PEBBLE PROJECT
ENVIRONMENTAL BASELINE DOCUMENT
2004 through 2008

CHAPTER 26.
CLIMATE AND METEOROLOGY
Cook Inlet Drainages

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TABLE OF CONTENTS

TABLE OF CONTENTS 26-i
LIST OF TABLES 26-ii
LIST OF FIGURES 26-ii
LIST OF APPENDICES 26-iii
ACRONYMS AND ABBREVIATIONS 26-iv
26. Climate and Meteorology 26-1
26.1 Introduction 26-1
26.2 Study Objectives 26-1
26.3 Study Area 26-1
26.4 Previous Studies 26-2
26.5 Scope of Work 26-2
26.6 Methods 26-2
26.7 Results and Discussion 26-3
26.7.1 Data Collection and Capture 26.4
26.7.2 Wind Direction 26-4
26.7.3 Wind Speed 26-5
26.7.4 Temperature 26-5
26.7.5 Precipitation 26-6
26.7.6 Evaporation 26-6
26.8 Summary 26-7
26.9 References 26-7
26.10 Glossary 26.7

LIST OF TABLES

Table 26-1, Meteorological Measurement Methods and Data-quality Objectives

Table 26-2, Meteorological Data-capture Rates by Month—Wind Speed, Wind Direction, and Temperature at Port Site 1, 2005 through 2007

Table 26-3, Meteorological Data-capture Rates by Month—Wind Speed and Wind Direction at All Stations, 2008

Table 26-4, Meteorological Data-capture Rates by Month—Temperature at All Stations, 2008

Table 26-5, Meteorological Data-capture Rates by Month—Precipitation and Evaporation at Port Site 1, 2008

Table 26-6, Summary of Monthly Mean and Monthly Maximum Hourly Mean Wind Speeds—Port Site 1, 2005 through 2007

Table 26-7, Summary of Monthly Mean Wind Speeds—All Stations, 2008

Table 26-8, Summary of Maximum Hourly Mean Wind Speeds by Month—All Stations, 2008

Table 26-9, Summary of Monthly Temperature Data—Port Site 1, 2005 through 2007

Table 26-10, Summary of Monthly Mean Temperatures—All Stations, 2008

Table 26-11, Summary of Maximum Daily Mean Temperatures by Month—All Stations, 2008

Table 26-12, Summary of Minimum Daily Mean Temperatures by Month—All Stations, 2008

Table 26-13, Summary of Maximum Hourly Mean Temperatures by Month—All Stations, 2008

Table 26-14, Summary of Minimum Hourly Mean Temperatures by Month—All Stations, 2008

Table 26-15, Summary of Precipitation and Evaporation Data for Port Site 1, 2008

LIST OF FIGURES

Figure 26-1, Locations of Meteorological Monitoring Stations, Cook Inlet Drainages

Figure 26-2. Port Site 1 Wind Roses, August 1, 2005, through December 1, 2008

Figure 26-3. Williamsport Station Wind Roses, January 1 through December 31, 2008

Figure 26-4. North Head Station Wind Roses, January 1 through December 31, 2008

LIST OF APPENDICES

Appendix 26A, Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program, August 2006

Appendix 26B, Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program, June 2008

Appendix 26C, Pebble Port Station (Port Site 1) First Annual Data Report, August 2005–July 2006, for the Pebble Project Meteorological Monitoring Program

Appendix 26D, Pebble Port Station (Port Site 1) 2006 Annual Data Report, January 2006–December 2006, for the Pebble Project Meteorological Monitoring Program

Appendix 26E, 2007 Annual Data Report, Pebble Port Station (Port Site 1), for the Pebble Project Meteorological Monitoring Program

Appendix 26F, 2008 Annual Data Report, Pebble Port Station (Port Site 1), for the Pebble Project Meteorological Monitoring Program

Appendix 26G, 2008 Annual Data Report, Pebble Williamsport Station, for the Pebble Project Meteorological Monitoring Program

Appendix 26H, 2008 Annual Data Report, Pebble North Head Station, for the Pebble Project Meteorological Monitoring Program

ACRONYMS AND ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
°C	degrees Celsius
EPA	U.S. Environmental Protection Agency
°F	degrees Fahrenheit
mm	millimeter(s)
mph	miles per hour
m/sec	meters per second
PSD	Prevention of Significant Deterioration

26. CLIMATE AND METEOROLOGY

26.1 Introduction

The Cook Inlet study area is in a transitional climatic zone with strong maritime influence. Summer temperatures are moderated by the open waters of Iniskin Bay, Iliamna Bay, and Cook Inlet. Winter temperatures are more continental because of sea ice in Iniskin Bay, Iliamna Bay, and Cook Inlet. Weather systems typically travel into the region from the Bering Sea to the west, from along the Aleutian Island chain to the southwest, and from the Gulf of Alaska to the south. Depending on the season, these weather systems consist of cool to cold air that is saturated with moisture, resulting in frequent clouds, rain, and snow. Less frequent wintertime incursions of frigid, stable arctic air masses bring shorter periods of clear, but very cold, conditions to the region. In the summer, incursions of very warm air masses from interior Alaska can cause atmospheric instability that result in cumulus cloud development and occasional thunderstorm activity.

Three meteorological stations were installed in the Cook Inlet study area at three possible port site areas. Installation of the Port Site 1 (also called Pebble Port Station in Annual Reports to ADEC and Appendices to this Environmental Baseline Document) monitoring station began in June 2005 and meteorological monitoring began on August 1, 2005. Installation of the Williamsport monitoring station began in July 2007 and meteorological monitoring began on January 1, 2008. Installation of the North Head monitoring station began in September 2007 and meteorological monitoring began on January 1, 2008.

26.2 Study Objectives

The objective of the meteorology data-collection program is to collect surface meteorological data for the Cook Inlet study area. The meteorological data for the environmental study program are being collected in strict accordance with the same guidance as provided to meet PSD requirements. Additional meteorological data are being collected to support engineering design in general accordance with PSD guidance; however, variations from PSD guidance do exist in the collection of these additional meteorological data.

26.3 Study Area

Meteorological data are being collected at three possible port locations for the Pebble Project: Port Site 1, Williamsport, and North Head. The Port Site 1 meteorological station is located on a small knoll on the west shore of Iniskin Bay near the mouth of the bay (Figure 26-1). The terrain rises very sharply west of the monitoring station. Personnel from the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC) visited and inspected this site and confirmed that meteorological data collected at this location would be representative of the meteorological study area in the Cook Inlet drainages. The Williamsport station is located on the west side of upper Iliamna Bay on

Williams Creek (Figure 26-1). The terrain rises sharply south-southwest and north of this monitoring station. The North Head station is located on the northern side of the entrance of Iliamna Bay on the southern tip of the same peninsula on which the Port Site 1 station is located (Figure 26-1). All three stations were located consistent with the EPA and ADEC requirements set forth in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA, 2000).

26.4 Previous Studies

A previous meteorological monitoring station with a climatic record that would be representative of the Cook Inlet study area does not exist. The closest meteorological monitoring stations with a climatic record are at Homer and Iliamna. Homer is located on the east side of Cook Inlet approximately 110 kilometers east of Port Site 1, approximately 119 kilometers east of Williamsport, and approximately 114 kilometers east of North Head. Iliamna is located on the north shore of Iliamna Lake approximately 80 kilometers west of Port Site 1, approximately 70 kilometers west of Williamsport, and approximately 71 kilometers west of North Head. Because of these distances and differences in terrain features, the climatic data collected at Homer and Iliamna are not indicative of conditions at the Cook Inlet meteorology study area.

26.5 Scope of Work

The research and field work for this study were begun in 2004. Installation of the Port Site 1 monitoring station began in June 2005. Collection of PSD-quality meteorological data began on August 1, 2005, and is ongoing. Installation of the Williamsport and North Head monitoring stations began in July 2007 and September 2007, respectively. Collection of PSD-quality meteorological data for both stations began on January 1, 2008, and is ongoing. The work has been conducted by Steve Mackey, Eric Brudie, Dominic Shallies, Jared Cockman, and Isaac Bertchi of the Hoefler Consulting Group.

The scope of work for the port area meteorological study is to measure and report the following meteorological parameters:

- Wind speed.
- Wind direction.
- Wind direction standard deviation (sigma-theta).
- Temperature.
- Precipitation.
- Evaporation.

26.6 Methods

This study was conducted according to the approach described in Chapter 2 of the study plan for the environmental baseline studies (a copy of which is provided as Appendix E of this environmental baseline document). The measurement methods and data-quality objectives for the meteorology study are summarized in Table 26-1. All monitoring and data reduction were conducted following the procedures described in *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program*

(copy provided as Appendix 26A). The quality assurance project plan was updated in June 2008 to include new stations (Appendix 26B). The measurement quality objectives and acceptance criteria for the monitoring as defined in the quality assurance project plan are prescribed in *EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA, 2000) and *EPA Requirements for Quality Assurance Project Plans* (EPA, 2001.)

26.7 Results and Discussion

26.7.1 Data Collection and Capture

Meteorological data-capture at the Port Site 1 station began in August 2005. In 2007 the monitoring year for the Pebble meteorological monitoring program was switched to a calendar-year system (effective January 1, 2006) so that all meteorological monitoring reports for all monitoring stations within the study area would use the same reporting schedule. Meteorological data collected at the Port Site 1 station from August 1 through December 31, 2005, are described in *Pebble Port Station First Annual Data Report, August 2005–July 2006, for the Pebble Project Meteorological Monitoring Program* (Appendix 26C). Data collected at Port Site 1 for the calendar year January through December 2006 can be found in *Pebble Port Station 2006 Annual Data Report, January 2006–December 2006, for the Pebble Project Meteorological Monitoring Program* (Appendix 26D). (Please note that an overlap of seven months of data exists between these two reports.) Meteorological data collected from January through December 2007 at Port Site 1 can be found in *2007Annual Data Report, Pebble Port Station, for the Pebble Project Meteorological Monitoring Program* (Appendix 26E), and meteorological data collected from January through December 2008 are in *2008 Annual Data Report, Pebble Port Station, for the Pebble Project Meteorological Monitoring Program* (Appendix 26F).

Meteorological data-capture at the Williamsport station began in January 2008, and the data collected from January through December 2008 are described in *2008 Annual Data Report, Pebble Williamsport Station, for the Pebble Project Meteorological Monitoring Program* (Appendix 26G).

Meteorological data-capture at the North Head station began in January 2008, and the data collected from January through December 2008 are presented in *2008 Annual Data Report, Pebble North Head Station, for the Pebble Project Meteorological Monitoring Program* (Appendix 26H).

Data-capture statistics for wind speed, wind direction, temperature, precipitation, and evaporation are provided in Tables 26-2 through 26-5. At the Port Site 1 station data capture was greater than 90 percent per quarter for all parameters during all quarters when monitoring was conducted from 2005 - 2008. At the Williamsport station data capture was greater than 90 percent per quarter for all parameters during all four quarters of 2008. At the North Head station, data-capture for 2008 exceeded 90 percent per quarter for all parameters discussed in this chapter. Data-capture for the primary sensor for the wind speed and direction did not exceed 90 percent per quarter for the first quarter of 2008. The Climatronics sensor was damaged during a storm in January 2008, resulting in data-capture rates for wind speed and wind direction of 67.2 percent for January and 77.3 percent for February. Instrument repairs were completed on February 7, 2008, and data-capture for March was 100 percent. However, the secondary (R.M. Young) wind speed and direction sensor had greater than 90 percent data-capture throughout the quarter. Both the primary and secondary wind speed and wind direction sensors meet all quality assurance specifications.

The secondary instruments are installed and operated in the event that the primary instrument fails so that meeting the minimum data recovery criterion of 90 percent per quarter is enabled.

Meteorological data are summarized below (additional information is provided in Appendices 26C through 26H).

26.7.2 Wind Direction

Figure 26-2 shows wind roses for two collocated wind instruments at the Port Site 1 station. As shown by the wind roses, the predominant wind direction from August 1, 2005, through December 31, 2008, was northerly. (Note that wind direction indicates the direction from which the wind is blowing, e.g., a northerly wind blows from the north.) The most common wind directions at Port Site 1 during this period (as indicated by the primary Climatronics sensor) were as follows:

- Northerly approximately 35 percent of the period.
- Northeasterly approximately 24 percent of the period.
- Northwesterly approximately 14 percent of the period.
- Southerly approximately 10 percent of the period.

The predominant wind directions of northerly and northeasterly reflect effects on synoptic flow (i.e., the large-scale wind pattern) caused by the north-south orientation of the mountains on either side of Iniskin Bay. The less frequent northwesterly winds likely occur during periods of high pressure when the synoptic flow is minimized and the slope-drainage winds from the mountain west of the monitoring station dominate the flow pattern. The still less frequent southerly winds occur most often from April through September when high pressure systems created in the Pacific Ocean build up and push the air to the north.

Figure 26-3 shows wind roses for two collocated wind instruments at the Williamsport station. The predominant wind direction from January 1 through December 31, 2008, was westerly. The most common wind directions at the Williamsport station during this period (as indicated by the primary Climatronics sensor) were as follows:

- Westerly approximately 50 percent of the period.
- Easterly approximately 19 percent of the period.
- Northwesterly approximately 15 percent of the period.

The predominant westerly winds result from the station's location in a valley oriented west to east, which creates slope-drainage winds from the mountains to the west of the station. The easterly winds most likely occur from the slope-drainage winds from the mountains to the east of the monitoring station, and the northwesterly winds likely occur from the slope-drainage winds from the mountains northwest of the monitoring station.

Figure 26-4 shows wind roses for two collocated wind instruments at the North Head station. The predominant wind direction from January 1 through December 31, 2008, was northwesterly. The most

common wind directions at the North Head location during this period (as indicated by the primary Climatronics sensor) were as follows:

- Northwesterly approximately 48 percent of the period.
- Easterly approximately 26 percent of the period.

The predominant northwesterly winds result from westerly winds being deflected by the mountains slightly northwest of the station on the east side of Iliamna Bay. The winds then travel toward the southeast to the monitoring station. The less frequent easterly winds happen most often from April to September and occur from unobstructed pathways from Cook Inlet.

26.7.3 Wind Speed

Table 26-6 summarizes the monthly mean wind speeds and maximum hourly mean wind speeds for Port Site 1 from 2005 through 2007. Tables 26-7 and 26-8 show the monthly mean wind speeds and maximum hourly mean wind speeds for calendar year 2008 for the Port Site 1, Williamsport, and North Head stations. The highest monthly mean wind speeds for the three stations were as follows:

- Port Site 1: 7.0 meters per second (m/sec) [15.7 miles per hour (mph)] in January 2007.
- Williamsport: 7.5 m/sec (16.8 mph) in January 2008.
- North Head: 10.6 m/sec (23.7 mph) in April 2008.

The highest maximum hourly mean wind speeds are shown below:

- Port Site 1: 20.7 m/sec (46.3 mph) in February 2008.
- Williamsport: 15.7 m/sec (35.1 mph) in January 2008.
- North Head: 29.3 m/sec (65.5 mph) in February 2008.

No hourly average calm winds were observed according to data from the primary Climatronics instruments at each station.

26.7.4 Temperature

Table 26-9 summarized the monthly temperature data (monthly mean, maximum daily mean, minimum daily mean, maximum hourly mean, and minimum hourly mean) for Port Site 1 from 2005 through 2007. For calendar year 2008 for Port Site 1, Williamsport, and North Head, monthly mean temperature, maximum daily mean temperature, minimum daily mean temperature, maximum hourly mean temperature, and minimum hourly mean temperature are summarized in Tables 26-10, 26-11, 26-12, 26-13, and 26-14, respectively. (The temperature data presented below and in the corresponding tables are for 2 meters above grade; temperature data for 10 meters above grade are presented in Appendix 26H.) The lowest and highest monthly mean temperatures, respectively, for the three stations were as follows:

- Port Site 1: -8.4 degrees Celsius (°C) [16.9 (°F) in March 2007 and 14.3°C (57.7 °F) in August 2005.

- Williamsport: -9.5°C (14.9 °F) in January 2008 and 12.3°C (54.1 °F) in August 2008.
- North Head: -8.4°C (6.9 °F) in January 2008 and 12.3°C (54.1 °F) in August 2008.

The minimum and maximum daily mean temperatures by month are listed below:

- Port Site 1 ranged from a minimum of -22.3°C (-8.1 °F) in January 2006 to a maximum of 20.3°C (68.5 °F) in June 2007.
- Williamsport ranged from a minimum of -25.2°C (-13.4 °F) in January 2008 to a maximum of 17.5°C (63.5 °F) in July 2008.
- North Head ranged from a minimum of -22.7°C (-8.9 °F) in January 2008 to a maximum of 17.3°C (63.1 °F) in July 2008.

Shown below are the minimum and maximum hourly average temperatures, respectively:

- Port Site 1: -24.1°C (-11.3 °F) in January 2006 and 25.2°C (77.4 °F) in June 2007.
- Williamsport: -26.2°C (-15.2 °F) in January 2008 and 22.2°C (72.0 °F) in July 2008.
- North Head: -24.2°C (-11.6 °F) in January 2008 and 21.0 °C (69.8 °F) in July 2008.

The locations of the monitoring stations adjacent to the cool waters of Iniskin Bay and Iliamna Bay cause the air-temperature extremes to be moderated.

26.7.5 Precipitation

Precipitation monitoring began at Port Site 1 on July 15, 2008, and is ongoing. The total monthly and maximum daily precipitation data for Port Site 1 are summarized in Table 26-15. The highest monthly precipitation was 370.8 millimeters (mm) (14.6 inches) in September 2008 and the lowest was 45.5 mm (1.8 inches) in December. The highest daily precipitation was 70.9 mm (2.8 inches) in September.

No precipitation data were collected at Williamsport or North Head because the precipitation pattern is similar to Port Site 1 at which precipitation data were collected.

26.7.6 Evaporation

Evaporation monitoring began at Port Site 1 on July 15, 2008, and was decommissioned on October 16, 2008 for the winter, prior to freezing temperatures that would reduce evaporation rates to zero. A summary of total monthly evaporation for Port Site 1 is provided in Table 26-15. The highest and lowest monthly evaporation, respectively, were 50.6 mm (2.0 inches) in July and 12.1 mm (0.5 inches) in October. Since monitoring began in the middle of a month and ended in the middle of another month, the highest and lowest evaporation data may be biased. Evaporation rates for the three one-month-long periods during the 2008 monitoring are as follows:

- July 15 through August 14: 74.1 mm (2.9 inches) evaporated.
- August 15 through September 14: 27 mm (1.1 inches) evaporated
- September 15 through October 16: 32.2 mm (1.3 inches) evaporated.

No evaporation data were collected at Williamsport or North Head because the evaporation pattern is similar to Port Site 1 at which evaporation data were collected.

26.8 Summary

The climate in the port study area is transitional with a strong maritime influence because of its proximity to Cook Inlet. The wind direction for Port Site 1 is generally from the north and northeast because of local terrain influences. The wind direction for Williamsport is generally from the west because of slope-drainage influences from the mountains. The wind direction for North Head is generally from the northwest because of slope-drainage influences from the mountains. Daily mean temperatures ranged from a minimum of -22.3°C (-8.1 °F) to a maximum of 20.3°C (68.5 °F) at Port Site 1, from a minimum of -25.2°C (-13.4 °F) to a maximum of 17.5°C (63.5 °F) at Williamsport, and from a minimum of -22.7°C (-8.9 °F) to a maximum of 17.3°C (63.1 °F) at North Head. Temperatures are moderated by the cool open waters of Iniskin and Iliamna bays. Port Site 1 began monitoring precipitation in July 2008 and recorded the highest monthly precipitation of 370.8 mm (14.6 inches) in September 2008. Evaporation monitoring at Port Site 1 also began in July 2008 and stopped in October for the winter. The highest monthly evaporation recorded was 50.6 mm (2.0 inches) for July, even though monitoring did not begin until July 15.

26.9 References

Environmental Protection Agency, U.S. (EPA). 2001. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5.

———. 2000. Meteorological Monitoring Guidance for Regulatory Modeling Applications. EPA-454/R-99-005.

26.10 Glossary

Synoptic Scale: The size of weather patterns ranging from approximately 1,000 kilometers (620 miles) in length and/or width to approximately 2,500 kilometers (1,500 miles) in length and/or width.

Transitional Climatic Zone: Under the Köppen climate classification8, the transitional zone is identified as a Maritime Subarctic Climate. These climates are generally found poleward and are confined to narrow coastal strips (to include the adjacent islands) on the western margins of continents. Both continental and maritime climate systems affect the transitional zone. The climate must have moderate moisture in all seasons.

Wind Rose: A wind rose is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location. Presented in a circular format, the wind rose shows the frequency of winds blowing *from* particular directions. The length of each "spoke" around the circle is related to the frequency that the wind blows from a particular direction per unit time. Each concentric circle represents a different frequency, emanating from zero at the center to increasing frequencies at the outer circles.

TABLES

TABLE 26-1
Meteorological Measurement Methods and Data-quality Objectives

Meteorological Parameter (Equipment Make/Model)	**Measurement Method**	**Manufacturer-specified Accuracy**	**EPA-required Accuracy** [a]	**EPA-required Resolution** [a]	**Detectability/ Data Completeness** [a]
Wind Speed (Climatronics F460)	Three-cup anemometer	±0.07 m/sec or ±1%	±0.2 m/sec or ±5%	0.1 m/sec	90% per monitoring quarter
Wind Direction (Climatronics F460)	Light-weight vane	±2 degrees	±5 degrees	1.0 degree	90% per monitoring quarter
Wind Speed (RM Young 05305-AQ)	Light-weight propeller	±0.2 m/sec	±0.2 m/sec or ±5%	0.1 m/sec	90% per monitoring quarter
Wind Direction (RM Young 05305-AQ)	Light-weight vane	±3 degrees	±5 degrees	1.0 degree	90% per monitoring quarter
Ambient Temperature and Vertical Temperature Difference [b] (Met One 062MP)	Solid-state thermistor	±0.05°C	±0.5°C (Ambient Temperature), ±0.1°C (Temperature Difference)	0.1°C (Ambient Temperature), 0.02°C (Temperature Difference)	90% per monitoring quarter
Barometric Pressure [b] (Vaisala PTB101B)	Silicon capacitive sensor	±0.3 mb	±3 mb	0.5 mb	90% per monitoring quarter
Relative Humidity [b] (Vaisala HMP45C)	Thin-polymer capacitor	±2% (0-90% range) ±3% (90-100% range)	±1.5°C [c]	0.1°C [c]	90% per monitoring quarter
Solar Radiation [b] (Licor LI200X)	Silicon photovoltaic detector	±5%	±5%	10 W/m^2	90% per monitoring quarter
Precipitation [d] (ETI NOAH II)	Water pressure	±0.25 mm	±5 mm	0.3 mm	90% per monitoring quarter
Evaporation [d] (Nova Lynx 255-100)	Float mechanism/ sensor	±0.25%	N/A	N/A	90% per monitoring quarter

Notes:

a. Referenced in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA, 2000).

b. These parameters are not discussed in this chapter, but are included in the data reports in the appendices.

c. Values in guidance document are given in terms of dew-point temperature.

d. Precipitation and evaporation gauges were installed at Port Site 1 on July 15, 2008, and the evaporation gauge was decommissioned for the winter on October 16, 2008.

mb = millibar(s)

W/m^2 = watts per square meter

TABLE 26-2
Meteorological Data-capture Rates by Month—Wind Speed, Wind Direction, and Temperature at Port Site 1, 2005 through 2007

		PERCENT RECOVERY			
Year	**Month**	**Speed**	**Direction**	**Temperature (at 2 m)**	**Temperature (at 10 m)**
2005	August	100	100	88.2	99.5
	September	100	100	100	100
	October	100	100	100	100
	November	100	99.3	100	100
	December	100	100	100	100
2006	January	99.5	99.3	99.5	99.5
	February	99.7	99.7	96.6	96.6
	March	99.5	88.6	100	100
	April	99.4	100	100	100
	May	100	100	100	100
	June	100	100	100	100
	July	100	100	100	100
	August	99.2	99.2	99.2	99.2
	September	100	100	100	100
	October	100	100	99.9	99.9
	November	99.2	100	100	100
	December	100	100	100	100
2007	January	99.2	99.2	99.2	99.2
	February	100	100	99.1	99.1
	March	100	100	100	100
	April	100	100	100	100
	May	100	100	100	100
	June	100	100	100	100
	July	100	100	100	100
	August	92.5	92.5	92.5	92.5
	September	99.9	99.9	99.9	99.9
	October	100	100	100	100
	November	100	100	100	100
	December	100	100	100	100

m = meters above grade

TABLE 26-3
Meteorological Data-capture Rates by Month—Wind Speed and Wind Direction at All Stations, 2008

		PERCENT RECOVERY					
		Port Site 1		Williamsport		North Head	
Year	Month	Speed	Direction	Speed	Direction	Speed	Direction
2008	January	100	100	100	100	67.2	67.2
	February	100	100	100	100	77.3	77.3
	March	100	100	100	100	100	100
	April	99.3	99.3	99.6	99.6	99.6	99.6
	May	100	100	100	100	100	100
	June	100	100	100	100	100	100
	July	99.7	99.7	98	98.0	100	100
	August	100	100	100	100	100	100
	September	99.7	99.7	99.7	99.7	99.4	99.4
	October	100	100	100	100	100	100
	November	100	100	100	100	100	100
	December	100	100	100	100	100	100

TABLE 26-4
Meteorological Data-capture Rates by Month—Temperature at All Stations, 2008

		PERCENT RECOVERY					
		Port Site 1		Williamsport		North Head	
Year	Month	Temp (at 2 m)	Temp (at 10 m)	Temp (at 2 m)	Temp (at 10 m)	Temp (at 2 m)	Temp (at 10 m)
2008	January	100	100	100	100	97.8	97.3
	February	100	100	100	100	99.4	99.4
	March	100	100	100	100	100	100
	April	99.2	99.2	99.7	99.7	99.6	99.6
	May	100	100	100	100	100	100
	June	100	100	100	100	100	100
	July	99.7	99.7	98.0	98.0	100	100
	August	100	100	100	100	100	100
	September	99.9	99.9	99.7	99.7	99.4	82.1
	October	100	100	100	100	100	100
	November	100	100	100	100	100	100
	December	100	100	100	100	100	100

m = meters above grade

TABLE 26-5
Meteorological Data-capture Rates by Month—Precipitation and Evaporation at Port Site 1, 2008

		PERCENT RECOVERY	
Year	**Month**	**Precipitation**	**Evaporation**
2008	July	100	95.1
	August	100	96.8
	September	99.7	94.9
	October	99.3	93.6
	November	100	N/A
	December	100	N/A

N/A = not applicable, parameter was not measured at this station during this month

TABLE 26-6
Summary of Monthly Mean and Monthly Maximum Hourly Mean Wind Speeds—
Port Site 1, 2005 through 2007

Year	Month	Monthly Mean Wind Speed (meters/second)	Maximum Hourly Mean Wind Speed (meters/second)
2005	August	3.6	12.6
	September	5.0	17.7
	October	4.9	15.5
	November	5.9	16.5
	December	6.3	14.5
2006	January	5.5	20.4
	February	6.3	16.3
	March	5.0	16.2
	April	5.1	14.8
	May	3.9	11.5
	June	3.3	10.9
	July	3.9	16.0
	August	3.9	13.6
	September	4.1	11.9
	October	4.9	14.2
	November	5.3	15.1
	December	6.1	18.4
2007	January	7.0	16.6
	February	4.3	13.6
	March	5.6	16.5
	April	5.6	14.3
	May	3.7	11.1
	June	3.3	11.5
	July	3.0	13.4
	August	3.5	14.3
	September	4.0	13.6
	October	5.5	13.1
	November	6.5	14.1
	December	6.2	14.5

Multiply by 2.24 to convert meters per second to miles per hour. Example: 4 m/sec * 2.24 = 9.0 mph.

TABLE 26-7
Summary of Monthly Mean Wind Speeds—All Stations, 2008

		MONTHLY MEAN WIND SPEED (meters/second)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	5.8	7.5	9.4
	February	5.6	6.3	6
	March	5.6	6.8	9.7
	April	4.9	6.2	10.6
	May	3.9	5.1	7.1
	June	3.4	4.2	6.1
	July	3.4	4.1	7
	August	2.8	3.3	5.4
	September	4.5	4.3	6.5
	October	4.7	4.5	8.3
	November	5.6	5.6	9.5
	December	5.3	5.3	7.9

Multiply by 2.24 to convert meters per second to miles per hour. Example: 4 m/sec * 2.24 = 9.0 mph.

TABLE 26-8
Summary of Maximum Hourly Mean Wind Speeds by Month—All Stations, 2008

		MAXIMUM HOURLY MEAN WIND SPEED (meters/second)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	16.5	15.7	28.2
	February	20.7	14	29.3
	March	13.1	13.4	20.7
	April	16.1	12.3	25.4
	May	12.3	14	24.3
	June	11.1	9.9	19.6
	July	12	9.9	18.1
	August	10.9	11.4	14.9
	September	12.2	13.7	24
	October	13.7	11.6	23.5
	November	15.5	13.9	26.2
	December	14.6	14.4	27.5

Multiply by 2.24 to convert meters per second to miles per hour. Example: 4 m/sec * 2.24 = 9.0 mph.

TABLE 26-9
Summary of Monthly Temperature Data—Port Site 1, 2005 through 2007

Year	Month	Monthly Mean (°C)	Maximum Daily Mean (°C)	Minimum Daily Mean (°C)	Maximum Hourly Mean (°C)	Minimum Hourly Mean (°C)
2005	August	14.3	17.4	12.2	20.1	7.9
	September	10.9	14.8	7.9	16.7	5.7
	October	4.2	8.8	-1.8	11.2	-3.6
	November	-4.1	2.7	-14.2	4.6	-15.7
	December	1.6	6.7	-11.6	8.1	-12.4
2006	January	-7.3	3.6	-22.3	5.2	-24.1
	February	-3.2	4.1	-17.9	6.3	-19.5
	March	-2.7	1.0	-9.0	2.3	-12.3
	April	1.4	5.4	-3.0	7.6	-5.6
	May	7.5	14.7	0.9	17.7	-1.5
	June	10.2	14.5	8.0	19.3	4.5
	July	12.5	16.0	10.3	21.9	8.0
	August	12.6	16.5	10.5	20.3	7.2
	September	10.1	12.2	6.8	17.0	4.7
	October	5.7	10.8	-0.8	12.5	-1.9
	November	-4.7	0.0	-12.2	2.9	-13.0
	December	-3.3	4.1	-10.2	5.1	-13.3
2007	January	-6.2	6.1	-20.4	8.6	-21.3
	February	-2.8	8.0	-11.3	10.4	-13.4
	March	-8.4	1.3	-15.1	3.8	-17.1
	April	4.3	7.2	1.8	10.5	0.0
	May	6.9	9.9	3.7	14.5	0.9
	June	10.5	20.3	7.0	25.2	5.4
	July	12.4	17.9	10.1	20.1	7.7
	August	13.2	19.8	10.9	22.6	9.6
	September	10.8	14.6	6.7	16.6	4.6
	October	3.7	8.5	1.2	10.1	-1.8
	November	2.4	7.3	-4.8	8.6	-6.0
	December	-2.4	3.9	-12.7	7.8	-13.5

Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

TABLE 26-10
Summary of Monthly Mean Temperatures—All Stations, 2008

		MONTHLY MEAN TEMPERATURE (°C)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	-6.9	-9.5	-8.4
	February	-5.2	-7.1	-5.3
	March	-1.2	-3	-2.2
	April	0.5	-0.4	-0.3
	May	6.6	6.7	6.2
	June	9.1	9.3	8.8
	July	11.8	11.6	11.3
	August	12.4	12.3	12.3
	September	9.1	9.1	9.5
	October	1.4	0.1	1.4
	November	-2.6	-4.2	-2.9
	December	-3.1	-3.4	-2.7

Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

TABLE 26-11
Summary of Maximum Daily Mean Temperatures by Month—All Stations, 2008

		MAXIMUM DAILY MEAN TEMPERATURE (°C)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	2.9	3.2	3
	February	3.9	4.5	4.4
	March	4.3	4	4
	April	6.4	6.1	6.7
	May	12.4	11.5	11.1
	June	11.2	11.9	11.8
	July	19.2	17.5	17.3
	August	16.4	17.4	15.5
	September	11.6	12.2	12.1
	October	7.4	7.8	7.5
	November	3.1	3.7	3.5
	December	4	4.9	5.3

Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

TABLE 26-12
Summary of Minimum Daily Mean Temperatures by Month—All Stations, 2008

		MINIMUM DAILY MEAN TEMP (°C)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	-18.1	-25.2	-22.7
	February	-16.7	-21.7	-16.8
	March	-9.5	-15.1	-13.2
	April	-5.3	-7.9	-7.1
	May	3.9	1	3.2
	June	6.6	6.9	6.6
	July	9.7	9.1	9.3
	August	10.7	10.9	10.6
	September	6.5	6.2	6.6
	October	-4.2	-7.8	-5.7
	November	-11.1	-15.3	-13.8
	December	-16.5	-15.9	-18.9

Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

TABLE 26-13
Summary of Maximum Hourly Mean Temperatures by Month—All Stations, 2008

		MAXIMUM HOURLY MEAN TEMP (°C)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	4.9	5	5.1
	February [a]	5.3	6.1	5.7
	March	5.7	5.6	5.3
	April	10.7	9.9	9.3
	May	14.5	15.1	14
	June	14.9	15.7	13.7
	July	21.2	22.2	21
	August	19.9	19.9	18.2
	September	13.2	14.8	13.7
	October	10.2	9.2	9.1
	November	4.9	6.6	5.6
	December	5.4	6.8	7.2

Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

a. Four hours of data were taken out of this month's data collection at the North Head Station because the data were statistically improbable.

TABLE 26-14
Summary of Minimum Hourly Temperatures by Month—All Stations, 2008

		MINIMUM HOURLY TEMP (°C)		
Year	**Month**	**Port Site 1**	**Williamsport**	**North Head**
2008	January	-19	-26.2	-24.2
	February	-18.2	-23.5	-19.2
	March	-11.2	-16.9	-14.8
	April	-10	-11.6	-9.5
	May	1.8	-0.5	1.4
	June	5.2	3.4	5
	July	6.6	3.3	7.8
	August	7.9	4.3	9.2
	September	1.3	-13.9	-7
	October	-6.6	-12.3	-6.9
	November	-12.1	-16.1	-14.6
	December	-17.4	-22.5	-19.3

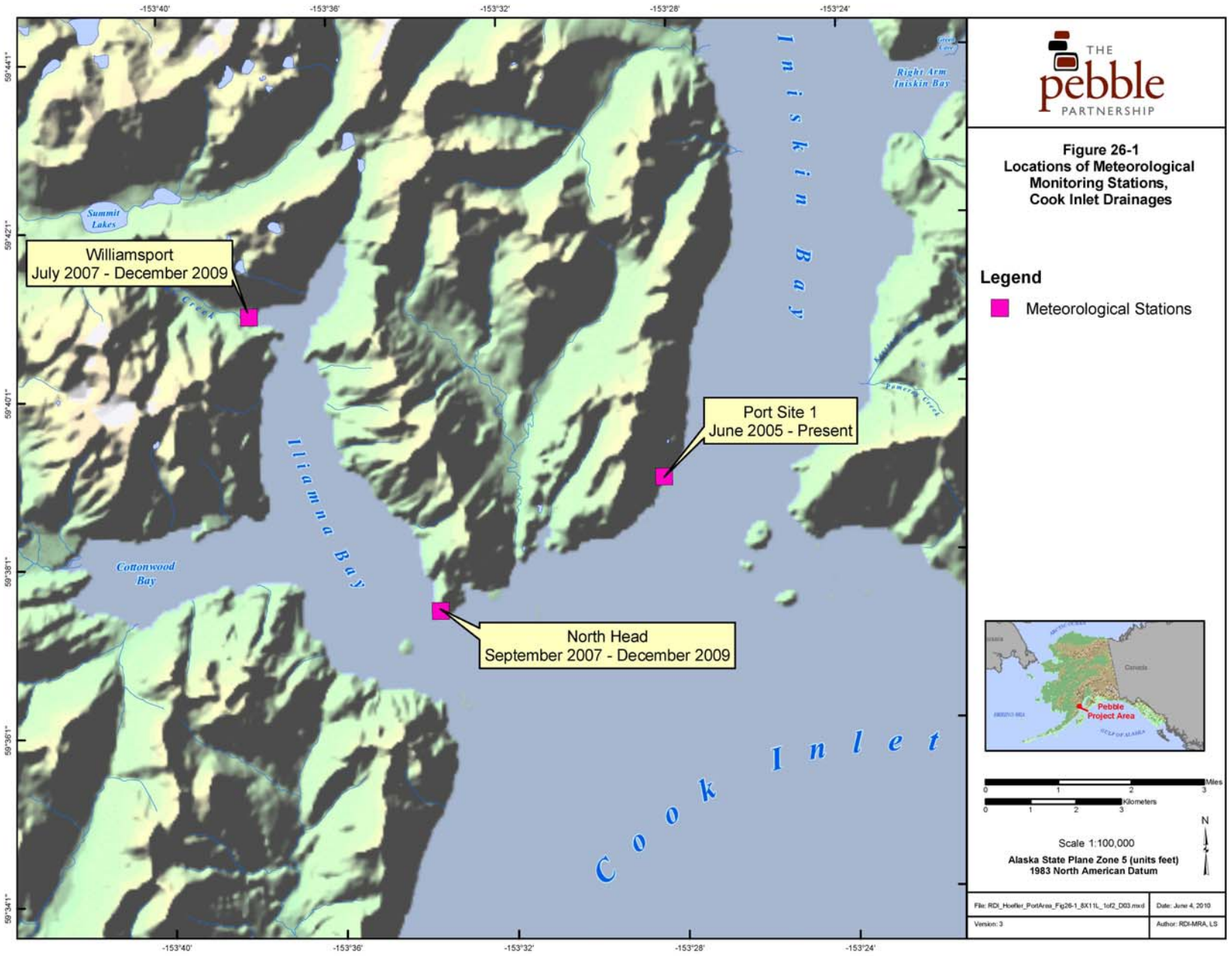
Use the following equation to convert °C to °F: (°C * 5/9) + 32 = °F. Example: (-10 °C * 5/9) + 32 = 14 °F.

TABLE 26-15
Summary of Precipitation and Evaporation Data for Port Site 1, 2008

		PRECIPITATION		EVAPORATION
Year	**Month**	**Total Monthly (liquid mm)**	**Max Daily (liquid mm)**	**Total Monthly (mm)**
2008	July	129.3	66.5	50.6
	August	88.1	31.2	46.7
	September	370.8	70.9	24
	October	89.6	46	12.1
	November	87.1	32.5	N/A
	December	45.5	12.7	N/A

N/A = not applicable, parameter was not measured at this station during this month.
Multiply by 0.039 to convert millimeters to inches. Example: 50 mm * 0.039 = 1.9 inches.

FIGURES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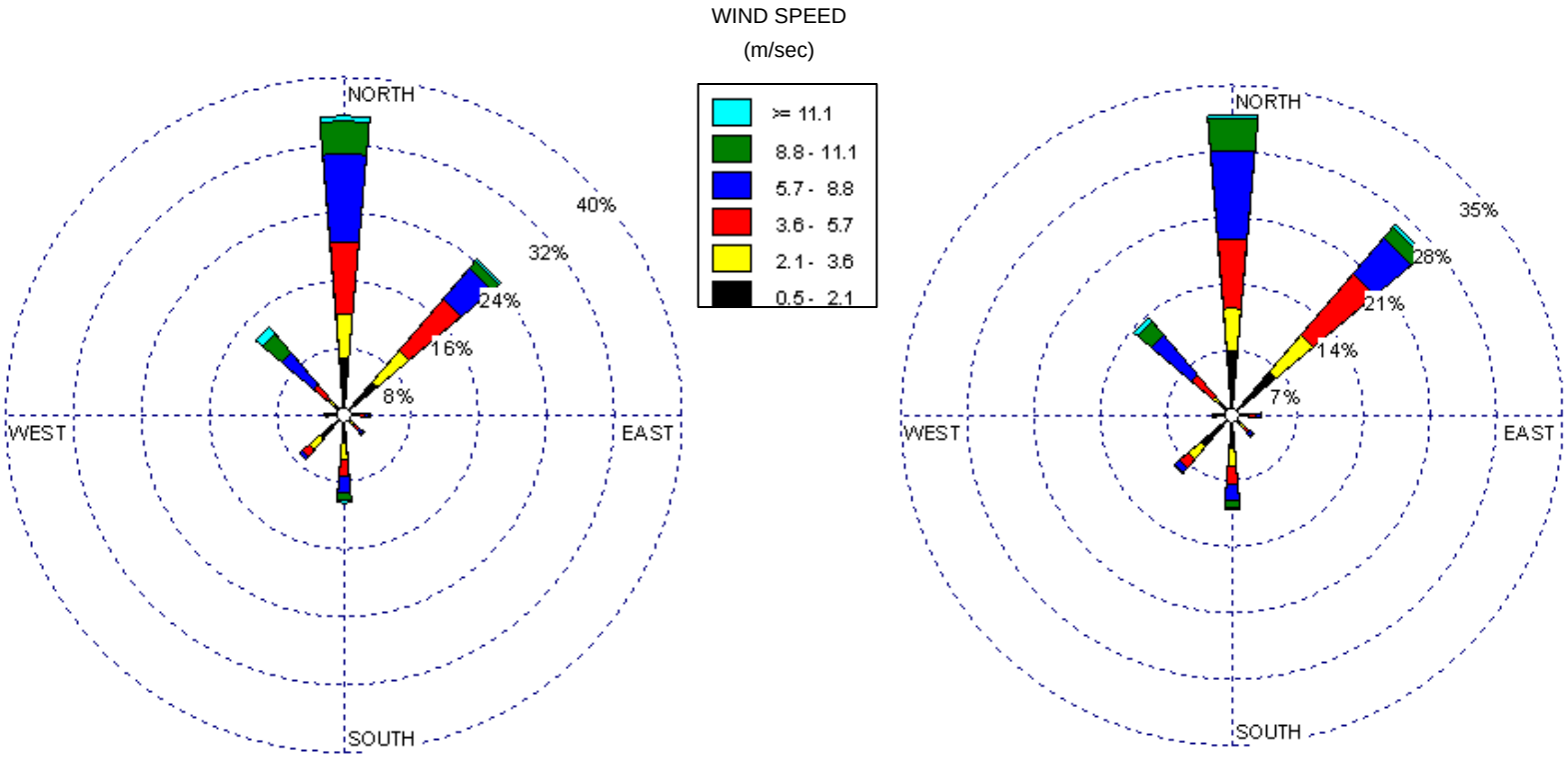
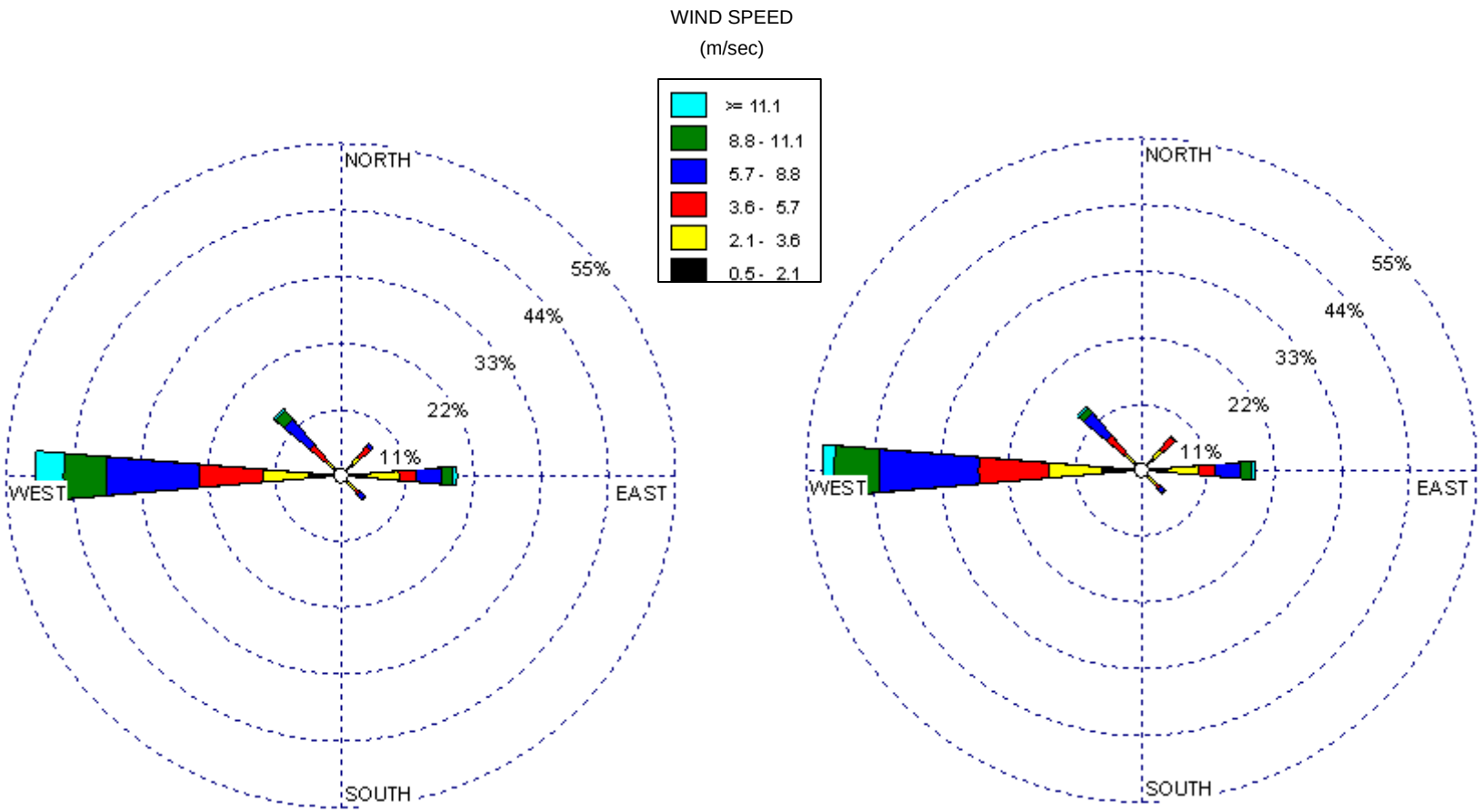
59°38'1"
59°36'1"
59°34'1"
Iniskin Bay
Right Arm Iniskin Bay
Summit Lakes
Williamsport
July 2007 - December 2009
Port Site 1
June 2005 - Present
Iliamna Bay
Cottonwood Bay
North Head
September 2007 - December 2009
Cook Inlet
THE pebble PARTNERSHIP
Figure 26-1
Locations of Meteorological Monitoring Stations,
Cook Inlet Drainages
Legend
Meteorological Stations
Canada
Pebble Project Area
Miles
Kilometers
N
Scale 1:100,000
Alaska State Plane Zone 5 (units feet)
1983 North American Datum
Date: June 4, 2010
Version: 3
Author: RDI-MRA, LS



Primary (Climatronics) Wind Sensor

Secondary (RM Young) Wind Sensor

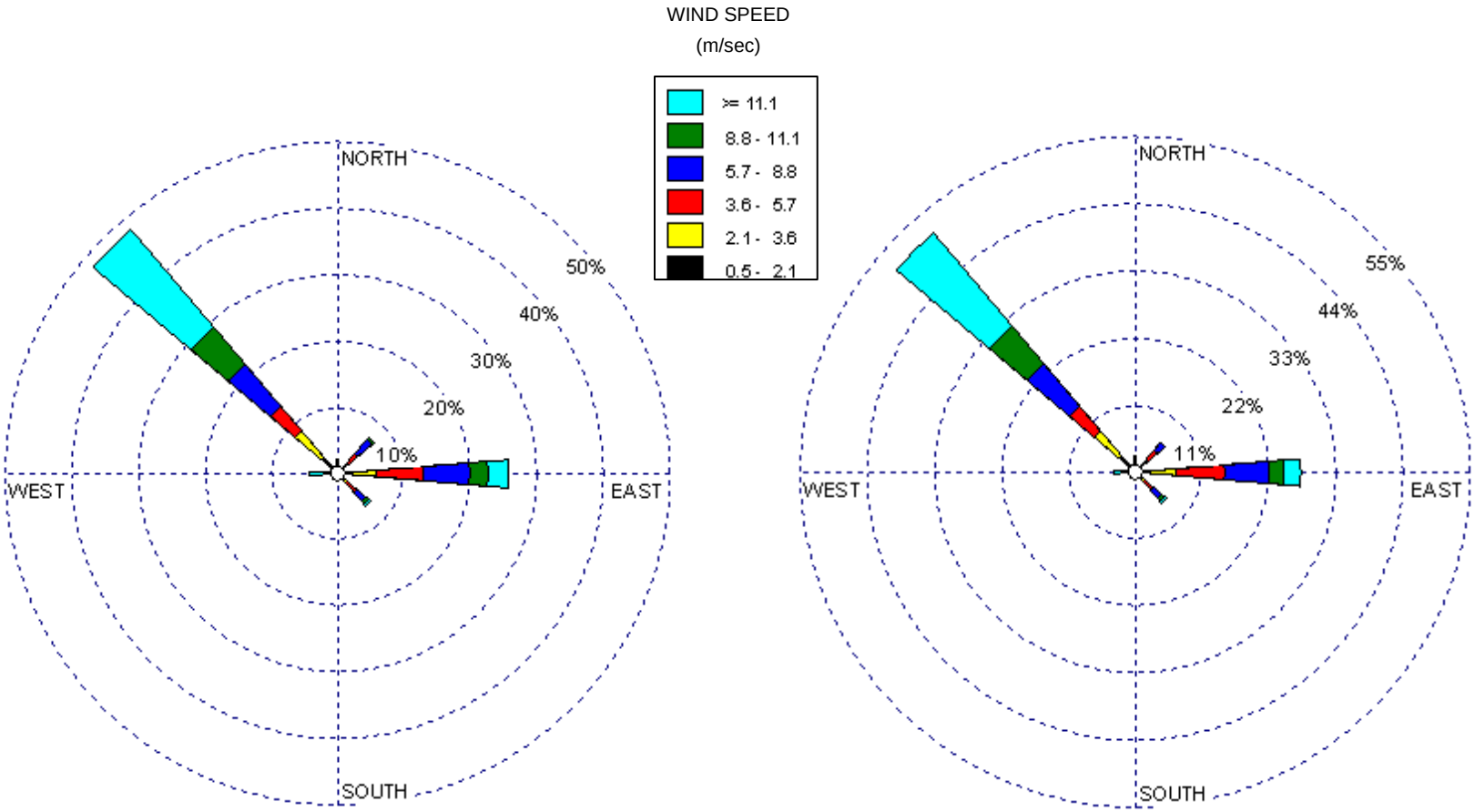
FIGURE 26-2. Port Site 1 Wind Roses, August 1, 2005, through December 31, 2008



Primary (Climatronics) Wind Sensor

Secondary (RM Young) Wind Sensor

FIGURE 26-3. Williamsport Station Wind Roses, January 1 through December 31, 2008



Primary (Climatronics) Wind Sensor

Secondary (RM Young) Wind Sensor

FIGURE 26-4. North Head Station Wind Roses, January 1 through December 31, 2008

APPENDICES

APPENDIX 26A

Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program August 2006

Quality Assurance Project Plan

for the

Pebble Project
Meteorological
Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines Inc.
Anchorage, AK

by

Hoefler Consulting Group
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503
(907) 563-2137

August 2006

A. Project Management Elements

A1. Approvals

Mike C. T. Smith — 8.31.06

Mike Smith
NDM Permitting Manager
Northern Dynasty Mines Inc.

Date

Al Trbovich — 8/31/06

Al Trbovich
HCG Permitting Manager
Hoefler Consulting Group

Date

K. Steven Mackey — 8/31/2006

K. Steven Mackey
HCG Project Manager
Hoefler Consulting Group

Date

Eric Brudie — 8/31/2006

Eric Brudie
HCG Quality Assurance Officer
Hoefler Consulting Group

Date

Bill Walker
ADEC Air Permits Program/Project Supervisor
Alaska DEC

Date

Richard Heffern
ADEC Air Quality Assurance Manager
Alaska DEC

Date

A2. Contents

A. Project Management Elements ii

A1. Approvals ii
A3. Distribution List 1
A4. Project/Task Organization 1
A5. Problem Definition/Background and Project Objective 4
A6. Project/Task Description 4
A7. Quality Objectives and Criteria for Measurement of Data 8
A8. Training and Certifications 10
A9. Documents and Records 10

B. Measurement and Data Acquisition 12

B1. Sampling Process Design 12
B1.1 Monitoring Site Locations 12
B2. Sampling Methods Requirements 25
B2.1 Reference and Equivalent Methods 25
B2.2 Environmental Controls 28
B3. Sample Handling and Custody 28
B4. Analytical Methods Requirements 28
B5. Quality Control 28
B6. Instrument/Equipment Testing and Inspection/Maintenance 33
B6.1 Acceptance Testing 33
B6.2 Site Surveillance and Equipment Inspection and Maintenance 33
B6.3 Preventive Maintenance and Corrective Actions 33
B7. Instrument/Equipment Calibration and Frequency 34
B7.1 Calibration Frequency 34
B7.2 Calibration Equipment 34
B8. Inspection/Acceptance of Supplies and Consumables 36
B9. Non-direct Measurements 36
B9.1 Climate History 36
B9.2 Land Use 39
B10. Data Management 40
B10.1 Data Acquisition 41
B10.2 Data Validation 41
B10.3 Data Transmission 42
B10.4 Data Reduction 42
B10.5 Data Reporting 42
B10.6 Data Storage 42
B10.7 Data Use in Modeling 42

C. Assessments and Oversight 43

C1. Assessments and Response Actions 43
C1.1 Performance Audits 43
C1.2 Systems Audits 43
C1.3 Corrective Actions 45
C1.4 QAPP Revisions 46
C2. Reports to Management 46

D. Data Validation and Usability 47

D1. Data Review, Validation, and Verification Requirements 47
D1.1 Data Review 47
D1.2 Data Calculations 47
D2. Validation and Verification Methods 48
D3. Reconciliation with User Requirements 48

List of Tables

A1. Distribution List for Quality Assurance Project Plan 1
A2. Pebble Project Meteorological Monitoring Program Key Individuals and Responsibilities 2
A3. Pebble Project Meteorological Monitoring Program Work Schedule 6
A4. Summary of DQOs for the Pebble Project Meteorological Monitoring Program 9
B1. Summary of Pebble Project Meteorological Stations 14
B2. Summary of Meteorological Sensors and Performance Specifications 26
B3. Sampling and Averaging Times for Meteorological Parameters 27
B4. Meteorological Sensors QA/QC Critical Validation Criteria 30
B5. Meteorological Sensors QA/QC Operational Evaluations 31
B6. Meteorological Sensors QA/QC Systematic Issues 32
B7. List of Meteorological Equipment Spare Parts 34
B8. List and Specifications for Calibration Equipment 35
C1. List of Performance Audit Equipment and Procedures 45
D1. Data Review List for the Pebble Project 47

List of Figures

A1. Pebble Project Meteorological Monitoring Program Organizational Chart 3
A2. Pebble Project Area Map 7
B1. Pebble Project Mine Area Meteorological Station Locations 15
B2. Pebble 1 Meteorological Station Site Map 16
B3. Pebble 4 Meteorological Station Site Map 17

B4. Pebble 1 Meteorological Station 18
B5. Area Surrounding the Pebble 1 Meteorological Station 19
B6. Pebble 4 Meteorological Station 20
B7. Area Surrounding the Pebble 4 Meteorological Station 21
B8. Pebble Port Meteorological Station Map 22
B9. Pebble Port Meteorological Station 23
B10. Area Surrounding the Pebble Port Meteorological Station 24
B11. Iliamna Daily Extreme and Average High and Low Temperatures 37
B12. Iliamna Monthly Mean Precipitation 37
B13. Iliamna Wind Rose 38
B14. Alaska Air Quality Control Regions 39
B15. Alaska Class I Areas 40
B16. Data Processes Flow Chart 41

List of Appendices

Appendix A. Program References
Appendix B. Standard Operating Procedures and Forms
Appendix C. Statement of Qualifications

A3. Distribution List

The following individuals have been provided a copy of this Quality Assurance Project Plan:

Table A1. Distribution List for Quality Assurance Project Plan

Key Individual/ Title	Organization	Email	Address	Phone
Mike Smith NDM Permitting Manager	Northern Dynasty Mines Inc.	michaels@nothern dynasty.com	3201 C Street, Suite 604 Anchorage, Alaska 99503	(907) 339-2606
Al Trbovich, HCG Permitting Manager	Hoefler Consulting Group	atrbovich @hoeflernet.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 563-2140
Steven Mackey, HCG Project Manager	Hoefler Consulting Group	smackey @hoeflernet.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 563-2129
Eric Brudie, HCG Quality Assurance Auditor	Hoefler Consulting Group	eric @brudie.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 243-0462
Bill Walker, ADEC Air Permits Program/ Construction Permits Supervisor	Alaska Department of Environmental Conservation	Bill_Walker @dec.state.ak.us	410 Willoughby Avenue, Suite 303 Juneau, Alaska 99801	(907) 465-5124
Richard Heffern, ADEC Air Quality Assurance Manager	Alaska Department of Environmental Conservation	Richard_Heffern @dec.state.ak.us	410 Willoughby Avenue, Suite 303 Juneau, Alaska 99801	(907) 465-5111

A4. Project/Task Organization

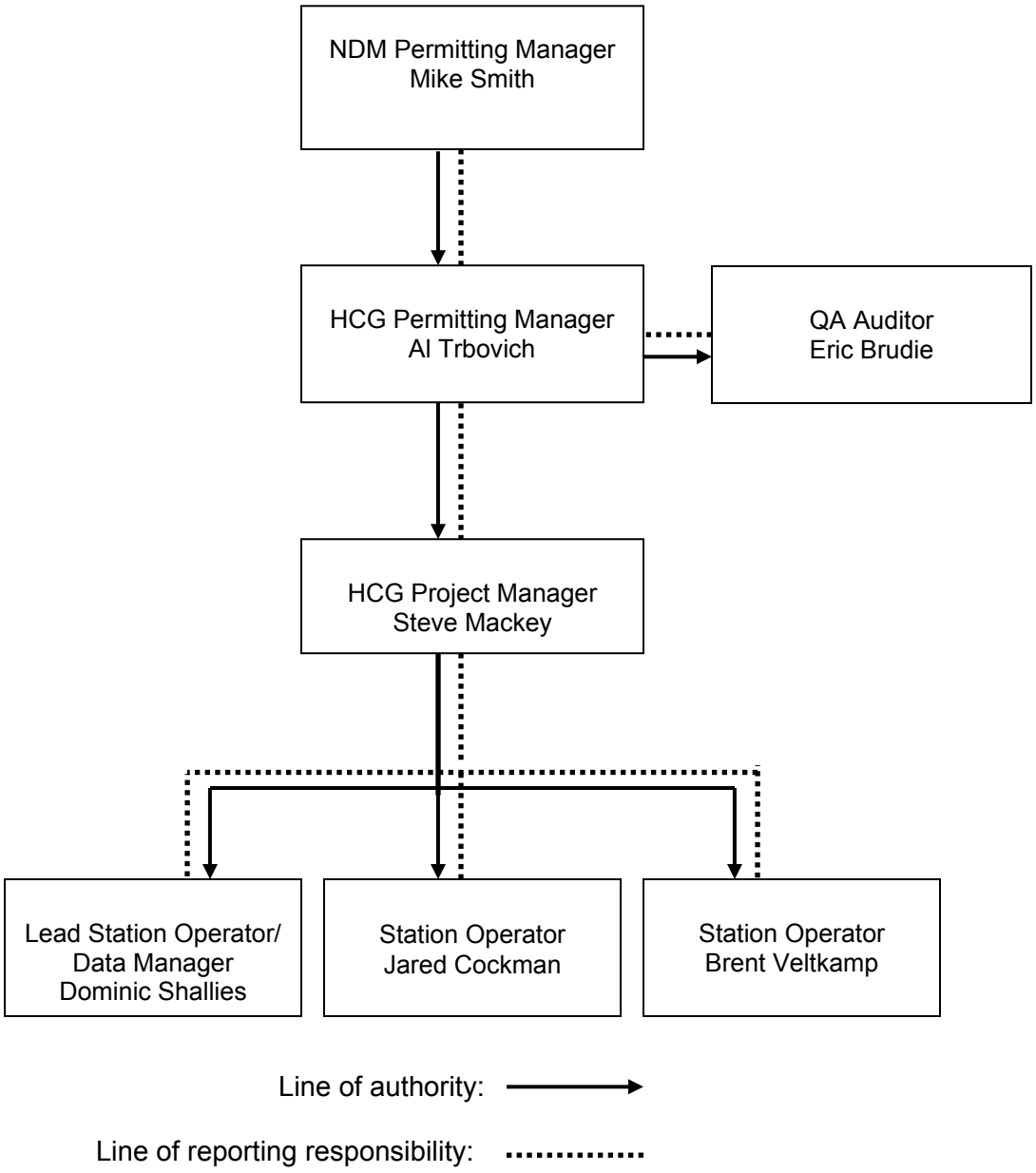
Hoefler Consulting Group (HCG) will support Northern Dynasty Mines Inc. (NDM) in the installation, operation, and maintenance of meteorological monitoring stations for the Pebble Project located near Iliamna, Alaska. Figure A1 provides the organization plan for this project. The key personnel involved with this project and their respective responsibilities are

summarized in Table A2. HCG will be responsible for all aspects of air monitoring, database management, and reporting.

Table A2. Pebble Project Meteorological Monitoring Program Key Individuals and Responsibilities

Key Individual	Responsibilities
NDM Permitting Manager	Mike Smith is the permitting manager for the Pebble Project and is responsible for complete program oversight.
HCG Permitting Manager	Al Trbovich is responsible for coordinating the meteorological monitoring program with NDM air permitting requirements.
HCG Project Manager	Steve Mackey is responsible for management of the technical staff conducting the NDM meteorological monitoring program and ensuring that the project is completed within established schedules and budgets.
Quality Assurance Auditors	Eric Brudie is responsible for auditing the validity and accuracy of reported information and coordinating follow-up activities to ensure a defensible data set.
Field/Site Operations	Dominic Shallies, Jared Cockman, and Brent Veltkamp are responsible for installation and routine operation of the monitoring stations.
Data Manager	Dominic Shallies is responsible for maintaining the project databases for all field data and for preparing data reports.

Figure A1. Pebble Project Meteorological Monitoring Program Organizational Chart



A5. Problem Definition/Background and Project Objective

The Pebble Project is a proposed mine for gold, copper, molybdenum, and silver located in southwestern Alaska, north of Lake Iliamna. NDM is conducting baseline environmental studies at the Pebble Project, including meteorological monitoring to support air permitting, environmental studies, and mine design objectives. At least two years of meteorological monitoring is anticipated with a primary objective of collecting meteorological data for supporting future air permit applications required for mining activities, construction and/or roadwork at the proposed mine and port sites.

The meteorological data will be collected in accordance with Prevention of Significant Deterioration (PSD) permit requirements and guidance. While construction of the mine and port infrastructure may not require a PSD permit, the PSD-quality meteorological measurements may also be used for air dispersion modeling required for minor permitting.

A6. Project/Task Description

This study will provide two years of representative surface meteorological observations for use in air quality dispersion modeling in support of the Pebble Project. The meteorological monitoring program will include three PSD-quality stations as follows:

- Mine PSD station (also referred to as the Pebble 1 station)
- Tailings Storage Facility PSD station (also referred to as the Pebble 4 station)
- Port PSD station (also referred to as the Pebble Port station)

The study will collect two years of meteorological data at the proposed Pebble mine area (Mine PSD station) and near the proposed port site (Port PSD station). The study will also provide one year of meteorological monitoring in the proposed tailings storage facility site (Tailings Storage Facility PSD station).

Two other non-PSD meteorological monitoring stations, known as the Pebble 2 and Pebble 3 stations, have also operated in the Pebble area to collect data for mine design purposes. These non-PSD stations are not included as part of this QAPP, as these stations are not intended to provide data for air dispersion modeling.

The meteorological monitoring stations for this project will use PSD quality equipment to monitor the following parameters on an hourly basis:

- Wind speed (meters/second [m/s])
- Wind direction (degrees [°])
- Wind direction standard deviation (sigma-theta [σ_θ])

- Temperature (degrees Celsius [°C])
- Vertical temperature difference (ΔT), 2-meter to 10-meter (degrees Celsius [°C])
- Relative humidity (percent [%])
- Solar radiation (watts per square meter [W/m^2])
- Barometric pressure (millibars [mbar])
- Precipitation (millimeters [mm]) (not included at Port PSD station)
- Evaporation (millimeters [mm]) (not included at Port PSD station)

The meteorological monitoring sites for the Pebble Project were selected in a manner consistent with PSD criteria for surface meteorological data collection. Figure A2 shows a map of the NDM meteorological monitoring sites located in southwest Alaska. On May 24, 2005, the proposed monitoring sites were visited by Alan Schuler and Gerry Guay of Alaska Department of Environmental Conservation (ADEC), Natasha Greaves and Rob Wilson of the United States Environmental Protection Agency (EPA) Region 10, and Al Trbovich and Steve Mackey of HCG. On this date, all parties concurred that the selected sites are the best available locations for carrying out meteorological monitoring representative of the areas proposed for development. Greater details of the monitoring site locations and the proximity of the study areas within defined Alaska land use boundaries are provided in Sections B1 and B9, respectively.

The Pebble Project Meteorological Monitoring Program is expected to run from August 1, 2005 to July 31, 2007 (two years). The first year of PSD monitoring will take place from August 1, 2005 to July 31, 2006. The second year of monitoring will take place from August 1, 2006 to July 31, 2007. The annual reports for this project are scheduled for submission to Northern Dynasty within ninety days following the completion of each year of monitoring. For purposes of data reporting, the two years of monitoring will be split into monitoring quarters as follows:

Year Number 1 (8/1/2005 – 7/31/2006)

Monitoring Quarter A	Aug/Sep/Oct 2005
Monitoring Quarter B	Nov/Dec/Jan 2005-2006
Monitoring Quarter C	Feb/Mar/Apr 2006
Monitoring Quarter D	May/Jun/Jul 2006

Year Number 2 (8/1/2006 – 7/31/2007)

Monitoring Quarter E	Aug/Sep/Oct 2006
Monitoring Quarter F	Nov/Dec/Jan 2006-2007
Monitoring Quarter G	Feb/Mar/Apr 2007
Monitoring Quarter H	May/Jun/Jul 2007

Personnel working on this project will be selected by the HCG project manager and will be fully qualified, trained, and capable of their assigned tasks. Work schedules will be

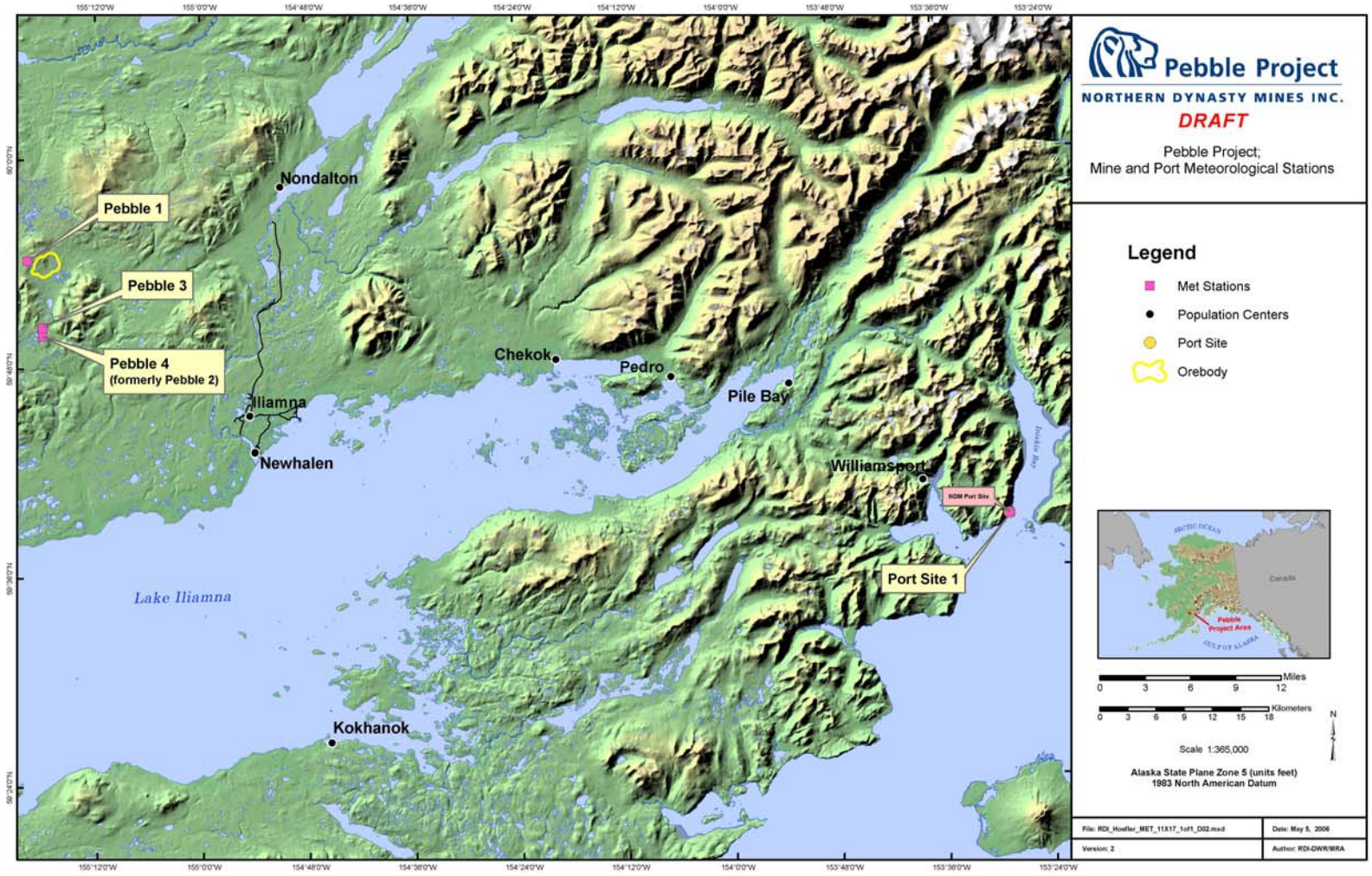
determined by the HCG project manager and will include: (a) daily data reviews, (b) site visits every four to eight weeks, (c) semiannual audits and audit reports, (d) quarterly data summaries, (e) annual data reports, and (f) as needed maintenance and corrective actions. Table A3 provides a provisional work schedule for this monitoring project.

Table A3. Pebble Project Meteorological Monitoring Program Work Schedule

Scheduled Activity	Date
Station Site Selection Visit	May 24, 2005
Installation of the Mine PSD Station (Pebble 1) and the Port PSD Station	June 2005
Training of Station Operators	June 2005
Mine PSD Station and Port PSD Station Initial Systems/Performance Audit and Calibrations	June 11 and June 25, 2005
Start of Two Year Monitoring Period[1]	August 1, 2005
Semiannual Performance Audit and Calibrations	January 15-16, 2006
Tailings Storage Facility PSD Station (Pebble 4) Installation	June 3-10, 2005
First Year of Monitoring Ends	July 31, 2006
Second Year of Monitoring Begins	August 1, 2006
Annual Systems/Performance Audit and Calibrations	July/August 2006
Semiannual Performance Audit and Calibrations	January 2007
Annual Systems/Performance Audit and Calibrations	June 2007
End of Two Year Monitoring Period	July 31, 2007

[1] The start of the PSD monitoring period was delayed until August 1, 2005 to resolve a temperature sensor problem in July 2005.

Figure A2. Pebble Project Area Map



A7. Quality Objectives and Criteria for Measurement of Data

Measurement Quality Objectives (MQOs) and acceptance criteria for the project are defined by the MQOs as prescribed in *EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Sections 3 and 5 (EPA-454/R-99-005), and by the guidelines defined in *EPA Requirements for Quality Assurance Project Plans* Chapter 3, Section A7 (EPA QA/R-5).

Data completeness is a measure of the amount of data actually collected compared with the amount of data that could have been collected, expressed as a percentage. Data completeness for the meteorological sensors is calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The Data Quality Objective (DQO) for data completeness during this monitoring project is 90 percent data capture per quarter for every parameter listed in Table A4.

DQOs for the detection capabilities of the meteorological sensors are defined in terms of measurement resolution. The resolution DQOs for this project have been set equal to those put forth in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* Section 5.1 (EPA-454/R-99-005), and are presented in Table A4.

Accuracy is a measure of the proximity of the measurements and the true value. Accuracy includes components of both random error and systematic error associated with instrumental bias. Accuracy will be assessed during performance audits. The accuracy DQOs for the meteorological sensors are presented in Table A4, and have been set equal to those recommended in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 5.1 (EPA-454/R-99-005).

Detectability, method/comparability, and representativeness are determined by the siting and exposure of the meteorological tower and sensors. The space-time domain and aspects for this specific application--as prescribed in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 3.1.1 Objective for Siting (EPA-454/R-99-005)--have been considered for each measurement parameter.

Table A4. Summary of DQOs for the Pebble Project Meteorological Monitoring Program

Meteorological Parameter/ Manufacturer and Model	Measurement Method	Manufacturer Specified Accuracy	EPA Required Accuracy[1]	EPA Required Resolution[1]	Detectability/ Data Completeness[1]
Wind Speed (Climatronics F460)	Three-cup anemometer	± 0.07 m/s or ± 1%	± 0.2 m/s or ± 5%	0.1 m/s	90% per monitoring quarter
Wind Direction (Climatronics F460)	Light-weight vane	± 2 degrees	± 5 degrees	1.0 degree	90% per monitoring quarter
Wind Speed (RM Young 05305-AQ)	Light-weight propeller	± 0.2 m/s	± 0.2 m/s or ± 5%	0.1 m/s	90% per monitoring quarter
Wind Direction (RM Young 05305-AQ)	Light-weight vane	± 3 degrees	± 5 degrees	1.0 degree	90% per monitoring quarter
Ambient Temperature & Vertical Temperature Difference (Met One 062MP)	Solid state Thermistor	± 0.05°C	± 0.5°C (Ambient Temperature), ± 0.1°C (Temperature Difference)	0.1°C (Ambient Temperature), 0.02°C (Temperature Difference)	90% per monitoring quarter
Barometric Pressure (Vaisala PTB101B)	Silicon capacitive sensor	± 0.3 mbar	± 3 mbar	0.5 mbar	90% per monitoring quarter
Relative Humidity (Vaisala HMP45C)	Thin-polymer capacitor	± 2% (0-90% range) ± 3% (90-100% range)	± 1.5°C	0.1°C	90% per monitoring quarter
Solar Radiation (Licor LI200X)	Silicon photovoltaic detector	± 5%	± 5%	10 W/m^2	90% per monitoring quarter
Precipitation (ETI NOAH II)	Water pressure	± 0.25 mm	± 5 mm	0.3 mm	90% per monitoring quarter
Evaportation (Nova Lynx 255-100)	Float mechanism/ sensor	± 0.25%	n/a[3]	n/a[3]	90% per monitoring quarter

[1] Referenced in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2] Values are given in terms of dew point temperature in guidance document (EPA-454/R-99-005).
[3] n/a = not applicable.

A8. Training and Certifications

The Pebble Project meteorological monitoring sites require no specific mandated training requirements as stated in *EPA Requirements for Quality Assurance Project Plans* Section A8 (EPA QA/R-5). However, a site-specific health and safety plan was developed in accordance with both HCG and NDM standards. Site-specific training for this project covers activities performed in the field and includes record keeping practices. All HCG and NDM field personnel will attend annual site safety and logistics meetings hosted by NDM. HCG field technicians for this project will receive training on the operation and maintenance of the meteorological sensors and related equipment. Training will be conducted by the HCG project manager or his designees. Site-specific training checklists and site visit memos will document the specific training received by each Field Technician (Appendix B). These documents will be filed and maintained in the project files.

A9. Documents and Records

Documentation and records for this project will include equipment calibration and maintenance records, documentation of quality control/quality assurance activities, routine monitoring data, corrective action and resolution forms, any QAPP revision documentation, and records of HCG field activities (i.e. site visit memos). Appendix B includes example data sheets for the monitoring project. All hard-copy documentation will be stored at the HCG Anchorage office and retained for a period of at least five years from the completion of the project. Electronic data will be stored on various media with full project backups. In addition to any written reports, electronic data collected for this project and data transferred to electronic format will be provided to NDM via CD-ROM or e-mail. Both the original comma delimited raw text file and a spreadsheet format file will be provided.

The final annual reports will be submitted to ADEC and NDM in both hard copy and electronic (PDF) format within 90 days of the conclusion of the monitoring program. Validated data will be submitted to ADEC in the same formats. The annual report will include a brief discussion of any monitoring phenomena, observable trends, quarterly and annual averages for all the measured parameters, statistical summaries for each collected parameter, and wind rose graphics. The reports will also contain any additional documentation, including but not limited to equipment calibration and maintenance records, documentation of quality control/quality assurance activities, routine monitoring data, project data reports, corrective action records, and records of field activities. Examples of these documentation forms are provided in Appendix B. See Section C for an outline of the annual report.

In accordance with ADEC reporting guidelines, quarterly data summaries and annual data reports will be prepared by HCG and provided to NDM and ADEC. Two separate annual data reports will be prepared (one for each monitoring year, not calendar year).

The final annual data reports will conform to format requirements set forth in *PSD Quality Ambient Air Quality & Meteorological Monitoring Annual Data Report Format* (ADEC, March 2005). The annual data reports will be submitted to ADEC after the department has received the QAPP.

In addition to the annual data reports, quarterly data summaries will be prepared by HCG in accordance with the format described in *PSD Quality Ambient Air Quality & Meteorological Monitoring Quarterly Data Summary Format* (ADEC, March 2005) and provided to NDM and ADEC within 30 days after the completion of each calendar quarter. The quarterly data summaries will be submitted to ADEC in conclusion of each monitoring year.

B. Measurement and Data Acquisition

B1. Sampling Process Design

The identified objectives of the Pebble Project Meteorological Monitoring Program are:

- Collect meteorological data necessary to support air permit applications
- Collect data for other environmental purposes (baseline, NEPA)
- Collect data for engineering design of mine and port facilities

To accomplish the monitoring objectives, baseline meteorological monitoring is being performed in both the proposed mine region (two stations) and the proposed port site (one station). The monitoring study is comprised of three PSD quality meteorological monitoring stations, each of which will collect meteorological monitoring data over a period of two years. The three PSD stations are designed and operated to meet the data quality objectives previously outlined in Section A7 of this QAPP.

B1.1 Monitoring Site Locations

The Pebble Project area is located near Iliamna in southwestern Alaska. The mine area stations are located approximately 17 miles northwest of Iliamna and the Port station is located approximately 52 miles east of Iliamna on the eastern shore of Iniskin Bay. The specific station locations are shown in Figure A2.

The meteorological monitoring program consists of a total of three PSD quality meteorological monitoring stations, the Mine PSD Station (Pebble 1), the Tailings Storage Facility PSD Station (Pebble 4), and the Port PSD Station (Pebble Port). An additional non-PSD meteorological monitoring station is being used to collect data for mine design purposes. This non-PSD station was initially located at the Pebble 4 station site from October 2004 through November 2005, and was called the “Pebble 2” station. During November 2005, the Pebble 2 station was relocated 0.6 miles north and renamed “Pebble 3”. Table B1 provides a summary of the location, purpose, and measurement parameters of PSD and non-PSD meteorological monitoring stations for the Pebble Meteorological Monitoring Program. Throughout the remainder of this QAPP, emphasis will be placed on the locations and operation of the PSD meteorological monitoring stations only, as their primary purpose is to provide measurements for air dispersion modeling and air permit applications.

Figure B1 shows a map of the meteorological stations adjacent to the Pebble Project ore body, located approximately 15 to 20 miles west northwest of Iliamna, Alaska. Figures B2 and B3 provide higher resolved maps of the Pebble 1 and Pebble 4 station locations, which are situated atop gradual sloping hills that lie to the west and south, respectively, of the main

ore body. The Pebble 1 station is located at a northern edge of a hilltop at 1,600 feet above sea level and overlooks a basin to the west where the Pebble Project ore body is located. The Pebble 4 station is located at 1,200 feet above sea level and overlooks the Pebble 3 station (at 1,000 feet above sea level) and the drainage of Frying Pan Lake, which is located within the area of the proposed mine tailings storage facility.

Figures B4 and B5 are photos of the Pebble 1 station and the surrounding area in the four cardinal directions, respectively. Figures B6 and B7 provide respective photographs of the Pebble 4 station and the surrounding area in the four cardinal directions. Despite the relatively low elevation of the sites, both meteorological stations sit above tree line and are free of natural and man-made obstructions.

Figure B8 is a map of the Pebble Port station. Figure B9 and B10 are photos of the Pebble Port station and the surrounding area in the four cardinal directions, respectively. The Pebble Port station overlooks the western shores of Iniskin Bay at the site of the proposed Pebble Project shipping port.

Table B1. Summary of Pebble Project Meteorological Stations

Station Name	Purpose/ Function[1]	Station Coordinates and Elevation	Monitoring Period	Measured Meteorological Parameters
Pebble 1 (Mine PSD Station)	PSD quality meteorological monitoring for proposed mine site	59° 54' N 155° 20' W 1,600 feet	Aug. 1, 2005 - July 31, 2007	Wind speed
				Wind direction
				Wind sigma
				Temperature
				Δ Temperature
				Solar radiation
				Barometric pressure
				Precipitation
				Evaporation
Pebble 2	Non-PSD meteorological monitoring at the proposed mine tailings storage facility site	59° 50' N 155° 18' W 1,200 feet	Jan. 2005 – Nov. 2005	Wind speed
				Wind direction
				Wind sigma
				Temperature
				Precipitation
				Evaporation
Pebble 3	Non-PSD meteorological monitoring at the proposed mine tailings storage facility site	59° 50' N 155° 18' W 1,000 feet	Nov. 2005 – July 2007	Wind speed
				Wind direction
				Wind sigma
				Temperature
				Precipitation
				Evaporation
Pebble 4 (Tailings Storage Facility PSD Station)	PSD quality meteorological monitoring for proposed mine site	59° 50' N 155° 18' W 1,200 feet	Aug. 1, 2006 – July 31, 2007	Wind speed
				Wind direction
				Wind sigma
				Temperature
				Δ Temperature
				Solar radiation
				Barometric pressure
				Precipitation
				Evaporation
Pebble Port (Port PSD Station)	PSD quality meteorological monitoring at proposed port site	59° 39' N 153° 28' W 40 feet	Aug. 1, 2005 - July 31, 2007	Wind speed
				Wind direction
				Wind sigma
				Temperature
				Δ Temperature
				Solar radiation
				Barometric pressure

[1]Each PSD station measures winds at approximately 10-meters height and is operated in accordance to *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Non-PSD stations measure wind at 3-meters height and are operated primarily for engineering design.

Figure B1. Pebble Project Mine Area Meteorological Station Locations

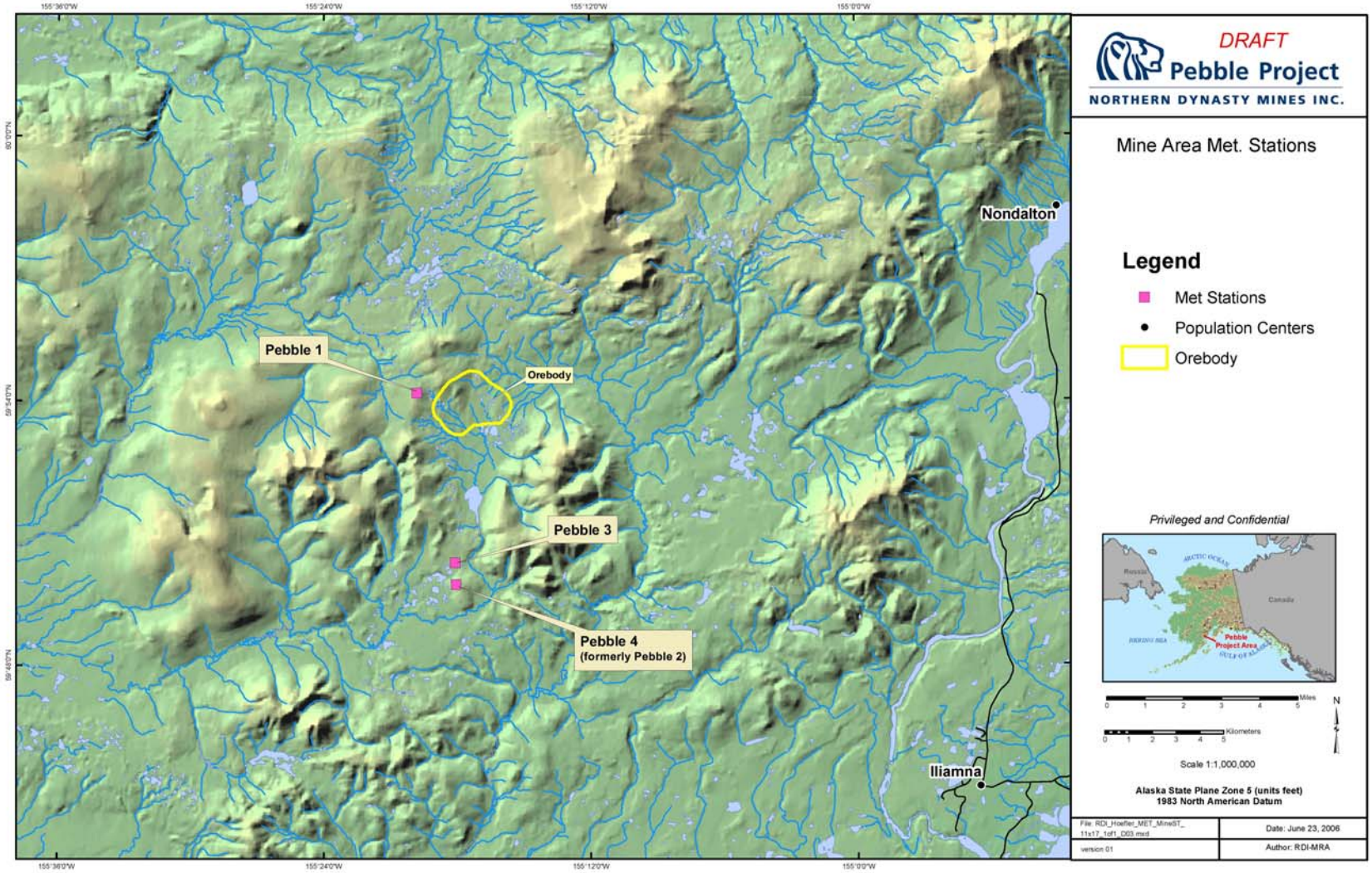


Figure B2. Pebble 1 Meteorological Station Site Map

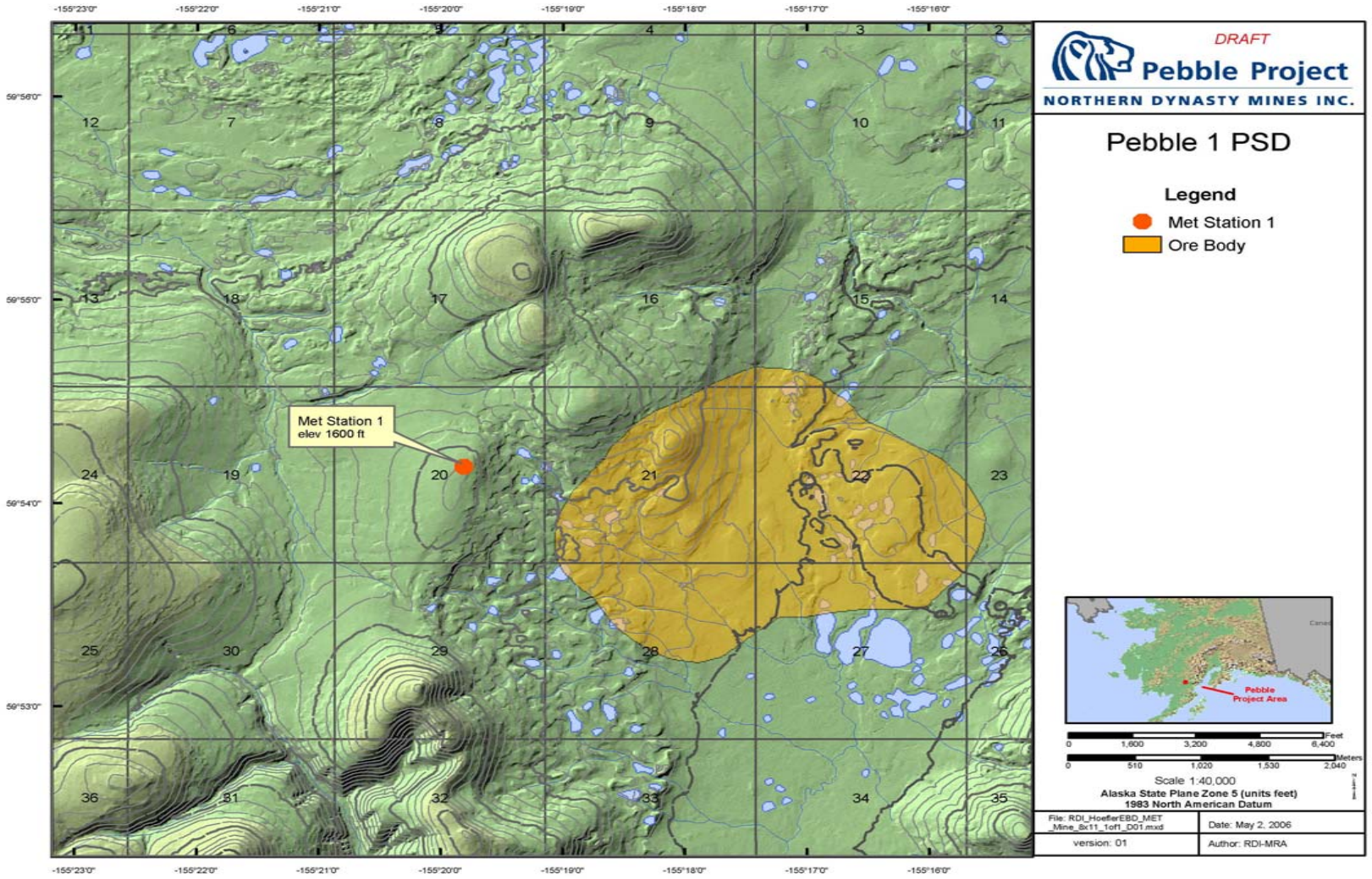


Figure B3. Pebble 4 Meteorological Station Site Map

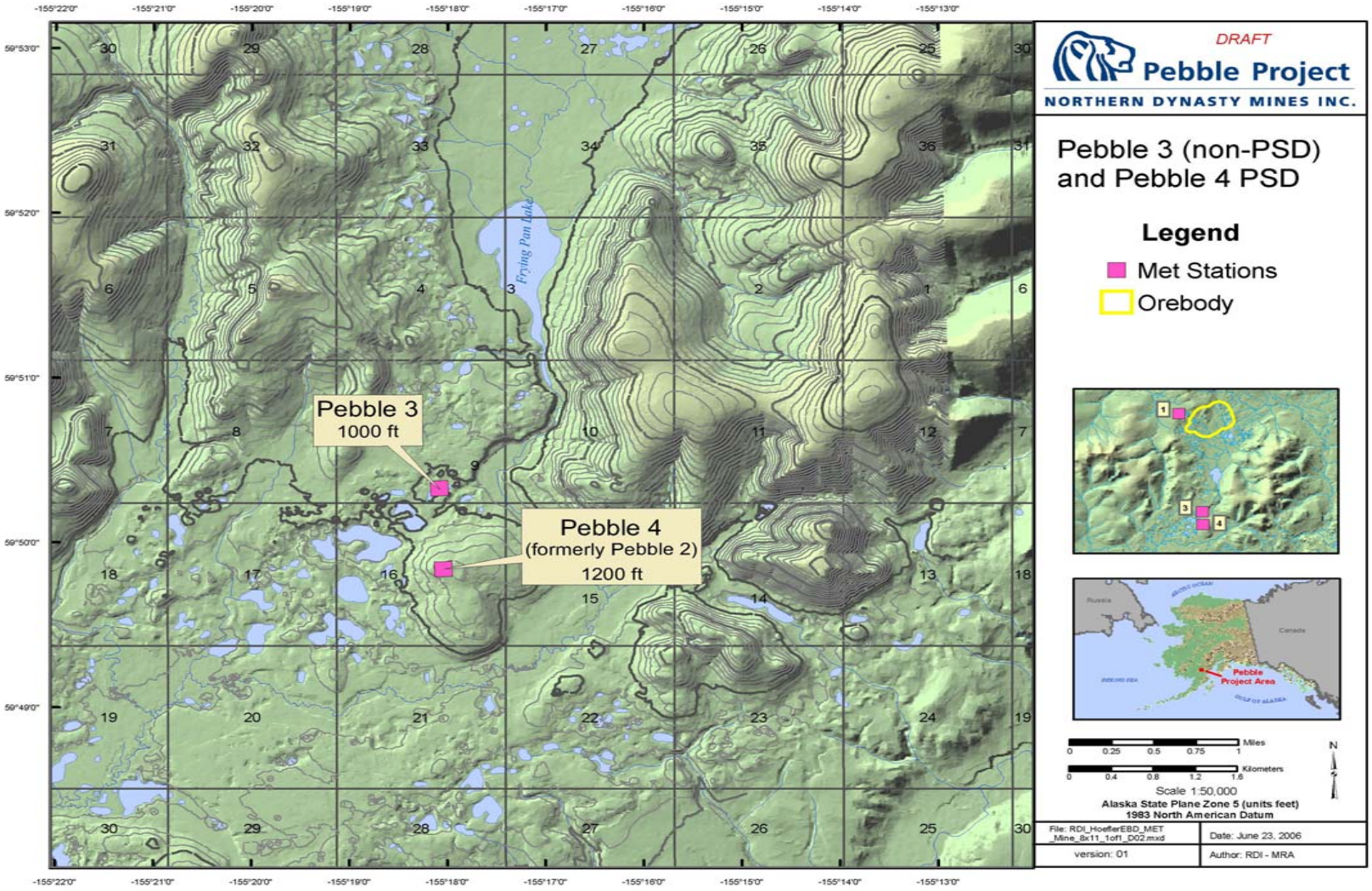
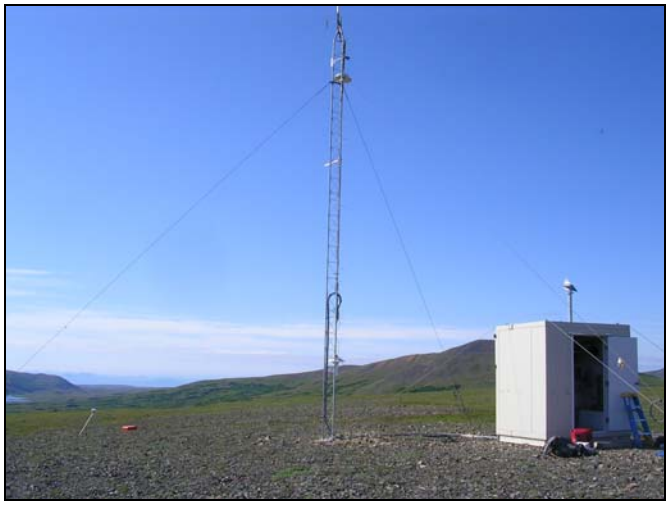


Figure B4. Pebble 1 Meteorological Station

Facing north



Facing south

Facing west

Facing east

Figure B5. Area Surrounding the Pebble 1 Meteorological Station

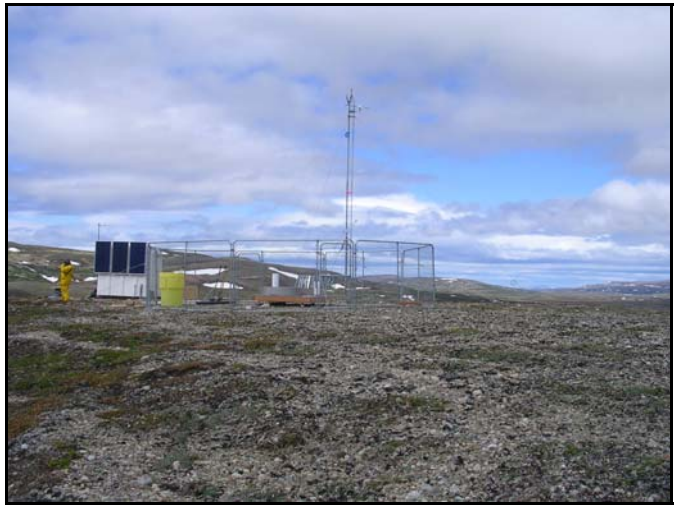
Facing north

Facing south

Facing west

Facing east

Figure B6. Pebble 4 Meteorological Station



Facing north

Facing south

Facing west

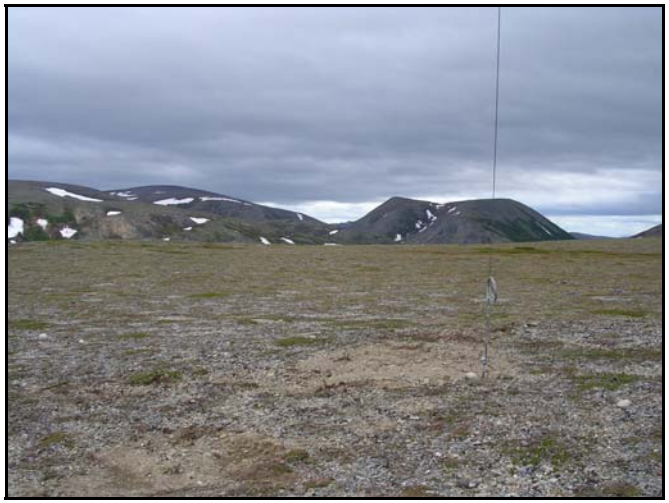
Facing east

Figure B7. Area Surrounding the Pebble 4 Meteorological Station

Facing north

Facing south

Facing west



Facing east

Figure B8. Pebble Project Port Meteorological Station Map

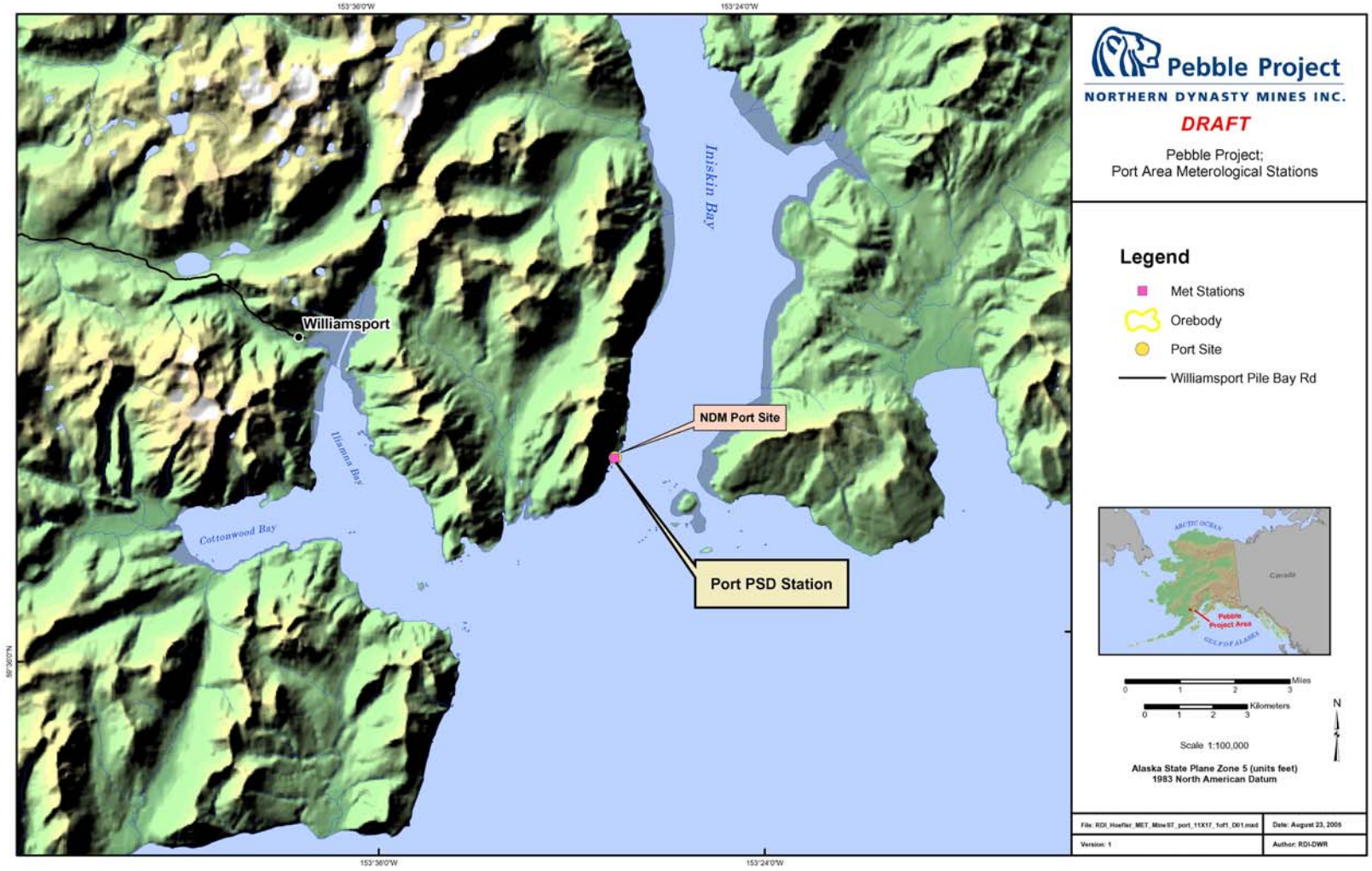
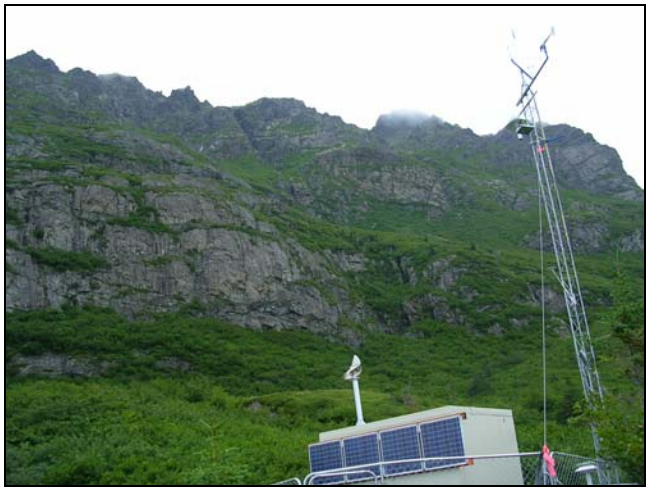


Figure B9. Pebble Port Meteorological Station



Facing north

Facing south

Facing west

Facing east

Figure B10. Area Surrounding the Pebble Port Meteorological Station

Facing north

Facing south

Facing west

Facing east

B2. Sampling Methods Requirements

Measurements will be performed using appropriate monitoring methods to ensure that the data are representative of actual conditions. The following sections address the methods to be used throughout the Pebble Project meteorological monitoring program, instrument installation, and the operational environment of the instruments.

B2.1 Reference and Equivalent Methods

Sensors for the measurement of wind speed, wind direction, ambient temperature, vertical temperature difference, barometric pressure, relative humidity, solar radiation, precipitation, and evaporation will be used to collect meteorological data. Table B2 lists the sensors that will be used, in addition to the manufacturers' specifications and the recommended performance specifications stated in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). These sensors will be continuously operated throughout this meteorological program.

Ambient temperature sensors will be mounted at 2 and 10 meters above ground level and used to measure vertical temperature difference, ΔT ("Delta T"). Two collocated wind speed and wind direction sensors will be mounted at 10 meters above ground level. The two wind measurement systems will include: (1) Climatronics F460 sensors as the primary wind sensors, and (2) a RM Young wind monitor as the secondary or back-up wind sensors. Solar radiation, relative humidity, and barometric pressure measurements will be measured at 4, 2, and 1.5 meters above ground level, respectively. At the Pebble 1 and Pebble 4 stations, the evaporation gauge will be mounted on a leveled deck and surrounded with fencing to avoid animal disturbance. The Pebble 1 and Pebble 4 station precipitation gauges will be mounted inside Wyoming-type (see Figure B4) and Alter Shield-type wind screens to prevent blowing snow and excessive winds from causing spurious readings and to improve catch efficiency. Complete descriptions of sensor audit and calibration methods are located in Appendix B.

Table B3 lists the sampling and averaging times for all of the meteorological variables that will be collected throughout this project. Wind speed, wind direction, temperature, solar radiation, evaporation pan level, and relative humidity will be sampled every second, and will be used to determine the mean hourly values of the measured parameters. Discrete precipitation values will be recorded to the datalogger each time the precipitation sensor detects a signal, and subsequently processed to provide measurements of total precipitation per hour. In addition, instantaneous measurements of barometric pressure will be sampled once every hour.

Table B2. Summary of Meteorological Sensors and Performance Specifications

Meteorological Parameter	Measurement Method	Sensor Characteristics	Manufacturer Specification	Guidance Document
Wind Speed - Primary (Climatronics F460)	Three-cup anemometer	Max Operating Range	0 - 65 m/s	0 - 50 m/s
		Starting Speed	0.22 m/s	0.5 m/s
		Accuracy	± 0.07 m/s or 1%	± 0.2 m/s + 5%
		Temperature Range	-40 ºC to +60 ºC	Not Specified
		Distance Constant	Less than 4.0 m (13.1 ft)	5 m
		Measurement Resolution	0.01 m/s	0.1 m/s
Wind Direction - Primary (Climatronics F460)	Precision low-torque potentiometer	Azimuth	0 - 360º	Not Specified
		Starting Speed[1]	0.22 m/s	0.5 m/s
		Accuracy	± 2º	± 5º
		Damping Ratio[1]	>0.4	0.4 to 0.7
		Delay Distance	< 1 m (3.3 ft)	5 m
		Temperature Range	-40 ºC to +60 ºC	Not Specified
		Measurement Resolution	0.1º	1.0º
Wind Speed - Secondary (RM Young 05305-AQ)	Propeller type anemometer	Max Operating Range	0 - 40 m/s	0 - 50 m/s
		Starting Speed	0.4 m/s	0.5 m/s
		Accuracy	± 0.2 m/s or 1%	± 0.2 m/s + 5%
		Temperature Range	-50 ºC to +50 ºC	Not Specified
		Distance Constant	2.1 m	5 m
		Measurement Resolution	0.01 m/s	0.1 m/s
Wind Direction - Secondary (RM Young 05305-AQ)	Precision low-torque potentiometer	Azimuth	0 - 360º	Not Specified
		Starting Speed	0.5 m/s	0.5 m/s
		Accuracy	± 3º	± 5º
		Damping Ratio	>0.4	0.4 to 0.7
		Delay Distance	1.2 m	5 m
		Temperature Range	-50 ºC to +50 ºC	Not Specified
		Measurement Resolution	0.1º	1.0º
Ambient Temperature and Delta T Met One 062-MP)	Solid state thermistor	Accuracy	± 0.05 ºC	± 0.1 ºC
		Time Constant	3.6 sec	1 min
		Temperature Range	-50 ºC to +50 ºC	-40 ºC to +60 ºC
Solar Radiation (Li-Cor LI200X)	Silicon photovoltaic detector	Accuracy	± 5 %	± 5 % of observed
		Time Constant	1 sec	5 sec
		Spectral Response[2]	400 nm to 1,100 nm	285 nm to 2,800 nm
		Temperature Range	-40 ºC to +65 ºC	-20 ºC to +40 ºC
Barometric Pressure (Vaisala PT101B)	Silicon capacitive absolute pressure sensor	Accuracy	± 0.5 mb	± 3 mb
		Temperature Range	-40 ºC to +60 ºC	Not specified
		Measurement Resolution	< 0.5 mb	0.5 mb
		Measurement Range	600 – 1,060 mb	Not specified

[1] At 10º initial angle of attack

[2] Guidance document allows photovoltaic pyranometers when data will be used to estimate stability.

Table B2 (Continued). Summary of Meteorological Sensors and Performance Specifications

Meteorological Parameter	Measurement Method	Sensor Characteristics	Manufacturer Specification	Guidance Document
Relative Humidity (Vaisala HMP45AC)	Capacitance change of a polymer thin film capacitor	Accuracy	± 2 % RH	± 1.5ºC [3]
		Time Constant	15 sec	30 min
		Temperature Range	-40 ºC to +60 ºC	-30 ºC to +30 ºC
		Measurement Resolution	0.1 % RH	0.1 ºC [3]
		Measurement Range	0-100% RH	-30 ºC to +30 ºC
Precipitation (ETI NOAH II)	Pressure of water column above a load cell mechanism	Accuracy	± .254 mm	± 0.5 mm
		Temperature Range	-30 ºC to +50 ºC	Not specified
		Measurement Resolution	± 0.254 mm	0.3 mm
		Measurement Range	0 to 12 in	Not specified
Evaporation (Nova Lynx 255-100)	Change in pressure head determined by float mechanism	Accuracy	± 0.25% over 10" range	Not specified
		Time Constant	1 sec	Not specified
		Temperature Range	0 ºC to 60 ºC	Not specified
		Measurement Resolution	1.0 mm	Not specified
		Measurement Range	3 to 10 in	Not specified

[3] Guidance document specifies values for dew point, not relative humidity.

Table B3. Sampling and Averaging Times for Meteorological Parameters

Meteorological Parameter	Sampling time	Averaging time
Wind Speed	1 sec	1 hr
Wind Direction	1 sec	1 hr
Wind Sigma	1 sec	1 hr
Temperature	1 sec	1 hr
Δ Temperature	1 sec	1 hr
Solar Radiation	1 sec	1 hr
Relative Humidity	1 sec	1 hr
Evaporation	1 sec	1 min
Precipitation[1]	n/a	n/a
Barometric Pressure[2]	1 hr	n/a

[1] Instantaneous precipitation measurements are collected by the datalogger and subsequently summed on an hourly basis.
[2] Instantaneous pressure measurements are sampled once per hour.

B2.2 Environmental Controls

Weatherproof enclosures and/or structures will be installed at each monitoring site for protection of the datalogger, batteries, modem, and barometric pressure sensor. Each monitoring station will be properly grounded to prevent damage from possible lightning strikes. To assure accurate temperature data, each temperature sensor will be mounted within identical fan-aspirated solar radiation shields.

B3. Sample Handling and Custody

Not applicable. No physical samples will be taken as part of this project.

B4. Analytical Methods Requirements

The meteorological sensors to be used for this project meet the specifications and recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005) (see Table B2).

B5. Quality Control

Quality Assurance/Quality Control (QA/QC) procedures are required for this project to ensure that the collected meteorological data meet standards of reliability and accuracy. Quality control for this project will follow EPA PSD monitoring requirements presented in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005) and *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)* (EPA 450/4-87-007).

All monitoring equipment will be acquired from manufacturers whose equipment meets EPA meteorological monitoring guidelines. In no case will inferior equipment be used. The Critical Validation Criteria Table (Table B4) outlines criteria deemed critical to maintaining the integrity of a sample or group of samples. Data that do not meet each and every criterion on the Critical Validation Criteria Table will be invalidated unless compelling reason and justification exist for not doing so. The samples for which one or more of these criteria are not met are invalid unless proven otherwise. The cause for not operating in the acceptable range for each violated criteria will be investigated and future occurrences avoided to reduce the likelihood that additional samples will be invalidated.

The QA/QC Operational Evaluations Table (Table B5) outlines criteria that are important for maintaining and evaluating the quality of the data collection system. Violation of a criterion or a number of criteria may be cause for invalidation of the data. The decision to invalidate data will consider other quality control information that may or may not indicate the data are acceptable. Therefore, a sample or group of samples for which one of these criteria is not

met is suspect unless other quality control information demonstrates otherwise. The reason for not meeting the criteria will be investigated, mitigated, and/or justified.

The Systematic Issues Table (Table B6) outlines criteria important for the correct interpretation of the data but that do not usually impact the validity of a sample or group of samples. For example, data quality objectives are included in this table. Not meeting these data quality objectives does not invalidate any of the samples, but may impact the error rate associated with the attainment/non-attainment decision.

Table B4. Meteorological Sensors QA/QC Critical Validation Criteria

Meteorological Sensors Critical Validation Criteria			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Standard Reporting Units		all data	
Wind speed	m/s	"	EPA-454/R-99-005
Wind direction	0-360 degrees	"	"
Temperature	Celsius	"	"
Delta temperature	Celsius	"	"
Barometric pressure	mbar	"	"
Solar radiation	W/m^2	"	"
Equipment			
Wind speed sensor	Meets recommended specs in guidance	Purchase	EPA-454/R-99-005
Wind direction sensor	"	"	"
Temperature sensor	"	"	"
Delta temperature sensor	"	"	"
Barometric pressure sensor	"	"	"
Solar radiation sensor	"	"	"
Completeness			
Annual - all parameters	90% hourly data capture/calendar qtr	1 year (all calendar qtrs)	EPA-450/4-87-007
Hourly avg.-all parameters	>45 min/hourly average	hourly average	"
Calibration			
All sensors calibrated by manufacturer	According to manufacturer specs and within EPA accuracy criteria	Every six months	EPA-454/R-99-005
Performance Audit and Calibration Transfer Standards			
Audit and Calibration Standards	Audit Std independent from Cal Stds	Within std certification freq	EPA-454/R-99-005
Wind speed	Co-located transfer standard	Every 6 months	EPA-454/R-99-005
WS bearing torque meter	"	"	"
Wind direction	"	"	"
WD bearing torque meter	"	"	"
Temperature	"	"	"
Delta temperature	"	"	"
Barometric pressure	"	"	"
Solar radiation	"	"	"
Assessments			
Accuracy **Performance Evaluation**	All sensors	Every six months and within 30 days of site start-up	EPA-454/R-99-005

Table B5. Meteorological Sensors QA/QC Operational Evaluations

Meteorological Sensor Operational Evaluations			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Range Checks			
Data Screening Criteria	EPA Suggested Criteria		(EPA-454/R-99-005)
Wind direction	$0^o \leq WD \leq 360^o$	All data	Section 8.6, Table 8-4
	WD varies ≥ 1^o/3 consecutive hrs.	"	"
	WD varies ≥ 10^o/18 consecutive hrs.	"	"
Wind speed	0 m/s ≤ WS ≤ 25 m/s	"	"
	WS varies ≥ (0.1m/s)/3 consecutive hrs.	"	"
	WS varies ≥ (0.5m/s)/12 consecutive hrs.	"	"
Temperature	local record low < T < local record high	"	"
	T < 5^oC from previous hour	"	"
	T varies > 0.5^oC for 12 consecutive hrs	"	"
Temperature difference	daytime $\Delta T < 0.1^o$C/m	"	"
	nighttime $\Delta T > -0.1^o$C/m	"	"
	$\Delta T > -3.0^o$C, $\Delta T < 5.0^o$C	"	"
Barometric pressure	pressure < 1060 mbar (sea level)	"	"
	pressure > 940 mbar (sea level)	"	"
	pressure varies > 6mb/3hours	"	"
Solar radiation (SR)	nighttime SR = 0	"	"
	daytime SR < max SR for date/latitude	"	"
Calibrations			
All sensors calibrated by manufacturer	According to manufacturer specs	Every six months	EPA-454/R-99-005
WD alignment	WD alignment to true N verified by TSN	"	"
Quality Control (QC) Checks			
Visual inspections			
Wind speed sensor	Moving freely, no visual damage	Each site visit	EPA-454/R-99-005
Wind direction sensor	Moving freely, no visual damage	"	"
Temperature sensor	No visual damage or obstruction	"	"
Delta temperature sensor	No visual damage or obstruction	"	"
Barometric pressure sensor	No visual damage or obstruction	"	"
Solar radiation sensor	No visual damage or obstruction	"	"
Time and Date DAS	DAS time/date agree with NIST time	"	"

Table B5 (Continued). Meteorological Sensors QA/QC Operational Evaluations

Meteorological Sensor Operational Evaluations			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Assessments			
Systems Audit			
Thorough review of entire monitoring system including field systems, data management, and data reporting.		1/year and < 30 days of site start-up	EPA-454/R-99-005
Performance Evaluation			
Wind speed	+/- 0.2 m/s +/- 5%	Every six months and <30 days of site start-up	EPA-454/R-99-005
WS bearing torque threshold	<= 0.5 m/s	"	"
Wind direction	+/- 5 degrees	"	"
WD linearity crossover	+/- 3° (included in +/- 5° above)	"	"
WD bearing torque threshold	<= 0.5 m/s	"	"
Temperature	+/- 0.5 Celsius	"	"
Delta temperature	+/- 0.1 Celsius	"	"
Barometric pressure	+/- 3 mbar	"	"
Solar radiation	+/- 5% of Observed	"	"

Table B6. Meteorological Sensors QA/QC Systematic Issues

Meteorological Sensor Systematic Issues			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Standard Reporting Units			
Wind speed	m/s	all data	EPA-454/R-99-005
Wind direction	0-360 degrees	"	"
Temperature	Celsius	"	"
Delta temperature	Celsius	"	"
Barometric pressure	mbar	"	"
Solar radiation	W/m2	"	"
Assessments			
Systems Audit			
Thorough review of entire monitoring system (field, lab, data, ect.)	In compliance with approved QAPP	Once per year and less than 30 days within site start-up	EPA-454/R-99-005

B6. Instrument/Equipment Testing and Inspection/Maintenance

B6.1 Acceptance Testing

Prior to installation, all equipment will be visually inspected to ensure no physical damage exists. After installation and prior to the beginning of the monitoring period, sensors will be calibrated according to the procedures stated in their respective operating manuals. Acceptance testing procedures will be documented on the appropriate calibration forms (provided in Appendix B). To ensure that the sensors continue to properly operate during the monitoring period, calibration checks of the instruments will be conducted semiannually as outlined in Section C1.1 of this QAPP.

B6.2 Site Surveillance and Equipment Inspection and Maintenance

HCG station operators will visit the monitoring station to inspect the condition of the monitoring equipment every 4 to 8 weeks and as needed. During each visit the following tasks will be conducted:

- Check the tower and sensors for signs of storm damage and/or vandalism;
- Observe the sensors to determine if the units appear to be operational;
- Verify that the wind speed and wind direction sensors are moving freely (which is especially important during periods of freezing rain or snow); and
- Clear snow, ice, or accumulated water from surfaces of sensors.

A check list is used to document work performed during the surveillance visits and will be filed with the site visit memo (Appendix B). In the event that station repairs or modifications become necessary, the HCG project manager will dispatch HCG field personnel to accomplish the necessary work. Table B7 is a list of spare parts for this project that will be stored at the HCG Anchorage office and, in some cases, on site to minimize periods of invalid data collection. HCG staff will review data from the stations at least once every work day to check that meteorological sensors and data acquisition are functioning properly.

B6.3 Preventive Maintenance and Corrective Actions

The procedures and schedule for preventive maintenance outlined in the standard operating procedure (SOP) will be followed for this monitoring program (Appendix B). As needed, the spare parts and/or sensors will be dispatched to the monitoring station for repair or sensor replacement by qualified HCG personnel (see Section A4, Organization Chart).

Table B7. List of Meteorological Equipment Spare Parts

Meteorological Parameter	Manufacturer	Model	Spare Parts
Wind Speed	Climatronics/ RM Young	F460/ 05305AQ	Extra sensor, cups[1], propeller[1], and bearings
Wind Direction	Climatronics/ RM Young	F460/ 05305AQ	Extra sensor, vane[1], and bearings
Ambient Temperature	Met One	062-MP	Spare sensor
Delta Temperature	Met One	062-MP	Pair of matched spare sensors
Barometric Pressure	Vaisala	PT101B	Spare sensor
Relative Humidity	Vaisala	HMP45AC	Spare sensor
Solar Radiation	Li-Cor	LI200X	Spare sensor
Precipitation	ETI	NOAH II	Spare sensor and recommended parts
Evaporation	NovaLynx	255-100	Spare sensor and recommended parts

[1] Stored at HCG Anchorage office and at the monitoring site.

B7. Instrument/Equipment Calibration and Frequency

B7.1 Calibration Frequency

Sensors will be calibrated according to the manufacturers' recommendations by HCG personnel immediately prior to the project start date and on a semiannual basis thereafter. Associated calibration forms, methodology, and calibration SOP are presented in Appendix B.

B7.2 Calibration Equipment

All instruments used for calibrating meteorological sensors will be traceable to a National Institute of Standards and Technology (NIST) transfer standard. Calibration certifications will remain on file at the HCG main office. Specific calibration equipment used, NIST traceability standards, equipment certification frequency, equipment accuracy, and calibration range for each meteorological parameter measured are provided in Table B8. The specifications stated in *Quality Assurance Handbook for Air Pollution Measurement Systems* (EPA-600/R-94/038c, September 1994) and *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005), for the calibration parameters are referenced in Table B8 to show compliance with EPA standards.

Table B8. List and Specifications for Calibration Equipment

Meteorological Instrument	Calibration Standard	Calibration Standard Characteristics	Manufacturer Specification	Guidance Document
Wind Speed (Climatronics F460 and RM Young 05305-AQ)	**RM Young 18801 Anemometer Drive**	Range of calibration	0 to 10,000 rpm	0, 2, 5, 10 m/s
		Range of standard	0 to 10,000 rpm	Not Specified
		Accuracy of standard	1.0 rpm	Not Specified
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via RM Young certification	Not Specified
Wind Direction (Climatronics F460 and RM Young 05305-AQ)	**Climatronics F460/ RM Young linearity Test Fixture**	Range of calibration	0 to 360º	Not Specified
		Range of standard	0 to 360º	Not Specified
		Accuracy of standard	0.75º	Not Specified
		Calibration Frequency[1]	n/a	n/a
		NIST traceability method	n/a	n/a
Ambient Temperature and Delta T (Met One 062-MP)	**Control Company Traceable 4000 series thermometer**	Range of calibration	-20º to 400º C	-40º to 60º C
		Range of standard	-50º to 150º C	Not Specified
		Accuracy of standard	± 0.001º C	± 0.1 ºC
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Control Co. certification	Not Specified
Solar Radiation (LiCor LI200X)	**Co-located Eppley PSP**	Range of calibration[3]	0 to 2000 w/m^2	Not Specified
		Spectral Response[4]	285 to 2800 nm	285 to 2800 nm
		Accuracy of standard	± 0.5 %	± 5 % of observed
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	To world radiometric reference via calibration with Eppley Cavity Pyrheliometer	To world radiometric reference
Barometric Pressure (Vaisala PT101B)	**Co-located Pretel AltiPlus A2**	Range of calibration	Ambient condition check (ACC)	ACC
		Range of standard	728 to 1050 mb	Not specified
		Accuracy of standard	± 1 mb	0.2 %
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Chinook Engineering certification to Ruska Deadweight tester	Not specified
Relative Humidity (Vaisala HMP45AC)	**Co-located Vaisala HMI41**	Range of calibration	Ambient condition check (acc)	ACC
		Range of standard	0-100% RH	Not Specified
		Accuracy of standard	± 2 % RH	± 1.5ºC [5]
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Vaisala Labs certification with Hyrgo M-3 dewpoint meter	Not specified
Precipitation (ETI NOAH II)	**NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator**	Range of calibration	24.66 mm/hr	< 25.0 mm/hr
		Range of standard	0 to 940 ml	n/a
		Accuracy of standard	n/a	Not specified
		Calibration Frequency[1]	n/a	n/a
		NIST traceability method	n/a	n/a
Evaporation (Nova Lynx 255-100)	**Graduated Cylinder**	Range of calibration	3"-9" of H_20 in gauge	Not specified
		Range of standard	n/a	Not specified
		Accuracy of standard	n/a	Not specified
		Calibration Frequency[1]	n/a	Not specified
		NIST traceability method	n/a	n/a

Note: All monitoring instrument calibrations performed every six months.

[1] Refers to calibration frequency of calibration standard/instrument.

[2] Guidance document specifies standard calibration per manufactures' specifications.

[3] Calibration range for solar radiation will be specific to the time and day of audit.

[4] Guidance document allows use of photovoltaic pyranometers when data will be used to estimate stability.

[5] Guidance document specifies values for dew point, not relative humidity.

B8. Inspection/Acceptance of Supplies and Consumables

All spare parts inventories will be kept up to date by the data manager. Each new spare part will be accepted with the same procedures mentioned in Section B6. Serial numbers for each spare sensor will be recorded by either the data manager or technicians and filed with the data manager. Upon deployment of a replacement part/sensor by site technicians, the make, model, and serial number will be recorded on a Site Visit and System Check form (see Appendix B) or an equivalent site visit memorandum. Each replacement sensor will be calibrated and a performance audit will be completed by technicians to ensure that the senor is properly functioning. The make, model, and serial number of the removed sensor, as well as replacement sensor information, will also be recorded on the performance audit form provided in Appendix B.

Consumable supplies are not expected to be necessary for this project.

B9. Non-direct Measurements

B9.1 Climate History

The Iliamna airport provides the only known comprehensive climate data available near the Pebble Project area. The Pebble Project mine area stations are located approximately 20 miles northwest of the Iliamna airport and the Pebble Port station lies approximately 50 miles to the southeast. Figure B11 shows the daily extreme and average high and low temperatures recorded at Iliamna from November 10, 1939 through 2005. The mean temperature at Iliamna ranges from 3°C (37°F) in January to 30°C (56°F) in July. The record low of -44°C (-47°F) was measured on January 22, 1947 and the record high of 33°C (91°F) was measured on June 27, 1953.

Figure B12 shows the monthly mean precipitation for Iliamna compiled from measurements collected from November 11, 1939 through 2005. Iliamna experiences the most precipitation in August and September with monthly mean precipitation values of 4.62 inches (117 mm) and 4.32 inches (110 mm), respectively. April is typically the driest month and has a monthly mean of 1.08 inches (27 mm) of precipitation.

Figure B13 shows a wind rose based on data collected by the National Weather Service from January 1, 2000 to December 31, 2004 at the Iliamna airport. Prevailing winds typically blow from the north and east. Because the Pebble Project meteorological stations are positioned at significant distances away from the airport and sit at varying elevations relative to the Iliamna airport and each other, the monitoring sites are expected to experience somewhat different meteorological conditions.

Figure B11. Iliamna Daily Extreme and Average High and Low Temperatures

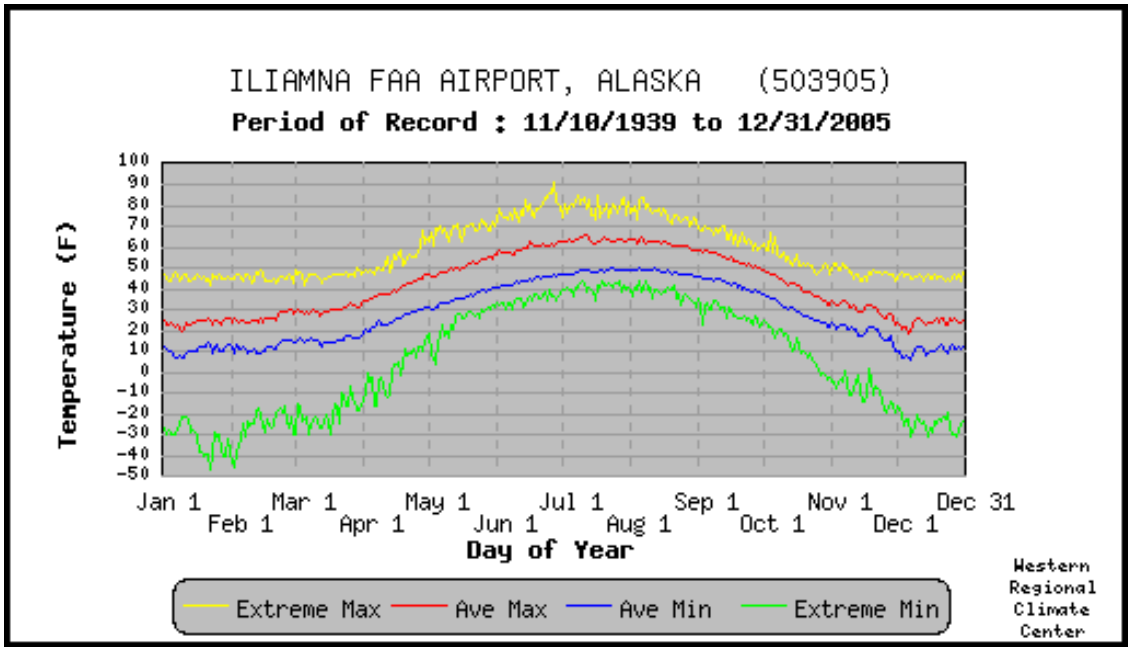


Figure B12. Iliamna Monthly Mean Precipitation

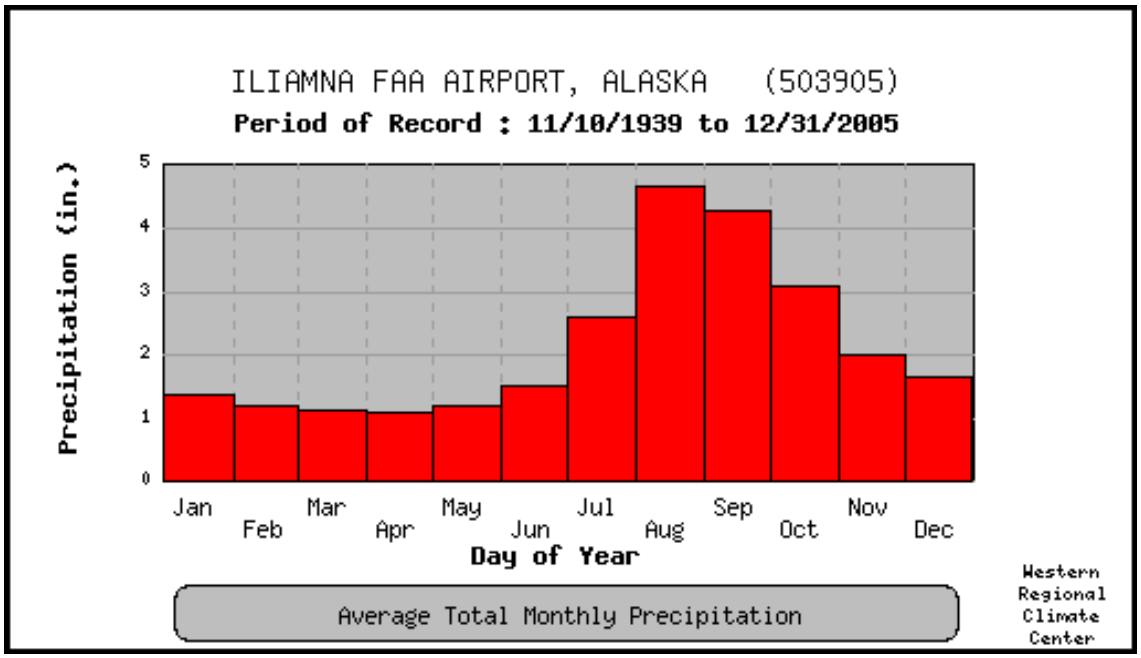
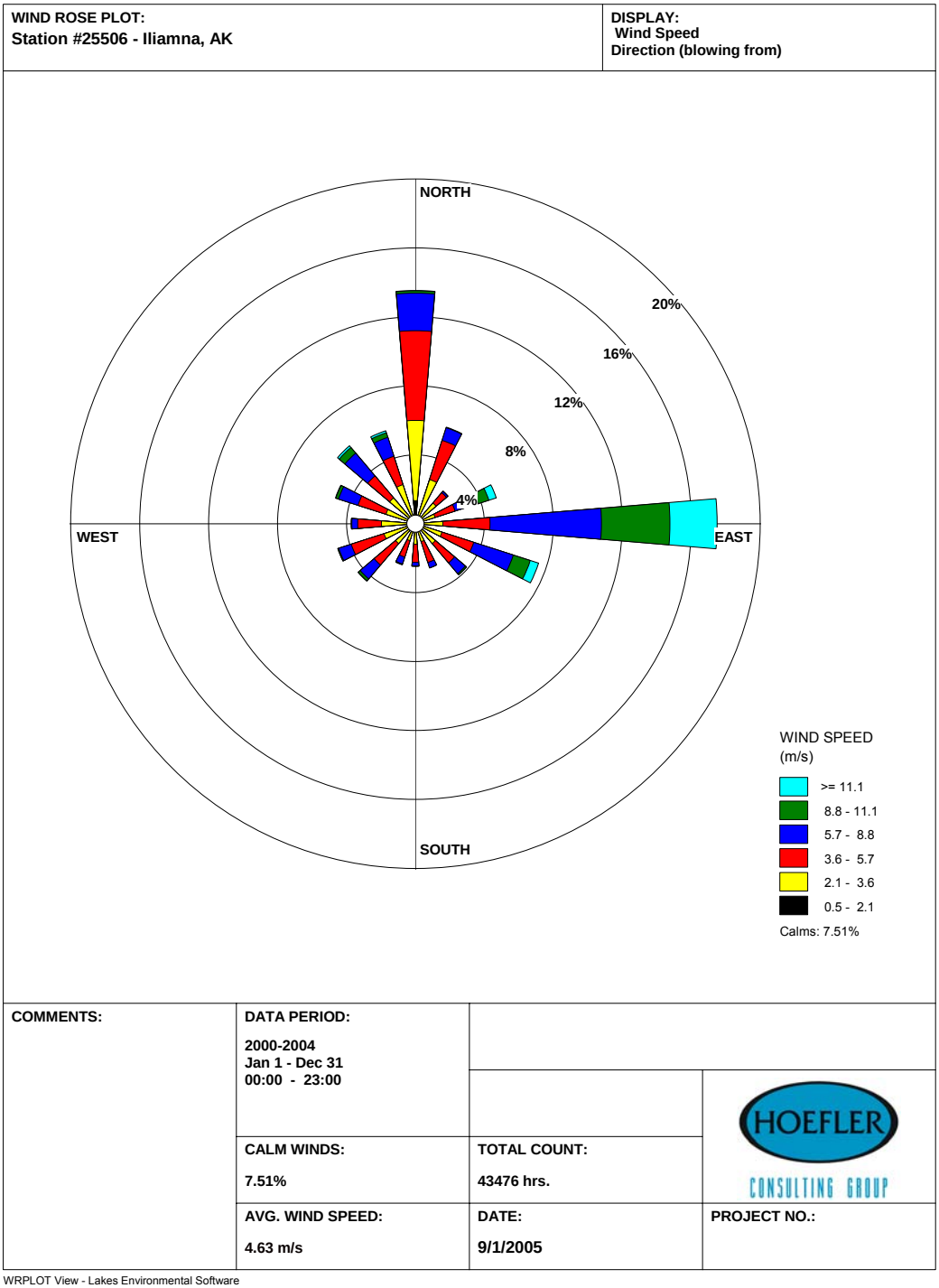


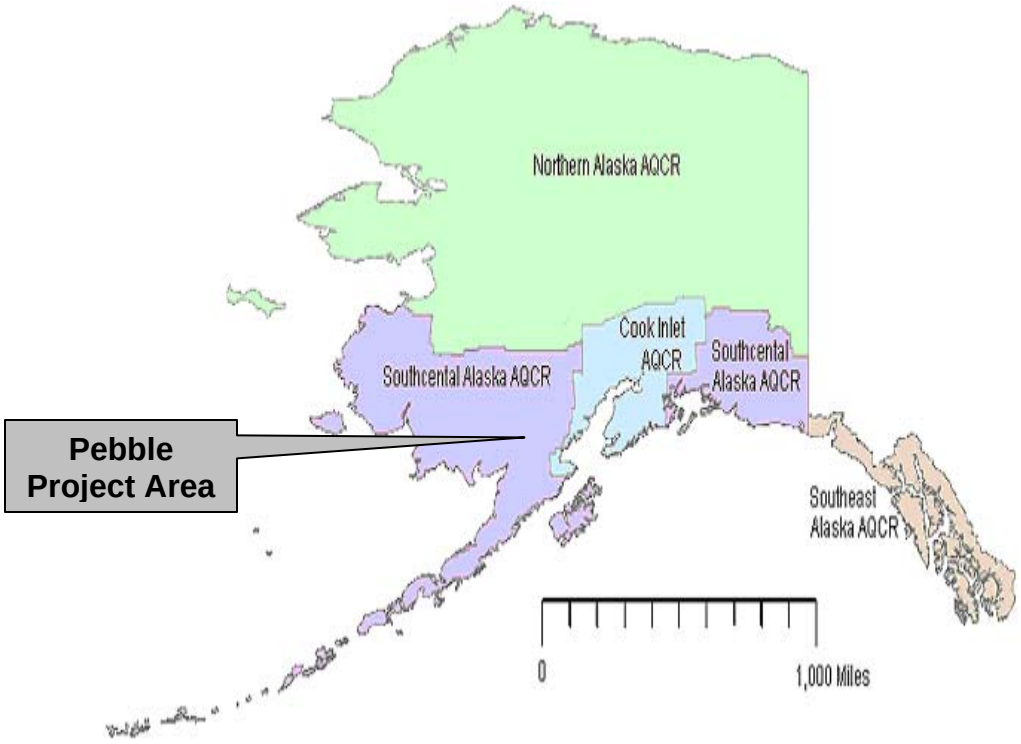
Figure B13. Iliamna Wind Rose



B9.2 Land Use

The Pebble Project study area is in a remote region of southwestern Alaska. The Pebble Port location lies within the boundaries of the Cook Inlet Air Quality Control Region (AQCR), as shown in Figure B14. The Pebble Project mine area lies within the boundaries of the Southcentral AQCR, as shown in Figure B14.

Figure B14. Alaska Air Quality Control Regions



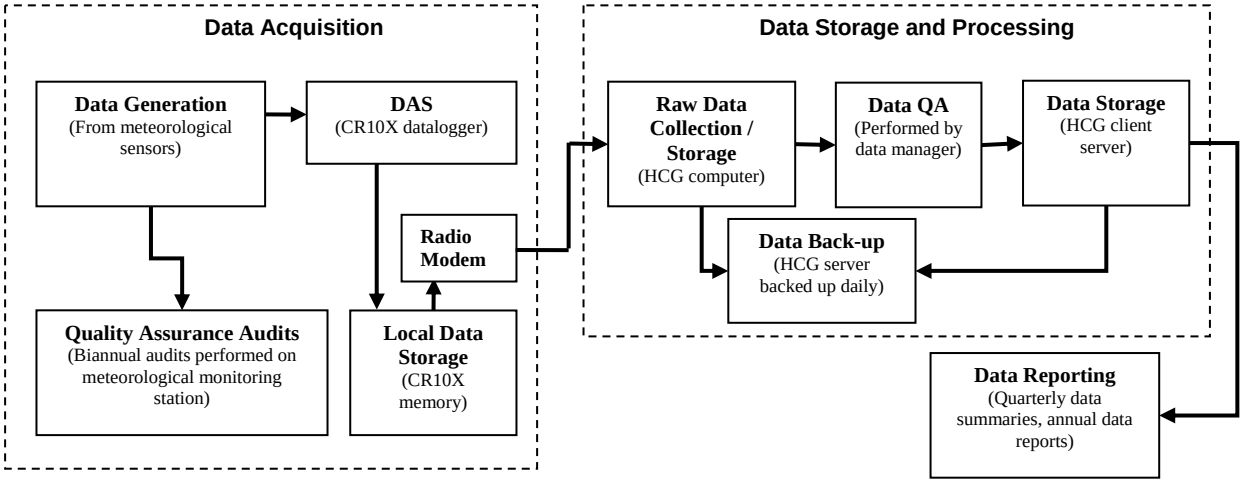
The map in Figure B15 shows the Class I areas in Alaska. The map reference to Denali National Park and Preserve is actually "Denali National Park including the Denali Wilderness but excluding the Denali National Preserve", as per 18 AAC 50.015. The Pebble Project area is within a Class II area and has been designated attainment or unclassifiable for all criteria pollutants. The Tuxedni Wilderness Area is the closest Class I area, which lies approximately fifty miles away from the proposed Pebble Port site, and ninety miles away from the Pebble Project mine area.

Figure B15. Alaska Class I Areas

B10. Data Management

The proper management of all data associated with this project is critical to assuring the quality and usability of the monitoring results. Therefore, procedures will be implemented to ensure adequate data acquisition, validation, transmission, reduction, reporting, and storage of electronic and hard copy data. Summaries of the procedures to be implemented in the field and in the laboratory for data management are provided in the following sections. Overall data processes are described in Figure B16, the Data Processes Flow Chart.

Figure B16. Data Processes Flow Chart



B10.1 Data Acquisition

Data acquisition will include the daily collection of electronic data, the generation of hand-written or typed audit and calibration records, and the compilation of previously prepared records (e.g., NIST traceability records). A Campbell Scientific CR10X datalogger will be used to collect and store the continuous meteorological data. Freewave wireless and SixNet telephone modems will be used to contact the stations remotely via a designated monitoring computer at HCG's Anchorage office. Station data will be downloaded on a daily basis. Field staff and the station auditor will generate written or typed records. These records will be kept according to the prescribed format. Additional records pertaining to this project that have been generated by other organizations will also be collected and stored at the HCG Anchorage main office as necessary.

B10.2 Data Validation

Meteorological data will be reviewed every work day by the HCG data manager or designated qualified personnel and screened using the recommended criteria in *Meteorological Monitoring Guidelines for Regulatory Modeling Applications* (EPA-454/R-99-005), Table 8-4. Site specific Microsoft Access databases and Excel spreadsheets will be used to store, review, and compare data to EPA critical criteria.

During each site visit, HCG Field Technicians will be responsible for verifying the condition of the monitoring site. All site visits will be documented by means of a site visit memo kept

with the project files. Alternately, the site visit may be documented in a designated station log book. These field notes will include the following:

- Time, date, current meteorological conditions, and personnel at the monitoring site;
- Activities completed during visit; and
- As-found and as-left observed conditions of monitoring site equipment.

The data manager or their designee will review all records received from the field. Problems or irregularities in the records will be brought to the attention of HCG Field Technicians for further clarification. If the documentation is not sufficiently defensible, the affected data will be invalidated.

B10.3 Data Transmission

Meteorological data will be collected daily by electronic transmission to the HCG Anchorage office. Original forms, check lists, and other records will be stored upon receipt at the HCG main office until the end of the monitoring period. A description of the equipment implemented in the monitoring site telemetry is included in the above section B10.1.

B10.4 Data Reduction

All electronic calculations and statistical analyses will be performed using standard software packages (e.g., MINITAB, Excel, and WRPLOT view) that can be easily verified and audited. Preliminary data reduction to hourly data averages is performed by the CR10X datalogger.

B10.5 Data Reporting

Data generated for this project will be routinely summarized and presented to NDM as described in Section C2. The data will also be submitted to ADEC for review and approval in anticipation of using the meteorological data to meet the air dispersion modeling requirements for a minor source air construction permit application.

B10.6 Data Storage

All project documentation, records, data, and reports will be maintained at HCG for a period of at least five years from the completion of the project. Electronic data on the HCG servers are backed up at least once daily and will be archived at a minimum of two separate locations.

B10.7 Data Use in Modeling

The meteorological data collected during this project will be used for air dispersion modeling using EPA approved AERMOD and CALPUFF models.

C. Assessments and Oversight

C1. Assessments and Response Actions

Data Quality Assessments will be performed on all collected data. Data reviews will be conducted by HCG staff to determine whether the data are reasonable and representative through an independent audit program. Data that are determined to be unreasonable or unrepresentative will be identified, flagged, and discussed in the data reports. The independent audit program for the Pebble Project will consist of semi-annual performance audits and annual systems audits. The audits will be conducted by HCG staff and will be independent of the staff operating the monitoring network. In addition, audits will be conducted using equipment independent of that used for instrument calibrations. The auditor will use a pre-formatted audit form and follow established audit standard operating procedures provided in Appendix B.

C1.1 Performance Audits

Performance audits of the meteorological sensors will be conducted within thirty days of the project start, semi-annually thereafter, and within thirty days of project completion. Performance audits for meteorological sensors will be conducted by collocating independent meteorological sensors with those being used for the monitoring program. The audit sensors will be provided by the station auditor. Performance audits will serve the monitoring program with a measure of quality assurance for meteorological sensors and a means to produce a defensible data set. The performance audits will be conducted in accordance with the procedures outlined in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 8 (EPA-454/R-99-005). The QA auditor will conduct the performance audits. An outline for the audit equipment and procedures on all meteorological sensors used for this study is listed in Table C1.

C1.2 Systems Audits

In the *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 8 (EPA-454/R-99-005), and *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*, Section 7 (EPA-450/4-87-007), EPA recommends that a systems audit be conducted to assess compliance with established regulations governing the collection, analysis, validation, and reporting of meteorological monitoring for PSD. A systems audit is an independent review of program procedures and files to assess conformance to established plans, SOPs, and protocols (see Appendix B). Systems audits for this project will be conducted no later than 30 days after project startup and annually thereafter. The systems audit will evaluate the complete measurement system from data collection through data reporting. The evaluation will also include all off-site data handling and evaluate the management process.

The systems audit is also an on-site qualitative review of the operational procedures of the monitoring program. The audit will ensure that all procedures for the monitoring program (field operations, data reporting, and data management) are being followed and that the data being collected meet the DQOs for the program as described in Section A7. Items reviewed during the systems audit include:

- Quality assurance procedures and documentation;
- Station installation and operation procedures;
- Calibration procedures and documentation for monitoring equipment;
- Documentation of log books and data sheets;
- Completion and documentation of on-site quality assurance procedures; and
- Review of prepared data sets.

After completion of the audit, a debriefing will be conducted with the participants to discuss preliminary audit results. The results of this audit will then be formally compiled in an audit report with observations of strengths and deficiencies, and recommendations for improvements. The audit report will be submitted by the auditor to the NDM and HCG project managers within 30 days. The HCG project manager will ensure that any necessary corrective actions are implemented in a timely manner. Audit forms and further information on system audits are provided in Appendix B.

Table C1. List of Performance Audit Equipment and Procedures

Meteorological Variable	Make/Model	Audit Method	NIST Traceable Audit Tool Used	Frequency of Audit	Procedure
Wind Speed	Climatronics F460/ RM Young 05305-AQ	Synchronous motor comparison	RM Young 18801 Anemometer Drive	Semiannually	See SOP in Appendix B
Wind Direction	Climatronics F460/ RM Young 05305-AQ	Fixed linearity test	Climatronics F460/ RM Young 05305 linearity test fixture	Semiannually	See SOP in Appendix B
Ambient Temperature and Delta T	Met One 062-MP	Co-located temperature immersion bath comparison	Control Company Traceable 4000 series thermometer	Semiannually	See SOP in Appendix B
Solar Radiation	Li-Cor LI200SZ	Co-located sensor comparison	Eppley Labs PSP	Semiannually	See SOP in Appendix B
Barometric Pressure	Vaisala PT101B	Co-located sensor comparison	Pretel Altiplus A2	Semiannually	See SOP in Appendix B
Relative Humidity	Vaisala HMP45ASP	Co-located sensor comparison	Vaisala HMI41	Semiannually	See SOP in Appendix B
Precipitation	ETI NOAH II	Volumetric drip comparison	Nova Lynx 260-2595 Tipping Bucket Rain Gauge Calibrator	Semiannually	See SOP in Appendix B
Evaporation	Nova Lynx 255-100	Water height comparison	Precision Tape Measure	Semiannually	See SOP in Appendix B

C1.3 Corrective Actions

All deficiencies identified during audits and site visits will be recorded and reported to the project manger no later than seven working days of discovery. Corrective actions to rectify deficiencies will be addressed and documented in a Corrective Action Form (see Appendix

B) and on the audit reports. Corrective actions will also be discussed in the annual data reports.

Based on the review of the systems audit, it may be necessary to revise this QAPP. The QAPP revisions will address any project deficiencies stated in the system audit. The project manager and permitting manager will make any necessary changes and the revised QAPP will be submitted to ADEC for approval.

C1.4 QAPP Revisions

After submittal and approval, any needed revisions of the NDM QAPP will be brought to the attention of the HCG project manager. Appropriate actions will be taken on any needed revisions and a revised version of the QAPP will be submitted to ADEC and NDM.

C2. Reports to Management

In accordance with ADEC reporting guidelines, quarterly data summaries and annual data reports will be prepared by HCG and provided to NDM and ADEC. Two separate annual data reports will be prepared, one for each monitoring year. All quarterly data summaries and annual data reports will be submitted to ADEC after ADEC has received the QAPP.

Quarterly data summaries will be prepared by HCG in accordance with the format described in *PSD Ambient Air Quality & Meteorological Monitoring Quarterly Data Summary Format* (ADEC, March 2005) and provided to NDM and ADEC within 30 days after the completion of each calendar quarter.

The final annual data report will conform to format requirements in *PSD Quality Ambient Air Quality & Meteorological Monitoring Annual Data Report Format* (ADEC, March 2005) and be provided to NDM and ADEC within 90 days after completion of the monitoring period. This report will summarize the monitoring data for the entire period, including monthly, quarterly, and annual averages for all measured parameters. This report will also include the following:

- Data capture statistics for the meteorological sensors;
- Explanations for any missing or flagged data;
- Summaries of maintenance activities;
- Results of calibrations and audits;
- Raw data and calculations used for calibrations and audits; and
- Copies of site visit notes.

D. Data Validation and Usability

D1. Data Review, Validation, and Verification Requirements

D1.1 Data Review

As meteorological data are periodically received over the monitoring year, the data manager will review the incoming data and make comparisons to the standards discussed in Section B10.2 of this document. During each quarter, the data will be reviewed again by a certified staff meteorologist to ensure that the data are complete, accurate, and representative and that erroneous data have been removed in preparation for the final data report. All other documentation pertaining to this monitoring project (e.g., trip reports, audit and calibration data sheets) will be reviewed upon receipt to ensure that all forms are completed prior to acceptance and for further use in this project. Table D1 summarizes the data review for this monitoring project.

Table D1. Data Review List for the Pebble Project

Type of Data Generated	Method for Acceptance	Data Review	Review Frequency	Person Responsible for Data Review	Project Specific Calculations
Raw Data	Calibrated DAS	n/a	Every Work Day	Project and data manager	Delta T and Wind Sigma
QA Reviewed Data	Data Review	MS Excel and Access Databases screening for EPA PSD criteria	Each Work Day	Project and data manager	n/a
Quarterly Data Summary	HCG permitting manger review	MS Excel and Access Databases screening for EPA PSD criteria	Quarterly	Project and data manager	Quarterly data capture statistics
Annual Data Report	HCG permitting manger review	MS Excel and Access Databases screening for EPA PSD criteria	Annual	Project and data manager	Quarterly and annual data capture statistics

D1.2 Data Calculations

Meteorological data collected for this project will be used for air dispersion modeling. Atmospheric stability, commonly determined using the solar radiation-delta temperature (SRDT) method, will be calculated using the EPA approved AIRMET Program.

D2. Validation and Verification Methods

Data validation refers to the review process in which data are screened for errors and anomalies. All data for this meteorological monitoring program will be validated only after being screened by the criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Table 8-4 (EPA-454/R-99-005).

Semiannual audits and calibrations will be performed on the station to ensure that all sensors are operating within the tolerances suggested by the manufacturer and the EPA. During each site visit, the station operator will be responsible for recording any anomalies or significant events and bringing them to the attention of the data manager. Copies of the site visit memos will also be provided to the data manager.

For this project two types of wind sensors are being used to provide redundant data. The RM Young 05305-AQ wind sensor uses a combined propeller anemometer and vane assembly, and the Climatronics F-460 wind sensor uses a three cup-type anemometer with a separate vane-style wind direction sensor. The RM Young sensor can be somewhat less susceptible to rime ice build-up and is therefore used as a back-up wind measurement sensor. In cases when the Climatronics wind sensor data fails to meet the DQO goal of 90% quarterly data capture, the back-up RM Young wind data will be used, if deemed necessary and applicable. Both the primary and back-up wind sensors will have the same level of quality assurance checks as outlined in Sections B5 and B6.

The data manager will review data at least once each work day to check for irregularities in all measured parameters. Any suspicious data will be investigated.

D3. Reconciliation with User Requirements

The objective of this monitoring program is to collect surface meteorological data needed for engineering design and environmental purposes, including water balance studies, and for the preparation of the air quality construction permit applications for the mine, road, and port sites. Although the mine, road, and port facilities may not require a PSD permit, PSD-quality data will be collected to support the required computer-based dispersion modeling. HCG will conduct an annual or final review at the completion of the monitoring project and report the results obtained during the reporting period. These reports will be compared with the established DQOs to ensure that the scope of the project has been met.

The reconciliation of data for this project will be determined by the data validation and verification process as discussed in Section D2 of this document and based upon the five step Data Quality Assessment (DQA) plan recommended in *Guidance for Data Quality Assessments* (EPA QA/G-9):

1. A review of the DQOs and sampling design will be conducted by the permitting manager to assure meteorological outputs from this program are still applicable. If DQOs have not been developed, the permit manager will specify DQOs before evaluating the data. The permitting manager will also review the sampling design and data collection documentation for consistency with the DQOs.
2. A Preliminary Data Review will be conducted by the permitting manager. The manager will review QA reports, calculate basic statistics, and generate graphs of the data. This information will be used to determine data structure and identify patterns, relationships, or potential anomalies.
3. A statistical test will be selected that is most appropriate for summarizing and analyzing the data, based on the review of the DQOs, the sampling design, and the preliminary data review. The permitting manager will identify the key underlying assumptions that must hold for the statistical procedures to be valid.
4. Given the actual data and other information about the study, the permitting manager will evaluate whether identified assumptions will hold, or whether departures are acceptable.
5. Conclusions from the statistical calculations will be evaluated to determine if the monitoring design and its created data meet the required permits for the statistical test. This determination will be documented, as well as the inferences drawn as a result of these calculations. If the design is to be used again, an evaluation will be made on the performance of the sampling design.

If the preliminary data review reveals that data sets are inconsistent with the DQOs, or the underlying assumptions of the statistical test are not supported by the data and fail to meet the criteria/objectives of this monitoring project, then the permit manager and project manager will reconsider the project design as described in this QAPP.

APPENDIX A
PROGRAM REFERENCES

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APPENDIX B
STANDARD OPERATION PROCEDURES AND FORMS

APPENDIX B1
STANDARD OPERATION PROCEDURES

Calibration Procedure for Climatronics F460 Wind Speed and Wind Direction Sensors

1.0 Introduction

Calibration of Climatronics F460 type wind speed and wind direction sensors (hereafter referred to as F460 sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for an F460 sensor requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

The calibration is comprised of the determination of sensor responses to known input values, maintenance and adjustment of the sensors responses if warranted, and the documentation of all adjustments and responses.

Items required for the calibration of an F460 are as follows:

1. RM Young 18801 (or similar model) anemometer drive
2. Climatronics F460 linearity test fixture
3. PC or similar display module
4. Tripod mounted, survey grade compass and/ or pre-determined bearings to landmarks.
5. F460 manual

The calibration will begin by filling out the first part of the wind speed and wind direction calibration forms, noting the time, date, calibrator, and any witnesses.

1.1 System Inspection

Before determining the initial response of a F460 inspect the cable, cups, vane, and bearings for damage, open the outer cuff of the sensor and look for condensation inside. Note these observations on the Wind Speed Calibration Form.

2.0 Wind Speed Calibration Procedures

2.1 Pre-adjustment System checks

A system response check is performed by the use of an RM Young 18801 (or similar model) anemometer drive. The cups are removed from the sensor shaft and the anemometer drive is attached. The sensor is then challenged at the speeds specified on the Wind Speed Calibration Form. The speeds measured by the datalogger for each specific revolution per minute (rpm) are compared to the calculated values. The equation for calculating wind speed as a function of anemometer drive rpm is given on the Wind Speed Calibration Form.

2.2 Maintenance and Adjustments

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the F460 instrument manual.

2.3 Post-Adjustment Checks

If any maintenance or adjustments were performed, the steps listed in Section 2.1 of this procedure should be repeated and recorded on the Wind Speed Calibration Form. Results of the post adjustment checks should be closely evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

3.0 Wind Direction Calibration Procedures

3.1 Sensor Orientation

After the system is inspected, a check of the wind vane orientation is performed. The two methods for an orientation check of the wind vane are as follows:

<u>Compass</u>

1. Determine declination for the area using a Geomag type program with the most recent models of the earth's magnetic field.
2. Use a clamp fashioned from a band clamp and rubber tubing to fix the wind vane in various directions. In medium to high winds a vane with the "tail" removed may have to be used as to not damage the wind vane.
3. Using a tripod mounted and leveled, survey grade compass align the compass so that it sights directly at the tail of the wind vane.
4. Obtain readings in each of the four quadrants of the compass.
5. Record the readings from the datalogger and the compass on the Wind Direction calibration form.

<u>Landmark</u>

1. Obtain a GPS point directly under the wind direction sensor.
2. Using a mapping program (eg: TOPO!, allTOPO, or similar) with USGS datasets as its base files, obtain bearings to nearby defined landmarks.
3. Clamp and site the vane tail at the appropriate landmark and record the reading from the datalogger.

3.2 System Linearity Check

Using a Climatronics F460 linearity test fixture test the sensor at 30° intervals. Record the readings from the datalogger at each interval on the Wind Direction Calibration Form and compare to the expected values. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 5° (accuracy) and ≤ 3° mean absolute error (linearity). Mean absolute error is calculated by the the following equation: equation.

$$\sum \frac{|X|}{n}$$

Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

3.3 Maintenance and Adjustment

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/ or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the F460 instrument manual. If the orientation was incorrect, the alignment of the cross arm will need to be adjusted following the linearity check.

3.4 Post Adjustment Checks

After all maintenance and adjustments have been made, the steps listed in Sections 3.2 and 3.1 of this document should be repeated, respectively. All results should be recorded On the Wind Direction Calibration Form. Results of the post adjustment checks should be evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

4.0 Conclusion

At the conclusion of the calibration, complete all calibration forms noting any adjustments made, maintenance performed, and corrective actions taken, if any. Note the specific time which the calibrations for the wind speed and direction sensors began and ended. Sign and date the calibration form under any comments made.

Audit Procedure for Wind Speed and Wind Direction Sensors

1.0 Wind Speed

The required instruments to complete a wind speed audit are a torque watch, and anemometer drive.

The audit procedure is as follows: A system response check is performed by the use of an RM Young 18801 (or similar model) anemometer drive. The cups are removed from the sensor shaft and the anemometer drive is attached. The sensor is then challenged at the speeds specified on the Wind Speed Audit Form. The speeds measured by the datalogger for each specific rpm are compared to the calculated values. The equation for calculating wind speed as a function of anemometer drive rpm is given on the Wind Speed Audit Form. The absolute difference from expected values is then calculated to see if the values agree within ±0.5 mph or 5% of observed.

The starting torque should be measured with a torque watch, and recorded on the Wind Speed Audit Form. If the sensor starting torque is above 0.0049 oz-in the bearings may need to be cleaned, oiled, or replaced.

2.0 Wind Direction

The process for auditing a wind direction sensor is described below:

<u>Compass</u>

1. Determine declination for the area using a Geomag type program with the most recent models of the earth's magnetic field.
2. Use a clamp fashioned from a band clamp and rubber tubing to fix the wind vane in various directions. In medium to high winds a vane with the "tail" removed may have to be used as to not damage the wind vane.
3. Using a tripod mounted and leveled, survey grade compass align the compass so that it sights directly at the tail of the wind vane.
4. Obtain readings in each of the four quadrants of the compass.
5. Record the readings from the datalogger and the compass on the Wind Direction calibration form.

<u>Landmark</u>

4. Obtain a GPS point directly under the wind direction sensor.
5. Using a mapping program (eg: TOPO!, allTOPO, or similar) with USGS datasets as its base files, obtain bearings to nearby defined landmarks.
6. Clamp and site the vane tail at the appropriate landmark and record the reading from the datalogger.

2.1 System Linearity Check

Using a linearity test fixture appropriate for the sensor, test the sensor at 30° intervals. Record the readings from the datalogger at each interval on the Wind Direction Audit Form and compare to the expected values. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 5° (accuracy) and ≤ 3° mean absolute error (linearity). Mean absolute error is calculated by the equation 1.0.

$$\sum \frac{|X|}{n}$$

Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

Calibration Procedure for MetOne 062 Temperature Sensors

1.0 Introduction

MetOne 062 temperature sensors (hereafter referred to as temperature sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for a temperature sensor requires an initial calibration check, and calibrations every six months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for temperature sensor calibration is as follows:

1. Calibrated, certified, NIST traceable thermometer.
2. Thermal mass unit and or ice, warm, and hot water bath.
3. PC or similar display module.
4. MetOne 062 manual

The calibration should start by completing the top of the Temperature Sensor Calibrations Form.

1.1 System Inspection

Before determining the initial response of the temperature measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Temperature Sensor Calibrations Form.

2.0 Pre-adjustment Calibration Procedures

2.1 System Response Check

The system response check is performed by comparing the sensor response with that of a calibrated NIST traceable thermometer for at least three different temperatures. The ideal temperatures to compare the sensors at are cold, warm , and hot. The cold, warm, and hot temperatures should be about 0˚C, 15-25˚C, and 30-40˚C, respectively. These temperatures can be obtained through the use of three small insulated thermoses. An ice bath should be used for the cold temperature range. For the warm and hot temperatures warm and hot water should be used. The thermometer and temperature sensor should be collocated as closely as possible by taping the sensors together. After allowing time for the temperature readings to stabilize, the technician will record the calibration and datalogger values on the Temperature Sensor Calibration Form. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 0.5° (accuracy) and no more than ± 0.1˚ for temperature difference between matched sensors in a delta temperature measurement system. Mean absolute error is

calculated by the equation 1.0. Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

$$\sum \frac{|X|}{n}$$

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks, the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Since a true calibration of the sensor cannot be performed unless the sensor is checked across its full range, a sensor not conforming to the calibrated NIST thermometer will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Temperature Sensor Calibration Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for Temperature Sensors

The temperature sensors should be removed from the aspirators and checked at three temperature points. The system response check is performed by comparing the sensor response with that of a calibrated NIST traceable thermometer for at least three different temperatures.

The ideal temperatures to compare the sensors at are cold, warm, and hot. The cold, warm, and hot temperatures should be about 0˚C, 15-25˚C, and 30-40˚C, respectively. These temperatures can be obtained through the use of three small insulated thermoses. An ice bath should be used for the cold temperature range. For the warm and hot temperatures warm and hot water should be used. The thermometer and temperature sensors should be collocated as closely as possible by taping the sensors together. Agitate each thermos to equilibrate the medium and remove any local temperature gradients, then record the audit sensor and datalogger values on the Temperature Sensor Audit Form.

The auditor should then compare all values recorded for the temperature sensors to the standards listed on the Temperature Sensor Audit Form. The standard for temperature sensors is ±0.5˚ of observed, and ±0.1˚ for temperature difference between matched sensors in a delta temperature measurement system.

Field Calibration Check for a Li-Cor LI200X Pyranometer

1.0 Introduction

LiCor LI200X pyranometers (hereafter referred to as pyranometers) are calibrated at the factory before receipt. Therefore, the calibration schedule for a pyranometer requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

True calibration of a pyranometer is only accomplished in full mid-summer sun, on a perfectly clear day. This calibration should also last 2 full diurnal cycles. Since these conditions are rarely possible to meet in Alaska calibration field checks rather than true calibrations of pyranometers are performed.

A field calibration check is comprised of the comparison of the pre-adjustment responses to the responses obtained from a collocated, calibrated NIST traceable pyranometer, adjusting or performing needed maintenance on the pyranometer, and documentation of all collected data and adjustments made.

Equipment required for calibration is as follows:

1. Calibrated NIST traceable pyranometer.
2. Datalogger capable of the same scan and averaging frequency as the datalogger being used on-site.
3. All associated instrument manuals.

The calibration should be started by completing the top of the Solar Radiation Sensor Calibration Form.

1.1 System Inspection

Before determining the initial response of the solar radiation system, inspect the signal cable and pyranometer. Check the cable for signs of wear. Check that the pyranometer is level and free of dust. Record these findings in the Solar Radiation Sensor Calibration Form.

2.0 Pre-adjustment Systems Check

This check requires that the solar radiation sensor is in it's normal operating mode. The first part of the check consists of totally covering the sensor to exclude all light. Observe and record the output from the datalogger (which should be approximately zero) in the Solar Radiation Sensor Calibration Form. Next check the ambient light condition output for the sensor and calibration sensor. Record these values in the Solar Radiation Sensor Calibration Form.

Pre-adjustment Collocated Transfer Standard (CTS) Check

Set-up and level the CTS as near as practical to the site pyranometer. Record the concurrent values for the site and CTS pyranometer. Ideally, the CTS should be collecting data for the entire time the technician is on-site. These data should be collected at the same scan rate, and averaged at the same interval as the site pyranometer. Ideally a full diurnal cycle of concurrent readings from the site pyranometer and CTS should be taken.

In practice, the calibration technicians time on-site is limited due to the remoteness and access of monitoring sites in Alaska. Therefore, at least four averaging periods of the site and CTS should be used. That is, if the site datalogger is set to record hourly averages of solar radiation data, four hours of data should be taken form the site datalogger and the CTS. Record the solar radiation data, averaging interval, and all other pertinent information in the Solar Radiation Sensor Calibration Form. If possible check the linearity of the instrument by fitting a curve and checking the slope, intercept, and R^2 value of the Y = X line.

3.0 Maintenance and Adjustments

At this point in the field calibration check the technician should review the results of the system inspection, system check, and CTS check to determine if the sensor is operating within its acceptable limits, and establish what maintenance and adjustments are required, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Any maintenance and adjustments performed should be noted in the Solar Radiation Sensor Calibration Form.

4.0 Post-adjustment Checks

If any maintenance or adjustments were performed, the steps listed in Sections 3.0 and 4.0 of this procedure should be repeated and all data noted in the Solar Radiation Sensor Calibration Form. The results of the post-adjustment checks should be evaluated and noted. If the results do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted. If the site pyranometer cannot be calibrated properly the unit may have to be replaced and sent back to the factory for repair.

5.0 Conclusion

Upon completion of the field calibration check, the Solar Radiation Sensor Calibration Form should be completed. Any adjustments, maintenance or repairs made should be noted. Sign and date the calibration form underneath any notes made in the comments section.

Solar Radiation Sensor Audit Procedure

Performance audits of a solar radiation system require a separate datalogger and a calibrated, NIST traceable pyranometer to serve as a collocated transfer standard (CTS). Procedure for the solar radiation system audit is as follows:

1. Set-up and level the CTS as near as practical to the site pyranometer.

2. Fill in the information of the top portion of the Solar Radiation Audit Form.

3. Record concurrent values for the site and CTS pyranometers for at least four of the site averaging intervals (generally 4 hours).

Ideally a full diurnal cycle of concurrent readings from the site pyranometer and CTS should be taken. However, In general practice the auditors time on-site is limited due to the remoteness and access of monitoring sites in Alaska. Therefore, at least four averaging periods of the site and CTS should be used. That is, if the site datalogger is set to record hourly averages of solar radiation data, four hours of data should be taken form the site datalogger and the CTS. Record the solar radiation data, averaging interval, scan rate, and all other pertinent information in the Solar Radiation Sensor Audit Form.

Calculated the percent difference according to the following equation and record the results in the Solar Radiation Sensor Audit Form.

$$\textit{Percent Difference} = \frac{\textit{(Observed value) - (Audit Value)}}{\textit{(Audit Value)}}$$

If possible check the linearity of the instrument, as compared to the CTS by fitting a curve and checking the slope, and intercept, of the Y = X line. To pass the audit the measures values should be within ±5% of observed (slope) and ±10 Wm^{-2} (intercept).

Calibration Procedure for Vaisala HMP- 45 Type Relative Humidity Sensors

1.0 Introduction

Vaisala HMP-45 type relative humidity sensors (hereafter referred to as relative humidity sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for a relative humidity sensor requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for relative humidity sensor calibration is as follows:

1. Calibrated, certified, NIST traceable relative humidity sensor.
2. PC or similar display module.
3. Vaisala HMP-45 type sensor manual

The calibration should be started by completing the top of the Relative Humidity Sensor Calibrations Form.

1.1 System Inspection

Before determining the initial response of the relative humidity measurement system, inspect the signal cable and sensor for signs of damage and wear. Open the sensor cover to look for signs of water condensation on the circuit board. Note these observations in the Relative Humidity Sensor Calibrations Form.

2.0 Pre-Adjustment Sensor and System Check

The system and sensor check of a relative humidity sensor is performed by comparing the sensor response with that of a calibrated NIST traceable relative humidity sensor such as a Vaisala HMI-41, to serve as a collocated transfer standard (CTS). Collocate the CTS as near to the site remative humidity sensor as possible. For aspirated temperature measurements, the sensor should be collocated inside, or just outside the bottom of the aspirator to receive the same amount of airflow and solar shielding as the site relative humidity senor. Five concurrent, instantaneous readings should be recorded, at least minute apart. Record these values on the Relative Humidity Sensor Calibrations Form.

Next calculate the absolute percent difference for each values and record the results in the Relative Humidity Sensor Calibrations Form. These instantaneous values should agree with the values from the CTS within ±5%.

Calculate the dew point temperature for each of the five points taken. Dew point temperature or T_d should be calculated according to the following equation:

Note: this equation is only valid for the following conditions:

0 °C < T < 60 °C
0.01 < RH < 1.0
0 °C < T_d < 50 °C

Where:

T = temperature in degrees Celsius
RH = is the relative humidity as a fraction (not percent)
T_d = the dew point temperature to be calculated

The formula is:

$$T_d = \frac{b\,\gamma(T, RH)}{a - \gamma(T, RH)}$$

where

$$\gamma(T, RH) = \frac{a\,T}{b + T} + \ln RH$$

and

a = 17.27
b = 237.7 °C

The recommended system accuracy for dew point temperature is ±1.5°C of observed

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Since a true field calibration of the sensor can rarely be performed any sensor not conforming to the calibrated NIST relative humidity sensor will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 of this document should be repeated and the results recorded in the Relative Humidity Sensor Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Relative Humidity Sensor Audit Procedure

Equipment needed for a relative humidity sensor audit includes a calibrated, NIST traceable, Vaisala HMI-41 or similar type relative humidity and temperature probe. This probe will serve as a collocated transfer standard (CTS).

The process for relative humidity as dew point audit procedure is as follows:

Collocate a calibrated NIST traceable relative humidity sensor such as a Vaisala HMI-41. Collocate the CTS as near to the site relative humidity sensor as possible. For aspirated temperature measurements, the sensor should be collocated inside, or just outside the bottom of the aspirator to receive the same amount of airflow and solar shielding as the site relative humidity sensor.

After the CTS has been given ample time to equilibrate five concurrent, instantaneous readings should be recorded, at least minute apart. Record these values on the Relative Humidity Sensor Audit Form.

Calculate the dew point temperature for each of the five points taken. Dew point temperature or T_d should be calculated according to the following equation:

Note: this equation is only valid for the following conditions:

0 °C < T < 60 °C
0.01 < RH < 1.0
0 °C < T_d < 50 °C

Where:

T = temperature in degrees Celsius
RH = is the relative humidity as a fraction (not percent)
T_d = the dew point temperature to be calculated

The formula is:

$$T_d = \frac{b\,\gamma(T, RH)}{a - \gamma(T, RH)}$$

where

$$\gamma(T, RH) = \frac{a\,T}{b + T} + \ln RH$$

and

a = 17.27
b = 237.7 °C

The recommended system accuracy for dew point temperature is ±1.5°C of observed.

Calibration Procedure for an ETI NOAH II Precipitation Gauge

1.0 Introduction

All ETI NOAH II precipitation gauges (hereafter referred to as precipitation gauges) are calibrated at the factory before receipt. Therefore, the calibration schedule for a precipitation gauge requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for precipitation gauges calibration is as follows:

1. NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder.
2. PC or similar display module with P7GACOMM
3. ETI NOAH II manual

The calibration should be started by completing the top of the Precipitation Gauge Calibrations Form.

1.1 System Inspection

Before determining the initial response of the precipitation measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Precipitation Gauge Calibrations Form.

2.0 Pre-Adjustment Checks

2.1 System Check

To ensure that the weight measurement assembly (WMA) is functioning, slowly pour an initial amount of water into the gauge and check for a response from the datalogger.

2.2 Gauge Check

A calibration is performed by inputting known amounts of water into the gauge using a NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder and checking the system response. Water is usually inputted into the gauge 800mL at a time, across the full range (4-12” liquid in gauge).

Water should be delivered to the gauge slowly, and poured onto the side of the gauge to buffer the flow. This will ensure that the sensitive load cell in the WMA does not become damaged.

After each bottle of water is added to the gauge, the measurement system should be given ample time to read. This value should be noted in the Precipitation Gauge Calibrations Form. The values should agree within ±10% of the expected. If possible check the linearity of the instrument by fitting a curve and checking the slope and intercept of the Y = X line.

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Due to limited time and marginal weather in the field a true field calibration of the sensor can rarely be performed. Therefore, any sensor not conforming to within ±10% of the expected values will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Precipitation Gauge Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for an ETI NOAH II Precipitation Gauge

An audit of an ETI NOAH II precipitation gauge is performed by inputting known amount of water into the gauge using a NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder. Water is usually inputted into the gauge 800mL at a time, across the full range (4-12" liquid in gauge).

Water should be delivered to the gauge slowly, and poured onto the side of the gauge to buffer the flow. This will ensure that the sensitive load cell in the weight measurement assembly (WMA) does not become damaged. Ample time should be given for the gauge to calculate and read the delivered amount of liquid.

After each bottle of water is added to the gauge, the system measurement should be noted in the Precipitation Gauge Audit Form. The values should agree within ±10% of the expected. If possible check the linearity of the instrument by fitting a curve and checking the slope, intercept, and R^2 of the Y = X line.

Audit procedure is as follows:

1. Fill out the top of the Precipitation Gauge Audit Form noting the prevailing meteorological conditions.

2. Deliver water to the gauge in measured increments across the full range of the gauge, noting the volume delivered, expected and system response, and percent error.

3. Compare the error of the gauge to the limit of ±10%.

For the gauge to pass the audit each point taken must agree to the expected value within ±10%. The slope, intercept, and R^2 value for the Y = X line should also agree within ±10% of expected.

Calibration Procedure for a Nova Lynx 255-100 Evaporation Gauge

1.0 Introduction

All Nova Lynx 255-100 evaporation gauge (hereafter referred to as evaporation gauge gauges) are calibrated at the factory before receipt. Therefore, the calibration schedule for an evaporation gauge requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for precipitation gauges calibration is as follows:

1. Large graduated cylinder or similar water delivery device
2. Ruler
3. PC or similar display module
4. Nova Lynx 255-100 manual

The calibration should be started by completing the top of the Evaporation Gauge Calibrations Form.

1.1 System Inspection

Before determining the initial response of the precipitation measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Evaporation Gauge Calibrations Form.

2.0 Pre-Adjustment Checks

2.1 System Check

To ensure that the float mechanism is functioning, slowly pour an initial amount of water into the gauge and check for a response from the datalogger.

2.2 Gauge Check

A calibration is performed by inputting known amounts of water into the gauge using a large graduated cylinder, measuring the height of the water in the evaporation pan, and checking the system response. Water is usually inputted into the gauge 800mL at a time, across the full range (3-9” liquid in gauge).

After each bottle of water is added to the gauge, the measurement system should be given ample time to read. This value should be noted in the Evaporation Gauge Calibrations Form. Check the linearity of the instrument by fitting a curve and checking

the slope and intercept of the Y = X line. These values should agree within ±10% of the expected.

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Evaporation Gauge Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for a Nova Lynx 255-100 Evaporation Gauge

An audit of an Nova Lynx 255-100 evaporation gauge is performed by inputting known amount of water into the gauge using a large graduated cylinder or similar type of water delivery device. Water is usually inputted into the gauge 800mL at a time, across the full range (3-9" liquid in gauge).

Water should be delivered to the gauge slowly and ample time should be given for the gauge to read and calculate the delivered amount of liquid.

After each bottle of water is added to the gauge, the system measurement should be noted in the Evaporation Gauge Audit Form. Check the linearity of the instrument by fitting a curve and checking the slope and intercept of the Y = X line. These values should agree within ±10% of the expected.

Audit procedure is as follows:

4. Fill out the top of the Evaporation Gauge Audit Form noting the prevailing meteorological conditions.

5. Deliver water to the gauge in measured increments across the full range of the gauge, noting the level of water in gauge and system response.

6. Compare the linearity of the gauge to the limit of ±10%.

For the gauge to pass the audit the slope and intercept of the Y = X line should agree within ±10% of expected.

Systems Audit Procedures for the Pebble Project Meteorological Monitoring Program.

1.0 Introduction

A systems audit is an on-site inspection and review of the quality assurance system used for the total measurement system (sample collection, sample analysis, data processing, ect.) for each monitored parameter. Whereas, performance audits are quantitative appraisal, system audits are normally a qualitative appraisal. The standard operating procedures (SOP) in the projects analysis plan should be used as the basis for conducting a system audit. The purpose of a system audit is to determine whether or not the monitoring program has followed the SOP and quality control procedures and listed in the projects analysis plan. It also determines if the data generated are scientifically valid, defensible, and of specified accuracy and precision.

2.0 Audit Items

The following are typical items checked in a systems audit for a PSD Meteorological Monitoring Program:

1. Is the quality assurance organization operational

2. Are there written standard operation procedures (SOP) available for site operation and sampling, and are they being followed?

3. Are there written calibration procedures and schedules, including traceability documentation, and are they being followed?

4. Are there preventative maintenance procedures and are they being followed?

5. Are site logbooks, site checks forms, and other documentation being used and properly completed?

3.0 Audit Goals

The goal of a systems audit is to ass the overall operation of the quality assurance system. System audits generally entail the following procedures:

1. Preparing audit questionnaires for the monitoring site evaluations (F/ST9001.1) and for evaluation of the office activities related to the monitoring (F/ST9001.2).

2. Identifying deficiencies from previous audits and preparing a checklist covering these areas.

3. Arranging entrance interviews and briefing the site operator on the purpose and the scope of the systems audit.

4. Performing the systems audit.

5. Conducting exit interviews and debriefing on the system audit results

6. Preparing and submitting audit reports

7. Following up on report recommendations.

A systems audit will be conducted within 30 days of the commencement of the filed program in order to insure that all of the QA project plans specified procedures have been implemented. An early assessment is designed to prevent the accumulation of a large amount of questionable to invalid data bay quickly uncovering any discrepancies between the project plan and the actual monitoring effort. Thereafter, a systems audit will be conducted yearly.

APPENDIX B2
AUDIT AND CALIBRATION FORMS

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

A. DAS TIME AUDIT

Instrument Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments:

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?

B. 2M, 10M, and ΔT, TEMPERATURE SENSOR AUDIT

Thermistor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Audit Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED THERMISTOR TEST									
Thermal Input			Station Response						
Temp Range	Target Deg C	Input Deg C	2M DAS Deg C	10M DAS Deg C	ΔT DAS Deg C	ΔT Error Deg C	2M Error Deg C	10M Error Deg C	Pass/ Fail?
Hot	35 - 40								
Warm	15 - 25								
Ice Bath	0								
				Max Abs. Error					

Instrument Limits: Max Absolute Error > 0.5°C (accuracy), Max Absolute Error > 0.1°C ΔT.
Comments:

C. RELATIVE HUMIDITY SENSOR AUDIT

Site Sensor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Audit Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED RELATIVE HUMIDITY SENSOR TEST							
NIST Readings			Station Response				
Temp Deg C	RH (%)	T_{dp} Deg C	DAS Temp Deg C	DAS RH (%)	DAS T_{dp} Deg C	Error Deg C	Pass/ Fail?
				Max Abs. Error			

Instrument Limits: Max Absolute Error > 1.5°C Dew Point Temperature
Comments:

C. MAIN HORIZONTAL WIND SPEED SENSOR AUDIT

Height: _____ **Meters**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Audit Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Audit Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	2.94				
200	5.60				
400	10.93				
1000	26.92				
2000	53.57				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >0.45 gm-cm (0.00625oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: MPS=RPM/37.522569+0.27; MPH=0.44704*MPS; gm-cm=72*oz-in; Torque=1.8*MPS^2.
Comments:

D. BACKUP HORIZONTAL WIND SPEED SENSOR AUDIT

Height: _____ **Meters**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Audit Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Audit Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	0.51				
200	1.02				
400	2.05				
1000	5.12				
2000	10.24				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >2.4 gm-cm (0.033oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: Transfer Function for RM Young Model 05305 AQ w/ carbon fiber propeller: m/s = rpm x 0.00512
Comments:

E. HORIZONTAL WIND DIRECTION SENSOR AUDIT

Height: _____ **Meters**

Wind Dir Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Vane #:** _____ **Range:** _____ **Deg**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
Audit Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >7.1 gm-cm (.0986 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions: Torque = 28.4*MPS^2 for aluminum vane.

Comments:

F. BACK-UP HORIZONTAL WIND DIRECTION SENSOR AUDIT

Height: **Meters**

Wind Dir Sensor: **Make:** **Model:** **S.N.#:** **Vane #:** **Range:** **Deg**
Audit Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >23.0 gm-cm (.32 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions:

Comments:

G. PRECIPITATION GAUGE AUDIT

Height: **Meters**

Precipitation Gauge: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Audit Equipment: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Diameter: **Inches** **Volume Rate** **Ml/mm**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

PRECIPITATION GAUGE VOLUME TEST										
Start Time	Input Vol Ml	Input mm	Data Hour	DAS mm	-Adjust mm	+Adjust mm	Final mm	Error % Input	Pass/ Fail?	Notes
						Max Abs. Error				

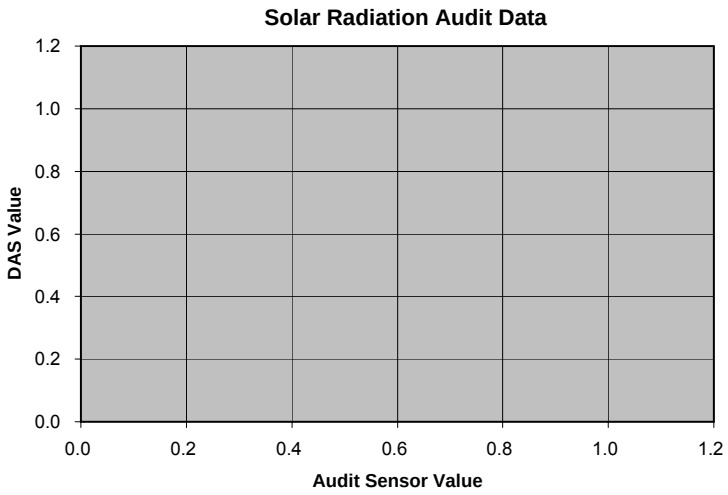
Instrument Limits: Max Absolute Error > 10 % of Input.
Comments:

H. SOLAR RADIATION SENSOR AUDIT

Height: _____ **Meters**

Site Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**
Audit Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**

SOLAR RADIATION SENSOR TEST					
DAS Output	Audit Output	C. Fit Data	Error	Error % Input	Pass/ Fail?
		Max Abs. Error			
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

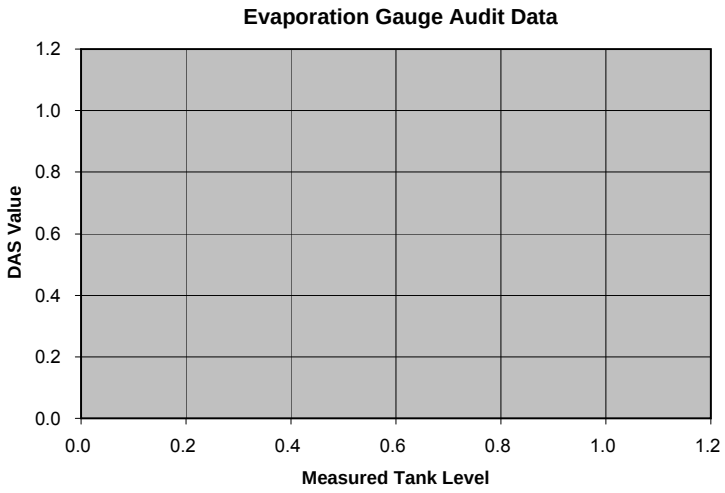
Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
F) EVAPORATION GAUGE AUDIT **Height:** _____ **Meters**

Evaporation Gauge: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**
Evaporation Pan: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**

EVAPORATION PAN STAGE HEIGHT TEST					
Tank Level	DAS mm	C. Fit Data	Error mm	Error % Input	Pass/ Fail?
Max Abs. Error					
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

A. DAS TIME CALIBRATION

Instrument Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments:

DAS TIME vs. NOAA CLOCK				
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?	Time Changed?

B. 2M, 10M, and ΔT, TEMPERATURE SENSOR CALIBRATION

Thermistor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED THERMISTOR TEST									
Thermal Input			Station Response						
Temp Range	Target Deg C	Input Deg C	2M DAS Deg C	10M DAS Deg C	ΔT DAS Deg C	ΔT Error Deg C	2M Error Deg C	10M Error Deg C	Pass/ Fail?
Hot	35 - 40								
Warm	15 - 25								
Ice Bath	0								
				Max Abs. Error					

Instrument Limits: Max Absolute Error > 0.5˚C (accuracy), Max Absolute Error > 0.1˚C ΔT.
Comments:

C. RELATIVE HUMIDITY SENSOR CALIBRATION

Site Sensor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED RELATIVE HUMIDITY SENSOR TEST							
NIST Readings			Station Response				
Temp Deg C	RH (%)	T_{dp} Deg C	DAS Temp Deg C	DAS RH (%)	DAS T_{dp} Deg C	Error Deg C	Pass/ Fail?
				Max Abs. Error			

Instrument Limits: Max Absolute Error > 1.5˚C Dew Point Temperature
Comments:

C. MAIN HORIZONTAL WIND SPEED SENSOR CALIBRATION

Height: _____ **Meters**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Cal. Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Cal. Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	2.94				
200	5.60				
400	10.93				
1000	26.92				
2000	53.57				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >0.45 gm-cm (0.00625oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: MPS=RPM/37.522569+0.27; MPH=0.44704*MPS; gm-cm=72*oz-in; Torque=1.8*MPS^2.
Comments:

D. BACKUP HORIZONTAL WIND SPEED SENSOR CALIBRATION

Height: _____ **Meters**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Cal. Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Cal. Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	0.51				
200	1.02				
400	2.05				
1000	5.12				
2000	10.24				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >2.4 gm-cm (0.033oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: Transfer Function for RM Young Model 05305 AQ w/ carbon fiber propeller: m/s = rpm x 0.00512
Comments:

E. HORIZONTAL WIND DIRECTION SENSOR CALIBRATION

Height: _____ **Meters**

Wind Dir Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Vane #:** _____ **Range:** _____ **Deg**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
Cal. Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >7.1 gm-cm (.0986 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions: Torque = 28.4*MPS^2 for aluminum vane.

Comments:

F. BACK-UP HORIZONTAL WIND DIRECTION SENSOR CALIBRATION

Height: **Meters**

Wind Dir Sensor: **Make:** **Model:** **S.N.#:** **Vane #:** **Range:** **Deg**
Cal. Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >23.0 gm-cm (.32 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions:

Comments:

G. PRECIPITATION GAUGE CALIBRATION

Height: **Meters**

Precipitation Gauge: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Cal. Equipment: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Diameter: **Inches** **Volume Rate** **Ml/mm**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

PRECIPITATION GAUGE VOLUME TEST										
Start Time	Input Vol Ml	Input mm	Data Hour	DAS mm	-Adjust mm	+Adjust mm	Final mm	Error % Input	Pass/ Fail?	Notes
						Max Abs. Error				

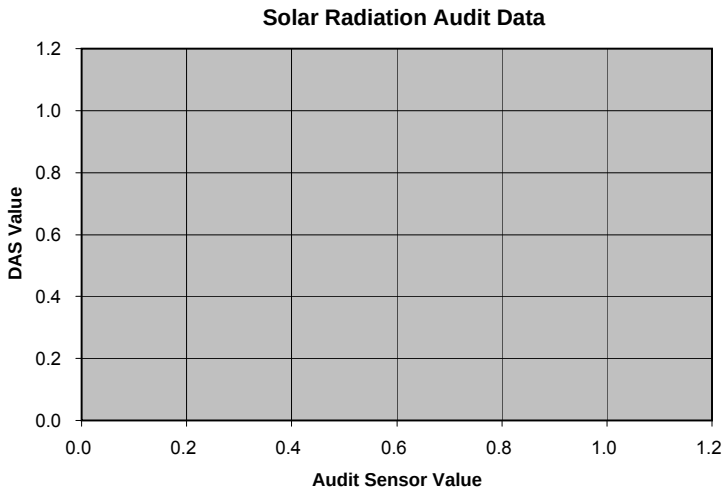
Instrument Limits: Max Absolute Error > 10 % of Input.
Comments:

H. SOLAR RADIATION SENSOR CALIBRATION

Height: _____ **Meters**

Site Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**

SOLAR RADIATION SENSOR TEST					
DAS Output	Audit Output	C. Fit Data	Error	Error % Input	Pass/ Fail?
		Max Abs. Error			
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

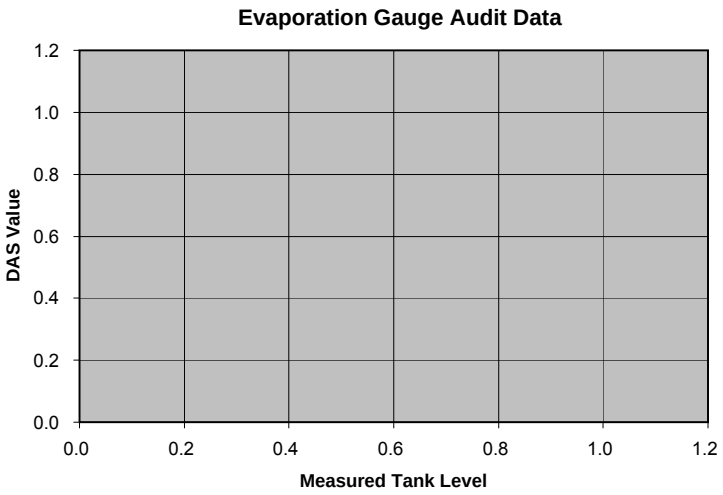
Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Northern Dynasty **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
F) EVAPORATION GAUGE CALIBRATION **Height:** _____ **Meters**

Evaporation Gauge: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**
Evaporation Pan: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**

EVAPORATION PAN STAGE HEIGHT TEST					
Tank Level	DAS mm	C. Fit Data	Error mm	Error % Input	Pass/ Fail?
Max Abs. Error					
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

APPENDIX B3
PROJECT HEALTH AND SAFETY PLAN

Health & Safety Plan

Pebble Project Meteorological Monitoring

November 2004

prepared for

Northern Dynasty Mines, Inc.

prepared by

Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, Alaska 99503
907-563-2137

Table of Contents

1.0 INTRODUCTION 1
2.0 SCOPE OF WORK 1
3.0 PROJECT EXECUTION PLAN 1
3.1 Phase 1: Mobilization 1
3.2 Phase 2: Installation 2
3.3 Phase 3: Operation 2
3.4 Phase 4: Demobilization 2
4.0 PROJECT SCHEDULE 2
5.0 HAZARD ASSESSMENT 2
5.1 HSE Risks Identified 2
5.1.1 Phase 1: Mobilization 3
5.1.2 Phase 2: Installation 5
5.1.3 Phase 3: Operation 7
5.1.4 Phase 4: Demobilization 9
6.0 ADDITIONAL SAFETY CONSIDERATIONS 12
7.0 EMERGENCY CONTACTS & MEDICAL PROCEDURES 13
7.1 Northern Dynasty Emergency Contact Information 13
7.2 Local Emergency Services 13
7.3 HCG Interface Document 14
7.4 Medical Emergency Procedures 14

1.0 INTRODUCTION

This Health and Safety Plan is a job-specific document presenting a comprehensive plan for compliance with the Hoefler Consulting Group HSE program. Hoefler Consulting Group (HCG) prepared this plan for the Pebble Project Meteorological Monitoring Program.

The plan incorporates a specific breakdown of the project activities, the planned communication and interface provisions that will be followed for the project. The intent is to summarize the scope of work and the associated health and safety issues with a focus on the needs of field personnel and successful execution of the project.

The established procedures found in the Alaska Safety Handbook (ASH) and the safety manual, *Mineral Exploration in Western Canada* are available as reference documents for implementing best practices for all project work activity and pre-job planning. A Phase Hazard Analysis (PHA) addresses the progressive steps of the project plan and field operations. Changes to a work plan or scope, after the plan is developed, poses significant potential for health and safety related incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT."

2.0 SCOPE OF WORK

Two three-meter meteorological stations will be installed and operated at the Pebble Project site. A radio repeating tower is already operating at the project location. Work will include instrument installation, establishing the power supply, and start-up and operation of the monitoring stations. All components are designed for rapid installation of the system in the field.

3.0 PROJECT EXECUTION PLAN

3.1 Phase 1: Mobilization

Mobilization consists of staging all necessary tools and equipment to the site. All equipment and personnel will travel from the base camp to the site via helicopter or snow machine. Prior to commencement of installation, HCG personnel will undergo a site-specific orientation, including familiarization with site facilities and operations personnel. HCG staff will also ensure that the pilot and site manager are aware of their location in the field in the event radio contact is interrupted. A back-up plan for pick-up will be established prior to beginning field work each day.

3.2 Phase 2: Installation

HCG personnel will begin to install equipment upon arrival. Electrical power such as 120 VAC for light hand tools and 12 VDC will be established first. All instrument components are 12 VDC, including heaters, fans, data logger and the cell phone/modem system.

3.3 Phase 3: Operation

Following successful installation of the equipment, initial performance audits and calibrations will be conducted to ensure equipment is operating within EPA and ADEC guidelines. These procedures require approximately one full day of work to complete. Subsequently, the meteorological station will operate unattended for an extended period of time**.** Quarterly audits, calibration, and maintenance will be conducted by HCG staff.

3.4 Phase 4: Demobilization

Demobilization operations consist of packing all tools, safety gear and HCG-owned equipment for transport back to Anchorage. The work area will be cleared of all work-related debris and litter and will be left in an orderly fashion.

4.0 PROJECT SCHEDULE

Installation activities are to be conducted in October 2004 and system upgrades are scheduled to be made in November 2004. Quarterly audits, calibrations and maintenance are scheduled to occur in 2005.

5.0 HAZARD ASSESSMENT

5.1 Health and Safety Risks Identified

The health and safety risks identified for the four defined phases of the project are as follows:

Phase		Personnel	Equipment
Phase 1	Mobilization	Low	Low
Phase 2	Installation	Medium	Medium
Phase 3	Operation	Low	Medium
Phase 4	Demobilization	Low	Low

5.1.1 Phase Hazard Analysis: Phase 1

Project: Pebble Project Meteorological Monitoring

Date: November 2004

Location: Iliamna, Alaska

Phase: Mobilization

Overall Risk Rank: Low

Phase Description: Initial project mobilization of employees, tools, and equipment to installation site.

Activities include:

- Travel to Pebble Project site near Iliamna, Alaska, site-specific orientation, familiarization with site facilities and operations personnel.
- Transporting, lifting, and rigging of tools and equipment.

POTENTIAL HAZARDS		RANK
1.	Lifting hazards	Medium
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Low
3.	Slips or falls from ladder.	Low
4.	Cuts and lacerations-striking against objects, pinch points and protruding objects, trip hazards.	Low
5.	Negative wildlife encounters	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with specific lifting equipment used, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Ensure footwear is in good repair, and always ensure solid footing. Situate ladders or stepstools on level ground, and use caution when working off the ground. Pay attention to surroundings.

4. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Brent Veltkamp, Chris Lindsey, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Northern Dynasty Mines officials of the situation.

Additional Comments/Changes:

5.1.2 Phase Hazard Analysis: Phase 2

Project:	Pebble Project Meteorological Monitoring
Date:	November 2004
Location:	Iliamna, Alaska
Phase:	Installation
Overall Risk Rank:	Medium
Phase Description:	The meteorological station tripods will be installed at pre-determined field locations. Power will be connected to the instrumentation.

Activities include:

- Installing towers

- Installing/securing a data logger/controller enclosure at ground level
- Connecting 12 VDC electrical power

POTENTIAL HAZARDS		RISK
1.	Lifting Hazards	Medium
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Medium
3.	Slips or falls from ladder.	High
4.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Medium
5.	Electrocution while connecting power supply	Low
6.	Negative wildlife contacts	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Ensure footwear is in good repair, and always ensure solid footing. Situate ladders or step stools on level ground and use caution when working off the ground. Pay attention to surroundings.

4. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

5. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

6. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in the use of firearms.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Brent Veltkamp, Chris Lindsey, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Northern Dynasty Mines officials of the situation.

Additional Comments/Changes:
Audits and calibrations are scheduled for the spring and fall. These tests, which will involve two HCG personnel, should take one working day to complete. Various personnel will be involved in these site visits.

5.1.3 Phase Hazard Analysis: Phase 3

Project: Pebble Project Meteorological Monitoring
Date: November 2004
Location: Iliamna, Alaska
Phase: Operation
Overall Risk Rank: Low/Medium
Phase Description: Following successful equipment setup, initial audits and calibrations will be conducted. These activities will take approximately one full work day to complete. Subsequently, the meteorological stations should operate unattended for an extended period of time.

Activities Include:

- Initial calibration and audits
- Periodic calibrations and audits

	POTENTIAL HAZARDS	RISK
1.	Lifting Hazards	Low
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Low
3.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Low
4.	Electrocution	Low
5.	Negative wildlife contacts	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These

liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

4. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

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Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Brent Veltkamp, Chris Lindsey, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Northern Dynasty Mines officials of the situation.

Additional Comments/Changes:

_____

_____

_____

5.1.4 Phase Hazard Analysis: Phase 4

Project: Pebble Project Meteorological Monitoring
Date: November 2004
Location: Iliamna, Alaska
Phase: Demobilization
Overall Risk Rank: Low
Phase Description: Demobilization consists of packing all tools, equipment and safety gear for transport back to Anchorage. The work area will be cleared of all debris and left in an orderly fashion.

Activities Include:

- Removal of all tools, and unused equipment and materials.
- Clean up and housekeeping at the job site and any other areas utilized as workspace or materials lay-down areas.
- Proper disposal of any waste materials generated during this installation.

	POTENTIAL HAZARDS	RISK
1.	Lifting Hazards	Low
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Medium
3.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Low
4.	Electrocution while demobilizing system	Low
5.	Negative wildlife contacts	Low

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

4. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY “TIME OUT” TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE

EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Brent Veltkamp, Chris Lindsey, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Northern Dynasty Mines officials of the situation.

Additional Comments/Changes:

6.0 ADDITIONAL SAFETY CONSIDERATIONS

- Field crews must always work in pairs and carry a radio.
- No alcohol or illegal drug consumption is allowed.
- Those who carry epi-pens for allergic reactions are to advise NDM and other members of the field crew so that assistance can be provided if necessary.
- Be aware of the rules regarding the possession of firearms and/or bear mace when traveling to the project area. A weapon must be unloaded before boarding the helicopter and unloaded and securely stored while in camp. The name of the individual bringing a firearm into camp must be given to Richard Moses (NDM Site Manager or his designee) prior to arrival. Permission to carry bear mace must be obtained from the pilot before boarding the helicopter.
- Field crews need to understand the risk of extreme weather and the possibility of staying overnight in the field.

7.0 EMERGENCY CONTACTS & MEDICAL PROCEDURES

7.1 Northern Dynasty Emergency Contact Information

c/o Iliamna Weathered Inn #1 Roadhouse Strip or Box 124 Iliamna, AK 99606 Tel: (907) 571-1872 or 1774 Home: (907) 571-1872 Fax: (907) 571-1789 Email: richardm@hdgold.com	1020-800 West Pender St. Vancouver, B.C. Canada V6C 2V6 Tel: (604) 684-6365 Toll Free: 1-800-667-2114 Fax: (604) 662-8956

Pebble Project Office in Iliamna	**John Baechler:**
Line 1: (907) 571-1788 Line 2: (907) 571-1774 Quest Office: (907) 571-1873 Emergencies: 8:30pm – 6:00am call (907) 571-1872	Home: (907) 571-1878

Project Coordinator in Anchorage	**Anchorage Office Manager**
Northern Dynasty Mines Inc. – Ella Ede Tel: (907) 339-2600 Toll Free: (877) 450-2600 Home: (907) 274-0228 Cell: (907) 229-1780 Email: ellae@northerndynasty.com	Northern Dynasty Mines Inc.– Michelle Brunner Tel: (907) 339-2600 Toll Free: (877) 450-2600 Home: (907) 563-1309 Cell: (907) 632-0163 Email: michelleb@northerndynasty.com

7.2 Local Emergency Medical Services

Iliamna Clinic — Located on the Roadhouse Strip
Telephone: (907) 571-1383

Rene (Health Aid) — Home Telephone: (907) 571-1323

7.3 INTERFACE DOCUMENT

HCG has developed an Interface Document (Table 7-1) that outlines the interface HCG field and office personnel. Serious incidents must be reported immediately, while less serious ones shall be reported within the shift in which the incident occurred. This will include the completion of all necessary forms and documentation.

Interface Document
Table 7-1

Activity	Primary HCG Contact	Secondary HCG Contact
Environmental Non-compliance	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Environmental Incident Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Unauthorized/unaccompanied individuals on site	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Compliance Audits: Scheduling, developing, conducting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Emergency Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Agency Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Field Installation Activities	Steve Mackey (563-2129)	Al Trbovich (563-2140)

7.4 MEDICAL EMERGENCY PROCEDURES

(1) Contact Northern Dynasty Mines Base Camp in Iliamna by radio or telephone. Radio frequency being used is 151.625 MHz with a 123.000 MHz transmit and receive tone (private line).

(2) Contact Alaska State Troopers Dispatch: (907) 428-7200 (24 hrs/day).

In the event of a major emergency, the Alaska State Troopers will mobilize a response, including contacting the local State Trooper, medical, and rescue personnel.

Information to provide:

- Who you are
- Nature of emergency
- Your location
- Your company and contact number
- Number of victims
- Sex, age and vital signs of patients (if possible)
- Specific injuries

(3) Local emergency support in Iliamna and Newhalen:

- Iliamna State Trooper: (907) 571-1534
- Iliamna Clinic (Health Aid): (907) 571-1383
- Newhalen Clinic: (907) 571-1248
- Iliamna Air Taxi (has air Medivac capability): (907) 571-1245 / (907) 871-1445

APPENDIX B4
PROJECT FORMS

Site Visit & System Check

Date: _____

Project Title: _____ **Project No.** _____

Name of Inspector: _____

Associated Company: _____

Sate Reason for visit: _____
_____
_____

_____

Check List

Tower:

- Check tower for stability, ensure that guy wires are taunt and all clamping hardware is in good condition.
- Check that all sensors are securely mounted to tower. This includes antennas and enclosures.
- Check for excessive ice build-up on tower and sensor mounts
- Check for loose instrument cables

Comments: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Sensors:

Wind Direction:

- Check to see if wind vane is moving freely or fluttering in wind.
- Check for excessive ice or snow build-up on vane and sensor if so clear the sensor.
- After clearing ice or snow, check to see if vane can move freely in all directions.

Wind Speed:

- Check to see that cups are spinning freely.
- Check for excessive ice or build-up on vane and sensor, if so clear the sensor.
- After clearing ice or snow, check cups to insure they spin with ease.
- Clear ice or snow off of wind sensor cross arm.

All other sensors:

- Check sensor housing or brackets for visible damage.
- Check all sensor connection and cables to ensure good connections and secured to tower.
- Clear any ice or snow from sensor brackets and mounts.
- Check each sensor mount to ensure the sensor is level and secure.

Comments: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Inspector signature: _____

Corrective Action Plan

The corrective action plan is designed to address the many unexpected problems that may arise during the project duration. HCG personnel are instructed to immediately bring any major problems to the attention of the project supervisor. Since many individuals could become involved in the corrective action, the notification is best done by a standard corrective action form.

This Corrective Action Form exists in three parts to address and correct program that occur during routine operation or as a result of performance evaluation and technical systems audits. The three parts are listed below:

- Request for Assistance
- Proposed Corrective Action
- Results of Proposed Corrective Action

It is recommended that all personnel signing the form should feel free to attach other needed material. These forms are stored at the HCG office both in electric and paper format.

Hoefler Consulting Group

Corrective Action Form

Project Title: _____ Project No. _____

I. Request for Assistance:

To: _____ From: _____ Date: _____

Problem Summary: _____
_____
_____
_____
_____
_____
_____.

II. Proposed Corrective Action

To: _____ From: _____ Date: _____

Recommended Action: _____
_____
_____
_____
_____
_____
_____.

III. Results of Proposed Action

To: _____ From: _____ Date: _____

Action Results: _____
_____
_____
_____
_____
_____
_____.

Systems Audit Report
For Meteorological Monitoring Programs

Audit Date:
Auditor:
Auditor Affiliation

Interviewees:	Witnesses:

1.0 Monitoring Program Information

Monitoring Site Audited:

Monitoring Site Owner:
Owner Mailing Address:

2.0 Monitoring Program Staff

2.1 Program Staff Organization

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles.

2.2 Program Staff Training and Experience

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

- How is program staff trained?_____
- Who is responsible for training staff?

Does the operator have training manuals or other training related materials available for staff?

Yes
No

3.0 General Program Information

3.1 Monitoring Site Description

Monitoring Site Name:

Monitoring Site Location Description:

Indicated by Operator	Determined by Auditor

3.2 Monitoring Site Appearance and Safety

Does the site appear clean, organized and well maintained?	Yes No	Comments:
Does the site appear to be safe and reasonably hazard free?	Yes No	Comments:
Does the site have a shelter for operators?	Yes No	Comments:
Does the site have emergency equipment such as a first aid kit available?	Yes No	Comments:
Does the site have adequate measures to prevent human tampering?	Yes No	Comments:
Does the site have adequate measures to prevent damage from animals?	Yes No	Comments:

3.3 Monitoring Site Surroundings

- Indicate the population density type for the monitoring site.

	Type	Description
	Remote	No nearby development with no nearby population center.
	Rural	Limited development with nearby sparse population.
	Low Suburban	Light industrial development in low population center.
	High Suburban	Light industrial development in high population center.
	Urban	Heavy industrial development in high population center.

3.4 Monitoring Site Equipment Inventory

- List all parameters that are being monitored and their associated instrumentation at the site.

Parameter	Make	Model	Serial No.

- List all instrumentation used in support of the monitoring instrumentation.

Instrument	Make	Model	Serial No.

3.5 Meteorological Instrumentation Siting and Exposure (EPA-454/R-99-005)

Do all sensors appear to be clean, intact, in good condition and well maintained?	Yes No	Comments:
Are all sensors operational, online and reporting data?	Yes No	Comments

3.5.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	Yes No	Comments
Is the height of the tower 10 meters above the ground?	Yes No	Comments:
Is the tower stable and plumb?	Yes No	Comments:
Is the tower protected from lightning?	Yes No	Comments:

3.5.2 Wind Speed and Wind Direction

Is the horizontal distance between the instrument and any obstruction at least 10 times the height of the obstruction?	Yes No	Comments:
Is the instrument 1.5 times the height of the building above the roof or 10 meters above the ground?	Yes No	Comments:
Are the wind speed and wind direction sensors stable and plumb?	Yes No	Comments:
Is the distance of the sensor on the cross arm/mast at least twice the diameter of the tower?	Yes No	Comments:
Is the wind sigma theta collected according to EPA requirements?	Yes No	Comments:

3.5.3 Air Temperature, Air Temperature Difference, and Relative Humidity

Are the sensors mounted over open level ground at least 9 meters in diameter and at least 2 meters above ground?	Yes No	Comments:
Are the two temperature difference probes located at a height of 2 meters and 10 meters above the ground?	Yes No	Comments
Is the ground beneath the temperature sensor natural native material?	Yes No	Comments
Is the site free of any man-made features exist that could create bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	Yes No	Comments:
Is the site free of any natural made features that could create bias temperature data (e.g. open water, sloping ridge, etc.)?	Yes No	Comments:
Are the temperature sensors protected from the influence of solar radiation?	Yes No	Comments:
Are the sensors located at least four times the distance from the height of the obstruction?	Yes No	Comments:
Are the sensors located at least 30 meters from large paved areas?	Yes No	Comments:
Are the temperature sensors used for differential measurements located in identical aspirated shields?	Yes No	Comments:

3.5.4 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows on the instrument?	Yes No	Comments:
Is the sensor situated to the south of the tower in order to minimize obstruction from the tower?	Yes No	Comments:

3.5.5 EPA Recommended Instrument Resolutions

Parameter	Equipment Specifications	EPA Resolution Standard	Meets Standard?

3.5.6 Recommended Instrument Accuracy Standards

Parameter	Equipment Specifications	EPA Accuracy Standard	Meets Standard?

3.5.7 EPA Recommended Instrument Response Standards

Parameter	Equipment Specifications	EPA Response Standard	Meets Standard?
Wind Speed			
Threshold:			
Distance Constant:			
Wind Direction			
Threshold:			
Damping Ratio:			
Delay Distance:			
Air Temperature (2 meter)			
Time Constant:			
Air Temperature (10 meter)			
Time Constant:			
Relative Humidity			
Time Constant:			
Range:			
Solar Radiation			
Time Constant:			
Operating Range:			
Spectral Response:			

3.6 Support Instrumentation and Equipment

Is the DAS well protected from the elements with adequate room for maintenance?	Yes No	Comments:
Is the DAS rated for operation in the expected local temperature range?	Yes No	Comments:
Are all sensor signal leads neatly and securely connected to the correct DAS channels?	Yes No	Comments:
Are all components of the DAS operational?	Yes No	Comments:
Is the communications equipment operating correctly?	Yes No	Comments:
Does the DAS system have a stable power supply?	Yes No	Comments:

Is the DAS properly grounded?	Yes No	Comments:
Is the DAS system protected from lightning?	Yes No	Comments:

4.0 Data Processing

4.1 Data Collection

Is the monitoring station polled on a regular basis?	Yes No	Comments:
Is the PM sample run date recorded?	N/A	Comments:
Is the PM sample start time and elapsed time recorded?	N/A	Comments:
Is the PM average flow rate recorded?	N/A	Comments:
Is each PM filter recovered after each run period?	N/A	Comments

- Indicate how the polled data are handled for data processing after being downloaded.

Are procedures in place for backing up raw data?	Yes No	Comments:

- How long are backup raw data files retained?
- How long are archived records retained?

Are hard copies of data being kept in case of computer failure?	Yes No	Comments:

4.2 Data and Sample Handling

Are written procedures for data handling available for the project?	Yes No	Comments:
Are filters properly secured once removed to prevent contamination or tampering?	N/A	Comments:

Are copies of the Site Check Forms being sent to the operator on a regular basis?	N/A	Comments:.
Are Chain-of-Custody forms being used to transmit materials, samples, and/or documents to and from the field?	N/A	Comments:
Are filters folded in half with collection surfaces in contact for transport to the lab?	N/A	Comments:
Are samples maintained in a secure location while awaiting shipment to the laboratory?	N/A	Comments:

- Diagram the data flow from monitoring equipment to submission of final report.

4.3 Data Validation

Are data validation procedures established and in use?	Yes No	Comments:

- Describe data validation procedure.

Are the individuals responsible for data collection separate from those responsible with data validation?	Yes No	Comments:

- Identify those responsible with data validation:

Name:
Position:
Affiliation:

- Identify how periods of missing or invalidated data are handled.

4.4 Data Reporting

Are quarterly and annual data reports being submitted for the site?	Yes No	Comments:
Is qualified staff prior to submittal of data reports making reviews of the report?	Yes No	Comments:

- Identify those person(s) responsible for review of data reports.

Name:
Position:
Affiliation:

4.5 Corrective Actions

Are procedures established for initiating corrective actions within the data processing steps?	Yes No	Comments:

- Describe procedures for tracking and closing corrective actions.

Data Capture (Section 4.5 EPA-454/R-99-005)

- Identify the desired data capture rate for the monitoring data.

Meteorological Monitoring Data Type	Capture Rate

Are the desired data capture rates being met for each data type?	Yes No	Comments:

5.0 Quality Assurance and Quality Control

5.1 Quality Assurance Program Plan

Has a quality assurance program plan (QAPP) been written that describes quality assurance procedures?	Yes No	Comments:
Is a copy of the plan available to field and data processing personnel?	Yes No	Comments:
Has the quality assurance plan been approved by the ADEC?	Yes No	Comments:

- Identify those person(s) responsible for updating the plan and the procedure for updating the plan.

Name:
Position:
Affiliation:

5.1.1 Quality Assurance Assessment Requirements (Section 8.0 EPA-454/R-99-005)

Have adequate audit procedures been identified within the quality assurance plan?	Yes No	Comments:
Does the plan adequately document the correct criteria for accuracy and precision?	Yes No	Comments:

- Indicate the project's correct precision and accuracy limits.

Parameter	***Precision Limit***	***Accuracy Limit***	***Reference***
DAS Time			
Wind Direction			
Wind Speed			
Air Temperature			
Air Temperature Difference			
Relative Humidity			
Solar Radiation			
Barometric Pressure			

5.2.1 Standard Operating Procedures

- Indicate the Standard Operating Procedures that have been developed for the program:

Standard Operating Procedures	
	Installation, Setup, and Checkout
	Site Operations and Calibrations
	Operational Checks and Preventive Maintenance
	Data Collection Protocols
	Data Validation Steps
	Data Archiving

5.2.2 Preventive Maintenance

Does a preventive maintenance program exist for the monitoring program and is the program being followed?	Yes No	Comments:

- Identify those responsible parties for preventive maintenance at the site.

Name:
Position:
Affiliation:

- Identify the preventative maintenance procedures conducted for the site.

5.2.3 Station Documentation

Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	Yes No	Comments:
Does the station have an activity log?	Yes No	Comments:
Does the station have a Site Visit Log and Checklist Form?	Yes No	Comments:
Does the station have an adequate Calibration Report Forms and copies of previous calibrations?	Yes No	Comments:
Does the station have an adequate Operations Manual?	Yes No	Comments:

- Identify the operation manuals present on site.

Description

Are report forms and site logs properly completed and current?	Yes No	Comments:

6.0 Comments and Suggestions

Site Training Check list

This form should be included with the site visit memos. All training is site specific and is to be given by qualified HCG personal only.

Date of Training: _____

Station Name:_____ Project No._____

Name of Trainer: _____ Position: _____

Name of Trainee: _____ Position: _____

Nature of Training: _____

Is the trainee HCG personnel? If not specify associated company. Yes □ No □

Specify company name: _____ Position: _____

Site surveillances/maintenances visits:

- □ Has the specific monitoring project overview and objectives been discussed?
- □ Has site location and all safety concerns been discussed in detail?
- □ Has the scope of the site surveillances visit been discussed?
- □ Have all specific concerns pertaining to meteorological station been discussed.
- □ Has all site surveillance visit forms and filling procedures been discussed in detail?
- □ Have all site surveillances/maintenances visit task been clearly explained and demonstrate, including all equipment and senor operation, and safety practices pertaining to these tasks?
- □ Have all "as left" procedures been explained and demonstrated?

Audit and Calibration Visits:

- ☐ Has the specific monitoring project overview and objectives been discussed?
- ☐ Has the scope of the audit or calibration visit been discussed in detail?
- ☐ Have all specific concerns pertaining to meteorological station including any environmental safety concerns been discussed?
- ☐ Have all the audit or calibration forms, site visit documentation and filling procedures been discussed in detail?
- ☐ Have the functions and operations of each instrument located at the site been explained and demonstrated in detail?
- ☐ Have all audit or calibration task, tests, and recording techniques been clearly explained and demonstrated?
- ☐ Have all safety practices penetrating to the above task been clearly explained and demonstrated?
- ☐ Have all filling procedure and deadlines been discussed in detail?
- ☐ Have all "as left" procedures been explained and demonstrated?

Comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Trainers Signature: _____

Trainees Signature: _____

APPENDIX C
STATEMENT OF QUALIFICATIONS

HOEFLER

CONSULTING GROUP

Air Quality Monitoring Services

Hoefler Consulting Group is an Anchorage-based consulting firm specializing in comprehensive environmental permitting and compliance services for Alaskan industries. Hoefler provides technical services supporting construction and operation of facilities in Alaska's unique physical, regulatory, and political environment. Hoefler is the leading air quality consulting firm in Alaska. The firm's staff of 40 professionals provides the following services from our Anchorage offices:

- PSD and non-PSD construction permitting
- Title V operating permitting
- Meteorological and ambient air quality monitoring programs
- Criteria pollutant, HAP, and greenhouse gas emission inventories
- Best available control technology demonstrations
- Air modeling compliance demonstrations
- Risk assessment
- Open burning approvals
- Certified opacity readings
- Source test supervision and support

Summaries of Experience for Key Personnel

ALAN M. TRBOVICH, CCM,

Vice President

Al Trbovich is a Certified Consulting Meteorologist and the Air Quality Team Leader of the Hoefler Consulting Group. He has 26 years of environmental permitting and regulatory compliance experience, and has been providing air quality services to his Alaskan clients throughout the state since 1998. Mr. Trbovich has extensive experience working with all facets of air permitting including construction ("PSD") and operating ("Title V") permitting, meteorological and ambient monitoring, compliance monitoring, source testing, and risk assessments. He is also a specialist in air quality modeling and has conducted ambient air quality and/or visibility modeling studies throughout Alaska. He has also lead numerous multi-disciplinary teams in preparing air permit applications, environmental impact statements, and other environmental studies. Mr. Trbovich holds B.S. and M.S. degrees in Meteorology from the University of Utah.

K. STEVEN MACKEY

Senior Project Manager

Steve Mackey is the Project Manger for the Air Quality Group at Hoefler Consulting group. He has over 20 years of air quality experience in air quality services project management as well as database development and management. His specialties include ambient air monitoring, meteorological monitoring, continuous emission monitoring systems (CEMS), source emissions measurement, and regulatory Compliance. Mr. Mackey holds B.S. degree in mechanical engineering from the University of Washington.

ERIC L. BRUDIE

Air Quality Consultant

Eric Brudie is an independent Air Quality Consultant that works with the Air Quality Group at Hoefler Consulting. He has over 22 years of air monitoring experience in air quality services. Mr. Brudie works with Hoefler Consulting as an independent contractor who specializes in conducting performance and systems audits of numerous PSD quality meteorological monitoring systems. His experiences include designee and operating numerous remote meteorological monitoring systems for the TAGS project, including the LNG terminal site 40-meter remote system. He functioned as a key team member in the preparation and agency approval of the Meteorological Monitoring & QA/QC Plan and the Application for Air Quality Control Permit to Operate with PSD Review for the proposed LNG liquefaction plant. Mr. Brudie holds a B.S. in Geological Engineering from the Colorado School of Mines.

JARED H. COCKMAN

Project Associate

Jared Cockman is a Project Associate with the Air Quality Group at Hoefler Consulting; He has over more than 4 years experience in air monitoring project support. Mr. Cockman holds an EPA Method 9 Visibility Certification for Alaska and his experiences include visible emissions monitoring, meteorological and ambient air quality monitoring, technical support for permit compliance, data management, management information systems, technical writing and editing, and document processing and production. Mr. Cockman holds a B.A. in English Literature from East Carolina University.

BRENT S. VELTKAMP

Associate Scientist

Brent Veltkamp is a Associate Scientist at Hoefler Consulting. He assists in field project support and meteorological monitoring site operations for Air Quality Group. He has over 12 years experience in environmental monitoring and remediation. His specialties include meteorological monitoring station installation and maintenance, maintenance of bioremediation systems, biological fieldwork and sampling techniques, wetland delineation, site assessment, and technical writing and editing. Mr. Veltkamp holds a BS in Biological Science from Colorado State University.

W. DOMINIC SHALLIES

Project Assistant/ Field Technician

Dominic Shallies is a Project Assistant at Hoefler Consulting. He assists in field project support and meteorological monitoring site operations for Air Quality Group. He has over 3 years experience in environmental monitoring and meteorological data collection. His specialties include PSD quality meteorological monitoring station installation and operation, data management, site assessment, and technical writing and editing. Mr. Shallies holds a BS in Environmental Science from the University of Alaska Southeast.

APPENDIX 26B

Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program June 2008

Quality Assurance Project Plan

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

June 2008

Quality Assurance Project Plan

for the

Pebble Project Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Pebble Limited Partnership, Care of Pebble Mines Corp.

by

Hoefler Consulting Group
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503
(907) 563-2137

June 2008

A. Project Management Elements

A1. Approvals

Mike Smith
PLP Permitting Manager
Pebble Limited Partnership

6.5.08
Date

Al Trbovich
HCG Permitting Manager
Hoefler Consulting Group

6/2/2008
Date

K. Steven Mackey
HCG Project Manager
Hoefler Consulting Group

6/2/2008
Date

Eric Brudie
HCG Quality Assurance Officer
Hoefler Consulting Group

6/2/08
Date

Dominic Shallies
HCG Lead Network Operator
Hoefler Consulting Group

June 7, 2008
Date

Alan Schuler
ADEC Air Permits Program Project Supervisor
Alaska Department of Environmental Conservation

Date

A2. Contents

A. Project Management Elements ii

A1. Approvals ii
A3. Distribution List 1
A4. Project/Task Organization 2
A5. Problem Definition/Background and Project Objective 4
A6. Project/Task Description 4
A7. Quality Objectives and Criteria for Measurement of Data 9
A8. Training and Certifications 11
A9. Documents and Records 11

B. Measurement and Data Acquisition 13

B1. Sampling Process Design 13
B1.1 Monitoring Site Locations 13
B2. Sampling Methods Requirements 37
B2.1 Reference and Equivalent Methods 37
B2.2 Environmental Controls 40
B3. Sample Handling and Custody 40
B4. Analytical Methods Requirements 40
B5. Quality Control 40
B6. Instrument/Equipment Testing and Inspection/Maintenance 45
B6.1 Acceptance Testing 45
B6.2 Site Surveillance and Equipment Inspection and Maintenance 45
B6.3 Preventive Maintenance and Corrective Actions 45
B7. Instrument/Equipment Calibration and Frequency 46
B7.1 Calibration Frequency 46
B7.2 Calibration Equipment 46
B8. Inspection/Acceptance of Supplies and Consumables 48
B9. Non-direct Measurements 48
B9.1 Climate History 48
B9.2 Land Use 51
B10. Data Management 52
B10.1 Data Acquisition 53
B10.2 Data Validation 53
B10.3 Data Transmission 54
B10.4 Data Reduction 54
B10.5 Data Reporting 54
B10.6 Data Storage 55
B10.7 Data Use in Modeling 55

C. Assessments and Oversight 56

C1. Assessments and Response Actions 56
C1.1 Performance Audits 56
C1.2 Systems Audits 56
C1.3 Corrective Actions 59
C1.4 QAPP Revisions 59
C2. Reports to Management 59

D. Data Validation and Usability 61

D1. Data Review, Validation, and Verification Requirements 61
D1.1 Data Review 61
D1.2 Data Calculations 62
D2. Validation and Verification Methods 63
D3. Reconciliation with User Requirements 65

List of Tables

A1. Distribution List for Quality Assurance Project Plan 1
A2. Pebble Project Meteorological Monitoring Program Key Individuals and Responsibilities 2
A3. Meteorological Monitoring Measurement Parameters 5
A4. Pebble Project Meteorological Monitoring Program Work Schedule 7
A5. Summary of DQOs for the Pebble Project Meteorological Monitoring Program 10
B1. Summary of Pebble Project Meteorological Stations 15
B2. Summary of Meteorological Sensors and Performance Specifications 38
B3. Sampling and Averaging Times for Meteorological Parameters 39
B4. Meteorological Sensors QA/QC Critical Validation Criteria 42
B5. Meteorological Sensors QA/QC Operational Evaluations 43
B6. Meteorological Sensors QA/QC Systematic Issues 44
B7. List of Meteorological Equipment Spare Parts 46
B8. List and Specifications for Calibration Equipment 47
C1. List of Performance Audit Equipment and Procedures 58
C2. Summary of Reports to Management 60
D1. Data Review List for the Pebble Project 61
D2. EPA PSD Data Validation Criteria 64

List of Figures

A1. Pebble Project Meteorological Monitoring Program Organizational Chart 3
A2. Pebble Project Area Map 8
B1. Pebble Project Deposit Area Meteorological Station Locations 17
B2. Pebble 1 Meteorological Station Site Map 18
B3. Pebble 4 Meteorological Station Site Map 19
B4. Pebble 5 Meteorological Station Site Map 20
B5. Pebble 6 Meteorological Station Site Map 21
B6. Pebble 1 Meteorological Station 22
B7. Area Surrounding the Pebble 1 Meteorological Station 23
B8. Pebble 4 Meteorological Station 24
B9. Area Surrounding the Pebble 4 Meteorological Station 25
B10. Pebble 5 Meteorological Station 26
B11. Area Surrounding the Pebble 5 Meteorological Station 27
B12. Pebble 6 Meteorological Station 28
B13. Area Surrounding the Pebble 6 Meteorological Station 29
B14. Pebble Project Port Area Meteorological Station Map 30
B15. Pebble Port Meteorological Station 31
B16. Area Surrounding the Pebble Port Meteorological Station 32
B17. Williamsport Meteorological Station 33
B18. Area Surrounding the Williamsport Meteorological Station 34
B19. North Head Meteorological Station 35
B20. Area Surrounding the North Head Meteorological Station 36
B21. Iliamna Daily Extreme and Average High and Low Temperatures 49
B22. Iliamna Monthly Mean Precipitation 49
B23. Iliamna Wind Rose 50
B24. Alaska Air Quality Control Regions 51
B25. Alaska Class I Areas 52
B26. Data Processes Flow Chart 53

List of Appendices

Appendix A Program References
Appendix B Monitoring Program Supporting Documents
Appendix C Standard Operating Procedures (SOPs) and Audit/Calibration Forms
Appendix D Statement of Qualifications

A3. Distribution List

The following individuals have been provided a copy of this Quality Assurance Project Plan:

Table A1. Distribution List for Quality Assurance Project Plan

Key Individual/ Title	Organization	Email	Address	Phone
Mike Smith PLP Permitting Manager	Pebble Limited Partnership	michaelsmith@pebblepartnership.com	3201 C Street, Suite 604 Anchorage, Alaska 99503	(907) 339-2606
Al Trbovich, HCG Permitting Manager	Hoefler Consulting Group	atrbovich @hoeflernet.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 563-2140
Steven Mackey, HCG Project Manager	Hoefler Consulting Group	smackey @hoeflernet.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 563-2129
Eric Brudie, HCG Quality Assurance Auditor	Hoefler Consulting Group	eric @brudie.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 529-1642
Dominic Shallies HCG Associate Scientist	Hoefler Consulting Group	dshallies @hoeflernet.com	3401 Minnesota Dr., Suite 300 Anchorage, Alaska 99503	(907) 563-2100
Alan Schuler, ADEC Air Permits Program Project Supervisor	Alaska Department of Environmental Conservation	alan.schuler @alaska.gov	410 Willoughby Avenue, Suite 303 Juneau, Alaska 99801	(907) 465-5112

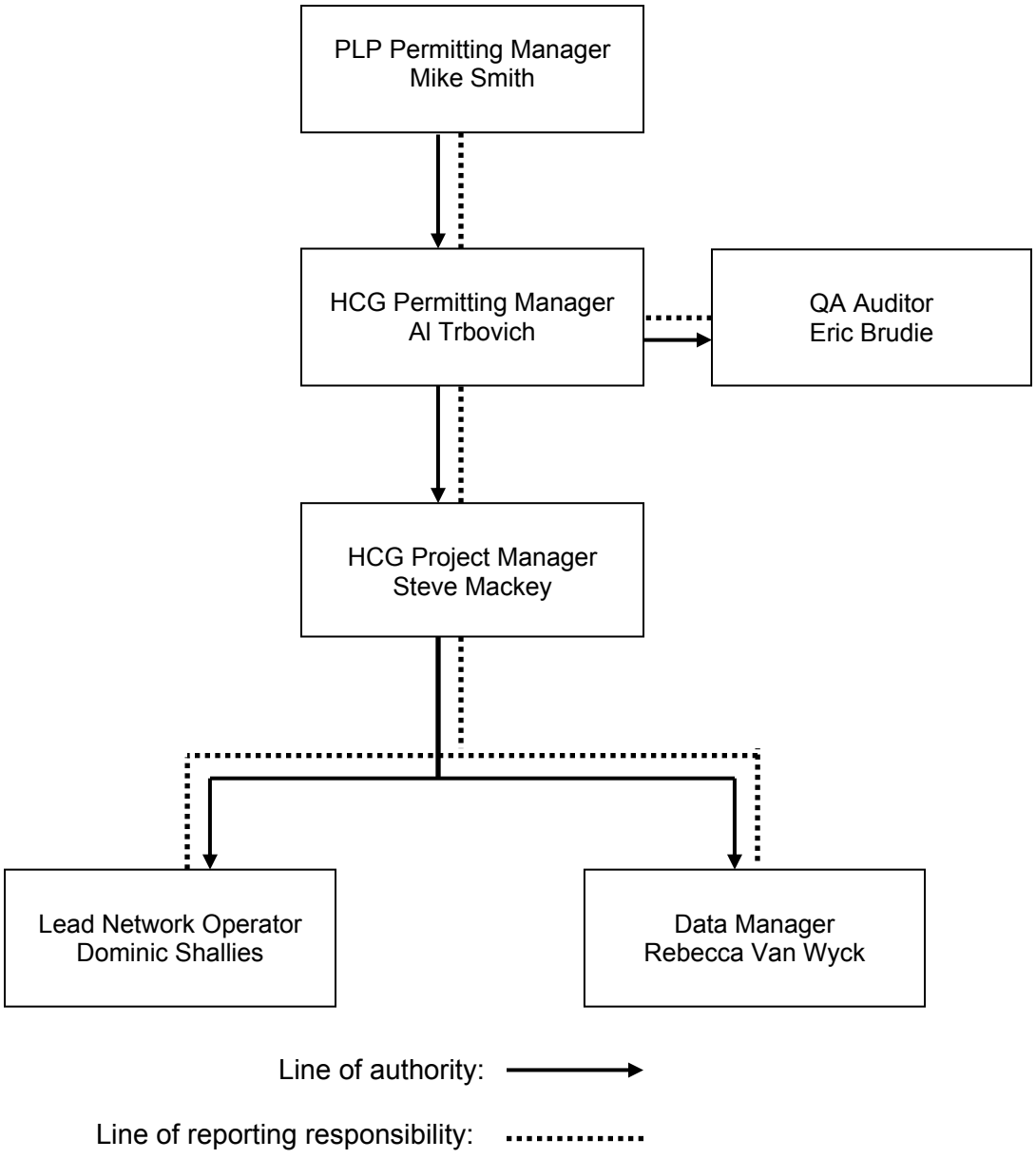
A4. Project/Task Organization

On behalf of The Pebble Limited Partnership (PLP), care of Pebble Mines Corp., its general partner, HCG Inc., dba Hoefler Consulting Group will assist in the installation, operation, and maintenance of meteorological monitoring stations for the Pebble Project located near Iliamna, Alaska. Figure A1 provides the organization plan for this project. The key personnel involved with this project and their respective responsibilities are summarized in Table A2. HCG will be responsible for all aspects of air monitoring, database management, and reporting.

Table A2. Pebble Project Meteorological Monitoring Program Key Individuals and Responsibilities

Key Individual	Responsibilities
PLP Permitting Manager	Mike Smith is the permitting manager for the Pebble Project and is responsible for complete program oversight.
HCG Permitting Manager	Al Trbovich is responsible for coordinating the meteorological monitoring program with PLP air permitting requirements.
HCG Project Manager	Steve Mackey is responsible for management of the technical staff conducting the PLP meteorological monitoring program and ensuring that the project is completed within established schedules and budgets.
Quality Assurance Auditor	Eric Brudie is responsible for auditing the validity and accuracy of reported information and coordinating follow-up activities to ensure a defensible data set.
Lead Network Operator	Dominic Shallies is responsible for installation and routine operation of the monitoring stations.
Data Manager	Rebecca Van Wyck is responsible for maintaining the project databases for all field data and for preparing data reports.

Figure A1. Pebble Project Meteorological Monitoring Program Organizational Chart



A5. Problem Definition/Background and Project Objective

The Pebble Project is a proposed mine for gold, copper, molybdenum, and silver located in southwestern Alaska, north of Lake Iliamna. PLP is conducting baseline environmental studies at the Pebble Project, including meteorological monitoring to support air permitting, environmental studies, and mine design objectives. At least two years of meteorological monitoring is anticipated with a primary objective of collecting meteorological data for supporting future air permit applications required for mining activities, construction and/or roadwork at the proposed mine and port sites.

The meteorological data will be collected in accordance with Prevention of Significant Deterioration (PSD) permit requirements and guidance. While construction of the mine and port infrastructure may not require a PSD permit, the PSD-quality meteorological measurements may also be used for air dispersion modeling required for minor permitting.

A6. Project/Task Description

This study will provide at least two years of representative surface meteorological observations for use in air quality dispersion modeling in support of the Pebble Project. The meteorological monitoring program will include seven PSD-quality stations. Four stations are located in the deposit area, approximately 17 miles northwest of Iliamna and three stations are located in the proposed port area, approximately 52 miles east of Iliamna. The stations are named as follows:

Deposit Area Stations

- Pebble 1 station
- Pebble 4 station
- Pebble 5 station
- Pebble 6 station

Proposed Port Area Stations

- Pebble Port station
- Williamsport station
- North Head station

The study will collect at least two years of meteorological data at the Pebble 1, Pebble 4 and Pebble Port stations. The study will also provide at least one year of meteorological monitoring at the Pebble 5, Pebble 6, Williamsport, and North Head stations.

Three other non-PSD meteorological monitoring stations, known as the Pebble 2, Pebble 3, and Pebble 5A stations have been or will be operated in the Pebble area to collect data for

mine design purposes. These non-PSD stations are not included as part of this QAPP because these stations are not intended to provide data for air dispersion modeling.

Table A3 lists the meteorological parameters to be measured and the frequency at which samples will be collected and recorded.

Table A3. Meteorological Monitoring Measurement Parameters

Parameter	Units	Sampling Frequency	Sample Averaging
Wind speed	meters/second (m/s)	1-second	1-hour
Wind direction	Degrees (°)	1-second	1-hour
Temperature 2-meters	degrees Celsius (°C)	1-second	1-hour
Temperature 10-meters	degrees Celsius (°C)	1-second	1-hour
Vertical temperature difference (ΔT)	degrees Celsius (°C)	1-second	1-hour
Relative Humidity	percent (%)	1-second	1-hour
Solar radiation	Watts per square meter (W/m^2)	1-second	1-hour
Barometric pressure	millibar (mb)	1-second[1]	N/A[1]
Precipitation[3]	Millimeters (mm)	N/A[2]	N/A[2]
Evaporation[3]	Millimeters (mm)	1 second	1 minute

1 Instantaneous pressure measurements are sampled once per hour.
2 Instantaneous precipitation measurements are collected by the datalogger and subsequently summed on an hourly basis.
3 Not measured at the Pebble Port, Williamsport, or North Head stations.

The meteorological monitoring sites for the Pebble Project were selected in a manner consistent with PSD criteria for surface meteorological data collection. Figure A2 shows a map of the PLP meteorological monitoring sites located in southwest Alaska. On May 24, 2005, the proposed monitoring sites were visited by Alan Schuler and Gerry Guay of Alaska Department of Environmental Conservation (ADEC), Natasha Greaves and Rob Wilson of the United States Environmental Protection Agency (EPA) Region 10, and Al Trbovich and Steve Mackey of HCG. On this date, all parties concurred that the Pebble 1, Pebble 4, and Pebble Port sites are the best available locations for carrying out meteorological monitoring representative of the areas proposed for development. Greater details of the monitoring site locations and the proximity of the study areas within defined Alaska land use boundaries are provided in Sections B1 and B9, respectively.

The Pebble Project Meteorological Monitoring Program is expected to run at least from August 1, 2005 to December 31, 2008. In 2007 the Pebble Project Meteorological Monitoring Program was changed to a calendar year monitoring year. Annual Data Reports for the Pebble 1 and Pebble Port stations were submitted for the 2005-2006 monitoring year (August 1, 2005 through July 31, 2006). Following the monitoring year change, annual data reports were submitted for the Pebble 1 and Pebble Port stations for the 2006 monitoring year (January 1, 2006 through December 31, 2006) and for the Pebble 1, Pebble 4, and Pebble Port stations for the 2007 monitoring year (January 1, 2007 through December 31, 2007). Annual data reports for all seven PSD stations will be submitted for the 2008 monitoring year (January 1, 2008 through December 31, 2008). Quarterly data summary reports will be submitted no later than 30 days upon the completion of the monitoring quarter and the annual data report will be submitted no later than 90 days upon completion of the monitoring year. Quality assurance audit reports will be included in the annual data report. For purposes of data reporting, the three calendar years of monitoring will be split into monitoring quarters A through D as follows:

2006 Monitoring Year
Pebble 1, Pebble Port

Monitoring Quarter A	Jan/Feb/Mar 2006
Monitoring Quarter B	Apr/May/Jun 2006
Monitoring Quarter C	Jul/Aug/Sep 2006
Monitoring Quarter D	Oct/Nov/Dec 2006

2007 Monitoring Year
Pebble 1, Pebble 4, Pebble Port

Monitoring Quarter A	Jan/Feb/Mar 2007
Monitoring Quarter B	Apr/May/Jun 2007
Monitoring Quarter C	Jul/Aug/Sep 2007
Monitoring Quarter D	Oct/Nov/Dec 2007

2008 Monitoring Year
Pebble 1, Pebble 4, Pebble 5
Pebble 6, Pebble Port, North Head, Williamsport

Monitoring Quarter A	Jan/Feb/Mar 2008
Monitoring Quarter B	Apr/May/Jun 2008
Monitoring Quarter C	Jul/Aug/Sep 2008
Monitoring Quarter D	Oct/Nov/Dec 2008

Personnel working on this project will be selected by the HCG project manager and will be fully qualified, trained, and capable of their assigned tasks. Work schedules will be determined by the HCG project manager and will include:

(a) daily data reviews
(b) site visits every four to eight weeks
(c) semiannual audits and audit reports
(d) quarterly data summaries
(e) annual data reports
(f) as needed maintenance and corrective actions.

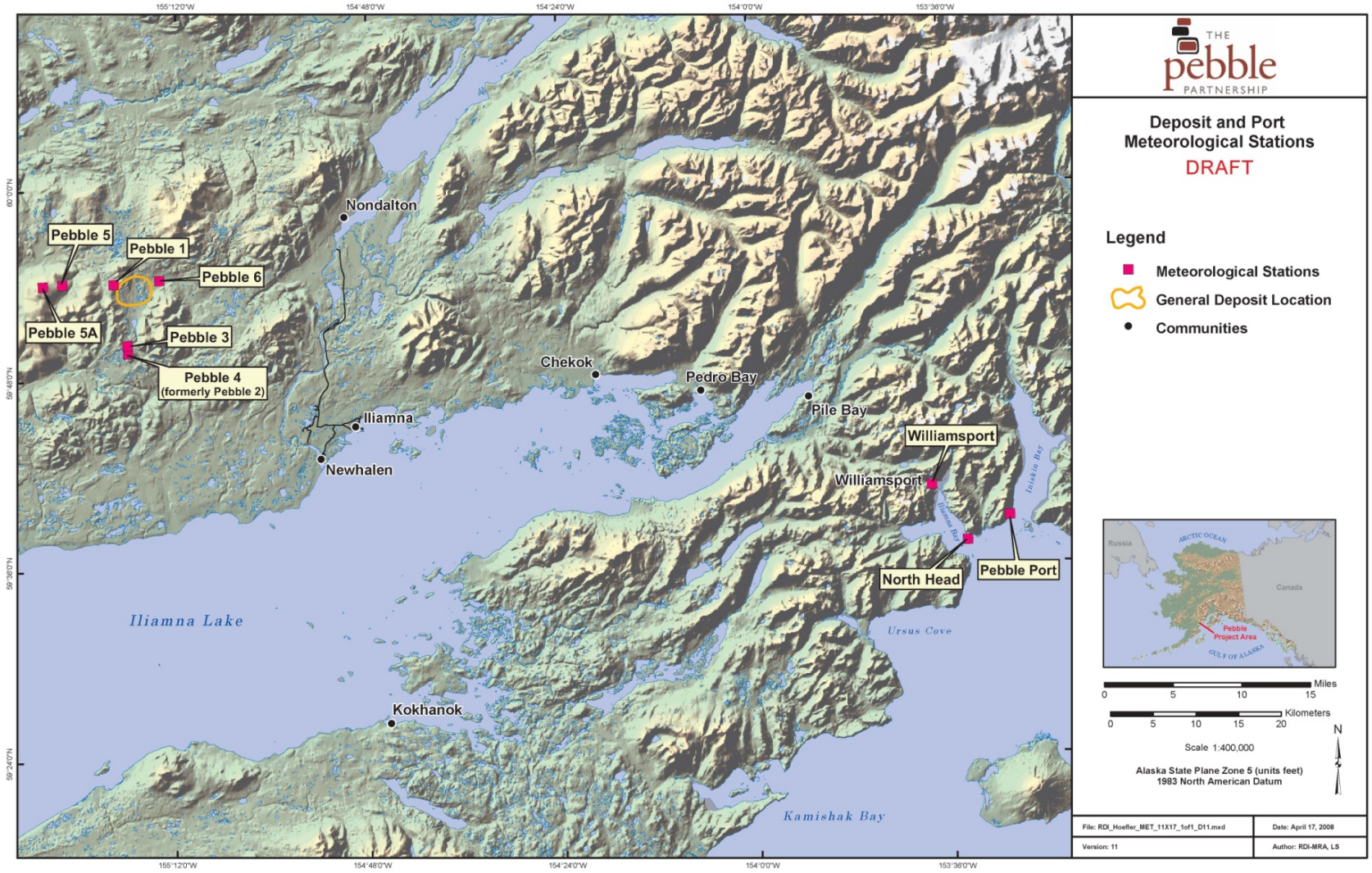
Table A4 provides a provisional work schedule for this monitoring project.

Table A4. Pebble Project Meteorological Monitoring Program Work Schedule

Scheduled Activity	Date
Station Site Selection Visit	May 24, 2005
Installation of Pebble 1 and Pebble Port Stations	June 2005
Training of Station Operators	June 2005
Pebble 1 and Port PSD Station Initial Systems/Performance Audit and Calibrations	June 11 and June 25, 2005
Start of Validated Data at Pebble 1 and Pebble Port stations[1]	August 1, 2005
Beginning of 2006 Monitoring Year	January 1, 2006
Semiannual Performance Audit and Calibrations	January 15-16, 2006
Pebble 4 Station Installation	June 3-10, 2006
Annual Systems/Performance Audit and Calibrations	July/August 2006
End of 2006 Monitoring Year	December 31, 2006
Beginning of 2007 Monitoring Year	January 1, 2007
Semiannual Performance Audit and Calibrations	January/February 2007
Pebble 5 Station Installation	June 2007
Williamsport Station Installation	July 2007
Annual Systems/Performance Audit and Calibrations	August/September 2007
Pebble 6 Station Installation	August 2007
North Head Station Installation	September 2007
End of 2007 monitoring Year	December 31, 2007
Beginning of 2008 Monitoring Year	January 1, 2008
Semiannual Performance Audit and Calibrations	February-April 2008
Annual Systems/Performance Audit and Calibrations	August/September 2008
End of 2008 Monitoring Year	December 31, 2008

[1] Monitoring year scheduled was changed to a calendar year system beginning in 2006.

Figure A2. Pebble Project Area Map



A7. Quality Objectives and Criteria for Measurement of Data

Measurement Quality Objectives (MQOs) and acceptance criteria for the project are defined by the MQOs as prescribed in *EPA Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Sections 3 and 5 (EPA-454/R-99-005), and by the guidelines defined in *EPA Requirements for Quality Assurance Project Plans* Chapter 3, Section A7 (EPA QA/R-5).

Data completeness is a measure of the amount of data actually collected compared with the amount of data that could have been collected, expressed as a percentage. Data completeness for the meteorological sensors is calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The Data Quality Objective (DQO) for data completeness during this monitoring project is 90 percent data capture per quarter for every parameter listed in Table A5.

DQOs for the detection capabilities of the meteorological sensors are defined in terms of measurement resolution. The resolution DQOs for this project have been set equal to those put forth in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* Section 5.1 (EPA-454/R-99-005), and are presented in Table A5.

Accuracy is a measure of the proximity of the measurements and the true value. Accuracy includes components of both random error and systematic error associated with instrumental bias. Accuracy will be assessed during performance audits. The accuracy DQOs for the meteorological sensors are presented in Table A5, and have been set equal to those recommended in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 5.1 (EPA-454/R-99-005).

Detectability, method/comparability, and representativeness are determined by the siting and exposure of the meteorological tower and sensors. The space-time domain and aspects for this specific application--as prescribed in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 3.1.1 Objective for Siting (EPA-454/R-99-005)--have been considered for each measurement parameter.

Meteorological data collected at this station will be examined and compared to nearby National Weather Service locations (e.g. Iliamna) to ensure that data are consistent with current and historical conditions in the area

Table A5. Summary of DQOs for the Pebble Project Meteorological Monitoring Program

Meteorological Parameter/ Manufacturer and Model	Measurement Method	Manufacturer Specified Accuracy	EPA Required Accuracy[1]	EPA Required Resolution[1]	Detectability/ Data Completeness[1]
Wind Speed (Climatronics F460)	Three-cup anemometer	± 0.07 m/s or ± 1%	± 0.2 m/s or ± 5%	0.1 m/s	90% per monitoring quarter
Wind Direction (Climatronics F460)	Light-weight vane	± 2 degrees	± 5 degrees	1.0 degree	90% per monitoring quarter
Wind Speed (RM Young 05305-AQ)	Light-weight propeller	± 0.2 m/s	± 0.2 m/s or ± 5%	0.1 m/s	90% per monitoring quarter
Wind Direction (RM Young 05305-AQ)	Light-weight vane	± 3 degrees	± 5 degrees	1.0 degree	90% per monitoring quarter
Ambient Temperature & Vertical Temperature Difference (Met One 062MP)	Solid state Thermistor	± 0.05°C	± 0.5°C (Ambient Temperature), ± 0.1°C (Temperature Difference)	0.1°C (Ambient Temperature), 0.02°C (Temperature Difference)	90% per monitoring quarter
Barometric Pressure (Vaisala PTB101B)	Silicon capacitive sensor	± 0.3 mb	± 3 mb	0.5 mb	90% per monitoring quarter
Relative Humidity (Vaisala HMP45C)	Thin-polymer capacitor	± 2% (0-90% range) ± 3% (90-100% range)	± 1.5°C	0.1°C	90% per monitoring quarter
Solar Radiation (Licor LI200X)	Silicon photovoltaic detector	± 5%	± 5%	10 W/m^2	90% per monitoring quarter
Precipitation (ETI NOAH II)	Water pressure	± 0.25 mm	± 5 mm	0.3 mm	90% per monitoring quarter
Evaportation (Nova Lynx 255-100)	Float mechanism/ sensor	± 0.25%	n/a[3]	n/a[3]	90% per monitoring quarter

[1] Referenced in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2] Values are given in terms of dew point temperature in guidance document (EPA-454/R-99-005).
[3] n/a = not applicable.

A8. Training and Certifications

The Pebble Project meteorological monitoring sites require no specific mandated training requirements as stated in *EPA Requirements for Quality Assurance Project Plans* Section A8 (EPA QA/R-5). However, a site-specific health and safety plan was developed in accordance with both HCG and PLP standards. Site-specific training for this project covers activities performed in the field and includes record keeping practices. All HCG and PLP field personnel will attend annual site safety and logistics meetings hosted by PLP. HCG field technicians for this project will receive training on the operation and maintenance of the meteorological sensors and related equipment. Training will be conducted by the HCG project manager or his designees. Site-specific training checklists and site visit memos will document the specific training received by each Field Technician (Appendix B). These documents will be filed and maintained in the project files.

All personnel working on any element of this project will have their qualifications reviewed and will be determined to have sufficient experience and knowledge in both meteorological monitoring and data processing. Experience and qualifications of key project participants are presented in Appendix D.

A9. Documents and Records

Documentation and records for this project will include equipment calibration and maintenance records, documentation of quality control/quality assurance activities, routine monitoring data, corrective action and resolution forms, any QAPP revision documentation, and records of HCG field activities (i.e. site visit memos). Appendix B includes example data sheets for the monitoring project. All hard-copy documentation will be stored at the HCG Anchorage office and retained for a period of at least five years from the completion of the project. Electronic data will be stored on various media with full project backups. In addition to any written reports, electronic data collected for this project and data transferred to electronic format will be provided to PLP via CD-ROM or e-mail. Both the original comma delimited raw text file and a spreadsheet format file will be provided.

The final annual reports will be submitted to ADEC and PLP in both hard copy and electronic (PDF) format within 90 days of the conclusion of the monitoring program. Validated data will be submitted to ADEC in the same formats. The annual report will include a brief discussion of any monitoring phenomena, observable trends, quarterly and annual averages for all the measured parameters, statistical summaries for each collected parameter, and wind rose graphics. The reports will also contain any additional documentation, including but not limited to equipment calibration and maintenance records, documentation of quality control/quality assurance activities, routine monitoring data, project data reports, corrective action records, and records of field activities. See Section C for an outline of the annual report.

In accordance with ADEC reporting guidelines, quarterly data summaries and annual data reports will be prepared by HCG and provided to PLP and ADEC. The annual data report will be prepared by HCG in accordance to the requirements set forth in *PSD Quality Ambient Air Quality & Meteorological Monitoring Annual Data Report Format* (ADEC, October 2006). In addition, quarterly data summaries will be prepared by HCG in accordance with the format described in *PSD Quality Ambient Air Quality & Meteorological Monitoring Quarterly Data Summary Format* (ADEC, April 2008) and provided to PLP and ADEC within 30 days after the completion of each calendar quarter.

B. Measurement and Data Acquisition

B1. Sampling Process Design

The identified objectives of the Pebble Project Meteorological Monitoring Program are:

- Collect meteorological data necessary to support air permit applications
- Collect data for other environmental purposes (baseline, NEPA)
- Collect data for engineering design of mine and port facilities

To accomplish the monitoring objectives, baseline meteorological monitoring is being performed in both the deposit area (four stations) and near the proposed port site (three stations). The monitoring study is comprised of seven PSD quality meteorological monitoring stations, each of which will collect hourly meteorological monitoring data over a period of at least two years. The seven PSD stations are designed and operated to meet the data quality objectives previously outlined in Section A7 of this QAPP.

B1.1 Monitoring Site Locations

The Pebble Project area is located near Iliamna in southwestern Alaska. The four deposit area stations are located approximately 17 miles northwest of Iliamna and the three port stations are located approximately 52 miles east of Iliamna on Iliamna Bay and Iniskin Bay. The specific station locations are shown in Figure A2.

The meteorological monitoring program consists of a total of seven PSD quality meteorological monitoring stations named as follows:

Deposit Area Stations

- Pebble 1 station
- Pebble 4 station
- Pebble 5 station
- Pebble 6 station

Proposed Port Area Stations

- Pebble Port station
- Williamsport station
- North Head station

Additional non-PSD meteorological monitoring stations are being used to collect data for mine design purposes. One of these non-PSD station was initially located at the Pebble 4 station site from October 2004 through November 2005, and was called the “Pebble 2” station. During November 2005, the Pebble 2 station was relocated 0.6 miles north and

renamed “Pebble 3”. Another non-PSD station, Pebble 5A, was installed on Koktuli Ridge during June 2007. Table B1 provides a summary of the location, purpose, and measurement parameters of PSD and non-PSD meteorological monitoring stations for the Pebble Meteorological Monitoring Program. Throughout the remainder of this QAPP, emphasis will be placed on the locations and operation of the PSD meteorological monitoring stations only, because the primary purpose of these stations is to provide measurements for air dispersion modeling and air permit applications.

Figure B1 shows a map of the meteorological stations adjacent to the Pebble Project deposit location, approximately 17 miles northwest of Iliamna, Alaska. Figures B2 through B5 provide higher resolved maps of the Pebble 1, Pebble 4, Pebble 5, and Pebble 6 station locations. The Pebble 1 station is located at a northern edge of a hilltop at 1,600 feet above sea level and overlooks a basin to the west where the Pebble Project ore body is located. The Pebble 4 station is located at 1,200 feet above sea level and overlooks the Pebble 3 station (at 1,000 feet above sea level) and the drainage of Frying Pan Lake. The Pebble 5 station is located at 1,400 feet above sea level in the North Fork Koktuli Basin. The Pebble 6 station is located at 800 feet above sea level 5 km east of the Pebble 1 station in the Upper Talarik Basin.

Figures B6 and B7 are photos of the Pebble 1 station and the surrounding area in the four cardinal directions, respectively. Figures B8 and B9 provide photos of the Pebble 4 station and the surrounding area in the four cardinal directions. Figures B10 and B11 provide photos of the Pebble 5 station and the surrounding area in the four cardinal directions. Figures B12 and B13 provide photos of the Pebble 6 station and the surrounding area in the four cardinal directions. Despite the relatively low elevation of the sites, all of the meteorological stations sit above tree line and are free of natural and man-made obstructions.

Figure B14 is a map of the proposed port area stations. Figure B15 and B16 are photos of the Pebble Port station and the surrounding area in the four cardinal directions, respectively. The Pebble Port station overlooks the western shores of Iniskin Bay at the site of the proposed Pebble Project shipping port. Figures B17 and B18 are photos of the Williamsport station and the surrounding area in the four cardinal directions respectively. The Williamsport station is located in the northern part of Iliamna Bay where Williams Creek meets the bay. Figures B19 and B20 are images of the North Head station and the surrounding area in the four cardinal directions. The North Head station overlooks the eastern shore of Southern Iliamna Bay.

Table B1. Summary of Pebble Project Meteorological Stations

Station Name	Purpose/ Function[1]	Station Coordinates and Elevation	Monitoring Period	Measured Meteorological Parameters
Pebble 1	PSD quality meteorological monitoring for proposed mine site	59° 54' N 155° 20' W 1,600 feet	Aug. 1, 2005 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature ∆ Temperature Solar radiation Barometric pressure Precipitation Evaporation
Pebble 2	Non-PSD meteorological monitoring at the proposed mine tailings storage facility site	59° 50' N 155° 18' W 1,200 feet	Jan. 2005 – Nov. 2005	Wind speed Wind direction Wind sigma Temperature Precipitation Evaporation
Pebble 3	Non-PSD meteorological monitoring at the proposed mine tailings storage facility site	59° 50' N 155° 18' W 1,000 feet	Nov. 2005 – July 2008	Wind speed Wind direction Wind sigma Temperature Precipitation
Pebble 4	PSD quality meteorological monitoring at the proposed mine tailings storage facility site	59° 50' N 155° 18' W 1,200 feet	Jan. 1, 2007 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature ∆ Temperature Solar radiation Barometric pressure Precipitation Evaporation
Pebble 5	PSD quality meteorological monitoring at the proposed mine tailings storage facility site	59° 54' N 155° 26' W 1,400 feet	Jan. 1, 2008 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature ∆ Temperature Solar radiation Barometric pressure Precipitation Evaporation

[1]Each PSD station measures winds at approximately 10-meters height and is operated in accordance to *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Non-PSD stations measure wind at 3-meters height and are operated primarily for engineering design.

Table B1 (Continued). Summary of Pebble Project Meteorological Stations

Station Name	Purpose/ Function[1]	Station Coordinates and Elevation	Monitoring Period	Measured Meteorological Parameters
Pebble 5A	Non-PSD meteorological monitoring at the proposed mine tailings storage facility site	59° 54' N 155° 29' W 2,300 feet	Aug. 1, 2007 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature Δ Temperature
Pebble 6	PSD quality meteorological monitoring for proposed mine site	59° 54' N 155° 12' W 800 feet	Jan. 1, 2008 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature Δ Temperature Solar radiation Barometric pressure Precipitation Evaporation
Pebble Port	PSD quality meteorological monitoring at a proposed port site	59° 39' N 153° 28' W 40 feet	Aug. 1, 2005 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature Δ Temperature Solar radiation Barometric pressure
Williamsport	PSD quality meteorological monitoring at a proposed port site	59° 41' N 153° 38' W 40 feet	Jan. 1, 2008 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature Δ Temperature Solar radiation Barometric pressure
North Head	PSD quality meteorological monitoring at a proposed port site	59° 37' N 153° 34' W 90 feet	Jan. 1, 2008 – Dec. 31, 2008	Wind speed Wind direction Wind sigma Temperature Δ Temperature Solar radiation Barometric pressure

[1]Each PSD station measures winds at approximately 10-meters height and is operated in accordance to *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Non-PSD stations measure wind at 3-meters height and are operated primarily for engineering design.

Figure B1. Pebble Project Deposit Area Meteorological Station Locations

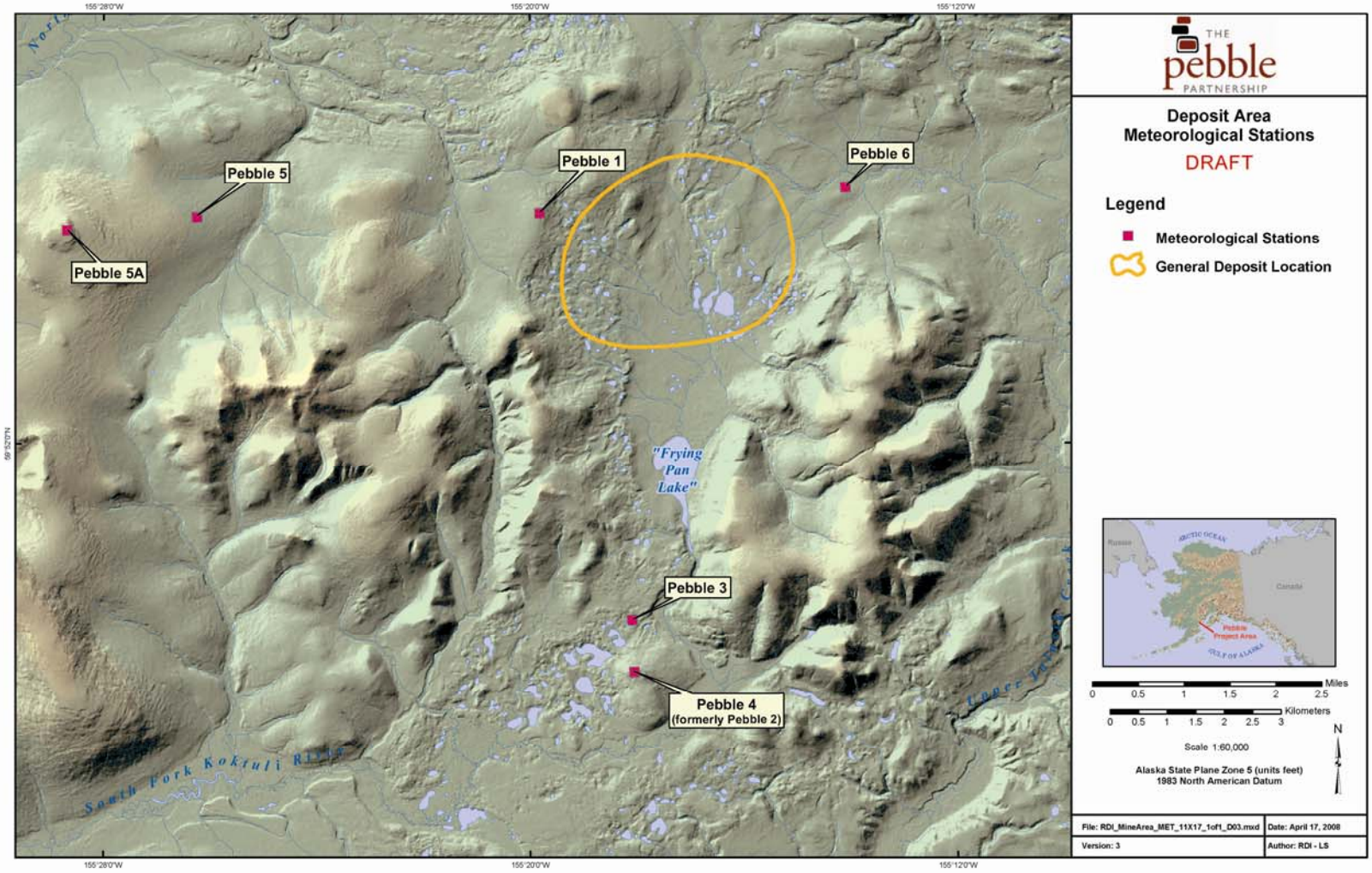


Figure B2. Pebble 1 Meteorological Station Site Map

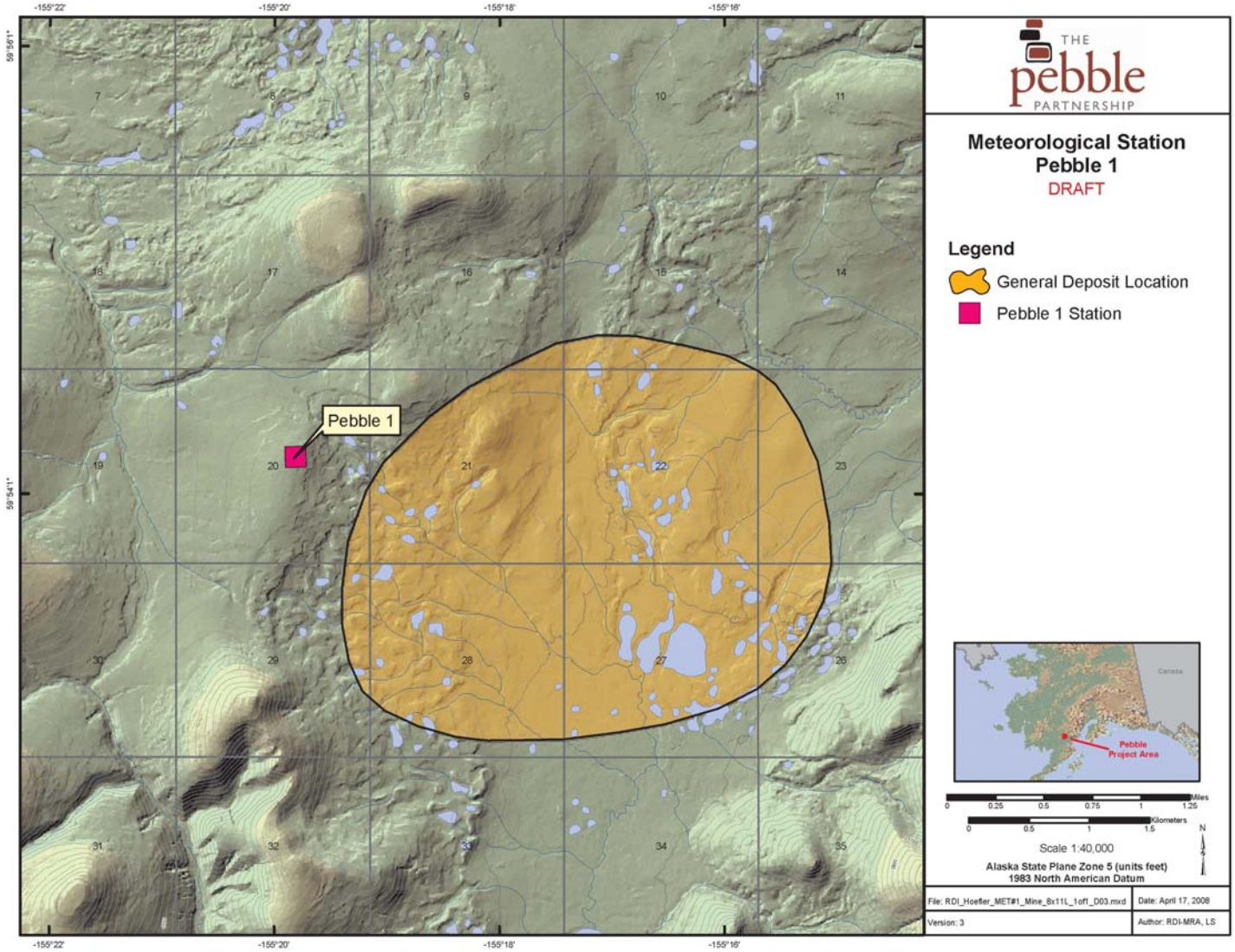


Figure B3. Pebble 4 Meteorological Station Site Map

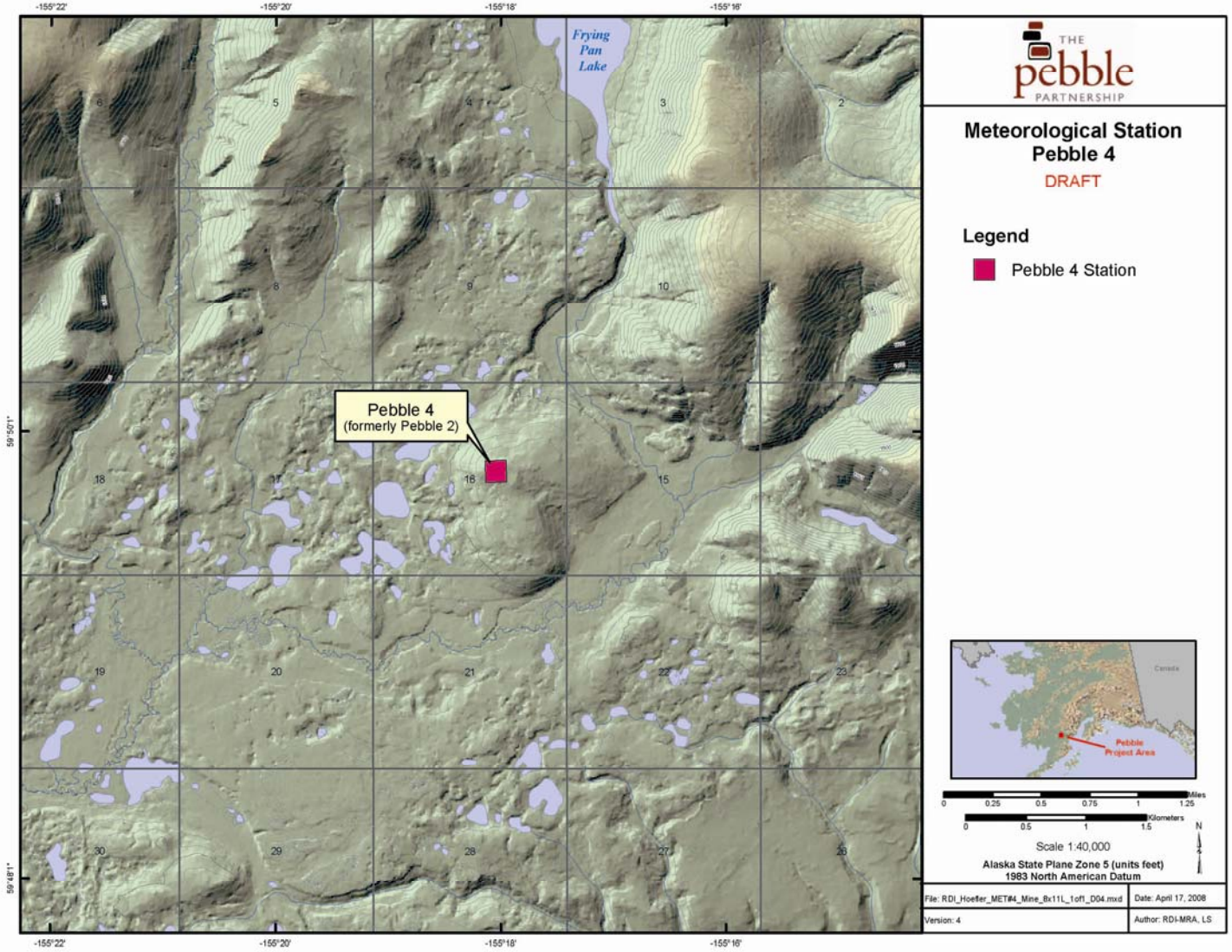


Figure B4. Pebble 5 Meteorological Station Site Map

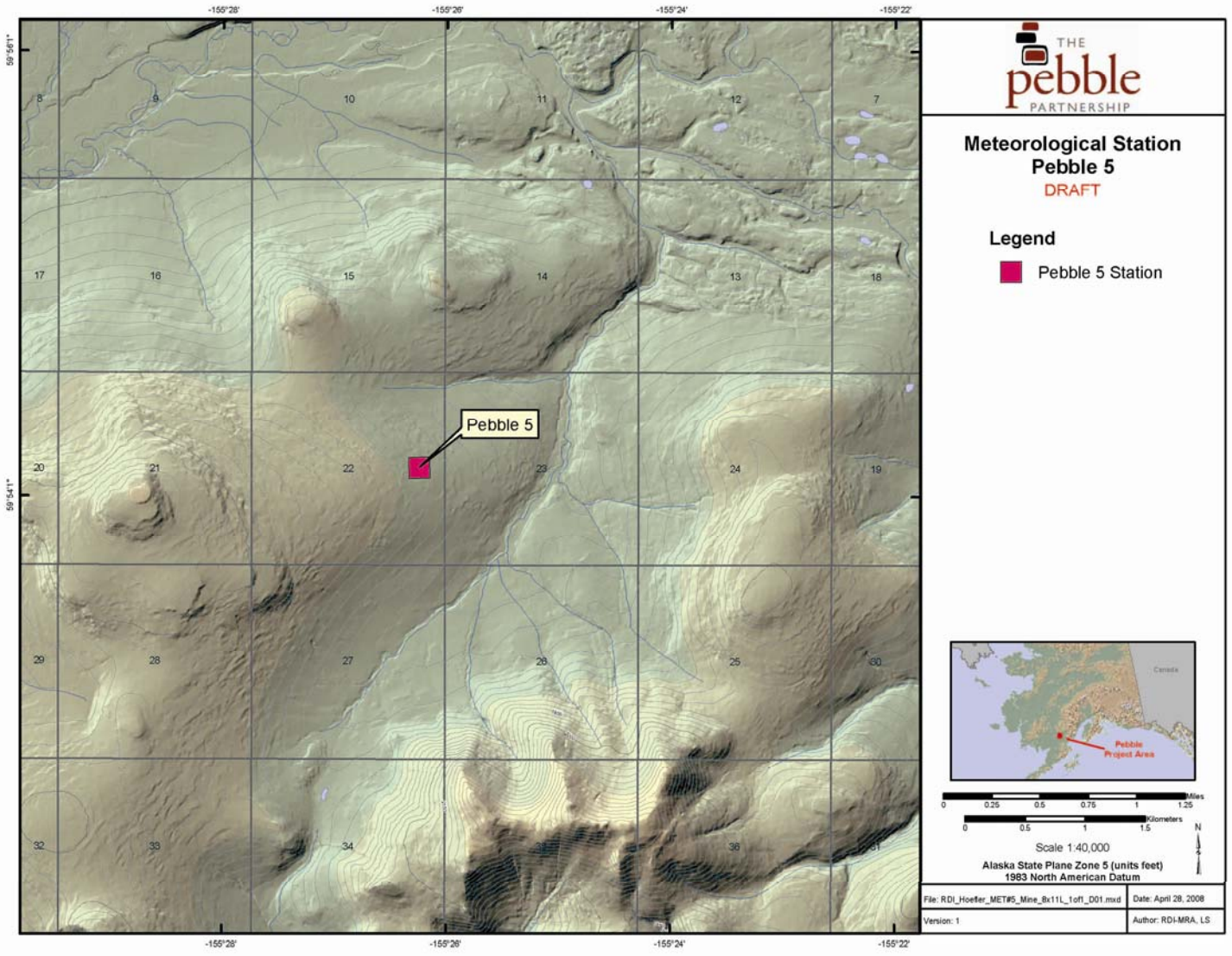


Figure B5. Pebble 6 Meteorological Station Site Map

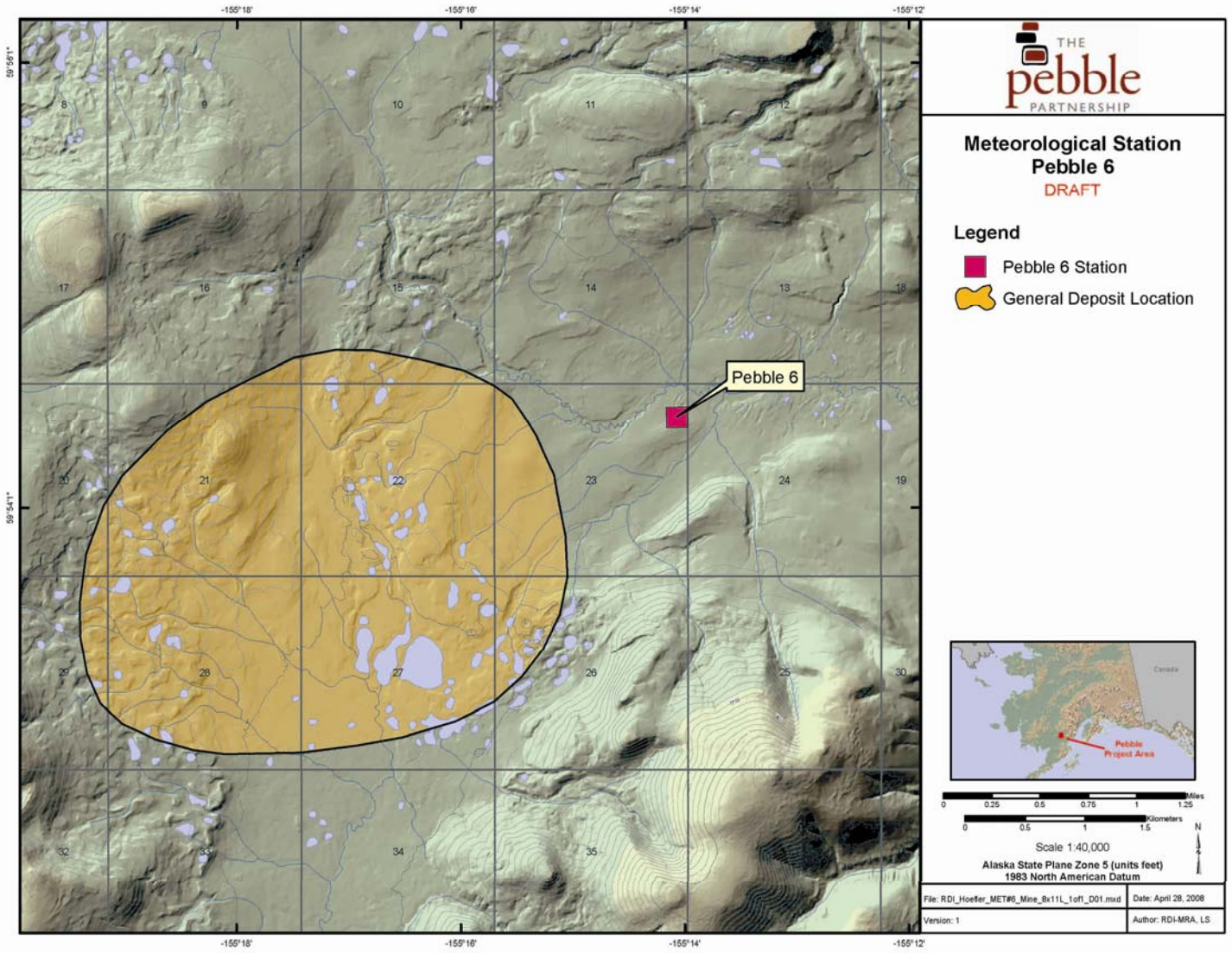


Figure B6. Pebble 1 Meteorological Station

North to Station

South to Station

West to Station

East to Station

Figure B7. Area Surrounding the Pebble 1 Meteorological Station

North from Station

South from Station

West from Station

East from Station

Figure B8. Pebble 4 Meteorological Station

North to Station

South to Station

West to Station

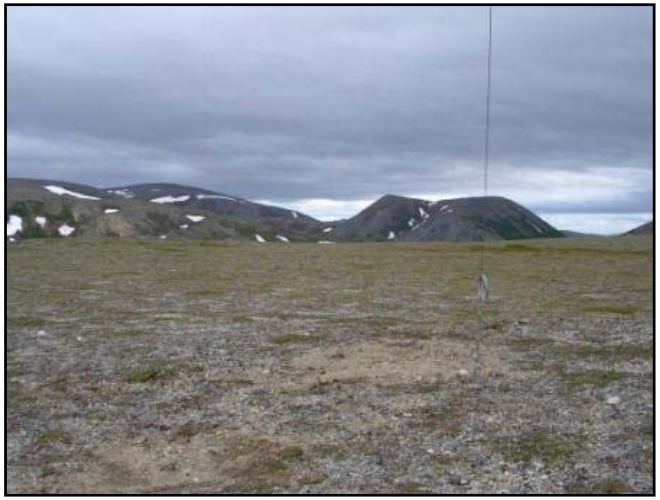
East to Station

Figure B9. Area Surrounding the Pebble 4 Meteorological Station

North from Station

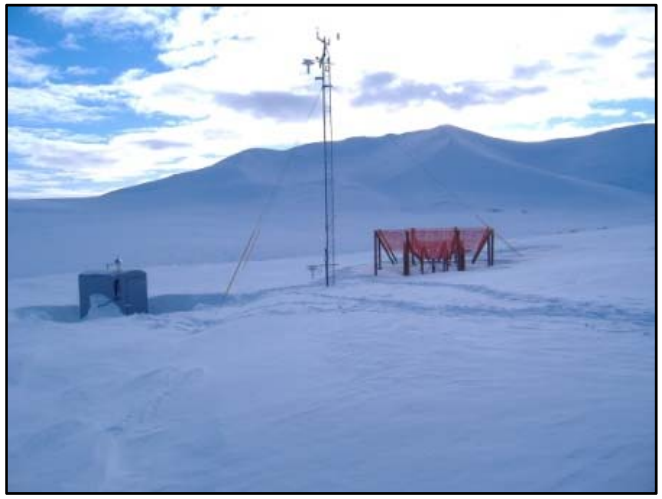
South from Station

West from Station



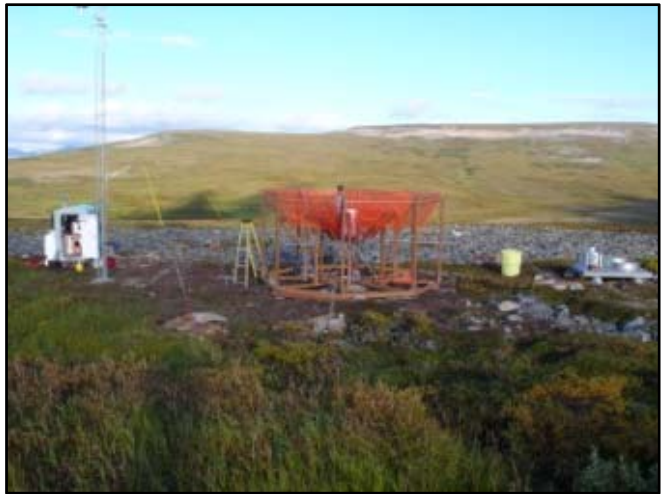
East from Station

Figure B10. Pebble 5 Meteorological Station

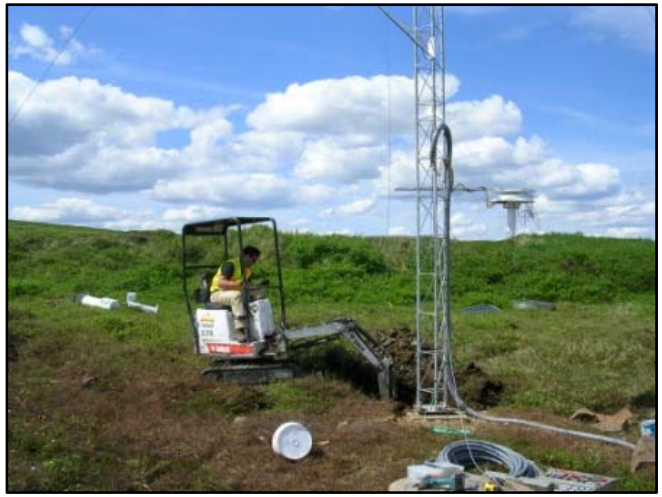


North to Station

South to Station



West to Station



East to Station

Figure B11. Area Surrounding the Pebble 5 Meteorological Station

North from Station

South from Station

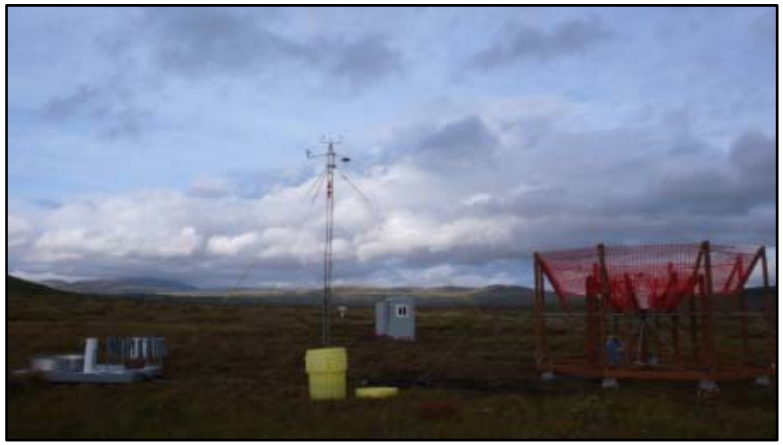
West from Station

East from Station

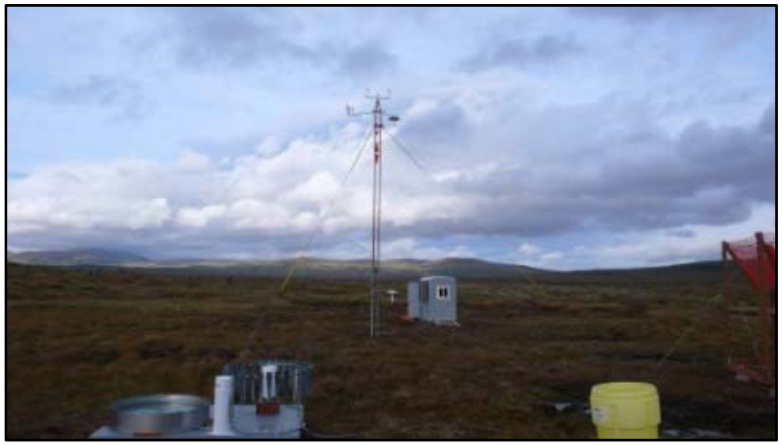
Figure B12. Pebble 6 Meteorological Station

North to Station

South to Station



West to Station

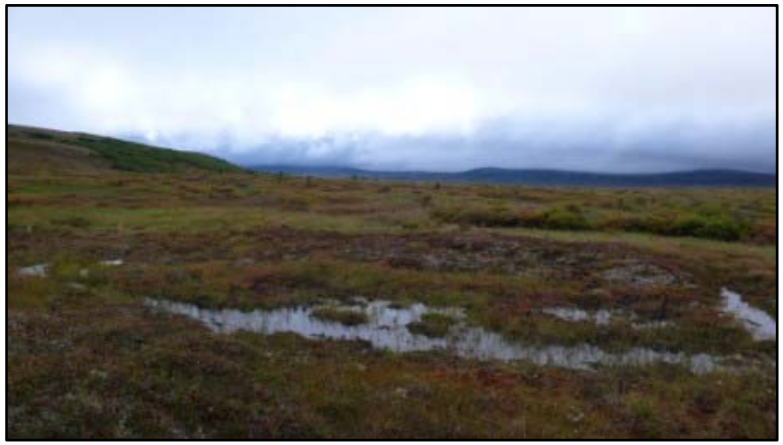


East to Station

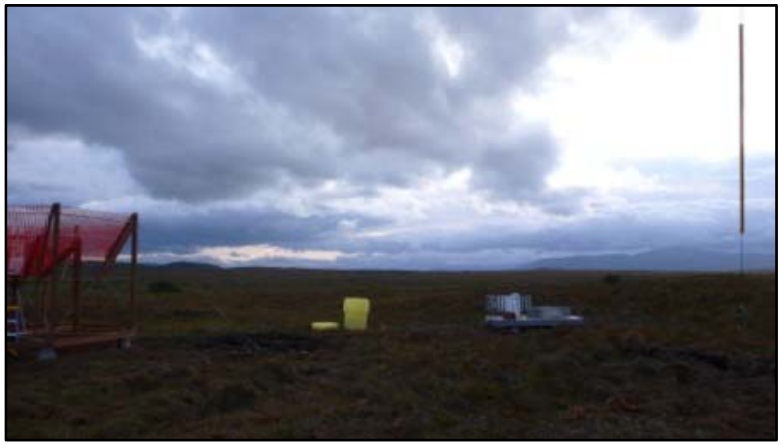
Figure B13. Area Surrounding the Pebble 6 Meteorological Station

North from Station

South from Station



West from Station



East from Station

Figure B14. Pebble Project Port Area Meteorological Station Map

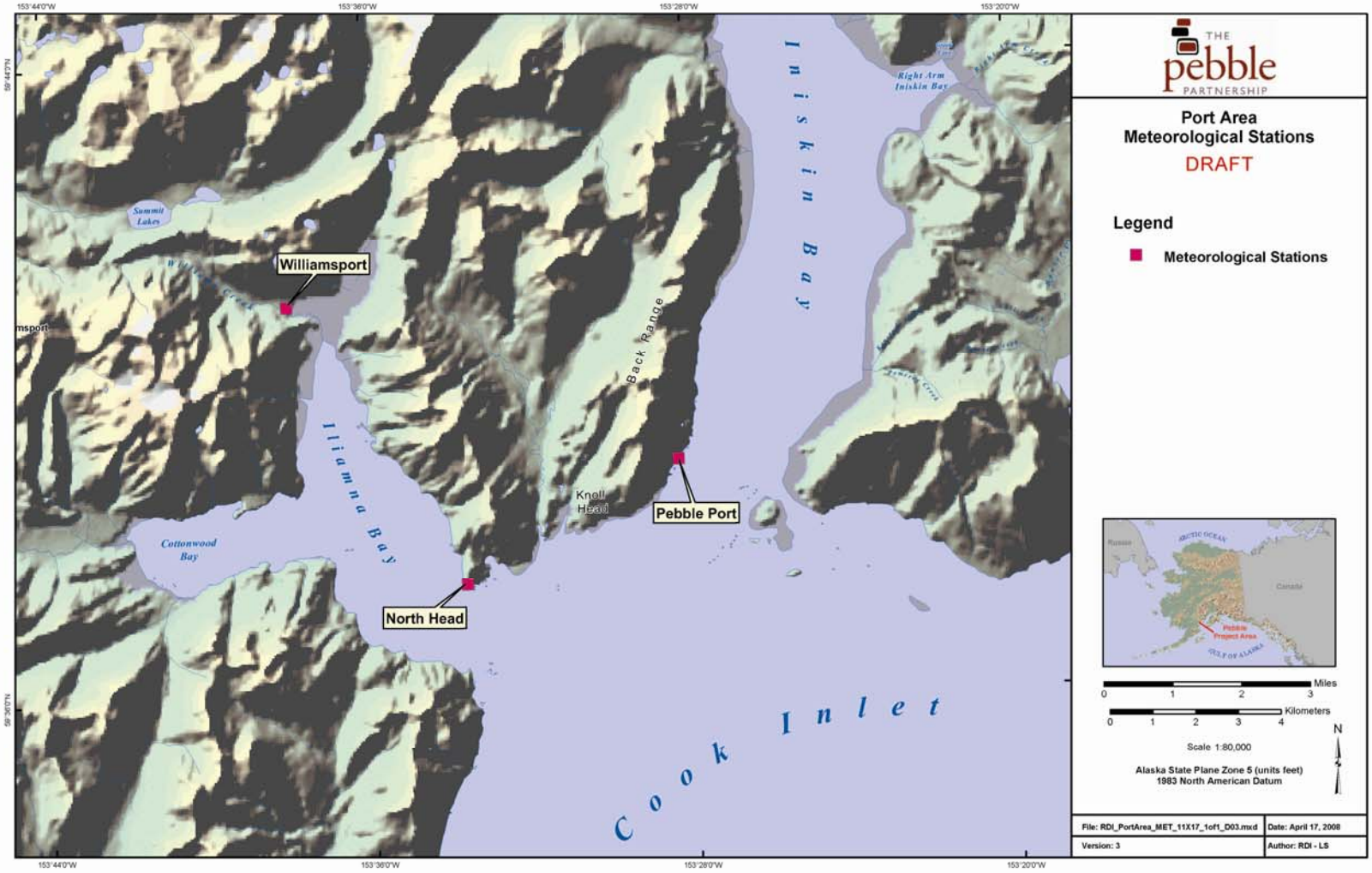


Figure B15. Pebble Port Meteorological Station

North to Station

South to Station

West to Station

East to Station

Figure B16. Area Surrounding the Pebble Port Meteorological Station

North from Station

South from Station

West from Station

East from Station

Figure B17. Williamsport Meteorological Station

North to Station

South to Station

West to Station

East to Station

Figure B18. Area Surrounding the Williamsport Meteorological Station

North from Station

South from Station

West from Station

East from Station

Figure B19. North Head Meteorological Station

North to Station

South to Station

West to Station

East to Station

Figure B20. Area Surrounding the North Head Meteorological Station

North from Station

South from Station

West from Station

East from Station

B2. Sampling Methods Requirements

Measurements will be performed using appropriate monitoring methods to ensure that the data are representative of actual conditions. The following sections address the methods to be used throughout the Pebble Project meteorological monitoring program, instrument installation, and the operational environment of the instruments.

B2.1 Reference and Equivalent Methods

Sensors for the measurement of wind speed, wind direction, ambient temperature, vertical temperature difference, barometric pressure, relative humidity, solar radiation, precipitation, and evaporation will be used to collect meteorological data. Table B2 lists the sensors that will be used, in addition to the manufacturers' specifications and the recommended performance specifications stated in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). These sensors will be continuously operated throughout this meteorological program.

Ambient temperature sensors will be mounted at 2 and 10 meters above ground level and used to measure vertical temperature difference, ΔT ("Delta T"). Two collocated wind speed and wind direction sensors will be mounted at 10 meters above ground level. The two wind measurement systems will include: (1) Climatronics F460 sensors as the primary wind sensors, and (2) RM Young 05305-AQ wind monitors as the secondary or back-up wind sensors. These dual wind sensors will provide redundancy in the case of data loss. Solar radiation, relative humidity, and barometric pressure measurements will be measured at 4, 2, and 1.5 meters above ground level, respectively. At the Pebble 1, Pebble 4, Pebble 5, and Pebble 6 stations, the evaporation gauge will be mounted on a leveled deck and surrounded with fencing to avoid animal disturbance. The Pebble 1, Pebble 4, Pebble 5, and Pebble 6 station precipitation gauges will be mounted inside Wyoming-type (see Figure B4) and Alter Shield-type wind screens to prevent blowing snow and excessive winds from causing spurious readings and to improve catch efficiency. Complete descriptions of sensor audit and calibration methods are located in Appendix C.

Table B3 lists the sampling and averaging times for all of the meteorological variables that will be collected throughout this project. Wind speed, wind direction, temperature, solar radiation, evaporation pan level, and relative humidity will be sampled every second, and will be used to determine the mean hourly values of the measured parameters. Discrete precipitation values will be recorded to the datalogger each time the precipitation sensor detects a signal, and subsequently processed to provide measurements of total precipitation per hour. In addition, instantaneous measurements of barometric pressure will be sampled once every hour.

Table B2. Summary of Meteorological Sensors and Performance Specifications

Meteorological Parameter	Measurement Method	Sensor Characteristics	Manufacturer Specification	Guidance Document
Wind Speed - Primary (Climatronics F460)	Three-cup anemometer	Max Operating Range	0 - 65 m/s	0 - 50 m/s
		Starting Speed	0.22 m/s	0.5 m/s
		Accuracy	± 0.07 m/s or 1%	± 0.2 m/s + 5%
		Temperature Range	-40 ºC to +60 ºC	Not Specified
		Distance Constant	Less than 4.0 m (13.1 ft)	5 m
		Measurement Resolution	0.01 m/s	0.1 m/s
Wind Direction - Primary (Climatronics F460)	Precision low-torque potentiometer	Azimuth	0 - 360º	Not Specified
		Starting Speed[1]	0.22 m/s	0.5 m/s
		Accuracy	± 2º	± 5º
		Damping Ratio[1]	>0.4	0.4 to 0.7
		Delay Distance	< 1 m (3.3 ft)	5 m
		Temperature Range	-40 ºC to +60 ºC	Not Specified
		Measurement Resolution	0.1º	1.0º
Wind Speed - Secondary (RM Young 05305-AQ)	Propeller type anemometer	Max Operating Range	0 - 40 m/s	0 - 50 m/s
		Starting Speed	0.4 m/s	0.5 m/s
		Accuracy	± 0.2 m/s or 1%	± 0.2 m/s + 5%
		Temperature Range	-50 ºC to +50 ºC	Not Specified
		Distance Constant	2.1 m	5 m
		Measurement Resolution	0.01 m/s	0.1 m/s
Wind Direction - Secondary (RM Young 05305-AQ)	Precision low-torque potentiometer	Azimuth	0 - 360º	Not Specified
		Starting Speed	0.5 m/s	0.5 m/s
		Accuracy	± 3º	± 5º
		Damping Ratio	>0.4	0.4 to 0.7
		Delay Distance	1.2 m	5 m
		Temperature Range	-50 ºC to +50 ºC	Not Specified
		Measurement Resolution	0.1º	1.0º
Ambient Temperature and Δ T Met One 062-MP	Solid state thermistor	Accuracy	± 0.05 ºC	± 0.1 ºC
		Time Constant	3.6 sec	1 min
		Temperature Range	-50 ºC to +50 ºC	-40 ºC to +60 ºC
Solar Radiation (Li-Cor LI200X)	Silicon photovoltaic detector	Accuracy	± 5 %	± 5 % of observed
		Time Constant	1 sec	5 sec
		Spectral Response[2]	400 nm to 1,100 nm	285 nm to 2,800 nm
		Temperature Range	-40 ºC to +65 ºC	-20 ºC to +40 ºC
Barometric Pressure (Vaisala PT101B)	Silicon capacitive absolute pressure sensor	Accuracy	± 0.5 mb	± 3 mb
		Temperature Range	-40 ºC to +60 ºC	Not specified
		Measurement Resolution	< 0.5 mb	0.5 mb
		Measurement Range	600 – 1,060 mb	Not specified

[1] At 10º initial angle of attack

[2] Guidance document allows photovoltaic pyranometers when data will be used to estimate stability.

Table B2 (Continued). Summary of Meteorological Sensors and Performance Specifications

Meteorological Parameter	Measurement Method	Sensor Characteristics	Manufacturer Specification	Guidance Document
Relative Humidity (Vaisala HMP45AC)	Capacitance change of a polymer thin film capacitor	Accuracy	± 2 % RH	± 1.5ºC [3]
		Time Constant	15 sec	30 min
		Temperature Range	-40 ºC to +60 ºC	-30 ºC to +30 ºC
		Measurement Resolution	0.1 % RH	0.1 ºC [3]
		Measurement Range	0-100% RH	-30 ºC to +30 ºC
Precipitation (ETI NOAH II)	Pressure of water column above a load cell mechanism	Accuracy	± .254 mm	± 0.5 mm
		Temperature Range	-30 ºC to +50 ºC	Not specified
		Measurement Resolution	± 0.254 mm	0.3 mm
		Measurement Range	0 to 12 in	Not specified
Evaporation (Nova Lynx 255-100)	Change in pressure head determined by float mechanism	Accuracy	± 0.25% over 10" range	Not specified
		Time Constant	1 sec	
		Temperature Range	0 ºC to 60 ºC	
		Measurement Resolution	1.0 mm	
		Measurement Range	3 to 10 in	

[3] Guidance document specifies values for dew point, not relative humidity.

Table B3. Sampling and Averaging Times for Meteorological Parameters

Meteorological Parameter	Sampling time	Averaging time
Wind Speed	1 sec	1 hr
Wind Direction	1 sec	1 hr
Wind Sigma	1 sec	1 hr
Temperature	1 sec	1 hr
∆ Temperature	1 sec	1 hr
Solar Radiation	1 sec	1 hr
Relative Humidity	1 sec	1 hr
Evaporation	1 sec	1 min
Precipitation[1]	n/a	n/a
Barometric Pressure[2]	1 hr	n/a

[1] Instantaneous precipitation measurements are collected by the datalogger and subsequently summed on an hourly basis.
[2] Instantaneous pressure measurements are sampled once per hour.

B2.2 Environmental Controls

Weatherproof enclosures and/or structures will be installed at each monitoring site for protection of the datalogger, batteries, modem, and barometric pressure sensor. Each monitoring station will be properly grounded to prevent damage from possible lightning strikes. To assure accurate temperature data, each temperature sensor will be mounted within identical fan-aspirated solar radiation shields.

B3. Sample Handling and Custody

Not applicable. No physical samples will be taken as part of this project.

B4. Analytical Methods Requirements

The meteorological sensors to be used for this project meet the specifications and recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005) (see Table B2).

B5. Quality Control

Quality Assurance/Quality Control (QA/QC) procedures are required for this project to ensure that the collected meteorological data meet standards of reliability and accuracy. Quality control for this project will follow EPA PSD monitoring requirements presented in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005) and *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)* (EPA 450/4-87-007).

All monitoring equipment will be acquired from manufacturers whose equipment meets EPA meteorological monitoring guidelines. In no case will inferior equipment be used. The Critical Validation Criteria Table (Table B4) outlines criteria deemed critical to maintaining the integrity of a sample or group of samples. Data that do not meet each and every criterion on the Critical Validation Criteria Table will be invalidated unless compelling reason and justification exist for not doing so. The samples for which one or more of these criteria are not met are invalid unless proven otherwise. The cause for not operating in the acceptable range for each violated criteria will be investigated and future occurrences avoided reducing the likelihood that additional samples will be invalidated.

The QA/QC Operational Evaluations Table (Table B5) outlines criteria that are important for maintaining and evaluating the quality of the data collection system. Violation of a criterion or a number of criteria may be cause for invalidation of the data. The decision to invalidate data will consider other quality control information that may or may not indicate the data are acceptable. Therefore, a sample or group of samples for which one of these criteria is not met is suspect unless other quality control information demonstrates otherwise. The reason for not meeting the criteria will be investigated, mitigated, and/or justified.

The Systematic Issues Table (Table B6) outlines criteria important for the correct interpretation of the data but that do not usually impact the validity of a sample or group of samples. For example, data quality objectives are included in this table. Not meeting these data quality objectives does not invalidate any of the samples, but may impact the error rate associated with the attainment/non-attainment decision.

Table B4. Meteorological Sensors QA/QC Critical Validation Criteria

Meteorological Sensors Critical Validation Criteria			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Standard Reporting Units			
Wind speed	m/s	all data	EPA-454/R-99-005
Wind direction	0-360 degrees		
Temperature	Celsius		
Delta temperature	Celsius		
Barometric pressure	mb		
Solar radiation	W/m^2		
Equipment			
Wind speed sensor	Meets recommended specs in guidance	Purchase	EPA-454/R-99-005
Wind direction sensor			
Temperature sensor			
Delta temperature sensor			
Barometric pressure sensor			
Solar radiation sensor			
Completeness			
Annual - all parameters	90% hourly data capture/calendar qtr	1 year (all calendar qtrs)	EPA-450/4-87-007
Hourly avg.-all parameters	>45 min/hourly average	hourly average	
Calibration			
All sensors calibrated by manufacturer	According to manufacturer specs and within EPA accuracy criteria	Every six months	EPA-454/R-99-005
Performance Audit and Calibration Transfer Standards			
Audit and Calibration Standards	Audit Std independent from Cal Stds	Within std certification freq	EPA-454/R-99-005
Wind speed	Co-located transfer standard	Every 6 months	
WS bearing torque meter			
Wind direction			
WD bearing torque meter			
Temperature			
Delta temperature			
Barometric pressure			
Solar radiation			
Assessments			
Accuracy **Performance Evaluation**	All sensors	Every six months and within 30 days of site start-up	EPA-454/R-99-005

Table B5. Meteorological Sensors QA/QC Operational Evaluations

Meteorological Sensor Operational Evaluations			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Range Checks			
Data Screening Criteria	EPA Suggested Criteria		(EPA-454/R-99-005)
Wind direction	$0^o \leq WD \leq 360^o$	All data	Section 8.6, Table 8-4
	WD varies ≥ 1^o/3 consecutive hrs.		
	WD varies ≥ 10^o/18 consecutive hrs.		
Wind speed	0 m/s ≤ WS ≤ 25 m/s		
	WS varies ≥ (0.1m/s)/3 consecutive hrs.		
	WS varies ≥ (0.5m/s)/12 consecutive hrs.		
Temperature	local record low < T < local record high		
	T < 5^oC from previous hour		
	T varies > 0.5^oC for 12 consecutive hrs		
Temperature difference	daytime $\Delta T < 0.1^o$C/m		
	nighttime $\Delta T > -0.1^o$C/m		
	$\Delta T > -3.0^o$C, $\Delta T < 5.0^o$C		
Barometric pressure	pressure < 1060 mb (sea level)		
	pressure > 940 mb (sea level)		
	pressure varies > 6mb/3hours		
Solar radiation (SR)	nighttime SR = 0		
	daytime SR < max SR for date/latitude		
Calibrations			
All sensors calibrated by manufacturer	According to manufacturer specs	Every six months	EPA-454/R-99-005
WD alignment	WD alignment to true N verified by TSN		
Quality Control (QC) Checks			
Visual inspections			
Wind speed sensor	Moving freely, no visual damage	Each site visit	EPA-454/R-99-005
Wind direction sensor	Moving freely, no visual damage		
Temperature sensor	No visual damage or obstruction		
Delta temperature sensor	No visual damage or obstruction		
Barometric pressure sensor	No visual damage or obstruction		
Solar radiation sensor	No visual damage or obstruction		
Time and Date DAS	DAS time/date agree with NIST time		

Table B5 (Continued). Meteorological Sensors QA/QC Operational Evaluations

Meteorological Sensor Operational Evaluations			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Assessments			
Systems Audit			
Thorough review of entire monitoring system including field systems, data management, and data reporting.		1/year and < 30 days of site start-up	EPA-454/R-99-005
Performance Evaluation			
Wind speed	+/- 0.2 m/s +/- 5%	Every six months and <30 days of site start-up	EPA-454/R-99-005
WS bearing torque threshold	<= 0.5 m/s		
Wind direction	+/- 5 degrees		
WD linearity crossover	+/- 3° (included in +/- 5° above)		
WD bearing torque threshold	<= 0.5 m/s		
Temperature	+/- 0.5 Celsius		
Delta temperature	+/- 0.1 Celsius		
Barometric pressure	+/- 3 mb		
Solar radiation	+/- 5% of Observed		

Table B6. Meteorological Sensors QA/QC Systematic Issues

Meteorological Sensor Systematic Issues			
Criteria	***Acceptable Range***	***Frequency***	***40 CFR Reference EPA QA Guidance***
Standard Reporting Units			
Wind speed	m/s	all data	EPA-454/R-99-005
Wind direction	0-360 degrees		
Temperature	Celsius		
Delta temperature	Celsius		
Barometric pressure	mbar		
Solar radiation	W/m2		
Assessments			
Systems Audit			
Thorough review of entire monitoring system (field, lab, data, ect.)	In compliance with approved QAPP	Once per year and less than 30 days within site start-up	EPA-454/R-99-005

B6. Instrument/Equipment Testing and Inspection/Maintenance

B6.1 Acceptance Testing

Prior to installation, all equipment will be visually inspected to ensure no physical damage exists. After installation, and prior to the beginning of the monitoring period, sensors will be calibrated according to the procedures stated in their respective operating manuals. Acceptance testing procedures will be documented on the appropriate calibration forms (provided in Appendix C). To ensure that the sensors continue to properly operate during the monitoring period, calibration checks of the instruments will be conducted semiannually as outlined in Section C1.1 of this QAPP.

B6.2 Site Surveillance and Equipment Inspection and Maintenance

HCG station operators will visit the monitoring station to inspect the condition of the monitoring equipment every 4 to 8 weeks and as needed. During each visit the following tasks will be conducted:

- Check the tower and sensors for signs of storm damage and/or vandalism;
- Observe the sensors to determine if the units appear to be operational;
- Verify that the wind speed and wind direction sensors are moving freely (which is especially important during periods of freezing rain or snow); and
- Clear snow, ice, or accumulated water from surfaces of sensors.

A check list is used to document work performed during the surveillance visits and will be filed with the site visit memo (Appendix B). In the event that station repairs or modifications become necessary, the HCG project manager will dispatch HCG field personnel to accomplish the necessary work. Table B7 is a list of spare parts for this project that will be stored at the HCG Anchorage office and, in some cases, on site to minimize periods of invalid data collection. HCG staff will review data from the stations at least once every work day to check that meteorological sensors and data acquisition are functioning properly.

B6.3 Preventive Maintenance and Corrective Actions

The procedures and schedule for preventive maintenance outlined in the standard operating procedure (SOP) will be followed for this monitoring program (Appendix C). As needed, the spare parts and/or sensors will be dispatched to the monitoring station for repair or sensor replacement by qualified HCG personnel (see Section A4, Organization Chart).

Table B7. List of Meteorological Equipment Spare Parts

Meteorological Parameter	Manufacturer	Model	Spare Parts
Wind Speed	Climatronics/ RM Young	F460/ 05305AQ	Extra sensor, cups[1], propeller[1], and bearings
Wind Direction	Climatronics/ RM Young	F460/ 05305AQ	Extra sensor, vane[1], and bearings
Ambient Temperature	Met One	062-MP	Spare sensor
Delta Temperature	Met One	062-MP	Pair of matched spare sensors
Barometric Pressure	Vaisala	PT101B	Spare sensor
Relative Humidity	Vaisala	HMP45AC	Spare sensor
Solar Radiation	Li-Cor	LI200X	Spare sensor
Precipitation	ETI	NOAH II	Spare sensor and recommended parts
Evaporation	NovaLynx	255-100	Spare sensor and recommended parts

[1] Stored at HCG Anchorage office and at the monitoring site.

B7. Instrument/Equipment Calibration and Frequency

B7.1 Calibration Frequency

Sensors will be calibrated according to the manufacturers' recommendations by HCG personnel immediately prior to the project start date and on a semiannual basis thereafter. Associated calibration forms, methodology, and calibration SOP are presented in Appendix C.

B7.2 Calibration Equipment

All instruments used for calibrating meteorological sensors will be traceable to a National Institute of Standards and Technology (NIST) transfer standard. Calibration certifications will remain on file at the HCG main office. Specific calibration equipment used, NIST traceability standards, equipment certification frequency, equipment accuracy, and calibration range for each meteorological parameter measured are provided in Table B8. The specifications stated in *Quality Assurance Handbook for Air Pollution Measurement Systems* (EPA-600/R-94/038c, September 1994) and *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005), for the calibration parameters are referenced in Table B8 to show compliance with EPA standards.

Table B8. List and Specifications for Calibration Equipment

Meteorological Instrument	Calibration Standard	Calibration Standard Characteristics	Manufacturer Specification	Guidance Document
Wind Speed (Climatronics F460 and RM Young 05305-AQ)	RM Young 18801 Anemometer Drive	Range of calibration	0 to 10,000 rpm	0, 2, 5, 10 m/s
		Range of standard	0 to 10,000 rpm	Not Specified
		Accuracy of standard	1.0 rpm	Not Specified
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via RM Young certification	Not Specified
Wind Direction (Climatronics F460 and RM Young 05305-AQ)	Climatronics F460/ RM Young linearity Test Fixture	Range of calibration	0 to 360º	
		Range of standard	0 to 360º	
		Accuracy of standard	0.75º	
		Calibration Frequency[1]	n/a	n/a
		NIST traceability method		
Ambient Temperature and Delta T (Met One 062-MP)	Control Company Traceable 4000 series thermometer	Range of calibration	-20º to 400º C	-40º to 60º C
		Range of standard	-50º to 150º C	Not Specified
		Accuracy of standard	± 0.001º C	± 0.1 ºC
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Control Co. certification	Not Specified
Solar Radiation (LiCor LI200X)	Co-located Eppley PSP	Range of calibration[3]	0 to 2000 w/m^2	Not Specified
		Spectral Response[4]	285 to 2800 nm	285 to 2800 nm
		Accuracy of standard	± 0.5 %	± 5 % of observed
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	To world radiometric reference via calibration with Eppley Cavity Pyrheliometer	To world radiometric reference
Barometric Pressure (Vaisala PT101B)	Co-located Pretel AltiPlus A2	Range of calibration	Ambient condition check (ACC)	ACC
		Range of standard	728 to 1050 mb	Not specified
		Accuracy of standard	± 1 mb	0.2 %
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Chinook Engineering certification to Ruska Deadweight tester	Not specified
Relative Humidity (Vaisala HMP45AC)	Co-located Vaisala HMI41	Range of calibration	Ambient condition check (acc)	ACC
		Range of standard	0-100% RH	Not Specified
		Accuracy of standard	± 2 % RH	± 1.5ºC [5]
		Calibration Frequency[1]	annually	annually[2]
		NIST traceability method	via Vaisala Labs certification with Hyrgo M-3 dewpoint meter	Not specified
Precipitation (ETI NOAH II)	NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator	Range of calibration	24.66 mm/hr	< 25.0 mm/hr
		Range of standard	0 to 940 ml	n/a
		Accuracy of standard	n/a	Not specified
		Calibration Frequency[1]		n/a
		NIST traceability method		
Evaporation (Nova Lynx 255-100)	Graduated Cylinder	Range of calibration	3"-9" of H_20 in gauge	Not specified
		Range of standard	n/a	
		Accuracy of standard		
		Calibration Frequency[1]		
		NIST traceability method		n/a

Note: All monitoring instrument calibrations performed every six months.
[1] Refers to calibration frequency of calibration standard/instrument.
[2] Guidance document specifies standard calibration per manufactures' specifications.
[3] Calibration range for solar radiation will be specific to the time and day of audit.
[4] Guidance document allows use of photovoltaic pyranometers when data will be used to estimate stability.
[5] Guidance document specifies values for dew point, not relative humidity.

B8. Inspection/Acceptance of Supplies and Consumables

All spare parts inventories will be kept up to date by the data manager. Each new spare part will be accepted with the same procedures mentioned in Section B6. Serial numbers for each spare sensor will be recorded by either the data manager or technicians and filed with the data manager. Upon deployment of a replacement part/sensor by site technicians, the make, model, and serial number will be recorded on a Site Visit and System Check form (see Appendix B) or an equivalent site visit memorandum. Each replacement sensor will be calibrated and a performance audit will be completed by technicians to ensure that the sensor is properly functioning. The make, model, and serial number of the removed sensor, as well as replacement sensor information, will also be recorded on the performance audit form provided in Appendix C.

Consumable supplies are not expected to be necessary for this project.

B9. Non-direct Measurements

B9.1 Climate History

The Iliamna airport provides the only known comprehensive climate data available near the Pebble Project area. The Pebble Project mine area stations are located approximately 17 miles northwest of the Iliamna airport and the Pebble Port station lies approximately 52 miles to the southeast. Figure B21 shows the daily extreme and average high and low temperatures recorded at Iliamna from November 10, 1939 through June 30, 2007. The mean temperature at Iliamna ranges from 3°C (37°F) in January to 30°C (56°F) in July. The record low of -44°C (-47°F) was measured on January 22, 1947 and the record high of 33°C (91°F) was measured on June 27, 1953.

Figure B22 shows the monthly mean precipitation for Iliamna compiled from measurements collected from November 11, 1939 through June 30, 2007. Iliamna experiences the most precipitation in August and September with monthly mean precipitation values of 4.62 inches (117 mm) and 4.32 inches (110 mm), respectively. April is typically the driest month and has a monthly mean of 1.08 inches (27 mm) of precipitation.

Figure B23 shows a wind rose based on data collected by the National Weather Service from January 1, 2005 to December 31, 2007 at the Iliamna airport. Prevailing winds typically blow from the north and east. Because the Pebble Project meteorological stations are positioned at significant distances away from the airport and sit at varying elevations relative to the Iliamna airport and each other, the monitoring sites are expected to experience somewhat different meteorological conditions.

Figure B21. Iliamna Daily Extreme and Average High and Low Temperatures

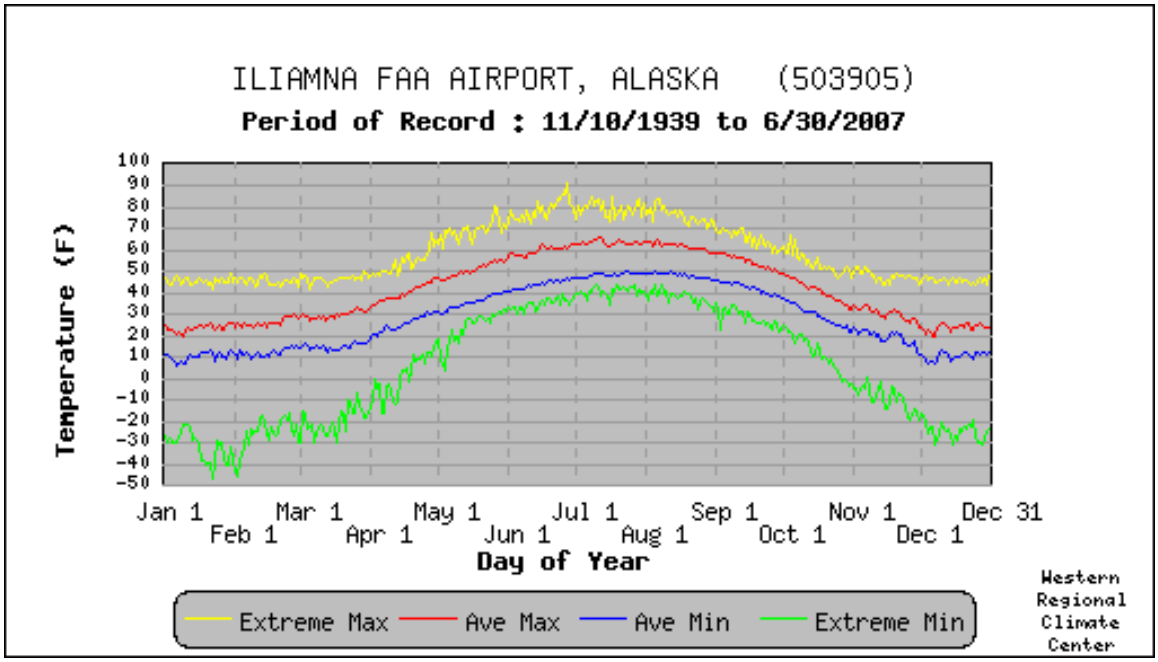


Figure B22. Iliamna Monthly Mean Precipitation

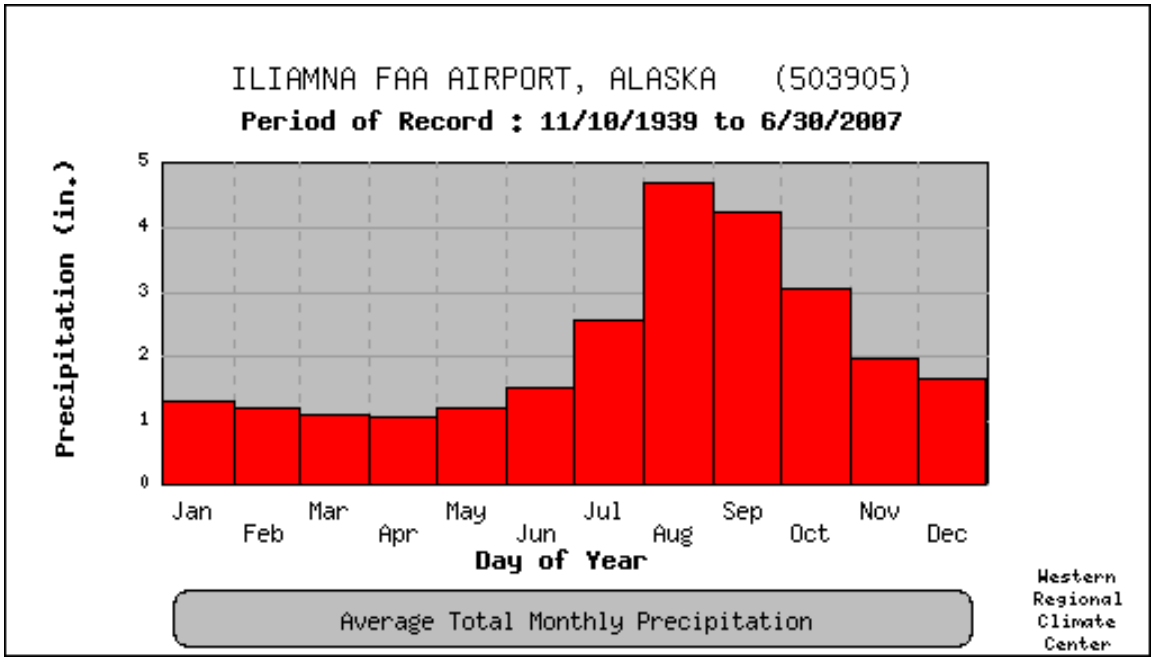
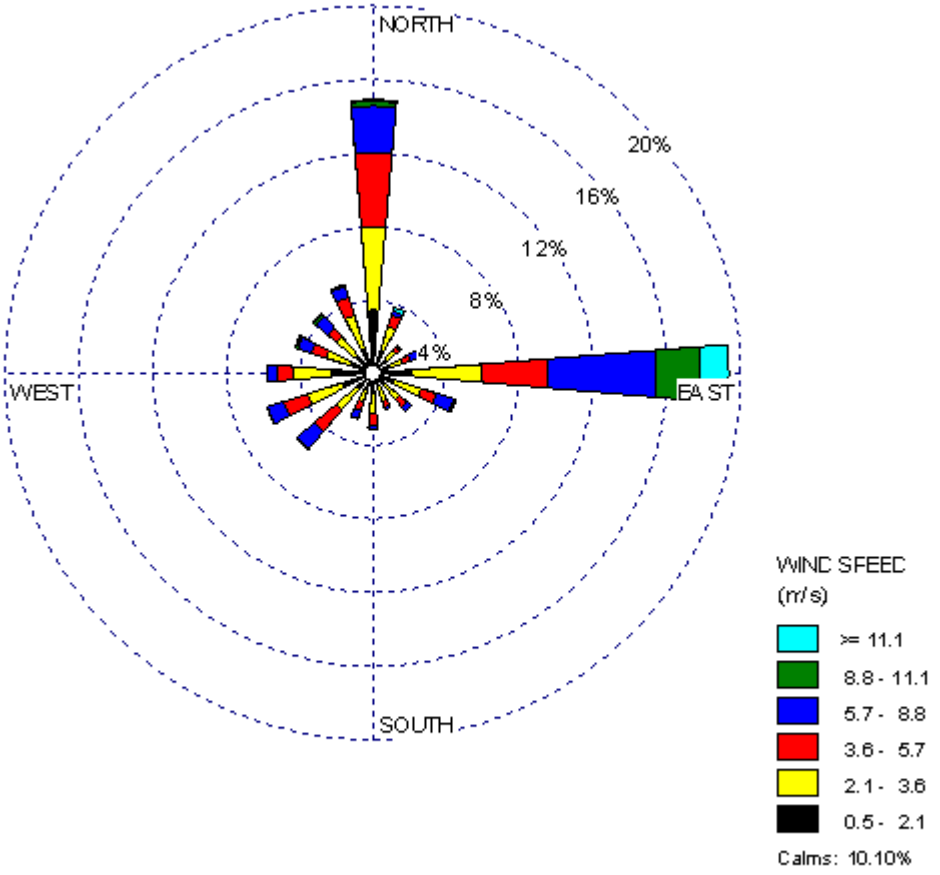


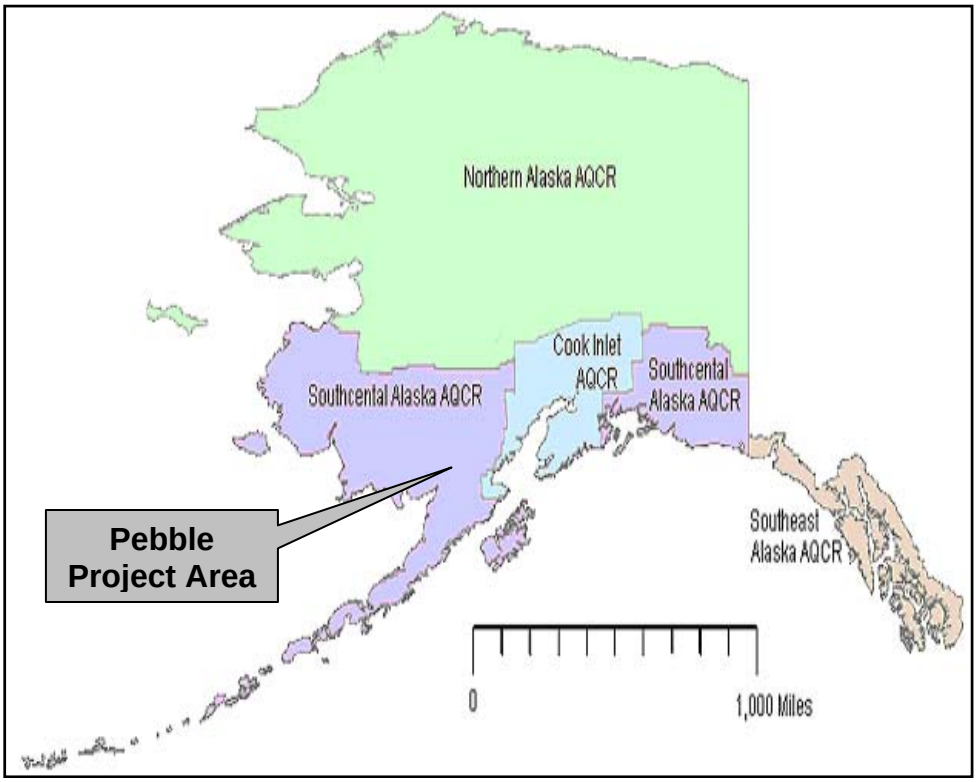
Figure B23. Iliamna Wind Rose



B9.2 Land Use

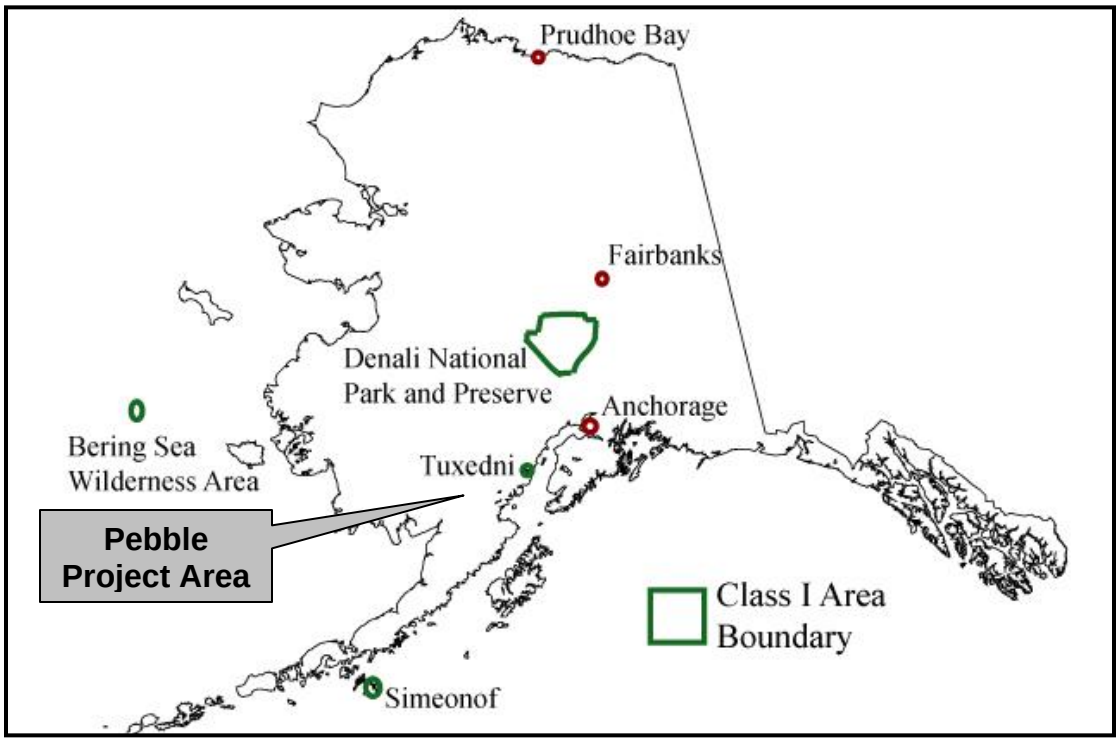
The Pebble Project study area is in a remote region of southwestern Alaska. The Pebble Port location lies within the boundaries of the Cook Inlet Air Quality Control Region (AQCR), as shown in Figure B24. The Pebble Project deposit area lies within the boundaries of the Southcentral AQCR, as shown in Figure B24.

Figure B24. Alaska Air Quality Control Regions



The map in Figure B25 displays the Class I areas in Alaska. The map reference to Denali National Park and Preserve is actually "Denali National Park including the Denali Wilderness but excluding the Denali National Preserve", as per 18 AAC 50.015. The Pebble Project area is within a Class II area and has been designated attainment or unclassifiable for all criteria pollutants. The Tuxedni Wilderness Area is the closest Class I area, and is approximately 50 miles away from the proposed Pebble Port site, and 90 miles away from the Pebble Project deposit area.

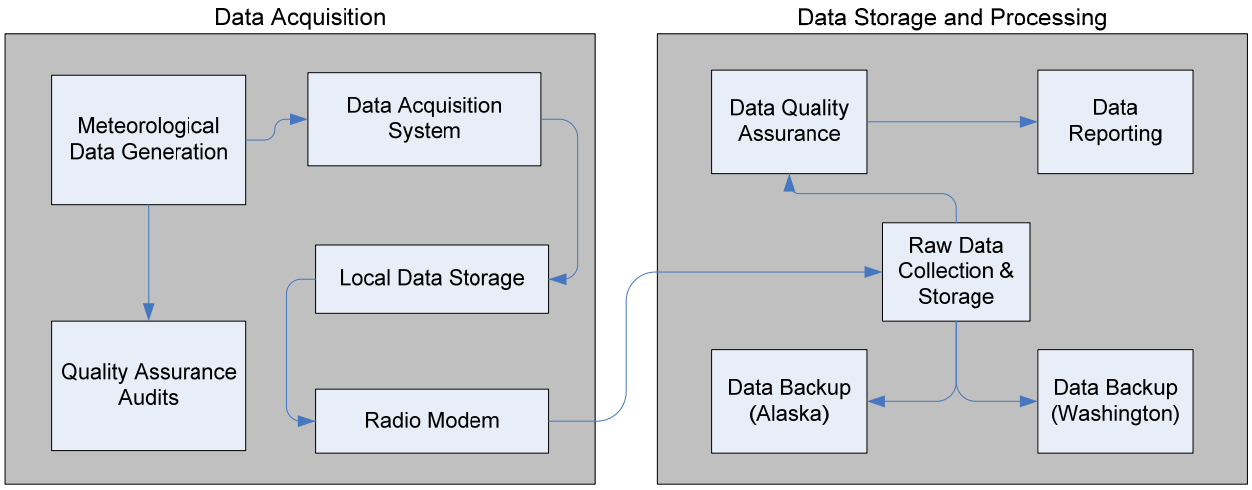
Figure B25. Alaska Class I Areas



B10. Data Management

The proper management of all data associated with this project is critical to assuring the quality and usability of the monitoring results. Therefore, procedures will be implemented to ensure adequate data acquisition, validation, transmission, reduction, reporting, and storage of electronic and hard copy data. Summaries of the procedures to be implemented in the field and in the laboratory for data management are provided in the following sections. Overall data processes illustrated in Figure B26.

Figure B26. Data Processes Flow Chart



B10.1 Data Acquisition

Data acquisition will include the daily collection of electronic data, the generation of hand-written or typed audit and calibration records, and the compilation of previously prepared records (e.g., NIST traceability records). Campbell Scientific CR1000 dataloggers will be used to collect and store the continuous meteorological data. Freewave wireless and SixNet telephone modems will be used to contact the stations remotely via a designated monitoring computer at the HCG Anchorage office. Station data will be downloaded on a daily basis. Field staff and the station auditor will generate written or typed records. These records will be kept according to the prescribed format. Additional records pertaining to this project that have been generated by other organizations will also be collected and stored at the HCG Anchorage main office as necessary.

B10.2 Data Validation

Meteorological data will be reviewed every work day by the HCG station operator or designated qualified personnel and screened using the recommended criteria in *Meteorological Monitoring Guidelines for Regulatory Modeling Applications* (EPA-454/R-99-005), Table 8-4. Site specific Microsoft Access databases and Excel spreadsheets will be used to store, review, and compare data to EPA critical criteria.

During each site visit, HCG Field Technicians will be responsible for verifying the condition of the monitoring site. All site visits will be documented by means of a site visit memo kept with the project files. Alternately, the site visit may be documented in a designated station log book. These field notes will include the following:

- Time, date, current meteorological conditions (e.g., temperature, barometric pressure, sky conditions), and personnel at the monitoring site;
- Activities completed during visit; and
- As-found and as-left observed conditions of monitoring site equipment.

Site audit and visit memo forms are found in Appendix C.

The data manager or their designee will review all records received from the field. Problems or irregularities in the records will be brought to the attention of HCG Field Technicians for further clarification. If the documentation is not sufficiently defensible, the affected data will be invalidated.

B10.3 Data Transmission

Meteorological data will be transmitted daily to the HCG Anchorage office. Collected data will be downloaded to HCG computers for daily data reviews and for data storage. Original forms, check lists, and other records will be stored upon receipt at the HCG main office until the end of the monitoring period. A description of the equipment implemented in the monitoring site telemetry is included in the above section B10.1.

B10.4 Data Reduction

All electronic calculations and statistical analyses will be performed using standard software packages (e.g., MINITAB, Excel, and WRPLOT view) that can be easily verified and audited. Preliminary data reduction to hourly data averages is performed by the datalogger.

B10.5 Data Reporting

Data generated for this project will be routinely summarized and presented to PLP as described in Section C2. Quarterly reports will be prepared and submitted to ADEC within 30 days of the completion of each monitoring quarter. Additionally, an annual data report will be prepared within 90 days upon completion of the monitoring year. The data will also be submitted to ADEC for review and approval in anticipation of using the meteorological data to meet the air dispersion modeling requirements for a minor source air construction permit application.

B10.6 Data Storage

All project documentation, records, data, and reports will be maintained at HCG for a period of at least five years from the completion of the project. Electronic data on the HCG servers are backed up at least once daily and will be archived at a minimum of two separate locations, as well as at the Washington site.

B10.7 Data Use in Modeling

The meteorological data collected during this project will be used for air dispersion modeling using EPA approved AERMOD and CALPUFF models.

C. Assessments and Oversight

C1. Assessments and Response Actions

Data Quality Assessments will be performed on all collected data. Data reviews will be conducted by HCG staff to determine whether the data are reasonable and representative through an independent audit program. Data that are determined to be unreasonable or unrepresentative will be identified, flagged, and discussed in the data reports. The independent audit program for the Pebble Project will consist of semi-annual performance audits and annual systems audits. The audits will be conducted by HCG staff and will be independent of the staff operating the monitoring network. In addition, audits will be conducted using equipment independent of that used for instrument calibrations. The auditor will use a pre-formatted audit form and follow established audit standard operating procedures provided in Appendix C.

C1.1 Performance Audits

Performance audits of the meteorological sensors will be conducted within thirty days of the project start, semi-annually thereafter, and within thirty days of project completion. Performance audits for meteorological sensors will be conducted by collocating independent meteorological sensors with those being used for the monitoring program. The audit sensors will be provided by the station auditor. Performance audits will serve the monitoring program with a measure of quality assurance for meteorological sensors and a means to produce a defensible data set. The performance audits will be conducted in accordance with the procedures outlined in *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 8 (EPA-454/R-99-005). The QA auditor will conduct the performance audits. An outline for the audit equipment and procedures on all meteorological sensors used for this study is listed in Table C1.

C1.2 Systems Audits

In the *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* Section 8 (EPA-454/R-99-005), and *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*, Section 7 (EPA-450/4-87-007), EPA recommends that a systems audit be conducted to assess compliance with established regulations governing the collection, analysis, validation, and reporting of meteorological monitoring for PSD. A systems audit is an independent review of program procedures and files to assess conformance to established plans, SOPs, and protocols (see Appendix C). Systems audits for this project will be conducted no later than 30 days after project startup and annually thereafter. The systems audit will evaluate the complete measurement system from data collection through data reporting. The evaluation will also include all off-site data handling and evaluate the management process.

The systems audit is also an on-site qualitative review of the operational procedures of the monitoring program. The audit will ensure that all procedures for the monitoring program (field operations, data reporting, and data management) are being followed and that the data being collected meet the DQOs for the program as described in Section A7. Items reviewed during the systems audit include:

- Quality assurance procedures and documentation;
- Station installation and operation procedures;
- Calibration procedures and documentation for monitoring equipment;
- Documentation of log books and data sheets;
- Completion and documentation of on-site quality assurance procedures; and
- Review of prepared data sets.

After completion of the audit, a debriefing will be conducted with the participants to discuss preliminary audit results. The results of this audit will then be formally compiled in an audit report with observations of strengths and deficiencies, and recommendations for improvements. The audit report will be submitted by the auditor to the PLP and HCG project managers within 30 days. The HCG project manager will ensure that any necessary corrective actions are implemented in a timely manner. Audit forms and further information on system audits are provided in Appendix C.

Table C1. List of Performance Audit Equipment and Procedures

Meteorological Variable	Make/Model	Audit Method	NIST Traceable Audit Tool Used	Frequency of Audit	Procedure
Wind Speed	Climatronics F460/ RM Young 05305-AQ	Synchronous motor comparison	RM Young 18801 Anemometer Drive	Semiannually	See SOP in Appendix C
Wind Direction	Climatronics F460/ RM Young 05305-AQ	Fixed linearity test	Climatronics F460/ RM Young 05305 linearity test fixture	Semiannually	See SOP in Appendix C
Ambient Temperature and Delta T	Met One 062-MP	Co-located temperature immersion bath comparison	Control Company Traceable 4000 series thermometer	Semiannually	See SOP in Appendix C
Solar Radiation	Li-Cor LI200SZ	Co-located sensor comparison	Eppley Labs PSP	Semiannually	See SOP in Appendix C
Barometric Pressure	Vaisala PT101B	Co-located sensor comparison	Pretel Altiplus A2	Semiannually	See SOP in Appendix C
Relative Humidity	Vaisala HMP45ASP	Co-located sensor comparison	Vaisala HMI41	Semiannually	See SOP in Appendix C
Precipitation	ETI NOAH II	Volumetric drip comparison	Nova Lynx 260-2595 Tipping Bucket Rain Gauge Calibrator	Semiannually	See SOP in Appendix C
Evaporation	Nova Lynx 255-100	Water height comparison	Precision Tape Measure	Semiannually	See SOP in Appendix C

C1.3 Corrective Actions

All deficiencies identified during audits, site visits or during data review will be recorded and reported to the project manger no later than seven working days of discovery. Corrective actions to rectify deficiencies will be addressed and documented in a Corrective Action Form (see Appendix B) and on the audit reports. Corrective actions will also be discussed in the annual data reports.

C1.4 QAPP Revisions

Based on the review of the systems audit, it may be necessary to revise this QAPP. The QAPP revisions will address any project deficiencies stated in the system audit. The project manager and permitting manager will make any necessary changes and the revised QAPP will be submitted to ADEC for approval.

The PLP QAPP was first submitted to ADEC August 31, 2006. On December 15, 2006 ADEC provided comments in their report of the findings. In May 2008, the QAPP was revised to reflect the addition of the Pebble 5, Pebble 6, Williamsport, and North Head meteorological stations and to address the comments received from ADEC regarding their review of the QAPP.

C2. Reports to Management

Reports to management are summarized in Table C2. An annual data report will be prepared by HCG and provided to PLP and ADEC within ninety days after the completion of the one year monitoring period. The annual data report will follow the ADEC PSD Quality Monitoring Data Report guidelines. An electronic copy of the validated data in Excel spreadsheet format will be provided with the data reports. This annual report will include the following:

- Data capture statistics for the meteorological sensors;
- Explanations for any missing or flagged data;
- Summaries of maintenance activities;
- Results of calibrations and audits;
- Raw data and calculations used for calibrations and audits; and
- Copies of site visit notes.

The annual data report will follow the ADEC PSD Quality Monitoring Data Report guidelines. An electronic copy of the validated data in Excel spreadsheet format will be provided with the data reports.

Table C2. Summary of Reports to Management

Reports	Frequency	Content	Responsible Individual	Distribution
Quarterly Data Summaries	Quarterly	Accuracy Assessment Summary	Rebecca Van Wyck Data Manager (or others)	See Section A3. Distribution List
Performance Audit Reports	Semiannually	Accuracy Assessment Summary	Eric Brudie QA Auditor	See Section A3. Distribution List
Technical System Audit Report	Annually	Results of the system audit, required corrective actions if needed	Eric Brudie QA Auditor	See Section A3. Distribution List
QA Annual Report	Annually	Summarize data following ADEC format for Annual Reports	Rebecca Van Wyck Data Manager (or others)	See Section A3. Distribution List
Corrective Action Reports	As Needed	Summarizes corrective actions taken to restore station to compliant status	K. Steven Mackey, Project Manager (or others)	See Section A3. Distribution List
Response to Corrective Action Reports	As Needed	Reports the results of the corrective action taken	K. Steven Mackey, Project Manager	See Section A3. Distribution List

D. Data Validation and Usability

D1. Data Review, Validation, and Verification Requirements

D1.1 Data Review

All data review will be done in accordance with EPA method-specific procedures. Method specific data validation tables (Appendix B) shall serve as the basis for this data review. These method specific data validation tables state specific criteria for accepting, rejecting, or qualifying the monitoring data. As meteorological data are periodically received over the monitoring year, the data manager will review the incoming data and make comparisons to the standards discussed in Section B10.2 of this document. During each quarter, the data will be reviewed again by a certified staff meteorologist to ensure that the data are complete, accurate, and representative and that erroneous data have been removed in preparation for the final data report.

Any anomalies or significant events will be flagged and noted on appropriate checklists or in the station logbook. Any suspect data will be brought to the attention of the Project Manager as soon as possible.

All other documentation pertaining to this monitoring project (e.g., trip reports, audit and calibration data sheets) will be reviewed upon receipt to ensure that all forms are completed prior to acceptance and for further use in this project. Table D1 summarizes the data review for this monitoring project.

Table D1. Data Review List for the Pebble Project

Type of Data Generated	Method for Acceptance	Data Review	Review Frequency	Person Responsible for Data Review	Project Specific Calculations
Raw Data	Data Review	Method Specific Data Validation Tables	Daily	Project and data manager	Delta T and Wind Sigma
QA Reviewed Data	Data Review	Method Specific Data Validation Tables	Daily	Project and data manager	n/a
Quarterly Data Summary	HCG permitting manger review	Method Specific Data Validation Tables	Quarterly	Project and data manager	Quarterly data capture statistics
Annual Data Report	HCG permitting manger review	Method Specific Data Validation Tables	Annual	Project and data manager	Quarterly and annual data capture statistics

D1.2 Data Calculations

Meteorological data collected for this project will be used for air dispersion modeling. Atmospheric stability, commonly determined using the solar radiation-delta temperature (SRDT) method, will be calculated using the EPA approved AIRMET Program.

Data completeness for meteorological monitoring methods will be calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) will be determined using the following equation:

$$DC_i = \frac{h_v}{h_i} \times 100$$

Where:

h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Vertical Temperature Difference and Wind Sigma will be computed by the datalogger. Wind Sigma will be calculated using the Yamartino method recommended in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005) provided below:

$$\sigma_A = \sigma_\theta = \arcsin(\epsilon)\,[1 + 0.1547\ \epsilon^3]$$

Where:

$$\epsilon = \left[1 - \left(\overline{\sin(\theta_i)^2} + \overline{\cos(\theta_i)^2}\right)\right]^{\frac{1}{2}}$$

D2. Validation and Verification Methods

Data validation refers to the review process in which data are screened for errors and anomalies. All data for this meteorological monitoring project will be validated only after being screened by the criteria in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications,* (EPA-454/R-99-005) found in Table D2. All data is examined using a MS Excel Spreadsheet that screens for the EPS PSD criteria outlined in Table D2 and all flagged data is examined by the Project Manager and Data Manager and reported in the Annual Data Report.

Semiannual audits and calibrations will be performed on the station to ensure that all sensors are operating within the tolerances suggested by the manufacturer and the EPA. Equipment audits and calibrations are conducted using NIST traceable equipment to ensure that collected data is traceable to standards of acceptable quality. Station calibration and audit forms can be found in Appendix C. During each site visit, the HCG operator will be responsible for recording any anomalies or significant events and bringing them to the attention of the Data Manager. Copies of the site visit memos will be provided to the Data Manager.

Calibration and Audit Criteria can be found in Section B.5. Station calibration and audit forms can be found in Appendix C.

For this project two types of wind sensors are being used to provide redundant data. The RM Young 05305-AQ wind sensor uses a combined propeller anemometer and vane assembly, and the Climatronics F-460 wind sensor uses a three cup-type anemometer with a separate vane-style wind direction sensor. The RM Young sensor can be somewhat less susceptible to rime ice build-up and is therefore used as a back-up wind measurement sensor. In cases when the Climatronics wind sensor data fails to meet the DQO goal of 90% quarterly data capture, the back-up RM Young wind data will be used, if deemed necessary and applicable. Both the primary and back-up wind sensors will have the same level of quality assurance checks as outlined in Sections B5 and B6.

The Data Manager will review data daily to check for irregularities. Any suspicious data will be investigated using EPA PSD criteria identified in Table D2. Any invalidated data will be discussed in Quarterly and Annual Data Reports. Data validation tables are provided in Appendix B.

Table D2. EPA PSD Data Validation Criteria

Parameter	Flagging Criteria[1]
Wind Speed (10 meters)	Value is < 0 m/s, > 25 m/s
	< 0.1 m/s variation for 3 consecutive hours
	<0.5 m/s variation for 12 consecutive hours
Wind Direction (10 meters)	Value is < 0°, > 360°
	<1° variation over 3 consecutive hours
	< 10° variation over 18 consecutive hours
Temperature (2 and 10 meters)	> 5°C variation from previous hour
	< 0.5°C variation for 12 consecutive hours
	Value is > record high, < record low
Temperature Difference, ΔT	Value is > 0.8°C during the daytime
	Value is < -0.8°C during the night
	Value is > 5°C, < -3°C
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature
	> 5°C variation from previous hour
	< 0.5°C variation for 12 consecutive hours
	Equals ambient temperature for 12 consecutive hours
Solar Radiation	> 0 W/m^2 at night
	Greater than the maximum possible value for date and latitude
Barometric Pressure	> 1060 mb (sea level)
	< 940 mb (sea level)
	> 6 mb variation for 3 consecutive hours
Precipitation	> 25 mm in one hour
	> 100 mm in 24 hours
	< 50 mm in one month

[1]Flagging criteria are based upon Table 8-4 Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides values in terms of dew point temperature.

D3. Reconciliation with User Requirements

The objective of this monitoring program is to collect surface meteorological data needed for engineering design and environmental purposes, including water balance studies, and for the preparation of the air quality construction permit applications for the mine and port sites. Although the mine and port facilities may not require a PSD permit, PSD-quality data will be collected to support the required computer-based dispersion modeling. HCG will conduct an annual or final review at the completion of the monitoring project and report the results obtained during the reporting period. These reports will be compared to the established DQOs to ensure that the scope of the project has been met.

The reconciliation of data for this project will be determined by the data validation and verification process as discussed in Section D2 of this document and based upon the five step Data Quality Assessment (DQA) plan recommended in *Guidance for Data Quality Assessments* (EPA QA/G-9):

- A review of the DQOs and sampling design will be conducted by the permitting manager to assure meteorological outputs from this program are still applicable. If DQOs have not been developed, the permit manager will specify DQOs before evaluating the data. The permitting manager will also review the sampling design and data collection documentation for consistency with the DQOs.
- A Preliminary Data Review will be conducted by the permitting manager. The manager will review QA reports, calculate basic statistics, and generate graphs of the data. This information will be used to determine data structure and identify patterns, relationships, or potential anomalies.
- A statistical test will be selected that is most appropriate for summarizing and analyzing the data, based on the review of the DQOs, the sampling design, and the preliminary data review. The permitting manager will identify the key underlying assumptions that must hold for the statistical procedures to be valid.
- Given the actual data and other information about the study, the permitting manager will evaluate whether identified assumptions will hold, or whether departures are acceptable.
- Conclusions from the statistical calculations will be evaluated to determine if the monitoring design and its created data meet the required permits for the statistical test. This determination will be documented, as well as the inferences drawn as a result of these calculations. If the design is to be used again, an evaluation will be made on the performance of the sampling design.

If the preliminary data review reveals that data sets are inconsistent with the DQOs, or the underlying assumptions of the statistical test are not supported by the data and fail to meet the criteria/objectives of this monitoring project, then the permit manager and project manager will reconsider the project design as described in this QAPP.

APPENDIX A
PROGRAM REFERENCES

Alaska Climate Summaries, Western Regional Climate Center, Desert Research Institute, 2004. http://www.wrcc.dri.edu/summary/climsmak.html

Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), (EPA-450/4-87-007)

AQCRs with Established Minor Source Baseline Dates for SO2 (map), WESTAR, 2004. http://www.westar.org/Committees/TDocs/AQCR%20maps/SO2_02Dec04.pdf

Class I Areas (map), Alaska Department of Environmental Conservation Areas Sources Group, 2004. http://www.state.ak.us/dec/air/anpms/as/rh/rhhome.htm

EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5).

Guidance for Data Quality Assessments (EPA QA/G-9)

Meteorological Monitoring Guidance for Regulatory Modeling Applications, EPA-454/R-99-005, EPA, February 2000.

PSD Quality Ambient Air Quality & Meteorological Monitoring Quarterly Data Summery Format, ADEC, April 2008

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Wind Rose Wizard Hourly Observations, 1945-1999, University of Alaska Anchorage School of Engineering, 2001. http://holmes-iv.engr.uaa.alaska.edu/ncar/WindRoseWizard.htm

18 AAC 50, Air Quality Control, Alaska Department of Environmental Conservation, As Amended through July, 2002.

EPA Quality Assurance Handbook for Air Pollution Measurement Systems, (EPA-600/ K-941038C), September 1994.

Yamartino, R.J., *A Comparison of Several "Single-Pass" Estimators of the Standard Deviation of Wind Direction*, J. Climate Appl. Meteor., Vol. 23, pp. 1362-1366, 1984.

APPENDIX B
MONITORING PROGRAM SUPPORTING DOCUMENTS

APPENDIX B1
PROJECT HEALTH AND SAFETY PLAN

Health & Safety Plan

Pebble Project Meteorological Monitoring

June 2008

prepared for

Pebble Limited Partnership

prepared by

Hoefler Consulting Group
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Anchorage, Alaska 99503
907-563-2137

Table of Contents

1.0 INTRODUCTION 1
2.0 SCOPE OF WORK 1
3.0 PROJECT EXECUTION PLAN 1
3.1 Phase 1: Mobilization 1
3.2 Phase 2: Installation 2
3.3 Phase 3: Operation 2
3.4 Phase 4: Demobilization 2
4.0 PROJECT SCHEDULE 2
5.0 HAZARD ASSESSMENT 2
5.1 HSE Risks Identified 2
5.1.1 Phase 1: Mobilization 3
5.1.2 Phase 2: Installation 5
5.1.3 Phase 3: Operation 7
5.1.4 Phase 4: Demobilization 9
6.0 ADDITIONAL SAFETY CONSIDERATIONS 12
7.0 EMERGENCY CONTACTS & MEDICAL PROCEDURES 13
7.1 Pebble Partnership Emergency Contact Information 13
7.2 Local Emergency Services 13
7.3 HCG Interface Document 14
7.4 Medical Emergency Procedures 14

1.0 INTRODUCTION

This Health and Safety Plan is a job-specific document presenting a comprehensive plan for compliance with the Hoefler Consulting Group HSE program. Hoefler Consulting Group (HCG) prepared this plan for the Pebble Project Meteorological Monitoring Program.

The plan incorporates a specific breakdown of the project activities, the planned communication and interface provisions that will be followed for the project. The intent is to summarize the scope of work and the associated health and safety issues with a focus on the needs of field personnel and successful execution of the project.

The established procedures found in the Alaska Safety Handbook (ASH) and the safety manual, *Mineral Exploration in Western Canada* are available as reference documents for implementing best practices for all project work activity and pre-job planning. A Phase Hazard Analysis (PHA) addresses the progressive steps of the project plan and field operations. Changes to a work plan or scope, after the plan is developed, poses significant potential for health and safety related incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT."

2.0 SCOPE OF WORK

Two three-meter meteorological stations will be installed and operated at the Pebble Project site. A radio repeating tower is already operating at the project location. Work will include instrument installation, establishing the power supply, and start-up and operation of the monitoring stations. All components are designed for rapid installation of the system in the field.

3.0 PROJECT EXECUTION PLAN

3.1 Phase 1: Mobilization

Mobilization consists of staging all necessary tools and equipment to the site. All equipment and personnel will travel from the base camp to the site via helicopter or snow machine. Prior to commencement of installation, HCG personnel will undergo a site-specific orientation, including familiarization with site facilities and operations personnel. HCG staff will also ensure that the pilot and site manager are aware of their location in the field in the event radio contact is interrupted. A back-up plan for pick-up will be established prior to beginning field work each day.

3.2 Phase 2: Installation

HCG personnel will begin to install equipment upon arrival. Electrical power such as 120 VAC for light hand tools and 12 VDC will be established first. All instrument components are 12 VDC, including heaters, fans, data logger and the cell phone/modem system.

3.3 Phase 3: Operation

Following successful installation of the equipment, initial performance audits and calibrations will be conducted to ensure equipment is operating within EPA and ADEC guidelines. These procedures require approximately one full day of work to complete. Subsequently, the meteorological station will operate unattended for an extended period of time**.** Quarterly audits, calibration, and maintenance will be conducted by HCG staff.

3.4 Phase 4: Demobilization

Demobilization operations consist of packing all tools, safety gear and HCG-owned equipment for transport back to Anchorage. The work area will be cleared of all work-related debris and litter and will be left in an orderly fashion.

4.0 PROJECT SCHEDULE

Installation activities are to be conducted in October 2004 and system upgrades are scheduled to be made in November 2004. Quarterly audits, calibrations and maintenance are scheduled to occur in 2005.

5.0 HAZARD ASSESSMENT

5.1 Health and Safety Risks Identified

The health and safety risks identified for the four defined phases of the project are as follows:

Phase		Personnel	Equipment
Phase 1	Mobilization	Low	Low
Phase 2	Installation	Medium	Medium
Phase 3	Operation	Low	Medium
Phase 4	Demobilization	Low	Low

5.1.1 Phase Hazard Analysis: Phase 1

Project: Pebble Project Meteorological Monitoring

Date: November 2004

Location: Iliamna, Alaska

Phase: Mobilization

Overall Risk Rank: Low

Phase Description: Initial project mobilization of employees, tools, and equipment to installation site.

Activities include:

- Travel to Pebble Project site near Iliamna, Alaska, site-specific orientation, familiarization with site facilities and operations personnel.
- Transporting, lifting, and rigging of tools and equipment.

POTENTIAL HAZARDS		RANK
1.	Lifting hazards	Medium
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Low
3.	Slips or falls from ladder.	Low
4.	Cuts and lacerations-striking against objects, pinch points and protruding objects, trip hazards.	Low
5.	Negative wildlife encounters	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with specific lifting equipment used, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Ensure footwear is in good repair, and always ensure solid footing. Situate ladders or stepstools on level ground, and use caution when working off the ground. Pay attention to surroundings.

4. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Jeff Frensdorf, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Pebble Partnership Mines officials of the situation.

Additional Comments/Changes:

5.1.2 Phase Hazard Analysis: Phase 2

Project:	Pebble Project Meteorological Monitoring
Date:	November 2004
Location:	Iliamna, Alaska
Phase:	Installation
Overall Risk Rank:	Medium
Phase Description:	The meteorological station tripods will be installed at pre-determined field locations. Power will be connected to the instrumentation.

Activities include:

- Installing towers

- Installing/securing a data logger/controller enclosure at ground level
- Connecting 12 VDC electrical power

POTENTIAL HAZARDS		RISK
1.	Lifting Hazards	Medium
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Medium
3.	Slips or falls from ladder.	High
4.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Medium
5.	Electrocution while connecting power supply	Low
6.	Negative wildlife contacts	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Ensure footwear is in good repair, and always ensure solid footing. Situate ladders or step stools on level ground and use caution when working off the ground. Pay attention to surroundings.

4. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

5. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

6. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in the use of firearms.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Jeff Frensdorf, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Pebble Partnership Mines officials of the situation.

Additional Comments/Changes:
Audits and calibrations are scheduled for the spring and fall. These tests, which will involve two HCG personnel, should take one working day to complete. Various personnel will be involved in these site visits.

5.1.3 Phase Hazard Analysis: Phase 3

Project: Pebble Project Meteorological Monitoring
Date: November 2004
Location: Iliamna, Alaska
Phase: Operation
Overall Risk Rank: Low/Medium
Phase Description: Following successful equipment setup, initial audits and calibrations will be conducted. These activities will take approximately one full work day to complete. Subsequently, the meteorological stations should operate unattended for an extended period of time.

Activities Include:

- Initial calibration and audits
- Periodic calibrations and audits

	POTENTIAL HAZARDS	RISK
1.	Lifting Hazards	Low
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Low
3.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Low
4.	Electrocution	Low
5.	Negative wildlife contacts	Low

Recommended Controls:

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These

liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

4. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY "TIME OUT" TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE EXECUTION DURING THE SAFETY "TIME OUT".

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a "Tool Box Safety Meeting" prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Jeff Frensdorf, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Pebble Partnership Mines officials of the situation.

Additional Comments/Changes:

_____

_____

_____

5.1.4 Phase Hazard Analysis: Phase 4

Project: Pebble Project Meteorological Monitoring
Date: November 2004
Location: Iliamna, Alaska
Phase: Demobilization
Overall Risk Rank: Low
Phase Description: Demobilization consists of packing all tools, equipment and safety gear for transport back to Anchorage. The work area will be cleared of all debris and left in an orderly fashion.

Activities Include:

- Removal of all tools, and unused equipment and materials.
- Clean up and housekeeping at the job site and any other areas utilized as workspace or materials lay-down areas.
- Proper disposal of any waste materials generated during this installation.

	POTENTIAL HAZARDS	RISK
1.	Lifting Hazards	Low
2.	Muscle strains / overexertion / dehydration / fatigue / hypothermia	Medium
3.	Cuts and lacerations-striking against objects, pinch points and protruding objects	Low
4.	Electrocution while demobilizing system	Low
5.	Negative wildlife contacts	Low

1. Ensure crew members understand all project hazards, are familiar with the specific lifting equipment used in installation, and utilize proper personal lifting techniques. Follow lifting safe work practices and avoid unsafe work acts. Ensure employees get help to move heavier objects, and utilize move-smart techniques, as well as proper body motion-mechanics when performing physical lifting.

2. Warm up and stretch before lifting or pulling. Drink plenty of water throughout the day. Avoid excessive amounts of coffee, teas, colas, sodas, juices, etc. These liquids will not re-hydrate an individual as well as water. Be prepared for inclement weather. Proper clothing (layered) for outside work activities is essential, and should include at a minimum: thermal underwear, arctic coverall gear, gloves, face mask, heavy socks, appropriately rated cold weather footwear (winter months). Get help with awkward loads. Ensure that employees are given sufficient time to conduct activities at the work site. Do not increase speed of activities. Ensure that employees are given multiple breaks throughout the workday.

3. Wear proper PPE to prevent personal injury. Anyone working at height will be trained in fall prevention/protection and will be wearing fall protection. Employees are to familiarize themselves with the immediate work area for any given task.

4. Ensure power tools and extension cords are good working order. Visually inspect the equipment before use.

5. Be alert to surroundings. Do not leave food sources out that can attract animals. Carry personal firearms and/or bear mace or be in the company of someone who has firearms and is trained in firearm use.

Note:
A change to a plan after the plan was developed is a major reason for health and safety incidents.

ANY CHANGE OF CONDITIONS THAT AFFECT THE PLAN WILL REQUIRE A SAFETY “TIME OUT” TO ASSESS HOW THAT CHANGE WILL IMPACT THE JOB AS PLANNED. WHEN ADDITIONAL HAZARDS ARE INTRODUCED INTO A PLANNED PHASE, CONTROLS WILL BE DISCUSSED WITH ALL PARTIES TO ENSURE SAFE

EXECUTION DURING THE SAFETY “TIME OUT”.

Inspections/Audits:
The crew supervisor will review the upcoming work on a daily basis and review a Safety Analysis Form outlining safety procedures, safety equipment usage and the possible hazards associated with the work planned that day. The material will be presented to the crew as a “Tool Box Safety Meeting” prior to the start of work that day.

Possible Crew Members: Dominic Shallies, Jared Cockman, Brent Veltkamp, Eric Brudie, Steve Mackey

Emergency Action Plan:
Provide first aid. Immediately notify Pebble Partnership officials of the situation.

Additional Comments/Changes:

6.0 ADDITIONAL SAFETY CONSIDERATIONS

- Field crews must always work in pairs and carry a radio.
- No alcohol or illegal drug consumption is allowed.
- Those who carry epi-pens for allergic reactions are to advise NDM and other members of the field crew so that assistance can be provided if necessary.
- Be aware of the rules regarding the possession of firearms and/or bear mace when traveling to the project area. A weapon must be unloaded before boarding the helicopter and unloaded and securely stored while in camp. The name of the individual bringing a firearm into camp must be given to Richard Moses (NDM Site Manager or his designee) prior to arrival. Permission to carry bear mace must be obtained from the pilot before boarding the helicopter.
- Field crews need to understand the risk of extreme weather and the possibility of staying overnight in the field.

7.0 EMERGENCY CONTACTS & MEDICAL PROCEDURES

7.1 Pebble Partnership Emergency Contact Information

c/o Iliamna Weathered Inn #1 Roadhouse Strip or Box 124 Iliamna, AK 99606 Tel: (907) 571-1872 or 1774 Home: (907) 571-1872 Fax: (907) 571-1789 Email: lenabrommelard@hdgold.com	3201 C Street, Suite 604 Anchorage, AK 99503 Tel: (907) 339-2600 Toll Free: 1-877-450-2600 Fax: (907) 339-2601

Pebble Project Office in Iliamna	**John Baechler:**
Line 1: (907) 571-1788 Line 2: (907) 571-1774 Quest Office: (907) 571-1873 Emergencies: 8:30pm – 6:00am call (907) 571-1872	Home: (907) 571-1878

Project Coordinator in Anchorage	**Anchorage Office**
Pebble Limited Partnership – Mike Smith Tel: (907) 339-2600 Toll Free: (877) 450-2600 Home: (907) 346-2467 Cell: (907) 223-1513 Email: michaelsmith@pebblepartnership.com	Pebble Limited Partnership – Ben Mohr Tel: (907) 339-2600 Toll Free: (877) 450-2600 Email: benmohr@pebblepartnership.com

7.2 Local Emergency Medical Services

Iliamna Clinic — Located on the Roadhouse Strip
Telephone: (907) 571-1383

Rene (Health Aid) — Home Telephone: (907) 571-1323

7.3 INTERFACE DOCUMENT

HCG has developed an Interface Document (Table 7-1) that outlines the interface HCG field and office personnel. Serious incidents must be reported immediately, while less serious ones shall be reported within the shift in which the incident occurred. This will include the completion of all necessary forms and documentation.

Interface Document
Table 7-1

Activity	Primary HCG Contact	Secondary HCG Contact
Environmental Non-compliance	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Environmental Incident Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Unauthorized/unaccompanied individuals on site	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Compliance Audits: Scheduling, developing, conducting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Emergency Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Agency Reporting	Steve Mackey (563-2129)	Al Trbovich (563-2140)
Field Installation Activities	Steve Mackey (563-2129)	Al Trbovich (563-2140)

7.4 MEDICAL EMERGENCY PROCEDURES

(1) Contact Pebble Partnership Base Camp in Iliamna by radio or telephone. Radio frequency being used is 151.625 MHz with a 123.000 MHz transmit and receive tone (private line).

(2) Contact Alaska State Troopers Dispatch: (907) 428-7200 (24 hrs/day).

In the event of a major emergency, the Alaska State Troopers will mobilize a response, including contacting the local State Trooper, medical, and rescue personnel.

Information to provide:

- Who you are
- Nature of emergency
- Your location
- Your company and contact number
- Number of victims
- Sex, age and vital signs of patients (if possible)
- Specific injuries

(3) Local emergency support in Iliamna and Newhalen:

- Iliamna State Trooper: (907) 571-1534
- Iliamna Clinic (Health Aid): (907) 571-1383
- Newhalen Clinic: (907) 571-1248
- Iliamna Air Taxi (has air Medivac capability): (907) 571-1245 / (907) 871-1445

APPENDIX B2
PROJECT FORMS

Site Visit & System Check

Date: _____

Project Title: _____ **Project No.** _____

Name of Inspector: _____

Associated Company: _____

Sate Reason for visit: _____
_____
_____

_____

Check List

Tower:

- Check tower for stability, ensure that guy wires are taunt and all clamping hardware is in good condition.
- Check that all sensors are securely mounted to tower. This includes antennas and enclosures.
- Check for excessive ice build-up on tower and sensor mounts
- Check for loose instrument cables

Comments: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Sensors:

Wind Direction:

- Check to see if wind vane is moving freely or fluttering in wind.
- Check for excessive ice or snow build-up on vane and sensor if so clear the sensor.
- After clearing ice or snow, check to see if vane can move freely in all directions.

Wind Speed:

- Check to see that cups are spinning freely.
- Check for excessive ice or build-up on vane and sensor, if so clear the sensor.
- After clearing ice or snow, check cups to insure they spin with ease.
- Clear ice or snow off of wind sensor cross arm.

All other sensors:

- Check sensor housing or brackets for visible damage.
- Check all sensor connection and cables to ensure good connections and secured to tower.
- Clear any ice or snow from sensor brackets and mounts.
- Check each sensor mount to ensure the sensor is level and secure.

Comments: _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Inspector signature: _____

Corrective Action Plan

The corrective action plan is designed to address the many unexpected problems that may arise during the project duration. HCG personnel are instructed to immediately bring any major problems to the attention of the project supervisor. Since many individuals could become involved in the corrective action, the notification is best done by a standard corrective action form.

This Corrective Action Form exists in three parts to address and correct program that occur during routine operation or as a result of performance evaluation and technical systems audits. The three parts are listed below:

- Request for Assistance
- Proposed Corrective Action
- Results of Proposed Corrective Action

It is recommended that all personnel signing the form should feel free to attach other needed material. These forms are stored at the HCG office both in electric and paper format.

Hoefler Consulting Group

Corrective Action Form

Project Title: _____ Project No. _____

I. Request for Assistance:

To: _____ From: _____ Date: _____

Problem Summary: _____
_____
_____
_____
_____
_____
_____.

II. Proposed Corrective Action

To: _____ From: _____ Date: _____

Recommended Action: _____
_____
_____
_____
_____
_____
_____.

III. Results of Proposed Action

To: _____ From: _____ Date: _____

Action Results: _____
_____
_____
_____
_____
_____
_____.

Systems Audit Report
For Meteorological Monitoring Programs

Audit Date:
Auditor:
Auditor Affiliation

Interviewees:	Witnesses:

1.0 Monitoring Program Information

Monitoring Site Audited:

Monitoring Site Owner:
Owner Mailing Address:

2.0 Monitoring Program Staff

2.1 Program Staff Organization

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles.

2.2 Program Staff Training and Experience

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

Name:
Program Position:
Training/Education/Experience:

- How is program staff trained?_____
- Who is responsible for training staff?

Does the operator have training manuals or other training related materials available for staff?

Yes
No

3.0 General Program Information

3.1 Monitoring Site Description

Monitoring Site Name:

Monitoring Site Location Description:

Indicated by Operator	Determined by Auditor

3.2 Monitoring Site Appearance and Safety

Does the site appear clean, organized and well maintained?	Yes No	Comments:
Does the site appear to be safe and reasonably hazard free?	Yes No	Comments:
Does the site have a shelter for operators?	Yes No	Comments:
Does the site have emergency equipment such as a first aid kit available?	Yes No	Comments:
Does the site have adequate measures to prevent human tampering?	Yes No	Comments:
Does the site have adequate measures to prevent damage from animals?	Yes No	Comments:

3.3 Monitoring Site Surroundings

- Indicate the population density type for the monitoring site.

	Type	Description
	Remote	No nearby development with no nearby population center.
	Rural	Limited development with nearby sparse population.
	Low Suburban	Light industrial development in low population center.
	High Suburban	Light industrial development in high population center.
	Urban	Heavy industrial development in high population center.

3.4 Monitoring Site Equipment Inventory

- List all parameters that are being monitored and their associated instrumentation at the site.

Parameter	Make	Model	Serial No.

- List all instrumentation used in support of the monitoring instrumentation.

Instrument	Make	Model	Serial No.

3.5 Meteorological Instrumentation Siting and Exposure (EPA-454/R-99-005)

Do all sensors appear to be clean, intact, in good condition and well maintained?	Yes No	Comments:
Are all sensors operational, online and reporting data?	Yes No	Comments

3.5.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	Yes No	Comments
Is the height of the tower 10 meters above the ground?	Yes No	Comments:
Is the tower stable and plumb?	Yes No	Comments:
Is the tower protected from lightning?	Yes No	Comments:

3.5.2 Wind Speed and Wind Direction

Is the horizontal distance between the instrument and any obstruction at least 10 times the height of the obstruction?	Yes No	Comments:
Is the instrument 1.5 times the height of the building above the roof or 10 meters above the ground?	Yes No	Comments:
Are the wind speed and wind direction sensors stable and plumb?	Yes No	Comments:
Is the distance of the sensor on the cross arm/mast at least twice the diameter of the tower?	Yes No	Comments:
Is the wind sigma theta collected according to EPA requirements?	Yes No	Comments:

3.5.3 Air Temperature, Air Temperature Difference, and Relative Humidity

Are the sensors mounted over open level ground at least 9 meters in diameter and at least 2 meters above ground?	Yes No	Comments:
Are the two temperature difference probes located at a height of 2 meters and 10 meters above the ground?	Yes No	Comments
Is the ground beneath the temperature sensor natural native material?	Yes No	Comments
Is the site free of any man-made features exist that could create bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	Yes No	Comments:
Is the site free of any natural made features that could create bias temperature data (e.g. open water, sloping ridge, etc.)?	Yes No	Comments:
Are the temperature sensors protected from the influence of solar radiation?	Yes No	Comments:
Are the sensors located at least four times the distance from the height of the obstruction?	Yes No	Comments:
Are the sensors located at least 30 meters from large paved areas?	Yes No	Comments:
Are the temperature sensors used for differential measurements located in identical aspirated shields?	Yes No	Comments:

3.5.4 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows on the instrument?	Yes No	Comments:
Is the sensor situated to the south of the tower in order to minimize obstruction from the tower?	Yes No	Comments:

3.5.5 EPA Recommended Instrument Resolutions

Parameter	Equipment Specifications	EPA Resolution Standard	Meets Standard?

3.5.6 Recommended Instrument Accuracy Standards

Parameter	Equipment Specifications	EPA Accuracy Standard	Meets Standard?

3.5.7 EPA Recommended Instrument Response Standards

Parameter	Equipment Specifications	EPA Response Standard	Meets Standard?
Wind Speed			
Threshold:			
Distance Constant:			
Wind Direction			
Threshold:			
Damping Ratio:			
Delay Distance:			
Air Temperature (2 meter)			
Time Constant:			
Air Temperature (10 meter)			
Time Constant:			
Relative Humidity			
Time Constant:			
Range:			
Solar Radiation			
Time Constant:			
Operating Range:			
Spectral Response:			

3.6 Support Instrumentation and Equipment

Is the DAS well protected from the elements with adequate room for maintenance?	Yes No	Comments:
Is the DAS rated for operation in the expected local temperature range?	Yes No	Comments:
Are all sensor signal leads neatly and securely connected to the correct DAS channels?	Yes No	Comments:
Are all components of the DAS operational?	Yes No	Comments:
Is the communications equipment operating correctly?	Yes No	Comments:
Does the DAS system have a stable power supply?	Yes No	Comments:

Is the DAS properly grounded?	Yes No	Comments:
Is the DAS system protected from lightning?	Yes No	Comments:

4.0 Data Processing

4.1 Data Collection

Is the monitoring station polled on a regular basis?	Yes No	Comments:
Is the PM sample run date recorded?	N/A	Comments:
Is the PM sample start time and elapsed time recorded?	N/A	Comments:
Is the PM average flow rate recorded?	N/A	Comments:
Is each PM filter recovered after each run period?	N/A	Comments

- Indicate how the polled data are handled for data processing after being downloaded.

Are procedures in place for backing up raw data?	Yes No	Comments:

- How long are backup raw data files retained?
- How long are archived records retained?

Are hard copies of data being kept in case of computer failure?	Yes No	Comments:

4.2 Data and Sample Handling

Are written procedures for data handling available for the project?	Yes No	Comments:
Are filters properly secured once removed to prevent contamination or tampering?	N/A	Comments:

Are copies of the Site Check Forms being sent to the operator on a regular basis?	N/A	Comments:.
Are Chain-of-Custody forms being used to transmit materials, samples, and/or documents to and from the field?	N/A	Comments:
Are filters folded in half with collection surfaces in contact for transport to the lab?	N/A	Comments:
Are samples maintained in a secure location while awaiting shipment to the laboratory?	N/A	Comments:

- Diagram the data flow from monitoring equipment to submission of final report.

4.3 Data Validation

Are data validation procedures established and in use?	Yes No	Comments:

- Describe data validation procedure.

Are the individuals responsible for data collection separate from those responsible with data validation?	Yes No	Comments:

- Identify those responsible with data validation:

Name:
Position:
Affiliation:

- Identify how periods of missing or invalidated data are handled.

4.4 Data Reporting

Are quarterly and annual data reports being submitted for the site?	Yes No	Comments:
Is qualified staff prior to submittal of data reports making reviews of the report?	Yes No	Comments:

- Identify those person(s) responsible for review of data reports.

Name:
Position:
Affiliation:

4.5 Corrective Actions

Are procedures established for initiating corrective actions within the data processing steps?	Yes No	Comments:

- Describe procedures for tracking and closing corrective actions.

Data Capture (Section 4.5 EPA-454/R-99-005)

- Identify the desired data capture rate for the monitoring data.

Meteorological Monitoring Data Type	Capture Rate

Are the desired data capture rates being met for each data type?	Yes No	Comments:

5.0 Quality Assurance and Quality Control

5.1 Quality Assurance Program Plan

Has a quality assurance program plan (QAPP) been written that describes quality assurance procedures?	Yes No	Comments:
Is a copy of the plan available to field and data processing personnel?	Yes No	Comments:
Has the quality assurance plan been approved by the ADEC?	Yes No	Comments:

- Identify those person(s) responsible for updating the plan and the procedure for updating the plan.

Name:
Position:
Affiliation:

5.1.1 Quality Assurance Assessment Requirements (Section 8.0 EPA-454/R-99-005)

Have adequate audit procedures been identified within the quality assurance plan?	Yes No	Comments:
Does the plan adequately document the correct criteria for accuracy and precision?	Yes No	Comments:

- Indicate the project's correct precision and accuracy limits.

Parameter	***Precision Limit***	***Accuracy Limit***	***Reference***
DAS Time			
Wind Direction			
Wind Speed			
Air Temperature			
Air Temperature Difference			
Relative Humidity			
Solar Radiation			
Barometric Pressure			

5.2.1 Standard Operating Procedures

- Indicate the Standard Operating Procedures that have been developed for the program:

Standard Operating Procedures	
	Installation, Setup, and Checkout
	Site Operations and Calibrations
	Operational Checks and Preventive Maintenance
	Data Collection Protocols
	Data Validation Steps
	Data Archiving

5.2.2 Preventive Maintenance

Does a preventive maintenance program exist for the monitoring program and is the program being followed?	Yes No	Comments:

- Identify those responsible parties for preventive maintenance at the site.

Name:
Position:
Affiliation:

- Identify the preventative maintenance procedures conducted for the site.

5.2.3 Station Documentation

Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	Yes No	Comments:
Does the station have an activity log?	Yes No	Comments:
Does the station have a Site Visit Log and Checklist Form?	Yes No	Comments:
Does the station have an adequate Calibration Report Forms and copies of previous calibrations?	Yes No	Comments:
Does the station have an adequate Operations Manual?	Yes No	Comments:

- Identify the operation manuals present on site.

Description

Are report forms and site logs properly completed and current?	Yes No	Comments:

6.0 Comments and Suggestions

Site Training Check list

This form should be included with the site visit memos. All training is site specific and is to be given by qualified HCG personal only.

Date of Training: _____

Station Name:_____ Project No._____

Name of Trainer: _____ Position: _____

Name of Trainee: _____ Position: _____

Nature of Training: _____

Is the trainee HCG personnel? If not specify associated company. Yes □ No □

Specify company name: _____ Position: _____

Site surveillances/maintenances visits:

- □ Has the specific monitoring project overview and objectives been discussed?
- □ Has site location and all safety concerns been discussed in detail?
- □ Has the scope of the site surveillances visit been discussed?
- □ Have all specific concerns pertaining to meteorological station been discussed.
- □ Has all site surveillance visit forms and filling procedures been discussed in detail?
- □ Have all site surveillances/maintenances visit task been clearly explained and demonstrate, including all equipment and senor operation, and safety practices pertaining to these tasks?
- □ Have all "as left" procedures been explained and demonstrated?

Audit and Calibration Visits:

- ☐ Has the specific monitoring project overview and objectives been discussed?
- ☐ Has the scope of the audit or calibration visit been discussed in detail?
- ☐ Have all specific concerns pertaining to meteorological station including any environmental safety concerns been discussed?
- ☐ Have all the audit or calibration forms, site visit documentation and filling procedures been discussed in detail?
- ☐ Have the functions and operations of each instrument located at the site been explained and demonstrated in detail?
- ☐ Have all audit or calibration task, tests, and recording techniques been clearly explained and demonstrated?
- ☐ Have all safety practices penetrating to the above task been clearly explained and demonstrated?
- ☐ Have all filling procedure and deadlines been discussed in detail?
- ☐ Have all "as left" procedures been explained and demonstrated?

Comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____

Trainers Signature: _____

Trainees Signature: _____

Data Validation Checklist for Creating EPA Criteria Screening Data Bases:

The following criteria must be included in the spread sheet for each variable.

Parameter	Flagging Criteria[1]
Wind Speed (10 meters)	Value is < 0 m/s, > 25 m/s
	< 0.1 m/s variation for 3 consecutive hours
	<0.5 m/s variation for 12 consecutive hours
Wind Direction (10 meters)	Value is < 0°, > 360°
	<1° variation over 3 consecutive hours
	< 10° variation over 18 consecutive hours
Temperature (2 and 10 meters)	> 5°C variation from previous hour
	< 0.5°C variation for 12 consecutive hours
	Value is > record high, < record low
Temperature Difference, ΔT	Value is > 0.8°C during the daytime
	Value is < -0.8°C during the night
	Value is > 5°C, < -3°C
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature
	> 5°C variation from previous hour
	< 0.5°C variation for 12 consecutive hours
	Equals ambient temperature for 12 consecutive hours
Solar Radiation	> 0 W/m^2 at night
	Greater than the maximum possible value for date and latitude
Barometric Pressure	> 1060 mb (sea level)
	< 940 mb (sea level)
	> 6 mb variation for 3 consecutive hours
Precipitation	> 25 mm in one hour
	> 100 mm in 24 hours
	< 50 mm in one month

[1]Flagging criteria are based upon Table 8-4 Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).

[2]Guidance document provides values in terms of dew point temperature.

APPENDIX C
STANDARD OPERATING PROCEDURES (SOPs) AND AUDIT/CALIBRATION FORMS

APPENDIX C1
STANDARD OPERATING PROCEDURES

Calibration Procedure for Climatronics F460 Wind Speed and Wind Direction Sensors

1.0 Introduction

Calibration of Climatronics F460 type wind speed and wind direction sensors (hereafter referred to as F460 sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for an F460 sensor requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

The calibration is comprised of the determination of sensor responses to known input values, maintenance and adjustment of the sensors responses if warranted, and the documentation of all adjustments and responses.

Items required for the calibration of an F460 are as follows:

1. RM Young 18801 (or similar model) anemometer drive
2. Climatronics F460 linearity test fixture
3. PC or similar display module
4. Tripod mounted, survey grade compass and/ or pre-determined bearings to landmarks.
5. F460 manual

The calibration will begin by filling out the first part of the wind speed and wind direction calibration forms, noting the time, date, calibrator, and any witnesses.

1.1 System Inspection

Before determining the initial response of a F460 inspect the cable, cups, vane, and bearings for damage, open the outer cuff of the sensor and look for condensation inside. Note these observations on the Wind Speed Calibration Form.

2.0 Wind Speed Calibration Procedures

2.1 Pre-adjustment System checks

A system response check is performed by the use of an RM Young 18801 (or similar model) anemometer drive. The cups are removed from the sensor shaft and the anemometer drive is attached. The sensor is then challenged at the speeds specified on the Wind Speed Calibration Form. The speeds measured by the datalogger for each specific revolution per minute (rpm) are compared to the calculated values. The equation for calculating wind speed as a function of anemometer drive rpm is given on the Wind Speed Calibration Form.

2.2 Maintenance and Adjustments

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the F460 instrument manual.

2.3 Post-Adjustment Checks

If any maintenance or adjustments were performed, the steps listed in Section 2.1 of this procedure should be repeated and recorded on the Wind Speed Calibration Form. Results of the post adjustment checks should be closely evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

3.0 Wind Direction Calibration Procedures

3.1 Sensor Orientation

After the system is inspected, a check of the wind vane orientation is performed. The two methods for an orientation check of the wind vane are as follows:

<u>Compass</u>

1. Determine declination for the area using a Geomag type program with the most recent models of the earth's magnetic field.
2. Use a clamp fashioned from a band clamp and rubber tubing to fix the wind vane in various directions. In medium to high winds a vane with the "tail" removed may have to be used as to not damage the wind vane.
3. Using a tripod mounted and leveled, survey grade compass align the compass so that it sights directly at the tail of the wind vane.
4. Obtain readings in each of the four quadrants of the compass.
5. Record the readings from the datalogger and the compass on the Wind Direction calibration form.

<u>Landmark</u>

1. Obtain a GPS point directly under the wind direction sensor.
2. Using a mapping program (eg: TOPO!, allTOPO, or similar) with USGS datasets as its base files, obtain bearings to nearby defined landmarks.
3. Clamp and site the vane tail at the appropriate landmark and record the reading from the datalogger.

3.2 System Linearity Check

Using a Climatronics F460 linearity test fixture test the sensor at 30° intervals. Record the readings from the datalogger at each interval on the Wind Direction Calibration Form and compare to the expected values. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 5° (accuracy) and ≤ 3° mean absolute error (linearity). Mean absolute error is calculated by the the following equation: equation.

$$\sum \frac{|X|}{n}$$

Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

3.3 Maintenance and Adjustment

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/ or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the F460 instrument manual. If the orientation was incorrect, the alignment of the cross arm will need to be adjusted following the linearity check.

3.4 Post Adjustment Checks

After all maintenance and adjustments have been made, the steps listed in Sections 3.2 and 3.1 of this document should be repeated, respectively. All results should be recorded On the Wind Direction Calibration Form. Results of the post adjustment checks should be evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

4.0 Conclusion

At the conclusion of the calibration, complete all calibration forms noting any adjustments made, maintenance performed, and corrective actions taken, if any. Note the specific time which the calibrations for the wind speed and direction sensors began and ended. Sign and date the calibration form under any comments made.

Calibration Procedure for RM Young 05305-AQ Wind Speed and Wind Direction Sensors

2.0 Introduction

Calibration of RM Young 05305-AQ type wind speed and wind direction sensors (hereafter referred to as RM Young sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for an RM Young sensor requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

The calibration is comprised of the determination of sensor responses to known input values, maintenance and adjustment of the sensors responses if warranted, and the documentation of all adjustments and responses.

Items required for the calibration of an RM Young are as follows:

1. RM Young 18801 (or similar model) anemometer drive
2. RM Young linearity test fixture
3. PC or similar display module
4. Tripod mounted, survey grade compass and/ or pre-determined bearings to landmarks.
5. F460 manual

The calibration will begin by filling out the first part of the wind speed and wind direction calibration forms, noting the time, date, calibrator, and any witnesses.

1.1 System Inspection

Before determining the initial response of a RM Young inspect the cable, prop, vane, and bearings for damage, open the outer cuff of the sensor and look for condensation inside. Note these observations on the Wind Speed Calibration Form.

2.0 Wind Speed Calibration Procedures

2.1 Pre-adjustment System checks

A system response check is performed by the use of an RM Young 18801 (or similar model) anemometer drive. The cups are removed from the sensor shaft and the anemometer drive is attached. The sensor is then challenged at the speeds specified on the Wind Speed Calibration Form. The speeds measured by the datalogger for each specific revolution per minute (rpm) are compared to the calculated values. The equation for calculating wind speed as a function of anemometer drive rpm is given on the Wind Speed Calibration Form.

2.2 Maintenance and Adjustments

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the RM Young instrument manual.

2.3 Post-Adjustment Checks

If any maintenance or adjustments were performed, the steps listed in Section 2.1 of this procedure should be repeated and recorded on the Wind Speed Calibration Form. Results of the post adjustment checks should be closely evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

3.0 Wind Direction Calibration Procedures

3.1 Sensor Orientation

After the system is inspected, a check of the wind vane orientation is performed. The two methods for an orientation check of the wind vane are as follows:

<u>Compass</u>

6. Determine declination for the area using a Geomag type program with the most recent models of the earth's magnetic field.
7. Use a clamp fashioned from a band clamp and rubber tubing to fix the wind vane in various directions.
8. Using a tripod mounted and leveled, survey grade compass align the compass so that it sights directly at the tail of the wind vane.
9. Obtain readings in each of the four quadrants of the compass.
10. Record the readings from the datalogger and the compass on the Wind Direction calibration form.

<u>Landmark</u>

4. Obtain a GPS point directly under the wind direction sensor.
5. Using a mapping program (eg: TOPO!, allTOPO, or similar) with USGS datasets as its base files, obtain bearings to nearby defined landmarks.
6. Clamp and site the vane tail at the appropriate landmark and record the reading from the datalogger.

3.2 System Linearity Check

Using a RM Young linearity test fixture test the sensor at 30° intervals. Record the readings from the datalogger at each interval on the Wind Direction Calibration Form and compare to the expected values. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 5° (accuracy) and ≤ 3° mean absolute error (linearity). Mean absolute error is calculated by the the following equation: equation.

$$\sum \frac{|X|}{n}$$

Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

3.3 Maintenance and Adjustment

At this point the technician should review the performance of the sensor and determine what adjustments are required, if any. All basic maintenance should be performed before any serious adjustment of the sensor, or determination of a new multiplier and/ or offset in the datalogger programming. All maintenance and adjustments should follow the guidelines presented by the manufacturer in the RM Young instrument manual. If the orientation was incorrect, the alignment of the cross arm will need to be adjusted following the linearity check.

3.4 Post Adjustment Checks

After all maintenance and adjustments have been made, the steps listed in Sections 3.2 and 3.1 of this document should be repeated, respectively. All results should be recorded On the Wind Direction Calibration Form. Results of the post adjustment checks should be evaluated. If the output values do not closely match the expected values, perform troubleshooting, maintenance, and adjustments as needed to correct the sensor response. If the sensor is deemed un-repairable by the technician, it should be replaced as soon as possible from the stock of back-up sensors for the monitoring project.

4.0 Conclusion

At the conclusion of the calibration, complete all calibration forms noting any adjustments made, maintenance performed, and corrective actions taken, if any. Note the specific time which the calibrations for the wind speed and direction sensors began and ended. Sign and date the calibration form under any comments made.

Audit Procedure for Wind Speed and Wind Direction Sensors

1.0 Wind Speed

The required instruments to complete a wind speed audit are a torque watch, and anemometer drive.

The audit procedure is as follows: A system response check is performed by the use of an RM Young 18801 (or similar model) anemometer drive. The cups are removed from the sensor shaft and the anemometer drive is attached. The sensor is then challenged at the speeds specified on the Wind Speed Audit Form. The speeds measured by the datalogger for each specific rpm are compared to the calculated values. The equation for calculating wind speed as a function of anemometer drive rpm is given on the Wind Speed Audit Form. The absolute difference from expected values is then calculated to see if the values agree within ±0.5 mph or 5% of observed.

The starting torque should be measured with a torque watch, and recorded on the Wind Speed Audit Form. If the sensor starting torque is above 0.0049 oz-in the bearings may need to be cleaned, oiled, or replaced.

2.0 Wind Direction

The process for auditing a wind direction sensor is described below:

Compass

1. Determine declination for the area using a Geomag type program with the most recent models of the earth's magnetic field.
2. Use a clamp fashioned from a band clamp and rubber tubing to fix the wind vane in various directions. In medium to high winds a vane with the "tail" removed may have to be used as to not damage the wind vane.
3. Using a tripod mounted and leveled, survey grade compass align the compass so that it sights directly at the tail of the wind vane.
4. Obtain readings in each of the four quadrants of the compass.
5. Record the readings from the datalogger and the compass on the Wind Direction calibration form.

Landmark

7. Obtain a GPS point directly under the wind direction sensor.
8. Using a mapping program (eg: TOPO!, allTOPO, or similar) with USGS datasets as its base files, obtain bearings to nearby defined landmarks.
9. Clamp and site the vane tail at the appropriate landmark and record the reading from the datalogger.

2.1 System Linearity Check

Using a linearity test fixture appropriate for the sensor, test the sensor at 30° intervals. Record the readings from the datalogger at each interval on the Wind Direction Audit Form and compare to the expected values. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 5° (accuracy) and ≤ 3° mean absolute error (linearity). Mean absolute error is calculated by the equation 1.0.

$$\sum \frac{|X|}{n}$$

Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

Calibration Procedure for MetOne 062 Temperature Sensors

1.0 Introduction

MetOne 062 temperature sensors (hereafter referred to as temperature sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for a temperature sensor requires an initial calibration check, and calibrations every six months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for temperature sensor calibration is as follows:

1. Calibrated, certified, NIST traceable thermometer.
2. Thermal mass unit and or ice, warm, and hot water bath.
3. PC or similar display module.
4. MetOne 062 manual

The calibration should start by completing the top of the Temperature Sensor Calibrations Form.

1.1 System Inspection

Before determining the initial response of the temperature measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Temperature Sensor Calibrations Form.

2.0 Pre-adjustment Calibration Procedures

2.1 System Response Check

The system response check is performed by comparing the sensor response with that of a calibrated NIST traceable thermometer for at least three different temperatures. The ideal temperatures to compare the sensors at are very cold, cold, warm , and hot. The very cold, cold, warm, and hot temperatures should be about -40˚C to -30˚C, 0˚C, 15 to 25˚C, and 30 to 40˚C, respectively. These temperatures can be obtained through the use of three small insulated thermoses and a Thermal Mass Device (TMD). The thermal mass device must be cooled by contact with dry ice (frozen CO_2). An ice bath should be used for the cold temperature range. For the warm and hot temperatures warm and hot water should be used. The thermometer and temperature sensor should be collocated as closely as possible by taping the sensors together. After allowing time for the temperature readings to stabilize, the technician will record the calibration and datalogger values on the Temperature Sensor Calibration Form. If possible, check the linearity of the instrument by fitting a curve and checking the slope, and intercept of the Y = X line. Check to see if the accuracy of the instrument is no more than ± 0.5° (accuracy) and no more than ± 0.1˚ for temperature difference between matched

sensors in a delta temperature measurement system. Mean absolute error is calculated by the equation 1.0. Were *X* is the precision of the instrument at any given degree, and *n*, is the number of measurements taken.

$$\sum \frac{|X|}{n}$$

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks, the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Since a true calibration of the sensor cannot be performed unless the sensor is checked across its full range, a sensor not conforming to the calibrated NIST thermometer will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Temperature Sensor Calibration Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for Temperature Sensors

The temperature sensors should be removed from the aspirators and checked at three temperature points. The system response check is performed by comparing the sensor response with that of a calibrated NIST traceable thermometer for at least three different temperatures.

The ideal temperatures to compare the sensors at are very cold, cold, warm , and hot. The very cold, cold, warm, and hot temperatures should be about -40˚C to -30˚C, 0˚C, 15 to 25˚C, and 30 to 40˚C, respectively. These temperatures can be obtained through the use of three small insulated thermoses and a Thermal Mass Device (TMD). An ice bath should be used for the cold temperature range. For the warm and hot temperatures warm and hot water should be used. The thermometer and temperature sensors should be collocated as closely as possible by taping the sensors together. Agitate each thermos to equilibrate the medium and remove any local temperature gradients, then record the audit sensor and datalogger values on the Temperature Sensor Audit Form.

The auditor should then compare all values recorded for the temperature sensors to the standards listed on the Temperature Sensor Audit Form. The standard for temperature sensors is ±0.5˚ of observed, and ±0.1˚ for temperature difference between matched sensors in a delta temperature measurement system.

Field Calibration Check for a Li-Cor LI200X Pyranometer

1.0 Introduction

LiCor LI200X pyranometers (hereafter referred to as pyranometers) are calibrated at the factory before receipt. Therefore, the calibration schedule for a pyranometer requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

True calibration of a pyranometer is only accomplished in full mid-summer sun, on a perfectly clear day. This calibration should also last 2 full diurnal cycles. Since these conditions are rarely possible to meet in Alaska calibration field checks rather than true calibrations of pyranometers are performed.

A field calibration check is comprised of the comparison of the pre-adjustment responses to the responses obtained from a collocated, calibrated NIST traceable pyranometer, adjusting or performing needed maintenance on the pyranometer, and documentation of all collected data and adjustments made.

Equipment required for calibration is as follows:

1. Calibrated NIST traceable pyranometer.
2. Datalogger capable of the same scan and averaging frequency as the datalogger being used on-site.
3. All associated instrument manuals.

The calibration should be started by completing the top of the Solar Radiation Sensor Calibration Form.

1.1 System Inspection

Before determining the initial response of the solar radiation system, inspect the signal cable and pyranometer. Check the cable for signs of wear. Check that the pyranometer is level and free of dust. Record these findings in the Solar Radiation Sensor Calibration Form.

2.0 Pre-adjustment Systems Check

This check requires that the solar radiation sensor is in it's normal operating mode. The first part of the check consists of totally covering the sensor to exclude all light. Observe and record the output from the datalogger (which should be approximately zero) in the Solar Radiation Sensor Calibration Form. Next check the ambient light condition output for the sensor and calibration sensor. Record these values in the Solar Radiation Sensor Calibration Form.

Pre-adjustment Collocated Transfer Standard (CTS) Check

Set-up and level the CTS as near as practical to the site pyranometer. Record the concurrent values for the site and CTS pyranometer. Ideally, the CTS should be collecting data for the entire time the technician is on-site. These data should be collected at the same scan rate, and averaged at the same interval as the site pyranometer. Ideally a full diurnal cycle of concurrent readings from the site pyranometer and CTS should be taken.

In practice, the calibration technicians time on-site is limited due to the remoteness and access of monitoring sites in Alaska. Therefore, at least four averaging periods of the site and CTS should be used. That is, if the site datalogger is set to record hourly averages of solar radiation data, four hours of data should be taken form the site datalogger and the CTS. Record the solar radiation data, averaging interval, and all other pertinent information in the Solar Radiation Sensor Calibration Form. If possible check the linearity of the instrument by fitting a curve and checking the slope, intercept, and R^2 value of the Y = X line.

3.0 Maintenance and Adjustments

At this point in the field calibration check the technician should review the results of the system inspection, system check, and CTS check to determine if the sensor is operating within its acceptable limits, and establish what maintenance and adjustments are required, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Any maintenance and adjustments performed should be noted in the Solar Radiation Sensor Calibration Form.

4.0 Post-adjustment Checks

If any maintenance or adjustments were performed, the steps listed in Sections 3.0 and 4.0 of this procedure should be repeated and all data noted in the Solar Radiation Sensor Calibration Form. The results of the post-adjustment checks should be evaluated and noted. If the results do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted. If the site pyranometer cannot be calibrated properly the unit may have to be replaced and sent back to the factory for repair.

5.0 Conclusion

Upon completion of the field calibration check, the Solar Radiation Sensor Calibration Form should be completed. Any adjustments, maintenance or repairs made should be noted. Sign and date the calibration form underneath any notes made in the comments section.

Solar Radiation Sensor Audit Procedure

Performance audits of a solar radiation system require a separate datalogger and a calibrated, NIST traceable pyranometer to serve as a collocated transfer standard (CTS). Procedure for the solar radiation system audit is as follows:

1. Set-up and level the CTS as near as practical to the site pyranometer.

2. Fill in the information of the top portion of the Solar Radiation Audit Form.

3. Record concurrent values for the site and CTS pyranometers for at least four of the site averaging intervals.

Ideally a full diurnal cycle of concurrent readings from the site pyranometer and CTS should be taken. However, In general practice the auditors time on-site is limited due to the remoteness and access of monitoring sites in Alaska. Therefore, at least four averaging periods of the site and CTS should be used. That is, if the site datalogger is set to record hourly averages of solar radiation data, four hours of data should be taken form the site datalogger and the CTS. Record the solar radiation data, averaging interval, scan rate, and all other pertinent information in the Solar Radiation Sensor Audit Form.

Calculated the percent difference according to the following equation and record the results in the Solar Radiation Sensor Audit Form.

$$\textit{Percent Difference} = \frac{\textit{(Observed value) - (Audit Value)}}{\textit{(Audit Value)}}$$

Check the linearity of the instrument, as compared to the CTS by fitting a curve and checking the slope, and intercept, of the Y = X line. To pass the audit the measures values should be within ±5% of observed (slope) and ±10 Wm^{-2} (intercept).

Calibration Procedure for Vaisala HMP- 45 Type Relative Humidity Sensors

1.0 Introduction

Vaisala HMP-45 type relative humidity sensors (hereafter referred to as relative humidity sensors) are calibrated at the factory before receipt. Therefore, the calibration schedule for a relative humidity sensor requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for relative humidity sensor calibration is as follows:

1. Calibrated, certified, NIST traceable relative humidity sensor.
2. PC or similar display module.
3. Vaisala HMP-45 type sensor manual

The calibration should be started by completing the top of the Relative Humidity Sensor Calibrations Form.

1.1 System Inspection

Before determining the initial response of the relative humidity measurement system, inspect the signal cable and sensor for signs of damage and wear. Open the sensor cover to look for signs of water condensation on the circuit board. Note these observations in the Relative Humidity Sensor Calibrations Form.

2.0 Pre-Adjustment Sensor and System Check

The system and sensor check of a relative humidity sensor is performed by comparing the sensor response with that of a calibrated NIST traceable relative humidity sensor such as a Vaisala HMI-41, to serve as a collocated transfer standard (CTS). Collocate the CTS as near to the site remative humidity sensor as possible. For aspirated temperature measurements, the sensor should be collocated inside, or just outside the bottom of the aspirator to receive the same amount of airflow and solar shielding as the site relative humidity senor. Five concurrent, instantaneous readings should be recorded, at least minute apart. Record these values on the Relative Humidity Sensor Calibrations Form.

Next calculate the absolute percent difference for each values and record the results in the Relative Humidity Sensor Calibrations Form. These instantaneous values should agree with the values from the CTS within ±5%.

Calculate the dew point temperature for each of the five points taken. Dew point temperature or T_d should be calculated according to the following equation:

Note: this equation is only valid for the following conditions:

0 °C < T < 60 °C
0.01 < RH < 1.0
0 °C < T_d < 50 °C

Where:

T = temperature in degrees Celsius
RH = is the relative humidity as a fraction (not percent)
T_d = the dew point temperature to be calculated

The formula is:

$$T_d = \frac{b\,\gamma(T, RH)}{a - \gamma(T, RH)}$$

where

$$\gamma(T, RH) = \frac{a\,T}{b + T} + \ln RH$$

and

a = 17.27
b = 237.7 °C

The recommended system accuracy for dew point temperature is ±1.5°C of observed

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Since a true field calibration of the sensor can rarely be performed any sensor not conforming to the calibrated NIST relative humidity sensor will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 of this document should be repeated and the results recorded in the Relative Humidity Sensor Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Relative Humidity Sensor Audit Procedure

Equipment needed for a relative humidity sensor audit includes a calibrated, NIST traceable, Vaisala HMI-41 or similar type relative humidity and temperature probe. This probe will serve as a collocated transfer standard (CTS).

The process for relative humidity as dew point audit procedure is as follows:

Collocate a calibrated NIST traceable relative humidity sensor such as a Vaisala HMI-41. Collocate the CTS as near to the site relative humidity sensor as possible. For aspirated temperature measurements, the sensor should be collocated inside, or just outside the bottom of the aspirator to receive the same amount of airflow and solar shielding as the site relative humidity sensor.

After the CTS has been given ample time to equilibrate five concurrent, instantaneous readings should be recorded, at least minute apart. Record these values on the Relative Humidity Sensor Audit Form.

Calculate the dew point temperature for each of the five points taken. Dew point temperature or T_d should be calculated according to the following equation:

Note: this equation is only valid for the following conditions:

0 °C < T < 60 °C
0.01 < RH < 1.0
0 °C < T_d < 50 °C

Where:

T = temperature in degrees Celsius
RH = is the relative humidity as a fraction (not percent)
T_d = the dew point temperature to be calculated

The formula is:

$$T_d = \frac{b\,\gamma(T, RH)}{a - \gamma(T, RH)}$$

where

$$\gamma(T, RH) = \frac{a\,T}{b + T} + \ln RH$$

and

a = 17.27
b = 237.7 °C

The recommended system accuracy for dew point temperature is ±1.5°C of observed.

Calibration Procedure for an ETI NOAH II Precipitation Gauge

1.0 Introduction

All ETI NOAH II precipitation gauges (hereafter referred to as precipitation gauges) are calibrated at the factory before receipt. Therefore, the calibration schedule for a precipitation gauge requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for precipitation gauges calibration is as follows:

1. NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder.
2. PC or similar display module with P7GACOMM
3. ETI NOAH II manual

The calibration should be started by completing the top of the Precipitation Gauge Calibrations Form.

1.1 System Inspection

Before determining the initial response of the precipitation measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Precipitation Gauge Calibrations Form.

2.0 Pre-Adjustment Checks

2.1 System Check

To ensure that the weight measurement assembly (WMA) is functioning, slowly pour an initial amount of water into the gauge and check for a response from the datalogger.

2.2 Gauge Check

A calibration is performed by inputting known amounts of water into the gauge using a NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder and checking the system response. Water is usually inputted into the gauge 800mL at a time, across the full range (4-12” liquid in gauge).

Water should be delivered to the gauge slowly, and poured onto the side of the gauge to buffer the flow. This will ensure that the sensitive load cell in the WMA does not become damaged.

After each bottle of water is added to the gauge, the measurement system should be given ample time to read. This value should be noted in the Precipitation Gauge Calibrations Form. The values should agree within ±10% of the expected. If possible check the linearity of the instrument by fitting a curve and checking the slope and intercept of the Y = X line.

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer. Due to limited time and marginal weather in the field a true field calibration of the sensor can rarely be performed. Therefore, any sensor not conforming to within ±10% of the expected values will most likely need to be replaced and sent back to the factory for a true calibration.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Precipitation Gauge Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for an ETI NOAH II Precipitation Gauge

An audit of an ETI NOAH II precipitation gauge is performed by inputting known amount of water into the gauge using a NovaLynx 260-2595 Tipping Bucket Rain Gauge Calibrator or large graduated cylinder. Water is usually inputted into the gauge 800mL at a time, across the full range (4-12" liquid in gauge).

Water should be delivered to the gauge slowly, and poured onto the side of the gauge to buffer the flow. This will ensure that the sensitive load cell in the weight measurement assembly (WMA) does not become damaged. Ample time should be given for the gauge to calculate and read the delivered amount of liquid.

After each bottle of water is added to the gauge, the system measurement should be noted in the Precipitation Gauge Audit Form. The values should agree within ±10% of the expected. If possible check the linearity of the instrument by fitting a curve and checking the slope, intercept, and R^2 of the Y = X line.

Audit procedure is as follows:

1. Fill out the top of the Precipitation Gauge Audit Form noting the prevailing meteorological conditions.

2. Deliver water to the gauge in measured increments across the full range of the gauge, noting the volume delivered, expected and system response, and percent error.

3. Compare the error of the gauge to the limit of ±10%.

For the gauge to pass the audit each point taken must agree to the expected value within ±10%. The slope, intercept, and R^2 value for the Y = X line should also agree within ±10% of expected.

Calibration Procedure for a Nova Lynx 255-100 Evaporation Gauge

1.0 Introduction

All Nova Lynx 255-100 evaporation gauge (hereafter referred to as evaporation gauge gauges) are calibrated at the factory before receipt. Therefore, the calibration schedule for an evaporation gauge requires an initial calibration check, and calibrations every 6 months. Calibrations are also required immediately after any repair, rewiring, adjustment, or replacement of the sensor or any sensor components.

Equipment required for precipitation gauges calibration is as follows:

1. Large graduated cylinder or similar water delivery device
2. Ruler
3. PC or similar display module
4. Nova Lynx 255-100 manual

The calibration should be started by completing the top of the Evaporation Gauge Calibrations Form.

1.1 System Inspection

Before determining the initial response of the precipitation measurement system, inspect the signal cable and sensor for signs of damage and wear. Note these observations in the Evaporation Gauge Calibrations Form.

2.0 Pre-Adjustment Checks

2.1 System Check

To ensure that the float mechanism is functioning, slowly pour an initial amount of water into the gauge and check for a response from the datalogger.

2.2 Gauge Check

A calibration is performed by inputting known amounts of water into the gauge using a large graduated cylinder, measuring the height of the water in the evaporation pan, and checking the system response. Water is usually inputted into the gauge 800mL at a time, across the full range (3-9” liquid in gauge).

After each bottle of water is added to the gauge, the measurement system should be given ample time to read. This value should be noted in the Evaporation Gauge Calibrations Form. Check the linearity of the instrument by fitting a curve and checking

the slope and intercept of the Y = X line. These values should agree within ±10% of the expected.

3.0 Maintenance and Adjustments

After performing all system inspections and calibration checks the results should be reviewed to determine what maintenance and adjustments are needed, if any. Maintenance procedures should follow the manufactures recommendations in the manual provided by the manufacturer.

4.0 Post-adjustment Checks

If maintenance or adjustments were made, the steps listed in Section 2.0 should be repeated and the results recorded in the Evaporation Gauge Calibrations Form. If the outputs do not agree within the specified limits troubleshooting, maintenance, and adjustments should be performed and noted.

5.0 Conclusion

When the instrument provides the proper response to the expected calibration values, complete the calibration form noting any adjustments, maintenance or repairs made. Sign and date the calibration form underneath any notes made in the comments section.

Audit Procedure for a Nova Lynx 255-100 Evaporation Gauge

An audit of an Nova Lynx 255-100 evaporation gauge is performed by inputting known amount of water into the gauge using a large graduated cylinder or similar type of water delivery device. Water is usually inputted into the gauge 800mL at a time, across the full range (3-9" liquid in gauge).

Water should be delivered to the gauge slowly and ample time should be given for the gauge to read and calculate the delivered amount of liquid.

After each bottle of water is added to the gauge, the system measurement should be noted in the Evaporation Gauge Audit Form. Check the linearity of the instrument by fitting a curve and checking the slope and intercept of the Y = X line. These values should agree within ±10% of the expected.

Audit procedure is as follows:

4. Fill out the top of the Evaporation Gauge Audit Form noting the prevailing meteorological conditions.

5. Deliver water to the gauge in measured increments across the full range of the gauge, noting the level of water in gauge and system response.

6. Compare the linearity of the gauge to the limit of ±10%.

For the gauge to pass the audit the slope and intercept of the Y = X line should agree within ±10% of expected.

Systems Audit Procedures for the Pebble Project Meteorological Monitoring Program.

1.0 Introduction

A systems audit is an on-site inspection and review of the quality assurance system used for the total measurement system (sample collection, sample analysis, data processing, ect.) for each monitored parameter. Whereas, performance audits are quantitative appraisal, system audits are normally a qualitative appraisal. The standard operating procedures (SOP) in the projects analysis plan should be used as the basis for conducting a system audit. The purpose of a system audit is to determine whether or not the monitoring program has followed the SOP and quality control procedures and listed in the projects analysis plan. It also determines if the data generated are scientifically valid, defensible, and of specified accuracy and precision.

2.0 Audit Items

The following are typical items checked in a systems audit for a PSD Meteorological Monitoring Program:

1. Is the quality assurance organization operational

2. Are there written standard operation procedures (SOP) available for site operation and sampling, and are they being followed?

3. Are there written calibration procedures and schedules, including traceability documentation, and are they being followed?

4. Are there preventative maintenance procedures and are they being followed?

5. Are site logbooks, site checks forms, and other documentation being used and properly completed?

3.0 Audit Goals

The goal of a systems audit is to ass the overall operation of the quality assurance system. System audits generally entail the following procedures:

1. Preparing audit questionnaires for the monitoring site evaluations (F/ST9001.1) and for evaluation of the office activities related to the monitoring (F/ST9001.2).

2. Identifying deficiencies from previous audits and preparing a checklist covering these areas.

3. Arranging entrance interviews and briefing the site operator on the purpose and the scope of the systems audit.

4. Performing the systems audit.

5. Conducting exit interviews and debriefing on the system audit results

6. Preparing and submitting audit reports

7. Following up on report recommendations.

A systems audit will be conducted within 30 days of the commencement of the filed program in order to insure that all of the QA project plans specified procedures have been implemented. An early assessment is designed to prevent the accumulation of a large amount of questionable to invalid data bay quickly uncovering any discrepancies between the project plan and the actual monitoring effort. Thereafter, a systems audit will be conducted yearly.

Hoefler CONSULTING GROUP

INDIVIDUAL SITE MEMO

Job Number: 1208-005-210
Station: Williamsport
Time Period:
Less Than 4/28/2008

Start Date & Time
3/24/2008 11:00

End Date & Time
3/24/2008 13:00

☐ **Equipment Change**
☐ **Missing or Altered Data**

Activity
Repair/Replace

Lead Technician
Dominic Shallies

Summary

Restored communications to station datalogger.

Work Performed

Dominic Shallies and Eric Brudie visited the Williamsport station to reset the communications. The datalogger RS232 port was found to be locked up. This problem is suspected to have happened because of concurrent communications with the CC640 digital camera interface (MD485) over the CS I/O port and the Freewave radio over the RS232 port. All stored data and images were downloaded from the CR1000 and a new operating system (rev.15) was loaded. One of the bugs listed to be fixed in rev.15 is comm lock-up during concurrent comm. Settings and datalogger program were returned to original. Comm was tested to HCG and is good.

Pending Items

1. 3/16" cable clamp for propane tank guy wire.

Attachments

EXAMPLE

APPENDIX C2
AUDIT/CALIBRATION FORMS

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

A. DAS TIME AUDIT

Instrument Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments:

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?

B. 2M, 10M, and ΔT, TEMPERATURE SENSOR AUDIT

Thermistor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Audit Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED THERMISTOR TEST									
Thermal Input			Station Response						
Temp Range	Target Deg C	Input Deg C	2M DAS Deg C	10M DAS Deg C	ΔT DAS Deg C	ΔT Error Deg C	2M Error Deg C	10M Error Deg C	Pass/ Fail?
Hot	35 - 40								
Warm	15 - 25								
Ice Bath	0								
				Max Abs. Error					

Instrument Limits: Max Absolute Error > 0.5˚C (accuracy), Max Absolute Error > 0.1˚C ΔT.
Comments:

C. RELATIVE HUMIDITY SENSOR AUDIT

Site Sensor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Audit Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED RELATIVE HUMIDITY SENSOR TEST							
NIST Readings			Station Response				
Temp Deg C	RH (%)	T_{dp} Deg C	DAS Temp Deg C	DAS RH (%)	DAS T_{dp} Deg C	Error Deg C	Pass/ Fail?
				Max Abs. Error			

Instrument Limits: Max Absolute Error > 1.5˚C Dew Point Temperature
Comments:

C. MAIN HORIZONTAL WIND SPEED SENSOR AUDIT

Height: _____ **Meters**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Audit Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Audit Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		
Torque:	N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	2.94				
200	5.60				
400	10.93				
1000	26.92				
2000	53.57				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >0.45 gm-cm (0.00625oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: MPS=RPM/37.522569+0.27; MPH=0.44704*MPS; gm-cm=72*oz-in; Torque=1.8*MPS^2.
Comments:

D. BACKUP HORIZONTAL WIND SPEED SENSOR AUDIT

Height: _____ **Meters**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Audit Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Audit Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		
Torque:	N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	0.51				
200	1.02				
400	2.05				
1000	5.12				
2000	10.24				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >2.4 gm-cm (0.033oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: Transfer Function for RM Young Model 05305 AQ w/ carbon fiber propeller: m/s = rpm x 0.00512
Comments:

E. HORIZONTAL WIND DIRECTION SENSOR AUDIT

Height: _____ **Meters**

Wind Dir Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Vane #:** _____ **Range:** _____ **Deg**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
Audit Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >7.1 gm-cm (.0986 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions: Torque = 28.4*MPS^2 for aluminum vane.

Comments:

F. BACK-UP HORIZONTAL WIND DIRECTION SENSOR AUDIT

Height: **Meters**

Wind Dir Sensor: **Make:** **Model:** **S.N.#:** **Vane #:** **Range:** **Deg**
Audit Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >23.0 gm-cm (.32 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions:

Comments:

G. PRECIPITATION GAUGE AUDIT

Height: **Meters**

Precipitation Gauge: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Audit Equipment: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Diameter: **Inches** **Volume Rate** **Ml/mm**

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**

PRECIPITATION GAUGE VOLUME TEST										
Start Time	Input Vol Ml	Input mm	Data Hour	DAS mm	-Adjust mm	+Adjust mm	Final mm	Error % Input	Pass/ Fail?	Notes
						Max Abs. Error				

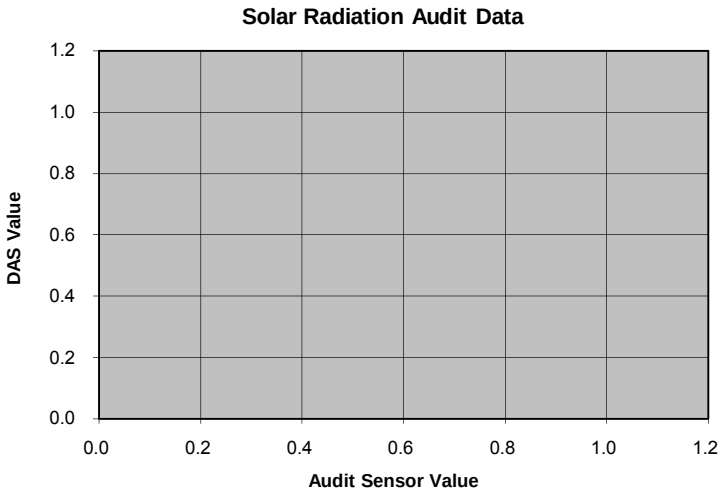
Instrument Limits: Max Absolute Error > 10 % of Input.
Comments:

H. SOLAR RADIATION SENSOR AUDIT

Height: _____ **Meters**

Site Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**
Audit Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**

SOLAR RADIATION SENSOR TEST					
DAS Output	Audit Output	C. Fit Data	Error	Error % Input	Pass/ Fail?
		Max Abs. Error			
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

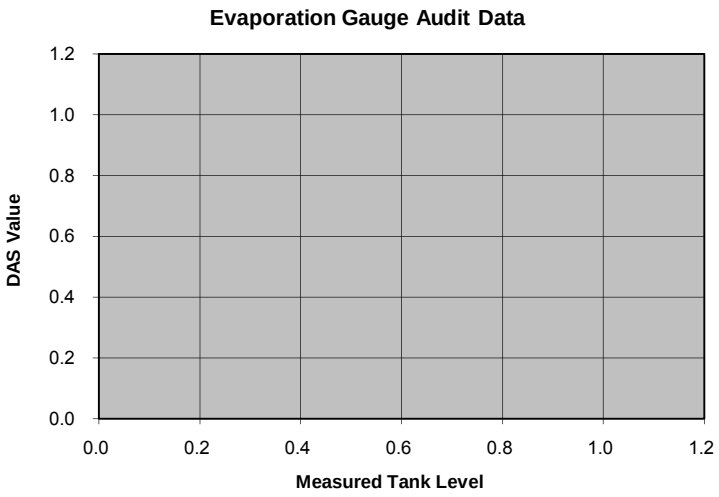
Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Auditor: **Witness(s):** **Audit Date:**
F) EVAPORATION GAUGE AUDIT **Height:** _____ **Meters**

Evaporation Gauge: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**
Evaporation Pan: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**

EVAPORATION PAN STAGE HEIGHT TEST					
Tank Level	DAS mm	C. Fit Data	Error mm	Error % Input	Pass/ Fail?
Max Abs. Error					
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

A. DAS TIME CALIBRATION

Instrument Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments:

DAS TIME vs. NOAA CLOCK				
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?	Time Changed?

B. 2M, 10M, and ΔT, TEMPERATURE SENSOR CALIBRATION

Thermistor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **Deg C**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED THERMISTOR TEST									
Thermal Input			Station Response						
Temp Range	Target Deg C	Input Deg C	2M DAS Deg C	10M DAS Deg C	ΔT DAS Deg C	ΔT Error Deg C	2M Error Deg C	10M Error Deg C	Pass/ Fail?
Hot	35 - 40								
Warm	15 - 25								
Ice Bath	0								
				Max Abs. Error					

Instrument Limits: Max Absolute Error > 0.5˚C (accuracy), Max Absolute Error > 0.1˚C ΔT.
Comments:

C. RELATIVE HUMIDITY SENSOR CALIBRATION

Site Sensor **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **% RH**
Probe SN: _____

Time:
Begin: _____
End: _____

COLLOCATED RELATIVE HUMIDITY SENSOR TEST							
NIST Readings			Station Response				
Temp Deg C	RH (%)	T_{dp} Deg C	DAS Temp Deg C	DAS RH (%)	DAS T_{dp} Deg C	Error Deg C	Pass/ Fail?
				Max Abs. Error			

Instrument Limits: Max Absolute Error > 1.5˚C Dew Point Temperature
Comments:

C. MAIN HORIZONTAL WIND SPEED SENSOR CALIBRATION

Height: _____ **Meters**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Cal. Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Cal. Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	2.94				
200	5.60				
400	10.93				
1000	26.92				
2000	53.57				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >0.45 gm-cm (0.00625oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: MPS=RPM/37.522569+0.27; MPH=0.44704*MPS; gm-cm=72*oz-in; Torque=1.8*MPS^2.
Comments:

D. BACKUP HORIZONTAL WIND SPEED SENSOR CALIBRATION

Height: _____ **Meters**

Wind Spd Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Cup #:** _____ **Range:** _____ **MPS**
Cal. Equipment: **Low Spd:** _____ **Model:** _____ **S.N.#:** _____ **Torque:** _____ **S.N.#:** _____
Cal. Equipment: **High Spd:** _____ **Model:** _____ **S.N.#:** _____

TORQUE TEST	
Torque:	gm-cm
Bearing Status:	
Bearings Replaced:	
Torque: N/A	gm-cm

SYNCHRONOUS MOTOR TEST					
Input RPM	Input MPS	DAS MPS	Error MPS	Error % Input	Pass/ Fail?
0	0.00				
100	0.51				
200	1.02				
400	2.05				
1000	5.12				
2000	10.24				
	Max Abs. Error				

Time: Begin: _____ End: _____

Instrument Limits: Threshold Torque >2.4 gm-cm (0.033oz-in). Max Absolute Error > 0.20 MPS @ WS<=5 MPS or > 5% of input @ WS>5 MPS.
Conversions: Transfer Function for RM Young Model 05305 AQ w/ carbon fiber propeller: m/s = rpm x 0.00512
Comments:

E. HORIZONTAL WIND DIRECTION SENSOR CALIBRATION

Height: _____ **Meters**

Wind Dir Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Vane #:** _____ **Range:** _____ **Deg**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
Cal. Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >7.1 gm-cm (.0986 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions: Torque = 28.4*MPS^2 for aluminum vane.

Comments:

F. BACK-UP HORIZONTAL WIND DIRECTION SENSOR CALIBRATION

Height: **Meters**

Wind Dir Sensor: **Make:** **Model:** **S.N.#:** **Vane #:** **Range:** **Deg**
Cal. Equipment: **Align:** **Model:** **S.N.#:** **Torque:** **S.N.#:**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
Compass: **Model:** **S.N.#:** **Magnetic Declin:** **E of N**

TORQUE TEST		
Torque:		gm-cm
Bearing Status:		
Bearings Replaced:		No
Torque:	N/A	gm-cm

IN SITU ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1020 End: 1043

VANE ACCURACY & LINEARITY TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: 1055 End: 1100

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				330.0			
60.0				355.0			
90.0				30.0			
120.0				60.0			
150.0				90.0			
180.0				120.0			
210.0				150.0			
240.0				180.0			
270.0				**Max Abs. Error**			
300.0				**Mean Abs. Error**			

Time: Begin: End:

POST-AUDIT ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

Instrument Limits: Threshold Torque >23.0 gm-cm (.32 oz-in). Max Absolute Error >5° or Mean Absolute Error > 3° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity).

Conversions:

Comments:

G. PRECIPITATION GAUGE CALIBRATION

Height: **Meters**

Precipitation Gauge: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Cal. Equipment: **Make:** **Model:** **S.N.#:** **Range:** **Inches per Hour**
Diameter: **Inches** **Volume Rate** **Ml/mm**

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**

PRECIPITATION GAUGE VOLUME TEST										
Start Time	Input Vol Ml	Input mm	Data Hour	DAS mm	-Adjust mm	+Adjust mm	Final mm	Error % Input	Pass/ Fail?	Notes
						Max Abs. Error				

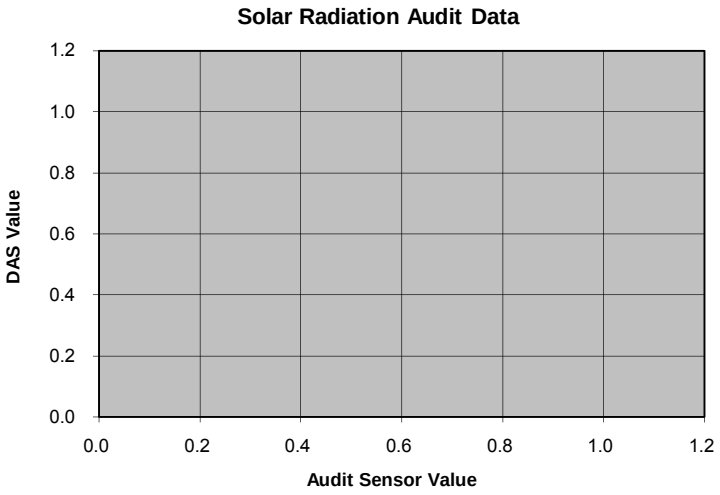
Instrument Limits: Max Absolute Error > 10 % of Input.
Comments:

H. SOLAR RADIATION SENSOR CALIBRATION

Height: _____ **Meters**

Site Sensor: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**
Cal. Equipment: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **W m^{-2}**

SOLAR RADIATION SENSOR TEST					
DAS Output	Audit Output	C. Fit Data	Error	Error % Input	Pass/ Fail?
		Max Abs. Error			
Intercept		**Slope**			



Regression: slope: intercept: R:
Time: Begin: End: **Date:**

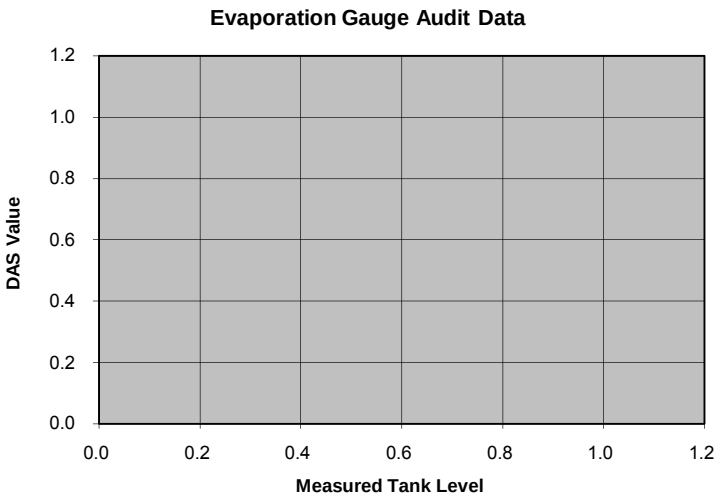
Instrument Limits: Max Absolute Error > 5 % . $0.95 \le m \le 1.05$, $-10 \le b \le 10$
Comments:

METEOROLOGICAL STATION - INSTRUMENT CALIBRATION

Owner: Pebble Project **Operator:** **Alternate:** **Station Site:**
Calibrator: **Witness(s):** **Calibration Date:**
F) EVAPORATION GAUGE CALIBRATION **Height:** _____ **Meters**

Evaporation Gauge: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**
Evaporation Pan: **Make:** _____ **Model:** _____ **S.N.#:** _____ **Range:** _____ **mm**

EVAPORATION PAN STAGE HEIGHT TEST					
Tank Level	DAS mm	C. Fit Data	Error mm	Error % Input	Pass/ Fail?
Max Abs. Error					
Intercept		**Slope**			



Time: Begin: _____ End: _____ **Date:** _____

Instrument Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments:

APPENDIX D
STATEMENT OF QUALIFICATIONS

Air Quality Monitoring Services

Hoefler Consulting Group is an Anchorage-based consulting firm specializing in comprehensive environmental permitting and compliance services for Alaskan industries. Hoefler provides technical services supporting construction and operation of facilities in Alaska's unique physical, regulatory, and political environment. Hoefler is the leading air quality consulting firm in Alaska. The firm's staff of 40 professionals provides the following services from our Anchorage offices:

- PSD and non-PSD construction permitting
- Title V operating permitting
- Meteorological and ambient air quality monitoring programs
- Criteria pollutant, HAP, and greenhouse gas emission inventories
- Best available control technology demonstrations
- Air modeling compliance demonstrations
- Risk assessment
- Open burning approvals
- Certified opacity readings
- Source test supervision and support

Summaries of Experience for Key Personnel

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Al Trbovich is a Certified Consulting Meteorologist and the Air Quality Team Leader of the Hoefler Consulting Group. He has 28 years of environmental permitting and regulatory compliance experience, and has been providing air quality services to his Alaskan clients throughout the state since 1998. Mr. Trbovich has extensive experience working with all facets of air permitting including construction ("PSD") and operating ("Title V") permitting, meteorological and ambient monitoring, compliance monitoring, source testing, and risk assessments. He is also a specialist in air quality modeling and has conducted ambient air quality and/or visibility modeling studies throughout Alaska. He has also lead numerous multi-disciplinary teams in preparing air permit applications, environmental impact statements, and other environmental studies. Mr. Trbovich holds B.S. and M.S. degrees in Meteorology from the University of Utah.

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Senior Project Manager

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Eric Brudie is an independent Air Quality Consultant that works with the Air Quality Group at Hoefler Consulting. He has over 24 years of air monitoring experience in air quality services. Mr. Brudie works with Hoefler Consulting as an independent contractor who specializes in conducting performance and systems audits of numerous PSD quality meteorological monitoring systems. His experiences include designee and operating numerous remote meteorological monitoring systems for the TAGS project, including the LNG terminal site 40-meter remote system. He functioned as a key team member in the preparation and agency approval of the Meteorological Monitoring & QA/QC Plan and the Application for Air Quality Control Permit to Operate with PSD Review for the proposed LNG liquefaction plant. Mr. Brudie holds a B.S. in Geological Engineering from the Colorado School of Mines.

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APPENDIX 26C

Pebble Port Station First Annual Data Report, August 2005–July 2006, for the Pebble Project Meteorological Monitoring Program

(Please also note: Pebble Port Station is also called Port Site 1 in the text of this document.)

Pebble Port Station
First Annual Data Report
August 2005 - July 2006

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

Pebble Project
NORTHERN DYNASTY MINES INC.

prepared for

Northern Dynasty Mines Inc.

December 2006

Pebble Port Station
First Annual Data Report
August 2005 - July 2006

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

December 2006

prepared for

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CONTENTS

Executive Summary **1**

1.0 Introduction **5**

1.1 Project Summary 5
1.2 Measurements Method Table 6
1.3 Variations from the Quality Assurance Project Plan 6

2.0 Station Performance Summary **11**

2.1 Significant Project Events 11
2.2 Missing, Invalid, and Adjusted Data 12
2.3 Network Data Completeness 14
2.4 Precision Statistics 16
2.4.1 Monitoring Network Precision Statistics 16
2.4.2 Analytical Laboratory Precision Statistics 16
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 16
2.5 Accuracy Statistics 16
2.5.1 Instrument Calibration Statistics 16
2.5.2 Independent Quality Assurance Audits 16

3.0 Monitoring Data Network Summary **20**

3.1 Air Quality Data Summary 20
3.2 Meteorological Data Summary 20
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 20
3.2.2 Temperature Climatology 32
3.3.3 Other Meteorological Parameters 37

4.0 References **41**

List of Figures

1-1 Map of the Pebble Project Area 8
1-2 Map of the Pebble Port Station 9
1-3 Pebble Port Meteorological Monitoring Station 10
3-1 Annual Pebble Port Wind Roses 22
3-2 Quarterly Pebble Port Wind Roses (Climatronics) 23
3-3 Quarterly Pebble Port Wind Roses (RM Young) 24
3-4 Annual Wind Rose Superimposed on Site Map 31
3-5 Hourly Average 2-Meter and 10-Meter Temperatures 35
3-6 Hourly Average Vertical Temperature Difference 36

3-7 Hourly Average Relative Humidity 38
3-8 Barometric Pressure 39
3-9 Hourly Average Solar Radiation 40

List of Tables

E-1 Meteorological Data Capture – Valid Hours per Month 2
E-2 Meteorological Data Capture – Percent Data Capture 3
E-3 Pebble Project QAPP Variation Table 4
1-1 Meteorological Measurement Methods 7
2-1 Chronology of Events 11
2-2 Percentage of Final Data Flagged 13
2-3 Pebble Port Station Percent Data Capture 15
2-4 Initial Performance Audit Summary (June 25, 2005) 17
2-5 Semi-Annual Audit Summary (January 16, 2006). 18
2-6 Second Annual Performance and Systems Audit Summary (August 21, 2006) . 19
3-1 Average and Maximum Wind Speeds 21
3-2 First Year Wind Rose Analysis Table (Climatronics) 25
3-3 Quarter A Wind Rose Analysis Table (Climatronics) 26
3-4 Quarter B Wind Rose Analysis Table (Climatronics) 26
3-5 Quarter C Wind Rose Analysis Table (Climatronics) 27
3-6 Quarter D Wind Rose Analysis Table (Climatronics) 27
3-7 First Year Wind Rose Analysis Table (RM Young) 28
3-8 Quarter A Wind Rose Analysis Table (RM Young) 29
3-9 Quarter B Wind Rose Analysis Table (RM Young) 29
3-10 Quarter C Wind Rose Analysis Table (RM Young) 30
3-11 Quarter D Wind Rose Analysis Table (RM Young) 30
3-12 2-Meter Temperature Summary 33
3-13 10-Meter Temperature Summary 34

List of Appendices

A Data Processing Specifications and Statistical Formulae
A.1 Data Recovery Percentage
A.2 Data Bias Correction Using Calibration Information
A.3 Estimation of Pasquill-Gifford Stability Categories
B Precision Data
C Accuracy Data
D Validated Continuous Hourly/Daily/Monthly Data Summaries
E Validated Manual Particulate (Field and Laboratory) Data

Executive Summary

On behalf of Northern Dynasty Mines Inc. (NDM), Hoefler Consulting Group (HCG) is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration- (PSD)-quality meteorological monitoring for the Pebble Project began on August 1, 2005 and will continue at least through July 31, 2007. This report provides details of the first full year of meteorological measurements collected from August 1, 2005 through July 31, 2006 at the proposed port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble Port meteorological monitoring station.

Table E-3 provides items and procedures that differ from the Pebble Project Quality Assurance Project Plan (QAPP).

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
August 2005	656	740	656	744	744	744	744	744	744	739	744	744
September 2005	720	720	720	720	720	720	720	720	720	682	720	720
October 2005	744	744	744	744	744	744	744	744	744	744	744	744
November 2005	720	720	720	720	720	720	720	720	720	720	716	720
December 2005	744	744	744	744	744	744	744	744	744	744	740	744
January 2006	740	740	740	740	739[3]	739	740	740	740	744	744	744
February 2006	649	649	649	670	670[3]	670	670	670	670	672	672	672
March 2006	744	744	744	740	659	659	744	744	744	744	744	744
April 2006	720	720	720	716	720	720	720	720	720	720	720	720
May 2006	744	744	744	744	744	744	744	744	744	744	744	744
June 2006	720	720	720	720	720	720	720	720	720	720	720	720
July 2006	744	744	744	744	744	744	744	744	744	744	744	744
Monitoring Year	8,645	8,729	8,645	8,746	8,668	8,668	8,754	8,754	8,754	8,717	8,752	8,760

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
August 2005	88.2%	99.5%	88.2%	100%	100%	100%	100%	100%	100%	99.3%	100%	100%
September 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	94.7%	100%	100%
October 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**96.0%**	**99.8%**	**96.0%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**98.1%**	**100%**	**100%**
November 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.4%	100%
December 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.5%	100%
January 2006	99.5%	99.5%	99.5%	99.5%	99.3%[3]	99.3%	99.5%	99.5%	99.5%	100%	100%	100%
Quarter B	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%[3]**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100%**	**99.6%**	**100%**
February 2006	96.6%	96.6%	96.6%	99.7%	99.7%[3]	99.7%	99.7%	99.7%	99.7%	100%	100%	100%
March 2006	100%	100%	100%	99.5%	88.6%	88.6%	100%	100%	100%	100%	100%	100%
April 2006	100%	100%	100%	99.4%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter C	**98.9%**	**98.9%**	**98.9%**	**99.5%**	**95.9%**	**95.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**
May 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
July 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**98.7%**	**99.6%**	**98.7%**	**99.8%**	**98.9%**	**98.9%**	**99.9%**	**99.9%**	**99.9%**	**99.5%**	**99.9%**	**100%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).

Table E-3. Pebble Project QAPP Variation Table

Item/Procedure	Variation	Reason for Variation
An accuracy performance evaluation will be conducted within 30 days of site startup.	The performance evaluation was conducted within 35 days of site startup.	A faulty sensor delayed startup by 30 days. The delay had no effect on collected data as all sensors passed performance audits conducted during and after the monitoring year.

1.0 Introduction

1.1 Project Summary

On behalf of Northern Dynasty Mines Inc. (NDM), Hoefler Consulting Group (HCG) is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring program currently consists of three PSD-quality meteorological monitoring stations located at the proposed mill site (Pebble 1), the tailings storage facility (Pebble 4), and port site (Pebble Port). An additional, non-PSD meteorological monitoring station (Pebble 3) is located near the tailings storage facility and is collecting data for engineering and mine design purposes. Of the three PSD-quality meteorological monitoring stations, continuous measurements were made at the Pebble 1 and Pebble Port stations from August 1, 2005 through July 31, 2006, which concluded the first monitoring year of the meteorological monitoring program. Pebble 4 became operational on August 1, 2006, at the start of the second monitoring year.

Separate annual data reports have been prepared for both of the Pebble 1 and Pebble Port stations. This data report exclusively addresses the first year of measurements made at the Pebble Port station.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble Port station.

The Pebble Port station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C])
- Air temperature, ten meters above ground level (degrees Celsius [°C])
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]))
- Wind speed (meters per second [m/s])
- Wind direction (degrees [°])
- Wind direction standard deviation (wind sigma [σ_θ])
- Relative humidity (percent [%])
- Solar radiation (Watts per square meter [W/m^2])
- Barometric Pressure (millibar [mb]).

Measurements of these parameters will provide at least two years of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble Port station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble Port PSD station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble Port station.

1.3 Variations from the Quality Assurance Project Plan

During the first monitoring year, there was one variation from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

The initial performance audit for the Pebble Port station was conducted on June 25, 2005 which is slightly more than thirty days prior to the monitoring period. At the time of this audit it was envisioned that monitoring period would start on July 1, 2005. However, due to a temperature sensor problem that was corrected on August 4, 2005, it was later decided to start the monitoring period on August 1, 2005 (rather than July 1, 2005). This later start to the monitoring year has no effect on collected data, as all performance audits (before, during, and after the monitoring year) passed. For a discussion of audits performed on the Pebble Port station, see Section 2.5.2 and Appendix C of this data report.

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]

[1]Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.

[2]Instantaneous barometric pressure measurements are collected for 1 second during every hour.

Figure 1-1. Map of the Pebble Project Area

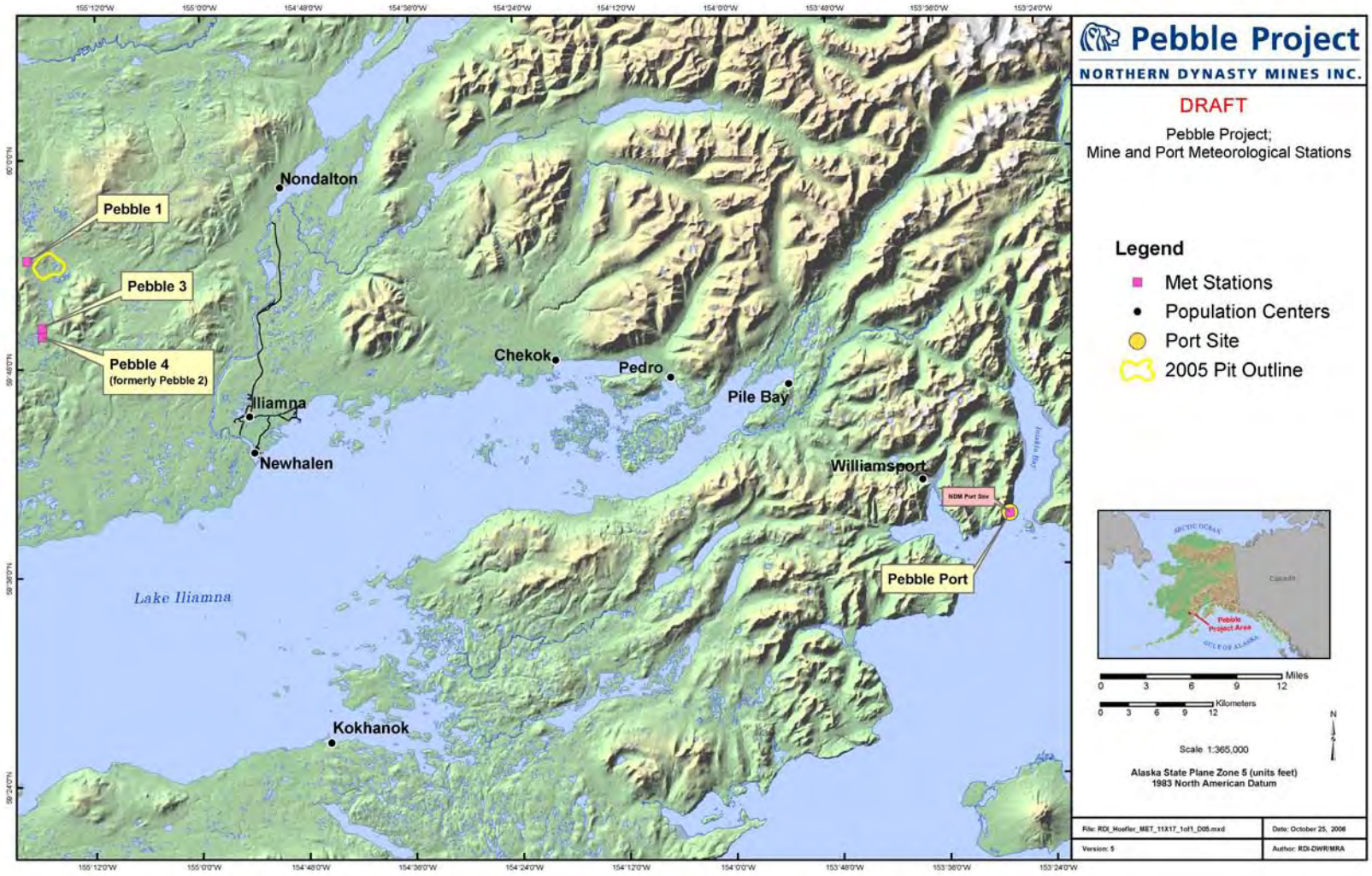


Figure 1-2. Map of the Pebble Port Station

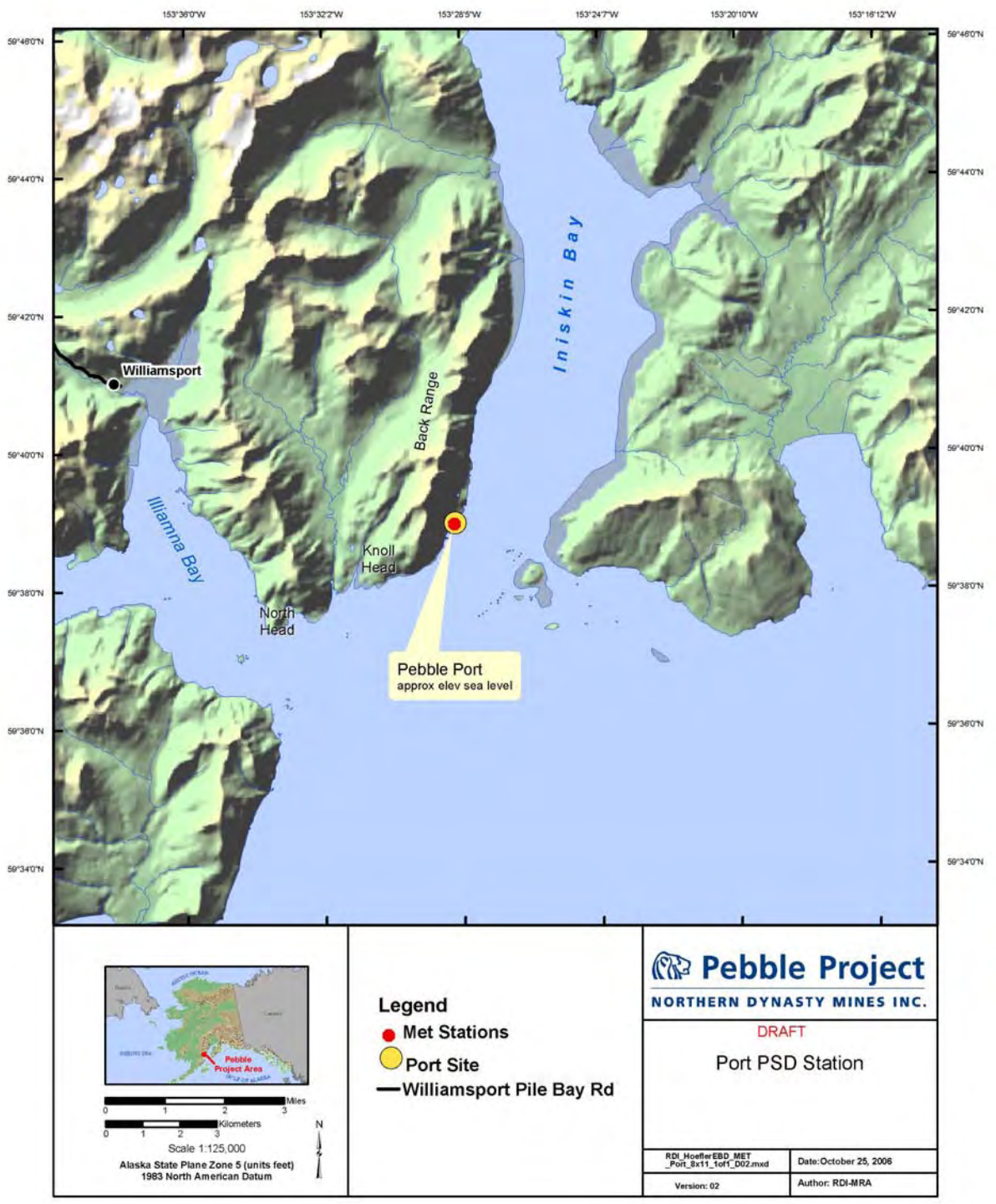


Figure 1-3. Pebble Port Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble Port station relevant to the first year of meteorological monitoring.

Table 2-1. Chronology of Events

Date	Event
June 21-25, 2005	Initial site installation and setup.
June 25, 2005	Initial systems performance audit and calibration.
July 19, 2005	Systems audit.
August 1, 2005	Start of the first meteorological monitoring year.
August 4, 2005	Maintenance and temporary rewiring of the 2-m and 10-m temperature sensors.
August 21, 2005	Permanent rewiring and calibration of the 2-m and 10-m temperature sensors.
September 24 - 25, 2005	Water damage to RH sensor. Maintenance and calibration successfully performed to repair sensor.
January 16, 2006	Semi-annual performance audit.
January 22, 2006	Storm up-ends station shelter and alters the alignment of the Climatronics wind direction sensor.
January 29, 2006	First visual confirmation that station shelter had been up-ended during storm on January 22, 2006.
February 8, 2006	Port shelter righted and visually inspected for damages.
February 10, 2006	Calibration and audit of wind sensors. Climatronics wind direction sensor was found to be out of alignment from the January 22, 2006 storm, was recalibrated, and passed a second audit.
July 31, 2006	Completion of the first meteorological monitoring year.
August 21, 2006	Second annual systems performance audit and calibration.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble Port station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

A thorough documentation of an error clearly defined may result in the correction of data, which will permanently be flagged (*Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005)). A clearly defined error was identified in the Pebble Port data from January 22 to February 10, 2006, due to a storm altering the alignment of the Climatronics (CLM) wind direction sensor. Throughout this period, comparisons between the RM Young (RMY) and CLM wind direction data indicated a consistent difference of approximately 16 degrees. According to an audit of the wind sensors conducted on February 10, 2006, the accuracy and linearity of the CLM wind vane met EPA criteria, yet was out of alignment by a mean absolute error of +15.9 degrees. Because only the alignment of the CLM sensor had been affected and was consistently offset from the RMY instrument during the time span between the storm and audit, the CLM wind direction data throughout this period were corrected by subtracting the measured mean absolute error (+15.9 degrees). While these data have been retained in the refined Pebble Port database, the data have been permanently flagged as “corrected” as outlined in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.00%
	< 0.1 m/s variation for 3 consecutive hours	1.05%
	<0.5 m/s variation for 12 consecutive hours	0.00%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.00%
	<1° variation over 3 consecutive hours	1.34%
	< 10° variation over 18 consecutive hours	1.19%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.00%
	< 0.1 m/s variation for 3 consecutive hours	0.96%
	<0.5 m/s variation for 12 consecutive hours	0.00%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.00%
	<1° variation over 3 consecutive hours	1.36%
	< 10° variation over 18 consecutive hours	1.15%
Temperature (2 meters)	> 5°C variation from previous hour	0.03%
	< 0.5°C variation for 12 consecutive hours	0.83%
	Value is > record high, < record low	0.00%
Temperature (10 meters)	> 5°C variation from previous hour	0.03%
	< 0.5°C variation for 12 consecutive hours	0.95%
	Value is > record high, < record low	0.00%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	1.23%
	Value is < -0.8°C during the night	0.00%
	Value is > 5°C, < -3°C	0.00%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.00%
	> 5°C variation from previous hour	0.08%
	< 0.5°C variation for 12 consecutive hours	1.20%
	Equals ambient temperature for 12 consecutive hours	0.00%
Solar Radiation	> 0 W/m^2 at night	0.00%
	Greater than the maximum possible value for date and latitude	0.00%
Barometric Pressure	> 1060 mb (sea level)	0.00%
	< 940 mb (sea level)	0.00%
	> 6 mb variation for 3 consecutive hours	0.00%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the first monitoring year at the Pebble Port station.

Table 2-3. Pebble Port Station Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
August 2005	88.2%	99.5%	88.2%	100%	100%	100%	100%	100%	100%	99.3%	100%	100%
September 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	94.7%	100%	100%
October 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**96.0%**	**99.8%**	**96.0%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**98.1%**	**100%**	**100%**
November 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.4%	100%
December 2005	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.5%	100%
January 2006	99.5%	99.5%	99.5%	99.5%	99.3%[3]	99.3%	99.5%	99.5%	99.5%	100%	100%	100%
Quarter B	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%[3]**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100%**	**99.6%**	**100%**
February 2006	96.6%	96.6%	96.6%	99.7%	99.7%[3]	99.7%	99.7%	99.7%	99.7%	100%	100%	100%
March 2006	100%	100%	100%	99.5%	88.6%	88.6%	100%	100%	100%	100%	100%	100%
April 2006	100%	100%	100%	99.4%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter C	**98.9%**	**98.9%**	**98.9%**	**99.5%**	**95.9%**	**95.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**
May 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
July 2006	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**98.7%**	**99.6%**	**98.7%**	**99.8%**	**98.9%**	**98.9%**	**99.9%**	**99.9%**	**99.9%**	**99.5%**	**99.9%**	**100%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected following the guidelines put forth in Meteorological Monitoring Guidance for Regulatory Modeling Applications, Section 8-6 and Table 8-3 (EPA-454/R-99-005).

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A technical systems audit was performed at the Pebble Port station on June 25, 2005. The power supply, data acquisition system (DAS), communications system, and sensors all worked properly. The systems audit indicated that the station is well-planned, equipped with PSD-quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

An initial performance audit of the station was conducted on June 25, 2005. The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. The results of the initial performance audit

are presented in Table 2-4. The complete performance audit report is available in Appendix C.

Table 2-4. Initial Performance Audit Summary (June 25, 2005)

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:02	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.35	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.30	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.05	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	1.1	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.9	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.060	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.006	Pass
Wind Direction[2] Alignment	≤ ±3	°	0.7	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.5	Pass
Wind Direction[2] Torque	≤ 0.153	oz-in	0.069	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.4	Pass
Barometric Pressure	≤ ±3	mb	1.9	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	NC[3]	N/A

[1]Parameters audited for Climatronics wind sensor.
[2]Parameters audited for RM Young wind sensor.
[3]NC = Not completed.

Subsequently, a performance audit was conducted on January 16, 2006 and a performance and systems audit was conducted on August 21, 2006. Each sensor was challenged with certified audit equipment and tested for compliance with PSD performance accuracy requirements. A summary of the results of these audits are

presented in Tables 2-5 and 2-6. The complete performance audit reports are available in Appendix C.

Table 2-5. Semi-Annual Performance Audit Summary (January 16, 2006)

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:20	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.14	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.14	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.00	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	1.9	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.5	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.070	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.007	Pass
Wind Direction[2] Alignment	≤ ±3	°	2.1	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.0	Pass
Wind Direction[2] Torque	≤ 0.152	oz-in	0.097	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	mb	1.5	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	NC[3]	N/A

[1]Parameters audited for Climatronics wind sensor.

[2]Parameters audited for RM Young wind sensor.

[3]NC = Not completed.

Table 2-6. Second Annual Performance and Systems Audit Summary (August 21, 2006)

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:07	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.21	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.21	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.00	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	0.5	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.5	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.100	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.008	Pass
Wind Direction[2] Alignment	≤ ±3	°	1.6	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.6	Pass
Wind Direction[2] Torque	≤ 0.152	oz-in	0.125	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	mb	1.0	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	5.8	Pass

[1]Parameters audited for Climatronics wind sensor.

[2]Parameters audited for RM Young wind sensor.

[3]NC = Not completed.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a statistical summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the first year of meteorological monitoring at the Pebble Port station. The mean hourly average wind speed during the monitoring year was 4.89 m/s and 4.64 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 20.42 m/s and 17.30 m/s were measured by the CLM and RMY sensors, respectively, at 7:00 PM on January 22, 2006.

Table 3-1 indicates that the RMY statistical values are generally 95% of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (>95%) when wind sigma values were less than 30 degrees and when winds were blowing from the northern end of Iniskin Bay. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Table 3-1. Average and Maximum Wind Speeds

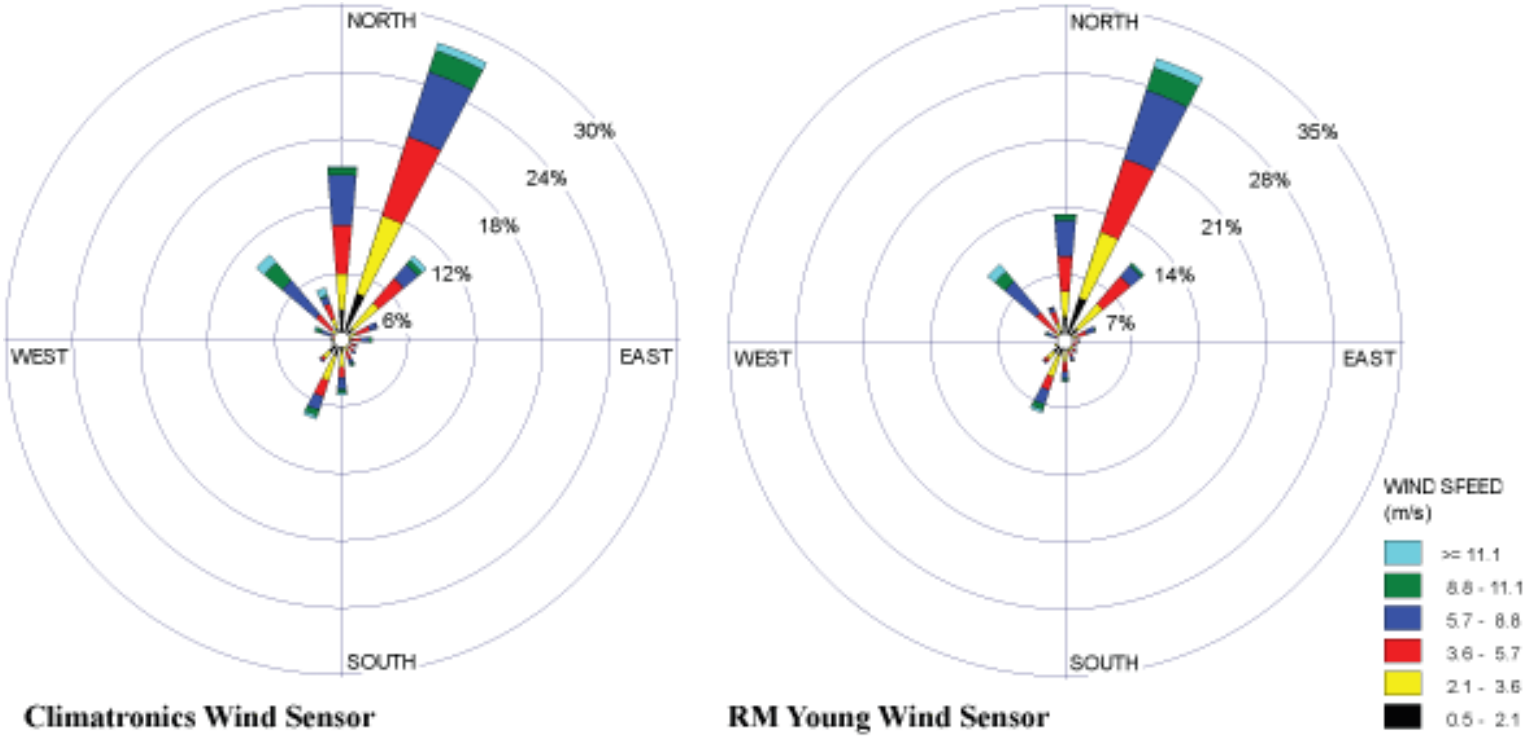
Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speeds (m/s) (RMY)
Quarter A	4.53	4.27	17.66	16.80
Quarter B	5.90	5.61	20.42	17.30
Quarter C	5.47	5.24	16.34	15.77
Quarter D	3.69	3.48	16.01	15.15
Monitoring Year	4.89	4.64	20.42	17.30

Figure 3-1 shows first year wind roses for the CLM and RMY wind instruments collocated at the Pebble Port station. During the monitoring year, winds were predominantly from the north-northeast and north with infrequent winds from southerly directions. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by predominant wind components from the north-northeast and north. In addition, the Quarters A and D wind roses display substantial wind components from the south-southwest and northwest. The Quarter B (November 1, 2005 through January 31, 2006) wind rose has dominant wind components from the north-northeast, north, and northwest. However, in contrast to Quarters A and D, the Quarter B wind rose indicates a lack of southerly winds during Quarter B. Similarly, the predominant wind components in the Quarter C (February 1, 2006 through April 30, 2006) wind rose are from northerly directions with only minor south-southwest and northwest wind components.

Tables 3-2 through 3-6 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-7 through 3-11 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the first year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble Port site and vicinity. The wind rose is centered over the Pebble Port station and shows that, on an annual basis, winds at the site predominantly blow parallel to the shoreline and toward the mouth of Iniskin Bay.

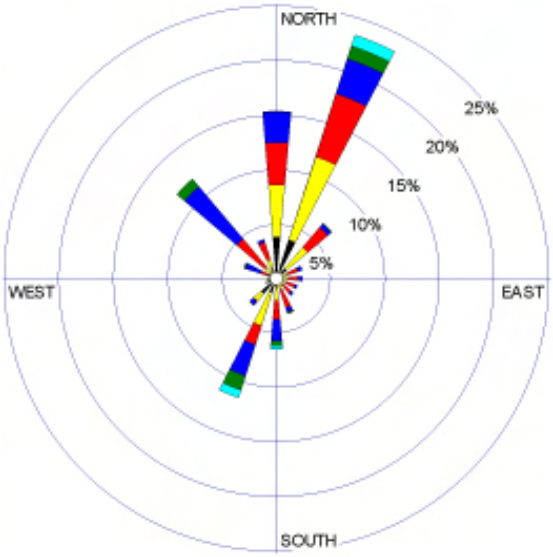
Figure 3-1. Annual[1] Pebble Port Wind Roses



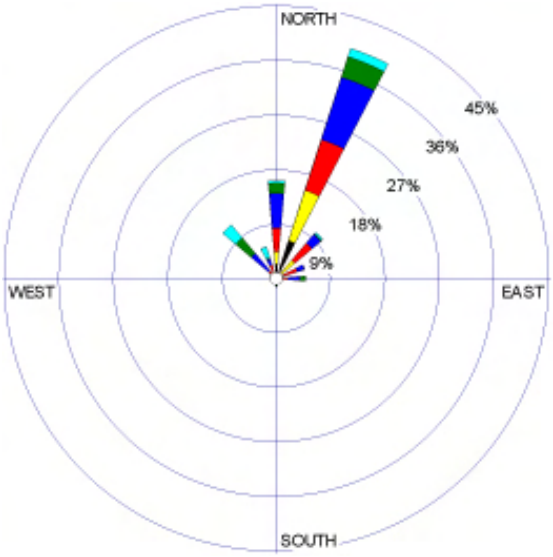
[1] August 1, 2005 to July 31, 2006.

Figure 3-2. Quarterly Pebble Port Wind Roses (Climatronics)

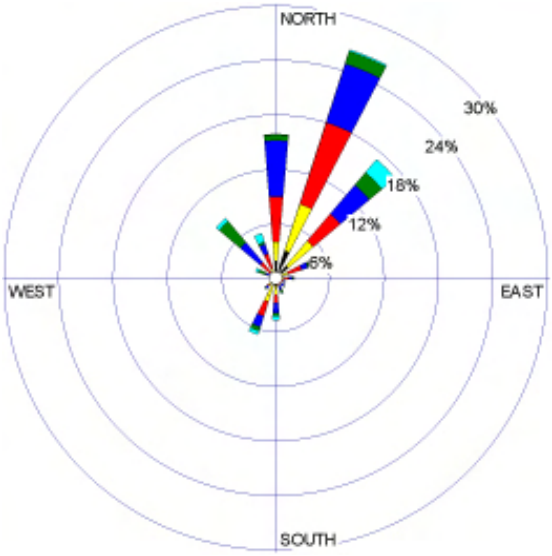
Quarter A (8/1/05 – 10/31/05)



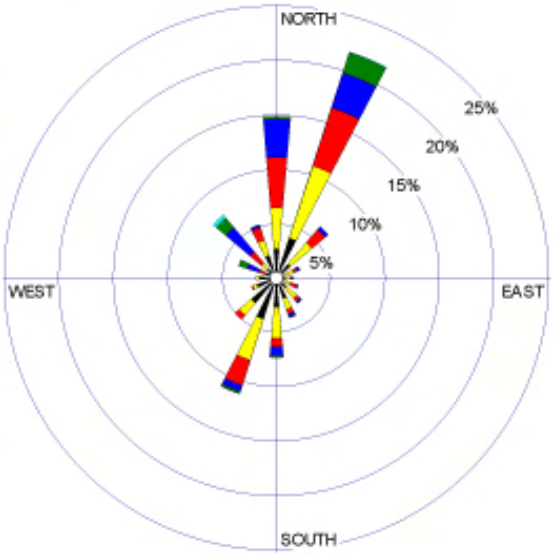
Quarter B (11/1/05 – 1/31/06)



Quarter C (2/1/06 – 4/30/06)



Quarter D (5/1/06 – 7/31/06)



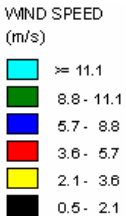
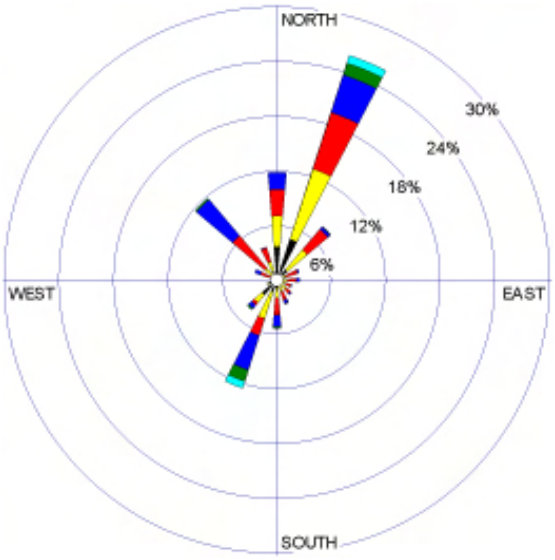
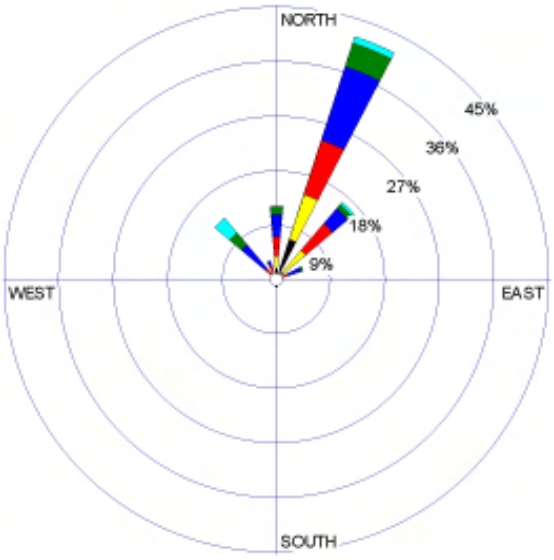


Figure 3-3. Quarterly Pebble Port Wind Roses (RM Young)

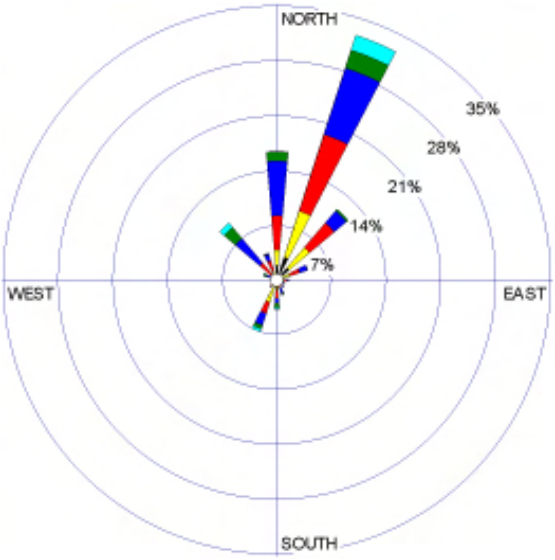
Quarter A (8/1/05 – 10/31/05)



Quarter B (11/1/05 – 1/31/06)



Quarter C (2/1/06 – 4/30/06)



Quarter D (5/1/06 – 7/31/06)

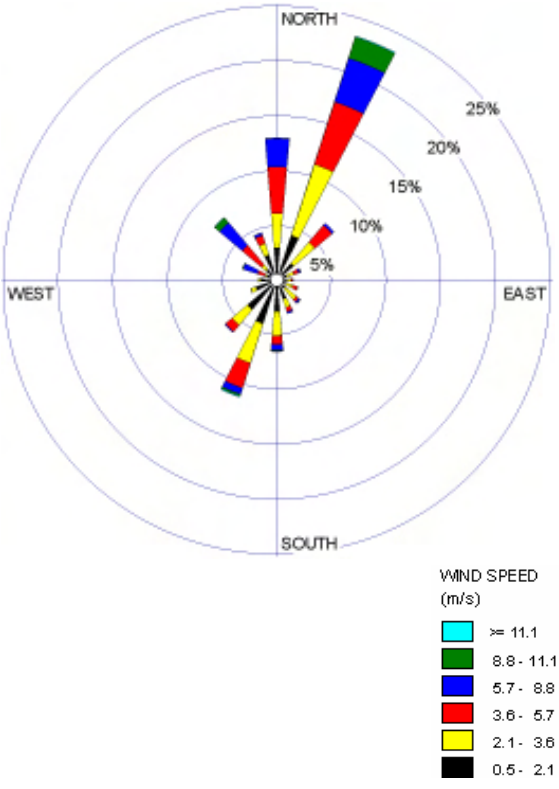


Table 3-2. First Year Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port PSD
Climatronics wind speed and direction
Start Date: August 1, 2005

Run ID: First Monitoring Year
End Date: July 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.4%	7.3%	9.1%	9.1%	2.1%	1.1%	34.3%
NE	3.9%	7.0%	7.0%	3.7%	1.1%	0.8%	23.6%
E	0.9%	1.0%	1.6%	1.2%	0.3%	0.0%	5.1%
SE	1.0%	1.1%	1.0%	0.5%	0.1%	0.0%	3.7%
S	2.3%	2.7%	2.1%	2.1%	0.8%	0.6%	10.6%
SW	2.9%	2.0%	1.1%	0.6%	0.2%	0.0%	6.7%
W	1.3%	0.3%	0.2%	0.3%	0.1%	0.0%	2.1%
NW	1.6%	1.1%	2.6%	4.8%	2.5%	1.1%	13.8%
Sub-Total:	19.3%	22.5%	24.8%	22.3%	7.3%	3.7%	100.0%
Calms (<0.5 m/s):							0.0%
Total:							100.0%

Average Wind Speed: 4.89 m/s

Table 3-3. Quarter A Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port PSD — Run ID: Quarter A
Climatronics wind speed and direction
Start Date: August 1, 2005 — End Date: October 31, 2005

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.3%	10.5%	7.8%	5.4%	0.9%	0.6%	31.5%
NE	3.4%	5.3%	6.0%	1.3%	0.5%	0.5%	17.0%
E	0.9%	1.4%	1.6%	0.9%	0.0%	0.0%	4.8%
SE	0.9%	1.1%	1.9%	0.5%	0.0%	0.0%	4.3%
S	1.7%	3.4%	4.0%	4.2%	1.5%	1.0%	15.9%
SW	3.1%	2.6%	0.8%	1.4%	0.5%	0.0%	8.4%
W	1.3%	0.1%	0.4%	0.4%	0.0%	0.0%	2.2%
NW	1.5%	1.2%	4.6%	7.6%	1.0%	0.0%	15.9%
Sub-Total:	19.0%	25.7%	27.1%	21.7%	4.4%	2.1%	100.0%
Calms (<0.5 m/s):							0.0%
Total:							100.0%

Average Wind Speed: 4.53 m/s

Table 3-4. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port PSD — Run ID: Quarter B
Climatronics wind speed and direction
Start Date: November 1, 2005 — End Date: January 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.1%	5.8%	9.5%	13.9%	4.4%	2.9%	42.7%
NE	4.1%	9.3%	8.2%	5.6%	1.1%	0.9%	29.1%
E	0.1%	0.7%	3.4%	2.8%	1.1%	0.0%	8.1%
SE	0.0%	0.3%	0.5%	0.2%	0.2%	0.1%	1.3%
S	0.1%	0.4%	0.5%	0.9%	0.5%	0.3%	2.6%
SW	0.6%	0.1%	0.3%	0.0%	0.0%	0.0%	1.0%
W	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.9%
NW	0.9%	0.7%	1.6%	4.2%	3.6%	3.3%	14.4%
Sub-Total:	12.5%	17.4%	24.0%	27.6%	11.0%	7.4%	100.0%
Calms (<0.5 m/s):							0.0%
Total:							100.0%

Average Wind Speed: 5.90 m/s

Table 3-5. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port PSD — Run ID: Quarter C
Climatronics wind speed and direction
Start Date: February 1, 2006 — End Date: April 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	3.4%	4.7%	10.0%	11.1%	2.0%	1.0%	32.2%
NE	4.2%	7.0%	10.4%	6.9%	2.2%	2.0%	32.6%
E	1.1%	0.7%	1.1%	0.8%	0.2%	0.0%	4.0%
SE	0.5%	0.7%	1.0%	0.8%	0.1%	0.0%	3.1%
S	1.4%	2.0%	2.2%	2.3%	0.9%	0.8%	9.6%
SW	1.2%	1.4%	0.8%	0.5%	0.3%	0.0%	4.3%
W	0.7%	0.2%	0.1%	0.4%	0.1%	0.1%	1.7%
NW	1.1%	0.9%	2.2%	3.7%	3.7%	0.8%	12.4%
Sub-Total:	13.5%	17.6%	27.8%	26.6%	9.5%	4.9%	99.9%
Calms (<0.5 m/s):							0.1%
Total:							100.0%

Average Wind Speed: 5.47 m/s

Table 3-6. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port PSD — Run ID: Quarter D
Climatronics wind speed and direction
Start Date: May 1, 2006 — End Date: July 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.9%	8.1%	9.2%	6.1%	1.3%	0.0%	30.6%
NE	4.2%	6.3%	3.7%	1.4%	0.9%	0.0%	16.5%
E	1.4%	1.2%	0.4%	0.4%	0.0%	0.0%	3.4%
SE	2.6%	2.3%	0.8%	0.4%	0.0%	0.0%	6.1%
S	5.7%	5.1%	1.8%	1.2%	0.4%	0.1%	14.3%
SW	6.4%	3.9%	2.3%	0.3%	0.0%	0.0%	13.0%
W	2.7%	0.5%	0.2%	0.3%	0.1%	0.0%	3.8%
NW	2.7%	1.6%	2.0%	3.8%	1.9%	0.4%	12.4%
Sub-Total:	31.6%	29.0%	20.4%	13.8%	4.6%	0.6%	100.0%
Calms (<0.5 m/s):							0.0%
Total:							100.0%

Average Wind Speed: 3.69 m/s

Table 3-7. First Year Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port PSD
RM Young wind speed and direction
Start Date: August 1, 2005

Run ID: First Monitoring Year
End Date: July 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.2%	6.3%	8.0%	8.6%	2.1%	0.4%	30.6%
NE	4.8%	7.8%	8.7%	5.1%	1.4%	0.7%	28.6%
E	1.1%	0.9%	1.0%	0.4%	0.0%	0.0%	3.4%
SE	1.1%	1.2%	0.8%	0.4%	0.0%	0.0%	3.4%
S	2.3%	2.1%	2.0%	1.8%	0.7%	0.4%	9.3%
SW	3.2%	2.4%	1.2%	0.9%	0.2%	0.1%	8.0%
W	1.4%	0.2%	0.2%	0.2%	0.0%	0.0%	2.1%
NW	1.7%	1.1%	3.6%	5.1%	1.5%	1.1%	14.0%
Sub-Total:	20.7%	22.1%	25.5%	22.4%	6.0%	2.8%	99.5%
Calms (<0.5 m/s):							0.5%
Total:							100.0%

Average Wind Speed: 4.64 m/s

Table 3-8. Quarter A Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port PSD — Run ID: Quarter A
RM Young wind speed and direction
Start Date: August 1, 2005 — End Date: October 31, 2005

Frequency Distribution (Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.3%	8.1%	6.8%	4.5%	0.2%	0.1%	26.1%
NE	4.2%	7.0%	7.0%	2.0%	1.2%	0.8%	22.1%
E	1.3%	1.3%	1.7%	0.5%	0.0%	0.0%	4.8%
SE	0.9%	1.5%	1.4%	0.4%	0.0%	0.0%	4.3%
S	1.7%	2.4%	3.5%	3.5%	1.0%	0.6%	12.7%
SW	3.6%	3.5%	1.4%	2.4%	0.7%	0.2%	11.7%
W	1.4%	0.2%	0.5%	0.0%	0.0%	0.0%	2.1%
NW	1.9%	1.5%	6.4%	5.8%	0.2%	0.0%	15.8%
Sub-Total:	21.2%	25.5%	28.7%	19.2%	3.3%	1.8%	99.6%
Calms (<0.5 m/s):							0.4%
Total:							100.0%

Average Wind Speed: 4.27 m/s

Table 3-9. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port PSD — Run ID: Quarter B
RM Young wind speed and direction
Start Date: November 1, 2005 — End Date: January 31, 2006

Frequency Distribution (Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.9%	5.1%	7.5%	11.0%	3.7%	0.5%	32.6%
NE	5.8%	10.4%	12.4%	11.0%	2.9%	1.2%	43.7%
E	0.1%	0.6%	0.7%	0.4%	0.0%	0.0%	1.8%
SE	0.2%	0.3%	0.3%	0.3%	0.0%	0.0%	1.1%
S	0.2%	0.4%	0.7%	0.8%	0.5%	0.2%	2.7%
SW	0.6%	0.2%	0.2%	0.0%	0.1%	0.0%	1.1%
W	0.5%	0.1%	0.0%	0.0%	0.1%	0.0%	0.8%
NW	1.0%	0.9%	2.0%	5.7%	2.9%	3.4%	15.9%
Sub-Total:	13.3%	17.9%	23.8%	29.2%	10.2%	5.4%	99.8%
Calms (<0.5 m/s):							0.2%
Total:							100.0%

Average Wind Speed: 5.61 m/s

Table 3-10. Quarter C Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port PSD — Run ID: Quarter C
RM Young wind speed and direction
Start Date: February 1, 2006 — End Date: April 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	3.6%	5.3%	9.3%	13.4%	3.2%	1.2%	36.0%
NE	4.4%	7.3%	11.0%	5.9%	0.7%	0.8%	30.0%
E	1.1%	1.2%	0.9%	0.4%	0.0%	0.0%	3.6%
SE	0.5%	0.8%	0.7%	0.7%	0.0%	0.0%	2.8%
S	1.2%	1.5%	2.2%	1.9%	1.1%	0.5%	8.4%
SW	1.5%	1.5%	0.9%	0.7%	0.1%	0.1%	4.9%
W	0.6%	0.2%	0.2%	0.4%	0.0%	0.0%	1.5%
NW	0.8%	0.9%	2.8%	4.9%	2.2%	0.8%	12.4%
Sub-Total:	13.7%	18.7%	28.0%	28.2%	7.5%	3.6%	99.6%
Calms (<0.5 m/s):							0.4%
Total:							100.0%

Average Wind Speed: 5.24 m/s

Table 3-11. Quarter D Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port PSD — Run ID: Quarter D
RM Young wind speed and direction
Start Date: May 1, 2006 — End Date: July 31, 2006

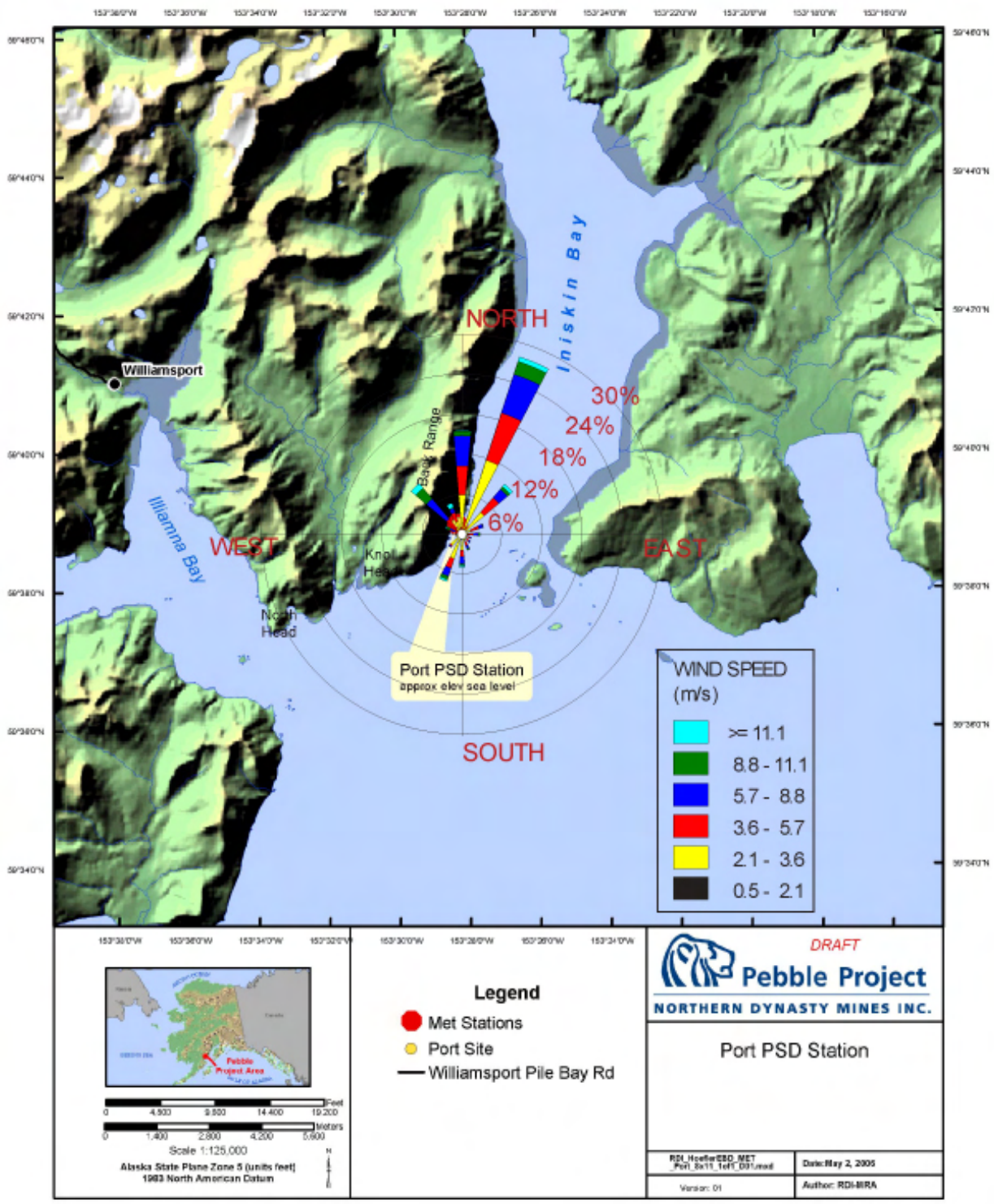
Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.1%	6.7%	8.4%	5.6%	1.1%	0.0%	28.0%
NE	5.0%	6.7%	4.5%	1.5%	1.0%	0.1%	18.8%
E	1.9%	0.7%	0.5%	0.3%	0.0%	0.0%	3.4%
SE	2.6%	2.1%	0.5%	0.3%	0.0%	0.0%	5.6%
S	5.8%	4.3%	1.8%	1.0%	0.3%	0.1%	13.3%
SW	7.0%	4.2%	2.4%	0.4%	0.0%	0.0%	14.0%
W	3.0%	0.5%	0.2%	0.3%	0.0%	0.0%	3.9%
NW	3.1%	1.1%	3.1%	3.9%	0.7%	0.0%	12.0%
Sub-Total:	34.5%	26.3%	21.6%	13.1%	3.1%	0.3%	98.9%
Calms (<0.5 m/s):							1.1%
Total:							100.0%

Average Wind Speed: 3.48 m/s

Figure 3-4. Annual[1] Wind Rose Superimposed on Site Map



[1] First monitoring year: August 1, 2005 to July 31, 2006.

3.2.2 Temperature Climatology

Tables 3-12 and 3-13 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The annual (August 1, 2005 through July 31, 2006) mean temperature was 3.7°C at the 2-meter height. This annual mean temperature is slightly higher in comparison to the annual mean temperature of 1.6°C observed at the Iliamna airport based upon data collected from 1971 to 2000 (Alaska Climate Research Center). Daily average temperatures at the Pebble Port station varied from a maximum of 17.4°C on August 5, 2005 to a minimum of -22.3°C on January 27, 2006.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 3.8°C measured on May 27, 2006. The greatest negative temperature difference was -2.7°C measured on January 28, 2006.

Table 3-12. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
August 2005	17.4	12.2	14.3	20.1	7.9
September 2005	13.0	7.9	10.8	15.7	5.7
October 2005	8.8	-1.8	4.2	11.2	-3.6
Quarter A	**17.4**	**-1.8**	**9.5**	**20.1**	**-3.6**
November 2005	2.7	-14.2	-4.1	4.6	-15.7
December 2005	6.7	-11.6	1.6	8.1	-12.4
January 2006	3.6	-22.3	-7.5	5.2	-24.1
Quarter B	**6.7**	**-22.3**	**-3.3**	**8.1**	**-24.1**
February 2006	4.1	-17.9	-2.8	6.3	-19.5
March 2006	1.0	-9.5	-3.1	2.3	-12.9
April 2006	5.4	-3.0	1.2	7.6	-5.6
Quarter C	**5.4**	**-17.9**	**-1.5**	**7.6**	**-19.5**
May 2006	14.7	0.9	7.5	17.7	-1.5
June 2006	14.5	8.0	10.2	19.3	4.5
July 2006	16.0	10.3	12.5	21.9	8.0
Quarter D	**16.0**	**0.9**	**12.5**	**21.9**	**-1.5**
Monitoring Year	**17.4**	**-22.3**	**3.7**	**21.9**	**-24.1**

Table 3-13. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
August 2005	17.6	12.2	14.2	19.8	9.5
September 2005	12.9	8.2	10.9	14.8	6.3
October 2005	9.1	-1.7	4.4	10.9	-3.2
Quarter A	**17.6**	**-1.7**	**9.8**	**19.8**	**-3.2**
November 2005	3.0	-14.1	-4.0	4.7	-15.8
December 2005	6.9	-11.5	1.7	8.3	-12.1
January 2006	3.7	-22.2	-7.5	5.4	-24.1
Quarter B	**6.9**	**-22.2**	**-3.2**	**8.3**	**-24.1**
February 2006	4.3	-18.0	-2.6	6.7	-19.6
March 2006	1.1	-9.6	-3.0	3.3	-12.7
April 2006	5.8	-2.8	1.3	8.5	-5.2
Quarter C	**5.8**	**-18.0**	**-1.4**	**8.5**	**-19.6**
May 2006	15.6	0.8	7.7	18.4	-0.7
June 2006	14.4	8.0	10.2	18.2	5.8
July 2006	16.1	10.4	12.5	22.0	8.8
Quarter D	**16.1**	**0.8**	**12.5**	**22.0**	**-0.7**
Monitoring Year	**17.6**	**-22.2**	**3.9**	**22.0**	**-24.1**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

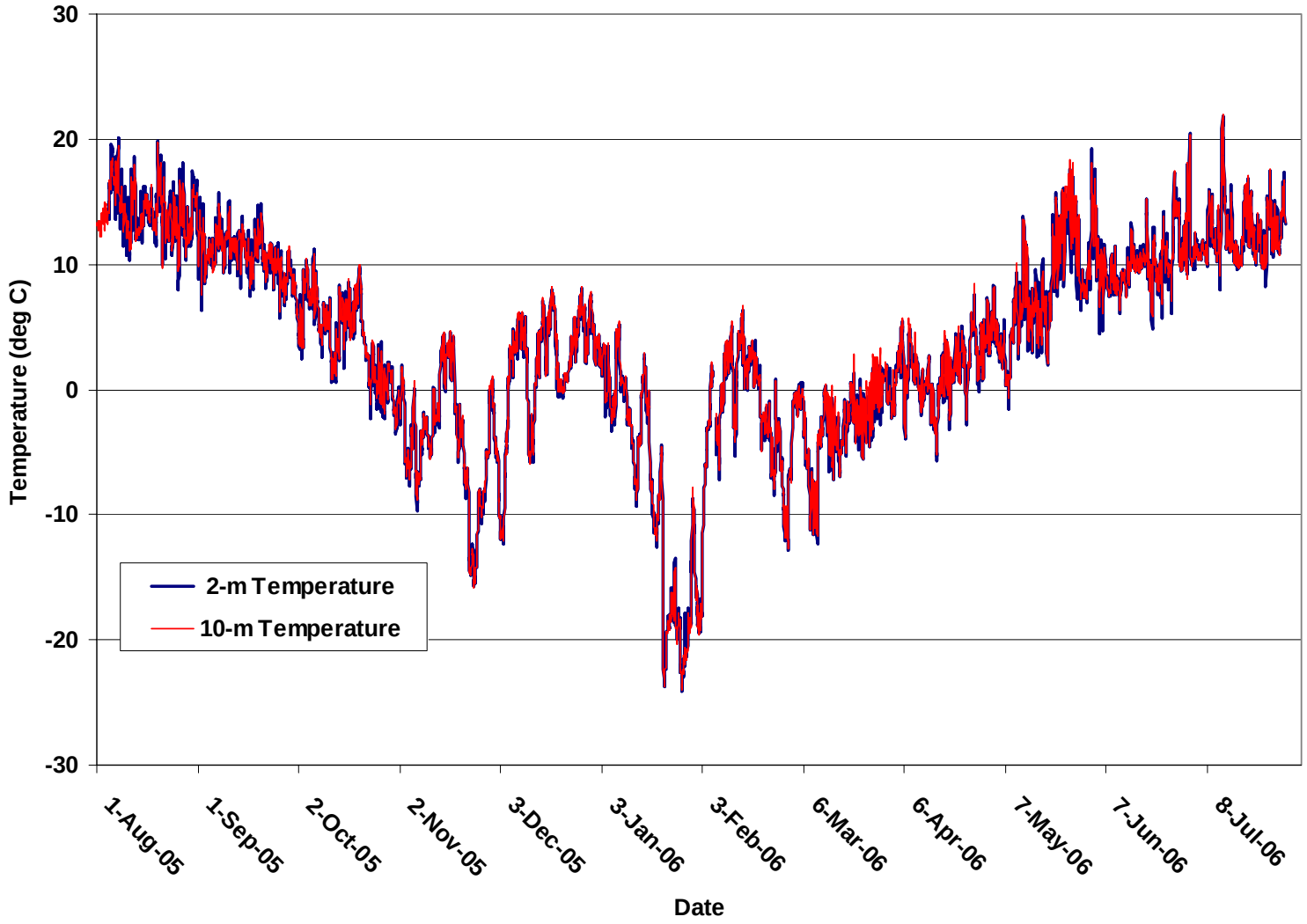
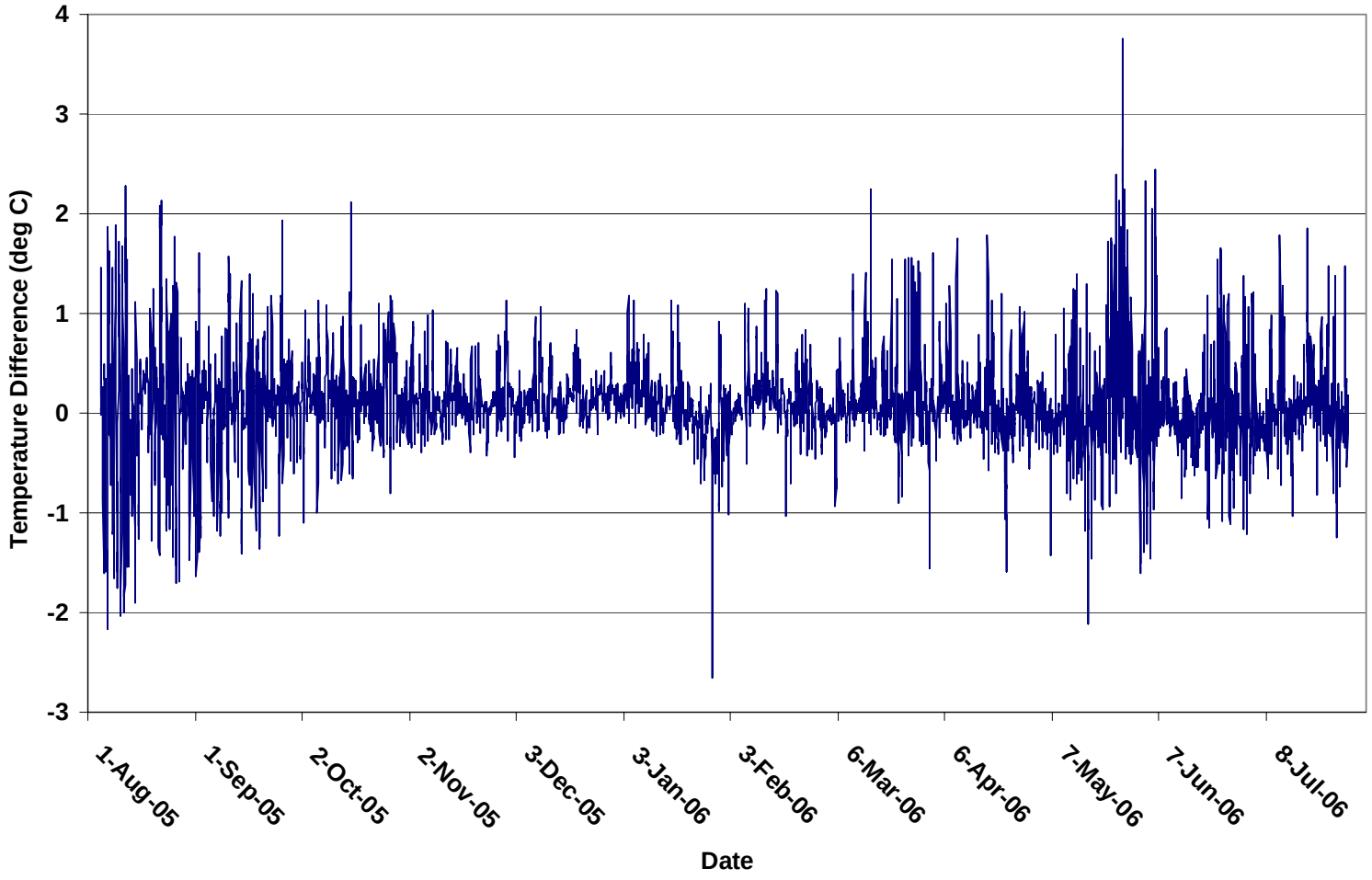


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble Port station include relative humidity, barometric pressure, and solar radiation.

Figure 3-7 is a plot of the annual hourly average relative humidity. Relative humidity at the Pebble Port site varied from a low of 24 percent to a high of 100 percent. The mean relative humidity during the monitoring year was 74 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 963 mbar on February 6, 2006 to a maximum of 1,040 mbar observed ten days later on February 16, 2006. The mean barometric pressure during the monitoring year was 1,005 mbar.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 818 W/m^2 recorded on June 4, 2006 at 2:00 p.m. The mean hourly average solar radiation for the monitoring year was 89 W/m^2.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Figure 3-7. Hourly Average Relative Humidity

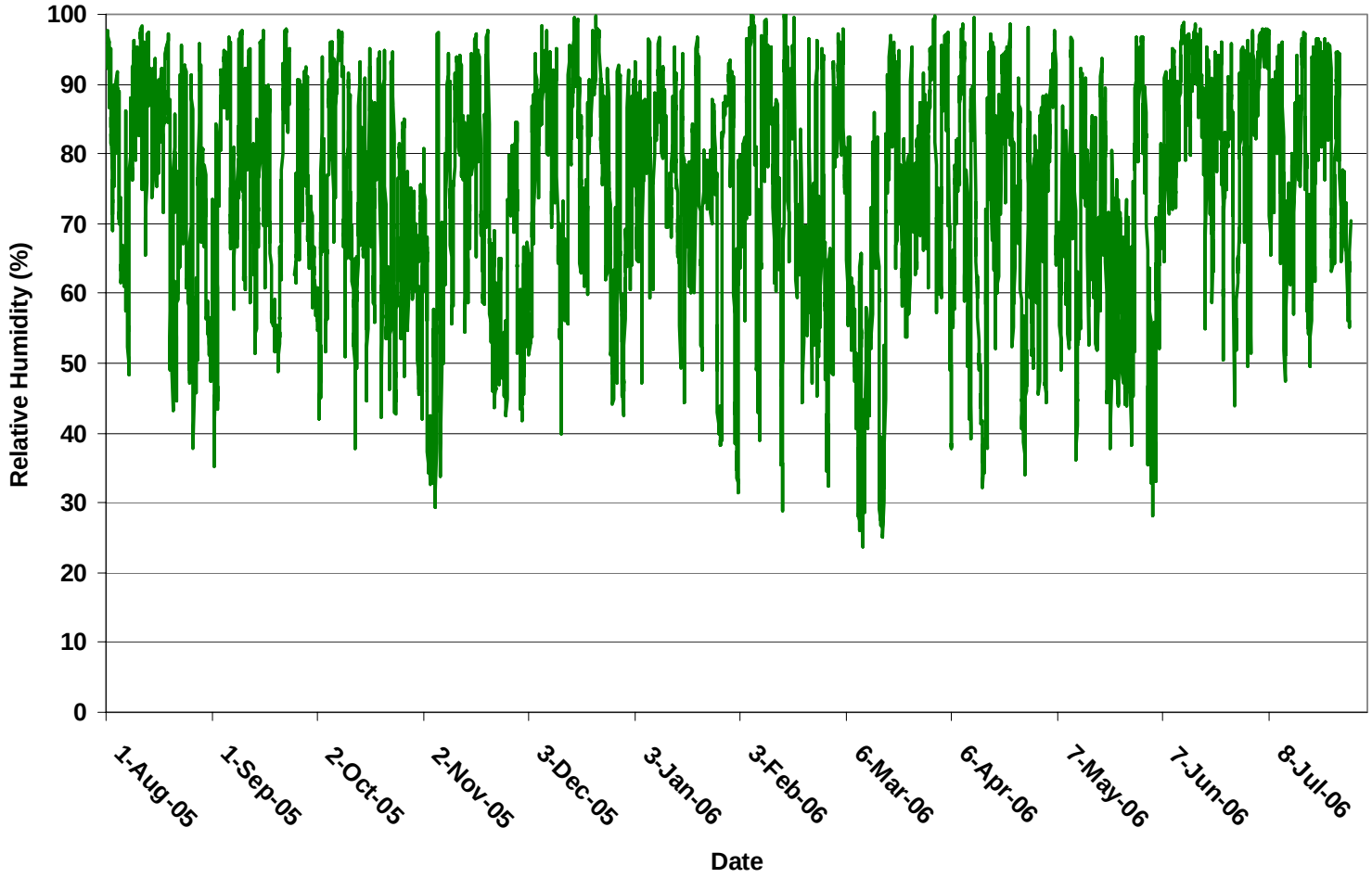


Figure 3-8. Barometric Pressure

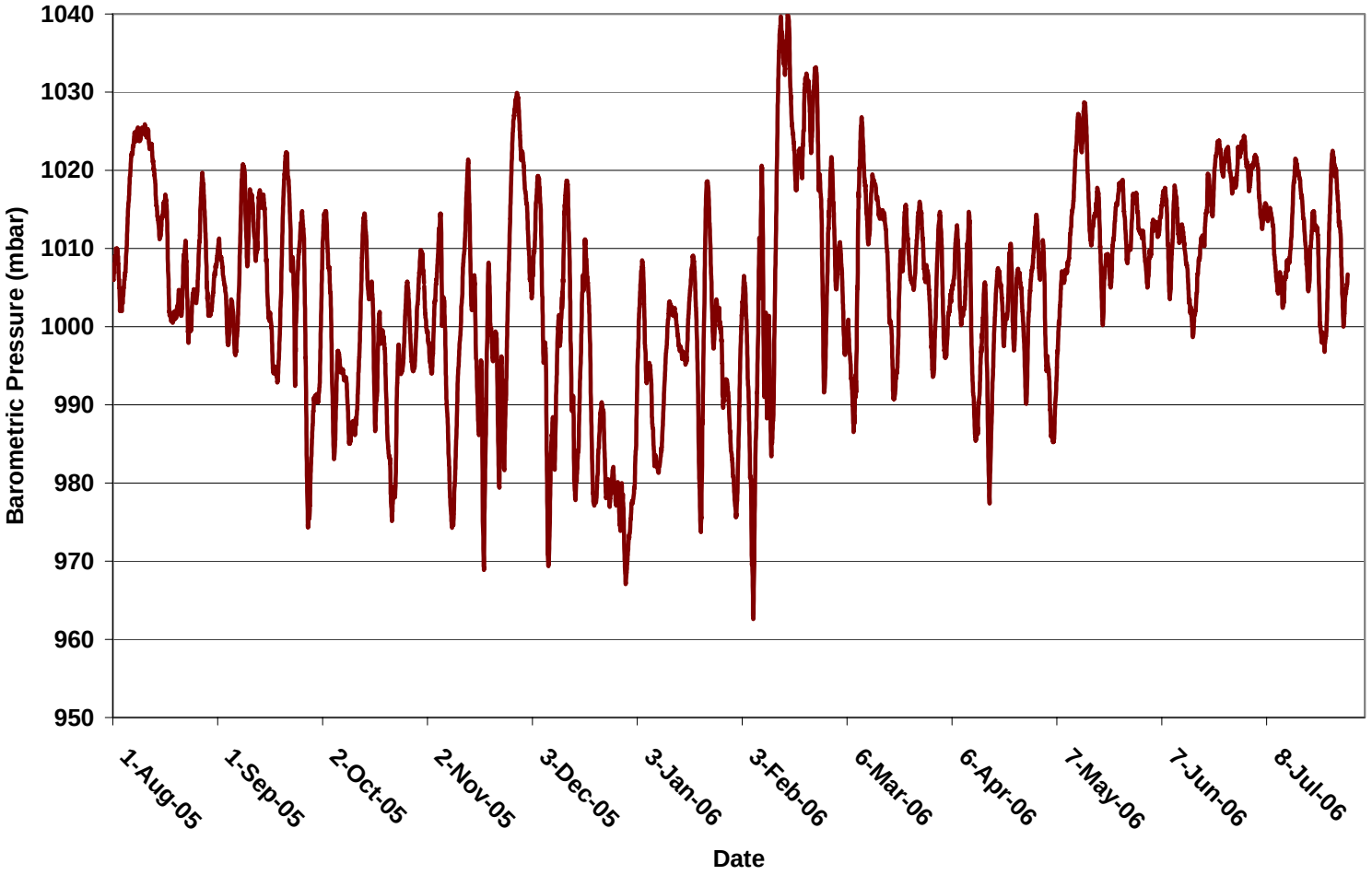
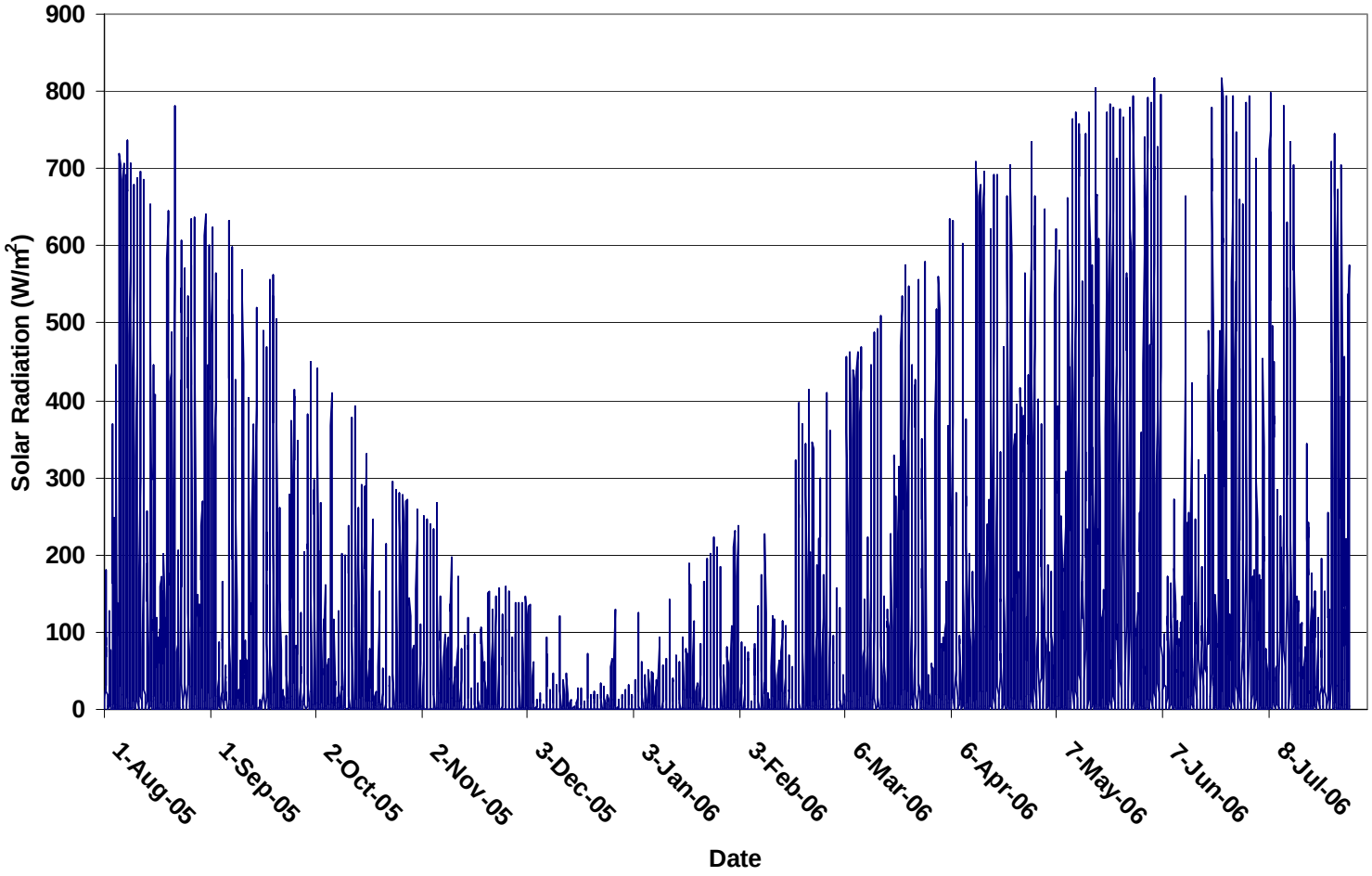


Figure 3-9. Hourly Average Solar Radiation



4.0 References

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Western Regional Climate Center, Desert Research Institute, Reno Nevada, *http://www.wrcc.dri.edu/summary/climsmak.html.*

Appendix A

Data Processing and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected

h_i = number of possible valid hours of data collection during the monitoring period

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

Pebble Port PSD Meteorological Monitoring Station

June 2005

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port PSD Meteorological Monitoring Station
June 2005
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station On-Site Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Wind Speed 7
3.1.4 Wind Direction 8
3.1.5 Relative Humidity 9
3.1.6 Barometric Pressure 9
3.1.7 Solar Radiation 9

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port Station June 25, 2005 & July 2005 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port Station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

The program plan was the *Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program*. This systems audit consisted of a review of this document, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question-answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

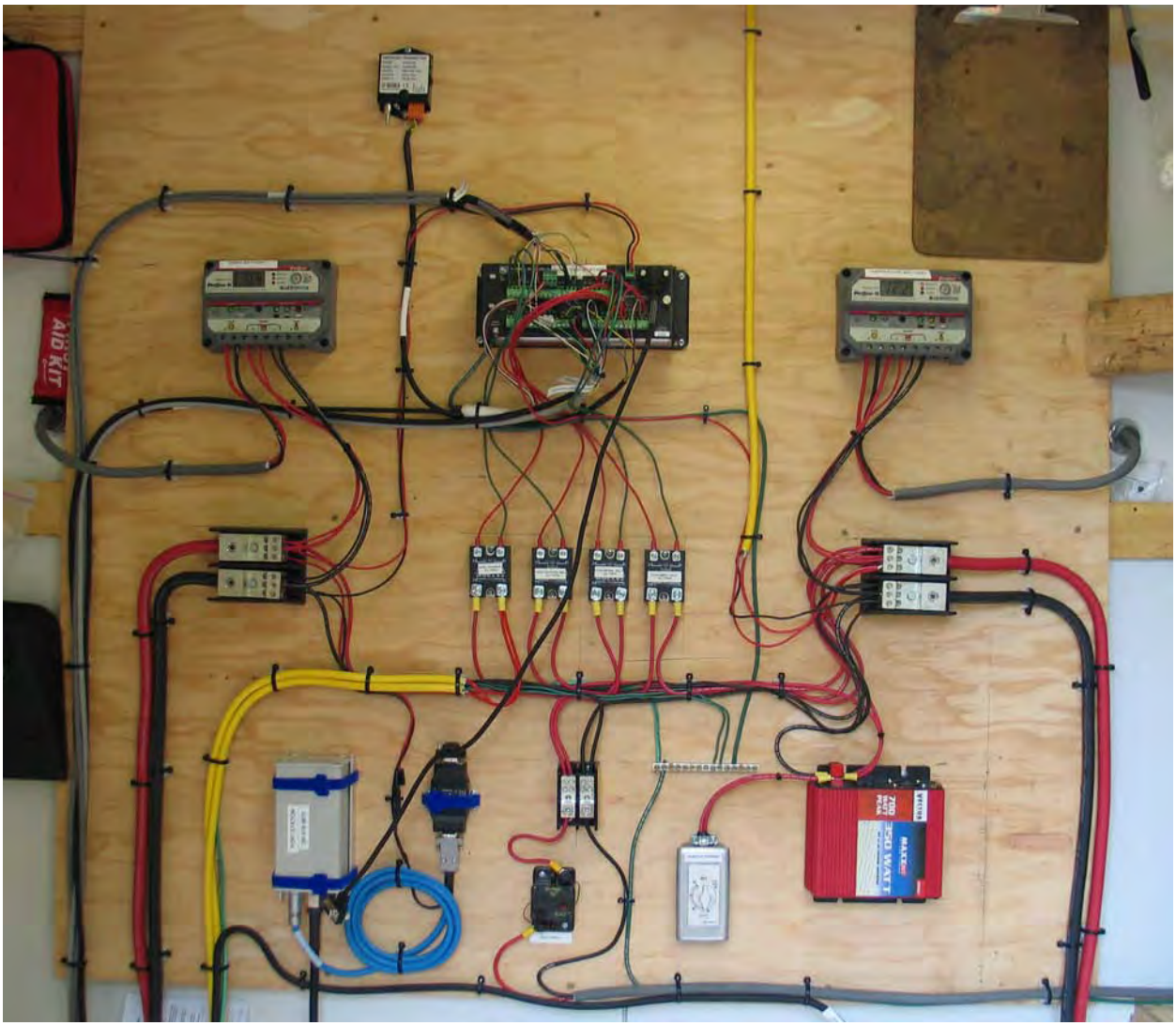
2.2 Meteorological Station On-Site Systems Audit

The on-site systems audit of the Pebble Port Station was conducted on June 25, 2005. Eric Brudie of HCG completed the systems audit with Steve Mackey and Jared Cockman of HCG and Robert Parks of NDM assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires from animals; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar

controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port Station DAS Wiring Panel



The Campbell Scientific CR10X DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. A Campbell Scientific SC932A interface converts the DAS signal to a RS-232 DCE modem signal. Three FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid near Seldovia, Alaska. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 35-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a 21-Watt Global Thermoelectric Model 5030 Thermo-Electric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three panels are dedicated to the aspirator fans, Climatronics heaters, shelter lighting and 120VAC power; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the aspirator/heater power system. Aspirator fans and heaters are controlled through relays connected to the DAS control ports. Logic programmed into the DAS reduces power consumption by limiting heater use to weather conditions conducive to icing and turns fans off at night when voltage is low, considered an upset condition. Also the TEG power is routed through relays which shunt power to the critical DAS/sensor system during upset conditions.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port Station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately

identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Pebble Port Station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port Station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit checklists
- Keep a file on site containing copies of previous checklists.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation[1]	Collocated NIST sensor	≤ ±5% of input+resolutuion[2]

1. Solar radiation not audited.
2. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of water baths; hot water (35°C to 45°C), warm water (15°C to 25°C), and a water/ice bath (0°C). Each water bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments. The difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded

during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS

programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly

average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The initial performance audit was conducted at the Pebble Port Station on June 25, 2005, shortly after startup. Steve Mackey and Jared Cockman of HCG and Robert Parks of NDM assisted. The relative humidity sensor and barometric pressure sensor were audited on July 19, 2005 because the transfer standards were not available in June. All sensors, except the solar radiation sensor, were challenged with certified audit equipment and yielded errors below the PSD limits. The solar radiation audit was not completed because adequate audit equipment was not available at the time of the audit. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Port Station June 25, 2005 & July 2005 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:02	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.35	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.30	Pass
Air Temperature Difference	≤ ±0.1	°C	-0.05	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.060	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-1.8	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[2]	N/A
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.006	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	1.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	-3.5	Pass
Wind Direction Linearity	≤ 3	Degree	2.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[2]	N/A
Relative Humidity (dew point) [1]	≤ ±1.5	°C	0.4	Pass
Barometric Pressure[1]	≤ ±3	Mbar	1.9	Pass
Solar Radiation	≤ ±5+Res	% input	No Test	N/A

1. Relative humidity and barometric pressure tested on 07/19/05.
2. Initial installation audit, azimuth audited after all other tests.

4.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble Port PSD Meteorological Station Systems Audit

Owner: NDM **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Audit Date:** 25-Jun-05
Witnesses: S. Mackey, Jared Cockman, Robert Parks **Auditor:** Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 3
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 4
3.2.1 Data Acquisition System (DAS) and Communications System 4
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 5
3.3 Station Location and Siting 6
3.3.1 Tower 6
3.3.2 Temperature and Relative Humidity Sensors 6
3.3.3 Wind Speed and Wind Direction Sensors 7
3.3.4 Relative Humidity and Barometric Pressure 7
3.3.5 Solar Radiation 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 12

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port tower is located near the middle of a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

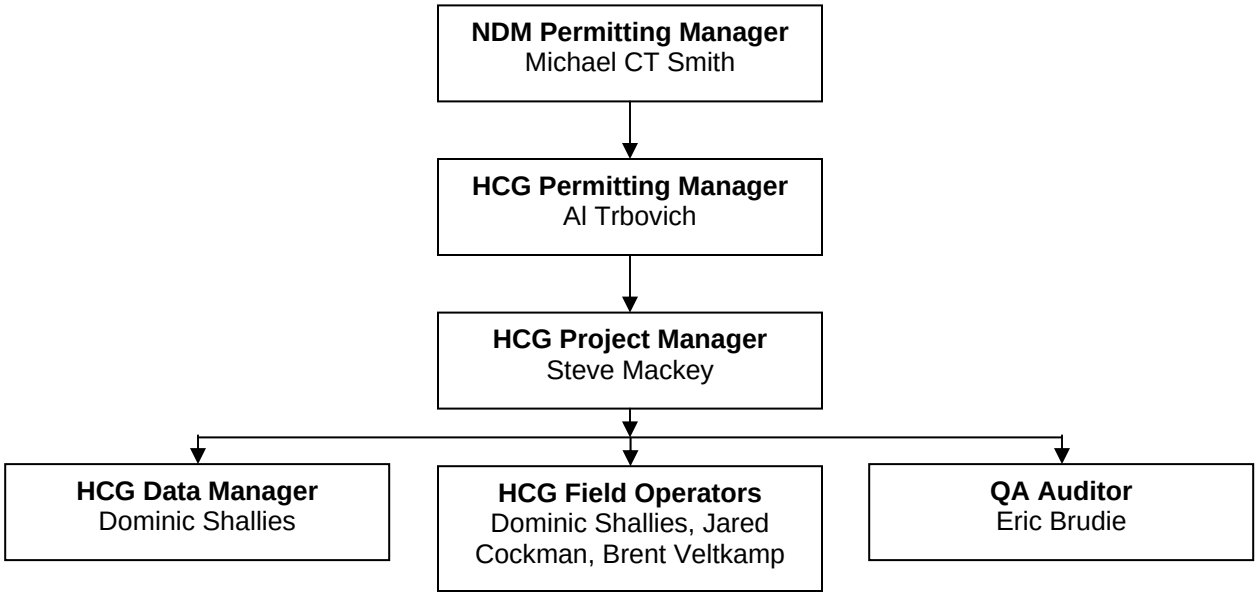
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles:



3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR10X	X41611
DAS Wiring Panel	Campbell Scientific	CR10X	31375
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Temperature Aspirators	Met One	076B-4	Unknown
Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	67055
Backup Wind Speed Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	67055
Relative Humidity	Vaisala	HMP45AC	A2120081
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY50763

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS to SC932A interface to FreeWave RF network to SixNet modem.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power?	■ Yes □ No	Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a 21-Watt propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can shunt the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not required.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained?	■ Yes □ No	Comments: None.
Are all sensors operational, online and reporting data?	■ Yes □ No	Comments: None.
Do all sensors meet EPA criteria for PSD quality sensors?	■ Yes □ No	Comments: See table below.
Are spare parts stocked for items which are frequently worn out or broken?	■ Yes □ No	Comments: Spare props, cups and vanes onsite and spare bearings at HCG office.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resol. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A

EPA Recommended Meteorological Instrument Standards (Continued)

Parameter	Instrument Specifications	EPA Standard	Pass?
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Siting

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature and Relative Humidity Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Is the ambient temperature sensor protected from the influence of solar radiation? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.

Are the temperature difference sensors located in identical aspirated shields? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.4 Relative Humidity and Barometric Pressure

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.
Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on wiring panel.

3.3.5 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	□ Yes ■ No	Comments: All operators have one to two years onsite experience.

Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

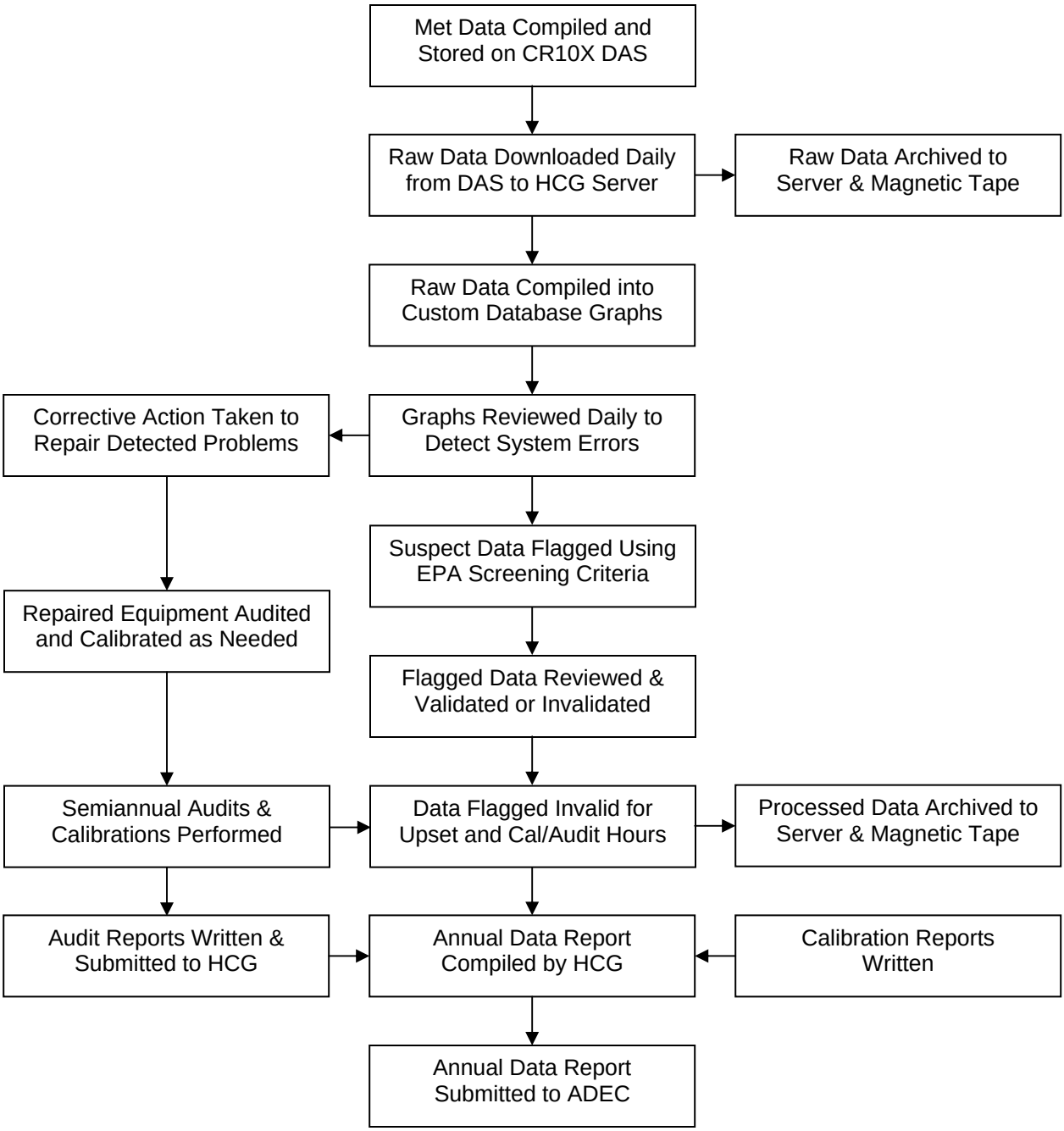
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.

Does the station have an adequate Calibration Report Form and copies of previous calibrations and audits?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Isaac Bertschi
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
15:05:00	15:05:02	**00:02**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 51091789 **Range:** -40 to 150 **°C**

Begin: 1400
End: 1420

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Ice Bath	0	0.07	0.42	0.35	Pass	0.37	0.30	Pass	-0.05	Pass
Warm	15 to 25	20.89	21.09	0.20	Pass	21.09	0.20	Pass	0.00	Pass
Hot	35 to 45	40.15	40.25	0.10	Pass	40.20	0.05	Pass	-0.05	Pass
		Max Abs. Error		0.35	**PASS**		0.30	**PASS**	0.05	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1130	70.1	15.2	9.8	71.8	15.2	10.1	0.4	Pass
					Max Abs. Error		0.4	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: Relative humidity audited on 07/19/05.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1143	29.99	29.87	1011.5	1013.4	1.9	Pass
			Max Abs. Error		1.9	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/23/05	
Audit Inst	Offset Amount
24.13	-0.13
26.18	-0.13
28.12	-0.12
30.12	-0.12
Intercept	**-0.18**
Slope	**0.0020**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: Barometric pressure audited on 07/19/05.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1450
End: 1455

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1440
End: 1450

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.006	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.6 **E of N**

TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.060	**PASS**
New	0.104	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.7	-0.5	Pass
Mt Augustine - Peak	356.1	355.4	-0.7	Pass
Mt Eleanor	202.6	201.4	-1.2	Pass
Compass	133.5	131.7	-1.8	Pass
		Max Abs. Error	**1.8**	**PASS**
		Mean Abs. Error	**1.1**	**GOOD**

Time: Begin: 1700 End: 1730

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	179.0	-1.0	Pass
West	270.0	269.8	-0.2	Pass
North	360.0	358.9	-1.1	Pass
East	90.0	88.7	-1.3	Pass
North	360.0	0.1	0.1	Pass
West	270.0	269.5	-0.5	Pass
South	180.0	179.0	-1.0	Pass
East	90.0	88.3	-1.7	Pass
	Max Abs. Error		**1.7**	**PASS**
	Mean Abs. Error		**0.9**	**PASS**

Time: Begin: 1525 End: 1530

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.2	0.2	Pass	330.0	331.9	1.9	Pass
60.0	60.7	0.7	Pass	360.0	0.5	0.5	Pass
90.0	90.7	0.7	Pass	30.0	30.5	0.5	Pass
120.0	120.7	0.7	Pass	60.0	60.7	0.7	Pass
150.0	150.9	0.9	Pass	90.0	90.8	0.8	Pass
180.0	181.0	1.0	Pass	120.0	121.0	1.0	Pass
210.0	211.2	1.2	Pass	150.0	151.0	1.0	Pass
240.0	241.3	1.3	Pass	180.0	181.0	1.0	Pass
270.0	271.5	1.5	Pass	**Max Abs. Error**		**1.9**	**PASS**
300.0	301.4	1.4	Pass	**Mean Abs. Error**		**0.9**	**PASS**

Time: Begin: 1515 End: 1520

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
		Max Abs. Error		
		Mean Abs. Error		

Time: Begin: End:

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment).
Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: Initial installation audit, no post-audit azimuth check.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.6 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	5.0	**PASS**
New	11.0	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	263.1	-0.1	Pass
Mt Augustine - East shore	347.1	348.4	1.3	Pass
Mt Eleanor	202.6	203.8	1.2	Pass
Compass	133.5	133.6	0.1	Pass
Compass	335.0	334.2	-0.8	Pass
		Max Abs. Error	**1.3**	**PASS**
Time: Begin: 1700 End: 1730		**Mean Abs. Error**	**0.7**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.2	-1.8	Pass	150.0	148.6	-1.4	Pass	270.0	266.5	-3.5	Pass
60.0	58.4	-1.6	Pass	180.0	177.4	-2.6	Pass	300.0	296.5	-3.5	Pass
90.0	88.4	-1.6	Pass	210.0	207.1	-2.9	Pass	330.0	327.2	-2.8	Pass
120.0	118.2	-1.8	Pass	240.0	236.5	-3.5	Pass	355.0	352.6	-2.4	Pass
								Max Abs. Error		**3.5**	**PASS**
				Time: Begin: 1503		End: 1508		**Mean Abs. Error**		**2.5**	**PASS**

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
		Max Abs. Error		
Time: Begin: End:		**Mean Abs. Error**		

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: Initial installation audit, no post-audit azimuth check.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate No. 1750.01

ACCREDITED

Calibration complies with ISO 17025

Cert. No.:4000-1103531

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 51091789

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	10/18/05	A4A12029
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	A42238		
Temperature Probe	149	7/20/05	A4715024
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	93139		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 4/27/05 **Cal Due: 4/27/07**

Test Conditions: 24.0°C 41.0 %RH 1016 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C		N.A.		0.001	0.003	Y	-0.049	0.051	0.013	3.8:1
°C		N.A.		25.001	25.002	Y	24.951	25.051	0.013	3.8:1
°C		N.A.		59.999	59.999	Y	59.949	60.049	0.013	3.8:1
°C		N.A.		100.001	100.007	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full.

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.

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VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052305.01

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 5/23/2005 Lab temperature 73.6 °F
Lab pressure 661.65 mm Hg

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)
24.00	24.13	0.13	-0.13
26.05	26.18	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.12	0.12	-0.12

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)

Reviewed: _____ Date: 5-23-05

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 Rpm - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 3 May 2005

Tested By EJC

YOUNG

Meteorological Instruments

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 Rpm - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 29 October 2004

Tested By EJC

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City, Michigan 49686 USA
Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: Houston Precision

P.O.#:6632

Product Identification

Product Type: Torque Watch
Serial Number: 4864

Model Number: 366-3
Part Number: 060-SQF41199-01
Order Code: TQ3663

Product Specifications

Full Scale Range: 0.003-0.03 OZ IN
Calibrated At: 0.003-0.03 OZ IN

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 09/02/04

Certificate Number: 086-6000-01
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 5% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480. Calibration procedures are in compliance with ANSI/NCSL Z540-1-1994.

This is a quality record.

Approved and Certified By: Michael A Stanley
Factory Supervisor

Printed: 09/02/2004

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3 SERIAL NUMBER: 4864 Units = oz in Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
.000	-.0002	.0000	.0000	.0002
.003	-.0000	.0036	.0031	.0060
.006	.0030	.0058	.0062	.0090
.009	.0060	.0086	.0092	.0120
.012	.0090	.0128	.0127	.0150
.015	.0120	.0162	.0161	.0180
.018	.0150	.0195	.0197	.0210
.021	.0180	.0225	.0219	.0240
.024	.0210	.0257	.0246	.0270
.027	.0240	.0296	.0288	.0300
.030	.0270	.0320	.0322	.0330

Max pos error (% FS) = 8.7 % at .027
Max neg error (% FS) = -1.2 % at .009

Torque Watch is a: PASS

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: Houston Precision

P.O.#:6743

Product Identification

Product Type: Torque Watch
Serial Number: 5042

Model Number: 366-0
Part Number: 060-SQF41201-01
Order Code: TQ3660

Product Specifications

Full Scale Range: 0.06-0.6 IN OZ
Calibrated At: 0.06-0.6 IN OZ

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 12/01/04

Certificate Number: 086-6000-01
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 5% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480. Calibration procedures are in compliance with ANSI/NCSL Z540-1-1994.

This is a quality record.

Approved and Certified By: Joe Belcher Jr., Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-0 SERIAL NUMBER: 5042 Units = oz in Accuracy = 5 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
.00	-.003	0.000	0.000	.003
.06	.030	.056	.060	.090
.12	.090	.121	.121	.150
.18	.150	.168	.180	.210
.24	.210	.223	.255	.270
.30	.270	.299	.319	.330
.36	.330	.359	.373	.390
.42	.390	.407	.424	.450
.48	.450	.481	.494	.510
.54	.510	.531	.537	.570
.60	.570	.592	.610	.630

Max pos error (% FS) = 3.1 % at .300
Max neg error (% FS) = -2.9 % at .240

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

Pebble Port PSD Meteorological Monitoring Station

January 2006

Quality Assurance Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port PSD Meteorological Monitoring Station
January 2006
Quality Assurance Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Wind Speed 3
2.1.4 Wind Direction 4
2.1.5 Relative Humidity 5
2.1.6 Barometric Pressure 5
2.1.7 Solar Radiation 5

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 9

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Port Station January 16, 2006 Performance Audit Summary 7
Table 2-3 Port Station February 10, 2006 Supplemental Audit Summary 8

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as a quantitative review of the Pebble Port Station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation[1]	Collocated NIST sensor	≤ ±5% of input+resolutuion[2]

1. Solar radiation not audited.
2. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of water baths; hot water (35°C to 45°C), warm water (15°C to 25°C), and a water/ice bath (0°C). Each water bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments. The difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded

during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS

programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly

average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Pebble Port Station on January 16, 2006, with Dominic Shallies of HCG assisting. The wind sensors were also audited on February 10, 2006, after a severe storm.

On January 16, 2006 all sensors, except the solar radiation sensor, were challenged with certified audit equipment and yielded errors below the PSD limits. The solar radiation audit was not completed because adequate audit equipment was not available at the time of the audit. On February 10, 2006 the Climatronics sensor was found out of alignment due to a severe winter storm event which occurred on January 22, 2006. The operator compared Climatronics and RM Young alignment data prior to and after this storm event and corroborated this conclusion. The sensor was realigned and then re-audited. Table 2-2 contains summary data from the January 2006 audit and Table 2-3 summarizes the supplemental February 2006 tests. Complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- None.

Table 2-2 Port Station January 16, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:20	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	-0.1	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.070	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-3.1	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.7	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.007	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.9	Pass
Wind Direction Accuracy	≤ ±5	Degree	-3.6	Pass
Wind Direction Linearity	≤ 3	Degree	2.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.0	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	Mbar	1.5	Pass
Weighing Precipitation	≤ ±10	% input	9.5	Pass
Solar Radiation	≤ ±5+Res	% input	No Test	N/A

Table 2-3 Port Station February 10, 2006 Supplemental Audit Summary

Parameter	Limit	Units	Max Err	Status
Climatronics Wind Direction System				
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	16.0	Fail[1]
Wind Direction Accuracy	≤ ±5	Degree	-2.1	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.4	Pass
RM Young Wind System				
Wind Dir. Azim. Align. (as-found/as-left)	≤ ±5	Degree	2.4	Pass

1. Climatronics wind sensor knocked out of alignment during severe storm on January 22, 2006.

3.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
13:06:30	13:06:10	**-00:20**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 51091789 **Range:** -40 to 150 **°C**

Begin: 1145
End: 1200

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Ice Bath	0	-0.02	0.12	0.14	Pass	0.12	0.14	Pass	0.00	Pass
Warm	15 to 25	18.07	18.13	0.06	Pass	18.13	0.06	Pass	0.00	Pass
Hot	35 to 45	37.80	37.94	0.14	Pass	37.94	0.14	Pass	0.00	Pass
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1330	52.9	2.8	-5.8	54.2	2.6	-5.7	0.1	Pass
1400	53.2	2.8	-5.8	56.6	2.6	-5.1	0.6	Pass
					Max Abs. Error		0.6	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1240	29.50	29.38	994.9	996.4	1.5	Pass
			Max Abs. Error		1.5	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/23/05	
Audit Inst	Offset Amount
24.13	-0.13
26.18	-0.13
28.12	-0.12
30.12	-0.12
Intercept	**-0.18**
Slope	**0.0020**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1215
End: 1230

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.70	N/A	-0.1	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.1**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1230
End: 1240

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.007	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.070	**PASS**
New	0.104	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	260.1	-3.1	Pass
Mt Eleanor	202.6	200.0	-2.6	Pass
Compass	347.0	347.9	0.9	Pass
Compass	102.5	103.7	1.2	Pass
		Max Abs. Error	**3.1**	**PASS**
		Mean Abs. Error	**1.9**	**GOOD**

Time: Begin: 1100 End: 1145

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.2	-0.8	Pass	330.0	331.3	1.3	Pass
60.0	58.8	-1.2	Pass	355.0	354.9	-0.1	Pass
90.0	89.8	-0.2	Pass	30.0	29.2	-0.8	Pass
120.0	119.9	-0.1	Pass	60.0	58.8	-1.2	Pass
150.0	149.6	-0.4	Pass	90.0	89.6	-0.4	Pass
180.0	179.2	-0.8	Pass	120.0	119.8	-0.2	Pass
210.0	210.1	0.1	Pass	150.0	149.1	-0.9	Pass
240.0	240.0	0.0	Pass	180.0	179.3	-0.7	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	300.1	0.1	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1245 End: 1250

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.5	-1.7	Pass
Mt Eleanor	202.6	201.0	-1.6	Pass
		Max Abs. Error	**1.7**	**PASS**
		Mean Abs. Error	**1.6**	**GOOD**

Time: Begin: 1425 End: 1435

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	7.0	**PASS**
New	11.0	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.3	-0.9	Pass
Mt Eleanor	202.6	202.4	-0.2	Pass
Compass	347.0	350.3	3.3	Pass
Compass	102.5	106.4	3.9	Pass
		Max Abs. Error	**3.9**	**PASS**
Time: Begin: 1100 End: 1145		**Mean Abs. Error**	**2.1**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	27.9	-2.1	Pass	150.0	148.9	-1.1	Pass	270.0	267.5	-2.5	Pass
60.0	58.4	-1.6	Pass	180.0	178.9	-1.1	Pass	300.0	296.4	-3.6	Pass
90.0	88.3	-1.7	Pass	210.0	208.2	-1.8	Pass	330.0	327.5	-2.5	Pass
120.0	119.2	-0.8	Pass	240.0	238.3	-1.7	Pass	355.0	352.0	-3.0	Pass
								Max Abs. Error		**3.6**	**PASS**
				Time: Begin: 1255		End: 1300		**Mean Abs. Error**		**2.0**	**PASS**

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.2	-2.0	Pass
Mt Eleanor	202.6	202.1	-0.5	Pass
		Max Abs. Error	**2.0**	**PASS**
Time: Begin: 1425 End: 1435		**Mean Abs. Error**	**1.3**	**GOOD**

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 10-Feb-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	342.0	357.6	15.6	Fail
Compass	180.0	196.0	16.0	Fail
		Max Abs. Error	**16.0**	**FAIL**
		Mean Abs. Error	**15.8**	**ALERT**

Time: Begin: 1200 End: 1300

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.6	-1.4	Pass
West	270.0	269.6	-0.4	Pass
North	360.0	0.2	0.2	Pass
East	90.0	89.8	-0.2	Pass
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error		**1.4**	**PASS**
	Mean Abs. Error		**0.5**	**PASS**

Time: Begin: 1600 End: 1605

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.4	-1.6	Pass	330.0	329.5	-0.5	Pass
60.0	57.9	-2.1	Pass	355.0	354.6	-0.4	Pass
90.0	88.7	-1.3	Pass	30.0	28.7	-1.3	Pass
120.0	119.1	-0.9	Pass	60.0	58.2	-1.8	Pass
150.0	148.8	-1.2	Pass	90.0	88.8	-1.2	Pass
180.0	178.6	-1.4	Pass	120.0	118.8	-1.2	Pass
210.0	209.0	-1.0	Pass	150.0	148.7	-1.3	Pass
240.0	239.1	-0.9	Pass	180.0	178.6	-1.4	Pass
270.0	269.6	-0.4	Pass	**Max Abs. Error**		**2.1**	**PASS**
300.0	299.7	-0.3	Pass	**Mean Abs. Error**		**1.1**	**PASS**

Time: Begin: 1550 End: 1600

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	342.5	341.6	-0.9	Pass
Compass	182.0	180.6	-1.4	Pass
Compass	103.0	101.8	-1.2	Pass
		Max Abs. Error	**1.4**	**PASS**
		Mean Abs. Error	**1.2**	**GOOD**

Time: Begin: 1630 End: 1645

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: On 01/22/06 a severe winter storm knocked the Climatronics crossarm out of alignment. The sensor was audited, realigned and then re-audited.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 10-Feb-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	343.0	343.6	0.6	Pass
Compass	182.0	183.5	1.5	Pass
Compass	103.0	105.4	2.4	Pass
	Max Abs. Error		**2.4**	**PASS**
Time: Begin: 1500 End: 1530	**Mean Abs. Error**		**1.5**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				150.0				270.0			
60.0				180.0				300.0			
90.0				210.0				330.0			
120.0				240.0				355.0			
								Max Abs. Error			
								Mean Abs. Error			

Time: Begin: End:

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
Time: Begin: End:	**Mean Abs. Error**			

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: RM Young sensor azimuth direction checked after winter storm.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate No. 1750.01

ACCREDITED

Calibration complies with ISO 17025

Cert. No.:4000-1103531

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 51091789

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	10/18/05	A4A12029
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	A42238		
Temperature Probe	149	7/20/05	A4715024
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	93139		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 4/27/05 **Cal Due: 4/27/07**

Test Conditions: 24.0°C 41.0 %RH 1016 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C		N.A.		0.001	0.003	Y	-0.049	0.051	0.013	3.8:1
°C		N.A.		25.001	25.002	Y	24.951	25.051	0.013	3.8:1
°C		N.A.		59.999	59.999	Y	59.949	60.049	0.013	3.8:1
°C		N.A.		100.001	100.007	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full.

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.

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VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052305.01

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 5/23/2005 Lab temperature 73.6 °F
Lab pressure 661.65 mm Hg

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)
24.00	24.13	0.13	-0.13
26.05	26.18	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.12	0.12	-0.12

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)

Reviewed: _____ Date: 5-23-05

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 Rpm - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 3 May 2005

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 17 November 2005

Tested By EC

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: www.youngusa.com

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 8884 **TRACEABILITY CERTIFICATE NO.** 05090203

ISSUED TO: Hoefler Consulting Group

INSTRUMENT: 366-3, .003-.03 Inch Ounces Torque Watch, Waters Manufacturing, Inc, S/N 4864

DATE DONE: September 02, 2005 **DATE DUE:** September 01, 2006

CERTIFIED BY METROLOGIST: E.P. Young E.P. Young **TEMPERATURE:** 72 °F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

PROCEDURE/LIMITATIONS/ACCURACY STATEMENT: T.O. 33k6-4-2630-1. Accuracy: +/- 10 % of Full Scale.

COMPLIANCE

Alaska Calibration, Inc.'s calibration practices and procedures comply with the requirements of ANSI/SO/Z540-1 and ANS/ ISO/IEC17025: 2000 and relevant requirements of ISO 9002: 1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. This Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	33479
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	12/20/2005
		PO#:	Verbal
Contact:	Chris Lindsey	**Page:**	1
Dept:			
Gage:	.06-.60 oz Torque Watch	**Control:**	5042
Mfg:	Honeywell	**Model:**	.06-.60 oz Torque Watch
Location:		**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Cal-Tech Calibration, INC
Original Certificate (attached) # 1768

Reference HPI S/O # 13385

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers.
:

Last / Next Cal Dates: -->

Gage Status: PASS

Next Calibration Due: 12/20/2006

Certified By: Jorge Ashook Signature: Jorge A. Ashook

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 21C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994, ISO10012-1, and Houston Precision's Quality manual.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Gary Deterling Lab Manager.
*This Report shall not be reproduced except in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 1768
Instrument Make: Honeywell
Model: .06-.60" oz Torque Watch
S/N: None
ID: 5042

Date: 12-20-05
Temp: 74 Deg f
Humidity: 40%
Rec. In Tol.
Due Date: 12-20-06

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: _____

Accuracy: +\- 5% of full scale.

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner	1g-100g	822/265036-01	3-22-06

Inch Oz. Range	As Found	After Adjust	Final Reading
.06	.05	none	.05
.18	.17	none	.17
.36	.35	none	.35
.48	.47	none	.47
.60	.59	none	.59

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

Pebble Port PSD Meteorological Monitoring Station

August 2006

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port PSD Meteorological Monitoring Station
August 2006
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station On-Site Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Wind Speed 7
3.1.4 Wind Direction 8
3.1.5 Relative Humidity 9
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port Station August 21, 2006 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port Station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of this document, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question-answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

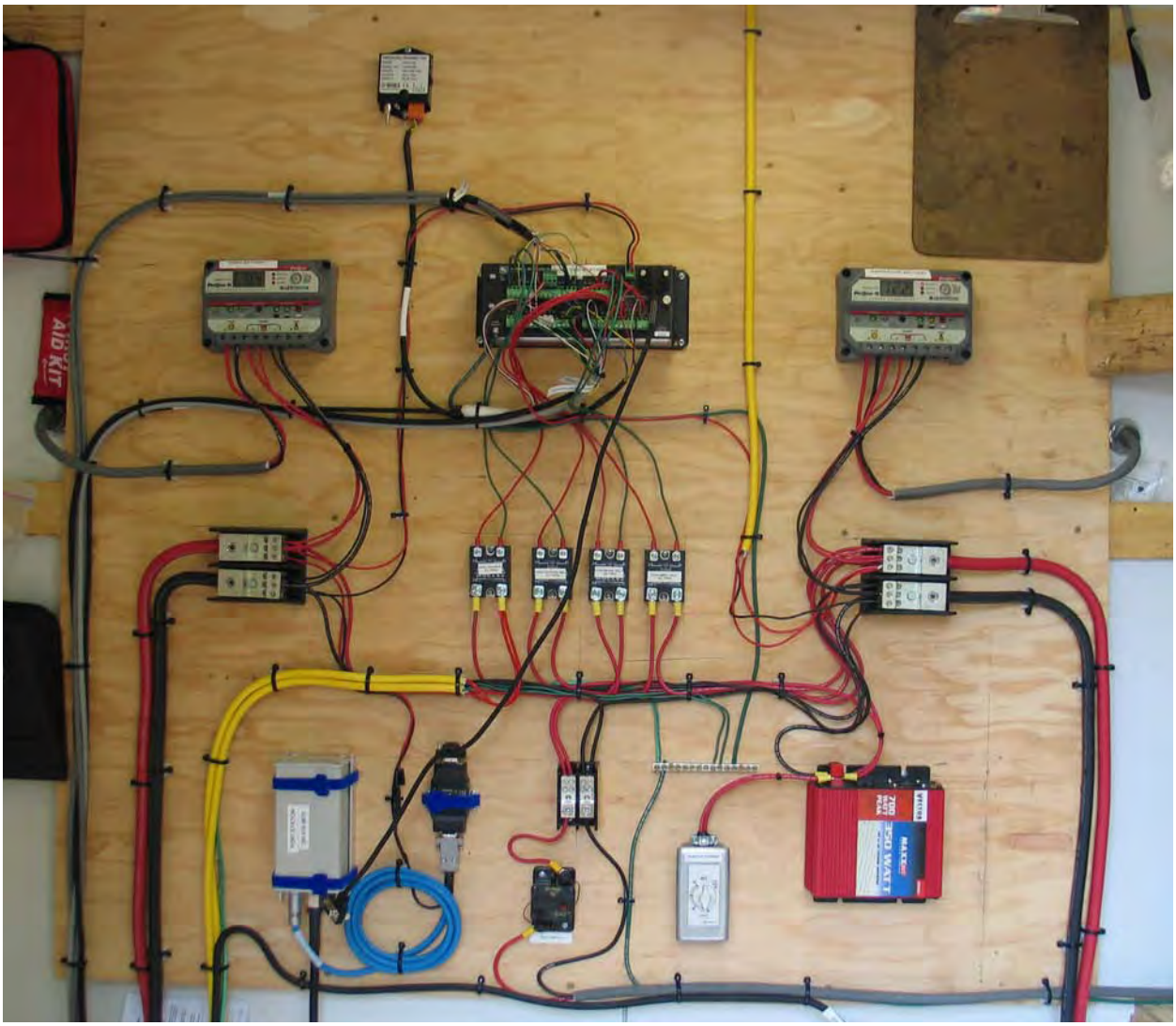
2.2 Meteorological Station On-Site Systems Audit

The on-site systems audit of the Pebble Port Station was conducted on August 21, 2006. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires from animals; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar

controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port Station DAS Wiring Panel



The Campbell Scientific CR10X DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. A Campbell Scientific SC932A interface converts the DAS signal to a RS-232 DCE modem signal. Three FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid near Seldovia, Alaska. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 35-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a 21-Watt Global Thermoelectric Model 5030 Thermo-Electric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three panels are dedicated to the aspirator fans, Climatronics heaters, shelter lighting and 120VAC power; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the aspirator/heater power system. Aspirator fans and heaters are controlled through relays connected to the DAS control ports. Logic programmed into the DAS reduces power consumption by limiting heater use to weather conditions conducive to icing and turns fans off at night when voltage is low, considered an upset condition. Also the TEG power is routed through relays which shunt power to the critical DAS/sensor system during upset conditions.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port Station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately

identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Pebble Port Station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port Station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit checklists
- Keep a file on site containing copies of previous checklists.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor’s threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The

instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital

raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audit was conducted at the Pebble Port Station on August 21, 2006 with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. The thermistor aspirator fans had failed and were replaced during the audit. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- Set up DAS to read aspirator fan amperage in order to monitor fan status.

Table 3-2 Port Station August 21, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 0.104	oz-in	0.100	Pass
Wind Direction Torque (new bearings)	≤ 0.104	oz-in	0.070	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-0.6	Pass
Wind Direction Accuracy	≤ ±5	Degree	-1.3	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass
RM Young Wind System				
Wind Speed Torque[1]	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 11	g-cm	9.0	Pass
Wind Direction Torque (new bearings)	≤ 11	g-cm	6.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	-4.5	Pass
Wind Direction Linearity	≤ 3	Degree	2.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.7	Pass
Barometric Pressure	≤ ±3	Mbar	1.0	Pass
Solar Radiation	≤ ±5+Res	% input	-5.8	Pass

1. Could not replace RM Young speed bearing due to stripped set screw.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 3
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 4
3.2.1 Data Acquisition System (DAS) and Communications System 4
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 5
3.3 Station Location and Siting 6
3.3.1 Tower 6
3.3.2 Temperature and Relative Humidity Sensors 6
3.3.3 Wind Speed and Wind Direction Sensors 7
3.3.4 Relative Humidity and Barometric Pressure 7
3.3.5 Solar Radiation 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 12

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port tower is located near the middle of a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

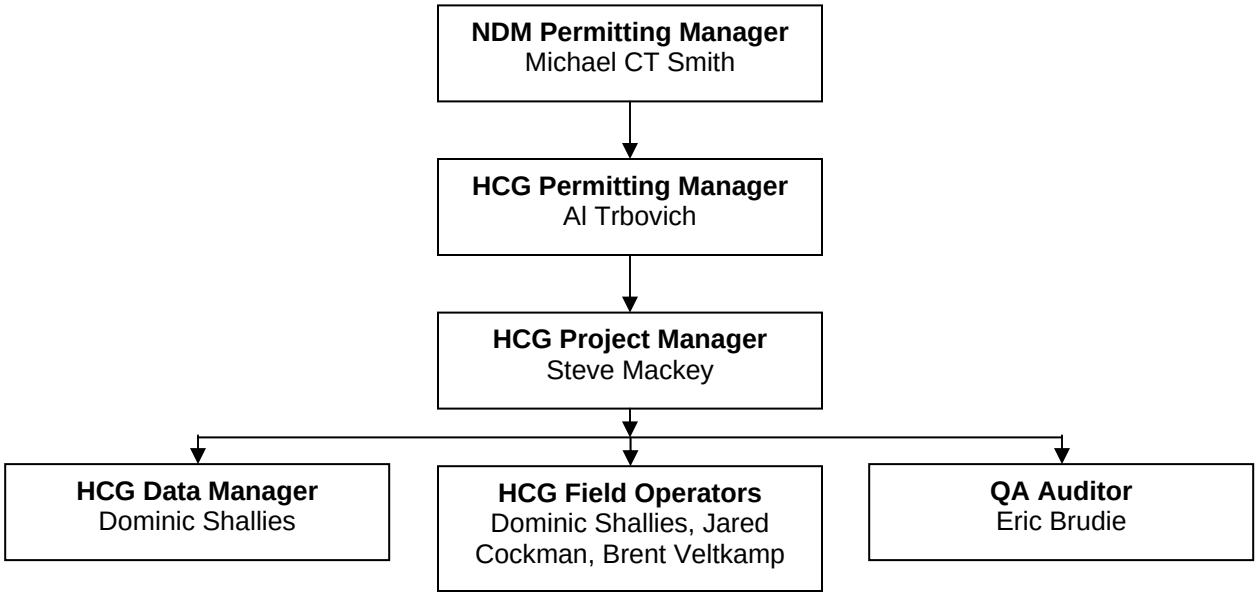
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles:



3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR10X	X41611
DAS Wiring Panel	Campbell Scientific	CR10X	31375
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Temperature Aspirators	Met One	076B-4	Unknown
Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	67055
Backup Wind Speed Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	67055
Relative Humidity	Vaisala	HMP45AC	A2120081
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY50763

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS to SC932A interface to FreeWave RF network to SixNet modem.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power?	■ Yes □ No	Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a 21-Watt propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can shunt the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not required.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained?	■ Yes □ No	Comments: None.
Are all sensors operational, online and reporting data?	■ Yes □ No	Comments: None.
Do all sensors meet EPA criteria for PSD quality sensors?	■ Yes □ No	Comments: See table below.
Are spare parts stocked for items which are frequently worn out or broken?	■ Yes □ No	Comments: Spare props, cups and vanes onsite and spare bearings at HCG office.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resol. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A

EPA Recommended Meteorological Instrument Standards (Continued)

Parameter	Instrument Specifications	EPA Standard	Pass?
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Siting

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature and Relative Humidity Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Is the ambient temperature sensor protected from the influence of solar radiation? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.

Are the temperature difference sensors located in identical aspirated shields? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.4 Relative Humidity and Barometric Pressure

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.
Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on wiring panel.

3.3.5 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	□ Yes ■ No	Comments: All operators have one to two years onsite experience.

Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

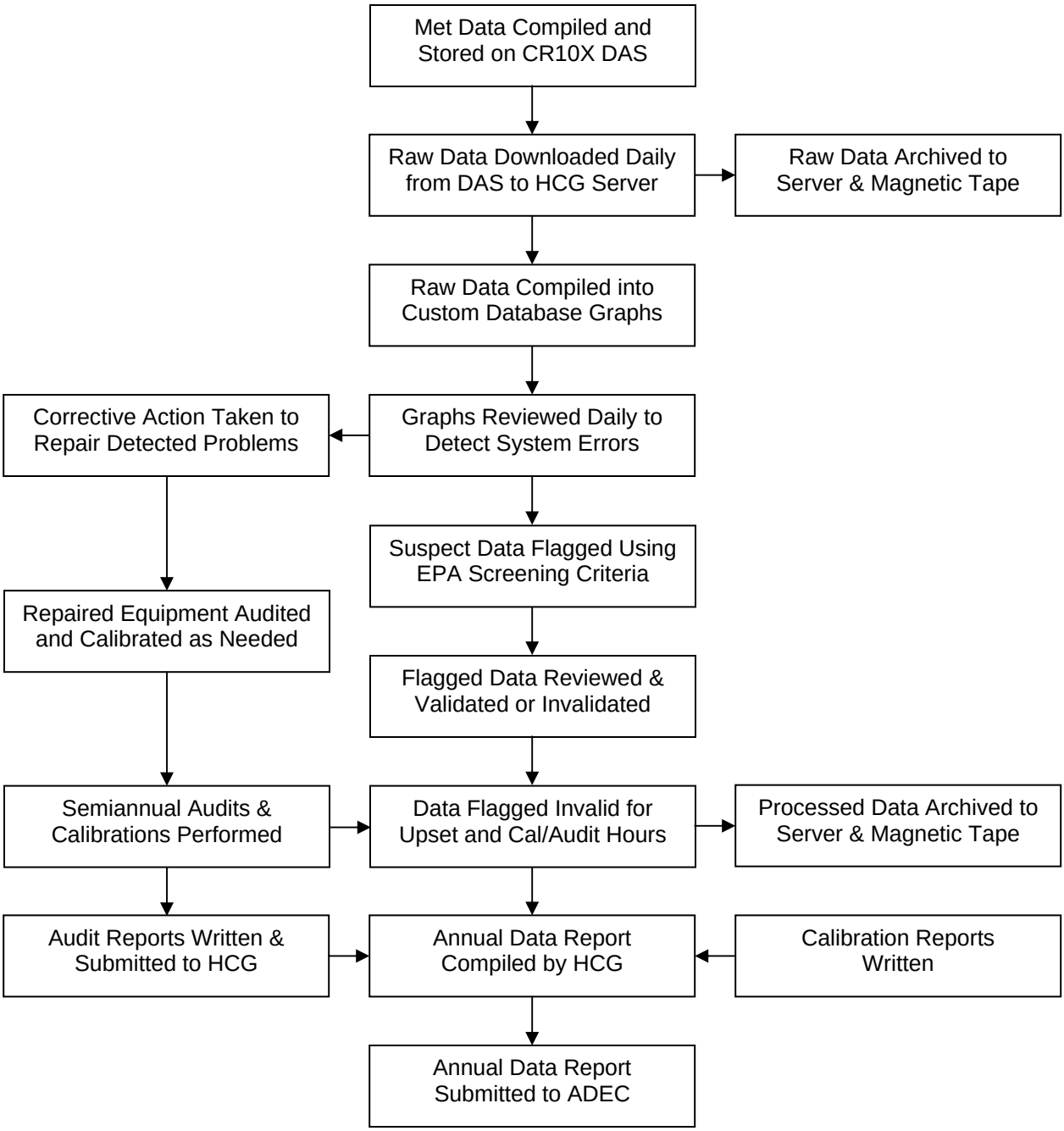
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.

Does the station have an adequate Calibration Report Form and copies of previous calibrations and audits?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Isaac Bertschi
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
16:54:30	16:54:37	**00:07**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Begin: 1444
End: 1505

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Very Cold	-35 to -45	-36.44	-36.25	0.19	Pass	-36.25	0.19	Pass	0.00	Pass
Cold	-15 to -25	-16.37	-16.16	0.21	Pass	-16.16	0.21	Pass	0.00	Pass
Ice Bath	0	-0.12	0.03	0.15	Pass	0.03	0.15	Pass	0.00	Pass
Warm	15 to 25	20.49	20.60	0.11	Pass	20.60	0.11	Pass	0.00	Pass
Hot	35 to 45	38.79	38.89	0.10	Pass	38.89	0.10	Pass	0.00	Pass
		Max Abs. Error		0.21	**PASS**		0.21	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1049	55.0	14.2	5.3	58.1	14.1	6.0	0.7	Pass
1139	52.1	14.8	5.1	54.7	14.6	5.6	0.5	Pass
					Max Abs. Error		0.7	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: $Td=b*ע/(a-ע)$, where $ע=a*Ta/(b + Ta) + \ln(RH)$, and $a = 17.27$, $b=237.7$°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1530	29.91	29.80	1009.0	1010.0	1.0	Pass
			Max Abs. Error		1.0	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/24/06	
Audit Inst	Offset Amount
24.13	-0.13
26.24	-0.13
28.12	-0.12
30.11	-0.11
Intercept	**-0.22**
Slope	**0.0035**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1351
End: 1354

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1150
End: 1155

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: Could not replace speed bearings because allen set screw on nose cone speed magnet worn.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.100	**PASS**
New	0.104	0.070	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST				
Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.9	-0.3	Pass
Mt Augustine - Peak	356.1	355.5	-0.6	Pass
Mt Eleanor	202.6	202.0	-0.6	Pass
Compass	145.5	145.1	-0.4	Pass
		Max Abs. Error	**0.6**	**PASS**
		Mean Abs. Error	**0.5**	**GOOD**

Time: Begin: 1100 End: 1125

CROSSARM-VANE ACCUR. & LIN. TEST				
Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.9	-1.1	Pass
West	270.0	269.9	-0.1	Pass
North	360.0	0.1	0.1	Pass
East	90.0	90.2	0.2	Pass
North	360.0	0.1	0.1	Pass
West	270.0	270.1	0.1	Pass
South	180.0	178.9	-1.1	Pass
East	90.0	89.7	-0.3	Pass
	Max Abs. Error		**1.1**	**PASS**
	Mean Abs. Error		**0.4**	**PASS**

Time: Begin: 1320 End: 1324

BENCH STAND ACCURACY & LINEARITY TEST							
Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.9	-0.1	Pass	330.0	330.5	0.5	Pass
60.0	58.7	-1.3	Pass	355.0	354.9	-0.1	Pass
90.0	89.5	-0.5	Pass	30.0	29.5	-0.5	Pass
120.0	119.9	-0.1	Pass	60.0	58.9	-1.1	Pass
150.0	149.2	-0.8	Pass	90.0	89.7	-0.3	Pass
180.0	179.0	-1.0	Pass	120.0	119.9	-0.1	Pass
210.0	209.7	-0.3	Pass	150.0	149.0	-1.0	Pass
240.0	240.0	0.0	Pass	180.0	179.2	-0.8	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	299.7	-0.3	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1328 End: 1331

POST-AUDIT AZIMUTH ALIGNMENT TEST				
Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	354.3	-1.8	Pass
Mt Augustine - East shore	347.1	345.4	-1.7	Pass
Mt Eleanor	202.6	199.8	-2.8	Pass
Compass	129.5	126.8	-2.7	Pass
		Max Abs. Error	**2.8**	**PASS**
		Mean Abs. Error	**2.1**	**GOOD**

Time: Begin: 1530 End: 1555

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	9.0	**PASS**
New	11.0	6.0	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	353.8	-2.3	Pass
Mt Eleanor	202.6	202.6	0.0	Pass
Compass	145.5	148.0	2.5	Pass
		Max Abs. Error	**2.5**	**PASS**
Time: Begin: 1100 End: 1125		**Mean Abs. Error**	**1.6**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.9	-1.1	Pass	150.0	148.3	-1.7	Pass	270.0	265.5	-4.5	Pass
60.0	59.0	-1.0	Pass	180.0	177.5	-2.5	Pass	300.0	295.7	-4.3	Pass
90.0	89.3	-0.7	Pass	210.0	207.1	-2.9	Pass	330.0	326.3	-3.7	Pass
120.0	118.9	-1.1	Pass	240.0	236.1	-3.9	Pass	355.0	351.7	-3.3	Pass
								Max Abs. Error		**4.5**	**PASS**
			Time:	Begin: 1140		End: 1144		**Mean Abs. Error**		**2.6**	**PASS**

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	263.2	0.0	Pass
Mt Augustine - East shore	347.1	348.5	1.4	Pass
Mt Eleanor	202.6	203.4	0.8	Pass
Compass	129.5	132.3	2.8	Pass
		Max Abs. Error	**2.8**	**PASS**
Time: Begin: 1530 End: 1555		**Mean Abs. Error**	**1.3**	**GOOD**

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

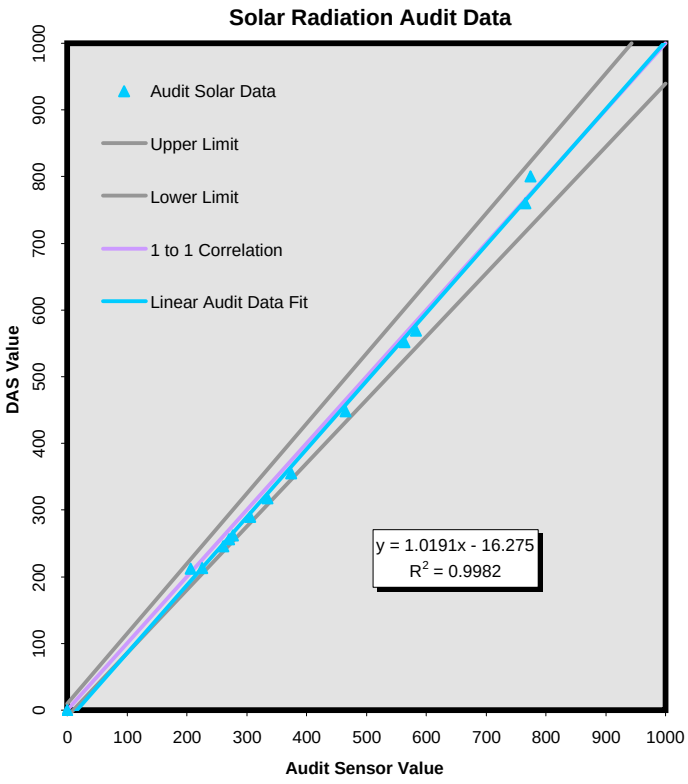
Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.0 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION SENSOR TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
Instantaneous Readings						
1047	276.7	262.3	-14.4	±23.8	-5.2%	Pass
1050	260.6	245.4	-15.2	±23.0	-5.8%	Pass
1310	774.0	800.6	26.6	±48.7	3.4%	Pass
1318	766.0	760.4	-5.6	±48.3	-0.7%	Pass
1402	1025.0	1030.4	5.4	±61.3	0.5%	Pass
1410	374.0	354.7	-19.3	±28.7	-5.2%	Pass
1518	225.4	212.9	-12.5	±21.3	-5.5%	Pass
1623	0.0	0.0	0.0	±10.0	n/a	Pass
1648	306.3	289.9	-16.4	±25.3	-5.4%	Pass
Hourly Averages						
1200	334.8	317.3	-17.5	±26.7	-5.2%	Pass
1300	465.6	447.9	-17.7	±33.3	-3.8%	Pass
1400	583.3	569.3	-14.0	±39.2	-2.4%	Pass
1500	563.3	552.2	-11.1	±38.2	-2.0%	Pass
1600	271.1	256.3	-14.8	±23.6	-5.5%	Pass
1700	206.4	211.9	5.5	±20.3	2.7%	Pass
Corr. Val	**0.9991**	**Max Abs. Percent Error**			**5.8%**	**PASS**
R² Value	**0.9982**	**Intercept**	**-16.3**	**Slope**	**1.0191**	**PASS**



Begin Date: 08/21/06 **End Date:** 08/21/06

PSD Limits: Max Absolute Error <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Comments: Instantaneous data point at 1623 taken with sensors covered.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate 1750.01

Calibration complies with ISO/IEC 17025 AND ANSI/NCSL Z540-1

Cert. No.: 4000-1338226

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Dominic Shallies, Anchorage, AK 99503 U.S.A. (RMA:933478)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	12/08/06	A5B28010-1
Thermistor Module	A17118	8/12/06	A5819038
Temperature Calibration Bath TC179	A45240		
Temperature Calibration Bath TC191	A42238		
Temperature Probe	157	9/01/06	A5815063
Thermistor Module	A27129	7/05/06	1000189003

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 6/07/06 **Cal Due: 6/07/07**

Test Conditions: 25.5°C 39.0 %RH 1013 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.000	0.072	N	0.000	-0.004	Y	-0.050	0.050	0.013	3.8:1
°C	25.000	25.020	Y	25.000	24.999	Y	24.950	25.050	0.013	3.8:1
°C	60.002	59.999	Y	60.001	59.999	Y	59.951	60.051	0.013	3.8:1
°C	100.002	100.001	Y	100.002	100.004	Y	99.952	100.052	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

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VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052406. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 05/24/06 Lab temperature 72.8 °F
Lab pressure 663.1 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.13	0.13	-0.13
26.11	26.24	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.11	0.11	-0.11

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R Sanders Date: 5-24-06

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 RPM - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 24 May 2006

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 17 November 2005

Tested By EC

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: www.youngusa.com

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 8884 **TRACEABILITY CERTIFICATE NO.** 05090203

ISSUED TO: Hoefler Consulting Group

INSTRUMENT: 366-3, .003-.03 Inch Ounces Torque Watch, Waters Manufacturing, Inc, S/N 4864

DATE DONE: September 02, 2005 **DATE DUE:** September 01, 2006

CERTIFIED BY METROLOGIST: E.P. Young E.P. Young **TEMPERATURE:** 72 °F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

PROCEDURE/LIMITATIONS/ACCURACY STATEMENT: T.O. 33k6-4-2630-1. Accuracy: +/- 10 % of Full Scale.

COMPLIANCE

Alaska Calibration, Inc.'s calibration practices and procedures comply with the requirements of ANSI/SO/Z540-1 and ANS/ ISO/IEC17025: 2000 and relevant requirements of ISO 9002: 1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. This Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	33479
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	12/20/2005
		PO#:	Verbal
Contact:	Chris Lindsey	**Page:**	1
Dept:			
Gage:	.06-.60 oz Torque Watch	**Control:**	5042
Mfg:	Honeywell	**Model:**	.06-.60 oz Torque Watch
Location:		**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Cal-Tech Calibration, INC
Original Certificate (attached) # 1768

Reference HPI S/O # 13385

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers.
:

Last / Next Cal Dates: -->

Gage Status: PASS

Next Calibration Due: 12/20/2006

Certified By: Jorge Ashook Signature: Jorge A. Ashook

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 21C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994, ISO10012-1, and Houston Precision's Quality manual.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Gary Deterling Lab Manager.
*This Report shall not be reproduced except in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 1768
Instrument Make: Honeywell
Model: .06-.60" oz Torque Watch
S/N: None
ID: 5042

Date: 12-20-05
Temp: 74 Deg f
Humidity: 40%
Rec. In Tol.
Due Date: 12-20-06

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: _____

Accuracy: +\- 5% of full scale.

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner	1g-100g	822/265036-01	3-22-06

Inch Oz. Range	As Found	After Adjust	Final Reading
.06	.05	none	.05
.18	.17	none	.17
.36	.35	none	.35
.48	.47	none	.47
.60	.59	none	.59

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.33 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}.

Shipped to:
Hoefler Consulting Group
Anchorage, AK

Date of Test: October 20, 2005

In Charge of Test: R. T. Eppman

S.O. Number: 60557
Date: January 11, 2006

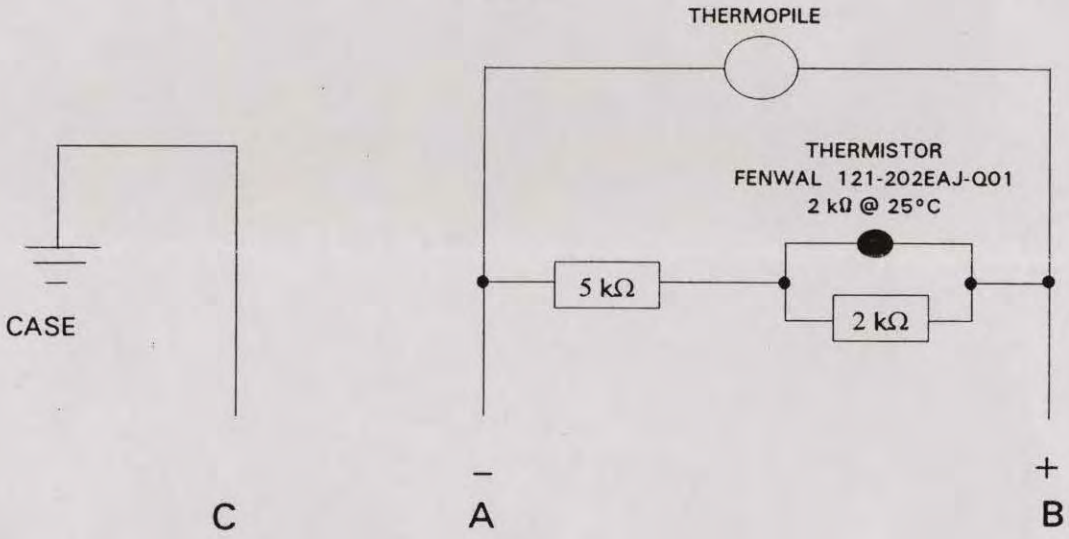
Reviewed by: George L. Kub

Remarks:

PRECISION SPECTRAL PYRANOMETER
MODEL PSP

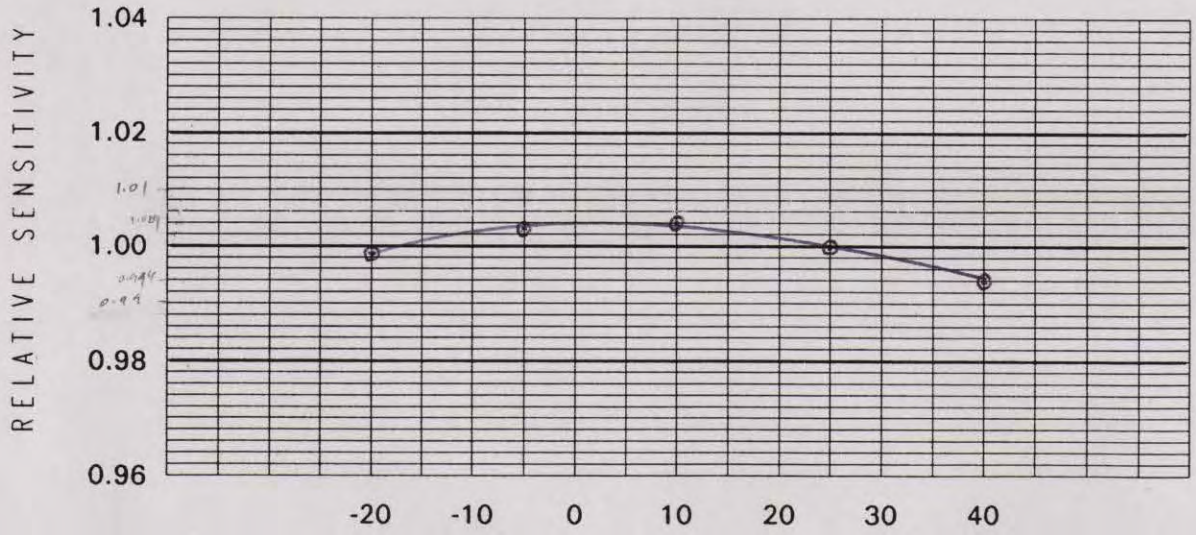
INSTRUMENT SERIAL NUMBER: 34377F3

INTERNAL WIRING



PIN CONNECTIONS ON PLUG

TEMPERATURE DEPENDENCE



EPLAB

TESTED BY: R. Esperman

DATE: Oct 18, 2005

Appendix D

Validated Continuous Data Summaries

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1																											
2																											
3																											
4																	14.7	14.9	14.8	14.5	13.7	13.7	15.9	16.5	16.5	13.7	14.8
5	16.3	16.3	16.1	15.9	15.7	15.7	16.0	16.2	16.5	17.5	18.0	18.6	19.4	19.6	19.4	19.0	19.3	18.5	17.7	17.5	17.4	17.0	17.2	17.3	19.6	15.7	17.4
6	17.0	16.8	16.5	16.3	16.1	16.0	16.1	16.6	16.9	17.5	18.4	18.2	18.3	18.7	17.9	18.0	17.2	16.2	14.7	13.9	13.6	15.2	17.3	17.0	18.7	13.6	16.7
7	16.7	15.5	14.4	14.1	14.1	14.2	16.5	16.6	17.0	17.5	17.9	18.6	19.3	19.6	20.1	19.7	19.5	19.4	18.7	18.6	18.2	17.1	15.8	15.1	20.1	14.1	17.3
8	14.7	14.0	13.6	13.3	12.9	12.9	14.0	15.3	16.2	15.5	15.2	15.4	15.9	16.6	16.8	17.3	17.6	17.2	16.0	15.2	13.7	13.0	13.0	12.9	17.6	12.9	14.9
9	12.6	12.1	11.5	11.5	11.6	11.8	12.9	14.3	14.4	13.7	14.6	15.0	15.2	15.4	16.2	16.1	15.7	15.1	14.2	14.0	13.6	12.6	12.2	12.1	16.2	11.5	13.7
10	11.8	12.4	12.3	11.0	10.8	10.8	12.4	13.8	14.2	13.8	14.3	15.0	14.6	14.8	15.2	15.4	15.1	13.9	12.9	12.3	11.4	10.3	10.5	10.9	15.4	10.3	12.9
11	11.0	10.7	10.9	10.3	10.6	11.1	12.0	11.8	11.8	12.2	13.6	14.1	14.6	16.2	16.8	17.1	17.5	17.6	16.1	15.2	14.4	14.8	15.2	14.2	17.6	10.3	13.7
12	14.3	13.5	13.2	12.8	12.9	12.8	14.3	15.7	15.7	15.9	16.5	16.4	16.9	17.2	17.7	18.4	18.3	18.6	16.9	16.2	15.0	14.1	13.5	12.8	18.6	12.8	15.4
13	12.4	12.2	12.0	12.2	12.6	12.6	12.6	12.6	12.6	12.5	12.8	13.2	12.9	12.9	13.3	13.4	13.5	13.7	13.3	13.3	12.9	11.9	12.0	12.6	13.7	11.9	12.7
14	12.7	12.8	12.8	12.6	12.5	12.5	12.6	13.0	13.2	13.3	13.5	13.7	14.3	14.7	15.2	15.5	15.8	15.1	13.8	13.6	12.7	11.8	11.7	12.5	15.8	11.7	13.4
15	13.1	13.2	13.0	13.0	13.1	13.2	13.2	13.2	13.6	13.9	13.8	14.5	14.9	15.6	16.2	16.0	16.3	15.8	15.7	15.5	15.4	15.0	14.9	14.8	16.3	13.0	14.4
16	14.2	14.0	14.2	14.2	14.0	14.0	14.2	14.4	15.1	15.4	15.5	15.6	14.7	14.6	14.0	14.5	15.0	14.9	14.8	14.4	13.9	14.1	14.1	14.1	15.6	13.9	14.5
17	13.9	13.5	13.4	13.2	13.1	13.1	13.3	13.4	13.3	13.6	13.6	14.0	14.5	14.4	15.1	15.6	15.5	16.1	15.5	15.6	15.2	14.8	14.6	15.0	16.1	13.1	14.3
18	14.4	14.2	14.0	14.0	13.6	13.4	13.8	13.6	14.3	14.1	13.5	12.9	13.1	13.0	13.1	13.1	13.3	13.5	13.7	13.7	13.7	13.1	12.5	12.3	14.4	12.3	13.5
19	11.7	11.9	11.7	11.5	11.6	12.3	13.4	14.8	15.6	15.3	15.4	15.5	15.1	15.3	16.0	17.8	19.9	19.5	19.3	19.4	19.0	18.8	18.5	18.1	19.9	11.5	15.7
20	15.7	14.2	16.6	16.5	15.9	15.5	15.8	15.7	16.2	17.0	17.2	18.0	18.4	18.7	18.4	18.3	17.8	17.3	16.9	16.6	16.4	15.0	14.7	14.3	18.7	14.2	16.5
21	13.7	13.4	13.8	13.7	13.4	13.5	13.1	13.2	13.8	10.0	16.4	16.6	17.2	17.6	17.9	18.2	17.8	16.3	15.5	14.4	13.5	13.0	13.1	11.9	18.2	10.0	14.6
22	11.0	10.8	11.0	10.5	10.7	10.8	11.8	12.8	13.6	13.9	14.0	14.0	13.6	13.5	12.3	12.3	12.9	12.2	12.1	11.8	12.0	12.5	12.4	12.3	14.0	10.5	12.3
23	12.3	12.1	11.9	12.1	12.7	13.0	13.3	13.5	14.5	15.5	15.1	13.9	14.5	15.8	15.1	15.1	15.1	13.7	13.2	13.1	12.5	11.2	11.3	11.5	15.8	11.2	13.4
24	11.3	11.1	10.8	10.9	10.8	10.8	10.8	10.9	12.0	13.0	13.1	13.8	14.7	15.0	15.1	14.9	16.6	15.6	15.1	14.8	14.4	13.7	12.8	12.9	16.6	10.8	13.1
25	12.6	12.5	12.4	11.9	11.9	11.9	12.1	12.7	12.9	13.7	14.2	14.8	15.0	15.4	15.4	14.9	14.7	13.9	13.1	11.9	10.6	10.5	10.2	9.7	15.4	9.7	12.9
26	9.3	8.2	7.9	8.2	8.3	8.7	9.0	10.5	12.2	13.4	14.6	16.0	16.5	17.3	17.3	17.6	17.1	15.0	14.2	13.8	13.8	13.7	13.4	13.4	17.6	7.9	12.9
27	13.5	13.6	13.6	13.4	12.5	12.4	13.3	13.5	13.8	14.8	15.8	16.3	16.9	17.5	18.1	17.7	16.6	15.6	15.2	14.6	14.2	14.0	14.0	12.8	18.1	12.4	14.7
28	11.5	11.7	12.0	12.1	11.4	10.6	10.4	10.6	11.4	11.7	11.6	11.8	12.0	12.3	12.4	12.5	12.6	12.8	14.6	14.1	13.6	13.3	13.1	12.8	14.6	10.4	12.2
29	12.2	11.5	11.6	11.8	12.1	12.1	12.2	12.1	11.5	11.8	12.1	12.6	12.7	13.0	13.5	13.4	13.5	13.6	13.5	13.5	13.1	12.8	12.6	12.5	13.6	11.5	12.6
30	11.4	11.7	12.1	12.4	12.7	12.5	12.4	12.6	12.7	13.5	14.7	15.4	16.0	17.5	16.7	17.0	16.5	16.0	15.8	15.6	15.3	15.3	15.3	15.3	17.5	11.4	14.4
31	15.1	15.2	15.0	14.6	14.5	14.6	14.4	14.6	14.7	14.9	14.7	14.9	15.5	16.3	16.7	16.5	16.2	15.3	15.0	14.4	13.5	13.2	12.9	12.5	16.7	12.5	14.8
Max.	**17.0**	**16.8**	**16.6**	**16.5**	**16.1**	**16.0**	**16.5**	**16.6**	**17.0**	**17.5**	**18.4**	**18.6**	**19.4**	**19.6**	**20.1**	**19.7**	**19.9**	**19.5**	**19.3**	**19.4**	**19.0**	**18.8**	**18.5**	**18.1**	**20.1**		
Min.	**9.3**	**8.2**	**7.9**	**8.2**	**8.3**	**8.7**	**9.0**	**10.5**	**11.4**	**10.0**	**11.6**	**11.8**	**12.0**	**12.3**	**12.3**	**12.3**	**12.6**	**12.2**	**12.1**	**11.8**	**10.6**	**10.3**	**10.2**	**9.7**		**7.9**	
Avg.	**13.2**	**12.9**	**12.9**	**12.7**	**12.7**	**12.7**	**13.2**	**13.6**	**14.0**	**14.3**	**14.8**	**15.1**	**15.4**	**15.9**	**16.0**	**16.1**	**16.1**	**15.6**	**15.1**	**14.7**	**14.2**	**13.8**	**13.7**	**13.6**			**14.3**

Total Hours in Month 744 **Hours Data Available** 656 **Data Recovery** 88.2%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.3	11.9	11.6	10.6	10.1	8.9	9.4	9.8	10.4	11.3	12.4	13.5	14.0	14.2	14.9	15.4	15.0	13.7	13.4	13.3	12.4	12.4	12.6	12.1	15.4	8.9	12.3
2	9.3	7.9	7.3	7.3	7.1	6.9	6.4	7.8	9.3	10.7	11.8	12.5	13.7	14.8	14.8	13.8	13.6	13.1	12.7	12.5	12.2	12.0	12.1	12.2	14.8	6.4	10.9
3	12.2	12.1	11.6	11.1	10.2	9.4	8.6	8.4	8.4	8.8	9.0	9.1	9.4	9.7	10.4	10.0	9.7	9.5	9.7	9.9	10.0	10.1	10.2	10.4	12.2	8.4	9.9
4	10.5	10.3	10.4	10.7	10.5	10.4	10.3	10.2	10.2	10.2	10.2	10.4	10.6	10.8	10.9	11.4	12.1	12.1	11.9	11.8	11.6	11.1	10.9	11.2	12.1	10.2	10.9
5	11.3	11.2	10.6	9.9	10.2	10.3	10.2	10.9	11.4	11.3	10.8	11.0	11.4	11.7	11.8	12.1	11.9	11.5	10.6	9.8	9.8	9.8	9.9	9.9	12.1	9.8	10.8
6	10.0	10.1	10.2	10.3	10.2	10.3	10.3	10.1	10.5	12.2	12.9	13.4	13.8	13.3	13.7	12.9	12.8	12.9	12.6	12.7	12.4	12.1	11.7	11.8	13.8	10.0	11.8
7	12.0	11.9	11.9	11.7	11.5	11.4	11.1	11.6	12.1	12.8	13.7	14.6	13.9	14.9	15.7	15.2	15.3	14.2	13.7	13.5	12.8	12.5	12.0	11.6	15.7	11.1	13.0
8	11.3	11.5	11.6	11.4	11.4	11.4	11.3	11.3	11.8	12.5	13.4	13.4	13.3	13.6	13.5	13.1	12.8	12.1	11.9	11.4	10.7	10.1	10.4	10.4	13.6	10.1	11.9
9	9.9	9.4	9.3	9.6	9.8	10.0	10.3	10.9	11.0	11.3	11.8	11.9	12.0	11.9	12.2	12.3	12.5	12.6	12.5	12.4	12.2	12.1	11.4	11.4	12.6	9.3	11.3
10	11.7	11.9	12.0	12.0	11.9	12.0	12.0	12.0	12.5	12.9	13.5	13.6	13.8	14.2	15.0	15.1	14.8	14.1	13.1	12.4	11.4	10.8	10.1	9.4	15.1	9.4	12.6
11	9.4	10.0	10.6	10.8	10.4	10.6	10.4	10.4	11.5	11.8	12.0	11.9	11.8	11.5	11.3	11.0	11.3	11.2	11.7	11.8	11.8	11.7	11.8	12.0	12.0	9.4	11.2
12	12.1	12.0	11.9	12.0	12.0	10.7	10.4	10.9	11.2	12.2	12.2	12.2	11.5	11.4	11.3	11.4	11.7	11.7	11.9	11.4	11.0	11.3	11.2	10.9	12.2	10.4	11.5
13	10.6	10.0	9.7	9.1	9.2	9.6	9.6	10.1	11.1	11.4	11.8	12.5	12.7	12.7	12.4	12.2	12.1	12.3	12.5	12.1	12.1	11.7	12.1	12.1	12.7	9.1	11.3
14	12.1	11.5	10.7	10.1	9.4	9.0	8.0	8.2	10.2	10.9	11.7	12.2	12.8	13.6	13.3	13.8	13.8	12.9	13.1	13.1	12.7	12.6	12.6	12.5	13.8	8.0	11.7
15	12.5	12.0	11.8	11.6	11.8	12.0	12.0	12.1	11.9	11.6	11.5	11.4	11.2	10.6	11.1	11.6	11.7	11.8	11.9	11.9	11.0	10.7	10.6	10.5	12.5	10.5	11.5
16	10.5	10.6	10.4	9.5	9.3	10.0	10.6	10.4	10.3	10.4	10.7	11.2	11.6	12.1	12.5	12.8	12.4	11.6	11.2	9.8	9.0	8.8	9.1	9.4	12.8	8.8	10.6
17	10.2	10.2	9.8	8.5	7.5	7.4	7.8	8.1	8.3	9.0	10.7	10.6	11.4	11.9	11.2	10.2	11.0	10.2	9.4	8.7	8.0	8.0	8.9	9.8	11.9	7.4	9.4
18	10.0	10.0	10.0	10.0	10.0	10.0	10.1	10.3	10.6	11.2	11.4	12.3	13.2	13.6	13.4	13.3	13.2	12.5	12.4	11.6	11.3	11.2	10.8	11.0	13.6	10.0	11.4
19	10.9	10.7	11.0	10.5	10.4	10.5	10.4	10.2	10.4	11.1	12.0	12.6	13.9	13.7	14.7	14.4	13.8	12.8	12.2	11.9	11.8	11.7	11.6	11.4	14.7	10.2	11.8
20	11.3	11.4	11.4	11.4	11.3	11.4	11.3	11.7	12.5	13.2	13.6	14.1	14.5	14.7	14.9	14.8	14.0	12.9	12.3	11.8	11.6	11.3	10.7	10.5	14.9	10.5	12.4
21	10.6	10.5	10.3	10.2	10.0	10.1	10.4	10.6	9.5	9.7	10.3	11.0	11.5	11.5	11.5	11.2	10.8	10.2	9.9	9.5	9.0	9.0	8.7	8.5	11.5	8.5	10.2
22	8.0	8.0	8.3	8.5	8.7	9.2	9.3	9.7	10.3	10.5	10.5	10.6	10.7	10.8	10.8	10.9	11.0	11.0	10.8	10.8	10.6	10.4	10.4	10.2	11.0	8.0	10.0
23	10.3	10.5	10.6	10.2	10.0	10.1	9.8	9.3	9.5	11.0	11.4	11.4	11.3	11.7	11.6	11.3	11.2	11.2	11.2	11.2	11.1	10.5	10.1	10.3	11.7	9.3	10.7
24	10.2	9.5	9.2	9.2	9.5	8.8	8.0	8.6	9.2	10.3	10.0	10.1	10.4	10.3	11.4	11.3	10.3	10.0	10.1	9.6	9.5	9.2	9.7	9.7	11.4	8.0	9.7
25	9.2	9.2	9.5	9.5	9.7	9.7	9.5	9.5	9.9	10.0	10.7	11.5	11.0	11.3	11.7	11.5	11.4	11.0	10.9	10.8	10.0	8.5	9.3	9.4	11.7	8.5	10.2
26	8.2	7.1	6.7	5.8	5.7	6.0	6.1	6.2	8.4	10.0	9.7	10.4	11.1	10.9	10.5	9.6	9.3	9.2	9.5	9.0	8.2	8.1	7.8	8.1	11.1	5.7	8.4
27	7.9	7.6	7.5	7.6	7.7	7.8	8.1	7.9	7.9	7.6	8.6	9.1	9.2	8.7	8.3	8.3	8.5	8.1	7.4	7.1	6.6	7.2	7.8	7.9	9.2	6.6	7.9
28	8.3	8.1	7.6	7.8	7.7	7.2	7.6	8.2	8.3	8.3	8.4	9.2	9.9	10.4	10.9	10.9	10.8	10.9	10.7	9.8	9.3	9.0	9.4	10.3	10.9	7.2	9.1
29	11.1	10.8	10.5	10.4	10.2	9.6	9.5	9.5	9.4	9.5	9.3	9.3	10.3	10.1	9.7	9.7	10.0	9.5	9.1	9.0	8.9	9.0	8.9	9.0	11.1	8.9	9.7
30	8.8	8.6	8.4	8.2	7.9	7.8	7.6	7.5	7.7	8.1	8.4	8.7	9.0	9.3	9.6	9.6	9.2	8.7	8.4	8.1	8.1	8.2	8.3	8.3	9.6	7.5	8.4
Max.	**12.5**	**12.1**	**12.0**	**12.0**	**12.0**	**12.0**	**12.0**	**12.1**	**12.5**	**13.2**	**13.7**	**14.6**	**14.5**	**14.9**	**15.7**	**15.4**	**15.3**	**14.2**	**13.7**	**13.5**	**12.8**	**12.6**	**12.6**	**12.5**	**15.7**		
Min.	**7.9**	**7.1**	**6.7**	**5.8**	**5.7**	**6.0**	**6.1**	**6.2**	**7.7**	**7.6**	**8.4**	**8.7**	**9.0**	**8.7**	**8.3**	**8.3**	**8.5**	**8.1**	**7.4**	**7.1**	**6.6**	**7.2**	**7.8**	**7.9**		**5.7**	
Avg.	**10.4**	**10.2**	**10.1**	**9.8**	**9.7**	**9.6**	**9.5**	**9.7**	**10.2**	**10.7**	**11.1**	**11.5**	**11.8**	**12.0**	**12.2**	**12.0**	**11.9**	**11.5**	**11.3**	**11.0**	**10.6**	**10.4**	**10.4**	**10.4**			**10.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.2	8.2	8.1	8.0	7.8	7.6	7.3	7.1	6.5	6.3	6.1	6.4	6.7	6.9	6.7	6.8	6.6	5.7	5.3	5.1	4.7	4.4	4.4	4.1	8.2	4.1	6.5
2	4.1	4.0	4.0	3.8	3.5	3.5	3.2	3.2	3.7	4.4	4.9	5.5	5.9	7.2	7.6	7.6	7.1	5.6	4.4	4.8	4.7	4.5	3.3	2.4	7.6	2.4	4.7
3	2.4	2.4	2.9	3.7	3.5	4.0	3.9	3.3	3.7	4.4	8.1	8.2	9.2	9.5	9.6	9.2	8.7	8.6	8.0	7.3	7.6	8.2	7.9	7.8	9.6	2.4	6.3
4	7.4	7.2	7.5	8.1	8.2	8.2	8.4	8.8	9.0	9.1	9.4	9.8	10.2	10.3	10.4	10.0	9.6	9.3	9.2	9.2	8.4	8.1	8.1	8.2	10.4	7.2	8.8
5	7.7	7.1	7.1	7.3	7.3	7.0	6.5	6.5	6.5	6.7	7.1	7.2	7.3	7.5	7.8	7.7	7.3	6.9	6.6	6.8	6.8	6.9	7.0	7.1	7.8	6.5	7.1
6	7.3	7.2	7.4	7.3	7.3	7.0	6.7	6.4	6.9	8.1	8.5	9.4	10.0	10.4	10.9	11.2	9.8	8.8	7.8	7.0	6.4	5.7	5.3	5.3	11.2	5.3	7.8
7	5.3	5.8	6.9	7.5	8.1	8.1	8.2	8.4	8.8	8.9	9.4	8.8	8.3	8.1	7.7	7.5	7.3	7.1	7.0	7.1	7.1	7.0	6.8	6.5	9.4	5.3	7.6
8	6.4	6.3	6.0	5.8	5.7	5.5	5.2	4.8	4.8	4.7	4.7	4.7	4.8	4.8	5.1	5.1	5.1	5.0	4.7	4.4	4.2	4.0	3.7	3.4	6.4	3.4	5.0
9	3.5	3.0	2.9	2.8	3.2	2.5	2.9	3.2	3.8	4.4	4.8	4.9	5.3	6.1	6.9	6.9	6.8	6.9	6.6	6.6	6.2	5.6	5.4	5.2	6.9	2.5	4.9
10	5.0	4.7	4.6	4.4	5.2	5.7	5.7	5.8	6.3	5.6	5.0	5.5	6.2	6.4	6.5	6.6	6.7	6.1	5.4	5.5	4.9	5.2	5.2	5.1	6.7	4.4	5.6
11	4.9	4.7	5.2	5.4	5.2	5.4	5.7	5.9	5.5	5.8	6.2	6.3	7.3	7.4	6.7	6.3	5.6	4.8	4.3	3.6	3.3	2.8	2.4	2.2	7.4	2.2	5.1
12	2.3	2.2	2.2	1.9	1.7	1.3	0.9	0.6	0.6	1.4	1.6	2.4	2.6	2.7	2.7	2.9	2.7	2.3	1.9	1.6	1.4	1.5	2.2	2.3	2.9	0.6	1.9
13	2.2	2.2	2.7	1.9	0.7	0.7	1.2	0.6	0.6	2.1	3.1	4.9	5.2	5.4	5.1	4.6	4.1	3.9	3.7	3.1	2.4	2.6	3.4	3.1	5.4	0.6	2.9
14	3.1	3.1	3.4	3.6	3.6	2.9	2.5	2.3	2.7	3.5	4.1	5.3	6.4	7.4	8.0	8.3	8.0	7.6	7.3	7.5	7.5	7.3	6.2	5.5	8.3	2.3	5.3
15	5.5	5.5	5.6	5.6	5.6	5.4	5.6	5.6	5.4	5.8	6.3	6.7	6.9	7.2	7.7	7.6	7.5	6.6	5.5	4.2	3.5	3.3	2.3	2.6	7.7	2.3	5.6
16	2.2	1.7	1.7	2.8	5.5	5.7	5.0	3.9	3.9	6.1	7.0	6.8	7.3	7.2	7.8	7.4	7.3	6.8	6.6	6.4	6.7	6.0	5.4	5.3	7.8	1.7	5.5
17	5.3	5.8	6.1	5.2	5.0	5.2	6.8	7.4	7.7	7.9	8.1	8.1	8.2	8.6	8.1	8.1	7.9	6.9	5.8	5.0	5.0	4.9	4.6	4.2	8.6	4.2	6.5
18	4.2	4.9	5.2	4.9	4.7	4.5	4.9	4.9	4.9	5.3	5.6	5.8	6.0	6.3	6.5	7.0	6.8	6.1	6.4	6.9	6.1	4.9	4.1	4.1	7.0	4.1	5.5
19	4.0	4.4	4.5	5.0	5.7	5.5	6.1	7.8	7.9	8.0	8.0	8.0	8.1	8.1	8.1	8.2	7.9	7.7	7.3	7.4	7.2	6.9	6.6	6.3	8.2	4.0	6.9
20	6.7	6.8	6.7	6.5	6.6	6.6	6.8	6.8	6.8	7.6	8.6	8.6	9.5	9.9	9.8	9.5	9.2	9.3	9.2	9.3	9.4	9.4	9.8	9.3	9.9	6.5	8.3
21	8.2	7.9	8.1	7.8	7.5	7.8	7.6	6.5	5.6	5.4	5.6	5.5	5.2	5.0	5.1	5.0	4.7	4.5	4.4	4.5	4.7	4.5	4.4	4.2	8.2	4.2	5.8
22	4.0	4.1	4.1	4.2	4.1	4.0	3.9	4.1	3.9	3.7	3.6	3.6	3.6	3.6	3.4	3.2	3.1	3.0	2.9	2.8	2.6	2.4	2.7	2.6	4.2	2.4	3.5
23	2.7	2.8	2.7	2.7	2.8	2.5	2.4	2.4	2.4	2.6	2.7	2.4	1.7	1.2	1.0	0.8	0.8	0.6	0.2	0.3	0.6	0.4	0.0	-0.1	2.8	-0.1	1.6
24	-0.5	-0.8	-1.6	-2.3	-1.8	-1.4	-1.1	-0.1	0.7	1.1	1.9	2.4	2.9	3.5	3.6	3.6	3.2	3.4	3.4	3.7	3.4	2.9	2.8	2.6	3.7	-2.3	1.5
25	2.5	2.1	1.9	1.8	1.0	0.8	0.6	0.4	0.4	1.1	1.0	1.1	1.5	1.8	1.9	2.0	1.1	-0.2	-0.3	0.4	0.0	-0.5	-0.2	-0.4	2.5	-0.5	0.9
26	-0.8	-0.5	-0.8	-0.8	-1.2	-1.6	-1.1	-0.8	-0.8	0.4	1.1	2.0	3.0	3.2	3.5	3.4	2.7	1.9	1.7	0.8	0.0	0.3	0.2	-0.7	3.5	-1.6	0.6
27	-0.8	-1.0	-1.1	-1.3	-1.4	-1.6	-1.6	-1.8	-1.8	-0.7	0.4	1.3	1.9	2.5	3.3	3.8	2.1	0.1	-0.3	-0.6	-1.0	-1.2	-1.6	-2.1	3.8	-2.1	-0.2
28	-2.1	-1.7	-1.8	-2.2	-2.2	-2.2	-1.8	-2.1	-2.4	-1.7	-0.5	0.3	1.1	1.7	2.0	1.7	0.5	-0.7	-0.7	0.1	-0.1	-0.2	0.2	-0.1	2.0	-2.4	-0.6
29	-0.1	0.1	0.1	-0.3	-0.6	-1.1	-0.8	-1.0	-0.9	-0.5	0.7	1.5	1.9	2.0	2.2	2.2	2.0	1.9	1.5	1.3	1.3	1.3	1.3	1.4	2.2	-1.1	0.7
30	1.4	1.4	1.5	1.3	1.0	0.8	0.8	0.7	0.6	0.5	0.7	0.9	1.4	1.8	1.8	1.4	1.1	1.0	0.5	0.0	-0.1	-0.3	-0.4	-0.6	1.8	-0.6	0.8
31	-0.6	-0.8	-1.0	-1.1	-1.2	-1.3	-1.5	-1.6	-2.1	-1.7	-1.5	-1.7	-1.4	-1.3	-1.7	-1.4	-1.7	-2.2	-2.2	-2.4	-2.5	-2.8	-3.0	-3.6	-0.6	-3.6	-1.8
Max.	**8.2**	**8.2**	**8.1**	**8.1**	**8.2**	**8.2**	**8.4**	**8.8**	**9.0**	**9.1**	**9.4**	**9.8**	**10.2**	**10.4**	**10.9**	**11.2**	**9.8**	**9.3**	**9.2**	**9.3**	**9.4**	**9.4**	**9.8**	**9.3**	**11.2**		
Min.	**-2.1**	**-1.7**	**-1.8**	**-2.3**	**-2.2**	**-2.2**	**-1.8**	**-2.1**	**-2.4**	**-1.7**	**-1.5**	**-1.7**	**-1.4**	**-1.3**	**-1.7**	**-1.4**	**-1.7**	**-2.2**	**-2.2**	**-2.4**	**-2.5**	**-2.8**	**-3.0**	**-3.6**		**-3.6**	
Avg.	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.5**	**3.6**	**3.5**	**3.6**	**4.1**	**4.6**	**4.9**	**5.3**	**5.6**	**5.7**	**5.6**	**5.2**	**4.7**	**4.3**	**4.2**	**3.9**	**3.7**	**3.6**	**3.3**			**4.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-3.4	-3.1	-2.4	-2.6	-3.1	-3.0	-2.9	-2.8	-2.7	-2.3	-1.5	-0.8	-0.2	0.0	0.2	0.0	-0.3	-0.4	-0.6	-0.5	-0.7	-0.8	-1.0	-1.2	0.2	-3.4	-1.5
2	-1.3	-1.3	-0.9	-0.9	-1.3	-1.6	-1.9	-2.3	-2.8	-1.4	-1.1	-0.8	0.4	1.3	1.5	1.9	1.6	1.2	1.1	0.9	0.6	0.1	0.3	-0.4	1.9	-2.8	-0.3
3	-0.1	-0.5	-0.3	0.4	0.6	-0.5	-0.2	-0.3	-0.7	-0.7	-0.7	-1.1	-2.6	-3.4	-4.5	-4.7	-4.8	-5.4	-5.7	-5.8	-5.9	-6.0	-5.7	-6.0	0.6	-6.0	-2.7
4	-6.2	-6.6	-7.0	-7.0	-6.9	-6.3	-6.1	-5.8	-6.0	-6.3	-6.2	-5.8	-5.3	-4.7	-4.8	-4.9	-5.1	-5.1	-5.4	-5.6	-5.6	-6.0	-6.6	-6.8	-4.7	-7.0	-5.9
5	-7.0	-7.8	-7.5	-7.4	-7.1	-7.0	-7.0	-6.9	-6.5	-6.3	-5.9	-5.4	-4.8	-3.5	-2.8	-2.9	-3.2	-3.5	-3.5	-3.6	-4.1	-4.0	-4.0	-4.2	-2.8	-7.8	-5.2
6	-3.7	-3.9	-4.2	-4.6	-4.7	-4.2	-3.0	-1.4	-0.3	0.0	-0.4	-0.1	-0.4	-1.1	-1.1	-1.4	-1.8	-2.2	-2.6	-2.9	-3.9	-4.7	-5.2	-6.1	0.0	-6.1	-2.7
7	-6.7	-7.1	-6.7	-6.9	-7.9	-8.0	-8.6	-9.7	-8.9	-9.0	-8.7	-8.1	-7.7	-7.5	-6.8	-6.6	-6.8	-7.4	-7.3	-7.4	-7.6	-7.8	-7.6	-7.2	-6.6	-9.7	-7.7
8	-6.9	-6.7	-6.7	-6.8	-7.3	-7.3	-7.1	-7.1	-7.0	-6.4	-5.7	-4.9	-4.3	-3.8	-3.3	-3.3	-4.3	-5.2	-5.2	-4.7	-4.7	-4.8	-4.2	-3.9	-3.3	-7.3	-5.5
9	-3.6	-3.5	-3.5	-3.7	-3.7	-3.8	-3.8	-3.6	-3.4	-3.1	-2.6	-2.2	-2.0	-1.8	-1.8	-2.0	-2.2	-2.6	-2.9	-3.0	-3.2	-3.1	-2.7	-2.8	-1.8	-3.8	-2.9
10	-2.7	-2.7	-2.4	-2.3	-2.7	-2.9	-2.5	-2.2	-3.1	-3.2	-3.0	-3.0	-2.9	-2.8	-3.2	-3.6	-3.8	-4.3	-4.5	-4.7	-4.7	-4.3	-3.8	-3.7	-2.2	-4.7	-3.3
11	-3.8	-3.8	-4.0	-4.3	-5.0	-5.2	-5.3	-5.3	-5.4	-5.4	-5.1	-4.8	-4.8	-4.7	-4.6	-4.7	-5.0	-5.2	-5.1	-5.1	-5.0	-4.7	-4.3	-3.9	-3.8	-5.4	-4.8
12	-3.9	-3.9	-3.7	-3.2	-2.8	-2.4	-2.4	-1.9	-1.3	-1.0	-0.3	0.1	0.2	0.1	0.1	-0.1	-1.0	-2.3	-2.8	-3.3	-3.5	-3.4	-3.3	-2.8	0.2	-3.9	-2.0
13	-3.0	-2.8	-2.5	-2.1	-2.2	-2.6	-2.6	-2.7	-2.6	-2.7	-2.5	-2.1	-2.0	-1.9	-2.0	-2.1	-2.1	-2.6	-2.6	-2.4	-1.6	-1.8	-2.8	-2.8	-1.6	-3.0	-2.4
14	-3.0	-3.0	-2.8	-2.5	-2.0	-2.2	-1.3	-1.3	-0.7	-0.1	1.0	1.2	2.0	2.5	2.9	3.1	2.9	2.7	2.6	2.5	2.2	2.4	3.0	3.6	3.6	-3.0	0.6
15	3.8	4.0	4.1	4.0	3.8	3.2	2.5	2.5	2.6	1.9	2.4	2.3	3.3	4.5	4.2	4.1	3.5	3.0	2.7	2.3	1.4	0.2	-0.1	-0.2	4.5	-0.2	2.7
16	0.0	1.8	2.6	2.0	1.4	1.1	0.9	1.3	2.3	2.7	2.7	2.7	2.9	2.9	3.1	3.2	2.9	2.6	2.9	3.4	3.2	3.0	3.7	3.1	3.7	0.0	2.4
17	3.1	3.5	3.3	3.2	3.0	2.7	2.9	2.8	2.6	2.5	2.5	2.9	3.8	4.4	4.6	4.0	3.3	2.8	2.1	1.7	0.9	0.6	0.7	1.3	4.6	0.6	2.7
18	2.9	2.3	2.9	3.5	2.3	2.2	2.5	2.9	3.1	3.5	3.9	4.0	3.8	3.6	3.5	3.8	4.2	4.0	3.8	3.6	0.1	-1.3	-1.7	-1.6	4.2	-1.7	2.6
19	-1.7	-1.6	-1.1	-1.2	-1.8	-1.9	-1.6	-1.2	-1.5	-1.9	-2.0	-2.0	-2.3	-2.6	-2.9	-3.0	-3.2	-3.4	-3.5	-3.8	-3.9	-4.6	-5.2	-5.4	-1.1	-5.4	-2.6
20	-5.7	-5.8	-5.8	-5.5	-5.1	-4.9	-4.7	-4.5	-4.0	-3.6	-2.4	-1.8	-1.3	-1.2	-1.4	-1.9	-2.3	-2.8	-2.9	-3.0	-3.0	-3.0	-3.3	-3.4	-1.2	-5.8	-3.5
21	-3.8	-4.2	-4.4	-4.3	-3.3	-2.6	-2.5	-2.5	-2.4	-2.5	-2.7	-3.0	-3.5	-3.8	-4.0	-4.1	-4.5	-5.1	-5.4	-5.5	-6.0	-6.3	-6.3	-6.3	-2.4	-6.3	-4.1
22	-6.5	-6.8	-7.2	-7.6	-7.9	-8.7	-8.1	-7.6	-7.6	-7.0	-6.9	-6.8	-6.5	-6.7	-6.5	-6.4	-7.1	-7.3	-7.3	-6.5	-6.3	-6.5	-6.6	-6.8	-6.3	-8.7	-7.1
23	-7.2	-7.3	-7.6	-8.2	-8.7	-9.6	-10.7	-11.5	-12.3	-13.6	-13.4	-13.5	-14.0	-14.2	-14.4	-14.7	-14.8	-14.8	-14.9	-14.9	-14.7	-14.4	-14.5	-14.7	-7.2	-14.9	-12.4
24	-14.7	-14.5	-14.4	-14.0	-13.6	-13.7	-13.2	-13.3	-13.3	-13.0	-12.5	-12.4	-12.5	-12.6	-12.8	-13.3	-14.2	-14.7	-15.7	-15.7	-15.5	-15.3	-15.2	-15.5	-12.4	-15.7	-14.0
25	-15.5	-15.4	-15.4	-15.2	-14.9	-15.0	-15.0	-15.1	-15.4	-15.5	-15.1	-14.6	-14.1	-14.2	-14.1	-13.9	-13.7	-13.2	-12.9	-12.8	-12.7	-12.5	-12.2	-11.8	-11.8	-15.5	-14.2
26	-11.6	-11.3	-11.0	-10.8	-10.1	-10.0	-9.9	-9.8	-9.3	-9.0	-8.5	-8.2	-8.1	-8.0	-8.1	-8.2	-8.4	-8.5	-8.6	-8.5	-9.0	-9.3	-9.6	-9.5	-8.0	-11.6	-9.3
27	-9.5	-9.6	-9.7	-10.0	-10.1	-10.7	-10.6	-10.2	-10.3	-9.9	-9.4	-9.0	-8.7	-8.6	-8.2	-8.2	-8.6	-9.3	-9.8	-9.9	-9.8	-9.2	-8.9	-8.9	-8.2	-10.7	-9.5
28	-8.6	-8.4	-7.9	-8.2	-8.0	-8.5	-8.6	-8.9	-8.7	-8.3	-7.2	-6.2	-5.5	-5.1	-4.9	-4.8	-4.9	-5.0	-5.0	-5.0	-5.5	-5.5	-5.4	-5.2	-4.8	-8.9	-6.6
29	-5.3	-5.0	-5.3	-5.5	-5.4	-5.5	-5.4	-5.3	-5.0	-5.1	-5.0	-3.4	-0.7	-1.1	-0.7	-0.1	-0.1	-0.6	-0.7	-0.9	-0.2	-0.1	-0.5	-0.6	-0.1	-5.5	-2.8
30	-0.1	-0.1	-0.4	-0.1	-0.3	-1.0	-0.5	-0.6	-0.7	-0.5	0.9	0.3	-0.1	-0.1	0.1	-0.2	-0.7	-1.2	-1.4	-1.6	-1.3	-1.2	-1.9	-1.8	0.9	-1.9	-0.6
Max.	**3.8**	**4.0**	**4.1**	**4.0**	**3.8**	**3.2**	**2.9**	**2.9**	**3.1**	**3.5**	**3.9**	**4.0**	**3.8**	**4.5**	**4.6**	**4.1**	**4.2**	**4.0**	**3.8**	**3.6**	**3.2**	**3.0**	**3.7**	**3.6**	**4.6**		
Min.	**-15.5**	**-15.4**	**-15.4**	**-15.2**	**-14.9**	**-15.0**	**-15.0**	**-15.1**	**-15.4**	**-15.5**	**-15.1**	**-14.6**	**-14.1**	**-14.2**	**-14.4**	**-14.7**	**-14.8**	**-14.8**	**-15.7**	**-15.7**	**-15.5**	**-15.3**	**-15.2**	**-15.5**		**-15.7**	
Avg.	**-4.5**	**-4.5**	**-4.4**	**-4.4**	**-4.5**	**-4.7**	**-4.6**	**-4.5**	**-4.4**	**-4.2**	**-3.8**	**-3.6**	**-3.3**	**-3.1**	**-3.1**	**-3.2**	**-3.5**	**-3.9**	**-4.0**	**-4.1**	**-4.3**	**-4.5**	**-4.5**	**-4.5**			**-4.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-2.1	-2.2	-2.3	-2.3	-2.3	-3.0	-3.6	-3.9	-4.3	-4.6	-4.6	-3.9	-3.8	-4.2	-4.2	-4.5	-5.0	-4.4	-5.5	-5.4	-5.6	-5.3	-5.0	-5.1	-2.1	-5.6	-4.0
2	-5.4	-5.8	-5.2	-5.2	-5.4	-5.1	-4.9	-5.7	-7.6	-8.6	-8.8	-8.9	-8.6	-8.3	-8.6	-9.1	-9.6	-10.1	-10.4	-10.1	-10.1	-10.3	-10.9	-11.1	-4.9	-11.1	-8.1
3	-11.1	-11.3	-11.5	-11.9	-11.7	-11.4	-11.6	-11.7	-11.7	-11.9	-11.8	-11.6	-11.4	-11.5	-11.5	-11.5	-11.5	-11.0	-11.3	-11.5	-11.8	-12.4	-12.1	-12.2	-11.0	-12.4	-11.6
4	-12.3	-11.9	-11.6	-10.8	-10.2	-9.5	-8.9	-7.2	-6.8	-6.7	-7.0	-6.9	-6.5	-6.0	-5.6	-5.2	-4.6	-4.6	-5.0	-5.1	-4.5	-4.5	-3.4	-3.5	-3.4	-12.3	-7.0
5	-4.2	-4.1	-4.3	-4.0	-2.4	-3.1	-1.9	-0.7	0.3	0.9	0.5	0.4	0.0	0.3	0.3	0.7	0.8	0.9	1.3	1.9	2.8	3.0	2.5	2.5	3.0	-4.3	-0.2
6	2.9	3.2	3.4	2.7	2.3	2.5	3.1	3.3	3.2	2.6	3.0	2.8	3.3	3.1	2.2	0.9	1.0	1.5	1.5	1.9	2.4	2.8	3.6	4.8	4.8	0.9	2.7
7	4.6	4.0	3.1	2.8	3.2	3.6	3.5	3.4	3.2	3.0	3.5	3.3	3.3	3.2	3.1	3.1	3.3	3.8	4.3	4.3	4.3	4.0	4.0	4.0	4.6	2.8	3.6
8	4.1	4.9	5.1	4.5	3.6	3.2	2.7	2.4	2.5	2.6	3.8	5.6	6.0	6.1	5.5	5.6	5.5	5.2	5.3	5.7	5.6	5.7	5.7	5.6	6.1	2.4	4.7
9	5.5	5.7	5.9	5.9	5.8	5.7	5.6	5.5	4.1	3.3	3.7	4.7	5.4	5.8	6.1	5.3	5.7	5.7	5.3	4.3	3.4	3.5	3.2	3.6	6.1	3.2	4.9
10	3.3	2.6	3.0	3.1	3.3	3.6	3.1	3.1	3.0	3.0	4.5	4.9	5.1	5.5	5.8	5.5	4.7	4.5	4.7	4.4	3.7	3.0	2.6	3.1	5.8	2.6	3.9
11	3.3	3.1	2.7	2.1	2.2	3.0	2.3	0.5	-0.6	-0.7	-0.9	-1.9	-2.5	-2.9	-3.4	-4.1	-4.4	-4.9	-5.1	-5.2	-5.2	-5.3	-5.0	-4.9	3.3	-5.3	-1.6
12	-4.8	-5.3	-5.8	-5.8	-5.9	-5.4	-5.6	-5.6	-5.6	-5.4	-4.5	-3.6	-2.6	-2.7	-2.8	-2.0	-3.2	-2.7	-4.3	-4.6	-5.2	-5.9	-5.1	-4.9	-2.0	-5.9	-4.5
13	-4.6	-4.0	-4.3	-4.0	-4.1	-4.0	-3.5	-2.9	-2.5	-2.4	-2.0	-1.7	-1.5	-1.5	-1.1	-1.0	-0.7	0.2	0.5	0.3	0.2	0.6	0.8	1.0	1.0	-4.6	-1.8
14	1.1	1.2	1.4	1.7	1.8	2.1	2.5	2.7	3.0	3.3	3.6	4.0	4.4	4.4	4.4	3.4	1.7	1.2	1.0	0.9	0.9	1.2	1.5	2.0	4.4	0.9	2.3
15	2.4	3.4	3.6	4.3	4.7	4.4	4.3	3.8	4.3	4.7	4.6	4.5	4.2	4.6	4.5	4.8	4.8	4.9	5.4	5.2	5.2	6.7	7.1	7.1	7.1	2.4	4.7
16	7.1	7.1	7.1	6.9	6.8	6.8	6.7	6.6	6.6	6.6	6.6	6.3	5.9	6.0	5.7	4.9	4.3	3.5	2.6	2.2	1.6	2.1	2.6	2.5	7.1	1.6	5.2
17	2.4	1.7	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.6	2.5	4.5	5.3	5.7	5.5	4.9	4.5	4.3	4.6	5.0	5.8	5.7	5.5	5.8	1.2	3.3
18	5.4	5.7	6.1	6.2	6.2	6.7	5.3	4.8	5.1	5.3	5.4	6.3	6.8	6.9	7.0	7.6	8.0	7.5	7.1	7.4	7.1	7.0	6.6	6.9	8.0	4.8	6.4
19	7.3	7.6	7.5	7.4	7.3	7.0	6.9	6.4	6.4	6.4	6.5	6.7	6.9	6.6	6.4	5.7	4.5	4.0	4.9	5.4	5.1	4.7	3.6	3.9	7.6	3.6	6.0
20	3.6	2.6	3.4	4.0	3.8	3.7	3.3	1.9	0.7	0.1	0.0	1.6	1.7	2.1	1.9	1.9	1.3	0.5	-0.6	-0.2	0.0	-0.1	-0.6	-0.2	4.0	-0.6	1.5
21	0.3	-0.4	-0.6	-0.2	0.1	0.1	0.0	-0.2	-0.4	0.3	0.7	0.6	0.3	-0.1	0.0	0.1	0.1	0.2	0.5	0.6	0.7	0.7	0.4	0.2	0.7	-0.6	0.2
22	0.1	-0.1	0.0	0.2	0.1	-0.1	-0.3	-0.6	-0.6	-0.3	-0.1	0.1	0.0	0.0	0.3	0.5	0.7	0.9	1.2	1.1	1.1	1.1	1.1	1.1	1.2	-0.6	0.3
23	1.2	0.9	0.9	0.9	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	0.9	0.7	0.9	1.0	1.2	1.3	1.6	1.8	1.8	0.7	1.0
24	1.8	2.1	1.6	1.7	1.7	1.9	2.1	2.0	2.2	2.4	2.0	2.3	2.4	2.7	1.8	1.8	1.8	3.0	3.8	4.2	4.2	4.1	3.4	3.4	4.2	1.6	2.5
25	3.5	3.4	3.8	3.4	3.4	3.1	2.8	2.8	3.3	3.9	4.0	4.8	4.7	4.7	4.8	5.2	5.5	5.5	5.4	5.7	5.7	5.6	5.0	4.4	5.7	2.8	4.3
26	3.5	2.1	2.4	2.8	2.9	2.7	2.8	3.1	4.0	4.6	4.2	4.3	4.3	4.4	4.5	4.4	4.4	4.6	4.1	4.3	5.3	5.0	4.9	5.1	5.3	2.1	3.9
27	5.6	5.9	6.1	6.1	6.0	6.4	6.3	5.6	6.1	7.0	7.1	7.4	7.3	7.2	6.1	6.5	7.0	7.4	7.6	8.1	7.8	7.5	6.8	6.0	8.1	5.6	6.7
28	6.2	5.9	6.0	6.3	5.8	5.9	5.0	4.7	5.5	5.6	5.6	6.2	6.5	6.4	6.4	6.4	6.2	6.3	6.6	6.5	6.2	5.8	4.7	4.1	6.6	4.1	5.9
29	3.2	3.0	2.6	2.2	2.1	2.6	2.9	2.9	2.8	3.3	3.1	3.6	4.0	4.1	3.8	3.2	2.8	2.9	3.0	3.3	4.3	4.8	5.0	5.1	5.1	2.1	3.4
30	5.1	5.0	5.3	5.5	5.7	5.8	6.0	5.1	4.9	4.9	4.5	4.6	6.3	6.9	7.1	7.6	7.4	7.0	7.1	6.9	6.8	6.8	6.8	6.6	7.6	4.5	6.1
31	6.5	6.5	6.4	5.9	5.4	4.7	4.9	4.9	4.9	4.5	4.9	5.1	5.2	4.7	5.1	4.7	4.6	4.0	4.1	4.0	4.3	4.1	4.2	3.9	6.5	3.9	4.9
Max.	**7.3**	**7.6**	**7.5**	**7.4**	**7.3**	**7.0**	**6.9**	**6.6**	**6.6**	**7.0**	**7.1**	**7.4**	**7.3**	**7.2**	**7.1**	**7.6**	**8.0**	**7.5**	**7.6**	**8.1**	**7.8**	**7.5**	**7.1**	**7.1**	**8.1**		
Min.	**-12.3**	**-11.9**	**-11.6**	**-11.9**	**-11.7**	**-11.4**	**-11.6**	**-11.7**	**-11.7**	**-11.9**	**-11.8**	**-11.6**	**-11.4**	**-11.5**	**-11.5**	**-11.5**	**-11.5**	**-11.0**	**-11.3**	**-11.5**	**-11.8**	**-12.4**	**-12.1**	**-12.2**		**-12.4**	
Avg.	**1.5**	**1.4**	**1.4**	**1.4**	**1.4**	**1.5**	**1.4**	**1.3**	**1.2**	**1.3**	**1.4**	**1.8**	**2.0**	**2.1**	**2.0**	**1.9**	**1.7**	**1.7**	**1.6**	**1.7**	**1.7**	**1.7**	**1.7**	**1.7**			**1.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.5	2.5	1.9	2.3	3.2	3.3	3.8	3.8	3.7	3.9	4.0	3.7	3.8	4.2	3.9	3.9	3.9	4.1	4.0	4.0	4.0	3.5	3.3	3.3	4.2	1.9	3.6
2	3.9	3.7	3.5	3.1	3.3	3.8	4.0	4.3	3.4	2.5	2.0	2.3	3.0	2.7	3.1	3.3	3.1	2.6	1.9	1.8	1.8	1.9	1.8	2.2	4.3	1.8	2.9
3	1.8	2.0	1.3	1.0	1.4	1.7	1.8	2.3	2.0	2.4	2.1	2.9	2.9	2.9	3.0	3.3	3.0	3.2	3.3	3.0	3.5	3.5	3.0	2.5	3.5	1.0	2.5
4	2.8	3.1	2.2	0.8	0.5	0.1	-0.4	-1.3	-2.0	-2.2	-0.8	-0.4	-0.5	-0.4	-0.5	-0.5	-0.6	-1.1	-1.5	-1.5	-0.6	-0.5	-0.4	-0.3	3.1	-2.2	-0.2
5	0.6	2.4	3.3	3.4	3.1	3.3	3.4	2.8	2.1	0.6	0.0	0.8	1.0	0.4	0.1	0.1	-0.4	-1.4	-1.5	-1.6	-2.1	-2.2	-2.8	-3.2	3.4	-3.2	0.5
6	-3.1	-3.1	-2.2	-2.9	-3.3	-3.2	-2.7	-2.7	-2.9	-2.8	-2.2	-0.8	-1.1	-0.9	-0.7	-0.6	-0.8	-1.1	-0.9	-0.7	-1.0	-1.3	-1.2	-1.4	-0.6	-3.3	-1.8
7	-0.3	-1.4	-2.3	-2.1	-2.6	-2.8	-2.6	-2.3	-1.4	-0.8	2.7	4.5	4.5	3.7	2.6	2.7	3.0	2.6	2.7	3.7	3.8	3.7	3.5	3.4	4.5	-2.8	1.2
8	4.1	4.6	4.6	4.5	4.7	4.4	4.0	4.0	4.3	4.6	5.2	4.9	5.1	5.2	3.7	3.2	2.6	2.0	1.2	1.4	0.9	0.4	0.5	0.1	5.2	0.1	3.3
9	-0.2	0.2	0.5	0.4	0.1	0.2	0.2	0.1	0.4	0.3	0.3	0.5	0.9	1.0	0.9	0.7	0.3	0.0	-0.3	-1.0	-0.8	-0.6	-0.5	-0.1	1.0	-1.0	0.1
10	0.1	0.0	0.1	0.0	0.0	0.2	0.3	-0.1	-0.4	-0.2	0.6	0.7	0.9	0.9	0.7	0.3	-0.6	-1.2	-1.5	-1.8	-2.0	-2.1	-2.2	-2.2	0.9	-2.2	-0.4
11	-2.6	-2.8	-2.3	-2.4	-2.2	-2.3	-2.6	-2.7	-2.8	-2.8	-2.4	-1.9	-1.6	-1.5	-1.4	-1.5	-1.6	-1.7	-2.0	-2.2	-2.7	-2.7	-2.8	-2.7	-1.4	-2.8	-2.3
12	-2.9	-2.7	-2.9	-2.9	-2.9	-3.2	-3.8	-4.0	-4.0	-4.3	-4.6	-4.0	-3.9	-3.9	-4.1	-4.4	-4.6	-5.0	-5.4	-5.5	-5.5	-5.6	-5.7	-5.7	-2.7	-5.7	-4.2
13	-5.7	-5.8	-6.0	-6.5	-6.6	-6.6	-6.9	-7.3	-7.7	-7.9	-7.9	-7.3	-7.0	-6.9	-7.2	-7.5	-8.0	-8.7	-9.3	-9.2	-9.2	-8.7	-9.0	-8.8	-5.7	-9.3	-7.6
14	-8.3	-7.9	-7.7	-7.3	-6.4	-5.1	-4.1	-3.8	-4.0	-3.9	-4.0	-3.8	-3.8	-3.6	-3.5	-4.2	-4.3	-4.3	-4.3	-4.4	-4.5	-4.3	-4.4	-4.4	-3.5	-8.3	-4.8
15	-4.3	-4.0	-3.9	-3.5	-3.2	-3.1	-3.1	-2.2	-1.4	-1.4	-0.4	-0.7	0.0	0.2	0.4	0.7	1.1	0.6	0.6	0.6	0.7	1.0	0.9	1.2	1.2	-4.3	-1.0
16	1.3	1.4	1.7	2.0	2.2	2.5	2.4	2.5	2.5	2.7	2.9					1.8	1.0	0.3	-0.5	-0.7	-1.2	-1.7	-1.7	-2.1	2.9	-2.1	1.0
17	-2.7	-2.5	-1.9	-1.8	-1.7	-1.9	-1.3	-1.1	-1.3	-1.4	-1.6	-1.4	-1.4	-1.3	-0.2	-0.2	-0.4	-1.2	-1.3	-2.3	-4.2	-5.8	-6.7	-7.1	-0.2	-7.1	-2.2
18	-7.2	-7.1	-6.9	-6.8	-7.0	-7.2	-7.3	-7.9	-7.9	-8.3	-8.3	-7.7	-7.5	-7.5	-7.3	-7.2	-7.7	-8.6	-9.1	-10.0	-10.3	-10.2	-10.0	-9.8	-6.8	-10.3	-8.1
19	-10.5	-10.6	-10.0	-9.9	-10.3	-11.4	-11.5	-11.5	-11.3	-11.4	-11.1	-10.8	-11.3	-11.2	-11.1	-11.2	-11.4	-11.3	-11.4	-11.6	-12.5	-11.8	-11.1	-11.0	-9.9	-12.5	-11.1
20	-11.5	-11.3	-10.7	-10.5	-10.2	-10.0	-10.2	-10.5	-10.4	-10.7	-10.7	-10.2	-9.6	-9.2	-8.7	-8.6	-8.5	-8.4	-8.6	-8.7	-8.7	-8.7	-8.7	-8.6	-8.4	-11.5	-9.7
21	-8.6	-8.4	-7.9	-7.2	-6.7	-6.5	-5.7	-5.3	-4.7	-4.5	-4.8	-5.2	-5.1	-5.3	-6.0	-6.9	-7.2	-8.7	-9.3	-10.0	-13.1	-14.6	-16.0	-17.4	-4.5	-17.4	-8.1
22	-19.2	-20.4	-21.3	-21.7	-22.4	-23.3	-23.5	-23.8	-23.4	-23.5	-23.4	-23.5	-23.4	-22.7	-22.6	-22.6	-22.4	-22.3	-21.9	-21.7	-21.2	-20.9	-20.5	-20.2	-19.2	-23.8	-22.1
23	-20.1	-20.1	-19.3	-19.4	-19.3	-19.0	-19.1	-19.1	-18.8	-18.4	-18.2	-18.5	-18.1	-18.4	-18.3	-18.4	-19.0	-19.1	-19.0	-19.2	-18.8	-18.6	-18.4	-18.5	-18.1	-20.1	-18.9
24	-18.1	-18.1	-18.0	-18.2	-18.2	-18.4	-18.5	-18.1	-18.0	-18.2	-17.8	-17.4	-16.6	-16.1	-15.9	-15.9	-16.5	-17.0	-17.2	-17.3	-17.6	-17.8	-17.8	-17.8	-15.9	-18.5	-17.5
25	-18.0	-17.9	-18.2	-18.5	-18.5	-18.5	-18.4	-18.6	-18.5	-18.1	-17.1	-15.8	-14.7	-13.9	-13.5	-13.7	-15.3	-16.4	-17.0	-17.7	-18.0	-18.6	-18.8	-18.8	-13.5	-18.8	-17.2
26	-18.8	-18.7	-18.8	-19.0	-19.2	-19.4	-19.5	-19.8	-20.0	-19.7	-19.1	-18.9	-18.7	-18.0	-18.0	-17.4	-17.6	-18.0	-18.1	-18.1	-17.9	-18.1	-18.6	-18.2	-17.4	-20.0	-18.6
27	-19.1	-18.2	-19.4	-20.8	-21.3	-22.1	-22.3	-22.7	-22.6	-22.0	-22.2	-22.2	-22.7	-22.7	-23.0	-23.5	-24.1	-23.9	-23.7	-24.0	-23.6	-22.7	-23.0	-22.6	-18.2	-24.1	-22.3
28	-22.7	-22.5	-22.6	-22.6	-23.0	-22.7	-22.8	-22.2	-22.0	-22.0	-21.5	-22.2	-21.5	-20.4	-17.9	-19.8	-20.5	-20.8	-21.2	-21.1	-20.8	-20.7	-21.1	-21.4	-17.9	-23.0	-21.5
29	-21.1	-21.2	-20.8	-20.8	-20.7	-20.5	-20.4	-20.4	-20.6	-20.8	-20.5	-19.8	-19.4	-18.6	-18.0	-17.5	-17.5	-18.5	-18.6	-18.4	-18.7	-19.0	-19.1	-18.8	-17.5	-21.2	-19.6
30	-18.4	-18.6	-18.7	-18.9	-18.7	-18.5	-18.1	-17.8	-18.4	-18.6	-18.8	-18.2	-16.8	-15.7	-14.7	-13.7	-13.8	-14.5	-14.6	-14.4	-12.0	-10.8	-10.1	-9.2	-9.2	-18.9	-15.9
31	-8.8	-8.7	-8.7	-8.7	-8.9	-9.2	-9.2	-9.4	-9.6	-10.7	-11.4	-11.5	-11.2	-10.8	-11.3	-11.2	-11.6	-12.0	-13.3	-14.7	-15.1	-15.7	-16.3	-16.6	-8.7	-16.6	-11.4
Max.	**4.1**	**4.6**	**4.6**	**4.5**	**4.7**	**4.4**	**4.0**	**4.3**	**4.3**	**4.6**	**5.2**	**4.9**	**5.1**	**5.2**	**3.9**	**3.9**	**3.9**	**4.1**	**4.0**	**4.0**	**4.0**	**3.7**	**3.5**	**3.4**	**5.2**		
Min.	**-22.7**	**-22.5**	**-22.6**	**-22.6**	**-23.0**	**-23.3**	**-23.5**	**-23.8**	**-23.4**	**-23.5**	**-23.4**	**-23.5**	**-23.4**	**-22.7**	**-23.0**	**-23.5**	**-24.1**	**-23.9**	**-23.7**	**-24.0**	**-23.6**	**-22.7**	**-23.0**	**-22.6**		**-24.1**	
Avg.	**-7.5**	**-7.5**	**-7.5**	**-7.6**	**-7.6**	**-7.6**	**-7.5**	**-7.6**	**-7.6**	**-7.7**	**-7.4**	**-7.4**	**-7.1**	**-6.9**	**-6.8**	**-6.7**	**-7.0**	**-7.4**	**-7.7**	**-7.8**	**-8.0**	**-8.0**	**-8.2**	**-8.2**			**-7.5**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-16.6	-16.6	-16.2	-16.1	-15.7	-16.0	-15.9	-16.3	-16.7	-18.1	-18.1	-17.5	-17.0	-17.3	-18.0	-18.0	-17.3	-18.8	-18.8	-19.0	-19.4	-19.3	-19.0	-18.0	-15.7	-19.4	-17.5
2	-18.3	-19.2	-19.3	-19.4	-19.5	-18.7	-19.0	-19.1	-19.4	-18.9	-17.9	-16.7	-17.6	-17.8	-17.5	-16.9	-17.3	-18.1	-17.8	-18.1	-17.8	-16.6	-15.1	-13.6	-13.6	-19.5	-17.9
3	-13.1	-12.1	-12.0	-11.8	-11.4	-10.9	-10.6	-10.4	-10.2	-9.8	-9.6	-9.5	-9.5	-9.2	-8.6	-7.9	-7.8	-7.6	-7.3	-7.1	-7.0	-7.0	-6.6	-6.2	-6.2	-13.1	-9.3
4	-6.0	-6.0	-5.9	-6.2	-6.3	-5.3	-4.9	-4.8	-4.5	-4.2	-3.7	-3.2	-3.1	-3.1	-3.3	-3.3	-3.0	-2.9	-3.0	-3.2	-3.1	-2.9	-2.9	-3.1	-2.9	-6.3	-4.1
5	-3.1	-2.9	-2.6	-2.6	-2.8	-2.9	-2.6	-2.3	-2.3	-1.4	-1.2	-1.5	-1.0	-0.2	0.1	1.2	1.6	2.0	0.9	0.6	0.7	0.2	0.4	0.8	2.0	-3.1	-0.9
6	1.1	1.3	1.1	1.1	1.4																				1.4	1.1	1.2
7					-3.7	-4.3	-5.2	-3.7	-2.4	-2.6	-3.0	-2.8	-3.2	-3.6	-3.8	-3.7	-4.2	-4.3	-4.7	-4.5	-4.3	-4.3	-4.3	-3.7	-2.4	-5.2	-3.8
8	-3.3	-3.2	-5.9	-5.5	-7.2	-7.1	-7.1	-6.9	-5.8	-2.8	-2.2	-2.3	-1.7	-1.8	-1.0	-0.7	-1.1	-1.7	-1.1	-1.3	-0.6	-0.3	0.0	0.3	0.3	-7.2	-2.9
9	0.4	0.3	0.1	-0.3	-0.9	-0.8	-1.8	-1.5	-1.6	-1.7	-1.5	-1.0	-0.3	0.3	0.9	1.1	1.9	2.4	2.5	2.6	2.8	1.9	2.4	2.4	2.8	-1.8	0.4
10	2.1	2.3	2.7	3.5	2.4	2.1	1.3	1.1	0.9	0.9	1.2	2.1	1.7	1.6	2.7	3.8	3.5	3.3	3.2	3.3	3.4	3.4	3.1	1.3	3.8	0.9	2.4
11	1.3	2.3	2.7	2.0	3.1	2.4	2.1	2.6	3.3	3.7	2.8	2.2	2.0	2.4	3.0	3.2	3.3	3.1	3.5	3.7	4.2	4.6	4.7	5.0	5.0	1.3	3.1
12	4.7	4.6	4.1	1.9	1.8	2.7	2.5	1.7	1.4	1.6	1.2	0.3	-0.1	-0.7	-1.1	-1.4	-1.7	-2.2	-2.9	-3.0	-2.6	-1.8	-1.5	-2.2	4.7	-3.0	0.3
13	-3.5	-5.2	-5.4	-5.4	-5.0	-4.2	-3.8	-3.9	-3.6	-2.8	-1.8	-1.8	-1.3	0.6	0.3	1.4	0.9	2.0	2.1	2.6	3.0	3.4	3.3	3.5	3.5	-5.4	-1.0
14	3.5	4.1	4.1	4.4	4.3	4.2	4.2	4.3	3.7	3.3	3.4	3.2	3.5	3.7	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.6	3.6	4.4	3.2	3.8
15	4.1	4.7	4.5	5.4	5.8	5.7	5.6	5.6	6.1	6.3	6.2	4.6	2.0	4.6	4.6	4.6	4.4	4.0	2.3	1.5	2.1	2.0	1.5	0.3	6.3	0.3	4.1
16	0.1	0.2	0.3	0.3	0.6	0.9	1.3	1.4	0.8	0.4	0.8	0.9	0.5	1.1	0.8	1.6	2.7	2.2	1.9	1.0	0.2	-0.1	0.1	0.2	2.7	-0.1	0.8
17	0.2	0.8	1.1	1.3	1.4	1.9	2.5	2.1	1.7	1.8	2.3	2.7	3.4	3.4	3.3	3.0	2.7	2.3	2.3	2.2	2.1	2.3	3.0	2.9	3.4	0.2	2.2
18	3.0	2.3	2.0	2.3	2.4	2.3	2.8	2.2	3.6	3.8	3.8	3.4	3.0	2.8	3.0	2.6	2.4	1.9	0.9	0.5	0.6	0.2	0.2	0.5	3.8	0.2	2.2
19	0.6	1.2	4.0	3.3	2.7	2.2	1.8	1.6	1.1	0.6	0.7	1.1	1.8	2.1	2.1	2.1	2.1	2.3	2.4	2.3	1.8	1.4	1.2	1.0	4.0	0.6	1.8
20	0.7	0.5	0.4	0.2	0.3	0.4	0.4	0.4	0.1	0.4	1.1	1.5	1.9	1.4	0.9	0.9	0.8	0.8	0.8	0.2	-0.4	-1.0	-1.5	-2.2	1.9	-2.2	0.4
21	-2.1	-2.6	-3.0	-3.6	-3.9	-4.1	-4.4	-4.8	-4.9	-4.0	-3.4	-2.7	-2.5	-2.4	-2.3	-2.4	-2.3	-2.3	-2.4	-2.5	-2.5	-2.4	-2.3	-2.3	-2.1	-4.9	-3.0
22	-2.4	-2.6	-3.0	-3.1	-3.5	-4.1	-3.5	-3.6	-3.6	-3.4	-2.8	-2.2	-1.7	-1.6	-1.6	-1.5	-1.7	-2.2	-3.3	-3.9	-3.4	-3.2	-2.9	-3.0	-1.5	-4.1	-2.8
23	-3.1	-3.5	-3.4	-3.7	-3.6	-3.7	-3.8	-3.5	-3.4	-2.4	-1.6	-1.6	-1.3	-1.0	-1.5	-1.5	-1.5	-2.0	-2.5	-3.8	-4.1	-3.5	-3.4	-4.1	-1.0	-4.1	-2.8
24	-4.9	-5.4	-5.6	-5.8	-5.9	-6.4	-7.1	-7.1	-6.8	-6.6	-6.7	-5.9	-5.4	-5.2	-5.0	-4.7	-4.9	-5.7	-6.3	-7.0	-7.3	-7.4	-7.9	-8.1	-4.7	-8.1	-6.2
25	-8.4	-8.4	-7.7	-7.1	-6.8	-6.5	-6.7	-7.0	-6.5	-5.5	-4.9	-4.7	-4.0	-3.5	-0.9	0.8	0.3	-1.3	-2.4	-3.0	-3.0	-3.1	-3.3	-3.7	0.8	-8.4	-4.5
26	-3.9	-3.8	-3.9	-3.6	-3.5	-4.3	-5.0	-4.4	-4.3	-4.0	-3.6	-3.5	-3.3	-2.8	-2.4	-2.3	-2.5	-2.7	-3.4	-4.1	-4.4	-4.8	-5.2	-5.3	-2.3	-5.3	-3.8
27	-5.4	-5.6	-5.9	-6.2	-6.2	-6.4	-6.5	-6.5	-6.1	-5.9	-5.5	-5.7	-5.4	-5.8	-7.0	-7.6	-7.7	-8.0	-8.4	-8.4	-8.4	-8.8	-9.3	-9.5	-5.4	-9.5	-6.9
28	-9.5	-10.2	-10.2	-10.7	-11.0	-11.6	-11.9	-12.0	-11.7	-11.5	-10.7	-10.5	-9.8	-9.4	-9.5	-9.8	-9.8	-9.7	-9.8	-9.9	-9.7	-9.5	-10.1	-11.0	-9.4	-12.0	-10.4
Max.	**4.7**	**4.7**	**4.5**	**5.4**	**5.8**	**5.7**	**5.6**	**5.6**	**6.1**	**6.3**	**6.2**	**4.6**	**3.5**	**4.6**	**4.6**	**4.6**	**4.4**	**4.0**	**3.7**	**3.7**	**4.2**	**4.6**	**4.7**	**5.0**	**6.3**		
Min.	**-18.3**	**-19.2**	**-19.3**	**-19.4**	**-19.5**	**-18.7**	**-19.0**	**-19.1**	**-19.4**	**-18.9**	**-18.1**	**-17.5**	**-17.6**	**-17.8**	**-18.0**	**-18.0**	**-17.3**	**-18.8**	**-18.8**	**-19.0**	**-19.4**	**-19.3**	**-19.0**	**-18.0**		**-19.5**	
Avg.	**-3.0**	**-3.1**	**-3.1**	**-3.1**	**-3.2**	**-3.4**	**-3.5**	**-3.5**	**-3.4**	**-3.1**	**-2.8**	**-2.6**	**-2.5**	**-2.3**	**-2.1**	**-1.9**	**-1.9**	**-2.2**	**-2.5**	**-2.8**	**-2.7**	**-2.7**	**-2.7**	**-2.8**			**-2.7**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-11.6	-11.3	-11.7	-11.9	-12.0	-12.0	-12.4	-12.6	-12.9	-12.0	-11.6	-10.9	-9.8	-8.3	-7.3	-6.9	-6.6	-6.7	-6.5	-6.8	-6.9	-6.8	-6.7	-6.8	-6.5	-12.9	-9.5
2	-6.8	-6.5	-6.3	-6.3	-6.4	-6.7	-6.9	-6.8	-7.2	-7.0	-6.6	-6.2	-5.8	-5.3	-4.3	-3.1	-2.4	-2.0	-1.5	-1.3	-1.0	-0.9	-1.1	-1.3	-0.9	-7.2	-4.6
3	-1.3	-1.3	-1.1	-0.7	-0.8	-0.9	-1.1	-0.6	-0.4	-0.3	-0.3	-0.5	-0.4	-0.4	-0.4	-0.2	-0.5	-0.3	-0.5	-0.7	-0.8	-1.0	-1.4	-1.5	-0.2	-1.5	-0.7
4	-1.4	-1.6	-1.6	-1.8	-2.1	-2.0	-1.8	-1.7	-1.7	-2.0	-1.6	-1.2	-0.3	0.4	0.0	-0.3	-0.4	-1.0	-1.2	-1.3	-1.2	-1.3	-1.4	-1.4	0.4	-2.1	-1.2
5	-1.3	-1.6	-1.1	-1.4	-1.3	-0.9	-0.6	-0.7	-1.0	-0.9	-0.1	0.6	0.5	0.3	0.2	0.5	0.4	0.3	0.0	-0.2	-0.5	-0.8	-1.0	-1.0	0.6	-1.6	-0.5
6	-1.1	-1.9	-2.1	-2.6	-2.9	-3.2	-3.6	-3.8	-3.5	-3.6	-3.4	-3.1	-3.1	-2.4	-2.7	-2.5	-2.8	-3.4	-4.5	-5.8	-6.0	-6.0	-5.8	-5.3	-1.1	-6.0	-3.5
7	-5.3	-5.3	-5.3	-5.4	-5.5	-5.4	-5.6	-5.7	-6.1	-6.4	-6.2	-5.3	-4.8	-5.1	-5.3	-5.4	-6.4	-6.9	-7.1	-7.4	-7.5	-7.7	-8.5	-8.8	-4.8	-8.8	-6.2
8	-9.3	-9.2	-9.4	-9.4	-10.8	-11.2	-11.0	-10.1	-10.1	-9.3	-8.8	-8.0	-7.1	-6.4	-6.7	-6.9	-7.7	-8.1	-8.1	-8.2	-8.0	-7.7	-7.7	-7.3	-6.4	-11.2	-8.6
9	-8.8	-8.6	-8.1	-7.7	-9.6	-11.5	-11.2	-10.5	-11.1	-10.8	-10.1	-9.8	-8.9	-9.1	-8.7	-8.4	-8.4	-8.2	-7.5	-7.7	-7.6	-7.6	-8.1	-8.4	-7.5	-11.5	-9.0
10	-9.2	-10.0	-10.3	-11.0	-11.1	-11.3	-11.6	-12.3	-10.9	-10.0	-8.7	-7.8	-6.7	-5.9	-5.5	-5.0	-4.3	-4.3	-4.2	-4.6	-4.7	-4.0	-3.9	-3.6	-3.6	-12.3	-7.5
11	-3.7	-3.7	-3.4	-3.5	-3.6	-4.0	-4.4	-4.5	-4.6	-3.8	-3.8	-3.8	-3.6	-3.0	-2.4	-2.2	-2.4	-2.8	-3.3	-3.5	-3.5	-3.7	-3.5	-3.2	-2.2	-4.6	-3.5
12	-3.0	-3.2	-3.0	-2.8	-2.6	-2.1	-2.3	-1.8	-1.6	-1.3	-1.0	-1.1	-0.6	-0.2	-0.4	-0.5	-0.1	0.3	0.3	0.0	0.0	-0.5	-0.7	-1.1	0.3	-3.2	-1.2
13	-1.3	-1.6	-1.9	-2.1	-3.2	-3.3	-3.7	-3.7	-2.7	-2.7	-1.9	-1.5	-1.2	-1.0	-1.1	-0.9	-1.0	-1.8	-2.1	-2.6	-3.5	-4.2	-5.3	-5.9	-0.9	-5.9	-2.5
14	-6.6	-5.4	-5.3	-5.3	-5.1	-5.3	-5.8	-5.8	-5.0	-4.4	-3.9	-2.9	-2.4	-1.8	-1.5	-1.1	-0.6	-1.4	-2.4	-3.7	-4.8	-5.5	-6.2	-6.5	-0.6	-6.6	-4.1
15	-6.1	-6.1	-6.0	-6.0	-6.1	-6.5	-6.9	-7.2	-7.1	-6.3	-5.5	-4.4	-3.8	-3.4	-3.0	-2.4	-2.2	-2.7	-3.0	-4.4	-4.7	-4.9	-4.6	-4.4	-2.2	-7.2	-4.9
16	-4.8	-4.8	-4.5	-4.6	-4.6	-4.5	-4.7	-5.0	-4.9	-4.4	-4.1	-3.6	-3.2	-2.9	-2.7	-2.2	-2.7	-2.9	-3.4	-4.6	-5.0	-4.9	-5.0	-5.5	-2.2	-5.5	-4.1
17	-5.7	-5.9	-6.5	-6.5	-7.0	-6.4	-6.7	-6.6	-5.9	-5.4	-5.1	-4.8	-4.8	-4.9	-5.0	-4.8	-4.6	-4.3	-4.2	-4.1	-4.4	-4.4	-4.1	-4.1	-4.1	-7.0	-5.3
18	-4.4	-4.3	-4.0	-4.2	-4.4	-4.1	-4.0	-3.9	-3.7	-3.4	-2.9	-2.3	-1.6	-1.8	-1.2	-0.8	-1.1	-1.4	-1.4	-1.6	-2.0	-2.2	-3.2	-3.5	-0.8	-4.4	-2.8
19	-3.1	-3.9	-4.0	-4.0	-4.7	-5.1	-5.3	-5.3	-4.3	-3.5	-3.3	-2.4	-1.6	-1.6	-1.1	-1.4	-1.4	-1.2	-1.1	-1.6	-2.8	-2.7	-2.4	-2.7	-1.1	-5.3	-2.9
20	-2.4	-2.2	-2.2	-2.1	-2.0	-2.2	-2.0	-1.7	-1.3	-1.0	-1.1	-0.6	-0.2	-0.2	-0.7	-0.6	0.5	0.5	0.4	0.6	0.2	0.3	0.3	-0.1	0.6	-2.4	-0.8
21	-0.3	-0.5	-1.3	-2.1	-1.9	-2.0	-2.1	-2.5	-2.7	-2.5	-2.2	-1.5	-0.8	-0.1	0.6	1.3	0.9	0.5	0.4	-0.6	-1.4	-2.0	-2.0	-2.0	1.3	-2.7	-1.1
22	-1.7	-2.1	-2.5	-2.8	-3.1	-3.1	-3.5	-4.2	-2.7	-3.1	-3.3	-1.5	-1.5	-1.2	-1.1	-0.6	-0.5	-1.1	-1.4	-1.8	-2.5	-2.7	-3.0	-3.3	-0.5	-4.2	-2.3
23	-3.5	-3.9	-4.0	-4.6	-4.9	-4.6	-4.4	-3.7	-3.0	-2.8	-2.4	-1.8	-1.0	-1.1	0.7	0.8	0.7	0.1	-0.9	-1.4	-3.2	-3.5	-3.6	-3.8	0.8	-4.9	-2.5
24	-3.9	-4.2	-4.7	-5.1	-5.1	-5.3	-5.6	-5.2	-4.8	-4.7	-3.5	-2.5	-1.7	-1.1	-0.5	-0.4	-0.3	-0.9	-1.6	-2.5	-2.9	-2.9	-2.8	-2.7	-0.3	-5.6	-3.1
25	-2.4	-2.2	-2.2	-2.6	-3.3	-3.9	-4.0	-4.3	-4.1	-3.7	-3.1	-2.0	-1.3	-0.9	-1.0	-0.7	-0.5	-0.9	-1.4	-2.1	-2.6	-2.6	-2.2	-2.1	-0.5	-4.3	-2.3
26	-2.3	-2.4	-2.4	-2.5	-2.5	-2.9	-3.7	-4.3	-4.5	-4.3	-3.0	-2.0	-1.5	-1.0	-0.6	-0.3	0.0	-1.0	-1.4	-2.3	-3.3	-3.6	-3.9	-4.0	0.0	-4.5	-2.5
27	-4.0	-3.8	-3.2	-3.4	-3.1	-3.3	-3.8	-2.4	-1.0	-0.7	0.7	1.4	1.7	1.6	1.8	1.9	2.3	1.5	1.1	0.9	-0.9	-2.5	-2.6	-2.1	2.3	-4.0	-0.9
28	-2.6	-2.0	-1.5	-1.0	-1.7	-1.0	-0.8	0.2	0.1	-0.5	0.8	1.2	1.5	1.5	1.4	1.9	2.0	1.3	1.1	0.4	-0.7	-1.5	-2.2	-2.4	2.0	-2.6	-0.2
29	-0.9	-0.5	-1.0	-0.7	-1.0	-1.3	-1.9	-1.8	-1.4	-0.8	0.2	0.8	1.5	1.8	1.3	1.6	1.8	1.0	0.5	0.0	-1.4	-2.8	-2.5	-1.8	1.8	-2.8	-0.4
30	-1.7	-1.8	-0.4	0.9	0.8	0.6	-0.1	-0.3	-0.3	1.0	1.0	1.7	0.9	1.3	1.2	0.8	0.8	0.8	0.9	1.1	0.9	0.7	1.0	0.9	1.7	-1.8	0.5
31	1.0	1.0	1.2	1.2	1.2	1.1	1.3	1.4	1.4	1.5	1.4	1.2	1.5	1.6	1.7	1.8	1.9	1.6	1.5	0.1	-0.4	-1.0	-1.2	-1.2	1.9	-1.2	1.0
Max.	**1.0**	**1.0**	**1.2**	**1.2**	**1.2**	**1.1**	**1.3**	**1.4**	**1.4**	**1.5**	**1.4**	**1.7**	**1.7**	**1.8**	**1.8**	**1.9**	**2.3**	**1.6**	**1.5**	**1.1**	**0.9**	**0.7**	**1.0**	**0.9**	**2.3**		
Min.	**-11.6**	**-11.3**	**-11.7**	**-11.9**	**-12.0**	**-12.0**	**-12.4**	**-12.6**	**-12.9**	**-12.0**	**-11.6**	**-10.9**	**-9.8**	**-9.1**	**-8.7**	**-8.4**	**-8.4**	**-8.2**	**-8.1**	**-8.2**	**-8.0**	**-7.7**	**-8.5**	**-8.8**		**-12.9**	
Avg.	**-3.9**	**-3.9**	**-3.9**	**-3.9**	**-4.2**	**-4.3**	**-4.5**	**-4.4**	**-4.2**	**-3.8**	**-3.3**	**-2.7**	**-2.3**	**-1.9**	**-1.7**	**-1.5**	**-1.5**	**-1.8**	**-2.0**	**-2.5**	**-3.0**	**-3.3**	**-3.4**	**-3.4**			**-3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.2	-1.2	-1.0	-0.8	-0.5	-0.4	-0.4	-0.3	0.0	0.2	0.4	0.5	1.4	1.0	1.6	0.4	0.0	-0.6	-0.7	-0.7	-1.0	-1.2	-1.3	-1.4	1.6	-1.4	-0.3
2	-1.8	-1.5	-1.2	-1.3	-1.3	-1.7	-2.1	-2.2	-2.3	-1.9	-1.4	-0.7	-0.4	-0.1	0.1	-0.3	-0.4	-0.5	-0.7	-1.0	-1.1	-1.1	-1.3	-1.2	0.1	-2.3	-1.1
3	-2.0	-1.9	-1.1	-0.4	0.0	-0.1	0.2	0.5	0.5	1.2	1.5	1.1	1.0	0.9	1.3	1.9	1.8	1.6	1.7	1.7	1.6	2.0	2.2	2.1	2.2	-2.0	0.8
4	3.0	2.9	2.6	1.4	1.4	1.4	1.5	1.9	2.2	2.1	3.4	3.1	2.2	2.2	2.5	2.5	2.0	1.4	1.6	1.5	1.5	1.4	1.3	1.0	3.4	1.0	2.0
5	1.2	3.6	4.4	4.9	3.0	2.5	5.1	4.6	5.4	5.4	4.4	3.7	3.3	3.4	3.8	3.7	3.7	2.3	1.6	0.8	0.5	0.1	-0.5	-1.1	5.4	-1.1	2.9
6	-1.4	-1.7	-1.9	-2.2	-3.0	-3.8	-3.9	-3.4	-3.2	-2.1	-1.3	-0.9	-0.2	0.5	0.8	1.1	1.3	1.2	0.8	0.2	-0.6	-0.7	-0.5	-0.4	1.3	-3.9	-1.0
7	-0.1	0.1	0.2	0.5	0.8	1.7	1.9	2.0	1.8	1.7	2.0	3.4	3.6	4.0	4.4	4.4	4.8	4.5	3.9	4.2	3.7	3.6	3.8	3.8	4.8	-0.1	2.7
8	3.8	3.8	3.7	3.5	3.4	3.1	2.1	1.9	2.2	2.0	2.3	2.1	1.9	2.2	2.3	2.1	2.2	1.8	1.6	1.7	1.0	0.8	0.9	0.8	3.8	0.8	2.2
9	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.7	0.9	1.2	1.6	2.2	2.8	2.3	1.9	1.5	1.4	1.5	1.3	1.4	1.1	2.0	2.4	2.6	2.8	0.5	1.4
10	2.3	2.0	1.6	0.9	1.3	1.3	1.1	1.2	1.0	0.7	0.4	0.3	0.1	0.1	0.2	0.5	0.4	0.3	0.1	-0.1	-0.2	-0.4	-0.7	-0.9	2.3	-0.9	0.6
11	-1.2	-1.4	-1.9	-2.1	-1.5	-1.0	-1.8	-1.5	-1.2	-0.7	0.2	0.7	1.5	1.6	-0.2	-1.3	-1.1	-0.8	-0.9	-0.9	-0.7	-1.0	-1.0	-0.8	1.6	-2.1	-0.8
12	-0.6	-0.4	-0.3	-0.2	-0.3	-0.4	-0.4	0.0	0.2	0.2	0.5	0.7	0.6	0.5	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.6	1.0	1.0	1.0	-0.6	0.2
13	0.8	0.6	0.0	-0.1	-0.3	0.0	0.4	0.8	1.0	1.6	2.2	2.5	2.5	2.5	2.7	2.3	1.6	1.0	0.7	0.6	0.2	-0.1	0.0	0.2	2.7	-0.3	1.0
14	0.2	-0.1	-0.5	-0.9	-1.4	-2.2	-2.6	-2.7	-2.8	-2.7	-2.3	-2.1	-1.9	-1.6	-1.1	-0.6	-0.1	0.1	0.3	0.4	0.3	-0.3	-0.4	-0.6	0.4	-2.8	-1.1
15	-1.1	-1.9	-1.9	-2.4	-3.1	-3.2	-2.5	-2.4	-2.8	-3.4	-2.9	-3.3	-3.4	-2.6	-2.8	-2.4	-2.3	-2.7	-2.6	-2.9	-3.4	-4.3	-5.3	-5.1	-1.1	-5.3	-3.0
16	-5.6	-5.5	-5.3	-4.8	-3.8	-3.0	-2.8	-2.1	-1.6	-1.3	-1.0	-0.7	-0.6	0.0	0.3	0.4	-1.1	-1.3	-0.8	-0.4	-0.1	1.0	-0.1	-0.2	1.0	-5.6	-1.7
17	-0.5	-0.2	-0.1	0.2	0.2	0.2	0.4	-0.1	-0.2	0.6	0.8	1.3	2.7	2.0	2.1	2.0	1.9	2.4	2.9	2.5	1.8	1.3	0.8	1.0	2.9	-0.5	1.1
18	0.6	0.5	-0.2	-0.5	-1.0	-0.9	-0.4	0.6	1.3	1.9	2.7	2.9	3.2	3.5	3.6	3.7	3.7	3.1	2.5	4.0	4.0	3.7	3.1	2.5	4.0	-1.0	2.0
19	2.7	1.7	0.7	0.1	-0.4	-0.7	-0.5	0.3	1.1	1.5	1.5	1.7	1.8	2.2	2.7	2.7	2.2	1.5	0.8	0.3	-0.4	-1.3	-2.5	-1.9	2.7	-2.5	0.7
20	-2.9	-3.2	-2.4	-1.9	-1.5	-1.2	-0.7	-0.4	0.0	0.3	0.6	1.4	2.3	2.1	1.8	1.0	1.5	2.0	1.4	0.8	0.7	0.8	0.8	0.6	2.3	-3.2	0.2
21	0.6	0.5	0.7	0.6	0.7	0.9	1.1	1.1	1.1	1.4	2.2	1.9	1.9	2.3	3.7	4.5	4.0	3.3	2.3	1.6	2.2	2.8	2.8	2.9	4.5	0.5	2.0
22	2.7	2.5	1.6	1.8	1.5	1.2	1.3	1.7	1.7	2.1	1.5	2.1	2.9	3.8	4.2	4.4	3.7	3.3	3.1	3.0	2.7	2.2	2.0	1.7	4.4	1.2	2.4
23	0.7	0.8	1.0	1.1	0.9	0.5	0.7	0.6	0.5	0.7	2.2	3.4	3.1	4.5	5.1	4.4	4.5	4.7	4.2	4.8	4.6	4.4	4.4	4.5	5.1	0.5	2.8
24	4.2	3.3	2.6	2.1	2.3	1.8	2.2	2.0	2.2	3.2	3.6	3.3	2.9	3.1	3.2	3.0	2.9	2.5	1.9	1.1	0.5	0.2	-0.2	-0.7	4.2	-0.7	2.2
25	-1.2	-1.4	-2.0	-2.6	-2.5	-2.8	-2.0	-1.7	-1.3	-0.5	1.0	1.8	2.0	0.8	1.0	1.3	1.4	1.5	1.2	1.7	1.9	1.5	1.9	2.0	2.0	-2.8	0.1
26	1.8	2.0	2.8	2.7	2.6	2.3	2.6	3.1	3.9	4.3	4.6	5.0	5.2	5.3	5.6	5.9	6.0	5.9	5.8	5.7	5.4	5.0	4.3	4.4	6.0	1.8	4.3
27	5.1	4.9	4.5	4.5	4.5	4.6	4.7	5.0	5.4	6.0	6.5	6.1	6.4	6.4	6.7	7.6	7.5	6.9	5.9	5.2	4.8	3.5	3.5	3.9	7.6	3.5	5.4
28	3.8	4.2	4.2	3.6	3.0	3.1	3.1	2.9	3.0	1.8	0.4	1.5	2.1	2.2	2.7	2.7	2.7	2.8	3.1	2.6	2.2	0.9	0.5	0.1	4.2	0.1	2.5
29	-0.2	0.1	2.0	2.0	1.8	1.8	2.6	1.9	2.0	3.0	3.5	4.2	4.5	4.5	5.0	5.0	5.2	5.0	5.1	5.3	5.3	4.8	3.4	2.5	5.3	-0.2	3.3
30	1.9	1.4	1.6	1.1	0.8	0.7	0.9	1.4	2.6	2.8	3.7	4.4	5.1	5.6	5.6	5.3	4.1	4.3	4.1	4.4	4.2	3.7	3.6	3.3	5.6	0.7	3.2
Max.	**5.1**	**4.9**	**4.5**	**4.9**	**4.5**	**4.6**	**5.1**	**5.0**	**5.4**	**6.0**	**6.5**	**6.1**	**6.4**	**6.4**	**6.7**	**7.6**	**7.5**	**6.9**	**5.9**	**5.7**	**5.4**	**5.0**	**4.4**	**4.5**	**7.6**		
Min.	**-5.6**	**-5.5**	**-5.3**	**-4.8**	**-3.8**	**-3.8**	**-3.9**	**-3.4**	**-3.2**	**-3.4**	**-2.9**	**-3.3**	**-3.4**	**-2.6**	**-2.8**	**-2.4**	**-2.3**	**-2.7**	**-2.6**	**-2.9**	**-3.4**	**-4.3**	**-5.3**	**-5.1**		**-5.6**	
Avg.	**0.5**	**0.5**	**0.5**	**0.4**	**0.3**	**0.2**	**0.4**	**0.6**	**0.8**	**1.1**	**1.5**	**1.8**	**2.0**	**2.2**	**2.4**	**2.3**	**2.2**	**2.0**	**1.7**	**1.7**	**1.4**	**1.2**	**1.0**	**0.9**			**1.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.2	3.0	3.3	3.6	3.8	3.7	3.9	4.5	5.3	5.5	6.0	6.9	7.2	7.3	7.3	6.8	6.5	6.3	5.7	5.3	4.4	4.4	4.0	7.3	3.0	5.0
2	3.3	2.7	2.8	2.8	2.7	3.1	3.1	3.0	3.0	3.4	3.8	3.5	3.6	4.2	5.2	6.0	6.2	6.3	6.1	5.8	5.7	5.1	3.8	4.0	6.3	2.7	4.1
3	4.6	4.7	4.6	4.4	4.8	5.0	4.8	5.6	6.8	7.3	7.6	7.9	8.2	8.4	8.3	8.1	7.8	6.8	6.5	5.5	5.0	4.8	4.5	4.2	8.4	4.2	6.1
4	4.0	3.7	4.3	4.6	4.4	4.3	3.5	4.0	4.7	5.0	5.4	5.6	5.5	5.2	4.7	5.0	5.1	5.0	4.8	4.8	4.9	4.6	3.7	3.5	5.6	3.5	4.6
5	2.9	2.7	2.5	2.4	2.2	2.4	2.5	2.7	3.2	3.6	3.8	3.9	4.3	4.5	4.2	4.1	4.1	4.1	4.2	4.0	3.7	3.4	3.3	2.4	4.5	2.2	3.4
6	2.2	2.0	2.0	1.9	1.8	1.6	1.9	2.0	1.9	2.1	2.4	3.1	3.9	5.1	5.6	5.6	5.3	4.8	4.2	4.0	3.5	3.2	2.9	2.3	5.6	1.6	3.1
7	1.8	1.4	1.1	1.0	0.8	0.4	0.3	0.4	0.4	0.5	0.8	0.9	1.0	1.3	1.3	1.4	1.3	1.5	1.0	0.7	0.4	0.3	0.3	0.6	1.8	0.3	0.9
8	0.8	1.0	0.7	-0.4	-1.5	-0.5	0.1	0.5	1.2	1.4	0.9	1.4	1.5	2.3	3.1	3.5	3.8	4.0	4.3	4.2	4.3	4.9	4.6	4.2	4.9	-1.5	2.1
9	3.9	4.6	4.7	4.8	4.8	4.8	4.6	4.6	4.4	3.7	3.7	4.8	5.7	5.9	6.3	7.1	7.1	7.0	7.2	7.3	6.8	6.4	6.6	6.4	7.3	3.7	5.5
10	6.0	6.4	6.3	5.2	5.5	5.7	6.6	8.1	8.5	8.3	7.3	8.1	7.8	8.8	9.3	9.0	8.1	6.9	6.2	5.6	4.8	4.3	3.9	3.7	9.3	3.7	6.7
11	2.8	2.4	3.2	3.3	3.1	3.3	3.6	3.9	4.4	5.0	6.2	7.2	7.8	8.0	8.6	8.2	8.3	7.6	6.9	6.7	7.1	6.4	6.0	5.7	8.6	2.4	5.7
12	5.1	5.8	5.7	5.4	5.1	5.7	6.6	7.3	7.9	9.0	9.5	11.0	11.1	12.7	13.4	13.5	13.9	12.9	11.5	11.1	10.4	9.0	8.9	8.0	13.9	5.1	9.2
13	8.1	7.6	6.6	5.9	5.6	6.5	7.2	7.2	7.9	9.3	10.3	10.7	10.7	10.7	11.6	11.2	11.0	10.4	9.7	8.8	8.5	7.5	6.1	4.5	11.6	4.5	8.5
14	3.5	3.4	3.1	3.0	3.3	3.9	4.8	6.1	6.9	7.9	7.9	7.7	7.3	7.3	6.9	6.7	7.1	6.9	6.8	6.7	6.2	5.8	5.5	5.2	7.9	3.0	5.8
15	5.3	5.1	4.7	4.0	2.9	3.2	3.9	4.8	5.8	6.2	6.9	8.1	8.0	7.5	7.4	7.3	7.0	7.0	7.1	6.7	6.4	6.0	5.7	5.8	8.1	2.9	5.9
16	5.3	6.4	7.2	6.9	6.7	6.5	6.4	6.2	7.1	7.4	8.2	9.1	9.6	9.3	8.7	8.2	7.8	7.1	6.3	5.9	5.8	5.3	3.9	2.6	9.6	2.6	6.8
17	2.6	2.8	3.0	2.7	3.0	4.0	4.9	5.6	6.2	7.0	7.5	7.8	8.6	7.4	7.4	7.0	6.2	6.2	6.5	6.0	5.7	5.3	3.7	4.0	8.6	2.6	5.5
18	4.2	3.9	3.1	3.0	3.4	3.9	4.1	4.6	5.8	8.2	9.6	9.8	10.5	10.4	9.3	7.3	6.6	7.2	7.2	7.0	6.7	6.4	6.2	5.9	10.5	3.0	6.4
19	5.6	5.4	5.4	5.3	5.1	5.2	5.5	5.8	6.0	6.7	6.9	7.3	7.9	7.9	6.9	7.1	6.0	4.1	2.9	2.9	3.1	2.9	2.0	2.0	7.9	2.0	5.2
20	2.3	2.6	2.9	3.0	3.2	3.4	3.7	4.3	4.7	4.7	5.0	5.5	5.5	5.7	6.3	6.8	7.4	7.9	7.3	7.4	7.2	7.1	6.6	5.9	7.9	2.3	5.3
21	6.4	5.7	6.3	6.5	5.6	5.6	6.1	6.8	8.5	9.2	9.8	10.4	11.2	12.2	13.7	13.8	14.0	13.5	12.9	12.6	12.4	12.2	11.9	11.7	14.0	5.6	9.9
22	11.6	10.1	8.6	7.8	7.9	8.3	8.5	9.1	9.9	10.7	11.4	12.2	13.1	15.1	15.3	15.7	15.5	15.3	15.1	14.9	13.5	11.9	10.0	9.3	15.7	7.8	11.7
23	9.1	9.2	7.9	7.7	7.4	8.1	8.2	9.6	10.9	10.0	10.7	11.3	11.3	12.6	13.5	13.2	13.9	13.1	11.4	11.8	11.8	13.8	12.9	12.7	13.9	7.4	10.9
24	12.5	11.9	12.0	11.2	8.8	12.0	11.5	11.8	10.8	10.2	10.8	10.6	11.4	13.2	14.0	14.9	15.5	15.7	16.1	15.5	14.2	15.6	13.4	12.8	16.1	8.8	12.8
25	11.5	11.7	11.4	8.4	8.2	11.1	11.8	11.1	12.6	12.6	11.1	11.5	12.1	13.1	14.8	14.9	15.5	15.2	14.6	15.3	15.0	14.9	13.9	13.5	15.5	8.2	12.7
26	13.5	12.8	13.0	13.8	14.3	14.6	14.6	14.9	16.0	15.1	12.4	13.8	13.8	13.9	14.8	15.7	14.3	14.8	14.0	15.6	16.5	17.7	16.1	16.0	17.7	12.4	14.7
27	15.1	14.6	11.9	9.3	12.3	14.4	15.1	15.1	15.8	16.6	17.2	12.5	12.9	12.4	14.3	15.0	17.0	15.4	14.2	14.4	15.1	15.6	15.6	13.9	17.2	9.3	14.4
28	12.2	10.9	12.0	13.1	11.3	12.3	12.5	12.7	13.3	13.3	14.9	14.3	14.1	14.1	15.1	15.1	14.8	12.4	12.7	13.9	13.9	13.5	13.2	11.2	15.1	10.9	13.2
29	10.7	8.5	7.3	9.6	10.6	9.8	8.9	10.3	11.1	12.1	12.9	12.9	13.6	13.6	13.5	13.5	12.8	12.1	10.6	10.4	9.2	9.9	8.4	7.9	13.6	7.3	10.8
30	7.8	7.2	6.3	6.7	7.2	7.7	8.1	7.8	7.6	7.7	7.5	8.0	7.9	7.9	8.5	8.8	9.0	9.2	9.2	9.6	9.0	8.9	8.9	8.3	9.6	6.3	8.1
31	8.0	8.1	8.0	7.7	7.4	7.3	7.4	7.6	8.3	8.3	8.4	8.6	8.1	8.7	8.5	8.0	7.9	7.8	7.5	7.5	7.5	7.5	7.4	7.2	8.7	7.2	7.9
Max.	**15.1**	**14.6**	**13.0**	**13.8**	**14.3**	**14.6**	**15.1**	**15.1**	**16.0**	**16.6**	**17.2**	**14.3**	**14.1**	**15.1**	**15.3**	**15.7**	**17.0**	**15.7**	**16.1**	**15.6**	**16.5**	**17.7**	**16.1**	**16.0**	**17.7**		
Min.	**0.8**	**1.0**	**0.7**	**-0.4**	**-1.5**	**-0.5**	**0.1**	**0.4**	**0.4**	**0.5**	**0.8**	**0.9**	**1.0**	**1.3**	**1.3**	**1.4**	**1.3**	**1.5**	**1.0**	**0.7**	**0.4**	**0.3**	**0.3**	**0.6**		**-1.5**	
Avg.	**6.3**	**6.1**	**5.9**	**5.6**	**5.5**	**6.0**	**6.3**	**6.7**	**7.3**	**7.7**	**7.9**	**8.2**	**8.5**	**8.9**	**9.3**	**9.3**	**9.3**	**8.9**	**8.4**	**8.3**	**8.1**	**7.9**	**7.2**	**6.7**			**7.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.9	7.0	7.0	8.3	8.1	7.7	8.3	8.7	8.8	9.3	9.8	10.4	11.8	10.8	10.4	10.9	11.3	11.3	10.0	10.0	9.2	8.5	8.4	9.0	11.8	6.9	9.2
2	9.0	8.5	8.3	8.0	8.4	9.2	9.7	10.4	11.7	12.7	13.4	14.7	15.6	17.1	19.3	19.1	18.8	17.9	16.2	15.8	15.2	14.8	13.5	11.0	19.3	8.0	13.3
3	10.7	10.4	10.7	12.3	12.6	12.1	11.8	11.5	12.0	12.8	13.2	13.9	15.2	16.9	17.2	17.6	17.5	16.5	14.9	14.3	14.4	13.9	13.3	13.1	17.6	10.4	13.7
4	12.7	12.5	11.7	10.2	8.7	9.2	9.6	10.0	10.9	11.7	11.7	10.8	11.1	12.2	12.1	12.1	11.9	11.0	10.0	10.3	10.5	10.5	8.1	6.4	12.7	6.4	10.7
5	6.3	5.8	5.4	4.5	6.5	7.7	7.9	8.8	9.3	10.3	10.6	11.0	11.1	11.4	11.2	11.7	11.8	12.0	10.9	10.7	10.2	9.7	8.4	7.7	12.0	4.5	9.2
6	6.7	5.9	5.4	4.6	5.4	7.0	8.3	9.0	9.3	10.0	9.7	10.4	11.2	11.2	11.5	11.6	11.4	10.3	9.7	9.8	9.7	9.5	8.8	8.4	11.6	4.6	8.9
7	8.6	9.0	9.5	9.4	9.0	8.8	8.8	9.1	8.4	8.1	8.7	9.0	9.0	8.7	8.4	8.2	7.7	7.5	7.8	8.0	7.9	7.8	7.7	7.5	9.5	7.5	8.4
8	7.5	7.5	7.4	7.5	7.4	7.4	7.7	7.6	7.9	8.2	8.1	8.9	9.6	10.3	10.5	10.9	10.5	10.2	9.7	9.3	9.4	8.9	8.4	8.1	10.9	7.4	8.7
9	8.0	8.1	8.0	8.0	7.7	7.6	7.6	8.0	7.9	8.0	8.6	9.2	9.8	10.0	10.1	10.9	11.5	10.1	8.8	8.4	8.2	8.1	8.0	7.7	11.5	7.6	8.7
10	7.6	7.6	7.6	7.6	7.6	7.8	7.7	7.7	7.9	8.0	8.3	9.1	9.0	8.6	8.8	8.7	8.6	8.3	8.2	8.2	8.1	8.0	8.1	8.1	9.1	7.6	8.1
11	8.1	7.4	7.0	6.4	6.1	6.6	7.1	7.4	7.8	7.5	7.5	7.5	8.0	8.4	8.2	8.3	8.4	9.1	9.1	9.2	9.4	8.9	9.0	9.0	9.4	6.1	8.0
12	8.9	8.8	8.6	8.7	8.7	8.9	9.1	9.0	9.1	9.6	9.6	9.2	9.2	9.3	9.4	9.5	9.2	9.0	9.0	8.6	8.7	8.9	8.7	8.4	9.6	8.4	9.0
13	8.2	8.2	8.1	8.0	7.7	7.6	7.5	7.8	8.0	8.2	8.5	9.0	9.3	10.2	10.9	11.4	10.1	9.4	9.4	9.4	9.3	9.0	8.6	8.4	11.4	7.5	8.8
14	8.3	8.3	8.2	8.3	8.5	9.2	9.4	9.5	9.9	10.3	10.3	10.0	9.7	9.7	9.9	10.1	11.4	12.4	12.8	13.4	13.3	12.7	12.7	12.7	13.4	8.2	10.5
15	12.4	11.9	11.6	11.2	10.9	11.2	11.4	10.1	10.2	10.4	10.9	11.6	11.4	10.4	9.8	9.9	10.6	10.5	10.7	10.5	10.1	10.3	10.2	10.2	12.4	9.8	10.8
16	10.1	10.0	9.9	9.7	9.5	9.4	9.6	9.8	9.4	9.6	10.1	9.9	10.1	10.8	11.1	11.0	10.2	10.4	10.7	11.0	10.7	10.6	10.4	10.3	11.1	9.4	10.2
17	10.1	9.9	9.9	9.5	9.3	9.4	9.5	9.6	9.6	10.0	10.6	11.5	10.9	10.6	10.6	10.7	11.0	11.3	10.7	10.8	10.4	9.8	9.7	9.8	11.5	9.3	10.2
18	9.8	9.7	9.7	9.7	10.1	10.7	10.5	11.3	11.6	11.5	10.9	10.9	11.3	11.5	11.4	11.3	11.3	11.0	10.8	10.7	10.7	10.3	10.0	10.1	11.6	9.7	10.7
19	10.1	9.8	9.8	10.0	10.4	10.4	10.5	10.7	11.9	12.4	13.1	13.9	14.1	13.9	14.8	15.2	13.0	11.6	9.7	9.3	9.2	8.9	8.9	8.9	15.2	8.9	11.3
20	9.0	10.1	9.4	9.1	8.8	9.1	9.1	9.7	10.1	10.3	10.4	10.1	9.2	8.5	8.0	9.1	10.3	10.4	9.5	9.0	8.6	8.2	7.6	6.7	10.4	6.7	9.2
21	5.8	5.8	5.5	4.8	5.5	6.6	7.1	8.2	10.0	11.2	10.3	10.6	11.4	11.6	13.0	13.0	12.8	12.8	11.5	11.5	11.7	10.6	10.1	9.6	13.0	4.8	9.6
22	9.3	10.1	10.2	10.2	9.5	9.2	9.5	9.4	9.0	8.9	8.7	8.8	8.8	8.8	9.4	9.5	9.5	9.5	9.8	9.8	9.8	9.2	9.1	7.7	10.2	7.7	9.3
23	7.6	7.6	7.7	7.7	7.8	8.3	8.8	9.2	9.2	9.1	9.5	9.9	10.0	10.0	10.4	10.5	10.6	10.8	10.2	10.0	9.3	9.5	8.6	7.3	10.8	7.3	9.1
24	7.2	6.2	5.8	5.7	6.1	7.8	8.7	10.2	11.0	11.0	10.9	11.1	11.9	13.0	13.3	13.7	14.2	14.0	12.8	11.9	11.8	11.4	10.4	9.6	14.2	5.7	10.4
25	9.2	9.4	9.7	9.0	8.6	9.5	10.8	11.3	11.1	11.5	11.6	11.3	12.0	12.5	12.0	12.5	12.4	12.1	10.8	10.8	10.5	9.6	9.4	8.3	12.5	8.3	10.7
26	8.1	8.0	8.3	8.5	9.1	9.2	9.3	9.8	10.3	9.8	10.3	10.0	10.0	9.6	9.8	9.9	9.8	9.5	9.4	9.9	9.8	9.6	8.7	8.4	10.3	8.0	9.4
27	7.4	7.1	6.3	6.1	6.9	8.7	9.8	9.6	9.7	10.5	11.2	11.5	11.8	11.6	11.8	12.4	12.9	12.4	11.2	11.0	14.7	17.4	16.7	16.6	17.4	6.1	11.0
28	16.0	15.0	14.3	14.1	14.2	13.7	13.8	14.7	14.6	14.3	14.6	14.4	14.8	16.1	15.9	14.8	14.9	14.8	14.1	14.1	14.0	13.7	13.9	14.2	16.1	13.7	14.5
29	14.7	14.5	14.4	14.4	14.4	14.5	14.8	14.1	15.3	14.2	13.2	13.7	12.9	11.5	10.2	11.1	11.6	11.5	11.4	11.3	11.2	11.1	10.9	10.8	15.3	10.2	12.8
30	10.8	10.4	10.0	9.8	9.5	9.5	9.6	9.9	10.4	10.9	11.4	11.4	12.0	12.1	11.6	11.4	11.3	10.7	10.6	11.0	13.1	12.9	12.8	12.3	13.1	9.5	11.1
Max.	**16.0**	**15.0**	**14.4**	**14.4**	**14.4**	**14.5**	**14.8**	**14.7**	**15.3**	**14.3**	**14.6**	**14.7**	**15.6**	**17.1**	**19.3**	**19.1**	**18.8**	**17.9**	**16.2**	**15.8**	**15.2**	**17.4**	**16.7**	**16.6**	**19.3**		
Min.	**5.8**	**5.8**	**5.4**	**4.5**	**5.4**	**6.6**	**7.1**	**7.4**	**7.8**	**7.5**	**7.5**	**7.5**	**8.0**	**8.4**	**8.0**	**8.2**	**7.7**	**7.5**	**7.8**	**8.0**	**7.9**	**7.8**	**7.6**	**6.4**		**4.5**	
Avg.	**9.2**	**9.0**	**8.8**	**8.7**	**8.8**	**9.1**	**9.4**	**9.7**	**10.1**	**10.3**	**10.5**	**10.8**	**11.1**	**11.2**	**11.4**	**11.6**	**11.5**	**11.3**	**10.7**	**10.6**	**10.6**	**10.4**	**10.0**	**9.5**			**10.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.5	10.6	10.7	10.3	9.9	10.6	11.8	12.5	13.5	12.7	11.2	11.1	11.4	11.7	11.6	11.4	10.5	10.2	9.2	12.5	18.0	15.5	15.5	16.9	18.0	9.2	12.1
2	17.0	16.4	16.1	14.0	13.4	13.6	13.4	14.0	14.3	15.2	15.9	16.5	14.0	14.4	14.7	17.6	20.5	20.2	19.7	19.6	19.2	17.6	14.8	12.5	20.5	12.5	16.0
3	11.7	11.0	10.6	10.1	10.0	10.4	10.1	10.2	10.3	11.0	11.0	10.8	10.6	10.7	10.7	10.6	10.6	11.4	11.1	10.9	10.9	10.9	10.4	9.6	11.7	9.6	10.6
4	9.8	10.2	10.1	9.6	9.8	10.4	11.5	12.1	11.4	11.8	11.9	12.2	12.4	12.2	12.0	11.9	12.0	11.6	11.2	11.1	11.0	11.0	10.8	10.7	12.4	9.6	11.2
5	10.9	10.9	11.0	10.7	10.6	11.0	10.9	10.7	11.0	11.6	11.1	10.7	10.6	10.6	10.7	10.9	10.8	10.9	11.2	11.2	10.9	10.9	10.8	10.7	11.6	10.6	10.9
6	10.6	10.3	10.3	10.3	10.5	10.7	10.8	10.9	11.3	11.6	11.2	11.5	12.0	11.9	11.5	11.5	11.7	11.8	11.7	11.6	11.6	11.5	11.3	11.2	12.0	10.3	11.2
7	11.1	11.0	11.0	11.0	11.0	10.9	10.9	11.0	11.0	11.1	11.2	11.2	11.6	11.7	11.3	11.4	11.6	11.4	10.9	10.8	10.6	10.4	10.2	10.1	11.7	10.1	11.0
8	10.1	10.1	10.0	9.9	9.9	10.5	11.5	12.7	13.2	14.3	14.8	15.2	15.1	15.3	15.8	15.0	14.8	14.5	15.3	15.9	15.9	15.6	13.8	12.5	15.9	9.9	13.4
9	12.1	12.0	11.6	11.6	11.4	12.7	13.5	14.4	13.4	13.6	13.4	13.2	13.4	13.5	13.5	13.9	15.6	14.8	13.0	12.2	11.8	11.8	12.0	11.9	15.6	11.4	12.9
10	11.9	11.7	11.6	11.3	11.3	11.5	11.7	11.9	11.5	11.2	11.2	11.6	11.9	12.8	12.4	12.2	11.8	11.5	11.0	10.9	10.9	11.0	11.0	10.8	12.8	10.8	11.5
11	10.6	10.5	10.4	10.2	10.2	10.3	10.5	10.8	11.2	12.8	14.2	14.1	14.4	13.4	12.3	12.2	12.9	13.1	12.5	12.5	12.1	11.2	10.4	9.8	14.4	9.8	11.8
12	9.3	8.9	8.3	8.0	8.1	9.2	10.9	12.5	14.6	16.2	16.4	14.6	14.8	14.8	15.4	17.2	18.3	20.9	21.9	21.8	21.1	21.7	20.1	18.5	21.9	8.0	15.1
13	17.6	20.1	19.5	15.4	17.8	18.2	16.8	15.9	15.3	15.0	15.1	15.2	15.5	15.5	15.0	14.9	14.3	14.0	13.7	13.5	13.0	12.6	12.3	12.2	20.1	12.2	15.3
14	12.2	11.8	11.2	11.4	11.4	11.4	11.7	12.1	12.5	12.7	13.2	13.6	14.3	13.7	13.8	13.0	12.8	12.5	12.0	11.6	12.0	12.0	11.7	11.2	14.3	11.2	12.3
15	11.1	10.9	11.3	11.4	11.1	11.1	11.3	11.6	12.7	13.6	14.8	15.1	16.0	16.3	15.1	14.0	13.4	12.7	11.8	11.7	11.4	11.3	11.3	11.2	16.3	10.9	12.6
16	11.2	11.3	11.3	11.2	10.8	10.9	10.3	10.3	10.4	10.6	10.7	10.9	11.4	11.7	11.7	11.7	11.9	11.5	11.4	11.1	11.0	10.9	10.7	10.6	11.9	10.3	11.1
17	10.4	9.9	9.9	9.9	9.7	9.6	10.3	10.7	10.7	10.9	11.1	11.5	11.4	10.5	10.6	10.4	10.5	10.4	10.1	9.8	10.0	10.1	9.7	10.0	11.5	9.6	10.3
18	10.4	10.4	10.2	10.1	10.1	10.0	10.3	10.4	10.6	10.6	10.3	10.2	10.0	10.3	10.6	11.3	11.8	11.7	11.6	11.4	12.0	11.4	10.8	11.0	12.0	10.0	10.7
19	11.4	11.3	11.1	11.2	11.9	12.2	12.5	12.9	13.7	14.9	15.0	14.9	15.1	15.7	15.9	15.9	15.6	16.0	16.3	16.2	15.1	13.3	13.5	14.4	16.3	11.1	14.0
20	14.2	12.6	12.4	11.8	12.3	13.8	13.4	14.9	15.6	16.2	16.0	16.1	15.8	15.7	16.3	15.7	16.3	16.0	16.9	16.3	13.0	11.5	11.3	11.5	16.9	11.3	14.4
21	11.4	12.4	12.3	12.3	11.8	13.5	14.4	14.8	14.9	15.3	15.5	15.5	15.5	15.5	15.8	14.8	12.6	12.4	12.2	12.5	14.1	12.8	12.1	11.9	15.8	11.4	13.6
22	11.6	11.4	11.1	10.9	10.8	12.0	12.6	12.5	12.3	12.6	12.8	12.8	13.1	12.8	11.0	10.5	10.6	11.0	11.5	11.0	10.7	10.5	10.3	10.0	13.1	10.0	11.5
23	10.4	10.4	10.8	10.8	10.3	9.9	10.0	10.9	11.2	11.7	12.3	12.2	12.7	13.5	14.0	13.9	12.0	11.6	13.2	13.2	12.9	12.5	12.1	11.9	14.0	9.9	11.8
24	11.6	11.7	11.5	11.1	11.1	11.4	12.2	12.1	12.4	12.7	13.5	13.3	13.1	12.3	10.7	10.3	10.3	10.2	10.2	10.3	10.2	10.2	10.0	10.3	13.5	10.0	11.4
25	10.3	10.3	10.3	10.4	10.3	9.7	9.8	10.2	10.3	10.4	10.5	10.8	11.2	11.1	11.8	12.1	12.7	11.9	12.2	12.4	12.0	11.2	10.9	10.7	12.7	9.7	11.0
26	10.9	10.4	9.1	8.5	8.2	9.9	10.7	13.3	13.5	13.8	14.4	14.8	14.7	14.7	15.4	15.1	15.5	14.9	14.5	14.2	14.1	14.1	14.0	13.7	15.5	8.2	13.0
27	13.4	13.2	13.0	12.8	12.9	13.0	12.8	13.2	14.3	15.6	16.5	16.9	17.5	16.6	15.4	15.0	15.2	14.6	13.4	13.0	13.0	11.4	10.9	11.6	17.5	10.9	14.0
28	11.8	11.3	10.9	11.4	10.6	11.2	11.3	12.0	13.2	14.2	13.6	13.6	13.4	13.3	13.0	11.9	11.8	11.5	11.4	11.8	15.1	14.6	13.4	12.4	15.1	10.6	12.4
29	12.1	12.2	12.4	12.1	11.7	11.9	11.8	11.5	12.1	12.3	12.7	13.0	14.1	14.6	14.4	14.0	13.6	13.2	12.8	12.6	12.0	11.6	11.3	11.0	14.6	11.0	12.5
30	11.1	10.9	10.9	11.2	11.1	11.1	11.0	10.8	11.4	12.0	11.9	11.7	11.9	12.3	12.0	12.3	13.3	13.7	13.9	14.1	13.9	12.9	12.1	13.2	14.1	10.8	12.1
31	14.2	14.1	13.9	13.7	13.8	13.6	13.5	14.1	14.4	14.9	15.9	16.6	16.7	17.3	16.9	16.6	15.5	15.1	14.5	14.4	14.4	14.4	13.9	13.3	17.3	13.3	14.8
Max.	**17.6**	**20.1**	**19.5**	**15.4**	**17.8**	**18.2**	**16.8**	**15.9**	**15.6**	**16.2**	**16.5**	**16.9**	**17.5**	**17.3**	**16.9**	**17.6**	**20.5**	**20.9**	**21.9**	**21.8**	**21.1**	**21.7**	**20.1**	**18.5**	**21.9**		
Min.	**9.3**	**8.9**	**8.3**	**8.0**	**8.1**	**9.2**	**9.8**	**10.2**	**10.3**	**10.4**	**10.3**	**10.2**	**10.0**	**10.3**	**10.6**	**10.3**	**10.3**	**10.2**	**9.2**	**9.8**	**10.0**	**10.1**	**9.7**	**9.6**		**8.0**	
Avg.	**11.7**	**11.6**	**11.4**	**11.1**	**11.1**	**11.5**	**11.7**	**12.2**	**12.5**	**13.0**	**13.2**	**13.3**	**13.4**	**13.4**	**13.3**	**13.2**	**13.2**	**13.1**	**13.0**	**13.0**	**13.0**	**12.5**	**12.0**	**11.8**			**12.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.4	13.2	13.2	13.1	13.2	13.2	13.3	13.4	13.2	13.3	13.2	13.3	13.0	12.8	12.8	13.1	12.8	13.0	13.3	13.3	13.0	13.0	13.2	13.0	13.4	12.8	13.1
2	13.2	13.5	13.4	13.5	12.2	12.2	12.3	12.6	13.0	13.3	13.4	13.8	14.0	13.9	13.8	13.8	13.6	13.9	14.1	14.4	14.1	14.5	14.1	14.2	14.5	12.2	13.5
3	14.1	14.2	13.8	13.3	13.2	12.8	13.0	12.9	12.7	13.6	13.9	14.4	15.0	14.4	14.6	14.5	14.7	14.8	14.4	14.4	14.4	14.2	14.5	14.3	15.0	12.7	14.0
4	13.6	13.5	13.3	13.4	13.3	13.3	13.3	13.2	13.3	13.6	14.2	13.9					14.7	15.0	14.8	14.6	14.1	15.2	16.6	16.8	16.8	13.2	14.2
5	16.5	16.5	16.3	16.2	16.0	15.9	16.1	16.1	16.4	17.1	17.4	17.7	17.8	18.3	18.2	18.0	18.4	18.4	18.0	17.9	17.8	17.5	17.6	17.6	18.4	15.9	17.2
6	17.3	17.1	16.8	16.6	16.4	16.3	16.3	16.5	16.6	16.9	16.8	16.8	16.9	16.8	16.4	15.8	15.8	15.2	14.7	14.7	14.7	17.1	18.2	18.0	18.2	14.7	16.5
7	17.6	16.7	15.8	15.7	15.7	15.8	16.7	16.6	16.8	17.3	17.7	18.1	18.7	19.0	19.4	19.2	19.3	19.4	19.0	19.1	18.7	17.6	16.4	15.7	19.4	15.7	17.6
8	15.4	14.8	14.6	14.4	14.3	14.2	14.5	14.8	15.0	14.4	14.1	14.2	14.4	14.9	15.2	15.7	16.1	16.2	16.1	15.7	14.9	14.2	14.8	14.8	16.2	14.1	14.9
9	14.1	13.4	13.1	12.9	12.8	12.6	13.1	13.4	13.6	13.0	13.5	13.8	13.7	13.6	14.8	14.5	14.1	14.1	14.1	14.2	14.3	14.2	13.9	13.6	14.8	12.6	13.7
10	13.1	13.1	13.1	12.3	12.1	12.1	12.8	13.1	13.4	13.2	13.1	13.5	12.9	13.1	13.3	13.3	13.3	12.7	12.3	12.2	12.1	12.0	11.9	12.0	13.5	11.9	12.7
11	11.7	11.8	11.4	11.1	11.7	11.8	12.7	11.4	11.2	11.5	12.5	12.6	12.8	14.2	15.1	15.3	15.8	17.0	16.5	16.1	15.9	16.6	16.6	16.5	17.0	11.1	13.7
12	15.7	14.9	14.6	14.4	14.3	14.0	14.9	15.1	15.5	15.5	15.6	15.2	15.4	15.6	16.3	16.8	16.8	18.0	17.2	16.6	15.3	14.3	13.1	12.5	18.0	12.5	15.3
13	12.1	12.0	11.9	12.2	12.4	12.4	12.3	12.4	12.2	12.1	12.1	12.4	12.2	12.2	12.4	12.3	12.5	12.8	12.7	13.0	12.8	12.3	12.4	12.8	13.0	11.9	12.4
14	12.8	12.8	12.8	12.5	12.5	12.5	12.6	12.8	12.9	13.0	13.0	12.9	13.1	13.2	13.4	13.7	13.9	14.1	13.7	13.6	13.1	12.9	12.8	13.1	14.1	12.5	13.1
15	13.4	13.4	13.2	13.2	13.2	13.3	13.3	13.0	13.4	13.5	13.7	14.4	14.7	15.0	15.1	15.1	15.0	15.2	15.5	15.6	15.5	15.2	15.0	14.9	15.6	13.0	14.3
16	14.7	14.5	14.6	14.8	14.5	14.4	14.6	14.5	15.3	15.5	15.6	15.5	14.7	14.7	14.1	14.7	15.1	15.0	14.9	14.6	14.1	14.5	14.5	14.5	15.6	14.1	14.7
17	14.2	13.9	13.7	13.5	13.3	13.5	13.6	13.6	13.6	14.0	13.9	14.2	14.7	14.7	15.3	15.8	15.7	16.4	15.9	16.0	15.5	15.3	15.1	15.4	16.4	13.3	14.6
18	14.7	14.6	14.5	14.4	13.9	13.8	14.1	13.9	14.3	13.9	13.3	12.7	12.7	12.7	12.9	12.9	13.1	13.3	13.5	13.6	13.6	13.3	13.0	12.8	14.7	12.7	13.6
19	12.7	12.6	12.4	12.4	12.4	13.3	14.1	14.5	14.8	14.6	14.6	14.4	13.9	14.1	14.7	17.0	19.7	19.6	19.6	19.8	19.5	19.3	19.0	18.8	19.8	12.4	15.7
20	16.3	15.5	17.2	17.0	16.3	16.1	16.4	15.9	16.2	16.7	16.6	17.3	18.0	18.1	18.1	18.0	17.7	17.3	17.1	17.1	16.6	15.1	14.9	14.6	18.1	14.6	16.7
21	14.1	13.5	14.0	13.8	13.5	13.6	13.1	13.4	14.0	9.7	15.4	15.5	16.0	16.2	16.4	16.9	17.0	16.8	16.5	15.8	15.4	15.0	15.0	13.9	17.0	9.7	14.8
22	13.0	12.9	12.9	12.6	12.5	11.7	13.1	13.5	14.0	14.3	14.3	14.0	13.4	13.6	12.6	12.6	13.3	12.4	12.6	12.1	12.1	12.3	12.2	12.1	14.3	11.7	12.9
23	12.2	12.0	11.8	12.0	12.7	13.0	13.3	13.5	14.1	14.9	14.9	14.0	14.1	14.7	14.0	13.9	14.1	14.0	14.1	14.0	13.4	12.5	12.5	12.2	14.9	11.8	13.4
24	11.9	12.0	11.5	11.2	11.1	11.1	11.2	11.4	11.7	12.1	12.6	13.2	14.3	14.7	15.0	14.9	15.4	15.7	15.4	15.3	15.0	14.4	13.8	13.8	15.7	11.1	13.3
25	13.4	13.2	13.0	12.8	12.6	12.4	12.4	12.7	12.2	13.4	12.8	13.5	14.1	14.6	14.1	13.8	13.5	13.4	13.2	12.6	11.9	11.7	11.4	10.8	14.6	10.8	12.9
26	10.3	9.5	9.7	9.9	9.6	9.8	9.8	10.6	11.2	12.2	13.4	14.3	15.3	15.8	16.4	16.6	16.7	15.9	15.5	15.0	14.4	14.0	13.6	13.6	16.7	9.5	13.0
27	13.8	13.9	13.8	13.7	13.1	13.1	13.9	13.4	13.0	14.1	14.6	15.4	15.9	16.1	16.4	16.5	16.2	15.6	15.2	14.6	14.3	14.2	14.2	13.1	16.5	13.0	14.5
28	12.1	12.4	12.7	12.6	11.7	10.8	10.6	10.7	11.3	11.6	11.4	11.3	11.5	11.7	11.8	12.1	12.3	12.7	14.6	14.0	13.8	13.4	13.2	12.9	14.6	10.6	12.2
29	12.2	11.6	11.6	12.0	12.2	12.2	12.3	12.2	11.8	12.1	12.3	12.6	12.6	12.9	13.2	13.3	13.5	13.6	13.7	13.7	13.4	12.9	12.8	12.9	13.7	11.6	12.6
30	11.9	12.1	12.5	12.8	13.0	12.8	12.7	12.8	12.7	13.1	13.8	14.4	15.5	16.0	16.0	16.3	16.2	16.1	16.0	15.8	15.6	15.6	15.7	15.6	16.3	11.9	14.4
31	15.4	15.5	15.4	14.9	14.9	14.9	14.8	14.8	14.8	14.9	14.7	14.6	15.0	15.4	15.7	15.6	15.4	15.3	15.1	14.5	13.7	13.5	13.2	12.8	15.7	12.8	14.8
Max.	**17.6**	**17.1**	**17.2**	**17.0**	**16.4**	**16.3**	**16.7**	**16.6**	**16.8**	**17.3**	**17.7**	**18.1**	**18.7**	**19.0**	**19.4**	**19.2**	**19.7**	**19.6**	**19.6**	**19.8**	**19.5**	**19.3**	**19.0**	**18.8**	**19.8**		
Min.	**10.3**	**9.5**	**9.7**	**9.9**	**9.6**	**9.8**	**9.8**	**10.6**	**11.2**	**9.7**	**11.4**	**11.3**	**11.5**	**11.7**	**11.8**	**12.1**	**12.3**	**12.4**	**12.3**	**12.1**	**11.9**	**11.7**	**11.4**	**10.8**		**9.5**	
Avg.	**13.8**	**13.6**	**13.5**	**13.4**	**13.2**	**13.2**	**13.5**	**13.5**	**13.7**	**13.8**	**14.1**	**14.3**	**14.5**	**14.8**	**14.9**	**15.1**	**15.2**	**15.3**	**15.1**	**15.0**	**14.6**	**14.4**	**14.4**	**14.2**			**14.2**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.6	12.3	12.0	11.1	10.5	9.8	10.1	10.1	10.1	10.5	11.0	11.8	12.5	13.3	13.8	14.3	14.3	13.9	13.8	13.8	13.2	12.9	13.0	12.5	14.3	9.8	12.2
2	10.1	9.1	8.9	8.5	8.3	8.2	7.6	7.9	8.4	9.3	10.7	11.2	12.6	13.7	13.8	13.3	13.4	13.0	12.8	12.6	12.4	12.3	12.4	12.4	13.8	7.6	11.0
3	12.4	12.3	12.1	11.4	10.1	9.7	9.0	8.7	8.6	9.1	9.2	9.3	9.8	10.2	10.8	10.2	9.9	9.6	10.0	10.1	10.2	10.3	10.5	10.6	12.4	8.6	10.2
4	10.6	10.4	10.8	11.2	10.9	10.9	10.6	10.4	10.5	10.2	10.0	10.1	10.3	10.5	10.6	11.0	11.6	12.0	11.8	11.9	11.8	11.6	11.5	11.4	12.0	10.0	10.9
5	11.5	11.4	11.2	10.8	10.7	10.6	10.7	11.0	11.6	11.5	10.8	11.0	11.5	11.7	11.9	12.1	11.5	11.0	9.7	9.4	9.6	9.6	9.7	9.8	12.1	9.4	10.8
6	9.9	10.0	10.1	10.1	10.2	10.3	10.2	10.0	10.2	11.2	12.1	13.2	13.2	13.0	13.1	12.9	12.8	13.1	13.1	13.1	12.6	12.2	12.1	12.1	13.2	9.9	11.7
7	12.3	12.2	12.1	11.8	11.6	11.6	11.3	11.9	12.3	12.8	13.0	13.5	13.6	14.2	14.5	14.6	14.8	14.4	14.0	13.7	13.1	12.9	12.3	11.8	14.8	11.3	12.9
8	11.6	11.6	11.8	11.6	11.6	11.6	11.7	11.5	11.1	11.7	12.2	12.4	12.4	12.7	12.5	12.5	12.5	11.8	11.8	11.8	11.2	10.8	11.2	10.8	12.7	10.8	11.8
9	10.2	9.3	9.4	9.7	9.9	10.1	10.5	11.1	11.1	11.3	11.6	11.8	11.8	11.8	12.1	12.2	12.4	12.4	12.5	12.4	12.3	12.2	12.0	12.3	12.5	9.3	11.3
10	12.5	12.6	12.6	12.5	12.1	12.3	12.2	12.1	12.5	12.7	12.9	12.9	12.9	13.5	13.9	14.3	14.5	14.6	14.3	13.6	12.5	12.1	11.6	10.5	14.6	10.5	12.8
11	10.8	10.9	11.2	11.3	10.9	10.8	10.5	10.8	11.6	12.0	12.1	11.9	11.8	11.6	11.4	11.1	11.3	11.2	11.7	11.7	11.6	11.8	11.8	12.0	12.1	10.5	11.4
12	12.0	11.9	11.9	12.1	12.0	10.9	11.0	11.4	11.2	11.7	12.0	12.0	11.5	11.5	11.6	11.8	12.1	11.9	12.1	11.4	11.1	11.5	11.4	11.0	12.1	10.9	11.6
13	10.7	10.1	9.8	9.6	10.1	10.3	10.2	10.6	11.0	11.3	11.5	11.9	12.1	12.1	12.2	12.1	12.1	12.4	12.7	12.4	12.4	12.2	12.5	12.4	12.7	9.6	11.4
14	12.5	12.2	11.6	10.8	10.1	10.0	9.4	9.2	9.7	9.9	10.7	11.3	11.7	12.2	12.2	12.5	13.2	12.9	13.2	13.2	12.8	12.8	12.8	12.7	13.2	9.2	11.6
15	12.6	12.0	11.6	11.4	11.6	11.8	11.9	11.9	11.8	11.5	11.4	11.3	11.0	10.5	11.1	11.5	11.6	11.7	11.8	11.9	11.0	10.7	10.6	10.6	12.6	10.5	11.4
16	10.6	10.6	10.3	9.9	9.9	10.7	11.0	10.7	10.5	10.6	10.9	11.2	11.5	11.8	12.0	12.0	11.9	11.6	11.6	10.6	10.4	10.2	10.2	10.5	12.0	9.9	10.9
17	10.6	10.6	10.3	9.0	8.1	8.2	8.6	8.3	8.5	9.0	10.3	10.2	10.9	11.0	10.7	10.0	10.7	10.5	9.9	9.5	9.2	8.9	9.7	10.3	11.0	8.1	9.7
18	10.5	10.4	10.4	10.3	10.2	10.1	10.3	10.5	10.7	10.8	11.0	11.6	12.0	12.4	12.6	12.8	12.8	12.8	12.7	12.2	11.9	11.8	11.5	11.6	12.8	10.1	11.4
19	11.5	11.5	11.5	11.1	10.9	10.7	10.6	10.4	10.5	11.1	11.7	12.1	12.7	12.9	13.4	13.5	13.3	13.1	12.6	12.1	12.0	12.0	11.8	11.6	13.5	10.4	11.8
20	11.6	11.6	11.6	11.6	11.6	11.7	11.7	11.9	12.5	12.8	13.0	13.3	13.6	13.9	14.1	14.0	13.7	13.3	13.0	12.6	12.3	12.0	11.5	11.3	14.1	11.3	12.5
21	11.1	10.8	10.5	10.3	10.3	10.5	10.7	10.8	9.6	9.7	10.1	10.4	10.7	11.0	11.0	11.1	11.0	10.4	9.9	9.6	9.5	10.1	9.3	9.0	11.1	9.0	10.3
22	8.7	8.7	8.6	8.9	9.0	9.7	9.2	9.8	10.5	10.6	10.7	10.8	10.8	10.9	10.8	10.9	11.0	11.0	10.8	10.7	10.6	10.5	10.5	10.8	11.0	8.6	10.2
23	11.3	11.5	11.6	11.3	11.2	11.3	10.7	10.1	10.2	11.3	11.3	11.4	11.4	11.7	11.6	11.2	11.1	11.1	11.2	11.1	11.1	10.6	10.4	10.6	11.7	10.1	11.1
24	10.4	9.6	9.4	9.4	9.7	9.0	8.1	8.7	9.3	10.2	10.0	10.1	10.4	10.4	11.1	11.3	10.5	10.1	10.3	9.7	9.8	9.3	9.9	9.9	11.3	8.1	9.9
25	9.4	9.3	9.6	9.7	10.0	9.8	9.7	9.6	10.0	9.9	9.9	10.3	10.6	10.7	11.1	11.2	11.1	11.1	11.0	10.9	10.3	9.6	9.9	9.8	11.2	9.3	10.2
26	9.0	8.3	7.8	7.2	7.6	6.7	6.3	6.4	8.8	9.9	9.8	10.5	10.4	10.5	10.6	9.9	9.5	9.5	9.8	9.3	8.6	8.5	8.1	8.6	10.6	6.3	8.8
27	8.3	7.9	7.8	7.9	8.1	8.2	8.5	8.4	8.3	7.9	8.7	9.2	9.3	8.7	8.0	8.3	8.7	8.4	7.7	7.3	7.0	7.6	8.4	8.4	9.3	7.0	8.2
28	8.6	8.3	7.9	8.2	8.1	7.6	8.3	8.9	8.7	8.7	8.6	9.1	9.5	10.0	10.6	10.5	10.7	11.0	11.1	10.4	9.8	9.4	10.0	10.8	11.1	7.6	9.4
29	11.4	11.2	11.0	10.9	10.4	9.7	9.6	9.6	9.5	9.4	9.2	9.2	9.7	9.5	9.3	9.4	9.7	9.5	9.2	9.1	9.1	9.2	9.1	9.1	11.4	9.1	9.7
30	8.9	8.7	8.5	8.3	8.1	7.9	7.8	7.7	7.6	7.8	8.0	8.3	8.5	8.8	9.1	9.2	9.2	8.9	8.6	8.4	8.4	8.5	8.6	8.6	9.2	7.6	8.4
Max.	**12.6**	**12.6**	**12.6**	**12.5**	**12.1**	**12.3**	**12.2**	**12.1**	**12.5**	**12.8**	**13.0**	**13.5**	**13.6**	**14.2**	**14.5**	**14.6**	**14.8**	**14.6**	**14.3**	**13.8**	**13.2**	**12.9**	**13.0**	**12.7**	**14.8**		
Min.	**8.3**	**7.9**	**7.8**	**7.2**	**7.6**	**6.7**	**6.3**	**6.4**	**7.6**	**7.8**	**8.0**	**8.3**	**8.5**	**8.7**	**8.0**	**8.3**	**8.7**	**8.4**	**7.7**	**7.3**	**7.0**	**7.6**	**8.1**	**8.4**		**6.3**	
Avg.	**10.8**	**10.6**	**10.5**	**10.3**	**10.1**	**10.0**	**9.9**	**10.0**	**10.2**	**10.5**	**10.8**	**11.1**	**11.4**	**11.5**	**11.7**	**11.7**	**11.8**	**11.6**	**11.5**	**11.2**	**10.9**	**10.8**	**10.8**	**10.8**			**10.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.5	8.5	8.4	8.1	7.9	7.7	7.4	7.2	6.5	6.2	5.9	6.1	6.4	6.5	6.3	6.4	6.2	5.8	5.4	5.2	4.9	4.8	4.9	4.6	8.5	4.6	6.5
2	4.4	4.3	4.3	4.0	3.8	3.7	3.4	3.4	3.7	4.2	4.5	5.2	5.5	6.1	6.7	6.8	6.8	6.4	5.5	5.3	5.0	4.9	4.1	3.3	6.8	3.3	4.8
3	3.4	3.4	3.7	4.0	3.7	4.0	3.8	3.4	3.8	4.5	8.1	8.4	9.2	9.6	9.6	9.5	8.9	8.8	8.2	7.8	8.3	8.9	8.3	8.3	9.6	3.4	6.6
4	7.7	7.8	8.0	8.6	8.6	8.6	8.8	9.1	9.3	9.4	9.5	9.9	10.3	10.4	10.3	10.1	9.7	9.3	9.4	9.4	8.5	8.2	8.2	8.4	10.4	7.7	9.1
5	7.8	7.3	7.3	7.4	7.4	7.1	6.7	6.7	6.8	7.0	7.5	7.6	7.7	7.8	7.9	8.1	7.4	6.9	6.7	6.8	7.0	7.0	7.3	7.4	8.1	6.7	7.3
6	7.5	7.4	7.5	7.4	7.4	7.3	7.2	7.0	7.4	7.6	7.8	8.4	9.3	9.8	10.4	10.9	10.3	9.7	8.5	7.9	7.3	6.9	6.1	5.7	10.9	5.7	8.0
7	5.8	6.3	7.4	7.9	8.5	8.5	8.7	8.7	9.1	9.1	9.3	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.2	7.3	7.3	7.2	7.0	6.7	9.3	5.8	7.8
8	6.4	6.2	6.0	5.8	5.7	5.6	5.2	4.8	4.8	4.6	4.6	4.6	4.6	4.6	4.8	5.0	5.2	4.8	4.7	4.7	4.6	4.4	4.2	4.1	6.4	4.1	5.0
9	4.1	3.8	3.6	3.7	4.0	3.6	3.8	4.1	4.5	5.0	5.2	5.0	5.4	6.0	6.8	6.9	6.8	7.0	6.8	6.8	6.4	5.8	5.6	5.3	7.0	3.6	5.3
10	5.3	5.0	4.8	4.7	5.5	5.8	5.9	6.0	6.4	5.4	4.8	5.2	5.6	5.7	5.9	6.2	6.7	6.6	6.1	6.0	5.7	5.5	5.5	5.5	6.7	4.7	5.7
11	4.9	4.8	5.3	5.6	5.3	5.7	6.0	6.2	5.7	5.6	5.6	5.9	6.9	7.2	6.6	6.2	5.5	4.7	4.4	3.7	3.5	3.1	2.7	2.5	7.2	2.5	5.2
12	2.5	2.6	2.5	2.2	2.0	1.5	1.1	0.9	0.8	1.2	1.2	1.8	1.9	2.1	2.2	2.4	2.4	2.3	2.2	1.9	1.6	1.7	2.4	2.5	2.6	0.8	1.9
13	2.4	2.5	3.0	2.4	1.6	1.4	1.6	1.1	1.3	2.1	2.9	4.4	4.8	4.7	4.6	4.3	4.1	4.0	4.0	3.9	3.3	3.6	4.0	3.8	4.8	1.1	3.2
14	3.7	3.7	3.8	3.8	3.6	3.0	2.7	2.5	2.8	3.3	3.8	5.0	6.0	7.1	7.7	8.2	8.0	7.6	7.5	7.7	7.7	7.3	6.2	5.5	8.2	2.5	5.3
15	5.6	5.6	5.7	5.7	5.7	5.6	5.7	5.8	5.5	5.8	6.2	6.4	6.6	6.8	7.1	7.0	7.3	6.8	6.5	5.4	4.6	4.1	3.2	3.8	7.3	3.2	5.8
16	3.6	3.8	3.8	4.6	6.0	6.0	5.3	4.8	4.7	6.1	6.7	6.3	6.6	6.9	7.2	7.2	7.3	6.9	6.9	6.7	6.8	6.3	5.7	5.5	7.3	3.6	5.9
17	5.7	6.1	6.4	5.4	5.1	5.3	7.0	7.6	8.0	8.3	8.2	8.1	8.3	8.8	7.9	8.1	7.9	6.9	5.8	5.0	5.0	5.0	4.7	4.2	8.8	4.2	6.6
18	4.0	4.8	5.2	4.7	4.5	4.2	4.6	4.8	4.9	5.4	5.7	5.7	5.8	6.1	6.4	6.8	6.8	6.3	6.5	7.1	6.1	5.2	5.0	4.8	7.1	4.0	5.5
19	4.5	4.7	4.7	5.5	6.0	6.0	6.5	8.0	8.1	8.3	8.1	8.1	8.1	8.2	8.2	8.4	8.1	7.8	7.4	7.3	7.2	7.1	6.7	6.5	8.4	4.5	7.1
20	6.9	7.1	7.1	6.8	7.0	7.1	7.3	7.2	7.3	8.0	8.7	8.6	9.7	10.0	9.9	9.6	9.4	9.5	9.4	9.5	9.5	9.6	9.9	9.4	10.0	6.8	8.5
21	8.3	8.1	8.3	7.9	7.8	8.0	7.7	6.7	6.0	5.9	5.7	5.4	5.2	5.0	5.0	4.8	4.6	4.4	4.3	4.6	4.7	4.6	4.6	4.4	8.3	4.3	5.9
22	4.1	4.3	4.5	4.4	4.3	4.1	4.0	4.3	4.0	3.7	3.5	3.4	3.3	3.3	3.2	2.9	2.9	3.1	3.4	3.1	2.7	2.5	2.7	2.7	4.5	2.5	3.5
23	2.8	2.9	2.7	2.8	2.7	2.7	2.6	2.5	2.5	2.6	2.6	2.3	1.7	1.3	1.1	0.8	0.8	0.5	0.3	0.6	0.9	0.6	0.2	0.3	2.9	0.2	1.7
24	0.2	-0.4	-0.9	-1.2	-1.0	-0.8	-0.4	0.4	0.9	1.2	1.7	2.1	2.6	3.4	3.6	3.7	3.4	3.6	3.7	4.0	3.7	3.1	3.0	2.8	4.0	-1.2	1.8
25	2.7	2.3	2.2	2.0	1.3	1.1	0.8	0.6	0.7	0.9	0.6	0.8	1.1	1.4	1.6	1.8	1.4	0.7	0.7	0.7	0.4	0.1	0.4	0.0	2.7	0.0	1.1
26	-0.3	0.0	-0.3	-0.3	-0.5	-0.7	-0.4	-0.3	-0.3	0.5	0.8	1.7	2.7	3.0	3.4	3.3	3.0	2.4	2.0	1.5	1.0	1.0	0.7	-0.1	3.4	-0.7	1.0
27	-0.1	-0.4	-0.6	-0.8	-0.7	-1.1	-1.0	-1.2	-1.2	-0.6	0.0	1.1	1.6	2.2	2.7	3.0	2.5	1.3	0.9	0.4	-0.3	-0.5	-1.0	-1.2	3.0	-1.2	0.2
28	-1.2	-0.6	-1.1	-1.4	-1.3	-1.7	-1.1	-1.7	-1.9	-1.5	-0.8	-0.1	0.8	1.4	1.7	1.4	0.9	0.3	0.0	0.4	0.2	0.2	0.5	0.3	1.7	-1.9	-0.3
29	0.2	0.3	0.3	0.0	-0.2	-0.5	-0.5	-0.8	-0.8	-0.4	0.6	1.3	1.6	1.8	2.0	2.0	1.9	1.9	1.6	1.5	1.4	1.4	1.4	1.5	2.0	-0.8	0.8
30	1.5	1.5	1.6	1.4	1.2	0.9	0.9	0.8	0.7	0.5	0.6	0.7	1.1	1.4	1.6	1.3	1.1	1.1	0.6	0.2	0.1	-0.1	-0.2	-0.4	1.6	-0.4	0.8
31	-0.4	-0.6	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	-1.9	-1.7	-1.7	-1.8	-1.5	-1.5	-1.8	-1.4	-1.6	-2.0	-2.1	-2.2	-2.3	-2.6	-2.8	-3.2	-0.4	-3.2	-1.7
Max.	**8.5**	**8.5**	**8.4**	**8.6**	**8.6**	**8.6**	**8.8**	**9.1**	**9.3**	**9.4**	**9.5**	**9.9**	**10.3**	**10.4**	**10.4**	**10.9**	**10.3**	**9.7**	**9.4**	**9.5**	**9.5**	**9.6**	**9.9**	**9.4**	**10.9**		
Min.	**-1.2**	**-0.6**	**-1.1**	**-1.4**	**-1.3**	**-1.7**	**-1.3**	**-1.7**	**-1.9**	**-1.7**	**-1.7**	**-1.8**	**-1.5**	**-1.5**	**-1.8**	**-1.4**	**-1.6**	**-2.0**	**-2.1**	**-2.2**	**-2.3**	**-2.6**	**-2.8**	**-3.2**		**-3.2**	
Avg.	**4.0**	**4.0**	**4.0**	**3.9**	**3.9**	**3.8**	**3.9**	**3.8**	**3.9**	**4.1**	**4.4**	**4.7**	**5.1**	**5.3**	**5.4**	**5.5**	**5.3**	**4.9**	**4.7**	**4.5**	**4.3**	**4.1**	**3.9**	**3.7**			**4.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-3.1	-2.9	-2.4	-2.3	-2.6	-2.5	-2.5	-2.5	-2.7	-2.2	-1.7	-1.0	-0.5	-0.3	-0.1	-0.1	-0.2	-0.4	-0.6	-0.5	-0.6	-0.8	-1.0	-1.0	-0.1	-3.1	-1.4
2	-1.2	-1.2	-0.9	-0.7	-1.1	-1.4	-1.8	-2.1	-2.3	-1.3	-1.4	-1.1	0.0	0.9	1.3	1.8	1.8	1.5	1.6	1.5	1.1	0.8	0.8	0.4	1.8	-2.3	-0.1
3	0.7	0.4	0.6	0.9	0.9	0.0	0.2	-0.2	-0.5	-0.6	-0.9	-1.4	-2.8	-3.6	-4.6	-4.7	-4.7	-5.3	-5.6	-5.6	-5.7	-5.8	-5.5	-5.9	0.9	-5.9	-2.5
4	-6.1	-6.5	-6.9	-6.9	-6.7	-6.1	-5.9	-5.7	-5.9	-6.2	-6.3	-6.0	-5.5	-4.9	-4.9	-5.1	-5.1	-5.0	-5.3	-5.4	-5.4	-5.8	-6.3	-6.6	-4.9	-6.9	-5.9
5	-6.7	-7.2	-7.2	-7.2	-7.0	-6.8	-6.9	-6.7	-6.3	-6.2	-6.0	-5.5	-5.1	-3.8	-3.2	-3.2	-3.1	-3.3	-3.5	-3.4	-4.1	-3.7	-3.9	-4.0	-3.1	-7.2	-5.2
6	-3.7	-3.9	-4.3	-4.9	-4.8	-4.2	-3.0	-1.4	-0.1	0.3	0.4	0.6	-0.5	-1.3	-1.4	-1.6	-1.8	-2.1	-2.5	-2.8	-3.7	-4.3	-4.7	-5.9	0.6	-5.9	-2.6
7	-6.4	-6.6	-6.4	-6.9	-7.8	-7.8	-8.3	-8.7	-8.6	-8.9	-8.7	-8.3	-8.0	-7.7	-7.0	-6.6	-6.6	-7.2	-7.1	-7.2	-7.4	-7.6	-7.5	-7.1	-6.4	-8.9	-7.5
8	-6.9	-6.7	-6.7	-6.9	-7.3	-7.3	-7.1	-7.2	-7.0	-6.4	-5.7	-5.0	-4.5	-4.0	-3.5	-3.4	-4.0	-4.4	-4.2	-4.1	-4.3	-4.2	-3.9	-3.6	-3.4	-7.3	-5.3
9	-3.4	-3.2	-3.3	-3.6	-3.7	-3.8	-3.7	-3.5	-3.3	-3.0	-2.6	-2.3	-2.2	-2.0	-1.9	-2.1	-2.3	-2.7	-3.0	-3.1	-3.2	-3.0	-2.6	-2.7	-1.9	-3.8	-2.9
10	-2.7	-2.7	-2.3	-2.2	-2.5	-2.7	-2.4	-2.2	-3.0	-3.0	-3.0	-2.9	-2.9	-2.8	-3.2	-3.5	-3.7	-4.2	-4.4	-4.5	-4.5	-4.1	-3.8	-3.7	-2.2	-4.5	-3.2
11	-3.8	-3.9	-4.1	-4.4	-5.1	-5.3	-5.4	-5.4	-5.4	-5.6	-5.3	-5.0	-5.0	-4.9	-4.8	-5.0	-5.2	-5.2	-5.2	-5.1	-4.9	-4.5	-4.2	-3.9	-3.8	-5.6	-4.9
12	-3.9	-3.8	-3.7	-3.1	-2.6	-2.3	-2.2	-1.8	-1.2	-1.0	-0.3	-0.1	-0.1	0.1	0.0	-0.1	-0.7	-2.0	-2.4	-2.6	-2.7	-2.8	-2.7	-2.3	0.1	-3.9	-1.8
13	-2.3	-2.1	-2.2	-2.0	-2.1	-2.4	-2.5	-2.6	-2.5	-2.5	-2.5	-2.3	-2.2	-2.2	-2.2	-2.2	-2.2	-2.4	-2.5	-2.2	-1.1	-1.4	-2.5	-2.2	-1.1	-2.6	-2.2
14	-2.6	-2.5	-2.5	-2.1	-1.9	-2.0	-1.2	-1.2	-0.5	0.1	1.1	1.3	2.0	2.4	3.0	3.2	3.1	2.8	2.7	2.6	2.3	2.6	3.2	3.7	3.7	-2.6	0.8
15	4.0	4.2	4.4	4.2	4.0	3.5	2.7	2.9	3.1	2.3	2.3	2.1	3.2	4.5	4.3	4.3	3.9	3.6	3.0	2.7	1.7	0.6	0.2	0.0	4.5	0.0	3.0
16	0.3	2.1	2.7	2.0	1.4	1.2	0.9	1.7	2.6	2.8	2.8	2.7	2.9	3.0	3.2	3.3	2.9	2.7	3.0	3.7	3.4	3.1	4.0	3.2	4.0	0.3	2.6
17	3.3	3.7	3.4	3.3	3.1	2.7	2.9	2.8	2.5	2.6	2.6	2.9	3.9	4.5	4.7	4.0	3.4	2.9	2.4	2.1	1.1	0.7	0.7	1.6	4.7	0.7	2.8
18	3.1	2.3	3.1	3.7	2.3	2.2	2.6	3.0	3.3	3.7	3.8	3.9	3.8	3.6	3.5	3.9	4.3	4.0	4.0	3.8	0.1	-1.4	-1.7	-1.7	4.3	-1.7	2.6
19	-1.7	-1.5	-1.1	-1.3	-1.8	-1.9	-1.5	-1.3	-1.6	-2.0	-2.2	-2.2	-2.6	-3.0	-3.2	-3.3	-3.5	-3.6	-3.8	-4.1	-4.1	-4.4	-4.6	-4.8	-1.1	-4.8	-2.7
20	-5.1	-5.4	-5.5	-5.3	-5.1	-4.9	-4.7	-4.6	-4.0	-3.6	-2.4	-1.8	-1.3	-1.2	-1.5	-2.0	-2.5	-2.9	-3.0	-3.1	-3.0	-3.0	-3.1	-3.1	-1.2	-5.5	-3.4
21	-3.5	-3.7	-3.8	-3.7	-2.6	-2.1	-2.0	-2.1	-2.1	-2.3	-2.6	-3.0	-3.5	-3.9	-4.1	-4.1	-4.4	-5.0	-5.3	-5.5	-6.0	-6.2	-5.9	-6.0	-2.0	-6.2	-3.9
22	-6.4	-6.9	-7.2	-7.4	-7.6	-8.0	-7.7	-7.5	-7.3	-6.9	-6.8	-6.7	-6.7	-6.9	-6.7	-6.4	-6.9	-7.0	-7.0	-6.4	-6.2	-6.4	-6.5	-6.7	-6.2	-8.0	-6.9
23	-7.1	-7.3	-7.5	-8.1	-8.6	-9.5	-10.6	-11.4	-12.3	-13.6	-13.4	-13.6	-14.2	-14.4	-14.6	-14.8	-14.8	-14.8	-14.9	-14.8	-14.6	-14.3	-14.4	-14.6	-7.1	-14.9	-12.4
24	-14.6	-14.4	-14.3	-13.9	-13.6	-13.6	-13.1	-13.2	-13.2	-13.0	-12.8	-12.8	-12.8	-13.0	-13.2	-13.6	-14.5	-15.0	-15.8	-15.7	-15.6	-15.3	-15.3	-15.4	-12.8	-15.8	-14.1
25	-15.4	-15.4	-15.3	-15.2	-14.9	-15.0	-14.9	-15.1	-15.4	-15.4	-15.1	-14.6	-14.2	-14.2	-14.1	-13.9	-13.7	-13.2	-12.8	-12.7	-12.6	-12.4	-12.1	-11.7	-11.7	-15.4	-14.1
26	-11.5	-11.2	-10.9	-10.7	-10.0	-9.9	-9.8	-9.6	-9.1	-8.8	-8.4	-8.1	-8.0	-7.9	-8.0	-8.1	-8.3	-8.3	-8.5	-8.4	-8.9	-9.1	-9.4	-9.3	-7.9	-11.5	-9.2
27	-9.5	-9.5	-9.6	-9.8	-9.8	-10.1	-10.0	-9.9	-10.2	-9.9	-9.6	-9.3	-8.9	-8.8	-8.2	-8.1	-8.5	-9.0	-9.4	-9.4	-9.2	-8.5	-8.2	-8.1	-8.1	-10.2	-9.2
28	-8.0	-7.8	-7.3	-7.5	-7.6	-8.1	-8.0	-8.2	-8.0	-7.7	-6.9	-6.2	-5.7	-5.3	-5.0	-4.9	-4.9	-5.0	-5.0	-5.1	-5.3	-5.3	-5.2	-4.9	-4.9	-8.2	-6.4
29	-5.0	-4.9	-5.3	-5.3	-5.4	-5.3	-5.4	-5.2	-5.1	-5.1	-5.0	-3.3	-0.7	-1.1	-0.7	-0.1	0.1	-0.3	-0.4	0.0	0.3	0.2	0.1	0.2	0.3	-5.4	-2.6
30	0.7	0.7	0.3	0.6	0.4	0.1	0.5	0.1	-0.1	0.2	1.1	0.3	-0.3	-0.4	-0.1	-0.1	-0.6	-0.9	-1.1	-1.4	-1.1	-1.0	-1.6	-1.6	1.1	-1.6	-0.2
Max.	**4.0**	**4.2**	**4.4**	**4.2**	**4.0**	**3.5**	**2.9**	**3.0**	**3.3**	**3.7**	**3.8**	**3.9**	**3.9**	**4.5**	**4.7**	**4.3**	**4.3**	**4.0**	**4.0**	**3.8**	**3.4**	**3.1**	**4.0**	**3.7**	**4.7**		
Min.	**-15.4**	**-15.4**	**-15.3**	**-15.2**	**-14.9**	**-15.0**	**-14.9**	**-15.1**	**-15.4**	**-15.4**	**-15.1**	**-14.6**	**-14.2**	**-14.4**	**-14.6**	**-14.8**	**-14.8**	**-15.0**	**-15.8**	**-15.7**	**-15.6**	**-15.3**	**-15.3**	**-15.4**		**-15.8**	
Avg.	**-4.3**	**-4.3**	**-4.2**	**-4.2**	**-4.3**	**-4.4**	**-4.4**	**-4.3**	**-4.2**	**-4.1**	**-3.8**	**-3.6**	**-3.4**	**-3.3**	**-3.2**	**-3.2**	**-3.4**	**-3.7**	**-3.9**	**-3.9**	**-4.1**	**-4.2**	**-4.3**	**-4.3**			**-4.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.9	-1.9	-2.0	-2.0	-2.1	-2.8	-3.4	-3.7	-4.2	-4.3	-4.5	-3.9	-3.8	-4.2	-4.2	-4.5	-5.0	-4.1	-5.2	-5.1	-5.4	-5.1	-4.7	-4.9	-1.9	-5.4	-3.9
2	-5.2	-5.6	-5.0	-5.1	-5.2	-4.9	-4.9	-5.6	-7.6	-8.5	-8.8	-9.0	-8.8	-8.8	-8.9	-9.3	-9.7	-10.2	-10.4	-10.1	-10.2	-10.3	-10.9	-11.1	-4.9	-11.1	-8.1
3	-11.3	-11.5	-11.6	-11.9	-11.6	-11.3	-11.5	-11.6	-11.6	-11.8	-11.8	-11.6	-11.4	-11.5	-11.4	-11.4	-11.3	-10.8	-11.1	-11.4	-11.7	-12.0	-12.1	-12.1	-10.8	-12.1	-11.5
4	-12.1	-11.8	-11.4	-11.1	-10.3	-9.8	-9.2	-7.3	-6.8	-6.6	-6.8	-6.8	-6.6	-6.1	-5.7	-5.3	-4.8	-4.8	-5.1	-5.2	-4.5	-4.5	-3.4	-3.5	-3.4	-12.1	-7.1
5	-4.3	-4.1	-4.3	-4.1	-2.2	-3.2	-1.8	-0.6	0.5	1.0	0.5	0.4	0.1	0.4	0.4	0.8	0.9	1.0	1.4	2.0	2.9	3.1	2.6	2.7	3.1	-4.3	-0.2
6	3.0	3.4	3.5	2.8	2.5	2.7	3.3	3.5	3.4	2.7	3.1	2.9	3.3	3.2	2.4	1.0	1.2	1.7	1.5	2.0	2.5	2.9	3.7	4.7	4.7	1.0	2.8
7	4.6	4.1	3.2	2.9	3.4	3.8	3.7	3.6	3.3	3.2	3.6	3.5	3.3	3.0	2.9	3.0	3.4	4.0	4.5	4.4	4.4	4.1	4.3	4.4	4.6	2.9	3.7
8	4.5	5.3	5.3	4.6	3.7	3.5	3.3	3.1	3.2	3.2	4.8	6.0	6.2	6.0	5.6	5.7	5.6	5.6	5.7	5.8	5.7	5.8	5.8	5.7	6.2	3.1	5.0
9	5.6	5.7	6.0	5.9	5.8	5.8	5.6	5.5	3.9	3.2	3.6	4.5	5.2	5.7	6.2	5.5	6.0	6.0	5.9	5.0	4.0	4.1	4.2	4.2	6.2	3.2	5.1
10	3.8	3.1	3.6	3.6	3.7	3.9	3.5	3.5	3.4	3.6	4.9	5.1	5.1	5.6	5.9	5.5	4.9	4.7	4.8	4.4	3.6	2.9	2.6	3.1	5.9	2.6	4.1
11	3.3	3.1	2.7	2.1	2.2	3.2	2.2	0.4	-0.7	-0.8	-1.1	-2.0	-2.6	-3.0	-3.6	-4.3	-4.6	-5.0	-5.2	-5.3	-5.3	-5.3	-5.1	-5.0	3.3	-5.3	-1.6
12	-5.0	-5.6	-5.9	-5.7	-5.7	-5.2	-5.3	-5.3	-5.3	-5.0	-4.4	-3.7	-2.5	-2.8	-3.0	-1.9	-2.8	-2.4	-4.0	-4.2	-4.8	-5.2	-4.4	-4.3	-1.9	-5.9	-4.4
13	-4.2	-3.6	-3.6	-3.6	-3.8	-3.4	-3.0	-2.7	-2.4	-2.4	-1.9	-1.7	-1.5	-1.5	-1.1	-1.0	-0.6	0.3	0.5	0.4	0.3	0.7	0.9	1.1	1.1	-4.2	-1.6
14	1.2	1.3	1.5	1.8	1.9	2.2	2.6	2.8	3.1	3.5	3.8	4.2	4.5	4.5	4.5	3.4	1.7	1.3	1.1	1.0	0.9	1.3	1.5	2.0	4.5	0.9	2.4
15	2.5	3.5	3.8	4.5	4.7	4.4	4.5	3.9	4.5	5.0	4.8	4.4	4.0	4.4	4.3	4.8	5.0	5.1	5.7	5.3	5.4	7.0	7.3	7.3	7.3	2.5	4.8
16	7.2	7.1	7.0	6.8	6.8	6.7	6.7	6.6	6.6	6.6	6.7	6.4	6.0	5.8	5.5	4.8	4.3	3.3	2.4	2.1	1.5	2.1	2.5	2.4	7.2	1.5	5.2
17	2.4	1.6	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	2.5	4.7	5.5	5.9	5.7	4.9	4.7	4.5	5.0	5.4	6.2	5.9	5.7	6.2	1.1	3.4
18	5.7	6.0	6.4	6.5	6.5	6.9	5.4	4.9	5.3	5.5	5.6	6.5	7.1	7.1	7.3	7.8	8.2	7.7	7.4	7.6	7.3	7.2	6.8	7.1	8.2	4.9	6.6
19	7.5	7.7	7.7	7.6	7.5	7.2	7.0	6.5	6.5	6.6	6.6	6.8	7.0	6.8	6.7	5.9	4.8	4.5	5.5	5.8	5.6	4.9	4.2	4.5	7.7	4.2	6.3
20	4.2	3.2	4.1	4.5	4.2	4.3	3.8	2.6	1.3	0.8	0.9	1.8	1.7	2.2	2.0	2.0	1.5	0.8	0.0	0.2	0.6	0.5	-0.1	0.3	4.5	-0.1	2.0
21	0.8	-0.2	-0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.8	0.9	0.7	0.3	-0.2	-0.1	0.1	0.1	0.2	0.5	0.6	0.8	0.7	0.3	0.2	0.9	-0.2	0.3
22	0.1	0.0	0.1	0.2	0.0	-0.1	-0.2	-0.3	-0.4	-0.2	-0.1	0.1	-0.2	-0.1	0.2	0.5	0.7	0.9	1.3	1.2	1.2	1.2	1.1	1.3	1.3	-0.4	0.4
23	1.3	1.1	1.1	1.1	0.9	1.0	1.0	0.8	0.8	0.7	0.7	0.6	0.7	0.8	0.9	0.9	0.8	0.6	0.8	0.9	1.1	1.3	1.6	1.6	1.6	0.6	1.0
24	1.7	1.9	1.5	1.8	1.8	2.0	2.2	2.1	2.3	2.5	1.9	2.4	2.6	2.9	1.8	1.9	1.9	3.4	4.0	4.3	4.3	4.2	3.5	3.5	4.3	1.5	2.6
25	3.5	3.5	3.9	3.5	3.6	3.1	2.9	2.9	3.6	4.2	4.2	4.9	4.8	4.8	4.9	5.3	5.6	5.6	5.6	5.8	5.8	5.7	5.2	4.6	5.8	2.9	4.5
26	3.6	2.2	2.5	2.9	2.9	2.8	3.0	3.4	4.5	4.9	4.0	4.2	4.4	4.5	4.5	4.5	4.5	4.8	4.3	4.5	5.5	5.2	5.1	5.4	5.5	2.2	4.1
27	5.8	6.1	6.3	6.3	6.3	6.7	6.5	5.8	6.4	7.4	7.3	7.6	7.5	7.5	6.5	6.8	7.3	7.6	7.9	8.3	8.0	7.6	7.0	6.2	8.3	5.8	6.9
28	6.4	6.0	6.2	6.5	5.9	6.0	5.0	5.1	5.9	5.8	5.8	6.3	6.5	6.5	6.6	6.5	6.4	6.5	6.8	6.7	6.4	5.9	4.7	4.1	6.8	4.1	6.0
29	3.3	3.1	2.7	2.2	2.2	2.8	3.1	3.2	3.0	3.5	3.3	3.7	4.2	4.2	3.8	3.1	2.9	2.9	2.9	3.3	4.2	4.9	5.1	5.4	5.4	2.2	3.5
30	5.3	5.3	5.6	5.8	5.9	6.1	6.3	5.2	5.4	5.2	4.9	5.2	6.9	7.1	7.3	7.8	7.7	7.2	7.3	7.2	7.0	7.0	7.0	6.8	7.8	4.9	6.4
31	6.7	6.7	6.6	6.2	5.6	4.9	5.1	5.1	5.1	4.6	5.1	5.2	5.4	4.9	5.2	4.9	4.9	4.3	4.4	4.3	4.5	4.3	4.3	3.9	6.7	3.9	5.1
Max.	**7.5**	**7.7**	**7.7**	**7.6**	**7.5**	**7.2**	**7.0**	**6.6**	**6.6**	**7.4**	**7.3**	**7.6**	**7.5**	**7.5**	**7.3**	**7.8**	**8.2**	**7.7**	**7.9**	**8.3**	**8.0**	**7.6**	**7.3**	**7.3**	**8.3**		
Min.	**-12.1**	**-11.8**	**-11.6**	**-11.9**	**-11.6**	**-11.3**	**-11.5**	**-11.6**	**-11.6**	**-11.8**	**-11.8**	**-11.6**	**-11.4**	**-11.5**	**-11.4**	**-11.4**	**-11.3**	**-10.8**	**-11.1**	**-11.4**	**-11.7**	**-12.0**	**-12.1**	**-12.1**		**-12.1**	
Avg.	**1.6**	**1.5**	**1.6**	**1.5**	**1.6**	**1.6**	**1.6**	**1.4**	**1.4**	**1.5**	**1.6**	**1.8**	**2.1**	**2.1**	**2.0**	**2.0**	**1.8**	**1.9**	**1.8**	**1.8**	**1.8**	**1.9**	**1.8**	**1.8**			**1.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.5	2.4	2.0	2.5	3.5	3.6	4.0	3.9	3.8	4.1	4.2	3.8	3.9	4.2	4.0	3.9	4.0	4.2	4.2	4.1	4.2	3.5	3.3	3.5	4.2	2.0	3.7
2	4.0	3.7	3.5	3.2	3.5	3.9	4.2	4.4	3.5	2.4	2.0	2.4	3.2	2.8	3.2	3.4	3.2	2.7	2.0	1.8	1.9	2.1	2.0	2.4	4.4	1.8	3.0
3	1.9	2.0	1.3	1.1	1.5	1.7	2.0	2.5	2.3	2.7	2.3	3.2	3.1	3.1	3.2	3.4	3.3	3.3	3.5	3.2	3.7	3.7	3.0	2.8	3.7	1.1	2.7
4	3.2	3.5	2.6	1.4	0.9	0.4	0.0	-0.5	-1.0	-1.1	-0.4	-0.5	-0.5	-0.5	-0.5	-0.3	-0.4	-0.8	-0.9	-0.9	-0.5	-0.3	-0.2	0.0	3.5	-1.1	0.1
5	1.0	2.9	3.7	3.6	3.3	3.6	3.6	3.0	2.3	1.0	0.4	1.0	1.0	0.5	0.3	0.6	0.2	-0.8	-1.1	-1.3	-1.5	-1.6	-2.2	-2.1	3.7	-2.2	0.9
6	-2.1	-2.3	-1.6	-2.4	-2.7	-2.7	-2.4	-2.3	-2.4	-2.3	-1.8	-0.7	-1.3	-1.0	-0.8	-0.7	-0.6	-0.8	-0.7	-0.6	-0.8	-0.8	-0.9	-1.2	-0.6	-2.7	-1.5
7	-0.1	-1.2	-1.6	-1.7	-2.0	-2.2	-2.0	-1.6	-1.2	-0.5	3.2	4.8	4.7	3.7	2.6	2.8	3.1	2.8	2.9	3.9	4.0	3.8	3.6	3.5	4.8	-2.2	1.5
8	4.2	4.7	4.7	4.6	4.8	4.4	4.1	4.2	4.6	4.9	5.4	5.0	5.2	5.3	3.8	3.6	2.8	2.4	2.0	1.8	1.2	0.7	0.8	0.4	5.4	0.4	3.6
9	0.4	0.8	0.9	0.7	0.5	0.5	0.6	0.7	0.6	0.5	0.6	0.7	0.8	0.9	0.8	0.7	0.8	0.5	0.0	-0.4	-0.2	-0.2	0.1	0.2	0.9	-0.4	0.5
10	0.2	0.2	0.1	0.0	-0.1	0.4	0.6	0.4	0.3	0.5	0.9	0.9	0.8	1.0	0.8	0.4	-0.5	-1.2	-1.5	-1.8	-1.8	-2.1	-2.1	-2.1	1.0	-2.1	-0.2
11	-2.3	-2.5	-2.1	-2.2	-2.0	-2.4	-2.8	-2.8	-2.8	-2.7	-2.3	-2.0	-1.8	-1.7	-1.6	-1.5	-1.5	-1.6	-1.8	-2.2	-2.7	-2.6	-2.7	-2.6	-1.5	-2.8	-2.2
12	-2.6	-2.4	-2.9	-2.9	-2.9	-3.2	-3.9	-4.0	-3.9	-4.0	-4.3	-4.1	-4.1	-4.1	-4.3	-4.6	-4.8	-5.1	-5.3	-5.3	-5.4	-5.5	-5.6	-5.6	-2.4	-5.6	-4.2
13	-5.5	-5.7	-5.9	-6.3	-6.4	-6.4	-6.7	-7.1	-7.3	-7.5	-7.5	-7.3	-7.1	-7.2	-7.4	-7.6	-7.9	-8.5	-8.9	-8.8	-8.8	-8.6	-8.7	-8.6	-5.5	-8.9	-7.4
14	-8.3	-8.0	-7.7	-7.3	-6.5	-5.1	-4.1	-3.8	-3.9	-3.9	-4.1	-3.9	-4.0	-3.8	-3.7	-4.3	-4.4	-4.3	-4.3	-4.4	-4.5	-4.4	-4.4	-4.4	-3.7	-8.3	-4.9
15	-4.3	-4.1	-3.9	-3.5	-3.2	-3.1	-3.2	-2.0	-1.2	-1.2	-0.2	-0.6	0.0	0.2	0.4	0.8	1.2	0.6	0.7	0.7	0.8	1.1	1.0	1.3	1.3	-4.3	-0.9
16	1.4	1.5	1.8	2.2	2.4	2.6	2.6	2.6	2.6	2.8	2.9					1.9	1.1	0.5	-0.1	-0.3	-0.7	-1.0	-1.2	-1.7	2.9	-1.7	1.2
17	-2.1	-1.3	-1.3	-1.3	-1.0	-1.1	-0.7	-0.8	-1.1	-1.3	-1.6	-1.4	-1.4	-1.4	-0.1	-0.2	-0.4	-1.0	-1.1	-2.1	-4.2	-5.9	-6.9	-7.2	-0.1	-7.2	-2.0
18	-7.3	-7.2	-7.0	-6.8	-7.0	-7.3	-7.3	-7.7	-7.9	-8.2	-8.0	-7.8	-7.7	-7.7	-7.5	-7.3	-7.7	-8.4	-8.6	-9.1	-9.2	-9.2	-9.3	-9.5	-6.8	-9.5	-7.9
19	-9.9	-10.1	-9.9	-9.7	-10.0	-10.7	-10.8	-11.0	-11.2	-11.3	-11.2	-11.1	-11.6	-11.5	-11.3	-11.5	-11.6	-11.5	-11.5	-11.6	-12.1	-11.5	-11.1	-11.1	-9.7	-12.1	-11.0
20	-11.4	-11.2	-10.7	-10.5	-10.0	-10.0	-10.1	-10.2	-10.2	-10.5	-10.4	-10.1	-9.7	-9.3	-8.8	-8.6	-8.5	-8.4	-8.7	-8.8	-8.8	-8.8	-8.8	-8.7	-8.4	-11.4	-9.6
21	-8.7	-8.5	-8.0	-7.2	-6.7	-6.7	-5.7	-5.4	-4.7	-4.6	-5.0	-5.4	-5.3	-5.5	-6.2	-7.1	-7.4	-9.0	-9.5	-10.0	-12.9	-14.3	-15.7	-17.2	-4.6	-17.2	-8.2
22	-19.1	-20.4	-21.4	-21.8	-22.5	-23.3	-23.6	-23.8	-23.4	-23.4	-23.4	-23.5	-23.4	-22.7	-22.6	-22.6	-22.3	-22.2	-21.7	-21.6	-21.1	-20.8	-20.4	-20.1	-19.1	-23.8	-22.1
23	-20.1	-20.0	-19.3	-19.5	-19.5	-19.2	-19.2	-19.3	-19.0	-18.6	-18.6	-18.9	-18.5	-18.8	-18.8	-18.7	-19.1	-19.2	-19.0	-19.2	-18.9	-18.6	-18.5	-18.6	-18.5	-20.1	-19.0
24	-18.1	-18.2	-18.0	-18.2	-18.2	-18.4	-18.6	-18.2	-18.1	-18.3	-18.0	-17.8	-17.0	-16.6	-16.2	-16.2	-16.6	-17.1	-17.3	-17.4	-17.6	-17.8	-17.9	-17.8	-16.2	-18.6	-17.6
25	-18.0	-17.9	-18.2	-18.4	-18.4	-18.4	-18.3	-18.3	-18.3	-17.9	-17.1	-16.3	-15.3	-14.6	-14.2	-14.3	-15.5	-16.4	-17.1	-17.8	-18.2	-18.8	-19.1	-19.1	-14.2	-19.1	-17.3
26	-19.1	-19.0	-19.1	-19.2	-19.4	-19.6	-19.7	-20.0	-20.3	-20.1	-19.6	-19.5	-19.3	-18.6	-18.4	-17.9	-17.9	-18.3	-18.4	-18.4	-18.0	-18.1	-18.7	-18.3	-17.9	-20.3	-19.0
27	-19.1	-18.3	-19.3	-20.7	-21.3	-22.1	-22.3	-22.7	-22.6	-22.1	-22.3	-22.2	-22.9	-22.9	-23.1	-23.5	-24.1	-23.8	-23.5	-23.8	-23.5	-22.6	-22.9	-22.5	-18.3	-24.1	-22.2
28	-22.5	-22.4	-22.4	-22.5	-22.8	-22.6	-22.5	-22.1	-21.9	-21.8	-21.2	-22.0	-21.5	-20.8	-20.6	-20.6	-21.0	-21.1	-21.5	-21.4	-21.0	-20.9	-21.3	-21.7	-20.6	-22.8	-21.7
29	-21.4	-21.5	-21.4	-21.4	-21.3	-21.0	-20.7	-20.7	-20.9	-21.1	-20.8	-20.4	-20.1	-19.3	-18.6	-18.1	-17.9	-18.8	-18.9	-18.7	-19.0	-19.3	-19.4	-19.2	-17.9	-21.5	-20.0
30	-18.8	-19.0	-19.2	-19.5	-19.2	-18.9	-18.6	-18.2	-18.6	-18.7	-18.9	-18.3	-17.8	-16.6	-15.6	-14.7	-14.3	-14.4	-14.2	-13.5	-11.9	-10.6	-9.9	-8.6	-8.6	-19.5	-16.2
31	-8.1	-8.0	-8.1	-7.9	-8.3	-8.7	-8.5	-8.6	-9.4	-10.7	-11.7	-11.8	-11.5	-11.4	-12.0	-11.9	-11.9	-12.1	-13.2	-14.6	-15.4	-15.8	-16.4	-16.7	-7.9	-16.7	-11.4
Max.	**4.2**	**4.7**	**4.7**	**4.6**	**4.8**	**4.4**	**4.2**	**4.4**	**4.6**	**4.9**	**5.4**	**5.0**	**5.2**	**5.3**	**4.0**	**3.9**	**4.0**	**4.2**	**4.2**	**4.1**	**4.2**	**3.8**	**3.6**	**3.5**	**5.4**		
Min.	**-22.5**	**-22.4**	**-22.4**	**-22.5**	**-22.8**	**-23.3**	**-23.6**	**-23.8**	**-23.4**	**-23.4**	**-23.4**	**-23.5**	**-23.4**	**-22.9**	**-23.1**	**-23.5**	**-24.1**	**-23.8**	**-23.5**	**-23.8**	**-23.5**	**-22.6**	**-22.9**	**-22.5**		**-24.1**	
Avg.	**-7.4**	**-7.3**	**-7.4**	**-7.5**	**-7.4**	**-7.5**	**-7.4**	**-7.4**	**-7.5**	**-7.5**	**-7.3**	**-7.5**	**-7.3**	**-7.1**	**-7.1**	**-6.8**	**-7.0**	**-7.3**	**-7.5**	**-7.7**	**-7.8**	**-7.9**	**-8.1**	**-8.1**			**-7.4**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-16.6	-16.8	-16.5	-16.6	-16.2	-15.7	-15.7	-16.1	-16.5	-17.9	-18.0	-17.5	-17.2	-17.4	-18.0	-18.1	-17.4	-18.9	-18.9	-19.4	-19.6	-19.3	-18.9	-17.9	-15.7	-19.6	-17.5
2	-18.2	-19.0	-19.2	-19.2	-19.4	-18.6	-18.8	-18.9	-19.2	-18.7	-17.7	-17.0	-18.6	-18.7	-18.2	-17.6	-17.7	-18.4	-18.0	-17.8	-17.8	-16.8	-15.0	-13.3	-13.3	-19.4	-18.0
3	-12.9	-12.0	-12.0	-11.7	-11.4	-10.9	-10.7	-10.4	-10.2	-9.8	-9.7	-9.7	-9.6	-9.4	-8.8	-8.0	-7.9	-7.6	-7.3	-7.1	-7.0	-7.0	-6.6	-6.2	-6.2	-12.9	-9.3
4	-5.9	-6.0	-5.9	-6.1	-6.2	-5.3	-4.8	-4.8	-4.5	-4.1	-3.6	-3.2	-3.1	-3.2	-3.3	-3.3	-3.0	-2.9	-2.9	-3.1	-3.0	-2.8	-2.7	-3.0	-2.7	-6.2	-4.0
5	-3.0	-2.8	-2.5	-2.4	-2.6	-2.8	-2.5	-2.1	-2.2	-1.2	-1.0	-1.4	-0.9	-0.2	0.3	1.4	1.7	2.1	1.0	0.7	0.7	0.2	0.4	0.8	2.1	-3.0	-0.8
6	1.2	1.3	1.0	1.1	1.5																				1.5	1.0	1.2
7					-3.4	-3.4	-4.1	-2.9	-2.0	-2.5	-2.9	-3.0	-3.5	-3.9	-4.1	-4.2	-4.3	-4.0	-4.5	-4.4	-4.2	-4.1	-3.8	-3.6	-2.0	-4.5	-3.6
8	-3.0	-2.8	-4.9	-4.9	-6.3	-6.4	-6.2	-5.9	-5.1	-2.0	-2.0	-2.0	-1.9	-1.7	-0.9	-0.7	-1.1	-1.5	-1.1	-1.2	-0.5	-0.2	0.1	0.5	0.5	-6.4	-2.6
9	0.6	0.5	0.3	-0.2	-0.9	-0.8	-1.7	-1.4	-1.5	-1.7	-1.4	-1.0	-0.1	0.5	0.9	1.4	2.1	2.7	2.6	2.7	3.0	2.0	2.6	2.6	3.0	-1.7	0.6
10	2.3	2.7	3.1	3.9	2.7	2.2	1.5	1.3	1.2	1.1	1.8	2.9	2.5	2.4	3.4	3.9	3.6	3.6	3.5	3.6	3.8	3.6	3.3	1.4	3.9	1.1	2.7
11	1.3	2.5	3.0	2.2	3.3	2.5	2.2	2.8	3.6	4.1	3.1	2.3	2.2	2.5	3.2	3.4	3.4	3.3	3.8	3.9	4.5	5.0	5.0	5.4	5.4	1.3	3.3
12	5.3	5.1	4.6	2.5	2.2	3.1	2.8	2.0	1.7	1.8	1.3	0.4	0.0	-0.7	-1.2	-1.6	-1.8	-2.2	-3.0	-3.0	-2.5	-1.6	-1.2	-1.9	5.3	-3.0	0.5
13	-3.0	-4.1	-4.2	-4.2	-3.7	-3.1	-3.0	-3.1	-3.2	-2.4	-1.7	-1.7	-1.2	0.8	0.6	1.7	1.1	2.2	2.3	2.9	3.5	3.9	3.8	3.8	3.9	-4.2	-0.5
14	3.9	4.4	4.4	4.7	4.6	4.5	4.5	4.5	3.9	3.6	3.5	3.2	3.5	3.7	4.0	4.0	4.0	4.0	3.9	3.8	3.8	3.6	3.8	3.8	4.7	3.2	4.0
15	4.3	4.9	4.8	5.7	6.0	6.0	5.9	5.9	6.4	6.7	6.5	4.7	2.0	4.7	4.7	4.7	4.5	4.2	2.5	1.6	2.1	2.1	1.7	0.4	6.7	0.4	4.3
16	0.1	0.3	0.4	0.5	0.9	1.2	1.6	1.8	1.2	1.0	2.1	2.1	1.4	1.6	1.5	2.2	2.5	2.2	1.8	1.1	0.3	0.0	0.2	0.3	2.5	0.0	1.2
17	0.3	0.9	1.2	1.4	1.5	1.9	2.6	2.2	1.8	1.8	2.2	2.7	3.3	3.5	3.3	3.1	2.8	2.4	2.5	2.4	2.4	2.6	3.4	3.2	3.5	0.3	2.3
18	3.3	2.6	2.2	2.6	2.7	2.5	3.2	2.4	3.7	3.9	3.9	3.5	3.1	2.8	3.0	2.7	2.5	2.0	1.0	0.6	0.6	0.2	0.2	0.5	3.9	0.2	2.3
19	0.6	1.3	3.0	2.7	2.2	1.8	1.6	1.4	1.0	0.4	0.5	1.0	1.7	2.1	2.2	2.2	2.3	2.4	2.6	2.5	2.1	1.6	1.4	1.2	3.0	0.4	1.7
20	0.9	0.6	0.5	0.4	0.6	0.6	0.6	0.6	0.3	0.5	0.8	1.1	1.2	1.1	0.7	0.8	0.8	0.8	0.9	0.3	-0.4	-0.9	-1.5	-2.2	1.2	-2.2	0.4
21	-2.1	-2.6	-2.9	-3.6	-3.9	-4.1	-4.4	-4.8	-4.9	-4.1	-3.4	-2.6	-2.6	-2.5	-2.4	-2.5	-2.5	-2.3	-2.3	-2.3	-2.1	-2.0	-1.8	-1.8	-1.8	-4.9	-2.9
22	-2.0	-2.4	-2.3	-2.5	-3.0	-3.4	-3.5	-3.6	-3.5	-3.5	-2.9	-2.2	-1.6	-1.6	-1.2	-1.1	-1.6	-2.2	-3.0	-3.5	-3.2	-3.0	-2.6	-2.7	-1.1	-3.6	-2.6
23	-2.7	-3.4	-3.2	-3.5	-3.5	-3.7	-3.9	-3.6	-3.4	-2.8	-1.5	-1.4	-1.4	-1.1	-1.4	-1.5	-1.4	-2.0	-2.4	-3.0	-3.5	-3.1	-3.1	-3.7	-1.1	-3.9	-2.7
24	-4.4	-4.9	-5.1	-5.5	-5.5	-6.1	-6.7	-6.9	-6.8	-6.8	-6.8	-5.8	-4.8	-4.4	-4.3	-3.9	-4.2	-5.6	-6.3	-6.7	-7.1	-7.2	-7.5	-7.6	-3.9	-7.6	-5.9
25	-7.9	-7.9	-7.6	-6.9	-6.6	-6.4	-6.8	-7.1	-6.7	-5.9	-5.1	-4.7	-4.4	-3.7	-1.2	0.7	0.4	-1.0	-2.2	-2.7	-2.8	-2.8	-3.0	-3.5	0.7	-7.9	-4.4
26	-3.8	-3.7	-3.7	-3.2	-3.1	-3.9	-4.3	-4.0	-3.9	-4.0	-3.7	-3.7	-3.6	-3.1	-2.7	-2.6	-2.7	-2.7	-3.2	-3.8	-4.3	-4.8	-5.3	-5.4	-2.6	-5.4	-3.7
27	-5.4	-5.7	-6.0	-6.3	-6.4	-6.5	-6.5	-6.5	-6.3	-6.1	-5.7	-5.9	-5.7	-6.3	-7.0	-7.6	-7.7	-8.0	-8.3	-8.3	-8.2	-8.5	-9.1	-9.4	-5.4	-9.4	-7.0
28	-9.2	-9.9	-9.9	-10.4	-10.7	-11.3	-11.6	-11.8	-11.6	-11.5	-10.7	-10.6	-9.8	-9.4	-9.4	-9.8	-9.8	-9.7	-9.8	-9.8	-9.6	-9.3	-9.9	-10.7	-9.2	-11.8	-10.3
Max.	**5.3**	**5.1**	**4.8**	**5.7**	**6.0**	**6.0**	**5.9**	**5.9**	**6.4**	**6.7**	**6.5**	**4.7**	**3.5**	**4.7**	**4.7**	**4.7**	**4.5**	**4.2**	**3.9**	**3.9**	**4.5**	**5.0**	**5.0**	**5.4**	**6.7**		
Min.	**-18.2**	**-19.0**	**-19.2**	**-19.2**	**-19.4**	**-18.6**	**-18.8**	**-18.9**	**-19.2**	**-18.7**	**-18.0**	**-17.5**	**-18.6**	**-18.7**	**-18.2**	**-18.1**	**-17.7**	**-18.9**	**-18.9**	**-19.4**	**-19.6**	**-19.3**	**-18.9**	**-17.9**		**-19.6**	
Avg.	**-2.8**	**-2.9**	**-2.9**	**-2.9**	**-3.0**	**-3.2**	**-3.3**	**-3.3**	**-3.2**	**-3.0**	**-2.7**	**-2.6**	**-2.6**	**-2.3**	**-2.1**	**-1.9**	**-1.9**	**-2.1**	**-2.4**	**-2.6**	**-2.5**	**-2.5**	**-2.5**	**-2.5**			**-2.5**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-11.3	-11.1	-11.4	-11.9	-12.1	-12.2	-12.5	-12.7	-12.6	-12.2	-12.0	-11.3	-10.2	-8.6	-7.6	-7.2	-6.8	-6.8	-6.6	-6.9	-6.9	-6.8	-6.7	-6.7	-6.6	-12.7	-9.6
2	-6.7	-6.5	-6.3	-6.3	-6.4	-6.8	-7.0	-7.0	-7.4	-7.3	-6.7	-6.3	-5.9	-5.5	-4.6	-3.3	-2.5	-2.2	-1.6	-1.3	-1.0	-0.9	-1.1	-1.3	-0.9	-7.4	-4.7
3	-1.3	-1.3	-1.1	-0.7	-0.8	-0.9	-1.1	-0.6	-0.4	-0.4	-0.4	-0.5	-0.5	-0.4	-0.4	-0.2	-0.5	-0.4	-0.5	-0.7	-0.7	-1.0	-1.5	-1.5	-0.2	-1.5	-0.7
4	-1.4	-1.6	-1.7	-1.8	-2.2	-2.1	-1.8	-1.7	-1.7	-2.1	-1.6	-1.3	-0.3	0.3	0.1	-0.3	-0.3	-0.9	-1.3	-1.3	-1.2	-1.3	-1.4	-1.5	0.3	-2.2	-1.3
5	-1.3	-1.6	-1.1	-1.4	-1.3	-1.0	-0.7	-0.8	-1.1	-1.1	-0.9	-0.4	-0.3	-0.3	-0.5	-0.2	-0.2	0.0	0.0	0.0	-0.3	-0.5	-0.6	-0.5	0.0	-1.6	-0.7
6	-0.9	-1.7	-1.9	-2.5	-2.7	-3.1	-3.4	-3.6	-3.5	-3.7	-3.4	-2.9	-2.9	-1.9	-2.3	-2.1	-2.2	-3.4	-4.3	-5.0	-5.3	-5.6	-5.6	-5.3	-0.9	-5.6	-3.3
7	-5.3	-5.3	-5.2	-5.4	-5.4	-5.3	-5.6	-5.7	-6.0	-6.3	-6.1	-5.2	-4.7	-5.0	-5.1	-5.3	-6.3	-6.9	-7.1	-7.3	-7.3	-7.5	-8.4	-8.8	-4.7	-8.8	-6.1
8	-9.2	-9.2	-9.4	-9.4	-10.8	-11.2	-11.0	-10.1	-10.2	-9.4	-8.9	-8.2	-7.4	-6.6	-7.0	-7.2	-8.0	-8.3	-8.3	-8.1	-8.0	-7.6	-7.5	-7.2	-6.6	-11.2	-8.7
9	-8.7	-8.5	-8.0	-7.4	-9.5	-11.6	-11.2	-10.4	-11.1	-10.9	-10.3	-10.1	-9.2	-9.2	-9.0	-8.6	-8.4	-8.2	-7.4	-7.5	-7.4	-7.3	-7.8	-8.1	-7.3	-11.6	-9.0
10	-9.0	-9.9	-10.2	-10.8	-11.0	-11.3	-11.4	-11.7	-11.0	-10.0	-8.7	-7.3	-5.9	-4.7	-4.5	-3.6	-3.6	-4.4	-4.1	-4.5	-4.5	-3.7	-3.7	-3.4	-3.4	-11.7	-7.2
11	-3.5	-3.5	-3.2	-3.3	-3.5	-3.8	-4.4	-4.4	-4.6	-3.8	-3.7	-3.8	-3.6	-3.0	-2.5	-2.2	-2.3	-2.7	-3.3	-3.5	-3.5	-3.7	-3.4	-3.1	-2.2	-4.6	-3.4
12	-3.0	-3.2	-3.0	-2.8	-2.6	-2.1	-2.1	-1.7	-1.5	-1.2	-0.9	-1.0	-0.5	-0.2	-0.3	-0.5	-0.1	0.4	0.5	0.2	0.2	-0.4	-0.5	-0.8	0.5	-3.2	-1.1
13	-1.1	-1.3	-1.4	-1.6	-2.4	-2.6	-3.2	-3.5	-2.8	-2.5	-1.5	-1.2	-0.8	-0.3	-0.6	-0.1	-0.6	-2.0	-2.5	-2.7	-2.9	-3.3	-4.4	-4.9	-0.1	-4.9	-2.1
14	-5.2	-4.3	-4.2	-4.3	-4.4	-4.6	-5.1	-5.3	-4.9	-4.3	-3.9	-2.4	-1.5	-1.0	-0.7	-0.4	0.3	-1.2	-2.3	-3.5	-4.6	-5.3	-5.9	-6.2	0.3	-6.2	-3.6
15	-5.8	-6.0	-6.0	-6.0	-6.1	-6.4	-6.8	-6.9	-7.2	-6.3	-5.5	-3.5	-1.7	-1.6	-0.7	-0.5	-1.5	-3.0	-3.2	-4.2	-4.2	-4.4	-4.2	-4.1	-0.5	-7.2	-4.4
16	-4.4	-4.4	-4.2	-4.3	-4.4	-4.3	-4.5	-4.8	-4.9	-4.4	-4.1	-3.5	-3.1	-2.6	-2.3	-1.8	-2.5	-2.9	-3.4	-4.4	-4.6	-4.6	-4.7	-5.1	-1.8	-5.1	-3.9
17	-5.2	-5.4	-5.9	-6.3	-6.9	-6.4	-6.5	-6.4	-5.9	-5.6	-5.2	-4.8	-4.8	-5.0	-5.2	-5.0	-4.7	-4.4	-4.3	-4.1	-4.4	-4.4	-4.1	-4.1	-4.1	-6.9	-5.2
18	-4.4	-4.3	-4.1	-4.2	-4.4	-4.1	-4.1	-3.9	-3.8	-3.6	-3.1	-2.5	-1.7	-1.9	-1.3	-0.9	-1.0	-1.4	-1.5	-1.6	-1.9	-2.0	-2.7	-2.9	-0.9	-4.4	-2.8
19	-2.8	-3.4	-3.5	-3.6	-4.0	-4.3	-4.6	-5.1	-4.6	-3.3	-2.9	-1.9	-1.0	-1.3	-1.2	-1.3	-1.5	-1.4	-1.4	-1.6	-2.4	-2.3	-2.3	-2.6	-1.0	-5.1	-2.7
20	-2.4	-2.2	-2.3	-2.2	-2.0	-2.2	-2.0	-1.8	-1.2	-1.0	-0.9	0.0	0.4	0.4	-0.7	-0.6	0.6	0.6	0.4	0.6	0.3	0.4	0.4	0.0	0.6	-2.4	-0.7
21	-0.3	-0.5	-1.2	-2.1	-1.8	-1.9	-2.1	-2.5	-2.7	-2.5	-2.2	-1.4	-0.2	0.6	1.9	2.8	1.5	0.6	0.5	-0.4	-1.1	-1.6	-1.6	-1.7	2.8	-2.7	-0.8
22	-1.5	-1.9	-2.3	-2.6	-2.9	-2.9	-3.5	-4.3	-2.8	-3.0	-3.5	-1.6	-1.8	-1.5	-1.4	-0.9	-0.8	-1.0	-1.1	-1.4	-2.1	-2.5	-2.7	-3.1	-0.8	-4.3	-2.2
23	-3.2	-3.4	-3.5	-3.6	-3.7	-3.4	-3.6	-3.6	-3.1	-3.0	-2.6	-2.2	-1.7	-1.5	-0.2	-0.1	0.2	0.2	-0.7	-1.2	-3.0	-3.4	-3.4	-3.6	0.2	-3.7	-2.4
24	-3.8	-4.2	-4.7	-5.1	-5.1	-5.3	-5.6	-5.2	-5.0	-4.9	-3.9	-3.1	-2.5	-1.7	-1.1	-0.8	-0.7	-0.9	-1.5	-2.4	-2.7	-2.8	-2.8	-2.7	-0.7	-5.6	-3.3
25	-2.5	-2.2	-2.2	-2.7	-3.4	-4.0	-4.1	-4.4	-4.3	-3.8	-3.1	-1.3	-0.3	0.7	0.3	0.1	0.1	-0.7	-1.4	-2.1	-2.4	-2.4	-2.1	-2.1	0.7	-4.4	-2.1
26	-2.1	-2.4	-2.4	-2.5	-2.4	-2.9	-3.7	-4.4	-4.6	-4.4	-3.1	-1.4	-0.3	0.6	0.3	0.8	1.3	-0.7	-1.8	-2.2	-3.0	-3.4	-3.7	-3.7	1.3	-4.6	-2.2
27	-3.6	-3.5	-3.0	-3.1	-2.9	-2.9	-3.2	-2.7	-0.6	0.3	2.2	2.8	2.7	2.6	2.6	2.4	2.6	1.6	1.0	0.6	-0.1	-1.1	-1.2	-1.2	2.8	-3.6	-0.3
28	-1.6	-1.0	-1.1	-0.5	-1.1	-0.4	-0.3	0.5	0.9	-0.1	1.2	2.5	1.9	2.1	1.7	2.3	2.5	1.4	1.1	0.6	-0.4	-0.5	-1.0	-1.4	2.5	-1.6	0.4
29	-0.1	0.3	-0.2	-0.3	-0.6	-1.0	-1.5	-1.8	-1.2	-0.7	0.3	1.4	3.0	3.3	1.7	1.7	1.8	1.1	0.2	-0.2	-0.9	-1.4	-1.1	-1.2	3.3	-1.8	0.1
30	-1.3	-1.3	0.0	1.1	1.0	0.8	-0.1	-0.3	-0.4	0.9	0.8	1.3	0.9	1.0	1.0	0.7	0.5	0.5	0.6	0.9	0.8	0.7	1.1	1.0	1.3	-1.3	0.5
31	1.1	1.1	1.3	1.3	1.3	1.2	1.3	1.5	1.9	2.2	1.9	1.6	1.7	1.9	1.6	1.5	1.7	1.5	1.5	0.2	-0.4	-0.9	-1.2	-1.2	2.2	-1.2	1.1
Max.	**1.1**	**1.1**	**1.3**	**1.3**	**1.3**	**1.2**	**1.3**	**1.5**	**1.9**	**2.2**	**2.2**	**2.8**	**3.0**	**3.3**	**2.6**	**2.8**	**2.6**	**1.6**	**1.5**	**0.9**	**0.8**	**0.7**	**1.1**	**1.0**	**3.3**		
Min.	**-11.3**	**-11.1**	**-11.4**	**-11.9**	**-12.1**	**-12.2**	**-12.5**	**-12.7**	**-12.6**	**-12.2**	**-12.0**	**-11.3**	**-10.2**	**-9.2**	**-9.0**	**-8.6**	**-8.4**	**-8.3**	**-8.3**	**-8.1**	**-8.0**	**-7.6**	**-8.4**	**-8.8**		**-12.7**	
Avg.	**-3.6**	**-3.7**	**-3.7**	**-3.8**	**-4.0**	**-4.2**	**-4.4**	**-4.4**	**-4.1**	**-3.8**	**-3.3**	**-2.6**	**-2.0**	**-1.6**	**-1.5**	**-1.3**	**-1.3**	**-1.8**	**-2.1**	**-2.4**	**-2.8**	**-3.0**	**-3.1**	**-3.2**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.2	-1.2	-1.0	-0.7	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1	-0.1	0.4	-0.1	0.1	0.2	0.1	-0.6	-0.9	-0.9	-0.9	-0.9	-1.1	-1.2	0.4	-1.2	-0.5
2	-1.5	-1.2	-1.1	-1.3	-1.2	-1.6	-2.1	-2.2	-2.3	-1.6	-1.2	0.4	1.2	1.4	1.6	1.1	0.1	-0.4	-0.7	-1.1	-0.9	-1.1	-1.3	-1.2	1.6	-2.3	-0.8
3	-2.1	-1.9	-1.1	-0.4	0.0	-0.1	0.2	0.4	0.3	0.8	1.3	0.8	0.7	0.7	0.8	1.5	1.5	1.4	1.6	1.5	1.7	2.0	2.1	2.2	2.2	-2.1	0.7
4	3.0	3.0	2.7	1.5	1.5	1.5	1.6	2.0	2.1	2.2	3.2	3.7	3.0	3.1	3.2	3.2	2.9	2.2	2.0	1.7	1.6	1.6	1.5	1.3	3.7	1.3	2.3
5	1.7	3.9	4.6	5.1	3.5	3.0	5.3	4.9	5.5	5.7	4.6	3.8	3.4	3.4	3.9	3.8	3.8	2.6	1.7	0.9	0.6	0.3	-0.3	-0.9	5.7	-0.9	3.1
6	-1.1	-1.4	-1.6	-2.0	-2.7	-3.5	-3.8	-3.5	-3.1	-2.1	-0.7	0.1	0.9	1.6	1.4	1.9	1.9	1.4	0.8	0.2	-0.2	-0.3	-0.3	-0.2	1.9	-3.8	-0.7
7	0.0	0.2	0.3	0.5	1.0	2.0	2.2	2.0	2.1	2.3	2.5	3.8	4.1	5.0	5.7	5.2	5.2	4.8	4.1	4.1	3.9	3.9	4.1	4.0	5.7	0.0	3.0
8	4.0	4.0	3.8	3.6	3.5	3.3	2.3	1.7	2.1	1.8	2.1	2.1	1.9	2.0	2.0	2.0	2.0	1.9	1.4	1.6	1.0	0.8	1.0	0.9	4.0	0.8	2.2
9	0.8	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.8	1.2	1.9	3.6	4.5	3.0	2.1	1.5	1.3	1.3	1.2	1.1	1.2	2.4	2.8	2.8	4.5	0.5	1.6
10	2.5	2.0	1.6	1.1	1.5	1.5	1.1	1.2	0.9	0.7	0.2	0.0	-0.1	-0.1	0.0	0.3	0.3	0.3	0.1	-0.2	-0.2	-0.2	-0.6	-0.8	2.5	-0.8	0.5
11	-1.0	-1.3	-1.5	-1.8	-1.1	-0.5	-1.8	-1.5	-1.3	-0.8	0.1	0.6	1.5	1.6	0.1	-1.4	-1.2	-0.8	-0.9	-0.9	-0.8	-1.0	-1.0	-0.7	1.6	-1.8	-0.7
12	-0.6	-0.4	-0.4	-0.2	-0.3	-0.4	-0.4	-0.1	0.2	0.1	0.4	0.6	0.6	0.4	0.3	0.4	0.5	1.0	0.6	0.4	0.4	0.9	1.2	1.1	1.2	-0.6	0.2
13	0.8	0.7	0.1	0.0	-0.2	0.1	0.5	0.8	1.0	1.6	2.2	2.6	2.5	2.4	2.6	2.1	1.4	1.0	0.7	0.6	0.3	0.1	0.2	0.4	2.6	-0.2	1.0
14	0.5	0.2	-0.3	-0.7	-1.2	-2.0	-2.5	-2.6	-2.7	-2.7	-2.3	-2.1	-2.0	-1.6	-1.2	-0.7	-0.2	0.1	0.3	0.4	0.3	-0.1	-0.3	-0.4	0.5	-2.7	-1.0
15	-0.9	-1.7	-1.7	-2.2	-3.0	-2.9	-2.5	-2.3	-2.6	-3.4	-2.9	-3.3	-3.5	-2.5	-2.8	-2.3	-2.2	-2.6	-2.6	-2.9	-3.4	-3.8	-4.5	-4.8	-0.9	-4.8	-2.8
16	-5.2	-5.2	-4.8	-4.3	-3.3	-2.8	-2.7	-2.1	-1.6	-1.4	-1.0	-0.7	-0.7	-0.2	0.2	0.4	-1.1	-1.5	-0.9	-0.5	-0.1	1.0	0.0	-0.2	1.0	-5.2	-1.6
17	-0.5	-0.3	-0.1	0.2	0.2	0.2	0.4	-0.1	-0.3	0.2	0.6	1.1	2.6	2.1	2.1	2.1	2.3	2.4	2.8	2.5	2.0	1.6	1.0	1.2	2.8	-0.5	1.1
18	0.8	0.6	0.1	-0.1	-0.5	-0.4	-0.5	0.6	1.8	2.9	4.4	4.6	4.6	4.1	4.1	3.8	4.3	3.6	2.2	3.4	4.0	4.0	3.6	3.1	4.6	-0.5	2.5
19	2.9	1.9	0.9	0.4	-0.2	-0.4	-0.4	0.4	1.4	1.8	1.6	2.2	2.1	2.3	3.7	3.8	2.9	1.9	0.6	0.0	-0.7	-1.0	-1.7	-1.6	3.8	-1.7	1.0
20	-2.1	-2.4	-2.2	-1.9	-1.6	-1.3	-0.9	-0.5	0.1	0.3	0.3	1.6	2.5	2.1	1.8	1.2	1.1	1.6	1.3	0.6	0.6	0.8	0.8	0.6	2.5	-2.4	0.2
21	0.6	0.5	0.7	0.7	0.7	0.9	1.0	0.8	0.8	1.0	1.9	1.6	1.6	1.9	3.3	4.2	4.1	3.3	2.4	1.5	2.0	2.8	2.8	2.9	4.2	0.5	1.8
22	2.7	2.4	1.6	1.7	1.5	1.2	1.1	1.5	1.6	1.9	1.6	2.5	3.4	5.0	4.6	4.3	3.7	3.1	2.7	2.7	2.5	2.2	2.2	1.7	5.0	1.1	2.5
23	0.6	0.7	1.0	1.1	0.9	0.5	0.6	0.5	0.4	0.5	1.5	2.9	3.0	3.9	4.6	3.8	3.5	3.7	3.1	3.3	3.4	3.6	3.6	3.8	4.6	0.4	2.3
24	3.9	3.4	2.6	2.3	2.2	1.8	1.9	2.0	1.9	2.9	3.5	3.3	2.8	2.9	3.0	2.8	2.8	2.5	1.7	0.9	0.4	0.1	-0.2	-0.6	3.9	-0.6	2.1
25	-1.0	-1.1	-1.4	-1.7	-1.9	-2.4	-2.1	-1.8	-1.4	-0.6	0.8	1.8	2.2	0.8	0.6	0.9	0.9	1.1	0.9	1.4	1.5	1.5	2.0	2.1	2.2	-2.4	0.1
26	1.8	2.1	2.8	2.8	2.6	2.3	2.5	2.9	3.8	4.2	4.5	4.9	5.3	5.4	5.7	6.0	6.1	6.1	5.9	5.7	5.5	5.3	4.7	4.8	6.1	1.8	4.3
27	5.4	5.2	4.9	4.9	4.8	4.8	4.7	5.1	5.4	6.0	6.6	6.3	6.8	7.4	7.8	8.5	8.5	7.6	5.7	5.1	4.5	4.5	4.4	4.6	8.5	4.4	5.8
28	4.4	4.8	4.7	4.0	3.4	3.4	3.1	2.8	3.1	2.2	0.7	1.3	2.3	2.7	3.0	3.5	3.1	3.2	3.0	2.3	2.1	1.7	1.5	1.1	4.8	0.7	2.8
29	0.8	0.9	2.3	2.3	2.0	2.0	2.7	2.1	2.0	2.9	3.5	4.4	4.9	4.8	5.3	5.2	5.3	5.2	5.0	5.1	5.2	5.1	3.8	3.1	5.3	0.8	3.6
30	2.4	2.0	2.1	1.8	1.4	0.8	0.8	1.2	2.5	2.5	3.1	4.4	5.4	5.6	5.2	4.9	4.2	4.3	3.8	4.2	4.2	3.9	3.8	3.5	5.6	0.8	3.2
Max.	**5.4**	**5.2**	**4.9**	**5.1**	**4.8**	**4.8**	**5.3**	**5.1**	**5.5**	**6.0**	**6.6**	**6.3**	**6.8**	**7.4**	**7.8**	**8.5**	**8.5**	**7.6**	**5.9**	**5.7**	**5.5**	**5.3**	**4.7**	**4.8**	**8.5**		
Min.	**-5.2**	**-5.2**	**-4.8**	**-4.3**	**-3.3**	**-3.5**	**-3.8**	**-3.5**	**-3.1**	**-3.4**	**-2.9**	**-3.3**	**-3.5**	**-2.5**	**-2.8**	**-2.3**	**-2.2**	**-2.6**	**-2.6**	**-2.9**	**-3.4**	**-3.8**	**-4.5**	**-4.8**		**-5.2**	
Avg.	**0.7**	**0.7**	**0.7**	**0.6**	**0.5**	**0.4**	**0.4**	**0.5**	**0.8**	**1.1**	**1.5**	**2.0**	**2.3**	**2.4**	**2.5**	**2.5**	**2.3**	**2.0**	**1.6**	**1.5**	**1.4**	**1.4**	**1.2**	**1.1**			**1.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.4	3.4	3.3	3.5	3.8	3.9	3.7	3.9	4.4	5.2	5.5	5.9	6.7	7.1	7.2	7.2	6.9	6.6	6.5	5.8	5.5	4.6	4.5	4.1	7.2	3.3	5.1
2	3.5	2.8	2.9	2.9	2.8	3.1	3.1	3.0	2.9	3.2	3.7	3.4	3.4	3.9	5.1	5.9	6.2	6.2	6.2	5.9	5.7	5.2	4.0	4.3	6.2	2.8	4.1
3	4.9	5.0	4.9	4.7	5.1	5.2	4.8	5.5	6.7	7.1	7.3	7.5	7.9	8.1	8.2	8.1	7.9	6.8	6.4	5.6	5.1	5.1	4.8	4.4	8.2	4.4	6.1
4	4.2	3.9	4.5	4.9	4.8	4.4	3.6	3.6	4.6	4.9	5.2	5.6	5.5	5.2	4.7	4.8	5.0	4.9	4.7	4.7	4.8	4.8	3.9	3.7	5.6	3.6	4.6
5	3.2	2.8	2.7	2.5	2.4	2.7	2.6	2.9	3.1	3.5	3.7	3.7	4.1	4.4	4.1	3.8	3.9	3.9	3.8	3.8	3.6	3.4	3.3	2.4	4.4	2.4	3.3
6	2.1	1.9	2.0	1.9	1.8	1.6	1.8	1.9	1.8	2.0	2.2	3.3	3.9	4.6	4.6	4.1	4.0	3.8	3.4	3.3	3.0	2.8	2.6	2.1	4.6	1.6	2.8
7	1.7	1.4	1.2	1.0	0.8	0.4	0.3	0.3	0.4	0.3	0.6	0.7	0.8	1.0	1.2	1.1	0.9	1.0	0.8	0.6	0.3	0.3	0.3	0.7	1.7	0.3	0.8
8	1.0	1.2	1.0	0.0	-0.7	-0.6	0.0	0.3	0.9	1.2	0.8	1.0	1.1	2.1	2.8	3.4	3.6	3.9	4.2	4.2	4.2	4.9	4.7	4.2	4.9	-0.7	2.1
9	3.9	4.7	4.8	4.8	4.9	4.8	4.7	4.5	4.4	3.7	3.6	4.6	5.5	5.7	6.0	6.9	6.8	6.8	7.0	7.3	6.9	6.5	6.7	6.5	7.3	3.6	5.5
10	6.2	6.6	6.5	5.4	5.7	5.8	6.5	7.8	8.5	8.5	7.5	8.5	7.7	8.7	9.8	10.0	8.6	6.9	6.5	5.7	4.9	4.4	4.1	3.8	10.0	3.8	6.8
11	3.2	2.9	3.2	3.3	3.2	3.3	3.4	3.6	4.1	4.5	5.4	6.6	7.7	8.1	8.4	8.2	8.1	7.6	6.5	6.4	6.9	6.4	6.1	6.1	8.4	2.9	5.5
12	5.7	6.1	6.3	6.1	5.7	5.6	6.4	7.3	7.7	8.6	9.0	10.1	11.2	12.1	12.9	13.2	13.6	13.5	11.3	11.1	10.4	9.4	9.8	8.8	13.6	5.6	9.2
13	8.7	8.3	7.6	7.1	6.5	6.6	7.3	7.2	7.5	8.6	9.7	10.4	10.4	10.9	11.8	11.8	11.6	11.3	9.8	8.6	8.6	8.1	7.3	5.5	11.8	5.5	8.8
14	4.5	4.4	4.5	4.0	4.1	3.8	4.7	5.9	6.9	7.4	7.2	7.2	7.1	6.9	6.5	6.3	6.5	6.7	6.4	6.6	6.1	5.8	5.5	5.4	7.4	3.8	5.8
15	5.5	5.3	5.0	4.6	3.8	3.1	3.3	4.3	5.7	6.2	6.8	8.1	7.3	7.1	7.0	7.0	6.8	6.8	6.8	6.7	6.3	6.0	6.0	6.2	8.1	3.1	5.9
16	5.8	6.7	7.4	7.1	6.8	6.5	6.4	6.1	6.9	7.1	7.7	8.5	8.6	8.2	7.6	7.6	7.2	6.9	6.1	5.8	5.4	5.1	4.8	3.7	8.6	3.7	6.7
17	3.9	3.8	3.7	3.3	3.5	3.9	4.7	5.4	5.8	6.4	7.0	6.6	6.5	6.4	6.3	6.3	5.8	5.9	6.5	6.1	5.6	5.3	4.3	4.8	7.0	3.3	5.3
18	4.9	4.4	3.9	3.5	3.7	3.8	4.2	4.2	5.8	7.3	8.1	8.7	9.4	9.2	8.2	7.1	6.3	6.9	7.0	6.9	6.7	6.5	6.3	6.0	9.4	3.5	6.2
19	5.7	5.5	5.5	5.5	5.3	5.2	5.5	5.8	5.9	6.4	7.5	7.1	7.4	7.0	6.6	6.8	6.0	4.2	2.9	2.8	3.0	3.0	2.1	2.1	7.5	2.1	5.2
20	2.3	2.6	3.0	3.3	3.6	3.7	3.9	4.2	4.5	4.6	4.8	5.3	5.3	5.4	5.9	6.5	7.0	7.8	7.4	7.4	7.1	7.3	7.2	6.3	7.8	2.3	5.3
21	6.7	6.0	6.5	6.7	5.8	5.5	5.9	6.7	8.1	9.0	9.5	10.1	10.8	11.9	12.8	12.8	13.2	13.2	12.8	12.5	12.4	12.2	12.1	11.9	13.2	5.5	9.8
22	11.8	10.3	8.9	8.2	8.1	8.3	8.5	9.0	9.7	10.4	11.1	12.4	13.2	14.7	14.9	15.3	15.3	15.3	15.1	14.9	13.9	12.5	10.7	10.3	15.3	8.1	11.8
23	9.8	9.8	8.9	8.9	8.1	8.8	8.8	9.9	11.9	11.7	10.9	11.7	11.5	12.6	13.7	13.4	13.5	13.5	11.3	10.9	11.6	13.9	13.6	13.5	13.9	8.1	11.3
24	13.3	12.6	12.7	12.1	10.1	12.2	13.2	13.0	12.5	11.8	12.5	11.7	12.6	13.8	15.0	15.7	15.9	15.9	15.5	15.8	14.9	15.7	14.3	13.9	15.9	10.1	13.6
25	13.0	12.7	12.6	9.6	8.7	10.6	13.4	12.7	14.3	13.9	11.7	13.9	13.8	13.6	15.3	15.5	16.2	16.3	14.4	14.5	14.9	15.2	14.7	14.1	16.3	8.7	13.6
26	14.3	13.7	14.0	14.8	15.1	14.7	14.8	15.0	15.8	16.1	14.4	14.9	14.9	16.1	16.4	17.2	15.4	15.9	14.3	15.2	16.7	18.4	17.1	17.1	18.4	13.7	15.5
27	16.3	15.8	13.6	11.2	13.7	14.4	15.2	15.1	15.7	16.6	17.5	15.2	15.2	16.2	15.7	16.7	18.1	17.0	15.8	16.7	16.4	15.8	16.4	14.9	18.1	11.2	15.6
28	13.1	11.8	13.4	14.7	12.3	12.6	13.6	13.7	14.8	13.7	15.4	13.8	14.1	14.1	15.0	15.2	15.5	13.7	12.6	13.5	13.7	13.7	13.7	11.8	15.5	11.8	13.7
29	11.6	10.2	9.1	11.1	11.2	10.7	9.0	10.2	11.6	12.1	13.4	13.1	13.7	14.0	13.8	13.1	13.3	12.3	10.7	10.2	9.4	9.4	9.0	8.7	14.0	8.7	11.3
30	8.7	8.4	7.5	7.3	7.5	7.5	7.9	7.6	7.2	7.3	7.4	7.7	7.9	8.0	8.3	8.8	9.2	9.3	9.1	9.5	9.2	8.8	8.8	8.3	9.5	7.2	8.2
31	8.1	8.2	8.0	7.8	7.5	7.4	7.4	7.5	8.1	8.4	8.1	8.4	7.8	8.2	8.2	7.8	7.6	7.8	7.5	7.4	7.4	7.4	7.4	7.3	8.4	7.3	7.8
Max.	**16.3**	**15.8**	**14.0**	**14.8**	**15.1**	**14.7**	**15.2**	**15.1**	**15.8**	**16.6**	**17.5**	**15.2**	**15.2**	**16.2**	**16.4**	**17.2**	**18.1**	**17.0**	**15.8**	**16.7**	**16.7**	**18.4**	**17.1**	**17.1**	**18.4**		
Min.	**1.0**	**1.2**	**1.0**	**0.0**	**-0.7**	**-0.6**	**0.0**	**0.3**	**0.4**	**0.3**	**0.6**	**0.7**	**0.8**	**1.0**	**1.2**	**1.1**	**0.9**	**1.0**	**0.8**	**0.6**	**0.3**	**0.3**	**0.3**	**0.7**		**-0.7**	
Avg.	**6.8**	**6.6**	**6.4**	**6.2**	**6.0**	**6.1**	**6.4**	**6.7**	**7.4**	**7.7**	**7.9**	**8.2**	**8.5**	**8.9**	**9.2**	**9.3**	**9.2**	**9.0**	**8.4**	**8.3**	**8.1**	**8.0**	**7.6**	**7.2**			**7.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.2	7.3	7.7	8.7	8.3	7.8	8.1	8.6	9.0	9.4	10.4	10.0	10.2	9.8	9.1	9.4	10.3	11.1	9.9	9.6	9.3	8.8	8.9	9.8	11.1	7.2	9.1
2	9.4	8.9	8.9	8.8	8.9	9.3	9.7	10.1	11.2	12.2	12.7	13.8	14.9	16.8	18.2	17.7	17.7	17.4	16.4	16.0	15.7	15.5	14.6	13.2	18.2	8.8	13.2
3	13.0	12.6	12.7	13.4	13.1	12.3	11.8	11.5	11.5	11.9	12.7	13.6	14.5	15.6	16.2	16.7	16.8	16.3	15.1	14.6	14.7	14.2	13.6	13.4	16.8	11.5	13.8
4	13.0	12.8	12.1	10.7	8.9	9.2	9.4	9.6	10.4	12.0	11.8	10.1	10.4	10.9	10.7	10.7	10.6	10.4	9.8	10.0	10.3	10.7	9.9	8.2	13.0	8.2	10.5
5	7.3	6.8	6.7	6.5	7.7	8.6	7.8	8.4	9.5	10.9	10.5	10.6	10.6	10.7	10.5	10.8	10.9	11.2	10.8	10.5	10.1	9.9	9.3	9.5	11.2	6.5	9.4
6	8.0	7.3	7.3	7.1	6.0	7.1	8.2	9.5	10.7	9.9	9.8	10.1	10.9	11.1	11.4	11.4	11.1	10.1	9.4	9.7	9.6	9.5	9.1	9.1	11.4	6.0	9.3
7	9.1	9.2	9.6	9.5	9.1	8.8	8.8	9.0	8.5	8.1	8.6	8.9	8.9	8.7	8.3	8.2	7.7	7.5	7.7	7.9	7.9	7.7	7.7	7.6	9.6	7.5	8.5
8	7.7	7.8	7.7	7.8	7.7	7.8	7.8	7.7	7.9	8.2	8.1	8.9	9.6	10.1	10.4	10.9	10.6	10.4	10.0	9.5	9.6	9.2	8.6	8.7	10.9	7.7	8.9
9	8.8	8.9	8.8	8.4	8.1	8.0	7.9	8.0	7.9	8.0	8.5	9.2	9.7	10.0	10.0	10.8	11.5	10.4	8.8	8.3	8.1	8.2	8.1	7.8	11.5	7.8	8.8
10	7.8	7.7	7.6	7.6	7.7	7.8	7.7	7.6	7.8	7.9	8.1	8.9	9.0	8.6	8.7	8.6	8.5	8.4	8.1	8.1	8.0	8.0	8.1	8.1	9.0	7.6	8.1
11	8.2	7.7	7.1	6.7	6.4	6.6	7.0	7.3	7.7	7.6	7.5	7.4	7.9	8.4	8.0	8.1	8.2	8.9	9.0	9.1	9.4	9.2	9.3	9.2	9.4	6.4	8.0
12	9.0	8.9	8.7	8.8	8.8	8.9	9.1	8.9	8.9	9.2	9.4	9.1	9.1	9.2	9.4	9.6	9.2	8.8	8.9	8.5	8.5	8.6	8.4	8.2	9.6	8.2	8.9
13	8.1	8.1	8.0	7.9	7.5	7.4	7.4	7.6	7.8	8.1	8.3	8.6	8.8	9.4	10.1	10.6	9.8	9.1	9.1	9.0	9.0	8.8	8.6	8.4	10.6	7.4	8.5
14	8.4	8.4	8.3	8.4	8.6	9.0	9.3	9.3	9.7	10.2	10.3	10.0	9.7	9.5	9.8	10.4	11.1	11.8	12.6	12.8	12.9	12.6	12.5	12.5	12.9	8.3	10.3
15	12.3	11.8	11.5	11.5	11.4	11.4	11.6	10.3	10.1	10.5	10.9	11.5	11.3	10.2	9.6	9.8	10.4	10.6	10.5	10.7	10.3	10.2	10.2	10.3	12.3	9.6	10.8
16	10.1	10.0	10.0	9.9	9.6	9.4	9.5	9.7	9.4	9.6	10.0	9.9	9.9	10.4	10.6	10.8	10.2	10.2	10.4	10.5	10.5	10.3	10.3	10.3	10.8	9.4	10.1
17	10.0	9.9	9.8	9.4	9.3	9.3	9.3	9.4	9.3	9.6	10.0	10.9	10.5	10.3	10.2	10.3	10.5	11.0	10.4	10.5	10.3	9.8	9.7	9.8	11.0	9.3	10.0
18	9.7	9.8	9.8	9.8	10.1	10.4	10.2	10.7	11.1	11.1	10.8	10.7	11.0	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.5	10.4	10.1	10.2	11.3	9.7	10.5
19	10.2	9.9	9.9	10.2	10.3	10.3	10.4	10.5	11.8	12.4	13.2	13.7	14.1	14.0	14.6	15.3	13.6	11.8	9.9	9.3	9.1	9.0	9.1	9.1	15.3	9.0	11.3
20	9.7	10.9	9.9	9.4	9.1	9.4	9.3	9.6	10.1	10.2	10.2	10.1	9.2	8.5	7.8	8.7	9.7	10.0	9.3	8.6	8.4	8.1	7.9	7.6	10.9	7.6	9.2
21	7.0	6.6	6.1	5.8	5.9	6.5	6.6	7.4	9.0	10.5	10.3	10.1	10.8	10.9	11.8	12.0	12.1	12.3	11.6	11.3	11.7	11.1	10.2	10.1	12.3	5.8	9.5
22	10.0	10.2	10.2	10.4	9.9	9.5	9.5	9.5	9.1	8.8	8.7	8.8	8.9	8.6	9.2	9.4	9.5	9.4	9.6	9.7	9.6	9.2	9.2	8.5	10.4	8.5	9.4
23	8.0	7.8	7.9	7.8	8.1	8.3	8.6	8.8	9.1	8.9	9.1	9.9	10.1	9.7	9.8	9.9	9.9	10.3	9.9	9.9	9.6	9.4	9.0	8.4	10.3	7.8	9.1
24	8.5	7.8	7.3	6.9	6.8	7.9	8.6	9.7	10.9	12.0	10.9	10.7	11.5	13.0	13.0	13.3	13.8	13.9	13.1	11.9	12.0	11.9	11.4	11.2	13.9	6.8	10.7
25	10.4	11.0	11.1	10.6	9.4	9.6	10.8	11.1	11.0	11.5	11.3	11.2	11.4	11.4	11.5	11.8	11.9	11.6	10.7	10.6	10.5	9.9	9.5	9.5	11.9	9.4	10.8
26	9.3	8.9	9.1	9.2	9.3	9.2	9.2	9.5	10.1	9.7	10.0	9.6	9.6	9.4	9.5	9.9	9.7	9.5	9.5	9.7	9.8	9.7	9.4	9.2	10.1	8.9	9.5
27	8.5	8.3	7.4	7.1	7.3	8.9	9.8	10.4	10.3	11.1	10.6	10.5	10.6	10.7	11.0	11.5	12.3	12.1	11.1	11.0	14.2	17.5	16.9	16.8	17.5	7.1	11.1
28	16.2	15.2	14.5	14.3	14.3	13.9	13.9	14.6	14.5	13.9	14.1	14.2	14.3	15.1	15.1	14.1	14.2	14.5	14.1	14.2	14.2	13.9	14.1	14.6	16.2	13.9	14.4
29	15.0	14.9	14.7	14.6	14.5	14.6	14.8	14.2	14.9	14.7	13.6	13.3	13.0	11.3	9.9	10.9	11.5	11.5	11.3	11.3	11.2	11.1	10.9	10.9	15.0	9.9	12.8
30	10.9	10.5	10.2	9.9	9.6	9.5	9.6	9.8	10.2	10.7	11.3	11.2	11.3	11.7	11.1	10.9	11.0	10.5	10.3	10.6	13.0	13.0	13.0	12.7	13.0	9.5	10.9
Max.	**16.2**	**15.2**	**14.7**	**14.6**	**14.5**	**14.6**	**14.8**	**14.6**	**14.9**	**14.7**	**14.1**	**14.2**	**14.9**	**16.8**	**18.2**	**17.7**	**17.7**	**17.4**	**16.4**	**16.0**	**15.7**	**17.5**	**16.9**	**16.8**	**18.2**		
Min.	**7.0**	**6.6**	**6.1**	**5.8**	**5.9**	**6.5**	**6.6**	**7.3**	**7.7**	**7.6**	**7.5**	**7.4**	**7.9**	**8.4**	**7.8**	**8.1**	**7.7**	**7.5**	**7.7**	**7.9**	**7.9**	**7.7**	**7.7**	**7.6**		**5.8**	
Avg.	**9.7**	**9.5**	**9.4**	**9.2**	**9.1**	**9.2**	**9.4**	**9.6**	**10.0**	**10.3**	**10.4**	**10.5**	**10.7**	**10.8**	**10.9**	**11.1**	**11.2**	**11.1**	**10.6**	**10.5**	**10.6**	**10.5**	**10.3**	**10.1**			**10.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.9	11.2	11.2	10.8	10.3	10.7	11.9	12.2	13.0	14.1	11.8	10.6	10.6	10.6	10.4	10.3	9.5	9.4	8.8	11.8	18.1	16.7	16.1	17.3	18.1	8.8	12.0
2	17.3	16.7	16.5	14.5	13.9	13.8	13.5	13.7	13.6	13.9	15.6	16.8	14.7	14.8	14.6	16.5	20.4	20.1	19.9	19.9	19.8	18.3	15.9	12.5	20.4	12.5	16.1
3	11.7	11.1	10.5	10.2	10.2	10.3	9.9	9.8	9.9	10.2	10.4	10.5	10.3	10.2	10.2	10.2	10.3	11.1	11.0	10.9	10.7	11.0	10.6	10.6	11.7	9.8	10.5
4	11.0	11.4	11.2	10.8	10.5	10.9	11.5	12.5	12.6	11.8	11.9	11.9	11.8	11.8	11.6	11.4	11.6	11.5	11.0	10.9	10.9	10.8	10.8	11.1	12.6	10.5	11.4
5	11.5	11.3	11.0	10.4	10.4	10.8	10.9	10.5	10.7	11.2	10.8	10.4	10.3	10.3	10.4	10.5	10.5	10.6	10.8	10.9	10.8	10.8	10.6	10.5	11.5	10.3	10.7
6	10.5	10.4	10.4	10.4	10.4	10.5	10.6	10.7	11.0	11.2	11.2	11.4	12.0	11.8	11.3	11.3	11.4	11.5	11.6	11.5	11.5	11.3	11.3	11.1	12.0	10.4	11.1
7	11.0	11.0	11.0	11.0	11.0	10.9	10.8	10.8	10.9	10.9	10.9	10.9	11.3	11.6	11.1	11.1	11.3	11.1	10.8	10.5	10.5	10.3	10.1	10.0	11.6	10.0	10.9
8	10.0	10.2	10.1	10.1	10.1	10.4	11.2	12.4	12.9	13.8	14.3	14.7	14.7	14.8	15.4	15.1	14.2	14.3	15.0	15.8	15.9	15.7	14.5	13.2	15.9	10.0	13.3
9	13.0	12.7	12.5	12.4	12.2	12.9	13.4	14.0	14.4	14.6	13.8	13.1	13.2	13.2	13.3	14.0	15.2	15.4	13.3	12.2	11.7	11.8	11.9	11.9	15.4	11.7	13.2
10	11.8	11.7	11.6	11.4	11.5	11.6	11.6	11.9	11.5	11.3	11.2	11.5	11.7	12.8	12.5	12.2	11.8	11.6	11.0	10.8	10.8	10.9	10.9	10.7	12.8	10.7	11.5
11	10.5	10.4	10.3	10.2	10.2	10.3	10.4	10.6	11.0	12.3	14.4	14.4	14.7	13.7	12.3	12.1	12.8	13.5	12.8	12.5	12.2	11.7	11.2	10.9	14.7	10.2	11.9
12	10.5	10.4	10.0	9.7	9.1	9.3	10.9	12.1	13.9	15.7	17.2	15.2	14.5	14.6	15.2	17.3	18.9	21.0	22.0	21.9	21.4	21.7	20.8	19.4	22.0	9.1	15.5
13	18.9	20.6	20.0	16.3	18.6	18.5	17.0	16.2	15.3	14.9	14.9	15.1	15.3	15.3	14.9	14.6	14.1	13.9	13.7	13.6	13.1	12.6	12.3	12.3	20.6	12.3	15.5
14	12.2	11.8	11.2	11.5	11.4	11.5	11.7	12.1	12.3	12.6	12.9	13.2	13.9	13.6	13.6	12.8	12.6	12.3	11.9	11.7	12.1	12.0	11.8	11.4	13.9	11.2	12.3
15	11.2	11.1	11.4	11.6	11.2	11.0	11.3	11.5	12.5	13.2	14.2	14.6	15.4	15.7	14.1	13.4	13.1	12.7	11.9	11.6	11.4	11.3	11.3	11.4	15.7	11.0	12.4
16	11.5	11.6	11.7	11.5	11.0	11.1	10.1	10.2	10.3	10.4	10.7	10.9	11.3	11.6	11.5	11.6	11.9	11.5	11.3	11.2	11.2	11.0	10.9	10.8	11.9	10.1	11.1
17	10.6	10.0	10.1	10.2	10.0	9.9	10.4	10.9	10.6	10.9	11.1	11.5	11.6	10.6	10.3	10.2	10.3	10.2	10.0	9.8	9.9	10.0	9.7	10.1	11.6	9.7	10.4
18	10.7	10.7	10.3	10.3	10.3	10.0	10.2	10.3	10.5	10.4	10.2	10.0	9.8	10.0	10.3	10.9	11.5	11.6	11.8	11.4	12.2	11.9	11.2	11.7	12.2	9.8	10.8
19	12.0	11.8	11.5	11.6	12.2	12.5	12.7	13.0	13.8	14.7	15.0	15.0	15.1	15.6	15.9	16.0	15.7	16.0	16.4	16.4	15.9	13.9	14.5	15.3	16.4	11.5	14.3
20	15.1	14.5	14.1	13.1	12.9	14.6	13.5	15.1	15.8	16.4	16.2	16.3	16.1	15.8	16.5	15.9	16.5	16.4	17.1	16.8	13.8	11.4	11.4	11.6	17.1	11.4	14.9
21	11.6	13.1	13.0	13.1	12.3	13.7	14.8	15.3	15.2	15.5	15.7	15.7	15.7	15.6	15.9	15.5	12.7	12.5	12.2	12.3	14.5	13.1	12.1	12.2	15.9	11.6	13.9
22	11.8	11.4	11.1	11.1	11.0	12.2	12.8	12.6	12.4	12.6	12.8	12.8	13.0	12.8	11.1	10.4	10.3	10.4	10.7	10.7	10.5	10.4	10.3	10.2	13.0	10.2	11.5
23	10.7	10.7	11.1	11.1	10.3	10.1	10.2	10.8	11.1	11.6	12.3	12.3	12.7	13.4	14.0	14.1	12.3	11.3	12.9	13.2	13.1	12.8	12.6	12.7	14.1	10.1	12.0
24	12.6	12.5	12.1	11.7	11.7	12.1	12.5	12.4	12.6	12.9	13.5	13.6	13.2	12.6	10.8	10.2	10.1	10.1	10.0	10.1	10.1	10.1	10.0	10.7	13.6	10.0	11.6
25	10.6	10.6	10.6	10.7	10.5	9.7	9.6	9.9	9.9	10.1	10.4	10.8	11.1	10.8	11.4	11.7	12.3	12.0	12.1	12.4	12.3	12.1	11.6	11.6	12.4	9.6	11.0
26	11.6	11.1	10.2	9.7	9.7	10.2	10.6	13.1	13.6	13.8	14.2	14.6	14.5	14.6	15.1	15.1	15.4	15.0	14.5	14.2	14.2	14.2	14.2	13.9	15.4	9.7	13.2
27	13.7	13.5	13.3	13.1	13.2	13.3	13.0	12.9	13.6	14.8	15.9	17.1	17.2	17.6	15.4	15.3	15.0	14.3	13.2	13.0	13.1	12.6	12.3	12.7	17.6	12.3	14.1
28	12.3	11.7	11.0	11.8	10.9	11.3	11.2	11.8	12.5	13.3	13.7	13.2	12.8	12.1	12.0	11.4	11.5	11.3	11.2	11.4	14.8	14.9	13.6	12.4	14.9	10.9	12.3
29	12.3	12.3	12.5	12.2	11.6	11.8	11.8	11.2	11.8	12.2	12.5	12.6	13.4	13.8	13.9	13.7	13.4	13.2	12.6	12.5	12.0	11.5	11.3	11.2	13.9	11.2	12.4
30	11.3	11.1	11.1	11.2	11.2	11.2	11.0	10.7	11.3	11.7	11.7	11.6	11.7	12.2	12.0	12.2	12.9	13.6	14.0	14.2	14.3	13.7	13.6	14.1	14.3	10.7	12.2
31	14.4	14.3	14.1	14.0	14.1	14.0	13.8	14.3	14.5	14.8	15.7	16.2	16.2	16.8	16.7	16.4	15.6	15.1	14.6	14.4	14.5	14.5	14.1	13.4	16.8	13.4	14.8
Max.	**18.9**	**20.6**	**20.0**	**16.3**	**18.6**	**18.5**	**17.0**	**16.2**	**15.8**	**16.4**	**17.2**	**17.1**	**17.2**	**17.6**	**16.7**	**17.3**	**20.4**	**21.0**	**22.0**	**21.9**	**21.4**	**21.7**	**20.8**	**19.4**	**22.0**		
Min.	**10.0**	**10.0**	**10.0**	**9.7**	**9.1**	**9.3**	**9.6**	**9.8**	**9.9**	**10.1**	**10.2**	**10.0**	**9.8**	**10.0**	**10.2**	**10.2**	**9.5**	**9.4**	**8.8**	**9.8**	**9.9**	**10.0**	**9.7**	**10.0**		**8.8**	
Avg.	**12.1**	**12.0**	**11.8**	**11.5**	**11.4**	**11.6**	**11.8**	**12.1**	**12.4**	**12.8**	**13.1**	**13.2**	**13.2**	**13.2**	**13.0**	**13.0**	**13.1**	**13.0**	**12.9**	**12.9**	**13.1**	**12.7**	**12.4**	**12.2**			**12.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1																											
2																											
3																											
4																	0.03	0.05	-0.01	0.11	0.48	1.45	0.66	0.31	1.45	-0.01	0.38
5	0.19	0.18	0.19	0.23	0.26	0.23	0.09	-0.07	-0.13	-0.41	-0.63	-0.87	-1.60	-1.28	-1.14	-1.02	-0.86	-0.03	0.25	0.37	0.45	0.49	0.41	0.35	0.49	-1.60	-0.18
6	0.30	0.31	0.34	0.34	0.32	0.35	0.15	-0.04	-0.24	-0.53	-1.59	-1.48	-1.38	-1.85	-1.56	-2.16	-1.34	-1.00	0.04	0.75	1.14	1.87	0.91	0.99	1.87	-2.16	-0.22
7	0.90	1.19	1.41	1.60	1.62	1.53	0.19	-0.03	-0.22	-0.19	-0.27	-0.51	-0.58	-0.63	-0.72	-0.43	-0.20	0.01	0.36	0.46	0.49	0.50	0.61	0.64	1.62	-0.72	0.32
8	0.70	0.84	1.02	1.17	1.47	1.30	0.50	-0.51	-1.21	-1.11	-1.11	-1.21	-1.50	-1.66	-1.66	-1.64	-1.54	-0.93	0.09	0.50	1.12	1.20	1.81	1.88	1.88	-1.66	-0.02
9	1.47	1.30	1.54	1.46	1.20	0.80	0.12	-0.99	-0.82	-0.69	-1.09	-1.15	-1.53	-1.75	-1.40	-1.59	-1.53	-0.98	-0.11	0.23	0.72	1.55	1.72	1.45	1.72	-1.75	0.00
10	1.31	0.77	0.78	1.30	1.39	1.30	0.34	-0.64	-0.78	-0.65	-1.25	-1.53	-1.69	-1.71	-1.85	-2.03	-1.80	-1.18	-0.61	-0.10	0.71	1.68	1.42	1.08	1.68	-2.03	-0.16
11	0.75	1.06	0.48	0.83	1.11	0.64	0.64	-0.40	-0.51	-0.72	-1.09	-1.49	-1.83	-1.99	-1.77	-1.83	-1.73	-0.66	0.37	0.90	1.52	1.76	1.31	2.28	2.28	-1.99	-0.01
12	1.46	1.43	1.36	1.55	1.43	1.22	0.68	-0.57	-0.20	-0.41	-0.87	-1.22	-1.50	-1.55	-1.32	-1.55	-1.50	-0.55	0.31	0.36	0.37	0.24	-0.38	-0.33	1.55	-1.55	-0.06
13	-0.23	-0.21	-0.16	-0.06	-0.17	-0.18	-0.24	-0.20	-0.38	-0.43	-0.67	-0.81	-0.71	-0.74	-0.97	-1.04	-0.97	-0.87	-0.52	-0.32	-0.07	0.38	0.44	0.19	0.44	-1.04	-0.37
14	0.14	0.07	0.01	-0.02	0.00	-0.05	-0.01	-0.15	-0.26	-0.32	-0.53	-0.77	-1.19	-1.51	-1.84	-1.87	-1.90	-1.02	-0.08	0.07	0.43	1.11	1.10	0.56	1.11	-1.90	-0.33
15	0.29	0.20	0.16	0.12	0.09	0.10	0.10	-0.11	-0.24	-0.42	-0.13	-0.09	-0.20	-0.55	-1.13	-0.92	-1.26	-0.57	-0.11	0.10	0.12	0.20	0.13	0.14	0.29	-1.26	-0.17
16	0.49	0.50	0.40	0.55	0.54	0.38	0.37	0.10	0.20	0.11	0.19	-0.16	0.00	0.06	0.10	0.18	0.06	0.11	0.17	0.19	0.18	0.38	0.42	0.40	0.55	-0.16	0.25
17	0.26	0.35	0.30	0.26	0.25	0.33	0.34	0.25	0.24	0.39	0.29	0.19	0.24	0.29	0.21	0.22	0.22	0.25	0.39	0.36	0.33	0.48	0.55	0.45	0.55	0.19	0.31
18	0.33	0.38	0.53	0.41	0.31	0.40	0.40	0.31	-0.02	-0.18	-0.19	-0.13	-0.40	-0.32	-0.18	-0.18	-0.26	-0.21	-0.21	-0.11	-0.12	0.14	0.43	0.55	0.55	-0.40	0.07
19	0.92	0.66	0.66	0.86	0.82	1.05	0.78	-0.30	-0.75	-0.69	-0.74	-1.10	-1.28	-1.28	-1.26	-0.79	-0.16	0.13	0.37	0.41	0.46	0.47	0.47	0.67	1.05	-1.28	0.02
20	0.69	1.25	0.59	0.44	0.43	0.59	0.65	0.11	0.01	-0.28	-0.59	-0.73	-0.39	-0.68	-0.30	-0.22	-0.09	0.06	0.25	0.46	0.25	0.16	0.19	0.31	1.25	-0.73	0.13
21	0.36	0.10	0.19	0.09	0.10	0.09	0.04	0.25	0.25	-0.30	-0.95	-1.12	-1.18	-1.34	-1.43	-1.31	-0.78	0.55	1.02	1.42	1.87	1.96	1.86	2.00	2.00	-1.43	0.15
22	2.03	2.08	1.89	2.14	1.83	0.92	1.26	0.64	0.43	0.40	0.37	-0.01	-0.21	0.09	0.37	0.31	0.37	0.13	0.49	0.30	0.08	-0.20	-0.26	-0.21	2.14	-0.26	0.63
23	-0.12	-0.11	-0.03	-0.03	0.00	-0.04	-0.03	-0.03	-0.41	-0.64	-0.24	0.08	-0.41	-1.13	-1.06	-1.18	-0.95	0.23	0.87	0.92	0.86	1.35	1.21	0.78	1.35	-1.18	-0.01
24	0.53	0.81	0.75	0.31	0.35	0.25	0.39	0.43	-0.24	-0.92	-0.46	-0.56	-0.43	-0.34	-0.12	0.04	-1.17	0.05	0.28	0.45	0.57	0.78	1.00	0.88	1.00	-1.17	0.15
25	0.76	0.66	0.61	0.90	0.73	0.41	0.33	-0.01	-0.73	-0.27	-1.44	-1.28	-0.91	-0.89	-1.27	-1.12	-1.28	-0.46	0.10	0.71	1.27	1.17	1.23	1.10	1.27	-1.44	0.01
26	0.92	1.22	1.77	1.66	1.32	1.07	0.77	0.06	-1.02	-1.24	-1.23	-1.71	-1.16	-1.53	-0.96	-1.00	-0.41	0.86	1.32	1.22	0.59	0.29	0.20	0.22	1.77	-1.71	0.14
27	0.25	0.25	0.27	0.27	0.58	0.76	0.53	-0.10	-0.80	-0.77	-1.15	-0.88	-0.99	-1.40	-1.69	-1.22	-0.44	-0.03	0.05	0.02	0.17	0.19	0.15	0.29	0.76	-1.69	-0.24
28	0.63	0.70	0.75	0.53	0.30	0.19	0.21	0.16	-0.06	-0.12	-0.25	-0.44	-0.48	-0.56	-0.56	-0.37	-0.39	-0.17	0.08	-0.10	0.18	0.12	0.13	0.12	0.75	-0.56	0.03
29	-0.03	0.14	0.07	0.11	0.13	0.08	0.14	0.07	0.31	0.30	0.12	0.04	-0.07	-0.17	-0.32	-0.10	-0.01	0.03	0.15	0.23	0.32	0.09	0.26	0.37	0.37	-0.32	0.09
30	0.49	0.42	0.39	0.40	0.31	0.29	0.26	0.21	-0.03	-0.40	-0.93	-1.04	-0.58	-1.48	-0.67	-0.67	-0.29	0.03	0.21	0.22	0.29	0.35	0.36	0.31	0.49	-1.48	-0.06
31	0.29	0.37	0.35	0.29	0.36	0.31	0.43	0.23	0.10	0.03	-0.02	-0.35	-0.45	-0.87	-1.04	-0.95	-0.74	0.01	0.10	0.15	0.17	0.31	0.34	0.33	0.43	-1.04	-0.01
Max.	**2.03**	**2.08**	**1.89**	**2.14**	**1.83**	**1.53**	**1.26**	**0.64**	**0.43**	**0.40**	**0.37**	**0.19**	**0.24**	**0.29**	**0.37**	**0.31**	**0.37**	**0.86**	**1.32**	**1.42**	**1.87**	**1.96**	**1.86**	**2.28**	**2.28**		
Min.	**-0.23**	**-0.21**	**-0.16**	**-0.06**	**-0.17**	**-0.18**	**-0.24**	**-0.99**	**-1.21**	**-1.24**	**-1.59**	**-1.71**	**-1.83**	**-1.99**	**-1.85**	**-2.16**	**-1.90**	**-1.18**	**-0.61**	**-0.32**	**-0.12**	**-0.20**	**-0.38**	**-0.33**		**-2.16**	
Avg.	**0.60**	**0.63**	**0.61**	**0.66**	**0.63**	**0.53**	**0.35**	**-0.05**	**-0.28**	**-0.39**	**-0.61**	**-0.75**	**-0.83**	**-0.99**	**-0.95**	**-0.90**	**-0.75**	**-0.22**	**0.20**	**0.37**	**0.53**	**0.73**	**0.67**	**0.65**			**0.03**

Total Hours in Month 744 **Hours Data Available** 656 **Data Recovery** 88.2%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.38	0.42	0.41	0.48	0.37	0.92	0.65	0.26	-0.31	-0.82	-1.45	-1.64	-1.45	-0.92	-1.11	-1.03	-0.72	0.18	0.40	0.51	0.82	0.45	0.41	0.40	0.92	-1.64	-0.10
2	0.73	1.21	1.60	1.21	1.23	1.25	1.24	0.11	-0.93	-1.39	-1.13	-1.24	-1.05	-1.03	-1.07	-0.42	-0.24	-0.12	0.10	0.14	0.22	0.29	0.26	0.23	1.60	-1.39	0.05
3	0.24	0.24	0.42	0.29	-0.10	0.34	0.42	0.26	0.14	0.26	0.19	0.21	0.44	0.52	0.33	0.26	0.15	0.05	0.24	0.19	0.21	0.23	0.25	0.19	0.52	-0.10	0.25
4	0.13	0.16	0.39	0.41	0.42	0.41	0.25	0.22	0.21	0.02	-0.17	-0.27	-0.25	-0.28	-0.32	-0.42	-0.49	-0.18	-0.06	0.07	0.19	0.44	0.59	0.26	0.59	-0.49	0.07
5	0.18	0.25	0.57	0.86	0.52	0.31	0.49	0.10	0.16	0.20	0.09	0.05	0.04	-0.03	0.08	-0.02	-0.40	-0.50	-0.89	-0.36	-0.23	-0.19	-0.14	-0.14	0.86	-0.89	0.04
6	-0.13	-0.12	-0.12	-0.13	-0.07	-0.09	-0.12	-0.07	-0.30	-1.03	-0.80	-0.25	-0.60	-0.32	-0.58	0.04	-0.02	0.17	0.58	0.39	0.14	0.18	0.32	0.28	0.58	-1.03	-0.11
7	0.29	0.29	0.21	0.11	0.12	0.13	0.16	0.28	0.20	-0.06	-0.64	-1.07	-0.32	-0.69	-1.18	-0.58	-0.46	0.23	0.22	0.18	0.30	0.34	0.29	0.19	0.34	-1.18	-0.06
8	0.23	0.15	0.17	0.15	0.20	0.24	0.31	0.14	-0.65	-0.79	-1.22	-0.92	-0.95	-0.89	-1.00	-0.61	-0.29	-0.31	-0.02	0.41	0.55	0.61	0.77	0.40	0.77	-1.22	-0.14
9	0.25	-0.04	0.09	0.11	0.15	0.11	0.21	0.25	0.02	-0.03	-0.13	-0.14	-0.17	-0.12	-0.12	-0.13	-0.13	-0.12	-0.01	-0.05	0.06	0.13	0.62	0.86	0.86	-0.17	0.07
10	0.83	0.68	0.66	0.54	0.20	0.24	0.22	0.12	0.06	-0.17	-0.57	-0.73	-0.87	-0.68	-1.04	-0.78	-0.25	0.50	1.19	1.14	1.11	1.26	1.57	1.14	1.57	-1.04	0.27
11	1.39	0.83	0.62	0.49	0.46	0.21	0.11	0.35	0.03	0.16	0.03	0.03	0.07	0.09	0.04	0.10	0.01	0.04	-0.02	-0.12	-0.12	0.02	0.02	0.01	1.39	-0.12	0.20
12	-0.02	-0.01	0.01	0.08	0.06	0.21	0.51	0.45	0.08	-0.49	-0.16	-0.17	0.01	0.09	0.33	0.40	0.32	0.22	0.12	-0.08	0.11	0.25	0.20	0.13	0.51	-0.49	0.11
13	0.05	0.08	0.12	0.44	0.90	0.66	0.65	0.52	-0.01	-0.11	-0.29	-0.65	-0.56	-0.60	-0.17	-0.10	-0.05	0.09	0.20	0.22	0.36	0.48	0.39	0.36	0.90	-0.65	0.12
14	0.46	0.67	0.89	0.63	0.74	1.00	1.33	0.98	-0.48	-0.99	-0.98	-0.94	-1.12	-1.41	-1.07	-1.31	-0.63	-0.05	0.08	0.10	0.09	0.21	0.23	0.18	1.33	-1.41	-0.06
15	0.12	-0.05	-0.16	-0.17	-0.13	-0.15	-0.13	-0.12	-0.13	-0.15	-0.13	-0.15	-0.16	-0.14	-0.05	-0.10	-0.12	-0.11	-0.09	-0.03	-0.02	-0.02	-0.03	0.08	0.12	-0.17	-0.09
16	0.10	-0.02	-0.05	0.39	0.58	0.70	0.39	0.31	0.21	0.19	0.19	0.02	-0.09	-0.31	-0.57	-0.73	-0.50	0.03	0.36	0.80	1.38	1.39	1.16	1.08	1.39	-0.73	0.29
17	0.43	0.43	0.47	0.50	0.68	0.73	0.72	0.24	0.16	-0.06	-0.34	-0.35	-0.57	-0.96	-0.53	-0.20	-0.26	0.32	0.46	0.83	1.19	0.92	0.82	0.46	1.19	-0.96	0.25
18	0.46	0.42	0.35	0.30	0.22	0.19	0.24	0.22	0.04	-0.32	-0.44	-0.71	-1.18	-1.16	-0.76	-0.55	-0.36	0.28	0.26	0.51	0.64	0.55	0.67	0.64	0.67	-1.18	0.02
19	0.59	0.74	0.53	0.60	0.50	0.22	0.20	0.16	0.10	-0.08	-0.28	-0.50	-1.24	-0.84	-1.35	-0.82	-0.43	0.24	0.42	0.25	0.24	0.23	0.27	0.25	0.74	-1.35	0.00
20	0.28	0.28	0.28	0.27	0.30	0.29	0.34	0.28	-0.04	-0.38	-0.63	-0.83	-0.89	-0.77	-0.79	-0.71	-0.28	0.49	0.68	0.74	0.75	0.77	0.74	0.81	0.81	-0.89	0.08
21	0.55	0.36	0.22	0.16	0.24	0.38	0.35	0.17	0.08	0.00	-0.28	-0.62	-0.75	-0.50	-0.48	-0.13	0.26	0.16	0.01	0.14	0.48	1.07	0.56	0.50	1.07	-0.75	0.12
22	0.68	0.62	0.35	0.37	0.34	0.54	-0.08	0.13	0.22	0.12	0.20	0.23	0.17	0.09	-0.01	0.00	0.03	0.02	-0.04	-0.05	-0.05	0.02	0.16	0.65	0.68	-0.08	0.20
23	1.07	1.08	1.01	1.03	1.18	1.19	0.88	0.82	0.72	0.24	-0.13	0.02	0.07	0.03	0.03	-0.07	-0.10	-0.05	0.02	-0.02	-0.03	0.12	0.35	0.23	1.19	-0.13	0.40
24	0.22	0.13	0.18	0.13	0.15	0.17	0.18	0.11	0.09	-0.10	-0.01	0.02	0.04	0.07	-0.24	0.04	0.14	0.19	0.16	0.09	0.28	0.08	0.20	0.20	0.28	-0.24	0.11
25	0.19	0.17	0.19	0.17	0.26	0.14	0.23	0.12	0.03	-0.10	-0.81	-1.23	-0.42	-0.61	-0.60	-0.31	-0.31	0.08	0.10	0.18	0.30	1.10	0.65	0.43	1.10	-1.23	0.00
26	0.83	1.18	1.10	1.39	1.94	0.70	0.20	0.26	0.35	-0.01	0.19	0.04	-0.70	-0.43	0.05	0.25	0.27	0.30	0.33	0.32	0.39	0.38	0.32	0.54	1.94	-0.70	0.42
27	0.36	0.31	0.33	0.33	0.40	0.42	0.48	0.49	0.47	0.30	0.10	0.11	0.16	0.02	-0.25	0.04	0.21	0.27	0.31	0.23	0.36	0.36	0.53	0.42	0.53	-0.25	0.28
28	0.30	0.28	0.29	0.39	0.34	0.34	0.71	0.74	0.43	0.39	0.17	-0.06	-0.44	-0.48	-0.22	-0.43	-0.07	0.10	0.36	0.53	0.50	0.45	0.62	0.44	0.74	-0.48	0.24
29	0.35	0.36	0.43	0.49	0.23	0.14	0.13	0.11	0.10	-0.02	-0.07	-0.16	-0.57	-0.60	-0.36	-0.33	-0.25	0.00	0.11	0.14	0.18	0.18	0.20	0.14	0.49	-0.60	0.04
30	0.13	0.12	0.09	0.11	0.12	0.08	0.14	0.14	-0.14	-0.34	-0.37	-0.40	-0.44	-0.50	-0.42	-0.38	0.01	0.17	0.23	0.26	0.26	0.26	0.31	0.30	0.31	-0.50	-0.01
Max.	**1.39**	**1.21**	**1.60**	**1.39**	**1.94**	**1.25**	**1.33**	**0.98**	**0.72**	**0.39**	**0.20**	**0.23**	**0.44**	**0.52**	**0.33**	**0.40**	**0.32**	**0.50**	**1.19**	**1.14**	**1.38**	**1.39**	**1.57**	**1.14**	**1.94**		
Min.	**-0.13**	**-0.12**	**-0.16**	**-0.17**	**-0.13**	**-0.15**	**-0.13**	**-0.12**	**-0.93**	**-1.39**	**-1.45**	**-1.64**	**-1.45**	**-1.41**	**-1.35**	**-1.31**	**-0.72**	**-0.50**	**-0.89**	**-0.36**	**-0.23**	**-0.19**	**-0.14**	**-0.14**		**-1.64**	
Avg.	**0.39**	**0.37**	**0.39**	**0.40**	**0.42**	**0.40**	**0.38**	**0.27**	**0.03**	**-0.18**	**-0.33**	**-0.41**	**-0.46**	**-0.45**	**-0.45**	**-0.30**	**-0.17**	**0.09**	**0.19**	**0.26**	**0.35**	**0.42**	**0.44**	**0.39**			**0.10**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.31	0.29	0.21	0.16	0.13	0.12	0.10	0.06	-0.02	-0.10	-0.17	-0.26	-0.29	-0.43	-0.32	-0.46	-0.37	0.09	0.13	0.14	0.23	0.44	0.50	0.43	0.50	-0.46	0.04
2	0.31	0.28	0.29	0.24	0.29	0.22	0.19	0.19	0.03	-0.19	-0.42	-0.35	-0.43	-1.10	-0.92	-0.76	-0.35	0.79	1.03	0.56	0.31	0.34	0.82	0.92	1.03	-1.10	0.10
3	0.98	1.01	0.79	0.36	0.17	-0.04	-0.08	0.06	0.10	0.09	-0.01	0.15	-0.01	0.07	0.01	0.25	0.17	0.24	0.18	0.46	0.73	0.73	0.40	0.47	1.01	-0.08	0.30
4	0.31	0.58	0.50	0.51	0.41	0.41	0.41	0.34	0.28	0.24	0.12	0.07	0.05	0.09	-0.01	0.04	0.04	0.09	0.18	0.16	0.07	0.10	0.10	0.14	0.58	-0.01	0.22
5	0.10	0.18	0.23	0.09	0.11	0.09	0.21	0.24	0.31	0.35	0.40	0.35	0.39	0.26	0.03	0.38	0.07	0.06	0.04	-0.01	0.22	0.17	0.25	0.25	0.40	-0.01	0.20
6	0.21	0.16	0.14	0.09	0.14	0.32	0.51	0.56	0.42	-0.50	-0.72	-0.99	-0.70	-0.63	-0.52	-0.29	0.45	0.91	0.75	0.87	0.92	1.14	0.81	0.41	1.14	-0.99	0.19
7	0.50	0.54	0.51	0.42	0.45	0.46	0.55	0.32	0.22	0.16	-0.10	-0.04	0.18	0.09	0.17	0.22	0.12	0.11	0.14	0.19	0.21	0.20	0.18	0.20	0.55	-0.10	0.25
8	0.00	-0.06	-0.04	-0.01	0.02	0.08	0.04	0.09	0.03	-0.10	-0.08	-0.14	-0.23	-0.24	-0.35	-0.10	0.10	-0.15	0.00	0.27	0.36	0.40	0.45	0.67	0.67	-0.35	0.04
9	0.61	0.81	0.76	0.83	0.84	1.09	0.94	0.85	0.71	0.56	0.33	0.13	0.08	-0.08	-0.09	-0.02	0.08	0.07	0.19	0.24	0.20	0.18	0.16	0.18	1.09	-0.09	0.40
10	0.25	0.24	0.25	0.25	0.34	0.17	0.18	0.21	0.09	-0.13	-0.23	-0.33	-0.55	-0.66	-0.62	-0.40	-0.08	0.48	0.65	0.42	0.80	0.33	0.26	0.34	0.80	-0.66	0.09
11	0.06	0.11	0.16	0.14	0.17	0.30	0.32	0.33	0.26	-0.12	-0.58	-0.38	-0.42	-0.19	-0.10	-0.10	-0.06	-0.06	0.04	0.10	0.20	0.24	0.34	0.32	0.34	-0.58	0.05
12	0.25	0.38	0.25	0.28	0.26	0.21	0.23	0.23	0.15	-0.23	-0.31	-0.60	-0.71	-0.58	-0.51	-0.53	-0.27	0.00	0.30	0.37	0.20	0.15	0.20	0.19	0.38	-0.71	0.00
13	0.20	0.22	0.34	0.48	0.87	0.62	0.43	0.46	0.72	-0.02	-0.19	-0.45	-0.45	-0.68	-0.51	-0.31	0.01	0.13	0.24	0.83	0.90	0.96	0.68	0.66	0.96	-0.68	0.26
14	0.59	0.58	0.40	0.22	0.05	0.10	0.19	0.20	0.10	-0.21	-0.36	-0.28	-0.33	-0.31	-0.32	-0.13	-0.07	0.06	0.20	0.22	0.20	0.08	-0.02	0.00	0.59	-0.36	0.05
15	0.07	0.07	0.06	0.09	0.10	0.16	0.18	0.17	0.15	0.04	-0.12	-0.29	-0.39	-0.45	-0.61	-0.57	-0.19	0.23	1.02	1.22	1.12	0.77	0.93	1.21	1.22	-0.61	0.21
16	1.44	2.12	2.07	1.76	0.47	0.25	0.35	0.87	0.80	-0.03	-0.37	-0.43	-0.66	-0.29	-0.63	-0.20	-0.03	0.13	0.28	0.36	0.14	0.36	0.34	0.20	2.12	-0.66	0.39
17	0.32	0.25	0.29	0.20	0.06	0.13	0.24	0.15	0.30	0.33	0.12	0.06	0.07	0.20	-0.22	-0.03	0.03	0.00	0.03	-0.02	-0.03	0.11	0.12	0.03	0.33	-0.22	0.11
18	-0.18	-0.05	0.02	-0.14	-0.14	-0.30	-0.21	-0.08	0.03	0.09	0.04	-0.10	-0.21	-0.26	-0.11	-0.18	-0.04	0.22	0.10	0.15	0.02	0.26	0.88	0.72	0.88	-0.30	0.02
19	0.52	0.30	0.23	0.46	0.30	0.45	0.42	0.29	0.25	0.28	0.15	0.11	0.08	0.08	0.18	0.22	0.14	0.13	0.09	-0.10	0.01	0.18	0.16	0.16	0.52	-0.10	0.21
20	0.25	0.30	0.33	0.28	0.38	0.50	0.43	0.41	0.40	0.45	0.15	-0.03	0.14	0.12	0.12	0.10	0.13	0.16	0.21	0.21	0.18	0.19	0.20	0.13	0.50	-0.03	0.24
21	0.09	0.15	0.17	0.13	0.22	0.22	0.12	0.19	0.41	0.52	0.13	-0.07	-0.04	-0.02	-0.10	-0.14	-0.18	-0.06	-0.04	0.07	-0.02	0.05	0.27	0.19	0.52	-0.18	0.09
22	0.13	0.20	0.39	0.23	0.22	0.14	0.16	0.17	0.13	0.03	-0.05	-0.16	-0.27	-0.37	-0.24	-0.27	-0.22	0.13	0.54	0.34	0.08	0.15	0.00	0.08	0.54	-0.37	0.06
23	0.12	0.07	0.06	0.07	-0.01	0.23	0.17	0.08	0.09	0.02	-0.06	-0.04	0.01	0.05	0.09	0.06	-0.01	-0.10	0.12	0.24	0.32	0.11	0.28	0.43	0.43	-0.10	0.10
24	0.62	0.49	0.70	1.11	0.80	0.60	0.69	0.50	0.20	0.09	-0.19	-0.33	-0.25	-0.15	-0.05	0.07	0.21	0.24	0.25	0.29	0.30	0.22	0.26	0.25	1.11	-0.33	0.29
25	0.23	0.19	0.24	0.24	0.24	0.22	0.23	0.20	0.26	-0.23	-0.40	-0.36	-0.44	-0.39	-0.30	-0.19	0.26	0.83	0.91	0.25	0.40	0.55	0.55	0.41	0.91	-0.44	0.16
26	0.55	0.52	0.52	0.53	0.68	0.83	0.70	0.41	0.59	0.09	-0.31	-0.28	-0.29	-0.24	-0.17	-0.06	0.26	0.50	0.37	0.69	1.02	0.72	0.53	0.65	1.02	-0.31	0.37
27	0.72	0.66	0.52	0.56	0.65	0.51	0.55	0.58	0.62	0.10	-0.34	-0.24	-0.30	-0.24	-0.66	-0.81	0.42	1.16	1.19	1.06	0.71	0.70	0.64	0.84	1.19	-0.81	0.40
28	0.91	1.14	0.72	0.81	0.84	0.51	0.66	0.38	0.47	0.25	-0.32	-0.36	-0.34	-0.30	-0.34	-0.23	0.37	0.91	0.75	0.27	0.36	0.45	0.34	0.39	1.14	-0.36	0.36
29	0.29	0.20	0.20	0.29	0.36	0.60	0.34	0.22	0.15	0.10	-0.10	-0.20	-0.29	-0.22	-0.20	-0.13	-0.04	0.04	0.09	0.14	0.14	0.18	0.14	0.11	0.60	-0.29	0.10
30	0.14	0.12	0.11	0.07	0.13	0.13	0.18	0.11	0.11	0.01	-0.09	-0.26	-0.32	-0.33	-0.22	-0.10	-0.01	0.05	0.15	0.13	0.17	0.16	0.19	0.25	0.25	-0.33	0.04
31	0.25	0.22	0.20	0.18	0.17	0.17	0.15	0.13	0.15	-0.01	-0.19	-0.14	-0.17	-0.20	-0.10	-0.05	0.08	0.15	0.16	0.18	0.22	0.26	0.20	0.35	0.35	-0.20	0.10
Max.	**1.44**	**2.12**	**2.07**	**1.76**	**0.87**	**1.09**	**0.94**	**0.87**	**0.80**	**0.56**	**0.40**	**0.35**	**0.39**	**0.26**	**0.18**	**0.38**	**0.45**	**1.16**	**1.19**	**1.22**	**1.12**	**1.14**	**0.93**	**1.21**	**2.12**		
Min.	**-0.18**	**-0.06**	**-0.04**	**-0.14**	**-0.14**	**-0.30**	**-0.21**	**-0.08**	**-0.02**	**-0.50**	**-0.72**	**-0.99**	**-0.71**	**-1.10**	**-0.92**	**-0.81**	**-0.37**	**-0.15**	**-0.04**	**-0.10**	**-0.03**	**0.05**	**-0.02**	**0.00**		**-1.10**	
Avg.	**0.36**	**0.40**	**0.37**	**0.35**	**0.31**	**0.31**	**0.31**	**0.29**	**0.27**	**0.06**	**-0.14**	**-0.20**	**-0.23**	**-0.24**	**-0.24**	**-0.15**	**0.03**	**0.24**	**0.33**	**0.33**	**0.34**	**0.35**	**0.36**	**0.37**			**0.18**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.31	0.25	-0.02	0.26	0.53	0.47	0.35	0.33	0.07	0.12	-0.15	-0.22	-0.30	-0.32	-0.29	-0.17	0.07	-0.01	0.01	0.02	0.03	0.04	0.05	0.12	0.53	-0.32	0.06
2	0.12	0.11	0.10	0.13	0.19	0.22	0.08	0.19	0.46	0.07	-0.30	-0.29	-0.34	-0.35	-0.16	-0.09	0.19	0.29	0.49	0.52	0.44	0.68	0.51	0.87	0.87	-0.35	0.17
3	0.77	0.88	0.92	0.44	0.31	0.48	0.41	0.12	0.19	0.12	-0.13	-0.32	-0.26	-0.25	-0.11	-0.04	0.06	0.10	0.16	0.14	0.18	0.17	0.16	0.12	0.92	-0.32	0.19
4	0.11	0.10	0.12	0.13	0.19	0.20	0.18	0.15	0.17	0.07	-0.10	-0.16	-0.20	-0.17	-0.10	-0.13	0.02	0.11	0.09	0.14	0.16	0.15	0.32	0.16	0.32	-0.20	0.07
5	0.24	0.59	0.35	0.18	0.15	0.17	0.15	0.20	0.15	0.12	-0.13	-0.14	-0.24	-0.27	-0.39	-0.32	0.07	0.18	-0.02	0.20	-0.03	0.24	0.16	0.23	0.59	-0.39	0.08
6	0.02	0.02	-0.09	-0.22	-0.11	0.02	0.04	0.06	0.16	0.23	0.81	0.78	-0.11	-0.25	-0.33	-0.22	-0.03	0.07	0.08	0.17	0.15	0.34	0.46	0.22	0.81	-0.33	0.09
7	0.27	0.47	0.31	0.05	0.08	0.26	0.32	1.00	0.25	0.17	0.03	-0.16	-0.28	-0.25	-0.17	0.02	0.12	0.22	0.18	0.19	0.22	0.21	0.11	0.08	1.00	-0.28	0.15
8	0.02	0.00	-0.03	-0.11	-0.05	0.00	-0.03	-0.09	-0.01	-0.02	0.00	-0.09	-0.19	-0.17	-0.22	-0.08	0.23	0.80	1.04	0.52	0.43	0.53	0.36	0.32	1.04	-0.22	0.13
9	0.24	0.24	0.15	0.12	-0.02	0.04	0.04	0.05	0.05	0.05	-0.03	-0.14	-0.18	-0.21	-0.12	-0.13	-0.10	-0.16	-0.10	-0.14	-0.06	0.13	0.16	0.09	0.24	-0.21	0.00
10	0.04	0.05	0.08	0.15	0.21	0.20	0.14	0.06	0.17	0.14	0.04	0.05	0.02	0.03	0.07	0.07	0.12	0.16	0.16	0.17	0.15	0.15	0.01	0.07	0.21	0.01	0.10
11	-0.02	-0.08	-0.04	-0.14	-0.13	-0.08	-0.10	-0.05	-0.04	-0.11	-0.17	-0.21	-0.24	-0.20	-0.20	-0.31	-0.17	-0.05	-0.09	0.00	0.09	0.14	0.04	-0.04	0.14	-0.31	-0.09
12	-0.01	0.03	-0.01	0.15	0.21	0.12	0.17	0.15	0.13	0.07	-0.04	-0.18	-0.26	-0.06	-0.08	0.05	0.29	0.28	0.45	0.70	0.73	0.56	0.61	0.50	0.73	-0.26	0.19
13	0.67	0.70	0.30	0.07	0.09	0.20	0.10	0.12	0.10	0.20	0.03	-0.18	-0.23	-0.26	-0.23	-0.13	-0.01	0.11	0.17	0.26	0.50	0.35	0.33	0.65	0.70	-0.26	0.16
14	0.38	0.50	0.32	0.40	0.15	0.18	0.13	0.11	0.20	0.20	0.10	0.06	0.02	-0.11	0.03	0.10	0.13	0.15	0.15	0.13	0.13	0.15	0.21	0.18	0.50	-0.11	0.17
15	0.19	0.20	0.22	0.19	0.23	0.28	0.23	0.41	0.48	0.32	-0.12	-0.13	-0.12	0.06	0.12	0.15	0.40	0.65	0.33	0.43	0.26	0.40	0.32	0.24	0.65	-0.13	0.24
16	0.28	0.27	0.10	-0.02	0.01	0.04	0.01	0.30	0.28	0.17	0.11	0.07	0.07	0.05	0.08	0.07	0.00	0.10	0.14	0.29	0.17	0.11	0.28	0.08	0.30	-0.02	0.13
17	0.21	0.17	0.16	0.08	0.03	-0.05	-0.01	0.02	-0.02	0.07	0.10	0.02	0.09	0.17	0.09	0.08	0.10	0.10	0.21	0.39	0.21	0.10	-0.01	0.25	0.39	-0.05	0.11
18	0.17	0.07	0.21	0.16	-0.05	0.03	0.12	0.18	0.19	0.17	-0.11	-0.04	-0.03	-0.02	-0.01	0.10	0.15	0.08	0.16	0.15	-0.08	-0.07	-0.05	-0.07	0.21	-0.11	0.06
19	-0.02	0.07	0.02	-0.12	-0.02	0.05	0.10	-0.09	-0.15	-0.16	-0.16	-0.20	-0.35	-0.39	-0.38	-0.37	-0.31	-0.27	-0.29	-0.22	-0.14	0.18	0.55	0.67	0.67	-0.39	-0.08
20	0.59	0.45	0.34	0.25	0.01	-0.02	-0.04	-0.06	-0.04	-0.06	0.03	0.03	0.02	0.01	-0.05	-0.16	-0.21	-0.15	-0.12	-0.07	-0.01	0.01	0.18	0.23	0.59	-0.21	0.05
21	0.29	0.47	0.68	0.56	0.66	0.55	0.45	0.40	0.28	0.21	0.09	0.03	-0.05	-0.10	-0.06	0.02	0.08	0.09	0.11	0.04	0.00	0.16	0.37	0.29	0.68	-0.10	0.23
22	0.09	-0.04	0.03	0.19	0.29	0.70	0.40	0.13	0.34	0.18	0.11	0.09	-0.17	-0.20	-0.16	0.00	0.11	0.29	0.26	0.11	0.12	0.09	0.11	0.09	0.70	-0.20	0.13
23	0.09	0.09	0.07	0.11	0.10	0.09	0.09	0.08	0.00	-0.02	0.00	-0.10	-0.14	-0.11	-0.12	-0.09	-0.03	0.01	0.03	0.04	0.10	0.12	0.07	0.04	0.12	-0.14	0.02
24	0.05	0.07	0.03	0.06	0.09	0.10	0.12	0.10	0.11	0.02	-0.26	-0.38	-0.30	-0.43	-0.42	-0.35	-0.30	-0.29	-0.16	-0.08	-0.04	-0.03	-0.03	0.02	0.12	-0.43	-0.10
25	0.04	0.02	0.02	0.05	0.04	0.03	0.06	0.04	0.06	0.06	0.00	0.00	-0.02	0.01	0.02	-0.01	0.03	0.06	0.06	0.10	0.11	0.13	0.11	0.09	0.13	-0.02	0.05
26	0.10	0.10	0.08	0.11	0.10	0.11	0.19	0.20	0.21	0.19	0.11	0.06	0.09	0.06	0.12	0.10	0.16	0.19	0.14	0.13	0.08	0.17	0.22	0.22	0.22	0.06	0.13
27	0.08	0.10	0.06	0.17	0.26	0.55	0.62	0.29	0.14	0.02	-0.19	-0.23	-0.20	-0.16	-0.02	0.14	0.17	0.30	0.40	0.51	0.60	0.72	0.67	0.78	0.78	-0.23	0.24
28	0.54	0.57	0.60	0.67	0.43	0.43	0.56	0.62	0.67	0.60	0.27	-0.04	-0.14	-0.18	-0.16	-0.09	0.01	-0.03	0.01	-0.04	0.20	0.26	0.16	0.27	0.67	-0.18	0.26
29	0.27	0.09	0.07	0.19	0.02	0.15	0.06	0.01	-0.06	-0.04	-0.01	0.04	-0.02	-0.04	-0.03	0.02	0.19	0.28	0.35	0.83	0.50	0.35	0.61	0.81	0.83	-0.06	0.19
30	0.73	0.78	0.69	0.70	0.73	1.13	1.04	0.76	0.61	0.72	0.21	-0.03	-0.18	-0.29	-0.15	0.06	0.12	0.31	0.31	0.26	0.20	0.20	0.27	0.24	1.13	-0.29	0.39
Max.	**0.77**	**0.88**	**0.92**	**0.70**	**0.73**	**1.13**	**1.04**	**1.00**	**0.67**	**0.72**	**0.81**	**0.78**	**0.09**	**0.17**	**0.12**	**0.15**	**0.40**	**0.80**	**1.04**	**0.83**	**0.73**	**0.72**	**0.67**	**0.87**	**1.13**		
Min.	**-0.02**	**-0.08**	**-0.09**	**-0.22**	**-0.13**	**-0.08**	**-0.10**	**-0.09**	**-0.15**	**-0.16**	**-0.30**	**-0.38**	**-0.35**	**-0.43**	**-0.42**	**-0.37**	**-0.31**	**-0.29**	**-0.29**	**-0.22**	**-0.14**	**-0.07**	**-0.05**	**-0.07**		**-0.43**	
Avg.	**0.23**	**0.24**	**0.19**	**0.16**	**0.16**	**0.22**	**0.20**	**0.19**	**0.17**	**0.13**	**0.01**	**-0.07**	**-0.14**	**-0.15**	**-0.11**	**-0.06**	**0.06**	**0.13**	**0.16**	**0.20**	**0.18**	**0.22**	**0.24**	**0.26**			**0.12**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.21	0.25	0.30	0.24	0.20	0.16	0.22	0.23	0.16	0.25	0.04	-0.02	0.00	0.00	0.00	0.02	0.01	0.26	0.24	0.25	0.15	0.17	0.22	0.17	0.30	-0.02	0.15
2	0.18	0.15	0.20	0.12	0.16	0.13	0.06	0.05	0.01	0.08	0.00	-0.12	-0.20	-0.45	-0.30	-0.23	-0.11	-0.08	-0.03	0.00	-0.02	0.01	-0.02	-0.03	0.20	-0.45	-0.02
3	-0.18	-0.19	-0.12	-0.01	0.12	0.10	0.10	0.10	0.13	0.11	0.07	0.02	-0.02	0.02	0.06	0.10	0.17	0.18	0.25	0.11	0.05	0.42	0.05	0.16	0.42	-0.19	0.07
4	0.21	0.06	0.12	-0.23	-0.14	-0.28	-0.23	-0.08	-0.01	0.18	0.22	0.01	-0.06	-0.07	-0.10	-0.12	-0.13	-0.14	-0.12	-0.08	-0.03	-0.02	0.05	-0.04	0.22	-0.28	-0.04
5	-0.12	-0.04	-0.09	-0.08	0.21	-0.09	0.09	0.12	0.23	0.10	0.03	0.04	0.06	0.09	0.08	0.09	0.08	0.09	0.13	0.13	0.12	0.08	0.10	0.16	0.23	-0.12	0.07
6	0.12	0.20	0.16	0.13	0.13	0.17	0.21	0.19	0.19	0.10	0.16	0.06	-0.01	0.09	0.24	0.09	0.18	0.17	-0.01	0.06	0.05	0.15	0.13	-0.10	0.24	-0.10	0.12
7	-0.02	0.06	0.09	0.19	0.21	0.24	0.21	0.19	0.15	0.18	0.16	0.13	-0.01	-0.19	-0.15	-0.05	0.15	0.22	0.20	0.11	0.10	0.11	0.33	0.41	0.41	-0.19	0.13
8	0.42	0.37	0.27	0.19	0.13	0.36	0.62	0.62	0.75	0.59	0.97	0.44	0.26	-0.01	0.10	0.10	0.12	0.32	0.38	0.18	0.10	0.11	0.13	0.11	0.97	-0.01	0.32
9	0.14	0.08	0.10	0.02	0.01	0.04	-0.02	-0.02	-0.17	-0.09	-0.06	-0.15	-0.17	-0.14	0.11	0.20	0.30	0.34	0.57	0.73	0.57	0.65	1.06	0.57	1.06	-0.17	0.19
10	0.56	0.59	0.65	0.50	0.44	0.39	0.31	0.39	0.43	0.56	0.36	0.12	0.06	0.05	0.08	0.01	0.18	0.17	0.08	-0.02	-0.05	-0.08	-0.02	-0.01	0.65	-0.08	0.24
11	-0.01	-0.02	-0.09	-0.07	0.03	0.19	-0.10	-0.09	-0.04	-0.11	-0.14	-0.13	-0.06	-0.08	-0.11	-0.19	-0.12	-0.10	-0.09	-0.06	-0.07	-0.05	-0.05	-0.11	0.19	-0.19	-0.07
12	-0.25	-0.23	-0.13	0.07	0.17	0.20	0.30	0.33	0.28	0.46	0.17	-0.05	0.03	-0.16	-0.15	0.09	0.31	0.25	0.30	0.39	0.37	0.70	0.64	0.59	0.70	-0.25	0.19
13	0.38	0.42	0.68	0.41	0.39	0.58	0.44	0.13	0.08	0.06	0.05	0.03	0.01	-0.01	0.01	0.07	0.15	0.13	0.09	0.06	0.08	0.09	0.09	0.10	0.68	-0.01	0.19
14	0.08	0.08	0.09	0.10	0.09	0.12	0.11	0.12	0.13	0.13	0.15	0.12	0.11	0.13	0.11	-0.04	0.00	0.10	0.09	0.04	0.02	0.07	0.07	0.06	0.15	-0.04	0.09
15	0.12	0.18	0.19	0.13	0.04	0.03	0.12	0.11	0.26	0.27	0.21	-0.13	-0.21	-0.19	-0.12	0.03	0.18	0.23	0.27	0.13	0.15	0.32	0.25	0.22	0.32	-0.21	0.12
16	0.07	-0.08	-0.09	-0.08	-0.07	-0.02	-0.01	0.01	-0.01	0.03	0.06	0.06	0.14	-0.10	-0.20	-0.07	-0.02	-0.15	-0.16	-0.10	-0.11	0.00	-0.13	-0.04	0.14	-0.20	-0.05
17	-0.04	-0.07	-0.06	0.00	0.04	0.03	0.04	0.04	0.06	0.09	-0.06	-0.02	0.18	0.15	0.19	0.12	0.05	0.13	0.16	0.33	0.39	0.34	0.22	0.23	0.39	-0.07	0.11
18	0.25	0.27	0.28	0.22	0.25	0.22	0.09	0.16	0.20	0.17	0.22	0.20	0.21	0.20	0.25	0.25	0.21	0.21	0.23	0.23	0.18	0.14	0.19	0.20	0.28	0.09	0.21
19	0.20	0.19	0.16	0.17	0.15	0.12	0.16	0.12	0.12	0.13	0.13	0.18	0.15	0.28	0.23	0.25	0.38	0.54	0.61	0.44	0.51	0.22	0.68	0.60	0.68	0.12	0.28
20	0.62	0.61	0.69	0.47	0.35	0.64	0.48	0.74	0.51	0.72	0.83	0.21	-0.01	0.09	0.04	0.10	0.18	0.36	0.62	0.41	0.62	0.65	0.44	0.55	0.83	-0.01	0.46
21	0.52	0.21	0.37	0.52	0.28	0.20	0.20	0.35	0.54	0.49	0.16	0.11	-0.01	-0.12	-0.09	-0.04	-0.01	0.01	-0.03	0.06	0.11	0.01	-0.08	-0.07	0.54	-0.12	0.15
22	0.04	0.13	0.08	-0.01	-0.05	-0.05	0.05	0.27	0.27	0.13	0.06	-0.06	-0.14	-0.13	-0.08	-0.02	0.01	0.06	0.12	0.07	0.05	0.06	0.04	0.11	0.27	-0.14	0.04
23	0.11	0.12	0.21	0.20	0.23	0.16	0.16	0.05	0.04	0.00	-0.10	-0.18	-0.19	-0.18	-0.11	-0.08	-0.08	-0.09	-0.05	-0.08	-0.09	-0.03	-0.06	-0.11	0.23	-0.19	-0.01
24	-0.12	-0.15	-0.11	0.05	0.06	0.13	0.11	0.09	0.09	0.10	-0.03	0.08	0.14	0.19	0.04	0.07	0.15	0.34	0.21	0.16	0.14	0.11	0.06	0.16	0.34	-0.15	0.08
25	0.05	0.12	0.09	0.14	0.16	0.09	0.08	0.11	0.26	0.25	0.20	0.12	0.11	0.08	0.10	0.12	0.14	0.12	0.11	0.13	0.10	0.11	0.16	0.18	0.26	0.05	0.13
26	0.07	0.03	0.14	0.04	0.05	0.08	0.18	0.36	0.42	0.33	-0.22	-0.17	0.07	0.10	0.09	0.10	0.17	0.16	0.12	0.20	0.25	0.18	0.21	0.22	0.42	-0.22	0.13
27	0.23	0.25	0.24	0.28	0.25	0.26	0.21	0.20	0.32	0.33	0.19	0.19	0.20	0.25	0.38	0.33	0.32	0.19	0.25	0.20	0.20	0.18	0.14	0.20	0.38	0.14	0.24
28	0.20	0.16	0.18	0.14	0.11	0.11	0.02	0.42	0.31	0.19	0.18	0.12	0.09	0.12	0.13	0.15	0.16	0.18	0.20	0.13	0.14	0.09	0.02	0.00	0.42	0.00	0.15
29	0.09	0.11	0.10	0.04	0.11	0.19	0.18	0.24	0.26	0.21	0.19	0.15	0.20	0.13	-0.06	-0.03	0.03	0.00	-0.04	0.00	-0.01	0.04	0.09	0.25	0.26	-0.06	0.10
30	0.28	0.25	0.29	0.28	0.28	0.32	0.26	0.12	0.48	0.34	0.43	0.61	0.52	0.19	0.19	0.24	0.26	0.23	0.28	0.23	0.23	0.25	0.27	0.24	0.61	0.12	0.29
31	0.22	0.20	0.20	0.25	0.17	0.21	0.18	0.18	0.19	0.14	0.18	0.13	0.17	0.15	0.09	0.20	0.24	0.28	0.27	0.23	0.16	0.15	0.11	0.04	0.28	0.04	0.18
Max.	**0.62**	**0.61**	**0.69**	**0.52**	**0.44**	**0.64**	**0.62**	**0.74**	**0.75**	**0.72**	**0.97**	**0.61**	**0.52**	**0.28**	**0.38**	**0.33**	**0.38**	**0.54**	**0.62**	**0.73**	**0.62**	**0.70**	**1.06**	**0.60**	**1.06**		
Min.	**-0.25**	**-0.23**	**-0.13**	**-0.23**	**-0.14**	**-0.28**	**-0.23**	**-0.09**	**-0.17**	**-0.11**	**-0.22**	**-0.18**	**-0.21**	**-0.45**	**-0.30**	**-0.23**	**-0.13**	**-0.15**	**-0.16**	**-0.10**	**-0.11**	**-0.08**	**-0.13**	**-0.11**		**-0.45**	
Avg.	**0.15**	**0.14**	**0.17**	**0.14**	**0.15**	**0.16**	**0.16**	**0.19**	**0.21**	**0.21**	**0.16**	**0.07**	**0.05**	**0.02**	**0.03**	**0.06**	**0.12**	**0.15**	**0.17**	**0.15**	**0.14**	**0.17**	**0.17**	**0.16**			**0.14**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.02	-0.09	0.09	0.24	0.30	0.21	0.18	0.13	0.13	0.18	0.14	0.12	0.06	0.06	0.06	0.06	0.10	0.16	0.16	0.15	0.13	0.05	0.02	0.14	0.30	-0.09	0.11
2	0.11	0.05	0.04	0.09	0.19	0.12	0.14	0.10	0.01	-0.06	0.01	0.12	0.15	0.08	0.07	0.10	0.08	0.01	0.06	0.05	0.12	0.19	0.15	0.21	0.21	-0.06	0.09
3	0.09	0.03	-0.03	0.10	0.12	-0.01	0.13	0.21	0.22	0.28	0.17	0.30	0.14	0.16	0.13	0.17	0.22	0.18	0.21	0.21	0.27	0.20	0.05	0.23	0.30	-0.03	0.16
4	0.35	0.38	0.33	0.57	0.41	0.34	0.41	0.81	1.02	1.19	0.43	-0.03	-0.09	-0.09	-0.01	0.20	0.25	0.21	0.61	0.58	0.19	0.19	0.19	0.23	1.19	-0.09	0.36
5	0.45	0.51	0.35	0.19	0.24	0.25	0.16	0.19	0.14	0.40	0.41	0.19	0.05	0.06	0.20	0.51	0.64	0.61	0.38	0.30	0.61	0.61	0.63	1.13	1.13	0.05	0.38
6	0.93	0.80	0.61	0.50	0.62	0.58	0.30	0.39	0.48	0.51	0.44	0.11	-0.13	-0.13	-0.15	-0.06	0.12	0.23	0.19	0.09	0.20	0.46	0.26	0.20	0.93	-0.15	0.31
7	0.16	0.25	0.71	0.43	0.59	0.66	0.62	0.65	0.21	0.25	0.52	0.24	0.12	0.06	-0.01	0.06	0.07	0.17	0.24	0.22	0.12	0.10	0.07	0.10	0.71	-0.01	0.28
8	0.18	0.16	0.13	0.13	0.12	0.06	0.09	0.16	0.30	0.24	0.23	0.13	0.11	0.08	0.06	0.33	0.16	0.35	0.78	0.35	0.28	0.34	0.27	0.30	0.78	0.06	0.22
9	0.56	0.60	0.36	0.31	0.44	0.26	0.39	0.54	0.20	0.20	0.29	0.27	-0.04	-0.11	-0.06	0.05	0.51	0.43	0.28	0.60	0.58	0.41	0.56	0.24	0.60	-0.11	0.33
10	0.17	0.13	0.05	-0.02	-0.04	0.19	0.33	0.46	0.68	0.71	0.35	0.21	-0.05	0.07	0.14	0.09	0.07	-0.01	-0.03	0.03	0.11	0.01	0.14	0.14	0.71	-0.05	0.16
11	0.33	0.33	0.24	0.29	0.23	-0.11	-0.16	-0.09	-0.01	0.04	0.03	-0.10	-0.18	-0.17	-0.17	0.00	0.07	0.14	0.15	-0.04	0.00	0.08	0.17	0.15	0.33	-0.18	0.05
12	0.23	0.28	-0.09	0.00	0.02	-0.07	-0.08	-0.02	0.03	0.27	0.32	-0.06	-0.17	-0.24	-0.21	-0.17	-0.13	-0.05	0.05	0.12	0.07	0.06	0.13	0.12	0.32	-0.24	0.02
13	0.17	0.13	0.10	0.19	0.27	0.19	0.18	0.20	0.33	0.33	0.40	0.02	-0.17	-0.22	-0.20	-0.08	0.08	0.21	0.40	0.41	0.36	0.14	0.28	0.17	0.41	-0.22	0.16
14	0.02	-0.11	-0.04	0.01	-0.09	0.01	0.01	0.00	0.05	-0.04	-0.09	-0.14	-0.17	-0.20	-0.17	-0.12	-0.09	-0.06	-0.03	-0.01	-0.08	-0.07	-0.02	-0.01	0.05	-0.20	-0.06
15	0.00	-0.03	-0.06	-0.05	-0.04	-0.06	-0.05	0.20	0.22	0.21	0.27	0.05	0.04	0.00	0.06	0.08	0.08	0.04	0.13	0.09	0.14	0.12	0.11	0.14	0.27	-0.06	0.07
16	0.13	0.14	0.16	0.16	0.15	0.15	0.16	0.15	0.17	0.16	0.03					0.06	0.08	0.18	0.39	0.41	0.45	0.64	0.53	0.31	0.64	0.03	0.23
17	0.56	1.13	0.65	0.56	0.71	0.83	0.58	0.23	0.26	0.07	0.03	-0.01	-0.08	-0.07	0.09	0.07	0.06	0.18	0.16	0.18	-0.01	-0.11	-0.14	-0.11	1.13	-0.14	0.24
18	-0.09	-0.12	-0.09	0.02	-0.01	-0.18	0.04	0.23	-0.01	0.15	0.28	-0.11	-0.15	-0.26	-0.20	-0.13	0.04	0.25	0.55	0.88	1.09	0.96	0.69	0.33	1.09	-0.26	0.17
19	0.61	0.46	0.17	0.15	0.20	0.71	0.70	0.49	0.11	0.04	-0.08	-0.29	-0.31	-0.31	-0.26	-0.22	-0.16	-0.14	-0.09	0.03	0.42	0.30	-0.04	-0.08	0.71	-0.31	0.10
20	0.14	0.10	0.00	0.08	0.23	0.02	0.12	0.29	0.28	0.27	0.31	0.08	-0.03	-0.11	-0.13	-0.08	-0.04	0.03	-0.04	-0.08	-0.10	-0.10	-0.11	-0.08	0.31	-0.13	0.04
21	-0.10	-0.07	-0.09	-0.01	-0.08	-0.16	-0.02	-0.04	0.03	-0.08	-0.13	-0.15	-0.14	-0.16	-0.18	-0.17	-0.20	-0.27	-0.21	-0.05	0.19	0.31	0.27	0.20	0.31	-0.27	-0.05
22	0.06	0.00	-0.07	-0.10	-0.08	-0.05	-0.06	0.00	0.01	0.05	0.01	-0.05	-0.03	0.03	0.01	0.03	0.05	0.09	0.13	0.11	0.13	0.12	0.13	0.10	0.13	-0.10	0.03
23	0.07	0.09	0.03	-0.09	-0.19	-0.19	-0.13	-0.16	-0.17	-0.26	-0.31	-0.43	-0.41	-0.41	-0.50	-0.34	-0.13	-0.07	-0.04	-0.08	-0.11	-0.04	-0.10	-0.09	0.09	-0.50	-0.17
24	-0.07	-0.09	0.01	0.00	0.00	-0.04	-0.12	-0.13	-0.14	-0.10	-0.22	-0.35	-0.44	-0.46	-0.38	-0.31	-0.08	-0.11	-0.10	-0.14	-0.09	-0.05	-0.04	-0.03	0.01	-0.46	-0.14
25	0.02	-0.04	0.06	0.10	0.07	0.08	0.10	0.27	0.18	0.21	0.08	-0.52	-0.65	-0.69	-0.71	-0.59	-0.22	-0.02	-0.06	-0.09	-0.12	-0.26	-0.25	-0.34	0.27	-0.71	-0.14
26	-0.32	-0.26	-0.26	-0.24	-0.25	-0.22	-0.22	-0.24	-0.30	-0.42	-0.49	-0.68	-0.65	-0.58	-0.49	-0.43	-0.30	-0.23	-0.28	-0.28	-0.16	-0.02	-0.11	-0.09	-0.02	-0.68	-0.31
27	-0.06	-0.12	0.08	0.02	-0.02	-0.01	-0.08	-0.01	0.02	-0.12	-0.11	-0.06	-0.19	-0.12	-0.04	0.03	0.09	0.08	0.13	0.18	0.07	0.10	0.13	0.14	0.18	-0.19	0.00
28	0.13	0.13	0.16	0.16	0.16	0.17	0.27	0.12	0.13	0.14	0.29	0.14	0.03	-0.44	-2.66	-0.87	-0.52	-0.23	-0.23	-0.28	-0.22	-0.14	-0.15	-0.24	0.29	-2.66	-0.17
29	-0.31	-0.33	-0.60	-0.56	-0.56	-0.51	-0.36	-0.33	-0.27	-0.27	-0.38	-0.57	-0.70	-0.70	-0.58	-0.57	-0.36	-0.24	-0.34	-0.30	-0.34	-0.31	-0.33	-0.32	-0.24	-0.70	-0.42
30	-0.35	-0.40	-0.49	-0.61	-0.53	-0.39	-0.44	-0.37	-0.26	-0.17	-0.16	-0.11	-0.97	-0.91	-0.91	-0.94	-0.54	0.14	0.39	0.92	0.12	0.24	0.25	0.65	0.92	-0.97	-0.24
31	0.68	0.79	0.68	0.77	0.57	0.47	0.64	0.76	0.20	-0.03	-0.29	-0.34	-0.29	-0.59	-0.72	-0.74	-0.31	-0.10	0.15	0.02	-0.26	-0.18	-0.14	-0.10	0.79	-0.74	0.07
Max.	**0.93**	**1.13**	**0.71**	**0.77**	**0.71**	**0.83**	**0.70**	**0.81**	**1.02**	**1.19**	**0.52**	**0.30**	**0.15**	**0.16**	**0.20**	**0.51**	**0.64**	**0.61**	**0.78**	**0.92**	**1.09**	**0.96**	**0.69**	**1.13**	**1.19**		
Min.	**-0.35**	**-0.40**	**-0.60**	**-0.61**	**-0.56**	**-0.51**	**-0.44**	**-0.37**	**-0.30**	**-0.42**	**-0.49**	**-0.68**	**-0.97**	**-0.91**	**-2.66**	**-0.94**	**-0.54**	**-0.27**	**-0.34**	**-0.30**	**-0.34**	**-0.31**	**-0.33**	**-0.34**		**-2.66**	
Avg.	**0.16**	**0.16**	**0.10**	**0.11**	**0.12**	**0.11**	**0.12**	**0.17**	**0.14**	**0.14**	**0.09**	**-0.07**	**-0.18**	**-0.21**	**-0.26**	**-0.13**	**-0.01**	**0.07**	**0.13**	**0.15**	**0.13**	**0.14**	**0.12**	**0.12**			**0.06**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.07	-0.24	-0.35	-0.47	-0.45	0.27	0.25	0.22	0.24	0.24	0.14	-0.01	-0.16	-0.16	-0.06	-0.03	-0.05	-0.10	-0.15	-0.43	-0.24	-0.06	0.03	0.10	0.27	-0.47	-0.06
2	0.08	0.15	0.11	0.13	0.08	0.17	0.21	0.17	0.22	0.21	0.16	-0.36	-1.01	-0.83	-0.68	-0.68	-0.40	-0.33	-0.20	0.28	-0.03	-0.20	0.05	0.28	0.28	-1.01	-0.10
3	0.19	0.13	0.05	0.02	0.03	0.00	-0.02	0.00	0.01	0.00	-0.03	-0.19	-0.12	-0.15	-0.21	-0.13	-0.09	0.04	0.01	0.02	0.03	0.05	0.02	0.03	0.19	-0.21	-0.01
4	0.04	0.05	0.02	0.04	0.05	0.02	0.05	0.04	0.05	0.07	0.11	-0.03	-0.08	-0.06	-0.05	-0.02	0.00	0.03	0.07	0.09	0.10	0.12	0.13	0.12	0.13	-0.08	0.04
5	0.05	0.07	0.11	0.14	0.15	0.09	0.09	0.15	0.10	0.19	0.19	0.12	0.16	0.01	0.16	0.11	0.18	0.15	0.10	0.08	0.05	-0.02	0.05	0.02	0.19	-0.02	0.10
6	0.09	-0.02	-0.07	-0.04	0.06																				0.09	-0.07	0.01
7					0.35	0.94	1.09	0.74	0.40	0.19	0.11	-0.15	-0.26	-0.26	-0.31	-0.51	-0.09	0.26	0.25	0.11	0.11	0.23	0.43	0.19	1.09	-0.51	0.19
8	0.29	0.38	1.05	0.63	0.91	0.72	0.81	1.00	0.70	0.74	0.16	0.24	-0.13	0.08	0.01	-0.02	0.09	0.17	-0.02	0.15	0.12	0.13	0.11	0.14	1.05	-0.13	0.35
9	0.17	0.16	0.15	0.10	0.07	0.06	0.04	0.07	0.08	0.05	0.07	0.08	0.15	0.17	0.01	0.23	0.27	0.28	0.17	0.17	0.17	0.13	0.23	0.25	0.28	0.01	0.14
10	0.19	0.40	0.39	0.35	0.22	0.18	0.21	0.21	0.24	0.25	0.58	0.87	0.76	0.78	0.67	0.17	0.10	0.30	0.28	0.28	0.32	0.26	0.25	0.12	0.87	0.10	0.35
11	0.05	0.25	0.31	0.24	0.23	0.19	0.19	0.24	0.24	0.33	0.22	0.14	0.14	0.11	0.19	0.12	0.09	0.15	0.23	0.19	0.25	0.35	0.34	0.43	0.43	0.05	0.22
12	0.55	0.54	0.57	0.61	0.42	0.40	0.26	0.29	0.26	0.17	0.10	0.09	0.07	0.00	-0.11	-0.17	-0.10	-0.04	-0.05	0.04	0.12	0.23	0.28	0.29	0.61	-0.17	0.20
13	0.52	1.05	1.13	1.13	1.25	1.08	0.88	0.77	0.42	0.32	0.13	0.13	0.11	0.22	0.31	0.27	0.21	0.23	0.19	0.32	0.49	0.51	0.45	0.37	1.25	0.11	0.52
14	0.38	0.28	0.28	0.28	0.24	0.23	0.32	0.21	0.27	0.23	0.07	0.07	0.03	0.04	0.07	0.09	0.15	0.15	0.25	0.20	0.21	0.16	0.22	0.21	0.38	0.03	0.19
15	0.21	0.25	0.37	0.29	0.29	0.30	0.30	0.29	0.32	0.43	0.35	0.15	0.06	0.08	0.11	0.12	0.17	0.22	0.27	0.12	0.07	0.13	0.17	0.08	0.43	0.06	0.21
16	0.03	0.06	0.14	0.20	0.33	0.29	0.33	0.32	0.39	0.58	1.23	1.20	0.90	0.51	0.69	0.62	-0.20	0.00	-0.04	0.04	0.10	0.10	0.10	0.10	1.23	-0.20	0.33
17	0.12	0.13	0.06	0.10	0.10	0.07	0.08	0.09	0.04	-0.02	-0.10	-0.09	-0.12	0.10	0.00	0.12	0.14	0.11	0.25	0.26	0.35	0.30	0.33	0.31	0.35	-0.12	0.11
18	0.31	0.34	0.26	0.28	0.29	0.20	0.34	0.25	0.18	0.09	0.08	0.09	0.07	0.02	0.04	0.07	0.08	0.16	0.09	0.02	-0.01	-0.04	-0.05	-0.01	0.34	-0.05	0.13
19	0.01	0.02	-1.04	-0.64	-0.46	-0.33	-0.23	-0.19	-0.18	-0.17	-0.23	-0.18	-0.11	0.04	0.02	0.10	0.12	0.12	0.15	0.17	0.21	0.16	0.23	0.24	0.24	-1.04	-0.09
20	0.20	0.16	0.09	0.16	0.21	0.23	0.15	0.14	0.21	0.05	-0.38	-0.41	-0.71	-0.32	-0.25	-0.13	0.04	0.01	0.04	0.07	0.04	0.07	0.05	0.05	0.23	-0.71	-0.01
21	0.03	0.07	0.10	0.00	-0.03	0.02	0.05	0.06	-0.07	-0.06	0.00	0.12	-0.09	-0.12	-0.05	-0.02	-0.11	-0.06	0.08	0.17	0.38	0.39	0.50	0.44	0.50	-0.12	0.08
22	0.33	0.22	0.61	0.61	0.54	0.64	0.04	0.01	0.04	-0.09	-0.07	-0.02	0.13	-0.01	0.42	0.35	0.11	-0.02	0.23	0.38	0.24	0.20	0.22	0.30	0.64	-0.09	0.23
23	0.39	0.09	0.24	0.17	0.11	-0.01	-0.10	-0.15	-0.02	-0.41	0.03	0.22	-0.05	-0.11	0.11	0.01	0.10	0.04	0.19	0.78	0.65	0.34	0.31	0.40	0.78	-0.41	0.14
24	0.50	0.50	0.41	0.29	0.37	0.31	0.36	0.21	-0.01	-0.18	-0.15	0.10	0.57	0.83	0.76	0.78	0.71	0.10	0.01	0.28	0.23	0.22	0.40	0.54	0.83	-0.18	0.34
25	0.49	0.49	0.19	0.22	0.15	0.05	-0.10	-0.11	-0.14	-0.43	-0.25	0.03	-0.36	-0.18	-0.31	-0.13	0.14	0.24	0.21	0.24	0.23	0.28	0.38	0.21	0.49	-0.43	0.06
26	0.08	0.11	0.19	0.41	0.44	0.40	0.69	0.33	0.46	0.03	-0.10	-0.21	-0.29	-0.33	-0.36	-0.25	-0.15	-0.02	0.12	0.30	0.09	-0.07	-0.10	-0.10	0.69	-0.36	0.07
27	-0.10	-0.11	-0.10	-0.12	-0.15	-0.09	-0.05	-0.05	-0.18	-0.16	-0.19	-0.21	-0.28	-0.46	-0.07	-0.04	-0.05	-0.01	0.09	0.13	0.14	0.24	0.18	0.14	0.24	-0.46	-0.06
28	0.32	0.29	0.30	0.30	0.27	0.27	0.29	0.23	0.09	0.01	-0.05	-0.05	-0.07	0.02	0.07	0.02	-0.03	0.01	0.03	0.12	0.06	0.22	0.22	0.24	0.32	-0.07	0.13
Max.	**0.55**	**1.05**	**1.13**	**1.13**	**1.25**	**1.08**	**1.09**	**1.00**	**0.70**	**0.74**	**1.23**	**1.20**	**0.90**	**0.83**	**0.76**	**0.78**	**0.71**	**0.30**	**0.28**	**0.78**	**0.65**	**0.51**	**0.50**	**0.54**	**1.25**		
Min.	**-0.10**	**-0.24**	**-1.04**	**-0.64**	**-0.46**	**-0.33**	**-0.23**	**-0.19**	**-0.18**	**-0.43**	**-0.38**	**-0.41**	**-1.01**	**-0.83**	**-0.68**	**-0.68**	**-0.40**	**-0.33**	**-0.20**	**-0.43**	**-0.24**	**-0.20**	**-0.10**	**-0.10**		**-1.04**	
Avg.	**0.20**	**0.21**	**0.21**	**0.20**	**0.22**	**0.25**	**0.24**	**0.21**	**0.16**	**0.10**	**0.08**	**0.06**	**-0.03**	**0.00**	**0.04**	**0.04**	**0.05**	**0.08**	**0.10**	**0.17**	**0.17**	**0.16**	**0.20**	**0.20**			**0.14**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.26	0.24	0.25	-0.01	-0.14	-0.19	-0.12	-0.11	0.25	-0.23	-0.37	-0.40	-0.39	-0.31	-0.35	-0.35	-0.20	-0.06	-0.15	-0.08	-0.04	-0.05	-0.01	0.03	0.26	-0.40	-0.10
2	0.10	-0.02	-0.07	-0.03	-0.02	-0.05	-0.06	-0.17	-0.18	-0.22	-0.18	-0.15	-0.13	-0.17	-0.22	-0.24	-0.16	-0.18	-0.13	0.00	0.01	0.00	-0.01	0.00	0.10	-0.24	-0.09
3	-0.03	0.00	-0.01	0.03	0.01	-0.01	-0.01	0.00	-0.02	-0.04	-0.04	-0.04	-0.06	-0.04	-0.03	0.08	0.05	-0.08	0.06	0.02	0.04	0.00	-0.06	-0.03	0.08	-0.08	-0.01
4	-0.01	-0.02	-0.03	-0.01	-0.05	-0.03	0.01	0.03	0.05	-0.08	-0.08	-0.12	-0.04	-0.08	0.15	-0.01	0.07	0.09	-0.11	-0.02	0.01	0.01	-0.01	-0.01	0.15	-0.12	-0.01
5	-0.03	-0.05	-0.01	-0.02	-0.05	-0.08	-0.11	-0.06	-0.06	-0.18	-0.79	-0.94	-0.77	-0.65	-0.71	-0.75	-0.67	-0.38	-0.03	0.20	0.23	0.32	0.42	0.44	0.44	-0.94	-0.20
6	0.25	0.15	0.18	0.16	0.18	0.11	0.25	0.18	0.08	-0.09	0.00	0.13	0.20	0.51	0.35	0.33	0.53	0.06	0.19	0.76	0.69	0.44	0.23	-0.03	0.76	-0.09	0.24
7	-0.07	-0.02	0.07	-0.01	0.07	0.05	0.03	0.05	0.11	0.10	0.10	0.08	0.11	0.11	0.23	0.19	0.10	-0.03	0.01	0.11	0.20	0.13	0.08	0.03	0.23	-0.07	0.08
8	0.02	0.06	0.04	0.01	0.04	-0.01	0.00	0.03	-0.09	-0.08	-0.10	-0.23	-0.23	-0.22	-0.30	-0.30	-0.24	-0.20	-0.14	0.04	0.06	0.15	0.13	0.16	0.16	-0.30	-0.06
9	0.09	0.13	0.16	0.30	0.10	-0.02	0.08	0.12	0.04	-0.12	-0.18	-0.23	-0.28	-0.15	-0.24	-0.12	-0.05	-0.04	0.04	0.15	0.20	0.23	0.27	0.32	0.32	-0.28	0.03
10	0.17	0.15	0.15	0.16	0.12	0.08	0.14	0.65	-0.06	0.03	0.04	0.46	0.72	1.22	1.03	1.40	0.80	-0.12	0.04	0.13	0.18	0.20	0.18	0.19	1.40	-0.12	0.33
11	0.18	0.19	0.15	0.13	0.14	0.13	0.07	0.07	-0.01	-0.04	0.05	0.02	-0.05	-0.06	-0.04	0.06	0.08	0.09	0.03	0.04	0.05	0.04	0.06	0.07	0.19	-0.06	0.06
12	0.05	0.06	0.05	0.06	0.06	0.04	0.14	0.12	0.07	0.02	0.14	0.02	0.06	0.03	0.10	0.06	0.00	0.14	0.14	0.16	0.23	0.15	0.23	0.30	0.30	0.00	0.10
13	0.27	0.35	0.45	0.54	0.76	0.71	0.58	0.25	-0.09	0.22	0.50	0.28	0.41	0.66	0.46	0.78	0.46	-0.14	-0.37	-0.11	0.54	0.88	0.94	1.02	1.02	-0.37	0.43
14	1.41	1.18	1.12	1.02	0.69	0.67	0.72	0.51	0.02	0.08	0.01	0.51	0.82	0.77	0.82	0.67	0.92	0.23	0.03	0.13	0.26	0.19	0.26	0.30	1.41	0.01	0.56
15	0.37	0.11	0.07	-0.04	-0.07	0.08	0.17	0.29	-0.10	0.00	0.00	0.87	2.07	1.77	2.24	1.86	0.68	-0.22	-0.17	0.27	0.54	0.53	0.38	0.36	2.24	-0.22	0.50
16	0.46	0.35	0.29	0.30	0.22	0.25	0.22	0.21	0.04	0.05	-0.04	0.08	0.12	0.30	0.33	0.44	0.15	0.03	0.05	0.24	0.34	0.37	0.36	0.40	0.46	-0.04	0.23
17	0.41	0.49	0.55	0.21	0.07	0.05	0.13	0.14	-0.04	-0.11	-0.08	-0.01	-0.06	-0.06	-0.13	-0.17	-0.10	-0.12	-0.07	-0.04	-0.06	0.01	-0.02	0.00	0.55	-0.17	0.04
18	0.00	-0.02	-0.03	0.00	-0.05	-0.04	-0.04	-0.04	-0.17	-0.16	-0.20	-0.21	-0.13	-0.09	-0.13	-0.08	0.08	0.01	-0.04	0.02	0.12	0.17	0.57	0.63	0.63	-0.21	0.01
19	0.27	0.55	0.50	0.43	0.68	0.77	0.68	0.20	-0.22	0.20	0.38	0.54	0.64	0.25	-0.12	0.11	-0.02	-0.16	-0.21	-0.04	0.43	0.33	0.08	0.09	0.77	-0.22	0.26
20	-0.03	-0.03	-0.03	-0.04	-0.03	0.00	0.00	-0.15	0.04	-0.06	0.14	0.62	0.63	0.63	-0.01	0.04	0.03	0.06	-0.03	-0.01	0.13	0.13	0.11	0.13	0.63	-0.15	0.09
21	0.10	0.08	0.06	0.02	0.08	0.08	0.04	-0.03	-0.07	0.01	-0.05	0.08	0.51	0.64	1.24	1.54	0.63	0.15	0.07	0.18	0.27	0.50	0.44	0.35	1.54	-0.07	0.29
22	0.24	0.17	0.19	0.20	0.15	0.17	0.07	-0.13	-0.06	0.08	-0.22	-0.17	-0.27	-0.27	-0.26	-0.30	-0.30	0.06	0.21	0.42	0.46	0.29	0.27	0.26	0.46	-0.30	0.05
23	0.29	0.49	0.46	1.00	1.15	1.14	0.76	0.13	-0.18	-0.22	-0.27	-0.35	-0.64	-0.40	-0.91	-0.87	-0.53	0.09	0.16	0.17	0.13	0.12	0.19	0.17	1.15	-0.91	0.09
24	0.11	0.04	0.00	-0.02	-0.02	0.00	-0.02	0.01	-0.16	-0.26	-0.43	-0.62	-0.84	-0.66	-0.61	-0.41	-0.38	0.08	0.10	0.10	0.20	0.09	0.03	-0.01	0.20	-0.84	-0.15
25	0.00	0.00	-0.03	-0.10	-0.09	-0.12	-0.05	-0.13	-0.19	-0.17	-0.03	0.74	1.05	1.55	1.24	0.79	0.66	0.23	0.03	0.01	0.22	0.20	0.07	0.05	1.55	-0.19	0.25
26	0.15	0.08	0.04	0.04	0.04	0.08	0.04	-0.13	-0.04	-0.11	-0.14	0.58	1.16	1.55	0.89	1.14	1.38	0.32	-0.42	0.07	0.27	0.22	0.25	0.35	1.55	-0.42	0.32
27	0.41	0.29	0.24	0.24	0.14	0.34	0.62	-0.33	0.41	1.01	1.57	1.45	1.03	0.97	0.77	0.47	0.29	0.05	-0.14	-0.25	0.76	1.47	1.36	0.82	1.57	-0.33	0.58
28	1.03	1.08	0.49	0.46	0.65	0.58	0.46	0.24	0.74	0.39	0.46	1.32	0.43	0.65	0.36	0.43	0.57	0.09	-0.02	0.20	0.26	1.00	1.22	0.94	1.32	-0.02	0.58
29	0.73	0.79	0.83	0.46	0.37	0.34	0.35	-0.03	0.14	0.08	0.11	0.67	1.50	1.52	0.39	0.12	0.01	0.10	-0.29	-0.11	0.53	1.37	1.41	0.65	1.52	-0.29	0.50
30	0.39	0.53	0.37	0.17	0.16	0.12	0.05	-0.04	-0.13	-0.18	-0.20	-0.32	-0.08	-0.30	-0.15	-0.19	-0.30	-0.29	-0.31	-0.19	-0.01	0.03	0.12	0.08	0.53	-0.32	-0.03
31	0.12	0.08	0.04	0.06	0.06	0.07	0.08	0.08	0.52	0.69	0.47	0.40	0.21	0.32	-0.04	-0.31	-0.29	-0.08	0.01	0.09	0.06	0.03	0.00	-0.01	0.69	-0.31	0.11
Max.	**1.41**	**1.18**	**1.12**	**1.02**	**1.15**	**1.14**	**0.76**	**0.65**	**0.74**	**1.01**	**1.57**	**1.45**	**2.07**	**1.77**	**2.24**	**1.86**	**1.38**	**0.32**	**0.21**	**0.76**	**0.76**	**1.47**	**1.41**	**1.02**	**2.24**		
Min.	**-0.07**	**-0.05**	**-0.07**	**-0.10**	**-0.14**	**-0.19**	**-0.12**	**-0.33**	**-0.22**	**-0.26**	**-0.79**	**-0.94**	**-0.84**	**-0.66**	**-0.91**	**-0.87**	**-0.67**	**-0.38**	**-0.42**	**-0.25**	**-0.06**	**-0.05**	**-0.06**	**-0.03**		**-0.94**	
Avg.	**0.25**	**0.24**	**0.21**	**0.18**	**0.17**	**0.17**	**0.17**	**0.06**	**0.02**	**0.02**	**0.02**	**0.16**	**0.25**	**0.32**	**0.21**	**0.21**	**0.14**	**-0.01**	**-0.05**	**0.09**	**0.24**	**0.31**	**0.31**	**0.26**			**0.16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.03	-0.02	-0.02	0.02	-0.02	-0.11	-0.10	-0.13	-0.34	-0.44	-0.50	-0.60	-1.03	-1.10	-1.56	-0.13	0.08	-0.01	-0.16	-0.15	0.05	0.25	0.21	0.21	0.25	-1.56	-0.23
2	0.35	0.22	0.13	0.08	0.02	0.08	0.05	0.06	0.03	0.29	0.28	1.07	1.61	1.54	1.48	1.38	0.55	0.13	-0.06	-0.08	0.13	0.04	-0.02	-0.01	1.61	-0.08	0.39
3	-0.04	-0.04	0.03	0.00	0.01	0.00	-0.01	-0.09	-0.22	-0.39	-0.19	-0.25	-0.26	-0.24	-0.48	-0.37	-0.29	-0.15	-0.07	-0.19	0.13	0.02	-0.03	0.04	0.13	-0.48	-0.13
4	0.04	0.15	0.12	0.13	0.16	0.09	0.11	0.07	-0.05	0.13	-0.24	0.59	0.71	0.87	0.72	0.74	0.92	0.76	0.42	0.12	0.02	0.21	0.22	0.29	0.92	-0.24	0.31
5	0.49	0.34	0.18	0.14	0.44	0.50	0.18	0.24	0.17	0.28	0.23	0.12	0.09	0.07	0.10	0.09	0.05	0.23	0.13	0.14	0.10	0.19	0.19	0.21	0.50	0.05	0.20
6	0.26	0.29	0.31	0.19	0.29	0.30	0.13	-0.08	0.07	0.00	0.58	1.00	1.06	1.11	0.60	0.75	0.61	0.22	0.04	0.00	0.37	0.39	0.18	0.19	1.11	-0.08	0.37
7	0.10	0.15	0.11	0.07	0.19	0.32	0.22	0.08	0.28	0.62	0.52	0.35	0.52	1.02	1.28	0.81	0.42	0.35	0.21	-0.07	0.20	0.25	0.23	0.19	1.28	-0.07	0.35
8	0.19	0.18	0.16	0.18	0.16	0.17	0.16	-0.17	-0.16	-0.16	-0.20	0.00	-0.02	-0.27	-0.24	-0.12	-0.20	0.11	-0.17	-0.03	0.01	-0.04	0.06	0.03	0.19	-0.27	-0.02
9	0.08	0.07	0.12	0.11	0.04	0.03	0.02	-0.13	-0.02	0.01	0.22	1.36	1.75	0.63	0.15	0.02	-0.09	-0.17	-0.10	-0.31	0.13	0.39	0.40	0.21	1.75	-0.31	0.20
10	0.18	0.00	0.03	0.18	0.20	0.15	-0.05	0.02	-0.09	-0.08	-0.19	-0.28	-0.21	-0.21	-0.26	-0.16	-0.08	-0.01	-0.02	-0.04	0.06	0.13	0.14	0.18	0.20	-0.28	-0.02
11	0.27	0.15	0.39	0.29	0.44	0.52	0.06	0.00	-0.05	-0.08	-0.09	-0.12	-0.02	0.06	0.30	-0.14	-0.15	-0.06	-0.07	-0.07	-0.03	0.01	0.00	0.02	0.52	-0.15	0.07
12	-0.01	0.01	-0.01	0.01	-0.02	-0.02	-0.04	-0.13	-0.09	-0.04	-0.09	-0.09	-0.04	-0.08	-0.12	-0.03	0.14	0.50	0.21	-0.06	-0.03	0.29	0.22	0.09	0.50	-0.13	0.02
13	0.06	0.09	0.11	0.12	0.13	0.13	0.08	-0.02	0.01	0.01	0.07	0.13	0.00	-0.10	-0.11	-0.13	-0.25	-0.04	0.03	0.02	0.06	0.12	0.17	0.23	0.23	-0.25	0.04
14	0.25	0.27	0.27	0.24	0.26	0.25	0.14	0.10	0.10	-0.01	-0.05	0.05	-0.08	-0.06	-0.04	-0.08	-0.09	0.02	0.02	-0.03	0.05	0.18	0.18	0.22	0.27	-0.09	0.09
15	0.20	0.18	0.22	0.18	0.19	0.31	-0.05	0.08	0.24	0.01	-0.03	0.04	-0.15	0.03	-0.08	0.10	0.13	0.10	0.00	-0.02	-0.03	0.56	0.79	0.32	0.79	-0.15	0.14
16	0.47	0.23	0.44	0.51	0.47	0.24	0.04	-0.01	-0.04	-0.02	-0.05	-0.05	-0.10	-0.15	-0.08	-0.03	-0.03	-0.20	-0.07	-0.14	-0.03	0.02	0.01	-0.04	0.51	-0.20	0.06
17	-0.05	-0.04	-0.05	-0.01	-0.03	-0.01	-0.07	0.01	-0.11	-0.46	-0.23	-0.24	-0.06	0.10	0.03	0.15	0.46	0.01	-0.13	-0.02	0.24	0.30	0.20	0.19	0.46	-0.46	0.01
18	0.18	0.12	0.28	0.33	0.51	0.54	-0.17	-0.01	0.48	1.02	1.68	1.78	1.35	0.60	0.50	0.15	0.59	0.55	-0.28	-0.57	0.03	0.31	0.46	0.53	1.78	-0.57	0.46
19	0.23	0.27	0.25	0.25	0.27	0.24	0.10	0.07	0.37	0.35	0.14	0.51	0.36	0.10	0.98	1.13	0.68	0.43	-0.26	-0.31	-0.29	0.34	0.76	0.36	1.13	-0.31	0.31
20	0.77	0.80	0.30	0.00	-0.07	-0.07	-0.18	-0.11	0.02	-0.05	-0.28	0.18	0.23	0.04	0.02	0.22	-0.40	-0.36	-0.09	-0.21	-0.09	-0.02	0.00	0.00	0.80	-0.40	0.03
21	0.01	-0.01	0.06	0.08	0.04	0.01	-0.06	-0.24	-0.26	-0.35	-0.33	-0.30	-0.35	-0.40	-0.38	-0.24	0.05	-0.01	0.13	-0.14	-0.18	0.06	0.00	-0.02	0.13	-0.40	-0.12
22	-0.01	-0.11	-0.04	-0.03	-0.07	-0.04	-0.16	-0.26	-0.06	-0.19	0.17	0.36	0.50	1.20	0.38	-0.11	0.02	-0.28	-0.38	-0.30	-0.25	0.04	0.25	-0.01	1.20	-0.38	0.03
23	-0.09	-0.09	-0.01	-0.02	-0.02	-0.04	-0.14	-0.12	-0.08	-0.15	-0.71	-0.53	-0.09	-0.58	-0.42	-0.60	-1.06	-1.02	-1.10	-1.58	-1.20	-0.73	-0.76	-0.72	-0.01	-1.58	-0.49
24	-0.28	0.01	0.03	0.15	-0.04	0.07	-0.26	-0.03	-0.37	-0.30	-0.08	0.04	-0.08	-0.22	-0.16	-0.18	-0.14	-0.01	-0.22	-0.18	-0.10	-0.05	0.04	0.12	0.15	-0.37	-0.09
25	0.16	0.22	0.59	0.84	0.60	0.37	-0.08	-0.14	-0.15	-0.11	-0.25	0.02	0.22	0.07	-0.42	-0.43	-0.49	-0.37	-0.38	-0.32	-0.40	0.03	0.10	0.07	0.84	-0.49	-0.01
26	0.03	0.08	0.05	0.03	0.02	-0.05	-0.08	-0.23	-0.09	-0.11	-0.05	-0.06	0.07	0.08	0.09	0.08	0.10	0.16	0.05	0.03	0.08	0.31	0.40	0.37	0.40	-0.23	0.06
27	0.35	0.35	0.37	0.35	0.31	0.20	0.04	0.05	0.00	0.00	0.05	0.13	0.41	0.96	1.07	0.91	0.96	0.71	-0.21	-0.06	-0.38	0.98	0.92	0.71	1.07	-0.38	0.38
28	0.60	0.55	0.52	0.43	0.38	0.31	0.05	-0.02	0.07	0.33	0.25	-0.22	0.18	0.51	0.24	0.80	0.40	0.39	-0.10	-0.33	-0.04	0.83	0.95	1.02	1.02	-0.33	0.34
29	1.00	0.76	0.32	0.30	0.28	0.14	0.06	0.17	-0.05	-0.07	-0.03	0.23	0.41	0.35	0.30	0.24	0.13	0.17	-0.10	-0.15	-0.04	0.31	0.47	0.55	1.00	-0.15	0.24
30	0.50	0.58	0.47	0.62	0.61	0.15	-0.06	-0.23	-0.14	-0.33	-0.55	0.06	0.26	0.03	-0.39	-0.44	0.14	0.01	-0.32	-0.13	-0.08	0.14	0.27	0.19	0.62	-0.55	0.06
Max.	**1.00**	**0.80**	**0.59**	**0.84**	**0.61**	**0.54**	**0.22**	**0.24**	**0.48**	**1.02**	**1.68**	**1.78**	**1.75**	**1.54**	**1.48**	**1.38**	**0.96**	**0.76**	**0.42**	**0.14**	**0.37**	**0.98**	**0.95**	**1.02**	**1.78**		
Min.	**-0.28**	**-0.11**	**-0.05**	**-0.03**	**-0.07**	**-0.11**	**-0.26**	**-0.26**	**-0.37**	**-0.46**	**-0.71**	**-0.60**	**-1.03**	**-1.10**	**-1.56**	**-0.60**	**-1.06**	**-1.02**	**-1.10**	**-1.58**	**-1.20**	**-0.73**	**-0.76**	**-0.72**		**-1.58**	
Avg.	**0.21**	**0.19**	**0.19**	**0.19**	**0.19**	**0.16**	**0.00**	**-0.04**	**-0.02**	**-0.01**	**0.00**	**0.18**	**0.24**	**0.20**	**0.12**	**0.15**	**0.11**	**0.07**	**-0.10**	**-0.17**	**-0.05**	**0.19**	**0.23**	**0.19**			**0.10**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.23	0.26	0.26	0.17	0.20	0.13	0.07	-0.05	-0.04	-0.09	-0.01	-0.11	-0.18	-0.15	-0.13	-0.04	0.09	0.12	0.16	0.11	0.21	0.15	0.14	0.12	0.26	-0.18	0.07
2	0.12	0.11	0.13	0.14	0.12	0.08	-0.02	-0.03	-0.03	-0.17	-0.16	-0.16	-0.16	-0.30	-0.13	-0.11	-0.04	-0.03	0.05	0.05	0.03	0.14	0.17	0.29	0.29	-0.30	0.00
3	0.32	0.33	0.30	0.32	0.30	0.19	0.03	-0.11	-0.10	-0.22	-0.30	-0.36	-0.29	-0.23	-0.07	0.01	0.05	-0.01	-0.07	0.15	0.11	0.32	0.28	0.23	0.33	-0.36	0.05
4	0.21	0.16	0.22	0.27	0.41	0.16	0.10	-0.34	-0.18	-0.06	-0.18	0.01	0.10	-0.05	0.03	-0.17	-0.12	-0.06	-0.09	-0.10	-0.04	0.14	0.20	0.18	0.41	-0.34	0.03
5	0.21	0.15	0.15	0.08	0.22	0.25	0.16	0.18	-0.11	-0.17	-0.17	-0.21	-0.23	-0.14	-0.05	-0.24	-0.25	-0.24	-0.36	-0.16	-0.08	-0.03	0.02	-0.05	0.25	-0.36	-0.04
6	-0.19	-0.05	0.04	0.08	-0.02	-0.06	-0.14	-0.12	-0.09	-0.09	-0.19	0.15	-0.04	-0.43	-0.91	-1.43	-1.27	-0.96	-0.80	-0.63	-0.51	-0.44	-0.31	-0.15	0.15	-1.43	-0.36
7	-0.04	0.03	0.04	0.02	0.02	-0.01	-0.05	-0.05	-0.07	-0.13	-0.17	-0.19	-0.15	-0.24	-0.08	-0.32	-0.39	-0.41	-0.15	-0.06	-0.07	-0.03	0.08	0.15	0.15	-0.41	-0.10
8	0.22	0.24	0.30	0.42	0.79	-0.03	-0.09	-0.22	-0.31	-0.16	-0.14	-0.40	-0.37	-0.24	-0.28	-0.10	-0.17	-0.12	-0.11	0.00	-0.13	0.04	0.10	0.07	0.79	-0.40	-0.03
9	0.07	0.10	0.08	0.08	0.09	0.05	0.02	-0.06	0.01	0.02	-0.09	-0.17	-0.21	-0.23	-0.33	-0.26	-0.24	-0.19	-0.15	-0.01	0.07	0.09	0.16	0.15	0.16	-0.33	-0.04
10	0.12	0.12	0.19	0.12	0.19	0.07	-0.16	-0.22	-0.07	0.19	0.25	0.33	-0.03	-0.07	0.49	1.04	0.43	0.00	0.32	0.09	0.06	0.03	0.20	0.10	1.04	-0.22	0.16
11	0.39	0.45	-0.03	-0.04	0.10	-0.01	-0.19	-0.24	-0.35	-0.53	-0.81	-0.57	-0.11	0.09	-0.28	0.02	-0.26	0.01	-0.47	-0.24	-0.25	-0.03	0.08	0.41	0.45	-0.81	-0.12
12	0.59	0.32	0.57	0.67	0.55	-0.10	-0.23	-0.07	-0.25	-0.43	-0.50	-0.87	0.13	-0.54	-0.48	-0.30	-0.23	0.61	-0.19	0.01	-0.08	0.31	0.93	0.83	0.93	-0.87	0.05
13	0.60	0.74	0.97	1.24	0.96	0.05	0.10	0.03	-0.37	-0.63	-0.66	-0.31	-0.31	0.19	0.20	0.63	0.62	0.91	0.09	-0.27	0.09	0.60	1.23	0.96	1.24	-0.66	0.32
14	0.95	0.98	1.39	0.96	0.81	-0.03	-0.12	-0.21	-0.01	-0.51	-0.70	-0.55	-0.17	-0.45	-0.43	-0.40	-0.61	-0.28	-0.39	-0.12	-0.09	-0.03	0.09	0.17	1.39	-0.70	0.01
15	0.17	0.27	0.33	0.54	0.86	-0.11	-0.55	-0.44	-0.13	0.00	-0.06	0.01	-0.67	-0.38	-0.44	-0.28	-0.18	-0.20	-0.23	0.02	-0.09	-0.02	0.30	0.43	0.86	-0.67	-0.04
16	0.48	0.35	0.21	0.19	0.13	0.03	-0.05	-0.09	-0.17	-0.33	-0.51	-0.70	-0.97	-1.18	-1.12	-0.63	-0.55	-0.23	-0.21	-0.13	-0.44	-0.16	0.97	1.15	1.15	-1.18	-0.16
17	1.30	0.96	0.75	0.58	0.56	-0.06	-0.14	-0.21	-0.40	-0.58	-0.43	-1.21	-2.12	-1.06	-1.17	-0.74	-0.39	-0.28	-0.02	0.08	-0.12	-0.02	0.60	0.78	1.30	-2.12	-0.14
18	0.64	0.49	0.80	0.56	0.22	-0.07	0.05	-0.40	0.02	-0.99	-1.45	-1.12	-1.09	-1.21	-1.09	-0.22	-0.26	-0.35	-0.18	-0.04	0.02	0.04	0.15	0.13	0.80	-1.45	-0.22
19	0.10	0.10	0.12	0.18	0.16	0.00	-0.01	0.03	-0.03	-0.26	0.62	-0.24	-0.44	-0.86	-0.22	-0.28	-0.01	0.05	-0.03	-0.16	-0.14	0.10	0.15	0.08	0.62	-0.86	-0.04
20	0.02	0.09	0.16	0.35	0.42	0.25	0.21	-0.13	-0.23	-0.18	-0.23	-0.21	-0.20	-0.27	-0.35	-0.34	-0.34	-0.13	0.08	-0.08	-0.10	0.20	0.67	0.48	0.67	-0.35	0.01
21	0.28	0.24	0.28	0.22	0.16	-0.12	-0.14	-0.15	-0.35	-0.16	-0.25	-0.29	-0.42	-0.29	-0.91	-0.97	-0.79	-0.35	-0.08	-0.08	-0.02	0.00	0.23	0.21	0.28	-0.97	-0.16
22	0.23	0.28	0.25	0.34	0.20	0.03	-0.04	-0.15	-0.21	-0.29	-0.29	0.16	0.06	-0.40	-0.39	-0.38	-0.20	0.02	-0.01	-0.02	0.42	0.51	0.72	1.09	1.09	-0.40	0.08
23	0.74	0.67	1.06	1.22	0.66	0.72	0.68	0.26	1.03	1.72	0.14	0.38	0.19	0.05	0.18	0.25	-0.41	0.44	-0.07	-0.94	-0.27	0.13	0.72	0.80	1.72	-0.94	0.43
24	0.78	0.65	0.78	0.98	1.25	0.16	1.73	1.24	1.75	1.52	1.71	1.17	1.21	0.54	0.97	0.81	0.33	0.25	-0.60	0.24	0.65	0.11	0.94	1.13	1.75	-0.60	0.84
25	1.50	1.07	1.19	1.13	0.47	-0.46	1.53	1.53	1.69	1.33	0.67	2.39	1.73	0.51	0.54	0.58	0.64	1.01	-0.22	-0.80	-0.14	0.28	0.73	0.57	2.39	-0.80	0.81
26	0.75	0.94	0.96	1.01	0.77	0.17	0.22	0.11	-0.22	0.99	1.95	1.12	1.11	2.14	1.67	1.51	1.04	1.14	0.26	-0.39	0.20	0.72	0.95	1.11	2.14	-0.39	0.84
27	1.13	1.19	1.67	1.87	1.38	-0.01	0.13	-0.03	-0.05	-0.02	0.30	2.66	2.31	3.75	1.37	1.65	1.07	1.61	1.61	2.24	1.36	0.16	0.73	0.99	3.75	-0.05	1.21
28	0.86	0.88	1.46	1.60	0.92	0.31	1.15	0.97	1.46	0.47	0.53	-0.46	-0.01	-0.03	-0.13	0.14	0.71	1.33	-0.15	-0.32	-0.24	0.19	0.46	0.55	1.60	-0.46	0.53
29	0.97	1.68	1.84	1.53	0.53	0.93	0.13	-0.17	0.51	0.03	0.50	0.15	0.09	0.36	0.34	-0.41	0.51	0.17	0.10	-0.15	0.17	-0.50	0.57	0.87	1.84	-0.50	0.45
30	0.91	1.12	1.17	0.66	0.27	-0.17	-0.19	-0.16	-0.40	-0.41	-0.05	-0.27	-0.02	0.01	-0.17	0.02	0.15	0.01	-0.06	-0.09	0.17	-0.09	-0.10	0.05	1.17	-0.41	0.10
31	0.08	0.09	0.03	0.11	0.10	0.08	0.02	-0.17	-0.25	0.17	-0.34	-0.23	-0.35	-0.44	-0.32	-0.18	-0.25	-0.05	-0.04	-0.13	-0.12	-0.12	0.00	0.09	0.17	-0.44	-0.09
Max.	**1.50**	**1.68**	**1.84**	**1.87**	**1.38**	**0.93**	**1.73**	**1.53**	**1.75**	**1.72**	**1.95**	**2.66**	**2.31**	**3.75**	**1.67**	**1.65**	**1.07**	**1.61**	**1.61**	**2.24**	**1.36**	**0.72**	**1.23**	**1.15**	**3.75**		
Min.	**-0.19**	**-0.05**	**-0.03**	**-0.04**	**-0.02**	**-0.46**	**-0.55**	**-0.44**	**-0.40**	**-0.99**	**-1.45**	**-1.21**	**-2.12**	**-1.21**	**-1.17**	**-1.43**	**-1.27**	**-0.96**	**-0.80**	**-0.94**	**-0.51**	**-0.50**	**-0.31**	**-0.15**		**-2.12**	
Avg.	**0.48**	**0.48**	**0.57**	**0.57**	**0.44**	**0.08**	**0.14**	**0.02**	**0.07**	**0.00**	**-0.03**	**0.00**	**-0.05**	**-0.05**	**-0.12**	**-0.04**	**-0.04**	**0.12**	**-0.06**	**-0.06**	**0.02**	**0.09**	**0.39**	**0.45**			**0.14**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.25	0.36	0.63	0.43	0.21	0.03	-0.21	-0.14	0.21	0.04	0.58	-0.46	-1.60	-0.99	-1.28	-1.51	-0.97	-0.25	-0.16	-0.36	0.16	0.32	0.57	0.72	0.72	-1.60	-0.14
2	0.46	0.39	0.59	0.80	0.47	0.12	-0.07	-0.27	-0.46	-0.49	-0.71	-0.90	-0.63	-0.31	-1.13	-1.39	-1.08	-0.42	0.18	0.26	0.50	0.69	1.08	2.22	2.22	-1.39	0.00
3	2.33	2.16	2.01	1.05	0.46	0.26	0.04	-0.07	-0.51	-0.93	-0.46	-0.32	-0.73	-1.31	-0.99	-0.81	-0.72	-0.23	0.17	0.28	0.25	0.23	0.35	0.27	2.33	-1.31	0.12
4	0.32	0.26	0.37	0.52	0.25	-0.03	-0.21	-0.38	-0.45	0.37	0.05	-0.73	-0.73	-1.31	-1.40	-1.45	-1.25	-0.61	-0.27	-0.28	-0.17	0.19	1.90	1.84	1.90	-1.45	-0.13
5	1.05	1.00	1.26	2.04	1.18	0.90	-0.07	-0.48	0.18	0.54	-0.14	-0.35	-0.52	-0.78	-0.69	-0.97	-0.93	-0.72	-0.16	-0.19	-0.06	0.17	0.92	1.77	2.04	-0.97	0.21
6	1.31	1.39	1.96	2.44	0.63	0.11	-0.12	0.48	1.38	-0.06	0.08	-0.29	-0.33	-0.08	-0.06	-0.26	-0.25	-0.15	-0.24	-0.14	-0.10	-0.06	0.33	0.65	2.44	-0.33	0.36
7	0.52	0.23	0.12	0.13	0.09	0.03	-0.08	-0.10	0.11	0.01	-0.15	-0.10	-0.07	0.01	-0.06	0.00	0.01	-0.04	-0.12	-0.05	0.08	-0.09	0.03	0.12	0.52	-0.15	0.03
8	0.13	0.33	0.25	0.31	0.29	0.35	0.12	0.13	0.05	0.04	0.00	-0.08	0.05	-0.14	-0.04	0.02	0.10	0.18	0.33	0.21	0.22	0.28	0.20	0.59	0.59	-0.14	0.16
9	0.81	0.86	0.74	0.49	0.43	0.38	0.29	-0.01	0.01	-0.04	-0.07	-0.06	-0.12	-0.03	-0.09	-0.10	-0.01	0.34	-0.06	-0.10	-0.05	0.06	0.03	0.03	0.86	-0.12	0.16
10	0.15	0.06	0.03	0.06	0.12	0.06	-0.03	-0.15	-0.11	-0.08	-0.22	-0.23	-0.03	-0.05	-0.14	-0.06	-0.11	0.04	-0.04	-0.06	-0.04	-0.03	0.06	0.06	0.15	-0.23	-0.03
11	0.10	0.24	0.16	0.30	0.26	-0.01	-0.06	-0.11	-0.07	0.08	0.02	-0.11	-0.14	-0.02	-0.18	-0.21	-0.22	-0.19	-0.08	-0.16	0.03	0.31	0.31	0.20	0.31	-0.22	0.02
12	0.11	0.14	0.10	0.13	0.13	0.00	-0.02	-0.10	-0.16	-0.42	-0.19	-0.16	-0.06	-0.10	-0.08	0.07	0.00	-0.23	-0.13	-0.07	-0.17	-0.29	-0.24	-0.15	0.14	-0.42	-0.08
13	-0.08	-0.09	-0.10	-0.11	-0.17	-0.22	-0.09	-0.15	-0.19	-0.07	-0.14	-0.41	-0.57	-0.85	-0.82	-0.79	-0.39	-0.34	-0.30	-0.36	-0.34	-0.15	0.04	0.03	0.04	-0.85	-0.28
14	0.13	0.14	0.11	0.04	0.01	-0.20	-0.12	-0.13	-0.18	-0.07	-0.05	0.06	-0.08	-0.18	-0.10	0.37	-0.34	-0.63	-0.27	-0.55	-0.44	-0.08	-0.22	-0.17	0.37	-0.63	-0.12
15	-0.19	-0.09	-0.02	0.23	0.45	0.20	0.13	0.21	-0.14	0.15	0.00	-0.07	-0.16	-0.19	-0.24	-0.12	-0.15	0.09	-0.23	0.18	0.17	-0.14	-0.04	0.07	0.45	-0.24	0.00
16	0.06	0.04	0.12	0.16	0.09	-0.06	-0.10	-0.09	-0.01	-0.09	-0.08	0.04	-0.19	-0.39	-0.45	-0.26	-0.09	-0.20	-0.33	-0.52	-0.21	-0.30	-0.11	0.00	0.16	-0.52	-0.12
17	-0.04	0.01	-0.06	-0.04	-0.06	-0.13	-0.19	-0.22	-0.33	-0.46	-0.62	-0.58	-0.39	-0.33	-0.43	-0.41	-0.53	-0.30	-0.30	-0.28	-0.09	-0.01	0.04	-0.01	0.04	-0.62	-0.24
18	-0.04	0.09	0.09	0.08	-0.05	-0.30	-0.27	-0.55	-0.49	-0.37	-0.16	-0.17	-0.30	-0.20	-0.17	-0.31	-0.35	-0.24	-0.25	-0.15	-0.16	0.04	0.14	0.10	0.14	-0.55	-0.17
19	0.06	0.10	0.12	0.20	-0.06	-0.12	-0.09	-0.19	-0.11	0.04	0.01	-0.17	0.04	0.10	-0.16	0.06	0.61	0.19	0.18	-0.07	-0.14	0.08	0.20	0.18	0.61	-0.19	0.04
20	0.70	0.79	0.53	0.28	0.36	0.35	0.12	-0.05	-0.04	-0.12	-0.12	0.00	-0.02	-0.01	-0.15	-0.37	-0.58	-0.36	-0.15	-0.44	-0.27	-0.04	0.31	0.91	0.91	-0.58	0.07
21	1.18	0.78	0.63	1.00	0.45	-0.09	-0.47	-0.79	-1.07	-0.65	0.05	-0.53	-0.66	-0.74	-1.14	-0.94	-0.74	-0.48	0.14	-0.15	-0.01	0.46	0.12	0.45	1.18	-1.14	-0.13
22	0.68	0.12	0.04	0.19	0.45	0.27	-0.01	0.13	0.14	-0.02	-0.04	0.01	0.09	-0.25	-0.24	-0.20	-0.03	-0.13	-0.21	-0.18	-0.17	-0.01	0.08	0.73	0.73	-0.25	0.06
23	0.37	0.23	0.22	0.12	0.34	-0.03	-0.19	-0.36	-0.08	-0.27	-0.39	-0.03	0.10	-0.30	-0.56	-0.66	-0.65	-0.55	-0.28	-0.15	0.34	-0.14	0.34	1.10	1.10	-0.66	-0.06
24	1.28	1.54	1.50	1.22	0.66	0.18	-0.18	-0.51	-0.09	1.04	0.01	-0.37	-0.44	0.01	-0.27	-0.35	-0.34	-0.13	0.35	0.03	0.12	0.46	1.04	1.56	1.56	-0.51	0.35
25	1.20	1.66	1.45	1.65	0.81	0.02	0.00	-0.22	-0.17	-0.07	-0.21	-0.08	-0.58	-1.09	-0.50	-0.61	-0.48	-0.55	-0.17	-0.12	-0.05	0.28	0.15	1.18	1.66	-1.09	0.15
26	1.19	0.95	0.80	0.64	0.23	0.07	-0.14	-0.24	-0.23	-0.07	-0.26	-0.37	-0.35	-0.19	-0.25	0.07	-0.07	0.00	0.07	-0.17	0.07	0.09	0.65	0.78	1.19	-0.37	0.13
27	1.07	1.20	1.03	1.03	0.38	0.18	-0.04	0.72	0.58	0.58	-0.59	-1.03	-1.12	-0.92	-0.88	-0.88	-0.60	-0.29	-0.09	0.02	-0.54	0.11	0.21	0.25	1.20	-1.12	0.02
28	0.22	0.20	0.22	0.22	0.14	0.18	0.08	-0.06	-0.12	-0.40	-0.57	-0.19	-0.49	-0.95	-0.77	-0.66	-0.67	-0.35	0.01	0.07	0.18	0.17	0.22	0.41	0.41	-0.95	-0.12
29	0.37	0.45	0.32	0.29	0.10	0.10	0.09	0.14	-0.34	0.52	0.39	-0.41	0.05	-0.18	-0.26	-0.25	-0.11	-0.02	-0.04	0.00	-0.01	-0.07	0.00	0.03	0.52	-0.41	0.05
30	0.05	0.10	0.18	0.20	0.06	0.00	-0.06	-0.10	-0.16	-0.20	-0.03	-0.12	-0.62	-0.34	-0.45	-0.55	-0.28	-0.21	-0.28	-0.43	-0.09	0.07	0.26	0.40	0.40	-0.62	-0.11
Max.	**2.33**	**2.16**	**2.01**	**2.44**	**1.18**	**0.90**	**0.29**	**0.72**	**1.38**	**1.04**	**0.58**	**0.06**	**0.10**	**0.10**	**-0.04**	**0.37**	**0.61**	**0.34**	**0.35**	**0.28**	**0.50**	**0.69**	**1.90**	**2.22**	**2.44**		
Min.	**-0.19**	**-0.09**	**-0.10**	**-0.11**	**-0.17**	**-0.30**	**-0.47**	**-0.79**	**-1.07**	**-0.93**	**-0.71**	**-1.03**	**-1.60**	**-1.31**	**-1.40**	**-1.51**	**-1.25**	**-0.72**	**-0.33**	**-0.55**	**-0.54**	**-0.30**	**-0.24**	**-0.17**		**-1.60**	
Avg.	**0.53**	**0.52**	**0.51**	**0.54**	**0.29**	**0.09**	**-0.06**	**-0.12**	**-0.10**	**-0.05**	**-0.13**	**-0.27**	**-0.35**	**-0.40**	**-0.47**	**-0.45**	**-0.37**	**-0.23**	**-0.09**	**-0.13**	**-0.03**	**0.09**	**0.30**	**0.54**			**0.01**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Temperature Difference (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.39	0.57	0.45	0.52	0.39	0.05	0.04	-0.28	-0.47	1.38	0.58	-0.42	-0.77	-1.12	-1.16	-1.04	-1.01	-0.84	-0.38	-0.67	0.05	1.17	0.60	0.42	1.38	-1.16	-0.06
2	0.30	0.35	0.49	0.50	0.46	0.27	0.05	-0.29	-0.65	-1.22	-0.27	0.36	0.69	0.39	-0.10	-1.15	-0.16	-0.15	0.10	0.34	0.65	0.66	1.07	0.08	1.07	-1.22	0.12
3	0.08	0.06	-0.09	0.10	0.24	-0.11	-0.23	-0.34	-0.38	-0.80	-0.55	-0.31	-0.32	-0.51	-0.51	-0.38	-0.33	-0.24	-0.09	-0.07	-0.20	0.08	0.19	0.99	0.99	-0.80	-0.15
4	1.16	1.19	1.11	1.20	0.73	0.45	-0.05	0.45	1.21	-0.04	-0.03	-0.36	-0.61	-0.36	-0.39	-0.42	-0.40	-0.12	-0.24	-0.20	-0.16	-0.18	0.06	0.45	1.21	-0.61	0.19
5	0.60	0.42	0.01	-0.28	-0.17	-0.17	0.00	-0.23	-0.30	-0.37	-0.32	-0.27	-0.23	-0.24	-0.32	-0.34	-0.29	-0.28	-0.33	-0.22	-0.11	-0.16	-0.17	-0.16	0.60	-0.37	-0.16
6	-0.11	0.03	0.10	0.06	-0.08	-0.17	-0.16	-0.24	-0.37	-0.38	-0.03	-0.09	-0.03	-0.07	-0.22	-0.24	-0.23	-0.24	-0.15	-0.05	-0.05	-0.12	-0.09	-0.07	0.10	-0.38	-0.12
7	-0.06	-0.05	0.01	0.00	0.00	-0.02	-0.12	-0.17	-0.14	-0.20	-0.28	-0.32	-0.37	-0.18	-0.19	-0.31	-0.29	-0.26	-0.12	-0.25	-0.15	-0.16	-0.11	-0.08	0.01	-0.37	-0.16
8	-0.04	0.06	0.14	0.24	0.22	-0.10	-0.31	-0.23	-0.37	-0.57	-0.55	-0.42	-0.43	-0.51	-0.41	0.13	-0.66	-0.21	-0.28	-0.02	-0.05	0.08	0.70	0.71	0.71	-0.66	-0.12
9	0.84	0.69	0.83	0.78	0.72	0.18	-0.05	-0.41	0.98	0.95	0.42	-0.13	-0.25	-0.31	-0.16	0.09	-0.42	0.64	0.28	-0.03	-0.09	-0.05	-0.05	-0.07	0.98	-0.42	0.23
10	-0.06	-0.06	-0.02	0.07	0.19	0.10	-0.06	0.08	0.02	0.08	-0.05	-0.07	-0.23	-0.03	0.08	-0.05	-0.01	0.04	0.03	-0.09	-0.07	-0.10	-0.05	-0.11	0.19	-0.23	-0.01
11	-0.11	-0.12	-0.06	0.03	0.04	-0.05	-0.11	-0.17	-0.20	-0.56	0.24	0.28	0.28	0.33	-0.02	-0.10	-0.11	0.38	0.25	0.03	0.07	0.57	0.74	1.05	1.05	-0.56	0.11
12	1.26	1.51	1.68	1.79	1.03	0.16	-0.01	-0.37	-0.71	-0.58	0.80	0.64	-0.24	-0.14	-0.22	0.12	0.58	0.09	0.04	0.15	0.35	-0.01	0.77	0.90	1.79	-0.71	0.40
13	1.28	0.46	0.49	0.97	0.75	0.29	0.22	0.25	0.01	-0.11	-0.20	-0.10	-0.14	-0.23	-0.08	-0.31	-0.19	-0.09	0.02	0.05	0.12	0.04	0.00	0.07	1.28	-0.31	0.15
14	0.06	0.03	-0.02	0.03	0.03	0.06	-0.03	0.02	-0.13	-0.19	-0.33	-0.41	-0.39	-0.12	-0.27	-0.13	-0.20	-0.13	-0.09	0.07	0.09	0.10	0.12	0.15	0.15	-0.41	-0.07
15	0.11	0.12	0.10	0.14	0.08	-0.10	0.01	-0.10	-0.23	-0.46	-0.63	-0.47	-0.52	-0.68	-1.03	-0.54	-0.24	0.02	0.09	-0.07	-0.05	-0.04	0.02	0.19	0.19	-1.03	-0.18
16	0.37	0.37	0.33	0.26	0.24	0.14	-0.15	-0.05	-0.18	-0.14	-0.08	-0.03	-0.05	-0.07	-0.22	-0.17	-0.01	-0.09	-0.03	0.09	0.13	0.08	0.18	0.24	0.37	-0.22	0.05
17	0.20	0.06	0.26	0.32	0.25	0.26	0.13	0.15	-0.05	0.05	0.01	0.02	0.16	0.08	-0.21	-0.16	-0.26	-0.21	-0.03	-0.09	-0.08	-0.11	0.02	0.18	0.32	-0.26	0.04
18	0.30	0.23	0.15	0.18	0.23	-0.01	-0.07	-0.07	-0.12	-0.20	-0.12	-0.14	-0.15	-0.31	-0.38	-0.39	-0.26	-0.07	0.14	-0.01	0.21	0.55	0.37	0.69	0.69	-0.39	0.03
19	0.52	0.53	0.41	0.44	0.33	0.37	0.12	0.17	0.12	-0.12	-0.01	0.05	0.07	-0.05	0.03	0.05	0.07	-0.02	0.08	0.18	0.73	0.51	1.01	0.99	1.01	-0.12	0.27
20	0.92	1.85	1.74	1.24	0.57	0.80	0.07	0.21	0.22	0.23	0.22	0.15	0.31	0.13	0.22	0.15	0.27	0.39	0.24	0.50	0.77	-0.05	0.02	0.15	1.85	-0.05	0.47
21	0.20	0.77	0.68	0.76	0.57	0.24	0.36	0.47	0.32	0.19	0.17	0.20	0.15	0.16	0.09	0.69	0.12	0.07	0.02	-0.14	0.45	0.34	0.09	0.22	0.77	-0.14	0.30
22	0.13	-0.01	0.05	0.14	0.23	0.28	0.26	0.19	0.15	-0.08	-0.03	-0.04	-0.05	0.06	0.09	-0.15	-0.32	-0.62	-0.82	-0.28	-0.18	-0.14	0.04	0.19	0.28	-0.82	-0.04
23	0.27	0.26	0.26	0.33	-0.03	0.18	0.20	-0.11	-0.09	-0.11	0.00	0.12	0.05	-0.02	-0.03	0.13	0.30	-0.26	-0.27	0.05	0.17	0.27	0.55	0.81	0.81	-0.27	0.13
24	0.96	0.78	0.61	0.54	0.54	0.66	0.26	0.28	0.21	0.23	0.03	0.25	0.06	0.37	0.11	-0.08	-0.14	-0.11	-0.21	-0.19	-0.07	-0.16	0.03	0.47	0.96	-0.21	0.23
25	0.29	0.25	0.27	0.28	0.18	0.02	-0.20	-0.33	-0.31	-0.26	-0.14	-0.07	-0.14	-0.33	-0.44	-0.48	-0.41	0.12	-0.06	-0.01	0.23	0.89	0.75	0.90	0.90	-0.48	0.04
26	0.68	0.75	1.12	1.23	1.48	0.32	-0.15	-0.19	0.09	0.01	-0.21	-0.15	-0.20	-0.14	-0.23	-0.09	-0.13	0.05	0.07	0.06	0.10	0.11	0.24	0.25	1.48	-0.23	0.21
27	0.29	0.26	0.27	0.27	0.30	0.23	0.19	-0.22	-0.66	-0.81	-0.52	0.16	-0.24	0.96	-0.02	0.29	-0.19	-0.23	-0.19	0.01	0.05	1.20	1.37	1.14	1.37	-0.81	0.16
28	0.48	0.32	0.17	0.43	0.38	0.14	-0.02	-0.27	-0.65	-0.89	0.12	-0.45	-0.64	-1.24	-0.92	-0.52	-0.28	-0.26	-0.26	-0.34	-0.30	0.30	0.13	0.03	0.48	-1.24	-0.19
29	0.17	0.15	0.12	0.11	-0.06	-0.07	0.03	-0.34	-0.34	-0.15	-0.20	-0.37	-0.74	-0.72	-0.54	-0.31	-0.20	-0.07	-0.16	-0.13	0.01	-0.05	0.03	0.15	0.17	-0.74	-0.15
30	0.19	0.18	0.22	0.03	0.04	0.07	-0.02	-0.14	-0.19	-0.29	-0.18	-0.10	-0.13	-0.10	0.00	-0.13	-0.35	-0.18	0.05	0.10	0.38	0.83	1.48	0.87	1.48	-0.35	0.11
31	0.28	0.27	0.27	0.31	0.34	0.34	0.28	0.21	0.10	-0.10	-0.24	-0.36	-0.43	-0.54	-0.19	-0.16	0.04	-0.02	0.03	0.01	0.06	0.07	0.18	0.10	0.34	-0.54	0.03
Max.	**1.28**	**1.85**	**1.74**	**1.79**	**1.48**	**0.80**	**0.36**	**0.47**	**1.21**	**1.38**	**0.80**	**0.64**	**0.69**	**0.96**	**0.22**	**0.69**	**0.58**	**0.64**	**0.28**	**0.50**	**0.77**	**1.20**	**1.48**	**1.14**	**1.85**		
Min.	**-0.11**	**-0.12**	**-0.09**	**-0.28**	**-0.17**	**-0.17**	**-0.31**	**-0.41**	**-0.71**	**-1.22**	**-0.63**	**-0.47**	**-0.77**	**-1.24**	**-1.16**	**-1.15**	**-1.01**	**-0.84**	**-0.82**	**-0.67**	**-0.30**	**-0.18**	**-0.17**	**-0.16**		**-1.24**	
Avg.	**0.39**	**0.40**	**0.39**	**0.42**	**0.33**	**0.16**	**0.02**	**-0.07**	**-0.10**	**-0.18**	**-0.08**	**-0.09**	**-0.18**	**-0.18**	**-0.25**	**-0.19**	**-0.18**	**-0.09**	**-0.07**	**-0.04**	**0.10**	**0.21**	**0.33**	**0.38**			**0.06**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	93.3	94.0	94.4	95.0	95.5	95.5	95.4	94.5	92.7	92.3	92.9	93.3	94.4	96.7	97.6	96.1	97.3	97.0	96.1	93.4	91.3	90.8	89.7	91.9	97.6	89.7	94.2
2	91.2	89.7	87.6	86.7	94.6	95.0	94.7	91.5	89.8	87.2	86.9	83.9	85.3	85.1	82.5	81.5	82.8	77.4	74.9	71.4	73.5	69.1	74.1	74.9	95.0	69.1	83.8
3	76.2	73.0	75.3	79.8	78.7	83.0	82.7	86.2	89.9	85.2	81.0	78.2	75.3	79.2	79.3	81.5	80.0	81.7	84.0	85.4	87.7	88.3	83.0	82.1	89.9	73.0	81.5
4	87.8	89.7	90.4	91.8	91.3	90.6	88.6	89.5	88.7	85.3	81.3	84.0					69.9	80.0	84.1	88.1	88.9	84.3	71.7	71.0	91.8	69.9	84.8
5	71.2	70.7	71.5	72.4	73.6	73.7	72.0	72.5	70.9	66.7	65.2	63.4	64.1	61.6	63.6	65.5	62.2	61.7	63.7	63.7	64.2	66.9	64.7	65.1	73.7	61.6	67.1
6	66.5	65.9	65.3	64.7	64.5	63.9	62.8	61.8	61.6	60.9	64.3	66.2	65.3	63.6	66.2	70.2	74.4	77.7	83.6	86.0	86.2	69.7	57.5	58.1	86.2	57.5	67.8
7	59.8	65.9	71.9	74.9	76.4	76.9	64.9	64.3	62.1	57.7	54.0	52.4	49.8	49.3	48.4	50.3	52.0	52.6	55.3	54.6	57.5	66.4	74.0	77.5	77.5	48.4	61.2
8	79.9	83.6	85.3	86.4	87.9	88.1	85.2	79.5	77.8	83.7	84.2	82.0	79.9	77.0	78.0	76.2	77.1	76.2	78.2	83.2	86.4	92.1	92.5	92.9	92.9	76.2	83.1
9	92.3	93.4	94.4	95.5	96.2	96.3	95.4	89.6	89.6	94.9	90.7	88.2	87.1	87.7	79.2	79.7	80.5	82.3	83.8	82.3	82.0	84.8	89.6	87.2	96.3	79.2	88.4
10	91.7	92.1	89.8	91.4	94.1	95.4	94.1	87.8	85.5	88.2	87.9	85.5	87.2	84.6	82.7	83.2	85.5	90.9	94.3	94.6	94.4	95.0	96.0	96.7	96.7	82.7	90.4
11	96.5	97.1	96.8	97.1	97.5	97.4	96.7	97.9	98.4	97.9	93.8	91.5	89.4	80.7	78.6	81.3	80.5	74.8	82.5	85.9	89.7	89.7	85.6	89.8	98.4	74.8	90.3
12	92.7	92.9	94.7	95.2	95.9	96.1	94.3	89.8	89.9	86.3	83.6	85.6	83.2	82.2	79.1	74.5	75.7	65.4	71.0	75.9	84.2	92.0	94.5	95.4	96.1	65.4	86.3
13	95.8	96.3	96.5	96.9	97.1	97.1	97.2	97.3	97.4	97.2	95.4	93.1	94.4	92.5	89.6	89.2	88.1	86.9	89.3	88.6	89.3	90.8	92.2	90.9	97.4	86.9	93.3
14	89.5	89.0	88.5	88.4	88.4	88.1	87.4	86.4	85.6	84.1	83.4	81.5	79.9	77.6	75.3	74.0	73.7	76.8	81.4	85.0	87.2	89.9	92.3	91.6	92.3	73.7	84.4
15	89.0	88.1	88.3	88.9	89.9	91.0	91.8	93.6	93.0	93.2	92.5	85.7	82.3	79.5	78.6	76.6	77.8	78.9	75.3	76.4	76.1	78.3	81.3	83.3	93.6	75.3	84.6
16	86.2	88.5	88.1	86.7	87.9	88.1	85.5	86.9	81.5	80.1	80.8	77.3	83.8	85.2	90.5	85.8	82.7	82.9	83.5	85.5	86.1	83.9	81.6	81.7	90.5	77.3	84.6
17	85.0	89.4	90.1	92.0	92.3	91.4	90.2	89.3	89.6	88.4	89.6	86.5	83.5	85.9	80.6	75.3	74.9	71.7	76.5	75.3	78.5	80.6	81.6	78.7	92.3	71.7	84.0
18	83.2	83.9	85.3	84.4	88.1	88.9	85.7	88.7	88.1	89.0	92.0	93.5	94.4	95.2	94.6	95.3	95.2	94.3	93.6	94.4	94.3	94.3	94.6	95.3	95.3	83.2	91.1
19	95.6	96.3	96.3	96.7	96.9	97.2	94.0	86.3	84.4	86.2	86.3	86.8	87.8	86.1	83.5	75.7	62.7	62.1	61.1	56.7	53.9	50.9	49.1	53.7	97.2	49.1	78.6
20	67.2	72.2	53.4	51.1	54.4	55.5	51.4	57.6	53.8	51.6	55.5	49.5	43.1	46.3	49.5	51.3	58.2	61.2	60.8	62.3	66.6	76.4	77.9	81.1	81.1	43.1	58.7
21	85.7	85.1	76.9	77.3	79.8	78.0	80.2	77.6	71.6		61.6	53.8	48.1	46.8	45.1	44.6	45.7	50.2	51.3	55.1	56.1	58.6	59.1	66.2	85.7	44.6	63.2
22	72.5	73.5	71.4	73.3	74.7	77.4	66.1	64.1	60.1	63.3	63.9	69.4	69.3	64.0	74.8	82.4	78.4	82.5	84.0	88.2	91.2	91.3	91.4	91.7	91.7	60.1	75.8
23	94.0	94.9	95.6	95.5	95.2	95.1	94.9	93.8	84.3	76.5	75.5	73.0	73.6	67.2	74.5	75.2	76.7	79.9	84.4	80.6	80.9	83.7	86.0	86.2	95.6	67.2	84.0
24	88.3	88.0	89.8	92.3	92.3	92.8	92.1	92.4	91.9	84.4	81.8	79.8	74.7	73.0	71.1	71.0	64.8	60.8	62.0	60.9	61.9	63.0	66.6	65.5	92.8	60.8	77.6
25	67.0	66.8	66.6	67.0	64.5	60.2	58.8	58.0	65.0	49.1	61.7	57.5	49.3	47.2	55.2	60.1	65.5	67.4	69.7	75.3	79.6	81.3	82.7	86.1	86.1	47.2	65.1
26	86.4	88.2	91.3	90.9	88.0	88.0	86.5	84.8	74.7	67.2	61.3	54.7	50.1	48.1	42.5	39.5	37.8	45.9	48.6	53.8	57.4	55.3	55.7	54.9	91.3	37.8	64.6
27	53.7	52.7	53.1	53.2	59.4	57.2	51.3	60.6	62.1	56.1	53.0	50.4	45.8	46.4	46.8	47.2	50.0	51.5	50.4	53.6	56.4	56.7	54.2	63.0	63.0	45.8	53.5
28	74.3	76.6	75.7	78.0	84.5	89.3	91.9	93.3	92.4	92.9	94.3	95.8	94.8	92.8	92.0	92.9	92.8	90.9	73.3	67.3	68.2	67.8	68.0	68.6	95.8	67.3	83.7
29	73.2	78.4	78.2	74.9	72.9	70.8	70.9	74.3	80.7	80.5	80.7	76.1	74.8	74.1	72.2	70.9	69.5	69.8	68.4	66.6	70.6	74.9	73.1	72.7	80.7	66.6	73.7
30	78.3	78.4	77.1	74.3	71.2	72.5	72.9	71.1	73.5	71.2	66.6	64.8	58.0	56.3	57.4	56.1	56.7	59.0	58.3	57.0	56.5	55.3	54.3	55.4	78.4	54.3	64.7
31	57.1	55.8	55.5	56.6	55.3	53.8	55.3	56.1	55.1	51.9	51.2	54.7	52.9	50.3	48.5	47.4	48.0	49.6	50.4	51.1	53.0	53.0	52.3	51.9	57.1	47.4	52.8
Max.	**96.5**	**97.1**	**96.8**	**97.1**	**97.5**	**97.4**	**97.2**	**97.9**	**98.4**	**97.9**	**95.4**	**95.8**	**94.8**	**96.7**	**97.6**	**96.1**	**97.3**	**97.0**	**96.1**	**94.6**	**94.4**	**95.0**	**96.0**	**96.7**	**98.4**		
Min.	**53.7**	**52.7**	**53.1**	**51.1**	**54.4**	**53.8**	**51.3**	**56.1**	**53.8**	**49.1**	**51.2**	**49.5**	**43.1**	**46.3**	**42.5**	**39.5**	37.8	45.9	**48.6**	**51.1**	**53.0**	**50.9**	**49.1**	**51.9**		**37.8**	
Avg.	**81.3**	**82.3**	**81.8**	**82.2**	**83.2**	**83.4**	**81.6**	**81.2**	**80.1**	**78.3**	**77.2**	**75.4**	**73.4**	**72.1**	**71.9**	**71.7**	**71.5**	**72.3**	**73.3**	**74.1**	**75.8**	**76.6**	**76.3**	**77.5**			**77.3**

Total Hours in Month 744 **Hours Data Available** 739 **Data Recovery** 99.3%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	51.6	51.9	54.0	65.4	71.3	73.5	72.8	70.6	67.2	63.2	58.9	53.3	47.1	41.3	37.9	35.1	38.0	43.0	45.0	42.8	45.4	43.3	41.3	46.9	73.5	35.1	52.5
2	68.9	74.4	77.0	80.9	82.2	83.2	84.3	82.1	75.9	72.4	64.8	60.7	58.6	45.5	44.7	46.8	43.5	59.2	65.0	70.7	72.8	74.1	74.2	72.6	84.3	43.5	68.1
3	73.2	78.5	80.7	81.8	76.1	77.1	79.7	82.3	82.1	82.1	85.5	88.3	87.4	85.7	80.4	88.3	89.2	92.1	91.2	91.6	92.1	92.1	91.1	90.3	92.1	73.2	85.0
4	90.2	92.1	90.0	86.9	88.2	88.0	89.5	90.9	90.8	92.2	93.5	94.8	94.3	93.2	93.8	93.3	86.7	87.2	89.6	88.6	88.4	88.4	90.0	90.8	94.8	86.7	90.5
5	90.7	91.1	91.6	92.6	94.3	94.7	94.7	92.7	85.0	85.4	91.8	92.6	91.9	92.0	91.3	88.7	91.5	91.6	88.7	90.5	93.1	94.7	95.3	95.4	95.4	85.0	91.7
6	95.8	96.3	96.6	96.8	96.8	96.8	95.9	96.0	94.4	79.7	74.3	69.9	68.5	68.7	66.4	72.8	75.2	68.8	71.4	67.4	68.8	71.7	72.9	73.0	96.8	66.4	80.6
7	72.9	71.8	72.4	75.0	75.8	76.5	81.0	78.5	74.6	70.5	68.8	65.0	64.8	60.4	58.0	57.8	57.9	64.8	69.0	71.8	72.7	72.6	71.9	71.7	81.0	57.8	69.8
8	68.8	67.2	67.6	70.0	70.1	68.6	67.7	71.2	73.9	70.4	69.0	66.7	69.9	70.8	75.1	75.7	76.0	79.3	76.9	73.6	84.1	82.4	79.9	84.3	84.3	66.7	73.3
9	85.3	91.2	95.5	96.4	96.5	96.6	97.1	96.6	96.6	96.7	96.2	96.1	96.4	96.9	97.3	97.5	97.7	97.6	97.2	97.5	97.6	97.6	95.3	89.2	97.7	85.3	95.8
10	81.4	76.4	74.8	74.4	76.5	73.5	73.3	74.2	71.5	71.0	68.6	66.2	64.8	62.0	62.5	62.4	60.6	62.1	71.5	75.4	80.5	81.5	85.9	89.8	89.8	60.6	72.5
11	92.2	89.7	87.1	85.8	88.3	89.1	90.6	89.7	82.3	78.1	77.8	83.3	83.7	87.6	89.7	92.9	92.8	93.9	92.2	92.4	92.7	93.1	93.0	93.7	93.9	77.8	88.8
12	94.5	94.8	95.0	94.5	92.4	77.2	71.8	69.1	70.1	63.7	58.7	62.7	70.3	73.4	77.4	79.3	77.2	76.3	71.5	76.2	80.7	73.8	67.4	71.1	95.0	58.7	76.6
13	71.8	75.5	78.3	81.4	79.4	75.5	75.6	71.8	66.0	64.8	63.9	62.7	62.9	63.7	63.3	62.9	60.7	55.9	51.7	51.5	52.8	59.9	52.1	54.1	81.4	51.5	64.9
14	55.0	59.5	64.9	71.7	76.7	79.4	82.8	84.9	75.8	72.7	67.9	69.2	70.3	66.6	71.0	72.3	71.8	80.3	77.2	77.5	81.2	78.5	76.6	78.6	84.9	55.0	73.4
15	79.6	86.1	90.5	92.4	93.7	95.0	95.6	95.9	95.9	95.7	96.0	96.3	95.9	94.8	95.3	95.7	95.9	96.1	96.3	96.2	95.0	95.4	96.8	97.3	97.3	79.6	94.3
16	97.5	97.6	97.7	94.2	88.1	79.3	71.1	70.3	69.8	70.2	68.2	64.2	60.8	61.2	62.2	62.3	64.4	68.4	68.6	72.4	75.3	76.8	78.1	75.7	97.7	60.8	74.8
17	71.6	69.7	72.1	83.6	88.8	89.6	88.2	88.2	89.9	87.8	78.4	80.4	73.7	71.5	76.4	82.1	76.2	81.7	85.2	84.1	86.9	89.2	78.8	70.1	89.9	69.7	81.0
18	69.3	70.2	67.3	67.5	68.7	69.0	67.4	65.6	64.2	63.1	62.1	60.1	59.5	58.3	57.3	57.3	56.4	57.6	55.9	58.1	58.3	56.6	56.5	55.4	70.2	55.4	61.7
19	55.6	56.7	55.7	57.5	57.3	56.1	56.2	58.9	59.1	55.4	54.0	54.8	54.4	55.7	52.4	51.7	52.1	53.8	53.4	52.9	53.4	53.3	53.5	54.2	59.1	51.7	54.9
20	54.2	53.4	53.9	54.8	55.4	55.0	55.4	54.0	51.5	51.7	52.9	52.0	50.7	50.2	48.9	49.3	50.8	52.9	53.7	54.4	53.7	54.5	56.5	56.4	56.5	48.9	53.2
21	60.6	65.2	65.6	66.7	65.8	62.6	62.0	64.0	76.2	75.4	74.3	71.4	67.4	71.5	74.3	77.8	80.1	86.3	89.2	89.0	88.4	86.5	87.7	90.4	90.4	60.6	74.9
22	91.4	92.5	93.0	91.4	88.4	84.5	90.1	95.1	95.9	95.9	96.4	97.3	97.5	97.6	97.6	97.6	97.6	97.5	97.5	97.6	97.7	97.8	97.9	97.7	97.9	84.5	95.1
23	96.5	91.2	86.7	86.8	84.9	83.4	84.7	88.4	87.9	85.1	85.1	83.1	85.7	87.5	87.1	90.6	93.5	94.7	94.8	95.1	94.8				96.5	83.1	88.9
24																											
25												62.7	64.5	64.0	61.5	61.9	63.7	64.3	65.5	65.3	68.7	77.3	71.9	68.8	77.3	61.5	66.2
26	73.2	81.9	85.9	87.2	87.7	89.4	90.7	89.0	79.1	74.8	77.8	73.3	71.4	67.5	64.8	74.7	79.1	77.5	75.0	79.7	86.5	88.4	90.6	88.7	90.7	64.8	80.6
27	89.1	89.9	90.0	89.9	89.1	87.5	84.8	84.9	85.7	85.4	77.1	73.3	70.4	74.6	78.3	75.6	74.2	77.3	84.7	84.1	87.7	87.3	78.1	78.8	90.0	70.4	82.4
28	77.0	79.9	84.2	84.1	88.1	91.9	91.0	86.1	87.7	90.0	92.4	89.1	85.0	80.1	75.4	82.8	81.5	80.1	77.7	85.0	89.7	91.0	86.3	77.3	92.4	75.4	84.7
29	72.5	75.9	77.0	75.6	74.2	74.9	69.8	67.6	68.3	68.3	69.0	69.2	65.6	70.0	69.9	67.5	63.7	66.2	68.3	70.1	69.8	68.9	68.2	67.8	77.0	63.7	69.9
30	68.1	69.1	71.9	72.4	73.3	74.0	72.5	72.1	71.1	66.7	63.9	62.0	60.4	59.4	58.0	57.9	60.6	62.9	64.2	65.2	66.6	66.4	63.5	62.8	74.0	57.9	66.0
Max.	**97.5**	**97.6**	**97.7**	**96.8**	**96.8**	**96.8**	**97.1**	**96.6**	**96.6**	**96.7**	**96.4**	**97.3**	**97.5**	**97.6**	**97.6**	**97.6**	**97.7**	**97.6**	**97.5**	**97.6**	**97.7**	**97.8**	**97.9**	**97.7**	**97.9**		
Min.	**51.6**	**51.9**	**53.9**	**54.8**	**55.4**	**55.0**	**55.4**	**54.0**	**51.5**	**51.7**	**52.9**	**52.0**	**47.1**	**41.3**	**37.9**	**35.1**	38.0	43.0	**45.0**	**42.8**	**45.4**	**43.3**	**41.3**	**46.9**		**35.1**	
Avg.	**76.7**	**78.2**	**79.2**	**80.6**	**81.0**	**80.1**	**79.9**	**79.7**	**78.2**	**76.0**	**74.5**	**73.1**	**72.2**	**71.4**	**71.3**	**72.8**	**72.7**	**74.8**	**75.4**	**76.4**	**78.5**	**78.3**	**76.8**	**76.5**			**76.4**

Total Hours in Month 720 **Hours Data Available** 682 **Data Recovery** 94.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	62.7	63.0	63.9	63.4	62.9	61.8	62.0	60.5	60.1	59.2	60.0	58.2	56.8	57.1	58.3	58.5	58.3	59.9	60.2	60.1	60.9	60.4	60.1	60.4	63.9	56.8	60.3
2	58.3	57.6	56.7	56.2	56.2	54.7	55.3	53.7	51.9	48.1	48.0	44.4	43.1	44.1	42.1	42.1	43.9	48.2	52.6	48.3	45.8	45.1	56.5	66.6	66.6	42.1	50.8
3	66.5	67.2	68.7	65.6	77.5	83.2	83.5	88.7	93.8	93.4	77.9	74.4	68.7	67.5	65.9	67.7	69.0	70.7	75.5	82.1	81.6	75.9	81.7	78.9	93.8	65.6	76.1
4	82.0	81.0	78.9	70.4	66.9	64.9	62.2	60.3	56.6	55.6	54.9	52.4	51.9	51.6	51.5	54.7	58.6	60.4	56.4	56.7	65.9	66.3	65.6	67.1	82.0	51.5	62.2
5	74.8	76.8	76.9	76.9	78.9	83.1	88.1	90.3	89.3	88.4	86.6	87.9	87.3	89.5	90.5	89.7	91.0	91.6	93.4	96.1	92.9	92.4	91.9	91.7	96.1	74.8	87.3
6	92.8	94.5	95.1	95.6	96.0	95.8	95.8	95.9	95.8	91.0	89.6	85.1	79.1	79.5	74.6	67.4	73.7	81.0	83.0	85.1	86.8	88.9	90.6	93.6	96.0	67.4	87.8
7	93.6	92.4	90.2	89.7	85.1	83.6	80.2	79.1	73.8	73.6	75.5	82.2	86.9	89.4	89.2	88.8	89.9	91.5	92.0	91.3	90.4	90.3	91.4	92.5	93.6	73.6	86.8
8	94.7	95.8	96.1	96.4	96.7	97.1	97.5	97.4	97.7	97.6	97.7	96.8	96.6	95.2	95.7	95.0	93.5	93.9	94.5	95.5	95.8	95.8	95.9	95.7	97.7	93.5	96.0
9	96.1	95.9	96.4	96.8	97.0	97.0	97.4	97.3	96.6	94.2	91.0	92.4	90.9	81.1	69.8	68.6	68.3	68.5	68.1	66.6	68.2	70.6	68.7	67.8	97.4	66.6	83.6
10	66.9	67.1	65.8	65.5	57.2	54.2	52.6	51.0	51.1	66.4	73.8	70.1	65.5	65.0	66.2	66.8	68.6	72.1	73.2	75.7	79.2	79.6	81.0	83.1	83.1	51.0	67.4
11	87.4	91.3	91.5	89.4	90.7	88.5	82.3	78.2	83.2	88.5	84.0	82.0	71.9	65.5	69.3	72.7	74.6	71.1	70.1	65.1	66.6	69.4	68.2	65.4	91.5	65.1	77.8
12	69.3	69.7	66.2	66.2	66.2	64.0	63.4	61.8	60.5	59.7	58.3	59.0	56.6	54.5	53.3	52.6	52.7	53.8	54.2	52.6	50.0	46.0	39.2	39.1	69.7	39.1	57.0
13	39.0	39.5	37.8	53.4	61.9	61.3	65.1	64.1	65.4	62.9	57.2	49.3	53.8	56.2	58.5	59.2	60.4	59.0	60.5	64.3	68.0	68.0	70.7	72.0	72.0	37.8	58.6
14	73.0	68.3	71.6	77.2	83.8	86.8	90.6	92.9	93.2	91.0	90.9	87.8	83.3	74.3	69.0	66.9	75.5	77.0	74.6	74.7	74.0	73.5	80.2	83.8	93.2	66.9	79.7
15	81.6	79.7	78.4	77.6	77.0	75.9	72.3	68.8	70.1	68.7	67.6	66.3	66.5	65.3	65.4	70.3	67.7	71.6	74.7	75.2	84.0	85.3	88.3	90.9	90.9	65.3	74.6
16	89.2	89.0	88.8	80.7	58.7	55.0	60.8	64.8	61.6	49.4	44.6	47.0	45.4	47.8	50.3	52.1	54.8	59.4	64.8	69.4	71.6	72.5	76.8	80.2	89.2	44.6	63.9
17	79.6	78.5	77.5	87.2	92.2	93.3	95.0	89.8	86.6	86.1	89.9	92.4	92.5	86.4	84.2	68.5	66.7	69.2	76.6	80.8	79.1	79.5	80.7	84.6	95.0	66.7	83.2
18	87.5	84.2	81.7	84.4	83.9	85.8	79.8	75.7	72.9	66.3	60.6	62.5	60.6	58.7	58.3	56.0	60.7	68.5	74.9	72.4	76.7	82.9	85.4	87.4	87.5	56.0	73.7
19	87.4	86.1	87.1	81.0	78.3	81.4	81.0	81.4	77.4	76.2	80.5	80.4	81.3	82.4	82.2	80.7	81.6	84.6	86.4	84.3	89.0	91.1	93.1	93.4	93.4	76.2	83.7
20	93.7	93.3	93.7	94.6	94.2	92.9	92.2	91.8	90.4	85.1	75.4	73.4	64.9	61.3	60.5	61.0	61.1	59.8	57.3	54.4	51.2	47.3	42.2	47.0	94.6	42.2	72.4
21	60.2	58.7	60.1	65.5	64.9	61.6	65.7	74.5	82.1	87.9	90.0	90.6	92.6	92.8	94.4	94.9	94.4	94.4	92.8	84.0	79.2	77.1	75.3	72.8	94.9	58.7	79.4
22	69.2	68.1	60.2	59.3	59.3	56.7	56.9	53.4	54.6	55.2	55.6	57.3	58.9	61.3	60.8	63.6	63.8	62.1	58.0	56.7	57.1	56.3	53.6	49.7	69.2	49.7	58.7
23	48.8	46.3	48.2	50.6	54.3	56.0	56.4	54.4	54.0	54.7	56.0	66.4	72.5	76.7	77.6	80.3	84.9	90.8	92.1	93.2	93.0	90.9	89.4	87.0	93.2	46.3	69.8
24	90.4	91.8	91.7	93.1	94.5	91.6	89.6	88.2	82.9	80.3	77.2	69.4	69.8	64.4	55.0	51.6	51.6	47.8	45.4	42.9	42.8	45.9	44.6	45.1	94.5	42.8	68.7
25	46.1	48.7	48.1	50.1	61.0	58.0	58.9	58.8	58.2	64.6	67.3	68.0	64.1	62.4	61.8	62.1	65.4	70.7	76.5	76.6	78.6	79.8	80.9	79.6	80.9	46.1	64.4
26	80.2	81.0	80.2	79.4	80.3	81.5	81.0	78.4	80.0	76.4	73.9	66.4	57.7	57.2	54.6	53.6	57.0	59.6	58.0	61.9	70.4	72.6	76.7	78.7	81.5	53.6	70.7
27	81.5	81.5	81.7	83.3	82.3	84.6	83.7	84.9	83.5	79.3	75.5	66.7	59.4	51.6	51.2	48.0	56.5	65.4	65.8	65.0	68.9	69.6	71.4	74.6	84.9	48.0	71.5
28	73.8	70.0	71.9	74.9	74.0	74.6	70.5	73.4	74.5	76.4	77.4	72.2	69.5	61.4	54.6	55.3	60.7	66.4	70.5	72.8	70.0	70.2	73.7	72.0	77.4	54.6	70.0
29	70.0	67.8	68.2	70.6	71.1	71.6	74.4	75.1	73.9	70.2	65.1	60.8	65.5	62.8	62.4	61.9	62.5	66.5	66.6	64.2	62.1	63.1	63.6	62.9	75.1	60.8	66.8
30	61.9	61.4	59.1	61.6	60.4	61.0	63.0	60.8	64.9	70.7	72.5	74.7	73.4	70.5	66.0	64.9	65.7	66.6	68.6	69.5	69.3	68.9	68.9	69.9	74.7	59.1	66.4
31	69.2	68.6	68.4	67.6	66.4	64.3	61.7	58.9	60.7	60.1	59.9	55.1	50.6	48.5	50.6	46.5	45.6	48.2	47.0	46.4	48.1	50.1	58.1	60.9	69.2	45.6	56.7
Max.	**96.1**	**95.9**	**96.4**	**96.8**	**97.0**	**97.1**	**97.5**	**97.4**	**97.7**	**97.6**	**97.7**	**96.8**	**96.6**	**95.2**	**95.7**	**95.0**	**94.4**	**94.4**	**94.5**	**96.1**	**95.8**	**95.8**	**95.9**	**95.7**	**97.7**		
Min.	**39.0**	**39.5**	**37.8**	**50.1**	**54.3**	**54.2**	**52.6**	**51.0**	**51.1**	**48.1**	**44.6**	**44.4**	**43.1**	**44.1**	**42.1**	**42.1**	43.9	47.8	**45.4**	**42.9**	**42.8**	**45.1**	**39.2**	**39.1**		**37.8**	
Avg.	**75.1**	**74.7**	**74.2**	**75.0**	**75.2**	**74.9**	**74.8**	**74.3**	**74.1**	**73.5**	**72.1**	**70.7**	**69.0**	**67.2**	**65.9**	**65.2**	**67.1**	**69.4**	**70.5**	**70.4**	**71.5**	**71.8**	**73.0**	**74.0**			**71.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.7	67.2	71.6	67.6	68.5	72.5	72.1	73.9	74.1	75.6	73.9	72.9	69.9	67.1	65.7	52.8	42.0	51.8	62.8	62.5	63.3	61.7	61.4	63.3	75.6	42.0	65.8
2	66.3	65.7	62.2	63.1	66.9	72.8	74.8	78.6	80.8	77.0	75.6	74.7	73.4	66.1	62.9	60.7	61.8	62.5	60.2	60.8	63.1	64.1	61.9	66.0	80.8	60.2	67.6
3	64.5	68.0	67.3	57.1	56.0	66.6	57.8	57.3	52.8	46.1	37.2	35.2	34.2	37.0	38.7	37.0	36.1	37.6	37.3	35.0	34.7	38.8	32.7	32.9	68.0	32.7	45.8
4	34.2	35.2	36.8	37.2	37.4	34.1	33.1	42.5	34.9	36.5	35.5	36.5	34.7	32.9	33.9	34.7	34.8	33.2	33.9	34.0	32.8	34.5	41.5	57.7	57.7	32.8	36.3
5	51.0	54.7	55.0	40.4	35.7	36.5	36.8	41.1	41.4	36.9	31.3	30.1	31.4	29.8	29.4	30.8	29.9	29.8	33.2	31.6	38.6	38.6	40.0	45.6	55.0	29.4	37.5
6	55.1	64.1	75.2	88.7	92.7	94.2	96.0	97.2	97.5	96.7	87.0	60.5	56.3	61.7	62.2	61.6	61.9	65.4	63.2	60.4	56.1	54.4	54.2	55.4	97.5	54.2	71.6
7	50.9	48.9	42.9	45.2	38.7	33.8	37.4	49.0	70.2	59.1	55.4	55.0	57.5	57.0	53.2	50.4	57.9	57.1	57.4	57.0	54.7	54.3	51.5	51.0	70.2	33.8	51.9
8	50.1	52.7	51.9	61.5	68.8	66.1	70.5	78.9	80.1	79.4	72.1	66.2	67.6	63.6	61.3	64.4	72.6	77.8	79.3	80.2	81.9	82.4	81.0	79.4	82.4	50.1	70.4
9	79.1	79.5	81.8	85.3	89.9	91.4	92.6	93.4	93.8	94.3	93.3	86.7	82.1	77.6	78.1	79.6	81.2	84.9	87.3	89.5	90.3	85.6	77.3	72.4	94.3	72.4	85.3
10	74.9	73.6	70.3	67.0	65.4	63.7	63.1	63.1	62.7	60.7	59.5	58.4	57.9	55.7	56.7	58.3	58.3	59.6	60.0	61.5	63.1	65.5	69.4	71.0	74.9	55.7	63.3
11	74.5	76.0	75.3	78.2	83.3	85.5	87.3	88.5	89.4	91.0	91.5	89.2	89.6	85.9	84.5	90.2	92.6	93.5	93.8	93.7	93.3	93.1	93.2	93.5	93.8	74.5	87.8
12	93.4	93.5	93.5	92.7	92.2	91.5	90.9	91.9	92.5	89.7	86.3	83.7	80.9	81.1	79.9	82.3	83.0	87.1	90.6	92.2	92.6	93.6	94.1	94.2	94.2	79.9	89.3
13	93.2	92.8	92.6	90.1	87.2	86.2	85.5	84.6	83.7	81.2	81.5	76.7	77.5	77.9	78.4	79.3	82.1	83.4	85.4	84.5	78.1	76.3	83.6	81.1	93.2	76.3	83.5
14	84.5	83.6	82.9	72.3	72.1	72.0	67.5	66.2	56.9	56.9	54.5	56.8	63.5	65.7	61.5	60.1	60.1	61.8	63.0	65.5	67.5	68.2	67.0	64.8	84.5	54.5	66.4
15	64.5	63.5	58.7	62.0	62.9	70.1	78.9	78.8	76.6	81.2	85.5	84.3	77.8	66.5	70.0	69.3	72.7	71.9	72.4	72.4	76.6	83.1	86.0	87.3	87.3	58.7	73.9
16	86.2	78.2	77.5	86.8	93.3	94.4	93.6	89.1	78.2	76.9	78.5	80.6	82.2	84.5	83.5	83.0	85.0	89.6	90.2	89.1	88.6	90.1	90.9	89.5	94.4	76.9	85.8
17	91.0	88.4	89.9	91.0	93.0	94.7	96.1	96.3	96.4	96.7	96.9	97.1	88.5	74.8	67.3	65.2	65.6	67.2	69.2	71.7	78.8	81.4	84.2	82.7	97.1	65.2	84.3
18	78.8	88.3	90.7	89.6	91.8	94.8	94.8	94.6	93.9	92.1	88.6	89.0	89.4	89.7	89.8	88.4	86.2	88.9	91.1	86.3	80.8	75.9	71.3	68.8	94.8	68.8	87.2
19	68.5	71.4	70.9	71.9	68.3	70.5	71.4	67.0	68.5	64.7	63.5	63.1	67.2	67.2	63.8	62.8	58.8	59.8	59.3	59.0	58.4	58.8	58.8	64.4	71.9	58.4	64.9
20	65.1	68.4	68.7	71.1	78.7	85.7	82.8	83.9	87.0	94.1	83.5	72.4	69.6	70.4	77.4	93.0	96.2	96.8	97.4	97.5	97.6	97.6	97.7	97.7	97.7	65.1	84.6
21	97.4	97.5	97.4	97.6	94.0	84.3	78.5	74.9	73.0	70.4	67.0	67.8	66.8	66.6	62.6	59.6	57.1	55.9	53.1	55.6	59.4	58.1	58.3	60.9	97.6	53.1	71.4
22	62.3	59.8	62.4	64.7	66.8	67.1	64.1	60.2	55.1	46.5	46.1	48.6	56.5	60.9	62.5	62.5	64.3	69.0	66.5	52.2	46.7	45.8	44.2	43.6	69.0	43.6	57.4
23	44.1	44.8	45.1	46.6	46.3	48.0	54.1	57.4	59.1	61.4	54.9	55.2	56.1	54.7	54.3	53.2	49.6	47.6	51.2	50.1	48.8	47.6	48.7	51.2	61.4	44.1	51.3
24	50.0	50.9	49.2	47.7	47.0	48.6	48.9	49.4	50.0	48.9	58.7	64.9	58.6	61.5	64.0	65.1	64.0	62.1	55.2	51.5	51.3	49.3	48.5	49.2	65.1	47.0	53.9
25	49.9	51.0	51.1	51.6	51.5	49.9	49.0	48.0	48.2	49.8	49.6	47.8	48.8	49.6	49.7	50.5	54.6	54.4	51.6	46.4	45.3	47.8	48.6	47.6	54.6	45.3	49.7
26	50.0	51.6	56.1	53.2	51.2	49.8	46.1	45.0	44.3	43.4	42.5	42.6	44.9	46.4	48.7	51.5	51.3	54.8	58.0	59.0	67.9	69.7	70.0	73.4	73.4	42.5	53.0
27	73.1	73.8	74.9	75.8	74.4	74.7	75.6	77.1	79.4	79.7	79.3	78.5	76.7	77.8	72.8	71.2	75.8	78.6	78.5	77.7	76.8	79.2	76.7	75.8	79.7	71.2	76.4
28	79.6	76.3	75.9	79.2	81.2	79.8	79.2	81.1	78.6	79.4	75.8	68.8	69.2	70.4	72.9	72.6	72.5	75.0	77.6	77.6	78.7	81.2	81.6	83.3	83.3	68.8	77.0
29	82.9	81.3	83.5	84.6	82.9	83.1	83.8	79.8	78.9	81.9	84.1	84.4	71.8	74.9	74.5	67.2	64.0	64.0	62.9	57.4	51.5	52.6	56.9	56.7	84.6	51.5	72.7
30	52.5	54.4	59.1	54.2	53.7	56.8	53.3	54.3	53.1	50.3	43.4	52.8	60.6	60.7	54.1	46.4	46.8	45.9	45.2	45.3	43.2	41.7	45.9	45.4	60.7	41.7	50.8
Max.	**97.4**	**97.5**	**97.4**	**97.6**	**94.0**	**94.8**	**96.1**	**97.2**	**97.5**	**96.7**	**96.9**	**97.1**	**89.6**	**89.7**	**89.8**	**93.0**	**96.2**	**96.8**	**97.4**	**97.5**	**97.6**	**97.6**	**97.7**	**97.7**	**97.7**		
Min.	**34.2**	**35.2**	**36.8**	**37.2**	**35.7**	**33.8**	**33.1**	**41.1**	**34.9**	**36.5**	**31.3**	**30.1**	**31.4**	**29.8**	**29.4**	**30.8**	29.9	29.8	**33.2**	**31.6**	**32.8**	**34.5**	**32.7**	**32.9**		**29.4**	
Avg.	**67.7**	**68.5**	**69.0**	**69.1**	**69.7**	**70.6**	**70.5**	**71.4**	**71.0**	**69.9**	**67.8**	**66.0**	**65.4**	**64.5**	**63.8**	**63.4**	**64.0**	**65.6**	**66.2**	**65.2**	**65.3**	**65.7**	**65.9**	**66.9**			**67.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	48.0	45.3	45.7	45.7	44.1	50.6	52.3	53.3	56.8	55.4	66.6	60.4	49.8	51.2	48.1	53.6	64.4	45.5	57.6	52.5	57.9	55.9	52.3	54.1	66.6	44.1	52.8
2	58.7	60.4	59.6	61.4	62.6	58.0	56.7	64.3	57.3	58.9	60.0	60.0	60.1	66.1	65.9	65.1	63.2	67.4	65.6	64.2	60.7	57.7	57.8	62.0	67.4	56.7	61.4
3	64.9	65.7	62.9	58.2	55.1	51.2	52.5	53.6	52.8	54.2	57.0	55.0	55.9	55.1	55.8	53.5	55.3	53.8	59.2	68.2	70.2	68.1	70.9	72.0	72.0	51.2	59.2
4	72.0	77.7	81.2	86.9	83.1	84.1	88.5	86.2	84.2	77.7	76.3	74.2	70.3	67.3	67.2	72.2	76.7	85.7	93.1	94.3	94.0	93.6	89.9	86.6	94.3	67.2	81.8
5	89.9	91.3	93.6	91.7	90.7	89.8	87.5	81.3	78.8	78.6	85.0	85.5	87.9	86.7	86.8	86.8	87.3	87.6	84.7	80.7	73.8	74.3	80.5	81.9	93.6	73.8	85.1
6	83.1	81.3	81.9	86.5	88.9	89.1	87.2	84.2	84.1	89.3	88.7	88.7	86.6	87.9	92.1	97.8	98.4	98.3	97.4	96.8	93.9	92.6	90.8	84.3	98.4	81.3	89.6
7	87.0	87.4	89.5	93.9	93.6	93.3	92.5	92.8	93.6	93.9	92.3	92.6	90.6	88.9	89.7	91.0	94.8	92.7	90.0	91.7	91.6	91.1	93.5	94.0	94.8	87.0	91.8
8	94.5	94.3	94.2	92.7	94.5	95.7	96.1	97.1	97.6	97.5	87.6	80.0	79.9	84.3	84.6	85.3	87.1	87.3	87.0	87.1	87.6	87.9	87.2	86.3	97.6	79.9	89.7
9	87.3	86.7	87.9	90.1	92.8	94.0	94.5	93.0	90.1	94.7	94.5	87.6	80.3	75.5	71.3	74.6	71.5	69.6	72.2	76.5	83.1	83.5	85.8	85.1	94.7	69.6	84.3
10	87.7	90.2	92.0	90.5	89.3	87.8	88.0	89.0	88.6	88.1	82.3	83.5	83.0	77.2	73.0	77.3	86.8	88.1	89.4	89.5	89.7	91.2	92.2	91.3	92.2	73.0	86.9
11	90.6	91.6	92.7	94.8	95.0	95.0	90.5	86.0	82.9	76.8	71.2	71.2	70.5	69.3	67.3	65.9	64.6	67.0	66.2	65.2	64.3	65.9	68.3	69.9	95.0	64.3	76.8
12	69.1	70.0	67.9	62.2	59.4	53.7	54.8	53.4	54.1	54.0	49.8	44.2	39.9	50.4	49.9	39.9	50.3	48.0	65.1	61.3	64.5	67.3	67.7	69.5	70.0	39.9	56.9
13	71.0	70.2	70.0	70.1	73.2	62.3	61.3	59.3	59.5	60.6	56.4	58.6	63.7	67.4	67.8	66.0	62.7	56.8	56.1	58.8	60.6	56.5	56.2	58.5	73.2	56.1	62.6
14	61.3	63.9	63.7	64.4	63.0	61.0	57.4	57.2	57.1	55.9	55.8	56.2	55.6	57.2	59.8	73.2	87.3	91.3	93.5	94.9	95.6	94.4	94.0	92.4	95.6	55.6	71.1
15	92.7	89.4	89.1	86.2	81.9	79.9	78.5	86.1	86.6	84.2	82.2	84.1	86.5	83.9	84.8	84.1	86.3	86.8	86.8	88.1	90.8	89.3	88.8	90.4	92.7	78.5	86.1
16	91.1	91.5	93.5	94.2	95.4	96.6	97.6	98.2	99.2	99.5	99.5	99.3	96.0	93.8	95.7	96.3	96.9	97.5	98.0	98.3	98.6	96.6	89.7	92.3	99.5	89.7	96.1
17	93.4	96.8	98.1	98.7	99.0	99.1	99.2	99.2	99.0	99.1	97.4	94.5	90.1	85.5	82.3	84.4	89.0	90.9	90.8	86.5	82.1	75.1	76.5	75.4	99.2	75.1	90.9
18	73.2	67.9	64.3	62.9	64.2	63.1	79.5	85.5	83.5	83.8	84.0	78.2	75.5	76.4	74.0	69.6	66.6	69.0	69.7	66.9	68.0	71.2	75.1	72.0	85.5	62.9	72.7
19	67.0	64.2	64.2	65.1	65.4	66.7	67.8	69.7	68.8	67.3	66.0	64.1	61.1	63.9	64.1	68.2	76.2	75.2	67.1	62.7	63.4	66.9	69.4	66.1	76.2	61.1	66.7
20	67.5	72.5	66.3	61.9	61.3	60.0	63.0	72.8	82.0	86.1	87.4	84.7	82.6	80.1	84.6	81.8	83.2	87.3	90.7	89.8	81.5	81.2	85.9	83.2	90.7	60.0	78.2
21	84.1	87.1	87.0	88.5	88.3	88.1	86.1	84.4	84.1	85.4	82.7	85.0	89.4	95.5	97.4	97.6	97.1	97.1	97.0	95.0	92.8	92.0	93.7	94.0	97.6	82.7	90.4
22	91.9	92.4	91.5	91.7	92.5	93.6	93.8	93.1	91.1	88.6	89.2	90.7	96.1	99.1	99.5	99.8	99.2	99.1	99.1	98.8	98.8	98.2	97.8	97.8	99.8	88.6	95.1
23	97.4	97.2	97.5	97.5	97.7	97.8	97.7	97.7	97.8	97.8	97.2	96.7	96.6	97.1	97.2	97.0	97.4	97.4	97.7	97.1	96.1	94.5	91.4	89.6	97.8	89.6	96.6
24	88.0	85.3	90.8	90.4	89.4	85.9	82.0	82.4	81.0	79.0	82.5	79.4	79.5	78.7	89.2	89.6	89.8	82.4	76.8	75.6	76.6	78.1	84.6	83.8	90.8	75.6	83.4
25	83.4	84.1	82.1	86.8	87.2	88.2	88.3	88.3	83.5	79.4	79.7	74.4	73.4	71.2	70.1	65.1	61.9	63.6	63.9	62.1	62.9	64.3	70.0	75.3	88.3	61.9	75.4
26	84.0	91.5	92.0	90.6	91.3	92.3	92.2	88.0	78.6	74.9	77.5	74.3	74.7	75.1	73.6	73.4	73.2	71.3	74.7	72.7	65.8	66.5	65.2	63.5	92.3	63.5	78.2
27	61.5	59.5	57.9	55.9	55.9	51.2	52.9	56.7	52.4	48.7	50.1	48.6	49.9	49.9	58.3	53.4	47.5	44.1	44.8	46.4	47.2	47.5	56.4	62.5	62.5	44.1	52.5
28	60.1	63.4	59.6	58.7	61.3	61.5	72.2	70.8	62.6	62.2	61.4	56.4	54.8	54.5	53.5	53.7	52.6	49.6	47.2	47.9	50.1	57.2	68.3	75.4	75.4	47.2	59.0
29	85.0	87.6	89.4	91.8	92.7	92.5	91.5	91.6	92.4	91.0	92.0	89.4	84.9	85.9	86.4	90.1	91.3	91.4	91.1	88.9	78.6	70.7	68.2	65.5	92.7	65.5	86.7
30	65.9	65.3	60.6	56.5	52.2	48.2	45.4	57.1	53.0	55.9	59.9	58.6	48.6	47.2	47.2	42.5	43.7	47.4	47.1	47.2	47.6	46.1	47.2	48.6	65.9	42.5	51.6
31	50.2	50.7	52.5	56.2	59.7	62.2	57.9	57.5	59.9	65.4	63.2	63.6	64.3	69.3	63.7	65.8	65.6	66.1	66.5	66.5	66.3	67.3	64.7	70.1	70.1	50.2	62.3
Max.	**97.4**	**97.2**	**98.1**	**98.7**	**99.0**	**99.1**	**99.2**	**99.2**	**99.2**	**99.5**	**99.5**	**99.3**	**96.6**	**99.1**	**99.5**	**99.8**	**99.2**	**99.1**	**99.1**	**98.8**	**98.8**	**98.2**	**97.8**	**97.8**	**99.8**		
Min.	**48.0**	**45.3**	**45.7**	**45.7**	**44.1**	**48.2**	**45.4**	**53.3**	**52.4**	**48.7**	**49.8**	**44.2**	**39.9**	**47.2**	**47.2**	**39.9**	43.7	44.1	**44.8**	**46.4**	**47.2**	**46.1**	**47.2**	**48.6**		**39.9**	
Avg.	**77.5**	**78.1**	**78.0**	**78.1**	**78.1**	**77.2**	**77.6**	**78.4**	**77.2**	**76.9**	**76.6**	**74.8**	**73.5**	**73.9**	**74.2**	**74.7**	**76.4**	**76.0**	**77.0**	**76.5**	**76.0**	**75.6**	**76.8**	**77.2**			**76.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	76.0	86.7	92.0	88.8	78.9	76.3	70.7	69.4	68.7	66.2	64.1	67.6	67.9	64.2	67.9	66.5	65.2	61.2	60.5	61.2	64.8	72.7	74.9	73.0	92.0	60.5	71.1
2	68.9	70.0	73.1	75.5	70.5	66.4	64.6	64.0	75.1	84.6	88.2	86.8	79.9	84.2	79.3	76.4	77.8	82.4	88.9	90.1	90.7	88.2	89.3	85.8	90.7	64.0	79.2
3	89.5	86.2	89.4	93.2	87.7	84.3	84.6	78.4	80.0	75.3	80.5	72.5	73.1	73.6	70.9	67.3	68.7	67.3	66.5	69.5	65.0	64.7	73.7	74.7	93.2	64.7	76.5
4	70.3	64.5	70.5	78.1	81.2	84.0	84.7	86.2	88.7	88.5	87.4	90.2	90.4	89.1	85.7	83.7	82.4	83.6	87.9	87.5	84.8	84.0	83.9	80.3	90.4	64.5	83.2
5	69.3	55.3	47.2	49.1	53.3	51.6	51.3	55.8	67.4	76.0	78.4	76.0	76.5	81.6	79.3	79.0	81.6	85.1	87.5	87.4	83.7	84.9	85.2	87.8	87.8	47.2	72.1
6	86.9	85.2	87.4	87.3	86.9	87.5	87.3	85.0	85.3	84.8	85.0	82.0	83.9	82.7	82.5	78.7	78.7	77.3	78.2	83.3	84.2	82.3	84.6	86.8	87.5	77.3	83.9
7	88.1	87.3	91.1	92.1	91.7	94.0	95.4	96.4	96.0	90.5	70.2	59.4	61.5	70.2	82.3	81.8	79.9	81.8	77.3	68.3	67.7	71.5	74.3	76.7	96.4	59.4	81.1
8	68.9	64.2	65.3	66.0	67.5	72.7	75.7	72.9	66.2	63.0	60.6	65.9	64.1	62.2	72.3	75.5	76.0	75.9	80.1	81.2	84.4	87.9	88.7	88.7	88.7	60.6	72.7
9	88.3	85.9	82.5	83.2	85.0	85.8	81.9	82.3	84.7	84.9	85.0	85.2	83.6	84.5	83.7	82.6	84.3	85.4	86.8	89.4	92.1	91.3	91.5	91.4	92.1	81.9	85.9
10	91.6	92.2	92.7	94.0	95.8	96.7	95.8	95.5	95.9	96.2	94.2	93.6	90.4	86.5	84.8	84.6	85.0	85.8	85.7	85.5	85.2	83.9	83.7	82.1	96.7	82.1	89.9
11	82.2	84.0	82.2	80.3	79.3	82.2	88.3	92.4	92.0	92.2	88.0	84.3	84.3	82.5	83.1	81.2	82.7	82.9	84.4	87.8	89.2	88.9	88.3	87.9	92.4	79.3	85.4
12	86.8	86.6	85.1	85.5	83.9	83.3	83.3	80.8	77.3	74.9	72.6	69.7	69.6	69.4	69.6	70.1	71.0	72.0	72.4	73.9	73.3	72.9	74.4	73.4	86.8	69.4	76.3
13	74.8	73.4	73.1	71.9	73.7	72.6	71.7	72.5	74.5	77.2	74.8	73.4	71.6	70.8	72.4	68.1	70.3	74.5	72.7	72.9	75.2	72.7	75.8	77.5	77.5	68.1	73.3
14	78.7	81.5	84.7	86.8	88.2	86.1	80.1	80.8	79.3	79.4	79.4	79.6	78.5	78.0	77.4	90.1	95.4	94.5	93.2	91.3	95.0	94.5	92.8	90.2	95.4	77.4	85.6
15	90.7	90.7	91.5	89.5	88.3	86.5	86.9	82.7	78.9	79.1	75.2	76.4	74.3	74.1	72.0	70.2	65.8	70.7	68.7	69.8	68.1	65.2	66.9	65.2	91.5	65.2	77.0
16	64.2	65.0	64.1	64.1	64.1	61.9	61.8	60.3	58.8	55.7	55.4	49.3	52.1	54.6	57.8	64.6	71.1	73.5	76.3	81.0	84.0	88.9	89.5	91.4	91.4	49.3	67.1
17	91.6	94.4	89.5	87.8	84.9	85.2	84.5	81.3	82.2	80.1	79.2	75.1	72.1	67.8	57.7	54.9	50.4	50.1	44.4	46.0	55.7	70.8	75.1	76.5	94.4	44.4	72.4
18	77.2	78.4	76.3	74.2	74.8	77.7	70.7	71.2	76.4	75.1	66.6	68.5	69.1	68.6	67.7	71.3	72.7	75.4	76.4	74.5	78.8	77.0	76.2	76.3	78.8	66.6	73.8
19	76.0	76.8	76.4	71.1	67.2	61.1	65.0	62.8	70.2	70.3	64.4	60.6	63.8	62.3	60.1	65.0	67.5	68.3	68.9	72.1	75.7	82.2	83.6	83.2	83.6	60.1	69.8
20	83.1	84.2	82.9	82.0	77.9	79.0	74.2	75.9	77.1	80.5	79.9	78.1	74.9	73.8	71.1	65.7	64.8	60.2	72.4	84.4	87.8	89.8	91.9	92.0	92.0	60.2	78.5
21	91.4	91.5	92.5	91.6	93.1	95.1	96.4	95.4	96.4	96.8	96.6	95.8	95.1	94.8	94.4	94.0	94.4	93.9	93.8	89.1	85.6	83.8	79.9	76.8	96.8	76.8	92.0
22	76.8	75.5	75.1	74.8	72.6	71.8	70.7	68.1	64.2	64.8	59.0	58.7	57.9	56.3	54.8	52.5	52.5	52.0	49.0	49.8	51.7	52.0	51.0	50.5	76.8	49.0	60.9
23	56.8	59.3	65.5	72.4	74.6	76.3	74.8	75.6	75.2	79.3	80.4	78.2	77.1	76.9	73.1	74.4	75.8	78.1	76.8	78.5	77.6	76.5	76.5	76.6	80.4	56.8	74.4
24	76.3	74.8	73.3	73.8	73.5	74.4	75.6	74.9	76.4	79.2	78.3	78.1	74.4	72.8	72.1	72.3	73.6	77.4	76.9	76.7	75.5	74.4	75.3	75.3	79.2	72.1	75.2
25	76.0	77.7	77.0	75.9	76.5	77.8	79.3	79.2	79.0	79.5	80.4	79.5	75.8	71.7	70.0	71.6	75.6	80.3	82.6	84.9	85.8	87.0	87.7	87.6	87.7	70.0	79.1
26	87.1	86.1	86.1	85.3	83.6	83.8	83.5	83.3	82.6	85.9	87.0	86.2	84.2	80.8	76.1	76.1	76.8	77.3	76.6	76.5	74.1	75.3	78.0	75.6	87.1	74.1	81.2
27	77.3	58.0	50.6	53.3	53.4	55.3	53.4	49.7	49.1	55.0	45.7	43.0	41.3	40.2	40.2	41.0	40.6	41.2	40.0	40.4	40.4	40.5	40.7	40.9	77.3	40.0	47.1
28	43.0	43.9	43.3	43.1	43.5	42.4	41.2	38.6	38.3	39.0	38.2	39.9	39.1	39.3	56.6	69.9	77.8	83.2	82.6	80.7	80.8	82.1	83.0	85.8	85.8	38.2	56.5
29	87.3	86.6	86.6	85.9	85.7	85.7	85.7	85.6	85.4	85.1	85.7	86.4	86.6	87.4	88.0	88.2	87.7	87.1	87.1	87.3	86.9	86.8	86.8	87.1	88.2	85.1	86.6
30	87.5	87.3	87.4	87.1	87.1	87.6	87.7	87.9	87.4	87.3	87.0	87.9	88.8	89.8	90.4	91.2	90.7	90.4	90.3	90.9	92.9	93.3	93.5	93.2	93.5	87.0	89.4
31	92.2	90.9	90.2	86.0	84.1	83.0	75.4	76.3	83.4	84.7	87.9	87.8	90.4	91.7	90.7	89.2	89.1	86.6	83.7	87.8	89.9	87.3	86.6	85.2	92.2	75.4	86.7
Max.	**92.2**	**94.4**	**92.7**	**94.0**	**95.8**	**96.7**	**96.4**	**96.4**	**96.4**	**96.8**	**96.6**	**95.8**	**95.1**	**94.8**	**94.4**	**94.0**	**95.4**	**94.5**	**93.8**	**91.3**	**95.0**	**94.5**	**93.5**	**93.2**	**96.8**		
Min.	**43.0**	**43.9**	**43.3**	**43.1**	**43.5**	**42.4**	**41.2**	**38.6**	**38.3**	**39.0**	**38.2**	**39.9**	**39.1**	**39.3**	**40.2**	**41.0**	40.6	41.2	**40.0**	**40.4**	**40.4**	**40.5**	**40.7**	**40.9**		**38.2**	
Avg.	**79.2**	**78.2**	**78.2**	**78.4**	**77.7**	**77.7**	**76.8**	**76.2**	**77.2**	**77.8**	**76.0**	**74.7**	**73.9**	**73.6**	**73.7**	**74.1**	**75.0**	**76.0**	**76.4**	**77.4**	**78.3**	**79.1**	**80.1**	**79.9**			**76.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	83.7	89.0	90.4	91.0	88.8	70.0	59.8	57.0	54.1	53.8	52.8	50.3	46.8	42.7	44.3	42.7	38.5	49.0	58.2	66.5	61.3	52.9	39.1	35.3	91.0	35.3	59.1
2	34.6	35.8	36.3	37.0	37.2	33.6	33.0	33.3	33.1	31.6	31.6	31.7	51.8	63.6	65.0	61.2	70.9	79.0	76.4	73.5	75.1	79.8	69.0	66.2	79.8	31.6	51.7
3	63.7	70.6	68.7	68.8	67.7	69.2	69.4	68.1	66.7	67.0	71.6	78.3	78.7	78.4	76.6	75.3	76.5	76.3	75.3	76.2	77.1	81.5	74.3	74.2	81.5	63.7	72.9
4	71.8	68.1	72.0	81.4	82.3	66.3	60.9	62.2	60.5	57.9	56.4	56.0	56.5	62.9	72.4	76.1	70.7	72.4	79.4	85.7	88.3	87.3	88.7	94.5	94.5	56.0	72.1
5	96.5	95.7	93.0	91.5	91.7	94.7	91.9	88.3	89.6	79.8	84.3	95.6	93.0	86.2	85.0	77.2	74.0	71.3	85.7	88.7	91.5	96.9	98.1	96.9	98.1	71.3	89.0
6	97.1	95.9	95.4	95.9	96.8	96.9	97.4	99.0	98.8	98.7	99.4	99.9	99.7	99.5	98.7	98.8	96.6	98.5	99.3	99.6	99.8	99.8	99.6	99.0	99.9	95.4	98.3
7	98.8	98.7	98.3	97.8	97.8	97.9	97.7	96.9	90.8	90.0	85.0	81.2	78.4	78.7	78.3	79.5	81.0	78.4	78.0	72.9	69.9	65.9	59.1	50.5	98.8	50.5	83.4
8	49.0	51.0	65.6	67.7	75.0	74.7	72.0	70.8	64.0	43.0	54.9	66.7	62.6	50.1	39.0	41.0	47.3	51.0	49.5	56.3	58.1	58.1	60.0	63.2	75.0	39.0	57.9
9	64.3	63.7	65.9	73.5	80.0	80.8	90.3	86.3	90.3	96.2	97.0	96.8	93.8	91.1	88.3	86.9	80.0	79.4	83.2	86.6	84.7	89.7	87.2	88.0	97.0	63.7	84.3
10	90.8	87.6	82.3	76.1	87.2	91.2	95.8	97.5	98.6	99.1	99.2	97.3	98.0	98.8	98.6	97.1	92.0	88.4	89.8	88.8	89.0	90.8	87.6	95.5	99.2	76.1	92.4
11	95.6	90.8	84.9	87.1	78.2	85.2	91.1	88.9	87.0	85.6	90.0	92.4	93.6	93.3	90.7	89.9	89.5	91.0	90.8	92.5	91.3	89.3	90.0	88.5	95.6	78.2	89.5
12	89.1	89.8	90.8	95.2	93.8	91.0	84.6	84.2	85.3	80.0	75.8	76.8	76.1	76.5	77.4	78.3	77.0	76.0	75.0	72.2	67.7	62.8	61.4	64.1	95.2	61.4	79.2
13	77.0	83.7	86.6	85.4	80.5	73.8	78.9	82.8	78.0	73.2	71.4	76.5	69.1	60.4	84.5	85.2	87.3	85.4	87.7	87.1	83.5	79.7	80.8	82.2	87.7	60.4	80.0
14	84.3	81.2	77.8	73.2	72.6	70.9	69.6	70.0	71.0	76.6	74.9	74.1	70.0	71.0	67.8	67.1	66.1	63.4	63.4	64.2	61.5	60.7	59.2	58.1	84.3	58.1	69.5
15	54.0	47.1	47.5	37.4	35.5	35.6	35.8	33.9	29.2	28.9	30.6	46.4	69.4	50.2	59.2	61.0	65.8	70.4	87.5	93.5	91.7	93.7	94.6	98.0	98.0	28.9	58.2
16	99.2	99.7	99.6	99.9	99.9	100.0	99.9	99.8	99.8	100.0	99.8	99.5	99.6	98.1	97.9	94.2	86.6	87.9	89.3	91.3	94.5	95.2	91.0	88.2	100.0	86.6	96.3
17	86.7	80.5	75.8	73.2	71.5	68.0	64.5	78.4	85.0	83.4	81.4	82.3	79.7	79.9	81.2	84.8	86.9	88.5	87.6	88.7	89.2	88.7	83.4	84.3	89.2	64.5	81.4
18	84.8	89.2	92.3	90.3	88.8	89.6	85.0	89.4	82.2	82.2	84.9	90.2	93.6	95.6	91.0	91.7	91.2	92.9	96.1	97.2	98.2	98.7	99.4	99.5	99.5	82.2	91.4
19	99.3	96.6	72.9	77.5	77.7	78.0	79.1	76.3	74.7	73.4	69.8	66.0	62.0	59.5	61.9	67.1	70.0	72.1	71.6	71.2	70.7	70.8	69.3	68.9	99.3	59.5	73.2
20	68.5	70.7	72.7	72.4	71.5	71.5	71.7	70.5	70.7	67.6	63.7	62.6	62.7	66.2	73.8	74.7	78.9	81.2	77.4	71.7	76.2	77.3	78.1	83.6	83.6	62.6	72.3
21	71.9	64.2	60.4	69.7	68.6	65.3	61.5	57.4	53.6	47.7	44.4	46.7	53.1	57.3	59.1	63.2	62.6	61.6	65.5	67.2	66.3	64.9	64.0	65.1	71.9	44.4	60.9
22	66.6	66.7	64.9	63.4	65.2	67.6	69.6	68.4	66.5	63.9	60.5	56.4	54.5	54.1	54.2	54.7	54.4	55.2	60.4	65.1	69.0	69.0	67.8	70.1	70.1	54.1	62.8
23	70.7	77.5	81.2	83.3	87.4	92.3	95.0	96.4	96.0	83.7	71.1	67.0	64.1	62.6	62.4	60.2	58.8	58.5	57.4	68.4	61.1	50.0	47.1	57.9	96.4	47.1	71.3
24	63.5	63.6	67.0	64.4	62.3	70.4	74.2	75.4	75.3	75.3	75.8	67.4	61.6	59.0	58.3	54.4	52.5	56.0	63.6	69.5	75.2	73.6	73.2	72.8	75.8	52.5	66.8
25	69.7	68.4	68.1	62.9	64.8	70.1	83.4	89.8	92.3	94.6	95.5	96.2	96.1	94.2	86.0	71.3	58.0	45.4	53.2	53.3	52.0	51.0	54.3	64.8	96.2	45.4	72.3
26	73.9	70.3	60.6	53.1	54.1	58.7	61.0	59.1	57.9	58.8	55.2	57.2	57.3	56.4	55.5	57.0	59.3	61.1	65.1	68.5	77.6	88.6	93.5	93.4	93.5	53.1	64.7
27	92.2	93.0	94.9	95.0	93.9	93.1	93.4	94.2	94.0	88.5	73.9	67.8	68.0	77.0	66.1	64.5	66.0	67.5	62.7	58.3	58.6	57.4	64.1	65.0	95.0	57.4	77.0
28	54.1	53.0	50.4	49.8	47.5	47.9	47.9	50.7	55.3	48.3	41.1	37.8	34.5	34.4	36.2	42.6	42.6	40.6	37.6	36.2	34.4	32.3	33.7	35.9	55.3	32.3	42.7
Max.	**99.3**	**99.7**	**99.6**	**99.9**	**99.9**	**100.0**	**99.9**	**99.8**	**99.8**	**100.0**	**99.8**	**99.9**	**99.7**	**99.5**	**98.7**	**98.8**	**96.6**	**98.5**	**99.3**	**99.6**	**99.8**	**99.8**	**99.6**	**99.5**	**100.0**		
Min.	**34.6**	**35.8**	**36.3**	**37.0**	**35.5**	**33.6**	**33.0**	**33.3**	**29.2**	**28.9**	**30.6**	**31.7**	**34.5**	**34.4**	**36.2**	**41.0**	38.5	40.6	**37.6**	**36.2**	**34.4**	**32.3**	**33.7**	**35.3**		**28.9**	
Avg.	**76.8**	**76.5**	**75.6**	**75.5**	**75.7**	**75.2**	**75.5**	**75.9**	**75.0**	**72.5**	**71.1**	**72.0**	**72.3**	**71.3**	**71.8**	**71.3**	**70.7**	**71.4**	**73.8**	**75.4**	**75.5**	**75.2**	**73.8**	**75.1**			**74.0**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	37.8	40.1	48.9	64.0	66.2	66.4	65.8	64.0	52.4	57.4	58.4	60.2	60.6	58.5	53.9	55.7	56.5	54.1	58.3	57.4	59.3	55.9	51.9	50.4	66.4	37.8	56.4
2	54.1	52.1	48.5	48.4	54.7	64.5	71.2	79.8	88.4	93.1	92.2	92.8	93.3	92.8	92.9	84.0	78.3	79.0	78.2	79.0	78.3	79.0	81.1	82.4	93.3	48.4	76.6
3	85.5	85.0	86.6	82.9	83.2	87.8	89.4	81.3	79.5	79.8	82.3	84.3	85.7	87.8	89.3	87.2	92.9	90.8	91.9	92.8	91.9	92.8	96.2	97.1	97.1	79.5	87.7
4	95.7	94.8	96.0	94.3	95.5	94.5	91.8	89.5	89.7	93.0	91.0	89.7	82.8	79.9	83.0	83.5	82.3	88.0	91.9	93.4	93.0	92.2	94.0	95.9	96.0	79.9	90.6
5	95.5	97.6	97.5	96.7	96.9	95.4	93.0	94.9	97.4	97.8	94.7	83.7	79.1	76.3	80.9	78.4	76.5	74.4	77.0	75.2	76.2	78.5	77.0	74.5	97.8	74.4	86.0
6	76.6	80.7	76.9	77.0	77.6	77.9	78.3	77.5	70.9	69.7	64.9	60.4	59.8	55.7	56.6	55.3	56.3	60.3	65.9	75.7	80.9	82.4	81.8	80.8	82.4	55.3	70.8
7	80.4	79.8	82.4	81.8	81.6	77.7	77.6	72.8	65.4	62.2	59.6	54.9	52.2	52.2	52.2	51.9	58.0	62.1	60.7	60.6	61.0	58.1	57.2	57.0	82.4	51.9	65.0
8	56.2	57.4	55.9	55.1	57.6	59.2	61.0	60.9	54.5	52.2	49.6	49.8	48.4	47.3	51.3	53.4	57.3	57.7	54.9	53.1	50.7	48.0	42.0	40.5	61.0	40.5	53.1
9	47.0	42.5	44.1	41.7	46.5	51.3	46.1	40.9	40.5	42.8	43.1	41.2	38.6	36.4	37.8	32.9	31.7	30.8	28.2	28.4	27.5	26.1	27.4	30.1	51.3	26.1	37.6
10	52.9	58.9	59.0	61.6	60.0	62.2	63.8	65.7	64.1	65.5	65.8	61.7	53.5	54.9	54.2	52.2	54.7	49.9	37.4	37.0	42.2	33.8	32.7	27.4	65.8	27.4	53.0
11	28.3	25.7	23.6	25.2	27.6	36.2	42.1	41.9	44.9	34.5	35.0	39.3	38.7	31.2	28.5	31.6	37.5	40.7	49.5	54.5	54.1	58.0	54.3	51.6	58.0	23.6	38.9
12	42.9	44.8	43.6	41.1	42.7	40.7	48.5	46.6	44.4	44.9	46.0	49.2	46.7	43.7	48.8	47.8	48.8	49.1	45.3	49.1	50.4	52.4	55.5	52.6	55.5	40.7	46.9
13	46.8	42.6	46.3	55.5	58.1	60.4	68.7	72.2	60.0	67.5	63.6	52.2	53.6	54.1	53.9	53.8	57.0	57.7	59.4	61.0	66.0	69.2	76.4	79.9	79.9	42.6	59.8
14	81.8	78.6	77.4	79.1	79.4	82.1	84.9	85.9	83.3	82.8	81.0	76.3	73.5	70.5	68.0	66.3	63.7	68.0	68.4	70.4	73.5	78.5	80.8	82.0	85.9	63.7	76.5
15	82.0	82.1	82.0	80.6	80.0	80.4	82.0	82.3	79.2	75.4	71.4	68.1	66.7	66.0	63.8	62.0	59.6	58.9	59.5	60.5	57.1	50.5	38.3	32.8	82.3	32.8	67.5
16	31.1	29.0	27.4	29.3	39.5	27.4	26.7	28.2	32.6	34.3	33.1	31.1	31.8	30.7	27.9	26.7	28.0	26.6	29.7	37.1	33.3	29.9	25.2	25.4	39.5	25.2	30.1
17	25.1	30.2	42.4	51.6	52.5	37.8	43.8	33.2	32.1	40.5	33.7	37.9	44.9	61.2	69.1	71.8	71.6	72.2	73.6	76.9	82.8	78.2	74.9	77.3	82.8	25.1	54.8
18	76.8	74.9	74.5	80.0	88.5	90.1	91.2	90.5	90.4	90.0	89.5	84.1	77.8	83.7	78.8	76.2	81.3	89.4	90.3	93.4	93.4	93.9	94.0	96.4	96.4	74.5	86.2
19	96.9	96.1	96.1	94.6	94.1	95.1	95.9	95.3	91.4	88.6	88.6	81.1	84.3	90.3	88.0	92.7	94.9	91.3	89.4	92.7	93.2	95.6	95.9	95.7	96.9	81.1	92.4
20	93.3	92.1	92.8	93.2	94.1	94.2	92.7	90.8	92.9	86.5	93.3	91.4	89.5	92.4	92.7	90.3	72.6	67.9	65.5	63.7	67.0	67.7	69.2	72.4	94.2	63.7	84.1
21	72.4	73.1	80.0	86.6	82.2	80.0	81.1	88.3	94.8	92.6	87.4	82.8	80.6	76.9	74.1	69.9	70.2	72.5	72.7	74.7	76.3	78.3	77.0	76.9	94.8	69.9	79.2
22	76.2	76.0	76.8	77.0	78.2	76.2	76.4	77.5	66.9	68.2	70.5	62.2	63.2	63.5	62.9	62.6	58.1	62.1	65.7	68.0	71.6	72.0	73.2	74.4	78.2	58.1	70.0
23	75.6	78.3	78.0	82.1	81.4	79.9	79.3	76.3	77.5	73.6	75.0	71.5	68.1	66.7	61.4	61.4	59.6	53.8	53.9	57.6	69.6	69.2	65.8	70.1	82.1	53.8	70.2
24	72.8	74.2	75.8	77.2	78.0	78.5	79.8	77.7	75.0	76.3	70.4	65.1	62.0	59.2	60.9	61.1	57.0	61.8	66.7	69.9	72.6	72.7	73.5	73.9	79.8	57.0	70.5
25	73.9	73.9	78.6	85.2	90.4	94.2	95.3	93.5	91.9	86.7	83.1	81.4	78.4	73.6	71.3	69.1	68.8	70.8	70.9	73.0	74.6	74.1	73.2	73.3	95.3	68.8	79.1
26	73.3	73.2	73.1	73.6	74.0	74.7	76.3	78.1	78.7	77.9	74.2	69.8	66.6	64.3	62.6	64.4	63.7	69.4	69.7	73.2	75.4	77.9	79.0	82.0	82.0	62.6	72.7
27	82.0	81.0	82.2	80.0	78.7	81.2	84.0	78.8	74.3	79.6	73.5	72.3	69.7	73.6	76.6	75.3	69.2	68.9	70.5	68.2	73.6	82.7	87.3	85.5	87.3	68.2	77.0
28	87.4	85.0	83.1	79.4	81.8	74.5	75.1	70.8	76.6	83.7	74.3	78.1	74.3	77.8	72.8	66.3	66.7	69.9	69.7	79.9	81.3	86.7	88.8	91.6	91.6	66.3	78.1
29	86.2	80.0	84.6	85.5	86.5	88.1	88.4	87.6	84.2	82.5	76.9	69.8	67.8	66.5	71.7	72.7	72.3	73.4	75.0	74.8	82.7	81.9	83.5	80.0	88.4	66.5	79.3
30	82.6	79.1	70.2	60.9	61.1	62.0	75.5	81.4	85.8	83.8	87.3	83.2	89.2	86.7	87.8	89.7	90.4	91.2	92.4	92.1	93.5	95.1	94.6	94.8	95.1	60.9	83.8
31	95.2	94.6	94.2	93.9	93.9	94.3	93.7	91.1	91.1	90.7	92.4	93.6	91.8	91.9	91.3	90.9	90.9	93.2	93.4	99.0	99.1	99.4	99.5	99.6	99.6	90.7	94.1
Max.	**96.9**	**97.6**	**97.5**	**96.7**	**96.9**	**95.4**	**95.9**	**95.3**	**97.4**	**97.8**	**94.7**	**93.6**	**93.3**	**92.8**	**92.9**	**92.7**	**94.9**	**93.2**	**93.4**	**99.0**	**99.1**	**99.4**	**99.5**	**99.6**	**99.6**		
Min.	**25.1**	**25.7**	**23.6**	**25.2**	**27.6**	**27.4**	**26.7**	**28.2**	**32.1**	**34.3**	**33.1**	**31.1**	**31.8**	**30.7**	**27.9**	**26.7**	28.0	26.6	**28.2**	**28.4**	**27.5**	**26.1**	**25.2**	**25.4**		**23.6**	
Avg.	**69.8**	**69.5**	**70.3**	**71.5**	**73.0**	**73.1**	**74.8**	**74.0**	**72.6**	**72.7**	**71.0**	**68.4**	**66.9**	**66.7**	**66.6**	**65.7**	**65.4**	**66.3**	**66.9**	**69.1**	**71.0**	**71.3**	**71.0**	**71.1**			**69.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	99.6	99.6	99.7	99.3	96.9	95.5	94.2	91.0	86.2	81.8	78.5	76.6	66.2	66.2	57.3	59.9	62.1	64.0	65.7	66.5	71.0	69.3	68.5	66.6	99.7	57.3	78.4
2	66.9	66.9	69.1	71.7	71.1	71.6	74.4	74.9	75.2	70.8	62.7	62.5	61.0	60.2	59.8	61.5	62.9	64.8	65.0	63.9	59.3	75.2	73.0	75.9	75.9	59.3	67.5
3	90.1	95.6	94.3	88.4	87.0	90.8	90.7	90.9	92.9	88.9	86.2	90.6	92.9	93.8	91.3	87.9	89.9	92.1	92.3	91.8	92.9	91.1	88.6	90.8	95.6	86.2	90.9
4	87.5	87.5	88.5	95.0	96.7	97.0	95.4	91.5	90.0	91.3	83.3	83.7	91.1	93.4	92.8	94.2	94.9	97.3	96.9	96.0	96.0	96.2	96.6	96.9	97.3	83.3	92.9
5	97.4	85.0	75.4	69.8	80.9	83.5	67.5	69.7	60.4	57.9	59.9	60.1	58.7	56.7	54.9	51.4	49.1	49.9	47.5	43.7	39.3	37.9	38.1	38.6	97.4	37.9	59.7
6	38.1	39.8	41.4	54.4	59.2	63.3	66.2	64.7	64.9	61.5	55.2	56.0	56.2	55.1	57.4	55.7	58.1	57.7	65.0	61.6	71.6	75.4	75.9	76.3	76.3	38.1	59.6
7	76.3	75.9	77.7	78.3	76.3	69.9	74.0	75.8	75.2	78.5	79.4	71.9	74.7	76.6	82.0	80.7	76.1	78.4	82.2	74.7	78.8	81.2	78.3	80.2	82.2	69.9	77.2
8	77.6	76.6	77.8	76.1	75.7	79.0	87.4	90.0	87.9	89.6	87.7	89.1	91.1	88.9	87.3	88.9	88.4	92.1	94.6	93.8	96.5	97.6	97.8	97.8	97.8	75.7	87.9
9	97.8	97.9	98.0	98.2	98.3	98.5	98.6	98.6	98.3	97.2	94.4	90.7	89.5	91.4	93.4	95.5	95.8	95.6	95.9	93.6	93.9	81.1	65.2	59.0	98.6	59.0	92.3
10	62.5	68.4	69.4	71.0	69.4	73.6	75.6	75.2	74.7	74.4	76.4	75.9	77.6	74.4	71.5	55.2	51.4	49.4	51.1	54.9	54.7	56.1	56.6	57.4	77.6	49.4	65.7
11	60.4	60.2	61.2	58.2	44.3	41.9	62.8	63.1	62.4	57.9	57.1	54.5	40.9	39.2	76.3	86.3	83.2	83.7	87.7	88.2	84.6	89.2	88.5	86.7	89.2	39.2	67.4
12	86.8	86.4	85.6	86.1	88.4	88.9	89.6	85.6	82.9	85.8	82.0	82.6	87.1	93.3	95.4	96.8	98.4	99.0	99.5	98.7	96.5	88.7	74.4	74.0	99.5	74.0	88.9
13	72.2	71.0	73.1	71.0	70.7	67.6	65.5	65.7	67.8	64.4	60.6	59.4	62.6	62.4	59.9	60.1	60.8	61.7	61.1	58.0	57.1	56.7	53.4	50.6	73.1	50.6	63.1
14	49.0	49.1	49.8	50.1	50.0	51.4	51.1	49.9	49.8	49.7	48.2	47.9	48.0	46.9	45.8	44.9	43.7	43.7	45.6	43.2	41.4	41.7	38.8	36.5	51.4	36.5	46.5
15	36.9	38.3	36.0	36.7	38.3	36.2	32.1	32.1	36.2	35.5	34.4	36.6	37.9	35.7	37.5	36.4	35.8	36.8	36.7	37.7	39.5	52.5	52.3	56.4	56.4	32.1	38.5
16	60.1	58.5	63.3	72.1	54.7	44.2	44.1	37.8	41.7	45.3	48.6	50.3	55.7	56.4	58.1	61.7	84.2	88.0	82.8	83.8	80.9	74.2	87.1	90.4	90.4	37.8	63.5
17	93.1	91.0	92.9	90.6	94.6	93.8	89.8	95.5	97.2	91.2	87.3	87.7	73.4	79.9	81.6	81.6	79.8	75.3	67.6	71.2	79.2	82.3	86.4	84.7	97.2	67.6	85.3
18	88.6	93.0	95.3	96.0	95.6	95.2	84.8	75.6	69.1	66.4	63.3	71.8	76.8	80.3	80.6	78.8	81.5	84.6	85.5	57.5	52.0	53.7	56.6	58.8	96.0	52.0	76.7
19	59.1	65.6	69.3	68.8	70.1	70.1	69.0	63.9	64.4	62.1	60.0	61.3	63.7	64.4	60.1	61.3	62.4	67.2	70.2	73.6	76.5	80.9	86.0	85.4	86.0	59.1	68.1
20	86.3	88.4	87.3	84.1	84.4	84.6	81.5	82.0	82.1	83.8	85.5	76.3	71.4	71.6	71.5	83.3	85.4	81.4	85.3	93.4	93.5	92.5	91.6	93.6	93.6	71.4	84.2
21	94.2	94.1	93.6	94.3	94.2	92.0	90.7	92.7	93.0	92.2	88.2	90.5	90.5	89.5	81.9	73.0	75.6	84.3	91.7	94.6	91.0	87.1	86.6	84.3	94.6	73.0	89.2
22	82.3	83.0	89.7	87.4	90.3	93.6	94.7	92.1	93.6	89.9	95.3	92.5	88.1	85.0	83.1	82.3	84.3	87.6	85.9	87.4	90.2	86.8	87.1	91.1	95.3	82.3	88.5
23	95.2	96.9	96.8	95.4	95.4	96.6	97.0	98.3	98.7	97.5	90.1	81.3	86.0	72.5	73.1	82.1	81.8	70.7	64.6	55.0	54.9	53.5	53.1	52.3	98.7	52.3	80.8
24	55.1	63.3	81.7	81.5	74.4	79.4	75.5	81.5	81.3	61.8	58.4	63.9	70.0	69.6	69.8	70.4	70.8	71.7	72.7	74.3	72.9	70.3	68.2	69.0	81.7	55.1	71.1
25	68.4	67.8	70.2	75.0	75.3	74.8	72.3	74.0	74.3	73.9	67.2	67.6	71.0	88.9	90.9	88.2	88.0	86.6	89.3	83.4	83.2	87.5	86.1	84.6	90.9	67.2	78.7
26	86.6	83.1	72.7	71.9	72.3	76.2	72.6	66.4	60.6	59.1	56.9	54.9	53.2	52.1	50.2	46.4	44.5	44.9	42.7	40.5	42.3	44.8	56.7	51.1	86.6	40.5	58.4
27	44.2	45.0	44.6	41.7	41.7	40.1	39.7	38.7	36.9	35.4	34.5	41.4	40.5	44.5	50.4	34.0	34.4	36.4	45.0	45.1	46.0	50.1	49.3	51.5	51.5	34.0	42.1
28	51.9	46.6	47.0	52.9	56.8	57.3	60.1	60.6	70.2	88.3	98.2	94.8	90.3	87.9	78.9	81.7	82.6	83.6	76.6	72.6	70.9	80.4	83.7	85.4	98.2	46.6	73.3
29	86.0	83.1	64.9	63.6	64.8	64.6	59.5	63.5	63.5	58.4	55.9	57.8	56.6	60.2	54.5	51.6	51.1	52.0	52.2	49.9	49.3	52.7	65.0	69.6	86.0	49.3	60.4
30	75.0	77.5	74.9	74.4	76.2	78.2	79.5	75.0	69.0	70.2	67.4	65.5	65.7	67.5	69.6	74.9	82.6	68.5	59.7	58.7	72.1	79.6	77.3	80.4	82.6	58.7	72.5
Max.	**99.6**	**99.6**	**99.7**	**99.3**	**98.3**	**98.5**	**98.6**	**98.6**	**98.7**	**97.5**	**98.2**	**94.8**	**92.9**	**93.8**	**95.4**	**96.8**	**98.4**	**99.0**	**99.5**	**98.7**	**96.5**	**97.6**	**97.8**	**97.8**	**99.7**		
Min.	**36.9**	**38.3**	**36.0**	**36.7**	**38.3**	**36.2**	**32.1**	**32.1**	**36.2**	**35.4**	**34.4**	**36.6**	**37.9**	**35.7**	**37.5**	**34.0**	34.4	36.4	**36.7**	**37.7**	**39.3**	**37.9**	**38.1**	**36.5**		**32.1**	
Avg.	**74.2**	**74.5**	**74.7**	**75.1**	**74.8**	**75.0**	**74.5**	**73.9**	**73.3**	**72.0**	**70.1**	**69.8**	**69.6**	**70.1**	**70.6**	**70.2**	**71.3**	**71.6**	**72.0**	**70.2**	**70.9**	**72.2**	**72.2**	**72.5**			**72.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	75.2	69.9	70.4	67.4	63.9	63.9	70.5	69.5	63.9	58.6	56.8	52.3	48.0	46.7	45.9	45.6	47.4	47.5	47.8	53.8	57.5	65.5	66.3	70.3	75.2	45.6	59.4
2	78.8	85.5	84.9	84.8	85.7	83.9	83.5	85.2	86.3	85.1	83.6	85.9	86.6	83.0	75.8	69.3	67.1	65.9	64.6	67.1	66.5	75.5	88.3	84.3	88.3	64.6	79.5
3	76.8	74.8	74.6	75.5	70.4	69.7	72.4	66.2	59.3	54.4	51.1	48.5	47.0	47.2	45.5	44.4	50.1	60.4	63.8	74.6	79.2	79.9	81.7	84.4	84.4	44.4	64.7
4	86.8	88.6	85.5	85.9	87.3	86.7	88.3	85.1	80.1	78.4	77.0	74.7	77.6	83.0	86.3	81.1	80.8	81.1	81.7	84.3	82.9	78.9	85.0	85.1	88.6	74.7	83.0
5	88.2	90.5	90.2	89.5	91.3	92.0	90.7	89.5	88.0	87.4	88.0	88.2	86.7	86.9	91.4	89.8	88.5	88.5	90.2	92.8	94.3	94.0	91.9	92.7	94.3	86.7	90.1
6	95.1	95.6	96.0	96.3	96.4	96.7	97.6	97.0	97.2	96.9	96.5	95.9	92.9	86.8	78.5	65.5	64.0	64.5	66.3	67.2	68.3	65.9	65.6	67.5	97.6	64.0	83.8
7	67.4	68.5	68.1	68.3	68.7	69.8	70.3	68.8	69.0	68.5	66.1	63.7	62.2	60.9	62.9	63.8	64.4	62.5	61.5	62.2	58.7	55.4	53.6	51.4	70.3	51.4	64.0
8	50.1	49.0	50.8	64.8	70.2	66.2	67.6	63.6	59.9	66.7	81.8	85.4	86.9	81.6	75.6	72.4	72.2	72.8	70.8	73.0	70.8	65.3	69.8	74.5	86.9	49.0	69.2
9	78.1	69.9	68.4	68.9	68.7	69.2	70.7	71.6	74.2	82.1	83.3	75.3	67.4	67.2	64.2	58.6	60.1	61.6	60.9	59.0	62.0	64.0	60.5	64.7	83.3	58.6	67.9
10	67.6	62.9	66.5	74.9	70.7	67.9	59.8	54.1	52.0	59.1	67.6	60.6	62.2	57.1	53.2	56.2	66.0	74.5	79.4	84.2	91.4	94.8	93.9	93.9	94.8	52.0	69.6
11	93.8	95.0	95.6	96.1	96.2	96.6	96.7	96.2	95.4	92.1	86.1	81.6	79.1	75.1	69.7	69.2	67.9	70.0	69.0	69.6	70.8	75.6	77.9	77.5	96.7	67.9	83.0
12	79.9	75.6	74.1	75.0	78.0	75.4	71.9	69.7	69.1	64.8	62.8	57.0	58.1	40.3	36.2	37.6	37.6	41.2	44.8	44.5	47.1	57.2	53.1	57.9	79.9	36.2	58.7
13	52.5	54.3	58.1	61.7	63.1	61.0	59.8	62.3	61.6	60.4	55.9	54.4	56.2	56.8	53.8	53.6	58.2	54.9	55.1	58.0	60.9	63.8	66.7	76.5	76.5	52.5	59.2
14	88.3	92.2	91.0	91.1	91.6	88.6	85.4	77.6	77.6	80.8	81.5	81.1	82.4	81.1	81.0	80.5	74.6	75.3	73.7	74.2	77.3	78.3	79.4	78.6	92.2	73.7	81.8
15	77.1	78.9	81.8	85.6	88.4	90.9	90.0	86.7	79.6	75.8	74.7	72.6	79.9	79.5	78.7	79.0	79.3	77.0	77.3	79.1	80.6	78.4	78.7	75.0	90.9	72.6	80.2
16	78.9	66.1	52.5	53.1	53.8	55.6	57.0	64.6	62.4	64.0	60.5	58.1	66.9	66.5	71.0	72.2	71.4	72.4	74.5	71.8	69.3	68.3	72.8	77.7	78.9	52.5	65.9
17	77.9	84.1	83.0	85.5	81.4	83.3	77.4	74.7	68.7	63.1	62.1	68.2	67.1	70.9	70.0	69.2	73.1	69.4	59.4	69.3	72.3	78.9	82.7	80.5	85.5	59.4	73.8
18	76.3	79.9	83.6	85.3	84.4	83.4	84.2	82.0	76.1	60.9	56.9	52.8	52.0	54.3	59.8	67.3	67.6	59.6	62.1	62.6	61.4	57.2	51.9	59.8	85.3	51.9	67.6
19	64.3	65.5	67.3	67.4	67.2	68.1	71.0	69.2	69.3	67.2	69.2	68.2	62.6	57.5	57.7	61.9	72.6	87.2	89.8	88.2	89.1	91.0	92.7	93.3	93.3	57.5	73.2
20	93.6	91.9	92.8	93.0	91.2	91.1	90.1	88.9	88.6	88.2	85.4	82.7	87.0	87.8	81.2	77.9	71.8	65.6	75.4	74.7	74.1	69.7	72.9	82.6	93.6	65.6	83.3
21	79.5	84.7	81.5	80.5	87.5	89.4	86.0	82.2	64.5	59.8	56.9	53.7	50.7	47.1	45.4	46.0	44.4	45.8	44.4	45.0	45.3	45.6	47.0	48.2	89.4	44.4	60.9
22	49.4	59.6	67.2	71.5	71.4	69.3	70.5	67.9	64.3	62.0	60.7	55.5	52.5	40.0	38.8	37.7	37.9	38.4	39.2	39.5	48.0	55.3	61.7	64.0	71.5	37.7	55.1
23	64.2	63.3	68.6	70.7	72.5	73.5	80.5	70.4	64.2	73.6	71.3	68.5	70.0	60.7	56.9	61.6	58.6	61.3	69.4	63.6	59.4	49.0	48.0	48.5	80.5	48.0	64.5
24	48.0	49.5	48.1	52.2	66.3	49.8	58.5	61.5	67.4	69.5	68.7	76.3	73.9	63.4	59.3	58.3	53.7	49.6	44.0	47.7	54.5	44.0	51.7	51.7	76.3	44.0	57.0
25	55.7	53.9	58.9	69.7	73.4	61.3	62.8	70.8	60.3	62.9	69.9	71.5	70.1	65.5	57.6	58.3	57.2	57.8	58.2	54.2	55.1	52.4	56.1	55.4	73.4	52.4	61.2
26	53.9	55.6	53.5	49.0	47.1	48.2	50.0	51.9	51.7	58.1	68.0	59.1	58.5	62.2	61.4	58.0	68.0	64.1	65.9	57.2	52.0	44.0	48.6	47.7	68.0	44.0	55.6
27	49.0	46.3	61.6	73.4	53.6	44.9	43.8	46.0	45.9	45.9	47.1	68.7	66.2	69.2	59.1	59.0	50.9	58.0	63.3	59.1	54.3	49.9	47.0	54.3	73.4	43.8	54.8
28	64.9	70.9	61.3	56.4	63.6	59.2	59.6	59.1	55.7	59.1	49.3	47.0	47.0	47.5	40.4	42.1	44.1	66.8	55.8	44.3	38.3	39.4	40.7	48.4	70.9	38.3	52.5
29	48.4	60.0	67.0	50.2	45.4	61.3	76.0	69.0	58.7	62.5	61.2	62.4	56.2	51.7	59.8	62.2	63.4	66.4	74.6	75.2	81.5	77.8	85.0	89.1	89.1	45.4	65.2
30	89.5	90.6	93.1	95.3	94.6	91.6	90.9	93.4	94.6	95.2	96.6	95.2	95.1	92.7	86.8	83.8	81.5	80.9	82.5	78.8	82.9	83.1	83.6	87.2	96.6	78.8	89.1
31	89.1	89.7	90.8	91.9	92.8	93.6	94.9	94.4	90.9	92.5	95.3	93.2	95.4	92.6	92.9	94.9	94.8	95.7	96.6	96.4	96.4	96.2	96.1	96.4	96.6	89.1	93.9
Max.	**95.1**	**95.6**	**96.0**	**96.3**	**96.4**	**96.7**	**97.6**	**97.0**	**97.2**	**96.9**	**96.6**	**95.9**	**95.4**	**92.7**	**92.9**	**94.9**	**94.8**	**95.7**	**96.6**	**96.4**	**96.4**	**96.2**	**96.1**	**96.4**	**97.6**		
Min.	**48.0**	**46.3**	**48.1**	**49.0**	**45.4**	**44.9**	**43.8**	**46.0**	**45.9**	**45.9**	**47.1**	**47.0**	**47.0**	**40.0**	**36.2**	**37.6**	37.6	38.4	**39.2**	**39.5**	**38.3**	**39.4**	**40.7**	**47.7**		**36.2**	
Avg.	**72.2**	**73.0**	**73.8**	**75.2**	**75.4**	**74.3**	**75.1**	**73.8**	**70.9**	**70.8**	**70.7**	**69.6**	**69.2**	**66.5**	**64.4**	**63.8**	**64.2**	**65.7**	**66.5**	**66.8**	**67.8**	**67.6**	**69.4**	**71.6**			**69.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	96.6	96.7	95.1	80.1	82.0	86.2	84.6	81.5	87.1	86.3	82.7	80.5	74.4	79.3	84.3	81.0	75.8	77.0	83.9	84.3	88.2	89.6	86.0	83.9	96.7	74.4	84.5
2	82.4	82.6	82.4	82.9	81.8	81.4	79.8	77.2	70.0	66.1	63.9	58.8	55.5	45.8	35.5	36.0	36.3	40.3	45.5	46.6	46.6	47.2	52.8	62.3	82.9	35.5	60.8
3	63.2	63.6	61.8	57.1	56.3	57.9	57.0	57.5	56.1	54.4	51.0	48.1	44.6	40.4	37.8	34.0	32.9	35.3	38.7	38.7	33.9	32.2	29.6	28.1	63.6	28.1	46.3
4	29.8	29.8	32.9	44.6	55.6	54.0	50.0	48.8	44.3	42.6	47.2	55.8	51.9	48.0	49.6	51.6	51.9	53.6	40.8	36.6	33.3	33.0	45.5	59.7	59.7	29.8	45.5
5	64.4	63.8	59.2	61.7	61.6	67.0	71.0	64.6	60.8	56.5	60.2	61.4	60.3	54.3	54.6	57.2	54.6	55.8	59.8	52.2	59.8	61.8	67.9	64.1	71.0	52.2	60.6
6	71.7	70.6	65.7	67.2	70.0	72.5	71.7	68.8	66.4	78.4	81.5	78.6	75.9	74.3	72.9	73.6	76.5	78.4	80.0	75.3	76.1	78.1	77.0	79.8	81.5	65.7	74.2
7	76.2	73.2	72.2	72.4	73.8	76.9	69.4	64.6	76.5	81.2	74.6	78.2	76.7	81.1	86.0	90.8	91.7	90.0	88.1	88.7	91.6	90.0	89.3	90.0	91.7	64.6	81.0
8	89.2	88.4	88.9	86.4	87.1	87.4	86.6	87.9	86.6	87.5	89.7	83.1	78.4	74.8	75.1	71.4	76.7	78.7	82.5	85.2	84.0	87.5	90.4	89.7	90.4	71.4	84.3
9	89.4	88.1	89.5	90.6	92.0	91.8	91.5	90.7	91.5	90.6	88.2	84.2	81.7	81.5	84.1	78.1	72.1	83.1	93.0	91.7	93.0	94.2	94.7	95.1	95.1	72.1	88.4
10	92.6	93.7	94.5	94.8	93.6	90.5	90.4	92.5	92.3	92.2	87.5	78.2	77.1	79.4	72.2	74.6	74.5	76.3	78.5	77.8	79.1	79.6	77.5	77.8	94.8	72.2	84.1
11	76.6	81.7	87.6	88.7	90.4	88.0	84.9	83.7	80.8	84.4	85.5	86.5	80.7	79.2	84.3	84.9	86.5	80.8	81.8	82.5	82.5	86.9	86.7	88.1	90.4	76.6	84.3
12	88.8	90.1	91.7	92.4	92.4	91.1	90.3	92.4	94.2	91.0	92.6	96.0	96.8	98.4	97.2	96.3	97.1	97.1	97.0	97.8	97.8	96.0	95.8	96.2	98.4	88.8	94.4
13	96.5	96.6	96.6	96.2	96.4	97.0	98.6	98.9	98.8	98.1	97.1	95.3	92.1	87.7	83.7	79.0	89.9	92.5	93.0	92.7	92.7	95.2	97.0	96.8	98.9	79.0	94.1
14	96.7	96.6	96.7	97.0	96.8	95.0	96.1	95.8	95.1	92.6	95.3	96.3	96.8	97.3	97.2	95.8	92.0	89.4	90.0	87.1	84.0	84.1	82.9	79.9	97.3	79.9	92.8
15	81.0	83.9	85.3	85.3	86.2	85.1	85.2	90.3	91.4	91.1	90.5	88.9	89.4	92.5	96.2	96.1	95.1	94.8	94.3	94.7	96.5	97.3	96.8	97.0	97.3	81.0	91.0
16	96.9	97.0	97.2	97.4	97.5	97.4	96.5	96.7	98.1	98.6	98.2	98.1	97.8	95.4	91.3	90.1	94.7	93.9	92.3	89.8	92.5	91.6	91.9	92.6	98.6	89.8	95.1
17	94.7	95.5	95.7	96.2	96.7	97.1	97.2	96.3	96.2	94.6	90.9	85.1	87.7	92.5	91.2	90.6	88.5	86.8	90.9	88.4	91.3	96.0	97.4	97.5	97.5	85.1	93.1
18	97.7	97.7	97.8	97.8	95.8	90.2	91.4	86.3	82.5	83.5	87.7	88.7	87.3	86.1	87.4	87.3	85.5	88.7	88.2	88.8	84.4	86.7	89.4	88.1	97.8	82.5	89.4
19	85.6	86.3	84.4	80.8	77.0	77.1	77.7	78.3	71.2	67.4	62.7	60.1	59.4	60.0	56.1	55.0	67.5	75.8	89.7	91.5	91.1	94.2	95.2	95.0	95.2	55.0	76.6
20	92.7	78.7	87.2	89.4	88.1	88.4	93.4	87.9	84.5	83.9	82.1	82.7	91.5	92.4	92.2	81.7	73.1	71.3	75.5	76.7	75.4	78.3	77.6	83.0	93.4	71.3	83.7
21	87.2	90.2	90.1	90.8	87.0	84.6	81.1	76.6	70.8	68.5	80.1	74.7	72.3	74.8	58.6	67.7	67.6	63.1	76.6	73.4	69.3	78.4	82.6	84.2	90.8	58.6	77.1
22	84.9	86.2	86.0	83.6	88.9	94.5	89.3	86.8	88.4	87.3	90.2	90.0	94.3	92.7	88.2	93.2	92.1	90.3	85.2	84.8	81.8	81.0	77.5	88.7	94.5	77.5	87.7
23	93.5	93.9	93.1	92.7	92.2	90.7	91.4	90.4	93.6	93.7	94.1	91.8	90.5	89.7	87.2	86.9	85.8	82.5	86.7	82.2	84.9	82.5	86.2	91.5	94.1	82.2	89.5
24	93.3	94.1	95.1	96.1	96.1	92.8	87.0	78.9	75.5	79.2	81.0	79.7	72.7	59.6	60.5	56.6	50.6	50.5	59.6	71.3	72.5	70.5	70.2	75.2	96.1	50.5	75.8
25	79.0	76.0	73.7	78.5	83.0	82.4	81.2	77.8	81.5	77.1	76.7	82.4	77.2	75.3	76.7	74.8	75.4	74.9	81.3	82.2	78.0	82.3	80.9	82.6	83.0	73.7	78.8
26	83.1	88.4	86.2	87.5	87.1	88.5	86.5	87.3	85.1	91.0	89.5	90.5	89.2	89.4	85.5	86.0	87.7	88.6	88.0	84.3	82.2	84.5	88.6	87.9	91.0	82.2	87.2
27	89.5	93.2	94.2	95.3	95.7	91.4	85.5	86.5	86.5	85.3	85.9	84.7	82.1	83.5	80.4	75.1	71.2	79.4	84.5	84.2	63.0	43.8	45.4	47.1	95.7	43.8	79.7
28	48.7	50.9	51.7	52.9	55.0	58.8	58.3	54.2	54.3	54.9	52.1	54.4	55.0	52.2	51.9	56.3	55.6	54.9	57.3	59.1	61.5	65.2	64.3	63.5	65.2	48.7	55.9
29	62.8	64.3	65.0	64.6	64.5	64.6	63.4	69.5	67.5	72.0	77.9	79.9	79.6	87.5	91.5	82.4	79.3	80.7	81.2	82.2	82.9	83.3	84.1	83.3	91.5	62.8	75.6
30	83.7	87.3	89.1	90.8	93.1	94.8	95.2	94.2	91.9	90.9	87.9	90.2	89.7	87.7	89.7	90.1	90.7	93.9	94.9	90.4	72.1	69.6	67.5	68.6	95.2	67.5	87.3
Max.	**97.7**	**97.7**	**97.8**	**97.8**	**97.5**	**97.4**	**98.6**	**98.9**	**98.8**	**98.6**	**98.2**	**98.1**	**97.8**	**98.4**	**97.2**	**96.3**	**97.1**	**97.1**	**97.0**	**97.8**	**97.8**	**97.3**	**97.4**	**97.5**	**98.9**		
Min.	**29.8**	**29.8**	**32.9**	**44.6**	**55.0**	**54.0**	**50.0**	**48.8**	**44.3**	**42.6**	**47.2**	**48.1**	**44.6**	**40.4**	**35.5**	**34.0**	32.9	35.3	**38.7**	**36.6**	**33.3**	**32.2**	**29.6**	**28.1**		**28.1**	
Avg.	**82.3**	**82.6**	**82.9**	**83.1**	**83.8**	**83.8**	**82.7**	**81.4**	**80.7**	**80.7**	**80.8**	**80.1**	**78.6**	**77.8**	**76.6**	**75.8**	**75.6**	**76.6**	**79.3**	**78.7**	**77.4**	**78.0**	**79.0**	**80.6**			**80.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Relative Humidity (%)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	75.4	81.0	79.7	82.9	84.0	82.3	80.3	77.2	73.1	77.4	88.9	88.6	87.6	85.8	85.3	86.3	91.3	90.8	96.2	80.8	49.6	63.9	59.9	51.9	96.2	49.6	79.2
2	58.8	61.6	57.9	71.5	73.7	74.6	77.1	74.2	73.7	70.3	67.6	65.9	80.9	79.4	79.6	66.1	51.4	53.8	55.6	56.8	58.4	65.8	78.2	87.1	87.1	51.4	68.3
3	89.5	92.1	94.3	94.6	95.8	96.5	97.7	97.4	97.1	94.5	93.9	95.2	97.1	95.5	94.3	93.5	93.5	88.3	90.4	89.2	88.9	86.0	86.3	87.9	97.7	86.0	92.9
4	86.1	83.6	82.7	84.8	84.5	86.0	82.9	82.1	85.4	87.0	86.8	85.6	85.7	88.0	89.5	89.5	87.6	89.5	94.3	94.5	92.2	91.0	86.4	85.5	94.5	82.1	87.1
5	85.8	88.4	90.0	93.3	94.6	92.3	94.7	95.8	94.6	92.5	94.9	96.8	96.9	97.5	97.0	96.2	96.6	96.4	95.9	94.6	94.1	96.3	96.5	96.5	97.5	85.8	94.5
6	96.5	96.5	96.6	96.6	96.9	97.7	97.8	97.2	95.6	94.6	95.4	94.8	92.8	93.6	94.5	93.9	92.8	93.1	92.5	93.9	94.2	94.9	94.7	95.3	97.8	92.5	95.1
7	95.8	96.2	96.4	96.5	96.6	96.9	96.8	96.7	97.3	97.8	97.6	97.8	96.2	94.4	96.1	94.9	92.3	93.0	96.6	96.2	95.9	96.6	97.0	97.3	97.8	92.3	96.2
8	97.5	97.6	97.6	97.6	97.7	96.9	93.2	83.7	77.2	71.1	68.7	67.6	68.3	67.7	66.1	73.6	77.5	78.2	70.1	65.6	65.6	66.9	76.8	84.5	97.7	65.6	79.5
9	86.3	87.9	89.6	90.3	90.6	86.6	84.6	81.8	85.8	84.6	84.5	83.8	82.4	81.8	82.0	80.8	71.5	74.9	80.5	85.9	89.5	89.3	88.4	89.2	90.6	71.5	84.7
10	90.0	90.9	90.9	91.8	90.7	88.5	88.1	88.0	90.7	92.6	92.9	91.8	88.9	80.1	81.1	83.0	86.2	89.7	93.9	93.2	92.3	90.2	90.8	92.7	93.9	80.1	89.5
11	94.1	95.0	95.4	95.4	95.5	95.1	94.0	91.9	90.7	84.0	67.4	64.5	64.4	72.7	79.7	78.3	74.3	74.4	81.5	82.0	79.5	83.8	84.3	89.6	95.5	64.4	83.6
12	91.6	92.9	94.1	95.1	95.9	93.5	87.0	82.3	73.9	67.4	70.1	76.5	77.2	77.1	72.1	63.5	61.5	52.0	47.5	49.1	53.1	51.2	57.6	64.3	95.9	47.5	72.8
13	66.0	52.5	54.8	73.2	60.8	55.9	62.4	66.4	68.5	69.1	67.3	64.4	62.9	62.7	64.6	65.5	67.8	68.6	69.0	69.3	71.1	73.0	73.8	72.4	73.8	52.5	65.9
14	71.4	72.1	75.8	73.8	73.1	72.5	70.8	68.6	67.5	66.4	64.6	63.1	61.2	63.5	63.7	66.6	67.7	71.6	75.8	78.3	74.8	74.3	75.6	78.6	78.6	61.2	70.5
15	79.4	80.1	77.0	75.8	78.6	77.9	75.4	75.0	70.1	66.9	61.6	60.1	57.1	57.5	71.5	76.7	76.9	77.5	83.5	82.4	87.3	87.0	85.1	84.8	87.3	57.1	75.2
16	83.1	80.7	80.3	81.0	82.9	83.8	91.6	94.1	91.4	90.0	85.9	84.3	80.4	79.1	84.7	81.6	76.3	82.9	79.5	79.9	80.2	78.5	80.8	81.8	94.1	76.3	83.1
17	83.3	87.4	86.8	85.3	86.9	88.2	86.5	85.0	86.0	82.3	80.9	75.3	77.3	88.1	86.5	90.7	91.1	92.5	94.7	96.4	95.2	93.8	95.6	95.7	96.4	75.3	88.0
18	92.8	92.6	93.9	94.9	95.0	95.8	95.0	95.0	95.0	96.3	97.4	97.5	97.1	95.4	94.9	87.5	81.6	81.4	82.2	80.7	74.9	82.7	85.2	81.1	97.5	74.9	90.2
19	78.0	78.6	79.9	78.8	73.6	71.1	68.1	64.2	60.6	57.6	58.1	58.8	58.5	56.3	54.3	57.1	59.8	58.3	55.8	54.9	61.8	74.2	69.6	60.2	79.9	54.3	64.5
20	61.6	67.1	69.2	74.2	70.9	60.0	63.9	52.5	51.3	49.5	53.9	56.1	61.6	62.4	59.1	66.6	66.8	66.2	59.4	63.8	83.7	93.8	93.4	94.5	94.5	49.5	66.7
21	95.3	91.5	91.4	88.7	91.1	75.5	67.4	65.5	65.5	63.7	63.8	62.8	62.6	62.4	61.8	68.7	84.1	85.8	88.9	88.6	75.7	84.0	89.6	89.9	95.3	61.8	77.7
22	91.9	94.2	95.4	96.0	96.4	89.5	84.5	86.5	90.1	88.4	88.1	89.8	88.6	89.4	96.2	96.4	95.2	89.9	79.2	84.5	87.2	87.1	88.3	91.8	96.4	79.2	90.2
23	89.8	90.8	87.9	90.3	94.8	95.9	92.6	88.4	84.5	81.1	81.0	86.9	86.9	84.8	82.7	83.7	91.9	94.6	86.5	86.3	88.6	91.4	94.5	94.0	95.9	81.0	88.7
24	93.6	92.9	93.4	93.7	92.6	88.3	81.3	84.5	83.3	81.6	76.3	80.5	84.7	90.2	96.4	96.2	94.9	94.7	94.0	93.4	95.4	94.8	95.6	93.8	96.4	76.3	90.3
25	93.9	94.2	94.3	93.4	93.4	94.9	94.6	92.9	93.2	94.9	94.6	94.5	92.3	95.8	89.3	88.8	81.9	89.7	89.7	87.7	88.7	89.4	90.7	90.9	95.8	81.9	91.8
26	91.0	90.7	93.3	94.7	95.6	92.2	88.3	71.4	71.9	72.1	69.7	68.2	69.3	69.2	65.3	66.2	63.2	64.2	65.0	66.2	65.9	66.4	66.8	67.4	95.6	63.2	74.7
27	67.4	67.5	67.9	69.2	69.5	70.6	77.0	76.8	74.0	69.6	65.8	64.3	64.7	68.9	75.3	79.4	81.6	84.4	87.5	88.3	82.2	87.4	90.0	90.5	90.5	64.3	75.8
28	90.4	92.2	94.6	92.8	94.7	92.6	91.6	87.4	82.7	79.2	82.1	81.8	81.7	83.4	84.0	89.9	91.7	93.2	94.3	93.8	79.5	79.7	79.0	80.0	94.7	79.0	87.2
29	77.8	76.5	72.6	74.5	77.3	74.4	74.5	76.1	72.2	70.8	68.6	68.8	66.2	64.6	67.4	71.2	72.9	74.4	76.9	75.9	77.7	76.2	74.7	73.3	77.8	64.6	73.1
30	71.8	72.9	74.6	75.3	75.4	75.9	77.4	77.2	73.9	70.9	70.4	69.9	68.1	66.1	68.7	71.0	70.2	69.0	68.8	68.2	67.5	71.0	73.1	66.6	77.4	66.1	71.4
31	59.0	58.5	59.2	59.6	58.8	60.3	63.4	59.9	59.4	58.6	56.9	56.1	56.0	55.3	56.5	57.8	61.1	61.4	64.6	64.7	64.3	63.1	66.0	70.4	70.4	55.3	60.4
Max.	**97.5**	**97.6**	**97.6**	**97.6**	**97.7**	**97.7**	**97.8**	**97.4**	**97.3**	**97.8**	**97.6**	**97.8**	**97.1**	**97.5**	**97.0**	**96.4**	**96.6**	**96.4**	**96.6**	**96.4**	**95.9**	**96.6**	**97.0**	**97.3**	**97.8**		
Min.	**58.8**	**52.5**	**54.8**	**59.6**	**58.8**	**55.9**	**62.4**	**52.5**	**51.3**	**49.5**	**53.9**	**56.1**	**56.0**	**55.3**	**54.3**	**57.1**	51.4	52.0	**47.5**	**49.1**	**49.6**	**51.2**	**57.6**	**51.9**		**47.5**	
Avg.	**83.4**	**83.8**	**84.1**	**85.7**	**85.7**	**83.9**	**83.2**	**81.2**	**79.9**	**78.1**	**77.3**	**77.2**	**77.3**	**77.7**	**78.7**	**79.4**	**79.1**	**79.8**	**80.3**	**80.2**	**79.2**	**81.4**	**82.7**	**83.2**			**80.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	15	32	76	81	69	104	181	82	94	79	60	24	23	20	8	4	0	0	0	181	0	40
2	0	0	0	0	0	4	5	17	23	44	71	127	119	107	93	75	78	77	62	34	13	1	0	0	127	0	40
3	0	0	0	0	0	6	26	65	117	202	320	368	254	205	242	163	248	166	124	49	27	3	0	0	368	0	108
4	0	0	0	0	0	6	40	88	120	198	250	369	350	445	357	0	95	138	91	50	14	3	0	0	445	0	109
5	0	0	0	0	0	29	83	201	242	443	577	658	700	719	704	587	551	275	33	21	14	4	0	0	719	0	243
6	0	0	0	0	0	19	87	203	307	456	565	642	686	707	679	623	530	268	30	23	12	2	0	0	707	0	243
7	0	0	0	0	0	15	82	197	335	353	430	691	670	690	736	484	356	273	26	22	13	3	0	0	736	0	224
8	0	0	0	0	0	8	68	189	319	433	483	583	675	707	662	610	530	255	26	20	12	2	0	0	707	0	233
9	0	0	0	0	0	11	94	196	317	425	541	620	667	679	672	613	521	245	24	18	11	2	0	0	679	0	236
10	0	0	0	0	0	11	83	202	327	448	570	651	636	687	678	620	527	235	19	17	10	1	0	0	687	0	238
11	0	0	0	0	0	10	95	168	296	434	544	629	678	696	675	614	520	230	23	18	11	2	0	0	696	0	235
12	0	0	0	0	0	8	76	191	313	435	542	618	669	685	663	603	511	220	25	19	10	1	0	0	685	0	233
13	0	0	0	0	0	1	12	26	45	76	157	189	140	170	256	256	230	204	70	33	17	1	0	0	256	0	79
14	0	0	0	0	0	4	20	53	77	104	168	247	425	537	653	592	494	202	28	21	10	1	0	0	653	0	151
15	0	0	0	0	0	1	16	32	106	116	101	122	147	282	445	296	407	173	74	43	13	0	0	0	445	0	99
16	0	0	0	0	0	1	14	48	61	75	65	119	98	56	54	62	94	50	17	10	3	0	0	0	119	0	34
17	0	0	0	0	0	0	8	26	31	51	64	104	93	159	173	119	88	76	51	25	8	0	0	0	173	0	45
18	0	0	0	0	0	1	7	49	152	95	59	90	202	141	91	84	119	80	85	32	5	0	0	0	202	0	54
19	0	0	0	0	0	3	50	159	253	338	516	583	634	645	618	527	390	148	65	39	10	0	0	0	645	0	207
20	0	0	0	0	0	4	42	177	162	317	424	438	476	488	405	300	189	137	72	19	2	0	0	0	488	0	152
21	0	0	0	0	0	0	12	30	78	262	561	628	768	782	702	617	405	113	24	16	6	0	0	0	782	0	209
22	0	0	0	0	0	3	17	61	75	86	63	141	205	88	74	88	55	17	6	3	0	0	0	0	205	0	41
23	0	0	0	0	0	0	2	13	260	426	190	160	569	606	513	546	435	128	62	34	5	0	0	0	606	0	164
24	0	0	0	0	0	1	10	29	110	249	147	304	270	285	130	104	571	142	32	14	5	0	0	0	571	0	100
25	0	0	0	0	0	1	32	145	283	353	482	416	480	463	534	373	363	126	66	22	5	0	0	0	534	0	173
26	0	0	0	0	0	1	30	121	265	386	497	575	421	625	635	585	480	89	22	13	3	0	0	0	635	0	198
27	0	0	0	0	0	1	19	132	262	386	496	572	626	637	611	495	226	92	41	15	1	0	0	0	637	0	192
28	0	0	0	0	0	0	4	26	40	40	56	79	108	149	126	109	135	77	40	13	1	0	0	0	149	0	42
29	0	0	0	0	0	0	27	37	53	75	199	167	199	237	270	169	103	86	55	32	2	0	0	0	270	0	71
30	0	0	0	0	0	0	11	57	138	268	484	550	613	641	407	365	281	141	75	23	2	0	0	0	641	0	169
31	0	0	0	0	0	0	21	45	90	145	182	445	415	540	600	525	431	109	76	24	2	0	0	0	600	0	152
Max.	**0**	**0**	**0**	**0**	**0**	**29**	**95**	**203**	**335**	**456**	**577**	**691**	**768**	**782**	**736**	**623**	**571**	**275**	**124**	**50**	**27**	**4**	**0**	**0**	**782**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**13**	**23**	**40**	**56**	**79**	**82**	**56**	**54**	**0**	**24**	**17**	**6**	**3**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**5**	**36**	**99**	**172**	**251**	**320**	**389**	**422**	**450**	**437**	**363**	**322**	**148**	**47**	**24**	**8**	**1**	**0**	**0**			**146**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	14	42	158	291	486	556	612	624	596	532	432	35	17	11	1	0	0	0	624	0	184
2	0	0	0	0	0	0	11	102	220	339	396	513	565	479	430	235	206	120	74	16	0	0	0	0	565	0	154
3	0	0	0	0	0	0	3	16	26	42	43	44	46	54	87	67	35	32	18	4	0	0	0	0	87	0	22
4	0	0	0	0	0	0	2	16	23	40	51	92	79	97	89	166	136	93	49	13	0	0	0	0	166	0	39
5	0	0	0	0	0	0	6	57	41	42	19	19	27	32	36	29	21	12	24	3	0	0	0	0	57	0	15
6	0	0	0	0	0	0	0	6	66	220	360	387	632	429	531	173	134	93	46	14	0	0	0	0	632	0	129
7	0	0	0	0	0	0	2	26	58	211	512	461	195	500	599	342	323	78	63	6	0	0	0	0	599	0	141
8	0	0	0	0	0	0	7	77	203	325	427	372	323	366	348	270	141	66	22	3	0	0	0	0	427	0	123
9	0	0	0	0	0	0	0	4	13	12	19	25	25	16	19	20	35	63	53	11	0	0	0	0	63	0	13
10	0	0	0	0	0	0	3	99	142	307	489	527	568	544	447	373	283	41	44	7	0	0	0	0	568	0	161
11	0	0	0	0	0	0	9	42	64	46	89	85	66	64	64	42	38	13	5	1	0	0	0	0	89	0	26
12	0	0	0	0	0	0	3	50	136	362	402	325	123	134	139	88	70	36	22	4	0	0	0	0	402	0	79
13	0	0	0	0	0	0	6	40	174	178	245	369	260	253	231	178	157	90	50	6	0	0	0	0	369	0	93
14	0	0	0	0	0	0	2	47	150	290	392	462	498	519	494	430	245	29	14	1	0	0	0	0	519	0	149
15	0	0	0	0	0	0	0	0	2	5	6	9	10	10	11	13	9	12	2	0	0	0	0	0	13	0	4
16	0	0	0	0	0	0	0	7	23	51	76	154	209	459	490	377	240	49	25	3	0	0	0	0	490	0	90
17	0	0	0	0	0	0	1	15	56	101	229	180	377	469	100	162	151	85	34	3	0	0	0	0	469	0	82
18	0	0	0	0	0	0	2	39	163	267	348	427	557	550	520	446	259	59	40	7	0	0	0	0	557	0	153
19	0	0	0	0	0	0	1	20	83	207	347	391	536	371	562	375	213	43	15	3	0	0	0	0	562	0	132
20	0	0	0	0	0	0	1	32	156	272	363	438	495	505	472	377	205	31	16	2	0	0	0	0	505	0	140
21	0	0	0	0	0	0	2	41	45	63	125	248	262	171	143	76	41	27	17	1	0	0	0	0	262	0	53
22	0	0	0	0	0	0	0	3	10	23	25	15	13	19	15	14	13	10	4	1	0	0	0	0	25	0	7
23	0	0	0	0	0	0	0	13	44	60	96	83	45	25	22	8	10	4	2	0	0	0	0	0	96	0	17
24	0	0	0	0	0	0	0	16	98	278	160	130	151	240	374	120	75	36	17	0	0	0	0	0	374	0	71
25	0	0	0	0	0	0	0	33	120	211	279	406	323	414	388	201	154	43	13	1	0	0	0	0	414	0	108
26	0	0	0	0	0	0	1	26	39	83	73	178	349	198	44	37	34	20	3	0	0	0	0	0	349	0	45
27	0	0	0	0	0	0	0	3	14	35	125	86	48	55	55	50	30	15	4	0	0	0	0	0	125	0	22
28	0	0	0	0	0	0	0	11	24	32	58	102	204	202	199	175	126	28	6	0	0	0	0	0	204	0	49
29	0	0	0	0	0	0	0	4	28	88	123	273	383	375	209	215	161	34	10	0	0	0	0	0	383	0	79
30	0	0	0	0	0	0	0	23	134	239	337	402	444	449	412	341	138	16	7	0	0	0	0	0	449	0	123
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**102**	**220**	**362**	**512**	**556**	**632**	**624**	**599**	**532**	**432**	**120**	**74**	**16**	**1**	**0**	**0**	**0**	**632**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**6**	**9**	**10**	**10**	**11**	**8**	**9**	**4**	**2**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**30**	**84**	**157**	**223**	**259**	**281**	**287**	**271**	**198**	**137**	**44**	**24**	**4**	**0**	**0**	**0**	**0**			**83**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	4	39	130	199	267	296	298	252	285	154	27	7	0	0	0	0	0	298	0	82
2	0	0	0	0	0	0	0	9	100	215	316	386	433	441	407	337	129	15	6	0	0	0	0	0	441	0	116
3	0	0	0	0	0	0	0	2	13	58	268	101	206	167	136	45	53	17	8	0	0	0	0	0	268	0	45
4	0	0	0	0	0	0	0	2	14	31	87	107	117	103	161	97	78	26	5	0	0	0	0	0	161	0	34
5	0	0	0	0	0	0	0	1	7	29	53	58	55	65	59	41	23	10	1	0	0	0	0	0	65	0	17
6	0	0	0	0	0	0	0	6	33	177	226	367	410	334	322	198	52	34	8	0	0	0	0	0	410	0	90
7	0	0	0	0	0	0	0	1	16	32	118	33	33	36	23	21	17	5	0	0	0	0	0	0	118	0	14
8	0	0	0	0	0	0	0	1	9	14	17	41	88	105	128	101	56	22	2	0	0	0	0	0	128	0	24
9	0	0	0	0	0	0	0	1	16	29	26	46	88	129	201	151	93	33	3	0	0	0	0	0	201	0	34
10	0	0	0	0	0	0	0	5	59	77	103	131	177	199	176	137	71	21	2	0	0	0	0	0	199	0	48
11	0	0	0	0	0	0	0	1	19	78	238	177	199	186	103	79	39	17	1	0	0	0	0	0	238	0	47
12	0	0	0	0	0	0	0	2	54	166	261	332	375	379	343	262	92	11	1	0	0	0	0	0	379	0	95
13	0	0	0	0	0	0	0	3	23	137	107	293	301	393	273	265	91	12	1	0	0	0	0	0	393	0	79
14	0	0	0	0	0	0	0	2	28	80	141	151	217	261	186	62	28	15	0	0	0	0	0	0	261	0	49
15	0	0	0	0	0	0	0	0	17	65	118	173	220	291	222	150	82	12	1	0	0	0	0	0	291	0	56
16	0	0	0	0	0	0	0	1	38	155	225	288	283	183	331	166	52	11	0	0	0	0	0	0	331	0	72
17	0	0	0	0	0	0	0	0	1	3	8	21	41	63	28	79	41	10	0	0	0	0	0	0	79	0	12
18	0	0	0	0	0	0	0	0	11	72	119	151	246	221	167	160	67	7	0	0	0	0	0	0	246	0	51
19	0	0	0	0	0	0	0	0	3	8	18	24	17	13	10	7	4	1	0	0	0	0	0	0	24	0	4
20	0	0	0	0	0	0	0	0	8	54	125	152	111	108	92	78	28	7	0	0	0	0	0	0	152	0	32
21	0	0	0	0	0	0	0	0	6	22	25	33	47	46	53	36	15	2	0	0	0	0	0	0	53	0	12
22	0	0	0	0	0	0	0	0	9	47	106	179	212	215	143	85	40	9	0	0	0	0	0	0	215	0	44
23	0	0	0	0	0	0	0	0	11	38	42	30	30	31	29	27	20	4	0	0	0	0	0	0	42	0	11
24	0	0	0	0	0	0	0	0	3	27	169	236	294	287	254	191	46	6	0	0	0	0	0	0	294	0	63
25	0	0	0	0	0	0	0	0	11	93	183	246	284	284	249	182	42	5	0	0	0	0	0	0	284	0	66
26	0	0	0	0	0	0	0	0	9	87	178	241	280	281	246	180	39	4	0	0	0	0	0	0	281	0	64
27	0	0	0	0	0	0	0	0	12	83	174	239	277	278	243	175	36	4	0	0	0	0	0	0	278	0	63
28	0	0	0	0	0	0	0	0	6	61	175	236	271	272	234	166	37	4	0	0	0	0	0	0	272	0	61
29	0	0	0	0	0	0	0	0	3	25	77	111	145	121	81	48	22	4	0	0	0	0	0	0	145	0	27
30	0	0	0	0	0	0	0	0	2	19	40	77	83	76	62	58	16	2	0	0	0	0	0	0	83	0	18
31	0	0	0	0	0	0	0	0	6	64	155	221	258	260	224	160	30	2	0	0	0	0	0	0	260	0	57
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**100**	**215**	**316**	**386**	**433**	**441**	**407**	**337**	**154**	**34**	**8**	**0**	**0**	**0**	**0**	**0**	**441**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**8**	**21**	**17**	**13**	**10**	**7**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**19**	**70**	**132**	**166**	**197**	**198**	**175**	**130**	**51**	**12**	**1**	**0**	**0**	**0**	**0**	**0**			**48**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	2	18	59	74	102	101	110	76	13	1	0	0	0	0	0	0	110	0	23
2	0	0	0	0	0	0	0	0	4	64	156	181	248	250	194	157	41	3	0	0	0	0	0	0	250	0	54
3	0	0	0	0	0	0	0	0	2	49	146	209	245	245	211	147	25	2	0	0	0	0	0	0	245	0	53
4	0	0	0	0	0	0	0	0	2	49	142	205	240	241	206	142	22	2	0	0	0	0	0	0	241	0	52
5	0	0	0	0	0	0	0	0	2	45	135	198	234	233	198	123	19	1	0	0	0	0	0	0	234	0	50
6	0	0	0	0	0	0	0	0	0	2	9	64	94	196	268	157	22	1	0	0	0	0	0	0	268	0	34
7	0	0	0	0	0	0	0	0	3	22	102	90	146	119	81	42	8	0	0	0	0	0	0	0	146	0	26
8	0	0	0	0	0	0	0	0	1	22	33	51	68	69	98	57	11	0	0	0	0	0	0	0	98	0	17
9	0	0	0	0	0	0	0	0	0	9	26	57	76	93	39	40	8	0	0	0	0	0	0	0	93	0	14
10	0	0	0	0	0	0	0	0	1	41	136	127	197	191	116	97	14	1	0	0	0	0	0	0	197	0	38
11	0	0	0	0	0	0	0	0	0	4	30	42	51	56	48	28	4	0	0	0	0	0	0	0	56	0	11
12	0	0	0	0	0	0	0	0	1	11	59	85	144	127	171	103	10	0	0	0	0	0	0	0	171	0	30
13	0	0	0	0	0	0	0	0	0	10	37	80	66	58	57	39	9	0	0	0	0	0	0	0	80	0	15
14	0	0	0	0	0	0	0	0	0	7	54	67	96	79	88	24	5	0	0	0	0	0	0	0	96	0	17
15	0	0	0	0	0	0	0	0	0	15	83	80	120	96	54	29	6	0	0	0	0	0	0	0	120	0	20
16	0	0	0	0	0	0	0	0	0	2	13	21	28	28	22	14	6	0	0	0	0	0	0	0	28	0	6
17	0	0	0	0	0	0	0	0	0	2	15	30	59	63	98	20	7	0	0	0	0	0	0	0	98	0	12
18	0	0	0	0	0	0	0	0	0	3	18	34	8	16	16	13	4	0	0	0	0	0	0	0	34	0	5
19	0	0	0	0	0	0	0	0	0	4	26	62	107	85	103	65	9	0	0	0	0	0	0	0	107	0	19
20	0	0	0	0	0	0	0	0	0	1	18	46	61	37	26	8	1	0	0	0	0	0	0	0	61	0	8
21	0	0	0	0	0	0	0	0	0	6	30	114	150	153	97	36	6	0	0	0	0	0	0	0	153	0	25
22	0	0	0	0	0	0	0	0	0	4	19	51	93	129	129	27	6	0	0	0	0	0	0	0	129	0	19
23	0	0	0	0	0	0	0	0	0	7	62	125	148	139	116	55	4	0	0	0	0	0	0	0	148	0	27
24	0	0	0	0	0	0	0	0	0	6	60	109	158	127	67	26	4	0	0	0	0	0	0	0	158	0	23
25	0	0	0	0	0	0	0	0	0	4	56	123	102	57	69	40	3	0	0	0	0	0	0	0	123	0	19
26	0	0	0	0	0	0	0	0	0	3	43	103	45	158	119	48	3	0	0	0	0	0			158	0	24
27	0	0	0	0			0	0	0	5	52	116	152	153	120	50	3	0	0	0	0	0	0	0	153	0	30
28	0	0	0	0	0	0	0	0	0	3	24	40	49	94	35	9	2	0	0	0	0	0	0	0	94	0	11
29	0	0	0	0	0	0	0	0	0	2	12	46	139	50	97	55	5	0	0	0	0	0	0	0	139	0	17
30	0	0	0	0	0	0	0	0	0	3	50	91	111	138	108	40	2	0	0	0	0	0	0	0	138	0	23
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**64**	**156**	**209**	**248**	**250**	**268**	**157**	**41**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**268**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**21**	**8**	**16**	**16**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**14**	**57**	**91**	**118**	**119**	**105**	**59**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**24**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	2	37	98	137	139	107	42	3	0	0	0	0	0	0	0	139	0	24
2	0	0	0	0	0	0	0	0	0	2	38	101	133	148	123	61	3	0	0	0	0	0	0	0	148	0	25
3	0	0	0	0	0	0	0	0	0	2	35	93	134	137	103	40	2	0	0	0	0	0	0	0	137	0	23
4	0	0	0	0	0	0	0	0	0	1	15	39	62	40	19	9	1	0	0	0	0	0	0	0	62	0	8
5	0	0	0	0	0	0	0	0	0	0	2	4	11	12	9	4	0	0	0	0	0	0	0	0	12	0	2
6	0	0	0	0	0	0	0	0	0	0	1	7	13	10	12	22	1	0	0	0	0	0	0	0	22	0	3
7	0	0	0	0	0	0	0	0	0	0	1	2	6	7	4	3	0	0	0	0	0	0	0	0	7	0	1
8	0	0	0	0	0	0	0	0	0	1	12	72	29	94	25	4	0	0	0	0	0	0	0	0	94	0	10
9	0	0	0	0	0	0	0	0	0	0	5	13	22	25	25	13	1	0	0	0	0	0	0	0	25	0	4
10	0	0	0	0	0	0	0	0	0	0	8	25	46	37	21	2	0	0	0	0	0	0	0	0	46	0	6
11	0	0	0	0	0	0	0	0	0	0	7	14	31	31	15	6	1	0	0	0	0	0	0	0	31	0	4
12	0	0	0	0	0	0	0	0	0	1	23	74	115	120	87	23	1	0	0	0	0	0	0	0	120	0	18
13	0	0	0	0	0	0	0	0	0	0	4	10	14	16	38	18	1	0	0	0	0	0	0	0	38	0	4
14	0	0	0	0	0	0	0	0	0	0	4	28	48	42	19	5	0	0	0	0	0	0	0	0	48	0	6
15	0	0	0	0	0	0	0	0	0	0	1	7	9	12	6	2	0	0	0	0	0	0		0	12	0	2
16	0	0	0	0	0	0	0	0	0	0	0	2	3	3	2	0	0	0	0	0	0	0	0	0	3	0	0
17				0	0	0	0	0	0	0	8	15	28	18	8	3	0	0	0	0	0	0	0	0	28	0	4
18	0	0	0	0	0	0	0	0	0	0	3	11	22	27	19	7	0	0	0	0	0	0	0	0	27	0	4
19	0	0	0	0	0	0	0	0	0	1	4	7	8	11	10	4	0	0	0	0	0	0	0	0	11	0	2
20	0	0	0	0	0	0	0	0	0	0	11	51	71	66	48	15	1	0	0	0	0	0	0	0	71	0	11
21	0	0	0	0	0	0	0	0	0	0	3	11	16	19	7	5	0	0	0	0	0	0	0	0	19	0	3
22	0	0	0	0	0	0	0	0	0	0	3	17	24	14	19	9	1	0	0	0	0	0	0	0	24	0	4
23	0	0	0	0	0	0	0	0	0	0	7	15	18	19	9	5	1	0	0	0	0	0	0	0	19	0	3
24	0	0	0	0	0	0	0	0	0	0	6	13	22	34	32	15	1	0	0	0	0	0	0	0	34	0	5
25	0	0	0	0	0	0	0	0	0	0	3	7	19	30	15	9	1	0	0	0	0	0	0	0	30	0	3
26	0	0	0	0	0	0	0	0	0	0	17	11	13	19	12	6	1	0	0	0	0	0	0	0	19	0	3
27	0	0	0	0	0	0	0	0	0	0	4	28	55	66	35	12	0	0	0	0	0	0	0	0	66	0	8
28	0	0	0	0	0	0	0	0	0	0	5	62	129	102	64	19	1	0	0	0	0	0	0	0	129	0	16
29	0	0	0	0	0	0	0	0	0	0	1	5	13	9	8	2	0	0	0	0	0	0	0	0	13	0	2
30	0	0	0	0	0	0	0	0	0	0	2	6	12	13	20	15	1	0	0	0	0	0	0	0	20	0	3
31	0	0	0	0	0	0	0	0	0	0	4	17	26	23	13	6	1	0	0	0	0	0	0	0	26	0	4
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**38**	**101**	**137**	**148**	**123**	**61**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**148**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**28**	**42**	**43**	**30**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**7**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	6	15	31	31	25	12	1	0	0	0	0	0	0	0	31	0	5
2	0	0	0	0	0	0	0	0	0	0	3	16	19	14	17	6	1	0	0	0	0	0	0	0	19	0	3
3	0	0	0	0	0	0	0	0	0	0	5	16	32	39	24	13	2	0	0	0	0	0	0	0	39	0	5
4	0	0	0	0	0	0	0	0	0	1	24	83	111	126	94	45	4	0	0	0	0	0	0	0	126	0	20
5	0	0	0	0	0	0	0	0	0	0	12	62	60	45	31	20	5	0	0	0	0	0	0	0	62	0	10
6	0	0	0	0	0	0	0	0	0	0	8	28	45	35	33	14	2	0	0	0	0	0	0	0	45	0	7
7	0	0	0	0	0	0	0	0	0	0	9	36	50	45	30	17	3	0	0	0	0	0	0	0	50	0	8
8	0	0	0	0	0	0	0	0	0	0	6	37	50	46	44	26	4	0	0	0	0	0	0	0	50	0	9
9	0	0	0	0	0	0	0	0	0	0	5	17	31	39	29	22	4	0	0	0	0	0	0	0	39	0	6
10	0	0	0	0	0	0	0	0	0	0	40	86	93	46	32	21	4	0	0	0	0	0	0	0	93	0	13
11	0	0	0	0	0	0	0	0	0	0	10	43	52	57	37	25	3	0	0	0	0	0	0	0	57	0	9
12	0	0	0	0	0	0	0	0	0	1	13	31	41	52	65	33	7	0	0	0	0	0	0	0	65	0	10
13	0	0	0	0	0	0	0	0	0	1	9	30	108	143	124	72	9	0	0	0	0	0	0	0	143	0	21
14	0	0	0	0	0	0	0	0	0	0	11	38	37	41	23	7	4	0	0	0	0	0	0	0	41	0	7
15	0	0	0	0	0	0	0	0	0	1	18	32	69	46	32	29	5	0	0	0	0	0	0	0	69	0	10
16	0	0	0	0	0	0	0	0	0	1	14	54	62	53	39	28	8	0	0	0	0	0	0	0	62	0	11
17	0	0	0	0	0	0	0	0	0	1	15	39	73	88	94	73	25	1	0	0	0	0	0	0	94	0	17
18	0	0	0	0	0	0	0	0	0	2	25	66	78	75	75	72	14	0	0	0	0	0	0	0	78	0	17
19	0	0	0	0	0	0	0	0	0	1	40	127	190	164	161	86	15	0	0	0	0	0	0	0	190	0	33
20	0	0	0	0	0	0	0	0	0	1	9	31	55	115	102	63	9	0	0	0	0	0	0	0	115	0	16
21	0	0	0	0	0	0	0	0	0	0	7	23	31	33	27	13	5	0	0	0	0	0	0	0	33	0	6
22	0	0	0	0	0	0	0	0	0	2	21	44	52	85	86	44	10	1	0	0	0	0	0	0	86	0	14
23	0	0	0	0	0	0	0	0	0	1	17	44	63	138	165	113	27	1	0	0	0	0	0	0	165	0	24
24	0	0	0	0	0	0	0	0	0	4	52	130	179	196	176	125	31	2	0	0	0	0	0	0	196	0	37
25	0	0	0	0	0	0	0	0	0	3	53	140	187	202	180	130	33	2	0	0	0	0	0	0	202	0	39
26	0	0	0	0	0	0	0	0	0	6	73	161	210	222	189	134	36	2	0	0	0	0	0	0	222	0	43
27	0	0	0	0	0	0	0	0	0	4	64	146	194	210	190	136	38	2	0	0	0	0	0	0	210	0	41
28	0	0	0	0	0	0	0	0	0	2	20	55	66	111	185	93	44	5	0	0	0	0	0	0	185	0	24
29	0	0	0	0	0	0	0	0	0	4	52	58	57	54	45	47	16	3	0	0	0	0	0	0	58	0	14
30	0	0	0	0	0	0	0	0	0	3	11	32	81	70	67	59	25	3	0	0	0	0	0	0	81	0	15
31	0	0	0	0	0	0	0	0	0	2	12	21	28	54	107	93	39	7	0	0	0	0	0	0	107	0	15
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**73**	**161**	**210**	**222**	**190**	**136**	**44**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**222**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**15**	**19**	**14**	**17**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**21**	**56**	**78**	**86**	**82**	**54**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**			**16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	8	77	155	211	232	211	158	58	4	0	0	0	0	0	0	232	0	46
2	0	0	0	0	0	0	0	0	0	13	91	173	220	238	218	167	66	4	0	0	0	0	0	0	238	0	50
3	0	0	0	0	0	0	0	0	0	3	21	35	46	54	87	57	42	5	0	0	0	0	0	0	87	0	15
4	0	0	0	0	0	0	0	0	0	3	20	72	81	49	47	44	19	5	0	0	0	0	0	0	81	0	14
5	0	0	0	0	0	0	0	0	0	3	8	40	52	74	63	66	31	4	0	0	0	0	0	0	74	0	14
6	0	0	0	0	0	0	0	0	0	2	4	5	6	11	9	12	10	1	0	0	0	0	0	0	12	0	2
7	0	0	0	0	0	0	0	0	0	19	53	84	55	46	63	79	36	9	0	0	0	0	0	0	84	0	18
8	0	0	0	0	0	0	0	0	1	39	94	133	131	123	108	106	43	10	0	0	0	0	0	0	133	0	33
9	0	0	0	0	0	0	0	0	0	2	10	25	41	80	173	68	51	5	0	0	0	0	0	0	173	0	19
10	0	0	0	0	0	0	0	0	0	2	13	33	21	39	129	228	125	25	1	0	0	0	0	0	228	0	26
11	0	0	0	0	0	0	0	0	0	2	7	12	21	19	16	13	8	2	0	0	0	0	0	0	21	0	4
12	0	0	0	0	0	0	0	0	0	7	15	22	45	54	115	122	92	18	0	0	0	0	0	0	122	0	20
13	0	0	0	0	0	0	0	0	1	41	117	76	57	30	24	20	8	2	0	0	0	0	0	0	117	0	16
14	0	0	0	0	0	0	0	0	0	10	27	45	63	56	45	36	32	13	0	0	0	0	0	0	63	0	14
15	0	0	0	0	0	0	0	0	1	23	74	93	115	115	49	18	9	1	0	0	0	0	0	0	115	0	21
16	0	0	0	0	0	0	0	0	1	21	45	65	103	109	85	83	47	17	1	0	0	0	0	0	109	0	24
17	0	0	0	0	0	0	0	0	0	15	16	38	53	55	71	23	25	10	0	0	0	0	0	0	71	0	13
18	0	0	0	0	0	0	0	0	1	15	46	56	52	51	42	22	12	3	0	0	0	0	0	0	56	0	13
19	0	0	0	0	0	0	0	0	2	47	112	181	322	265	150	124	58	21	1	0	0	0	0	0	322	0	53
20	0	0	0	0	0	0	0	0	4	61	265	249	397	234	178	106	30	9	1	0	0	0	0	0	397	0	64
21	0	0	0	0	0	0	0	0	8	85	197	281	340	369	357	189	84	22	3	0	0	0	0	0	369	0	81
22	0	0	0	0	0	0	0	0	5	27	114	255	300	339	343	279	163	45	4	0	0	0	0	0	343	0	78
23	0	0	0	0	0	0	0	0	2	41	254	344	321	414	200	203	145	25	4	0	0	0	0	0	414	0	81
24	0	0	0	0	0	0	0	0	10	87	183	273	328	346	337	249	144	26	4	0	0	0	0	0	346	0	83
25	0	0	0	0	0	0	0	0	1	11	17	11	66	103	165	186	140	37	4	0	0	0	0	0	186	0	31
26	0	0	0	0	0	0	0	0	12	79	146	221	223	299	277	204	123	37	5	0	0	0	0	0	299	0	68
27	0	0	0	0	0	0	0	0	2	40	66	119	171	173	105	67	55	26	5	0	0	0	0	0	173	0	35
28	0	0	0	0	0	0	0	0	13	65	219	339	392	409	377	301	163	24	6	0	0	0	0	0	409	0	96
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**87**	**265**	**344**	**397**	**414**	**377**	**301**	**163**	**45**	**6**	**0**	**0**	**0**	**0**	**0**	**414**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**5**	**6**	**11**	**9**	**12**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**28**	**83**	**123**	**151**	**157**	**144**	**115**	**65**	**15**	**1**	**0**	**0**	**0**	**0**	**0**			**37**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	18	109	215	295	342	362	341	233	91	48	7	0	0	0	0	0	362	0	86
2	0	0	0	0	0	0	0	0	2	13	31	40	61	60	65	95	57	29	6	0	0	0	0	0	95	0	19
3	0	0	0	0	0	0	0	0	10	34	59	89	146	157	132	107	49	24	5	0	0	0	0	0	157	0	34
4	0	0	0	0	0	0	0	0	7	27	56	129	132	125	86	68	29	13	4	0	0	0	0	0	132	0	28
5	0	0	0	0	0	0	0	0	1	6	22	41	45	34	32	26	23	18	12	0	0	0	0	0	45	0	11
6	0	0	0	0	0	0	0	1	62	193	306	395	443	457	427	359	224	23	10	0	0	0	0	0	457	0	121
7	0	0	0	0	0	0	0	0	22	66	106	279	453	338	462	349	180	40	11	0	0	0	0	0	462	0	96
8	0	0	0	0	0	0	0	2	94	166	253	349	405	439	427	355	189	41	23	1	0	0	0	0	439	0	114
9	0	0	0	0	0	0	0	3	66	184	297	380	437	462	435	365	228	29	13	1	0	0	0	0	462	0	121
10	0	0	0	0	0	0	0	3	71	198	309	381	415	469	438	342	142	73	17	0	0	0	0	0	469	0	119
11	0	0	0	0	0	0	0	2	23	41	67	78	97	143	105	74	39	21	6	0	0	0	0	0	143	0	29
12	0	0	0	0	0	0	0	2	23	44	82	150	186	224	185	108	100	64	18	1	0	0	0	0	224	0	49
13	0	0	0	0	0	0	0	7	51	164	247	337	363	445	327	352	214	25	12	1	0	0	0	0	445	0	106
14	0	0	0	0	0	0	0	6	99	226	336	424	472	489	459	391	256	29	15	2	0	0	0	0	489	0	133
15	0	0	0	0	0	0	0	4	71	226	337	425	475	493	466	402	265	33	16	2	0	0	0	0	493	0	134
16	0	0	0	0	0	0	0	7	107	231	351	426	485	510	339	334	159	83	39	2	0	0	0	0	510	0	128
17	0	0	0	0	0	0	0	6	32	70	92	98	112	126	147	137	57	35	13	2	0	0	0	0	147	0	39
18	0	0	0	0	0	0	0	1	16	35	72	114	106	119	130	119	107	65	26	2	0	0	0	0	130	0	38
19	0	0	0	0	0	0	0	8	38	132	135	193	189	226	201	102	91	57	24	2	0	0	0	0	226	0	58
20	0	0	0	0	0	0	0	6	36	56	87	155	318	329	132	222	276	111	47	6	0	0	0	0	329	0	74
21	0	0	0	0	0	0	0	3	16	46	100	167	197	287	315	280	163	96	50	7	0	0	0	0	315	0	72
22	0	0	0	0	0	0	0	20	148	272	384	472	518	536	507	440	305	24	15	4	0	0	0	0	536	0	152
23	0	0	0	0	0	0	0	25	138	348	259	482	522	540	575	315	293	36	28	6	0	0	0	0	575	0	149
24	0	0	0	0	0	0	0	24	149	276	390	480	529	548	518	450	319	33	21	6	0	0	0	0	548	0	156
25	0	0	0	0	0	0	0	14	48	137	295	261	272	447	322	237	186	84	30	7	0	0	0	0	447	0	97
26	0	0	0	0	0	0	0	20	85	184	274	395	377	420	364	427	338	30	20	6	0	0	0	0	427	0	123
27	0	0	0	0	0	0	1	24	140	301	415	490	557	556	517	388	346	34	24	8	0	0	0	0	557	0	158
28	0	0	0	0	0	0	1	44	182	156	210	253	311	295	246	350	335	69	44	12	0	0	0	0	350	0	104
29	0	0	0	0	0	0	2	43	177	306	422	512	562	579	549	479	359	36	25	8	0	0	0	0	579	0	169
30	0	0	0	0	0	0	0	5	9	19	30	44	37	31	27	23	18	9	4	2	0	0	0	0	44	0	11
31	0	0	0	0	0	0	0	4	14	25	30	46	57	59	55	54	42	30	17	4	0	0	0	0	59	0	18
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**44**	**182**	**348**	**422**	**512**	**562**	**579**	**575**	**479**	**359**	**111**	**50**	**12**	**0**	**0**	**0**	**0**	**579**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**22**	**40**	**37**	**31**	**27**	**23**	**18**	**9**	**4**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**63**	**138**	**202**	**270**	**310**	**332**	**301**	**257**	**177**	**43**	**19**	**3**	**0**	**0**	**0**	**0**			**89**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	8	45	80	129	161	289	373	461	519	384	64	57	19	0	0	0	0	519	0	108
2	0	0	0	0	0	0	7	81	155	211	325	536	560	518	457	457	230	113	66	15	0	0	0	0	560	0	155
3	0	0	0	0	0	0	1	12	32	76	85	80	82	77	89	94	69	56	27	7	0	0	0	0	94	0	33
4	0	0	0	0	0	0	1	18	57	81	101	117	136	166	160	158	128	95	52	13	0	0	0	0	166	0	53
5	0	0	0	0	0	0	9	35	122	367	238	491	616	635	609	534	435	45	24	12	1	0	0	0	635	0	174
6	0	0	0	0	0	0	8	89	236	372	488	574	619	633	584	504	312	137	50	14	1	0	0	0	633	0	193
7	0	0	0	0	0	0	2	26	51	103	140	198	228	272	281	271	218	102	39	15	0	0	0	0	281	0	81
8	0	0	0	0	0	0	1	7	23	47	60	65	81	91	85	96	83	82	34	12	0	0	0	0	96	0	32
9	0	0	0	0	0	0	5	36	69	268	465	604	465	396	351	188	177	95	40	21	2	0	0	0	604	0	133
10	0	0	0	0	0	0	7	51	127	277	264	375	353	350	285	213	141	79	47	28	2	0	0	0	375	0	108
11	0	0	0	0	0	0	17	109	137	169	203	203	169	135	91	111	82	46	22	7	0	0	0	0	203	0	63
12	0	0	0	0	0	0	5	28	53	84	109	134	169	178	146	87	69	63	25	10	1	0	0	0	178	0	48
13	0	0	0	0	0	0	12	79	262	359	459	639	708	703	656	575	436	90	37	18	3	0	0	0	708	0	210
14	0	0	0	0	0	1	23	135	276	418	535	616	664	680	646	574	467	81	25	16	3	0	0	0	680	0	215
15	0	0	0	0	0	1	23	151	298	435	551	639	680	696	660	585	472	101	37	21	4	0	0	0	696	0	223
16	0	0	0	0	0	1	23	55	108	106	157	204	223	218	206	241	201	134	81	24	2	0	0	0	241	0	83
17	0	0	0	0	0	0	5	13	13	272	91	385	623	280	439	382	214	191	118	35	4	0	0	0	623	0	128
18	0	0	0	0	0	1	33	145	285	468	560	643	683	691	673	597	490	112	24	16	5	0	0	0	691	0	226
19	0	0	0	0	0	2	51	179	311	444	558	644	681	692	649	587	491	126	29	20	6	0	0	0	692	0	228
20	0	0	0	0	0	1	14	43	65	74	142	141	334	162	117	70	64	72	25	5	1	0	0	0	334	0	55
21	0	0	0	0	0	1	7	28	68	145	316	143	101	191	469	304	154	83	30	13	2	0	0	0	469	0	86
22	0	0	0	0	0	3	32	92	149	149	168	296	478	631	665	571	325	149	100	34	4	0	0	0	665	0	160
23	0	0	0	0	0	1	15	26	25	63	269	705	669	668	679	589	499	160	33	31	15	0	0	0	705	0	185
24	0	0	0	0	0	1	12	46	97	145	128	240	245	338	356	271	202	130	71	32	7	0	0	0	356	0	97
25	0	0	0	0	0	9	67	89	141	252	191	396	315	151	178	106	83	46	28	17	3	0	0	0	396	0	86
26	0	0	0	0	0	4	42	123	226	266	315	416	411	347	375	390	341	183	83	53	12	0	0	0	416	0	150
27	0	0	0	0	0	4	38	121	187	303	379	308	373	565	505	549	470	183	61	25	17	0	0	0	565	0	170
28	0	0	0	0	0	4	34	80	120	65	77	254	354	344	368	433	297	233	83	38	19	0	0	0	433	0	117
29	0	0	0	0	0	11	73	218	368	496	595	678	708	734	703	632	535	195	36	23	11	1	0	0	734	0	251
30	0	0	0	0	0	10	86	147	349	474	619	665	569	627	458	338	212	196	36	28	10	0	0	0	665	0	201
Max.	**0**	**0**	**0**	**0**	**0**	**11**	**86**	**218**	**368**	**496**	**619**	**705**	**708**	**734**	**703**	**632**	**535**	**233**	**118**	**53**	**19**	**1**	**0**	**0**	**734**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**13**	**47**	**60**	**65**	**81**	**77**	**85**	**70**	**64**	**45**	**22**	**5**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**2**	**22**	**76**	**148**	**236**	**290**	**385**	**420**	**418**	**413**	**368**	**276**	**115**	**47**	**21**	**5**	**0**	**0**	**0**			**135**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

May 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	5	20	68	105	185	165	246	374	402	368	294	174	97	55	12	2	0	0	0	402	0	107
2	0	0	0	0	0	8	33	40	62	176	259	186	220	331	337	370	261	174	123	47	9	0	0	0	370	0	110
3	0	0	0	0	0	10	69	167	391	465	618	646	573	444	189	105	96	82	59	26	6	0	0	0	646	0	164
4	0	0	0	0	0	3	12	51	92	127	180	182	188	160	122	73	74	37	18	9	3	0	0	0	188	0	55
5	0	0	0	0	0	2	9	22	64	114	179	168	160	117	97	81	68	41	57	29	9	0	0	0	179	0	51
6	0	0	0	0	0	5	22	53	95	137	252	333	465	536	604	622	488	278	67	32	16	2	0	0	622	0	167
7	0	0	0	0	0	17	87	220	294	280	358	393	349	387	481	595	424	246	52	39	17	3	0	0	595	0	177
8	0	0	0	0	1	33	116	119	135	131	140	250	178	183	161	91	128	118	95	48	17	2	0	0	250	0	81
9	0	0	0	0	0	4	15	37	48	69	118	187	242	260	264	309	266	199	160	85	24	2	0	0	309	0	95
10	0	0	0	0	1	26	69	268	341	447	662	434	232	391	443	318	196	129	84	39	15	1	0	0	662	0	171
11	0	0	0	0	0	11	47	52	130	271	566	645	745	765	735	661	573	229	34	29	26	3	0	0	765	0	230
12	0	0	0	0	1	24	115	247	399	527	634	716	755	772	743	676	574	251	29	22	15	4	0	0	772	0	271
13	0	0	0	0	3	39	146	270	404	532	632	719	758	690	744	622	523	243	45	36	20	3	0	0	758	0	268
14	0	0	0	0	4	49	97	201	254	542	555	485	392	320	176	119	165	159	100	67	23	4	0	0	555	0	155
15	0	0	0	0	3	36	78	184	332	269	318	745	650	504	463	391	197	234	149	79	31	4	0	0	745	0	195
16	0	0	0	0	1	12	39	92	330	486	634	718	753	772	749	666	596	227	48	27	17	7	0	0	772	0	257
17	0	0	0	0	5	54	166	299	396	524	431	560	575	278	339	233	137	177	118	44	31	7	0	0	575	0	182
18	0	0	0	0	5	66	92	152	311	510	625	626	804	658	666	460	214	234	84	46	26	7	0	0	804	0	233
19	0	0	0	0	5	50	150	278	411	538	579	609	484	271	205	201	99	28	19	10	3	1	0	0	609	0	164
20	0	0	0	0	1	15	35	58	103	118	90	116	133	155	151	139	101	78	45	27	16	3	0	0	155	0	58
21	0	0	0	0	2	17	73	194	232	332	364	570	733	773	747	695	571	380	119	32	18	7	0	0	773	0	244
22	0	0	0	0	6	59	168	288	410	536	643	726	764	783	744	672	531	285	54	64	64	10	0	0	783	0	284
23	0	0	0	0	10	62	167	291	419	544	648	730	762	779	753	690	594	292	27	21	16	8	1	0	779	0	284
24	0	0	0	0	6	55	146	278	367	445	590	644	671	676	713	674	545	275	92	110	47	15	1	0	713	0	265
25	0	0	0	0	9	65	170	291	419	540	643	724	760	776	747	681	583	298	35	26	18	9	1	0	776	0	283
26	0	0	0	0	10	64	166	285	403	534	630	709	757	767	734	681	577	300	55	42	29	13	1	0	767	0	282
27	0	0	0	0	6	46	109	169	218	363	496	464	564	492	540	558	512	275	44	28	19	6	1	0	564	0	205
28	0	0	0	1	20	104	211	301	426	549	627	628	769	779	753	625	591	363	110	61	32	13	2	0	779	0	290
29	0	0	0	0	11	71	178	301	426	548	659	736	773	793	767	646	549	155	37	28	21	10	1	0	793	0	280
30	0	0	0	0	4	21	47	58	89	88	104	104	96	104	130	151	150	109	80	47	22	6	1	0	151	0	59
31	0	0	0	0	2	8	15	44	130	127	255	221	204	359	209	83	53	78	58	30	14	5	0	0	359	0	79
Max.	**0**	**0**	**0**	**1**	**20**	**104**	**211**	**301**	**426**	**549**	**662**	**745**	**804**	**793**	**767**	**695**	**596**	**380**	**160**	**110**	**64**	**15**	**2**	**0**	**804**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**22**	**48**	**69**	**90**	**104**	**96**	**104**	**97**	**73**	**53**	**28**	**18**	**9**	**2**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**4**	**34**	**93**	**173**	**266**	**357**	**440**	**491**	**512**	**499**	**480**	**425**	**342**	**196**	**69**	**40**	**20**	**5**	**0**	**0**			**185**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

June 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	4	30	132	184	285	408	410	446	590	741	650	678	586	307	48	56	25	12	2	0	741	0	233
2	0	0	0	1	14	75	180	295	425	544	649	729	766	792	761	688	586	315	52	38	27	13	2	0	792	0	290
3	0	0	0	1	13	74	178	304	453	471	474	545	765	786	768	689	608	326	36	29	24	12	2	0	786	0	273
4	0	0	0	1	15	77	181	319	451	578	686	795	801	818	687	703	627	329	60	45	21	12	3	0	818	0	300
5	0	0	0	1	14	89	196	292	375	469	565	701	729	719	541	727	492	346	48	34	21	12	2	0	729	0	266
6	0	0	0	1	16	88	194	316	444	564	667	741	780	797	771	707	467	231	82	67	34	11	3	0	797	0	291
7	0	0	0	0	2	9	25	31	32	49	98	96	73	97	92	84	51	33	29	22	12	5	0	0	98	0	35
8	0	0	0	0	1	7	15	30	51	76	88	122	111	171	133	89	113	67	48	23	19	5	0	0	171	0	49
9	0	0	0	0	2	7	15	27	45	102	157	150	150	107	163	129	74	71	29	4	3	0	0	0	163	0	51
10	0	0	0	0	2	4	12	16	22	27	124	271	142	120	183	135	103	49	23	21	11	5	0	0	271	0	53
11	0	0	0	0	2	10	18	50	48	58	59	112	115	85	83	92	85	69	39	27	10	3	0	0	115	0	40
12	0	0	0	0	2	12	23	38	67	73	107	102	113	115	146	113	80	42	49	29	16	5	0	0	146	0	47
13	0	0	0	0	1	8	17	37	46	79	126	232	439	665	639	579	327	238	149	93	40	12	2	0	665	0	155
14	0	0	0	0	3	18	44	68	104	232	241	162	135	148	139	174	254	179	126	78	36	14	1	0	254	0	90
15	0	0	0	1	17	68	105	147	157	241	355	423	421	160	160	149	100	55	66	60	31	6	1	0	423	0	113
16	0	0	0	0	4	11	18	32	34	97	139	86	163	247	186	166	98	101	62	36	33	12	2	0	247	0	64
17	0	0	0	0	3	25	74	75	190	323	266	305	98	202	198	162	231	115	113	67	36	17	1	0	323	0	104
18	0	0	0	0	4	18	30	86	96	107	89	109	185	157	113	91	92	64	55	30	16	4	1	0	185	0	56
19	0	0	0	1	4	19	47	123	208	156	189	304	250	201	226	235	97	52	46	55	43	15	2	0	304	0	95
20	0	0	0	1	19	76	121	247	357	432	255	126	116	84	127	332	491	352	117	58	40	17	4	0	491	0	140
21	0	0	0	1	17	47	79	131	306	559	616	754	780	671	714	670	497	283	31	40	37	19	3	0	780	0	261
22	0	0	0	0	3	17	19	15	30	48	71	71	90	114	148	111	80	84	82	71	46	20	5	0	148	0	47
23	0	0	0	0	3	20	51	87	107	111	181	415	362	364	490	448	398	384	129	45	23	15	3	0	490	0	151
24	0	0	0	1	22	104	159	299	446	569	674	735	817	792	744	605	608	335	105	84	80	38	4	0	817	0	301
25	0	0	0	1	9	67	162	183	373	342	289	404	521	794	661	746	609	372	70	59	28	16	4	0	794	0	238
26	0	0	0	1	5	25	43	96	167	73	123	104	67	63	119	124	112	83	70	71	34	14	4	0	167	0	58
27	0	0	0	1	25	116	202	338	434	554	656	736	771	794	769	709	618	363	28	23	18	11	3	0	794	0	299
28	0	0	0	1	17	85	194	313	452	560	655	733	744	748	720	490	555	380	63	51	29	19	4	0	748	0	284
29	0	0	0	1	20	73	108	123	442	220	371	654	660	301	87	93	70	38	20	18	5	2	0	0	660	0	138
30	0	0	0	0	1	10	30	85	141	154	154	329	654	546	338	328	297	116	67	37	21	9	2	0	654	0	138
Max.	**0**	**0**	**0**	**1**	**25**	**116**	**202**	**338**	**453**	**578**	**686**	**795**	**817**	**818**	**771**	**746**	**627**	**384**	**149**	**93**	**80**	**38**	**5**	**0**	**818**		
Min.	**0**	**0**	**0**	**0**	**1**	**4**	**12**	**15**	**22**	**27**	**59**	**71**	**67**	**63**	**83**	**84**	**51**	**33**	**20**	**4**	**3**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**1**	**9**	**43**	**89**	**146**	**226**	**276**	**318**	**383**	**414**	**413**	**385**	**368**	**313**	**193**	**65**	**46**	**27**	**12**	**2**	**0**			**155**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Solar (Watts/m^2)

July 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	1	13	85	197	284	417	548	639	743	782	786	778	673	541	357	35	28	20	12	4	0	786	0	289
2	0	0	0	1	15	86	189	310	436	556	662	741	775	793	764	702	606	366	63	49	31	19	3	0	793	0	299
3	0	0	0	1	8	19	34	40	79	134	141	147	156	173	161	146	116	181	51	31	29	13	3	0	181	0	69
4	0	0	0	1	12	74	175	345	359	639	713	655	504	364	300	244	221	168	57	27	28	18	2	0	713	0	204
5	0	0	0	0	1	11	20	29	78	173	92	90	119	123	156	167	99	98	77	52	12	3	1	0	173	0	58
6	0	0	0	0	2	18	22	77	124	180	170	295	455	339	209	193	223	194	114	44	5	2	0	0	455	0	111
7	0	0	0	0	1	4	12	43	51	61	79	66	51	40	41	40	39	48	40	27	9	2	0	0	79	0	27
8	0	0	0	0	2	13	47	67	175	578	724	750	784	798	681	531	642	374	32	25	19	11	2	0	798	0	261
9	0	0	0	0	9	53	159	269	281	497	360	353	380	370	450	312	219	213	36	42	28	6	0	0	497	0	168
10	0	0	0	0	1	9	20	38	52	58	103	162	256	285	212	156	85	51	49	14	5	2	0	0	285	0	65
11	0	0	0	0	2	14	25	43	117	250	126	95	160	210	151	87	141	192	157	140	57	21	2	0	250	0	83
12	0	0	0	0	5	39	126	242	415	531	640	726	762	781	738	692	594	366	76	56	27	18	2	0	781	0	285
13	0	0	0	0	8	50	142	295	433	545	528	304	405	541	415	630	423	213	101	72	38	21	4	0	630	0	215
14	0	0	0	0	4	37	151	301	428	530	635	714	735	589	634	350	230	125	67	48	46	19	1	0	735	0	235
15	0	0	0	0	3	22	60	247	438	600	568	627	675	675	705	606	504	240	83	48	16	7	0	0	705	0	255
16	0	0	0	0	0	2	4	9	13	21	32	46	108	138	148	128	140	119	82	41	18	6	0	0	148	0	44
17	0	0	0	0	0	3	50	43	67	61	92	111	79	80	112	100	70	54	27	13	9	2	0	0	112	0	41
18	0	0	0	0	0	4	14	24	35	50	41	55	52	70	80	67	69	51	44	29	13	5	0	0	80	0	29
19	0	0	0	0	4	26	58	84	168	344	303	221	174	237	223	241	162	160	115	82	38	8	0	0	344	0	110
20	0	0	0	0	4	24	21	49	77	89	98	139	161	87	95	108	176	71	61	27	8	5	0	0	176	0	54
21	0	0	0	0	2	14	32	55	66	128	138	142	153	105	136	94	152	110	72	28	31	4	0	0	153	0	61
22	0	0	0	0	1	7	17	26	36	85	98	101	118	91	43	45	41	50	45	22	12	3	0	0	118	0	35
23	0	0	0	0	0	4	16	20	30	56	96	103	160	195	191	129	67	76	65	32	15	4	0	0	195	0	52
24	0	0	0	0	0	4	21	32	53	80	98	113	153	79	53	39	38	33	23	14	8	2	0	0	153	0	35
25	0	0	0	0	0	3	14	20	46	113	137	167	168	208	255	234	168	120	129	88	40	4	0	0	255	0	80
26	0	0	0	0	2	35	49	82	206	428	571	652	604	576	708	450	595	306	32	26	18	8	0	0	708	0	223
27	0	0	0	0	2	33	134	250	375	500	610	637	713	746	720	670	580	329	30	33	24	9	0	0	746	0	266
28	0	0	0	0	2	18	130	248	359	484	562	575	674	646	601	248	297	187	82	50	18	6	0	0	674	0	216
29	0	0	0	0	1	8	12	114	406	250	333	350	595	705	436	300	182	115	67	55	23	5	0	0	705	0	165
30	0	0	0	0	1	38	130	83	288	457	349	134	171	205	172	175	221	160	90	44	24	5	0	0	457	0	114
31	0	0	0	0	1	24	122	243	351	419	537	511	575	567	568	380	238	160	82	63	35	5	0	0	575	0	203
Max.	**0**	**0**	**0**	**1**	**15**	**86**	**197**	**345**	**438**	**639**	**724**	**750**	**784**	**798**	**778**	**702**	**642**	**374**	**157**	**140**	**57**	**21**	**4**	**0**	**798**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**9**	**13**	**21**	**32**	**46**	**51**	**40**	**41**	**39**	**38**	**33**	**23**	**13**	**5**	**2**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**3**	**25**	**71**	**129**	**208**	**305**	**331**	**339**	**376**	**374**	**353**	**288**	**254**	**171**	**67**	**44**	**23**	**8**	**1**	**0**			**140**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1006	1007.8
2	1010	1010	1010	1010	1010	1009	1010	1009	1009	1009	1009	1009	1009	1009	1008	1008	1007	1007	1006	1006	1006	1005	1005	1005	1010	1005	1008.1
3	1004	1004	1003	1002	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1003	1003	1003	1003	1003	1004	1004	1002	1002.6
4	1004	1004	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1009	1009	1009	1004	1006.2
5	1010	1010	1010	1011	1011	1012	1012	1013	1013	1014	1014	1015	1015	1015	1016	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1010	1014.4
6	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1019	1021.3
7	1023	1023	1023	1023	1023	1024	1024	1024	1025	1025	1025	1025	1025	1025	1025	1024	1024	1024	1024	1024	1024	1025	1025	1025	1025	1023	1024.1
8	1025	1025	1025	1025	1025	1025	1025	1025	1026	1026	1026	1026	1025	1025	1025	1025	1024	1024	1024	1024	1024	1024	1024	1024	1026	1024	1024.8
9	1024	1024	1024	1024	1024	1024	1024	1025	1025	1025	1025	1025	1025	1025	1026	1026	1025	1025	1025	1025	1025	1025	1025	1025	1026	1024	1024.8
10	1025	1025	1025	1025	1025	1025	1025	1025	1025	1026	1026	1026	1026	1026	1025	1025	1025	1025	1025	1024	1024	1024	1024	1024	1026	1024	1025.0
11	1024	1024	1024	1024	1024	1024	1025	1025	1025	1025	1025	1025	1025	1024	1024	1024	1024	1023	1023	1023	1023	1023	1023	1023	1025	1023	1024.1
12	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1021	1021	1021	1021	1021	1023	1021	1022.5
13	1021	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1018	1018	1017	1017	1017	1016	1016	1016	1015	1016	1015	1021	1015	1018.2
14	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1012	1012	1012	1012	1011	1011	1012	1012	1012	1015	1011	1013.0
15	1012	1012	1012	1012	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1016	1016	1012	1013.5
16	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1015	1015	1017	1015	1016.0
17	1014	1013	1012	1012	1010	1010	1009	1008	1007	1007	1006	1005	1005	1004	1003	1003	1002	1002	1002	1001	1002	1002	1002	1002	1014	1001	1005.9
18	1002	1002	1001	1001	1001	1001	1001	1001	1001	1001	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1001	1001.1
19	1002	1002	1002	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1002	1002	1002	1002	1002	1002	1002	1001	1001.6
20	1002	1002	1002	1003	1002	1003	1003	1003	1003	1004	1004	1005	1005	1005	1004	1005	1005	1005	1004	1004	1004	1004	1004	1004	1005	1002	1003.6
21	1004	1003	1003	1003	1001	1002	1002	1001	1002	1002	1003	1002	1003	1004	1005	1005	1005	1006	1006	1007	1008	1008	1009	1009	1009	1001	1004.3
22	1009	1009	1009	1009	1010	1010	1009	1010	1010	1010	1011	1011	1011	1011	1010	1009	1009	1008	1008	1008	1007	1006	1005	1004	1011	1004	1008.8
23	1003	1003	1002	1001	1000	999	1000	998	998	998	999	999	999	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1003	998	1000.0
24	1000	1000	999	1000	1000	1000	1001	1001	1002	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	999	1002.6
25	1005	1005	1005	1004	1005	1005	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1003	1004.0
26	1005	1005	1006	1006	1007	1007	1007	1008	1009	1009	1010	1010	1011	1011	1011	1011	1011	1012	1012	1013	1014	1015	1015	1016	1016	1005	1010.0
27	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1020	1020	1019	1019	1019	1018	1018	1018	1018	1018	1017	1017	1017	1017	1020	1017	1018.1
28	1016	1015	1015	1015	1014	1014	1014	1012	1012	1012	1012	1011	1010	1010	1009	1008	1008	1006	1005	1006	1005	1005	1004	1004	1016	1004	1010.0
29	1004	1004	1003	1003	1002	1001	1002	1002	1002	1002	1002	1002	1002	1002	1001	1002	1002	1002	1001	1002	1002	1002	1002	1002	1004	1001	1002.0
30	1002	1002	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1006	1006	1006	1007	1007	1002	1003.8
31	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1007	1007.8
Max.	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1026**		
Min.	**1000**	**1000**	**999**	**1000**	**1000**	**999**	**1000**	**998**	**998**	**998**	**999**	**999**	**999**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**		**998**	
Avg.	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1012**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**			**1011.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1011	1009	1009.9
2	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1005	1005	1009	1005	1007.2
3	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1003	1003	1002	1002	1001	1000	1000	999	999	998	998	998	1005	998	1002.5
4	998	998	998	998	998	998	998	998	999	999	999	1000	1000	1001	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	1003	998	1000.0
5	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1001	1001	1001	1001	1000	999	999	998	997	997	1004	997	1001.4
6	997	997	997	997	996	996	997	997	997	997	997	997	997	998	998	999	999	999	999	999	1000	1000	1000	1001	1001	996	997.9
7	1002	1002	1003	1003	1004	1004	1005	1005	1006	1007	1008	1008	1009	1010	1010	1011	1011	1012	1013	1014	1015	1015	1016	1017	1017	1002	1008.7
8	1018	1019	1019	1019	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1020	1020	1020	1021	1020	1020	1020	1020	1020	1020	1021	1018	1019.9
9	1019	1019	1017	1016	1016	1015	1014	1014	1013	1013	1012	1012	1011	1011	1009	1009	1008	1008	1008	1008	1008	1008	1009	1009	1019	1008	1011.8
10	1010	1011	1012	1013	1013	1014	1015	1016	1015	1016	1017	1017	1018	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1010	1015.4
11	1016	1017	1017	1017	1016	1016	1016	1016	1016	1016	1015	1015	1014	1014	1013	1013	1013	1012	1012	1012	1012	1012	1012	1011	1017	1011	1014.2
12	1010	1010	1009	1009	1009	1009	1008	1009	1009	1010	1010	1009	1011	1011	1011	1011	1011	1010	1010	1011	1012	1013	1014	1014	1014	1008	1010.4
13	1015	1016	1016	1017	1016	1017	1017	1017	1017	1017	1017	1018	1017	1017	1017	1016	1017	1016	1016	1015	1015	1015	1016	1015	1018	1015	1016.3
14	1016	1015	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1017	1014	1015.8
15	1014	1013	1012	1011	1011	1010	1009	1009	1008	1009	1008	1008	1008	1007	1006	1005	1005	1004	1003	1003	1003	1003	1002	1002	1014	1002	1007.2
16	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	999	999	1002	999	1000.8
17	999	998	998	997	996	996	995	995	995	994	994	994	994	994	995	994	995	995	995	995	995	995	995	995	999	994	995.2
18	995	995	995	995	994	994	994	994	994	994	994	994	994	993	993	993	993	993	993	993	994	994	995	995	995	993	993.9
19	996	996	996	997	997	998	998	998	999	999	1000	1001	1001	1002	1003	1003	1004	1004	1006	1006	1007	1008	1008	1009	1009	996	1001.5
20	1010	1011	1012	1012	1013	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1019	1019	1020	1020	1020	1020	1021	1021	1021	1021	1010	1016.8
21	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1020	1020	1019	1019	1019	1019	1019	1019	1019	1022	1019	1020.9
22	1018	1018	1017	1017	1017	1016	1016	1015	1015	1014	1014	1013	1012	1011	1009	1009	1008	1007	1007	1008	1008	1008	1008	1008	1018	1007	1012.2
23	1009	1009	1009	1009	1009	1008	1008	1007	1007	1007	1005	1005	1005	1004	1002	1001	1000	997	995	994	992	994	994	995	1009	992	1002.7
24	997	997	999	1000	1001	1002	1002	1002	1003	1004	1005	1005	1005	1006	1006	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	997	1004.5
25	1010	1010	1010	1010	1010	1010	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1014	1015	1010	1012.3
26	1014	1014	1014	1013	1013	1013	1013	1013	1013	1012	1012	1011	1011	1010	1008	1007	1006	1004	1003	1002	1001	999	998	996	1014	996	1008.3
27	995	994	992	990	988	986	985	984	983	981	980	979	978	976	975	974	975	974	975	975	975	976	976	976	995	974	980.9
28	976	975	975	976	977	977	977	978	979	980	981	981	982	982	983	983	983	984	984	985	986	986	986	987	987	975	980.9
29	987	987	988	988	989	989	989	989	990	990	991	991	991	991	990	991	991	991	991	991	991	991	991	991	991	987	989.9
30	991	991	991	991	991	991	990	991	991	991	991	991	991	991	990	990	990	991	991	991	991	991	992	992	992	990	990.9
Max.	**1021**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1021**	**1020**	**1020**	**1021**	**1020**	**1020**	**1020**	**1021**	**1021**	**1021**	**1022**		
Min.	**976**	**975**	**975**	**976**	**977**	**977**	**977**	**978**	**979**	**980**	**980**	**979**	**978**	**976**	**975**	**974**	**975**	**974**	**975**	**975**	**975**	**976**	**976**	**976**		**974**	
Avg.	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1004**	**1004**	**1004**	**1004**	**1004**	**1005**	**1005**			**1005.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	992	992	993	993	993	994	995	996	997	997	999	1000	1001	1001	1002	1003	1004	1005	1006	1007	1007	1008	1009	1010	1010	992	1000.2
2	1010	1011	1011	1012	1012	1012	1013	1013	1014	1014	1014	1015	1014	1014	1014	1014	1014	1014	1015	1015	1015	1014	1015	1015	1015	1010	1013.4
3	1015	1015	1015	1014	1014	1013	1013	1012	1012	1011	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1008	1007	1008	1007	1015	1007	1010.4
4	1008	1007	1006	1006	1005	1005	1004	1004	1004	1004	1003	1002	1001	1000	999	998	997	996	994	993	993	992	991	990	1008	990	1000.1
5	989	988	988	987	986	985	984	984	984	983	983	984	984	984	984	985	985	986	986	987	988	988	989	990	990	983	985.8
6	991	991	992	993	993	994	995	995	996	996	997	997	997	997	997	997	997	997	996	996	997	996	996	996	997	991	995.3
7	996	996	995	995	995	994	994	994	994	994	994	995	995	995	994	994	994	994	995	994	994	995	995	994	996	994	994.6
8	995	994	994	994	994	994	993	993	993	993	993	994	994	993	993	993	993	993	994	994	993	994	994	993	995	993	993.6
9	993	993	993	993	992	992	991	991	990	990	990	990	989	988	988	987	987	987	986	986	985	985	985	985	993	985	989.0
10	985	986	985	985	986	986	985	986	986	987	987	987	987	988	987	988	988	988	988	988	988	988	988	988	988	985	986.8
11	988	988	988	988	987	987	987	987	987	987	987	987	987	987	986	987	987	987	988	988	987	988	988	988	988	986	987.3
12	988	989	989	989	989	989	990	991	991	991	992	993	993	993	994	994	994	995	996	996	996	996	997	998	998	988	992.6
13	998	999	1000	1000	1001	1001	1002	1003	1004	1005	1006	1006	1007	1007	1008	1009	1009	1010	1010	1011	1012	1012	1013	1013	1013	998	1006.1
14	1013	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1012	1011	1011	1015	1011	1013.1
15	1010	1009	1008	1008	1007	1006	1006	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1010	1004	1005.4
16	1005	1005	1005	1004	1005	1005	1005	1006	1005	1006	1006	1006	1006	1006	1005	1005	1004	1004	1004	1004	1003	1002	1002	1001	1006	1001	1004.4
17	1000	999	997	996	995	994	993	992	990	989	989	988	987	987	987	988	988	989	989	990	991	991	991	991	1000	987	991.1
18	991	991	991	992	993	994	995	996	997	998	998	999	1000	1000	1000	1001	1001	1002	1001	1001	1002	1001	1001	1001	1002	991	997.7
19	1000	999	998	998	998	998	998	998	999	999	999	999	999	999	999	999	999	1000	999	999	999	999	999	998	1000	998	998.9
20	999	998	998	998	998	997	997	997	997	997	997	996	995	995	994	993	992	992	991	991	991	990	989	989	999	989	994.7
21	988	988	987	987	986	986	985	985	985	985	984	984	984	984	983	983	983	984	983	983	983	983	983	983	988	983	984.5
22	981	981	980	979	979	978	977	977	977	976	976	975	975	976	976	976	977	977	978	978	978	978	979	980	981	975	977.7
23	979	979	979	979	979	978	979	979	978	978	979	979	979	980	981	981	982	984	985	987	988	989	990	991	991	978	981.7
24	992	993	994	994	995	995	996	996	997	998	998	997	998	997	997	996	996	995	994	995	995	995	995	994	998	992	995.6
25	995	995	994	994	994	994	994	994	995	995	995	995	995	994	994	994	995	995	995	995	996	996	996	997	997	994	994.8
26	997	997	998	998	999	999	1000	1001	1001	1001	1002	1002	1002	1003	1003	1003	1004	1004	1005	1005	1005	1006	1006	1006	1006	997	1001.9
27	1006	1006	1006	1005	1005	1005	1005	1005	1004	1004	1004	1004	1003	1003	1002	1002	1001	1001	1001	1000	1000	999	999	998	1006	998	1002.7
28	998	997	997	997	996	996	996	995	996	995	995	995	995	995	994	994	994	994	994	994	994	994	994	995	998	994	995.3
29	995	995	995	995	995	995	995	996	996	997	997	998	998	998	998	999	999	1000	1000	1001	1001	1002	1003	1003	1003	995	997.8
30	1003	1003	1003	1003	1004	1004	1004	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1010	1003	1006.2
31	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1008	1007	1007	1007	1007	1007	1007	1007	1006	1006	1010	1006	1008.4
Max.	**1015**	**1015**	**1015**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1015**	**1015**	**1015**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1015**	**1015**	**1015**	**1014**	**1015**	**1015**	**1015**		
Min.	**979**	**979**	**979**	**979**	**979**	**978**	**977**	**977**	**977**	**976**	**976**	**975**	**975**	**976**	**976**	**976**	**977**	**977**	**978**	**978**	**978**	**978**	**979**	**980**		**975**	
Avg.	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**998**	**998**			**997.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1005	1005	1004	1004	1003	1002	1002	1002	1002	1002	1001	1001	1001	1001	1000	1000	1000	1000	999	999	999	999	999	999	1005	999	1001.3
2	999	999	999	998	998	998	998	998	998	998	998	998	997	997	996	996	996	996	995	995	995	995	995	995	999	995	997.0
3	995	994	994	994	994	994	994	994	994	995	995	996	996	996	997	996	997	998	999	999	1000	1000	1001	1002	1002	994	996.5
4	1002	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1006	1005	1005	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1002	1005.1
5	1009	1009	1009	1010	1010	1010	1011	1011	1012	1013	1013	1013	1012	1012	1012	1013	1013	1014	1014	1014	1015	1014	1014	1014	1015	1009	1012.1
6	1013	1012	1010	1008	1006	1004	1002	1001	1000	1001	1001	1002	1001	1003	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1013	1000	1004.1
7	1003	1002	1001	1000	1000	999	998	997	996	995	994	994	993	992	991	990	990	990	989	989	989	989	988	988	1003	988	994.0
8	987	987	986	986	985	984	983	983	982	982	982	981	980	980	979	979	978	978	978	977	977	977	976	976	987	976	980.9
9	976	975	975	975	974	974	974	974	975	975	975	975	975	975	975	975	975	976	976	977	977	978	979	979	979	974	975.5
10	980	980	980	981	981	982	982	983	983	984	985	985	986	986	987	987	988	989	990	990	992	992	993	993	993	980	985.8
11	994	994	994	995	995	995	996	996	996	997	997	998	998	998	998	998	999	999	999	1000	1000	1001	1001	1002	1002	994	997.5
12	1003	1003	1003	1003	1003	1004	1004	1005	1006	1006	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1010	1010	1010	1010	1010	1003	1006.7
13	1011	1011	1011	1012	1012	1012	1013	1014	1014	1015	1016	1016	1017	1017	1017	1018	1019	1019	1019	1020	1020	1020	1021	1021	1021	1011	1016.0
14	1021	1021	1021	1020	1019	1019	1018	1017	1016	1016	1015	1015	1013	1011	1010	1009	1008	1007	1006	1006	1005	1004	1003	1003	1021	1003	1012.6
15	1003	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	1007	1006	1007	1006	1006	1006	1007	1002	1004.7
16	1006	1004	1003	1002	1000	999	998	996	996	996	996	996	995	994	994	993	992	992	991	990	990	989	988	988	1006	988	995.3
17	988	988	987	987	986	986	986	987	988	989	989	990	991	992	993	994	994	995	995	995	996	996	995	995	996	986	990.9
18	994	993	991	989	986	984	981	979	976	975	974	973	972	970	969	969	969	970	971	974	976	977	978	979	994	969	977.9
19	980	982	983	983	985	986	986	988	989	991	993	994	996	997	998	999	1000	1002	1003	1004	1005	1006	1007	1008	1008	980	994.3
20	1008	1008	1008	1008	1007	1007	1006	1006	1005	1005	1004	1002	1001	1001	1000	1000	1000	1000	1000	1000	999	999	999	999	1008	999	1003.0
21	998	998	997	997	997	996	996	996	996	996	996	996	997	997	996	996	997	998	997	997	998	998	998	999	999	996	996.8
22	999	999	999	999	999	999	999	999	999	999	998	998	996	995	994	994	992	991	989	988	987	985	985	983	999	983	994.4
23	982	982	981	980	980	980	979	981	982	983	984	986	990	991	991	992	994	995	996	995	996	996	996	995	996	979	987.8
24	994	993	993	991	990	989	988	988	986	987	984	983	983	983	982	982	982	983	984	985	986	987	987	988	994	982	986.6
25	989	989	990	991	991	991	993	994	994	996	997	997	998	999	1000	1001	1001	1003	1003	1004	1005	1006	1006	1007	1007	989	997.7
26	1007	1008	1009	1009	1009	1010	1011	1012	1013	1014	1014	1015	1015	1016	1016	1017	1018	1019	1019	1020	1021	1021	1022	1022	1022	1007	1014.8
27	1023	1023	1024	1024	1025	1025	1025	1025	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1028	1028	1028	1028	1028	1029	1029	1023	1026.3
28	1029	1029	1029	1029	1029	1029	1029	1029	1030	1030	1030	1030	1030	1030	1030	1030	1029	1029	1029	1029	1029	1028	1028	1028	1030	1028	1029.2
29	1028	1028	1027	1026	1026	1025	1025	1024	1024	1024	1024	1023	1023	1023	1022	1022	1021	1022	1022	1022	1022	1022	1022	1022	1028	1021	1023.8
30	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1021	1020	1020	1019	1019	1018	1018	1018	1018	1018	1017	1017	1017	1022	1017	1019.9
Max.	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1030**	**1030**	**1030**	**1030**	**1030**	**1030**	**1030**	**1030**	**1029**	**1029**	**1029**	**1029**	**1029**	**1028**	**1028**	**1029**	**1030**		
Min.	**976**	**975**	**975**	**975**	**974**	**974**	**974**	**974**	**975**	**975**	**974**	**973**	**972**	**970**	**969**	**969**	**969**	**970**	**971**	**974**	**976**	**977**	**976**	**976**		**969**	
Avg.	**1002**	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1002**	**1002**	**1002**	**1002**			**1000.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1013	1013	1012	1012	1012	1011	1011	1011	1010	1010	1017	1010	1013.9
2	1009	1009	1009	1008	1007	1007	1006	1006	1006	1006	1007	1006	1006	1006	1005	1005	1005	1005	1004	1004	1005	1005	1004	1005	1009	1004	1005.9
3	1005	1006	1008	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011	1011	1012	1012	1013	1014	1015	1015	1005	1009.6
4	1015	1016	1016	1016	1016	1017	1017	1017	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1015	1017.9
5	1018	1018	1018	1018	1017	1017	1016	1016	1016	1016	1015	1015	1014	1013	1012	1011	1010	1009	1008	1007	1005	1004	1004	1002	1018	1002	1012.5
6	1001	1000	1000	999	998	997	996	995	996	996	996	996	996	997	997	997	998	998	998	998	997	997	997	996	1001	995	997.3
7	996	994	992	989	987	984	983	982	980	978	977	975	973	971	971	970	969	969	970	970	970	970	971	972	996	969	977.5
8	972	973	974	975	976	978	979	979	980	982	983	984	984	985	985	985	986	986	986	986	986	987	988	988	988	972	981.9
9	988	988	988	988	987	987	987	986	985	984	983	983	982	982	982	982	983	984	985	986	987	988	989	990	990	982	985.7
10	991	992	992	993	994	994	995	996	996	997	998	999	999	1000	1000	1000	1001	1001	1001	1001	1002	1001	1001	1001	1002	991	997.7
11	1000	999	998	998	998	998	998	999	999	999	1000	1001	1001	1001	1002	1002	1003	1004	1004	1002	1004	1004	1004	1005	1005	998	1000.9
12	1005	1006	1006	1007	1008	1010	1010	1011	1012	1013	1014	1015	1014	1015	1016	1015	1016	1017	1017	1017	1018	1018	1018	1018	1018	1005	1013.2
13	1018	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1017	1015	1015	1014	1013	1013	1012	1011	1011	1010	1009	1019	1009	1015.8
14	1008	1007	1006	1004	1003	1001	1000	998	998	997	995	993	991	990	990	989	989	989	989	990	990	990	990	990	1008	989	995.4
15	991	991	991	989	988	986	985	983	982	980	981	980	979	979	979	978	979	978	978	979	979	980	980	981	991	978	982.3
16	980	980	980	981	981	982	982	983	983	983	983	984	984	984	984	985	985	986	987	988	989	989	990	991	991	980	984.4
17	992	993	993	993	994	995	995	996	997	997	998	999	999	1000	1001	1003	1004	1004	1004	1005	1005	1006	1007	1007	1007	992	999.4
18	1006	1005	1005	1005	1005	1006	1007	1007	1008	1009	1010	1011	1011	1011	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1011	1005	1008.4
19	1008	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1005	1005	1004	1004	1004	1003	1003	1003	1002	1002	1001	1000	1000	1008	1000	1004.5
20	998	998	996	995	994	993	992	991	990	989	988	987	986	985	984	983	982	982	981	980	980	979	979	979	998	979	987.1
21	978	978	978	978	977	977	977	977	977	978	978	978	978	978	978	978	978	978	977	978	978	978	978	978	978	977	977.7
22	979	979	980	980	980	981	981	981	982	983	983	984	984	984	984	984	985	985	986	986	987	987	988	988	988	979	983.5
23	988	989	989	989	989	989	989	990	990	990	990	990	990	990	990	990	990	990	989	989	989	989	989	989	990	988	989.5
24	989	989	988	987	986	986	985	984	984	983	983	982	982	981	980	979	979	978	978	978	978	978	978	979	989	978	982.3
25	979	979	979	979	980	980	980	980	980	980	981	980	980	980	979	978	978	978	977	977	977	977	977	978	981	977	979.0
26	978	978	979	979	980	979	979	979	979	979	980	980	981	980	980	981	981	982	982	982	982	982	982	982	982	978	980.2
27	981	981	981	980	980	980	979	979	979	980	979	979	978	978	977	978	978	977	977	977	978	979	979	980	981	977	978.9
28	980	980	979	980	980	980	980	980	980	980	979	978	978	977	977	976	976	975	975	975	975	975	975	974	980	974	977.6
29	974	974	974	975	975	976	977	978	979	980	980	980	979	978	978	978	978	978	979	978	977	977	977	976	980	974	977.2
30	975	974	973	973	972	971	970	970	969	969	968	968	967	967	967	967	968	968	968	969	969	969	969	969	975	967	969.5
31	970	970	970	971	971	971	971	972	972	973	973	973	973	973	973	973	973	974	974	974	974	974	975	975	975	970	972.5
Max.	**1018**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1018**	**1018**	**1018**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**		
Min.	**970**	**970**	**970**	**971**	**971**	**971**	**970**	**970**	**969**	**969**	**968**	**968**	**967**	**967**	**967**	**967**	**968**	**968**	**968**	**969**	**969**	**969**	**969**	**969**		**967**	
Avg.	**993**	**993**	**993**	**993**	**993**	**993**	**992**	**992**	**992**	**992**	**993**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**	**992**			**992.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	975	975	975	976	976	977	977	977	977	977	978	978	978	978	978	977	978	978	978	978	978	978	978	979	979	975	977.2
2	979	979	979	979	979	980	980	981	981	982	983	983	984	984	984	985	985	987	988	989	990	991	991	993	993	979	984.0
3	993	994	995	996	996	997	997	998	999	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1004	1004	1005	1005	1006	1006	993	1000.3
4	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1006	1005	1005	1004	1009	1004	1007.1
5	1003	1002	1001	1001	1000	999	998	998	997	997	997	996	995	995	994	993	993	993	993	993	993	993	994	994	1003	993	996.3
6	994	994	994	994	994	994	994	994	994	995	995	995	995	995	995	995	995	995	995	995	995	994	994	994	995	994	994.6
7	994	994	993	993	992	991	990	989	988	988	988	988	987	987	987	987	987	986	985	985	985	984	984	984	994	984	988.1
8	983	983	982	983	983	983	983	983	983	983	984	983	983	983	983	983	982	982	982	982	982	982	982	982	984	982	982.6
9	982	982	982	982	981	981	982	981	981	982	982	982	982	982	982	982	983	983	983	983	983	983	983	984	984	981	982.3
10	984	984	984	984	984	985	985	985	986	986	987	987	987	987	988	989	989	989	990	990	990	991	991	992	992	984	987.2
11	992	993	993	993	994	994	995	995	995	996	996	997	997	997	997	997	997	998	998	999	999	999	1000	1000	1000	992	996.3
12	1000	1001	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1000	1002.3
13	1002	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1002	1003	1001	1001.9
14	1002	1002	1002	1002	1002	1002	1002	1001	1002	1002	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	999	999	999	999	1002	999	1000.7
15	999	999	999	998	998	998	998	998	998	998	997	998	997	997	997	997	997	997	997	997	997	997	997	997	999	997	997.6
16	997	997	997	997	996	996	996	996	996	996	997	996	996	997	996	996	997	997	997	997	997	996	996	996	997	996	996.4
17	996	996	996	996	995	995	995	995	995	996	996	996	996	996	995	996	997	997	997	998	998	999	999	1000	1000	995	996.5
18	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1005	1005	1005	1006	1006	1007	1007	1007	1001	1003.8
19	1007	1007	1008	1008	1008	1007	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1007	1007	1009	1007	1008.1
20	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1002	1002	1001	1000	999	998	997	997	996	995	995	994	993	991	1007	991	1000.0
21	990	988	987	985	984	983	981	981	980	980	979	979	978	977	976	975	975	974	974	974	975	975	976	976	990	974	979.2
22	979	980	980	982	983	987	988	988	990	991	993	993	994	995	997	998	1000	1000	1001	1002	1003	1005	1007	1008	1008	979	993.5
23	1009	1010	1011	1013	1013	1014	1015	1016	1016	1017	1018	1018	1018	1019	1018	1018	1018	1018	1019	1019	1018	1018	1018	1018	1019	1009	1016.3
24	1018	1017	1017	1016	1016	1015	1015	1014	1013	1013	1013	1012	1012	1011	1010	1010	1009	1008	1008	1007	1006	1006	1006	1005	1018	1005	1011.5
25	1004	1004	1003	1002	1001	1001	999	999	999	999	998	998	997	997	997	997	998	998	998	999	999	1000	1000	1001	1004	997	999.5
26	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1003	1003	1003	1003	1003	1002	1002	1002	1001	1001	1001	1001	1001	1001	1004	1001	1002.1
27	1001	1001	1002	1002	1001	1001	1002	1000	1000	1000	1001	1000	1000	1000	1000	1000	999	1000	1000	999	999	998	998	998	1002	998	1000.2
28	996	995	995	994	993	991	991	991	991	990	990	991	991	990	991	991	991	991	991	992	992	992	993	993	996	990	991.9
29	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	992	992	992	992	992	992	991	991	993	991	992.6
30	991	991	990	990	989	988	988	987	987	986	987	986	986	985	985	985	985	984	984	984	984	984	983	983	991	983	986.3
31	983	983	983	983	982	982	981	981	981	981	981	981	980	980	979	979	979	979	978	978	978	977	977	977	983	977	980.0
Max.	**1018**	**1017**	**1017**	**1016**	**1016**	**1015**	**1015**	**1016**	**1016**	**1017**	**1018**	**1018**	**1018**	**1019**	**1018**	**1018**	**1018**	**1018**	**1019**	**1019**	**1018**	**1018**	**1018**	**1018**	**1019**		
Min.	**975**	**975**	**975**	**976**	**976**	**977**	**977**	**977**	**977**	**977**	**978**	**978**	**978**	**977**	**976**	**975**	**975**	**974**	**974**	**974**	**975**	**975**	**976**	**976**		**974**	
Avg.	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**996**	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**996**	**996**			**995.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	977	976	976	976	976	976	976	976	976	977	977	978	978	978	979	979	981	981	983	983	983	984	985	986	986	976	979.1
2	987	988	989	990	990	991	992	993	994	995	995	997	997	998	998	999	999	1000	1000	1000	1001	1002	1001	1002	1002	987	995.6
3	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1006	1006	1006	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1007	1003	1004.8
4	1004	1003	1003	1002	1001	1001	1001	1000	1000	999	998	997	997	996	995	994	993	993	993	992	992	991	990	989	1004	989	996.8
5	988	988	988	987	986	985	984	982	982	981	981	981	981	981	980	979	978	976	975	972	971	970	970	970	988	970	979.7
6	970	969	968	967	966	963	963	963	963	964	965	967	968	970	973	975	976	977	978	979	980	982	983	985	985	963	971.3
7	985	986	986	987	987	988	989	989	990	992	992	993	994	995	996	997	998	999	1001	1002	1004	1005	1007	1008	1008	985	994.6
8	1009	1010	1011	1010	1008	1007	1005	1004	1004	1004	1007	1009	1012	1014	1015	1016	1017	1020	1021	1020	1020	1020	1018	1018	1021	1004	1012.5
9	1016	1015	1013	1011	1008	1005	1002	999	997	995	994	993	991	991	992	992	993	994	996	997	999	1001	1002	1002	1016	991	1000.0
10	1001	1000	999	997	996	994	991	990	988	988	989	990	992	992	994	996	997	998	999	999	1000	1001	1001	1000	1001	988	995.5
11	999	998	996	994	993	992	991	990	988	988	987	986	985	984	984	983	984	985	985	985	985	985	986	987	999	983	988.4
12	987	987	988	988	988	989	989	991	992	994	994	995	998	999	1000	1002	1003	1005	1007	1007	1008	1009	1010	1011	1011	987	997.6
13	1013	1014	1015	1017	1018	1019	1021	1022	1023	1025	1026	1028	1028	1029	1029	1030	1032	1032	1033	1034	1034	1035	1035	1036	1036	1013	1026.1
14	1037	1037	1038	1038	1038	1038	1038	1039	1039	1040	1040	1040	1039	1039	1038	1038	1038	1038	1038	1038	1037	1036	1037	1036	1040	1036	1037.8
15	1036	1035	1035	1034	1034	1035	1034	1034	1034	1034	1033	1034	1034	1034	1033	1032	1032	1033	1033	1034	1034	1034	1035	1035	1036	1032	1033.9
16	1035	1036	1036	1036	1037	1037	1038	1038	1038	1039	1040	1040	1040	1040	1040	1039	1039	1039	1039	1039	1039	1038	1038	1037	1040	1035	1038.2
17	1036	1035	1034	1033	1032	1031	1030	1030	1029	1030	1029	1029	1028	1027	1027	1027	1026	1026	1026	1026	1025	1025	1025	1025	1036	1025	1028.7
18	1025	1025	1024	1024	1024	1024	1024	1024	1023	1023	1023	1023	1022	1021	1020	1020	1019	1019	1019	1018	1018	1018	1018	1018	1025	1018	1021.3
19	1018	1018	1018	1018	1018	1019	1019	1020	1021	1020	1020	1021	1021	1022	1022	1022	1021	1022	1022	1022	1023	1022	1023	1023	1023	1018	1020.5
20	1023	1023	1022	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1019	1020	1021	1022	1022	1023	1023	1023	1019	1021.4
21	1023	1024	1025	1025	1025	1025	1026	1027	1029	1029	1030	1031	1030	1031	1031	1031	1032	1032	1032	1032	1032	1032	1032	1032	1032	1023	1029.1
22	1032	1032	1032	1032	1032	1032	1031	1031	1030	1030	1031	1031	1031	1031	1032	1031	1031	1031	1031	1030	1030	1029	1028	1028	1032	1028	1030.7
23	1027	1027	1026	1025	1025	1024	1024	1023	1023	1022	1023	1023	1023	1024	1024	1024	1025	1025	1026	1027	1027	1028	1028	1029	1029	1022	1025.0
24	1030	1030	1030	1030	1030	1031	1031	1032	1032	1032	1033	1033	1033	1033	1033	1032	1033	1033	1033	1033	1033	1033	1033	1033	1033	1030	1031.9
25	1033	1032	1031	1031	1030	1029	1028	1026	1025	1024	1023	1022	1021	1019	1018	1017	1017	1018	1018	1018	1018	1018	1019	1020	1033	1017	1023.1
26	1019	1018	1018	1017	1017	1017	1017	1017	1016	1015	1015	1014	1013	1012	1011	1009	1008	1007	1005	1004	1003	1001	1000	998	1019	998	1011.3
27	996	995	994	992	992	992	992	992	992	992	993	993	994	994	995	995	996	997	998	999	1000	1001	1002	1003	1003	992	995.3
28	1004	1005	1005	1006	1006	1007	1008	1009	1010	1011	1012	1012	1013	1013	1014	1015	1014	1015	1016	1016	1016	1016	1017	1017	1017	1004	1011.5
Max.	**1037**	**1037**	**1038**	**1038**	**1038**	**1038**	**1038**	**1039**	**1039**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1038**	**1038**	**1037**	**1040**		
Min.	**970**	**969**	**968**	**967**	**966**	**963**	**963**	**963**	**963**	**964**	**965**	**967**	**968**	**970**	**973**	**975**	**976**	**976**	**975**	**972**	**971**	**970**	**970**	**970**		**963**	
Avg.	**1011**	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1009**	**1009**	**1010**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1012**	**1012**	**1013**			**1010.8**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1018	1019	1020	1020	1020	1021	1021	1022	1022	1022	1022	1021	1021	1021	1020	1020	1019	1019	1018	1018	1017	1016	1016	1016	1022	1016	1019.5
2	1016	1015	1015	1014	1013	1012	1012	1011	1010	1010	1009	1009	1008	1007	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1016	1005	1008.8
3	1006	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1006	1009.0
4	1010	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1007	1006	1006	1005	1005	1005	1004	1003	1003	1002	1002	1001	1001	1010	1001	1006.1
5	1000	999	999	998	997	997	997	997	997	997	996	996	997	997	997	997	997	997	997	997	998	999	999	999	1000	996	997.5
6	999	1000	1000	1000	1000	1000	1000	1000	1001	1000	1000	1000	999	999	998	998	997	997	997	997	996	996	996	996	1001	996	998.5
7	995	995	995	994	994	993	993	993	993	993	992	992	992	992	991	990	990	989	988	988	988	988	987	987	995	987	991.3
8	987	988	988	988	989	988	988	990	992	992	994	991	991	992	993	993	992	995	996	996	997	1000	1002	1002	1002	987	992.6
9	1004	1005	1005	1007	1010	1012	1012	1014	1015	1015	1017	1017	1018	1018	1019	1020	1020	1020	1020	1021	1022	1022	1023	1024	1024	1004	1015.9
10	1024	1025	1026	1026	1026	1026	1027	1027	1026	1026	1026	1026	1026	1025	1024	1024	1024	1023	1023	1023	1022	1021	1021	1021	1027	1021	1024.4
11	1020	1020	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1017	1017	1016	1016	1015	1015	1015	1014	1014	1014	1014	1013	1020	1013	1016.8
12	1013	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1013	1013	1014	1014	1015	1016	1016	1011	1012.1
13	1016	1017	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1016	1018.2
14	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1016	1016	1016	1017	1017	1017	1017	1017	1018	1016	1017.5
15	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1016	1014	1014.9
16	1015	1014	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1015	1014	1014.3
17	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1012	1012	1011	1011	1010	1010	1010	1010	1010	1010	1010	1009	1014	1009	1011.8
18	1008	1008	1007	1007	1006	1006	1005	1005	1004	1003	1003	1002	1001	1001	1000	1001	1001	1001	1001	1001	1001	1001	1001	1000	1008	1000	1002.9
19	1000	1000	1000	999	999	999	998	997	996	996	995	994	994	993	992	992	991	991	991	991	991	991	991	991	1000	991	994.6
20	991	991	991	991	991	992	992	992	993	993	994	993	994	994	994	994	994	994	994	995	995	995	995	996	996	991	993.3
21	997	997	998	998	999	1000	1001	1002	1003	1004	1004	1005	1006	1006	1007	1007	1008	1008	1009	1009	1010	1010	1010	1010	1010	997	1004.3
22	1009	1009	1009	1008	1008	1008	1008	1007	1007	1007	1007	1007	1008	1008	1009	1009	1010	1010	1011	1012	1013	1013	1014	1014	1014	1007	1009.4
23	1015	1015	1015	1015	1015	1015	1016	1015	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1012	1012	1011	1011	1011	1016	1011	1013.8
24	1011	1011	1010	1010	1010	1009	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1011	1006	1007.8
25	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1005	1005.4
26	1006	1007	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1011	1011	1011	1012	1012	1013	1013	1014	1014	1014	1014	1006	1010.1
27	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1016	1014	1015.0
28	1015	1014	1014	1013	1013	1012	1012	1011	1011	1011	1011	1011	1010	1010	1009	1009	1008	1008	1007	1007	1007	1007	1007	1006	1015	1006	1010.1
29	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1006	1006.8
30	1007	1006	1006	1006	1005	1005	1005	1004	1004	1004	1003	1003	1002	1002	1002	1001	1000	1000	999	999	999	998	997	998	1007	997	1002.2
31	997	996	996	995	995	995	995	994	994	994	994	994	994	994	994	994	994	995	995	996	997	998	998	999	999	994	995.2
Max.	**1024**	**1025**	**1026**	**1026**	**1026**	**1026**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1025**	**1024**	**1024**	**1024**	**1023**	**1023**	**1023**	**1022**	**1022**	**1023**	**1024**	**1027**		
Min.	**987**	**988**	**988**	**988**	**989**	**988**	**988**	**990**	**992**	**992**	**992**	**991**	**991**	**992**	**991**	**990**	**990**	**989**	**988**	**988**	**988**	**988**	**987**	**987**		**987**	
Avg.	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1008**	**1008**			**1007.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	999	1000	1000	1001	1001	1002	1003	1004	1004	1005	1005	1006	1007	1007	1008	1008	1009	1009	1010	1010	1011	1011	1011	1012	1012	999	1005.9
2	1012	1013	1013	1013	1013	1014	1014	1014	1014	1014	1015	1014	1014	1014	1014	1013	1013	1013	1013	1012	1012	1011	1011	1010	1015	1010	1013.0
3	1010	1009	1008	1007	1006	1005	1004	1003	1003	1002	1001	1000	999	999	998	998	997	997	997	997	997	997	996	996	1010	996	1001.1
4	996	996	996	996	996	996	996	996	996	996	997	997	998	998	998	999	999	999	1000	1001	1001	1001	1001	1002	1002	996	998.1
5	1002	1002	1002	1002	1002	1002	1003	1002	1003	1003	1003	1004	1004	1004	1004	1004	1003	1003	1003	1003	1005	1004	1005	1005	1005	1002	1003.1
6	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1007	1008	1008	1009	1009	1010	1010	1010	1005	1006.4
7	1010	1011	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1010	1009	1009	1013	1009	1011.4
8	1008	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1002	1002	1001	1001	1000	1001	1000	1000	1001	1001	1001	1002	1008	1000	1002.9
9	1002	1002	1001	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1004	1001	1002.3
10	1005	1005	1006	1006	1007	1007	1007	1008	1008	1009	1010	1010	1011	1011	1010	1010	1011	1011	1012	1012	1012	1013	1014	1015	1015	1005	1009.5
11	1014	1015	1015	1014	1013	1014	1013	1012	1011	1010	1010	1008	1007	1006	1004	1003	1001	1000	998	998	997	996	996	995	1015	995	1006.2
12	994	994	993	993	993	992	992	992	991	991	991	990	989	989	989	988	988	987	987	986	986	986	986	985	994	985	989.7
13	985	986	986	986	986	986	986	986	987	987	988	987	987	987	986	987	987	988	989	990	990	990	990	990	990	985	987.4
14	990	991	991	991	991	992	993	993	994	994	995	995	996	996	997	997	997	997	997	998	998	999	999	999	999	990	995.0
15	1000	1000	1000	1001	1001	1002	1002	1003	1003	1004	1004	1005	1005	1005	1005	1005	1005	1006	1006	1005	1005	1005	1004	1004	1006	1000	1003.5
16	1003	1002	1001	1000	999	998	997	996	995	994	994	993	991	990	988	987	986	984	983	982	982	981	980	980	1003	980	991.1
17	979	978	977	978	980	980	981	981	982	982	983	985	985	986	986	987	987	988	988	989	990	991	991	992	992	977	984.4
18	993	993	994	994	995	995	996	997	997	998	998	999	1000	1000	1000	1001	1001	1001	1002	1002	1003	1003	1004	1004	1004	993	998.8
19	1004	1005	1005	1005	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1004	1006.4
20	1007	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1003	1003	1002	1002	1007	1002	1004.8
21	1001	1001	1000	1000	999	998	998	998	998	998	998	998	999	999	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	998	999.5
22	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1003	1004	1004	1005	1006	1007	1007	1008	1009	1009	1009	1001	1003.4
23	1009	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1010	1010	1009	1009	1008	1007	1006	1005	1004	1004	1003	1002	1001	1011	1001	1007.8
24	1000	1000	999	999	998	998	997	997	997	997	997	998	998	998	999	999	1000	1000	1001	1002	1003	1004	1004	1005	1005	997	999.6
25	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1005	1006.7
26	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1003	1003	1002	1002	1002	1002	1002	1001	1007	1001	1004.3
27	1001	1001	1000	1000	999	999	998	998	998	997	997	996	996	995	994	993	992	992	991	991	991	990	990	990	1001	990	995.4
28	990	990	991	991	992	993	994	995	996	997	998	999	999	1000	1001	1001	1001	1002	1002	1002	1003	1003	1004	1004	1004	990	997.8
29	1004	1004	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1004	1006.5
30	1009	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1009	1011.6
Max.	**1014**	**1015**	**1015**	**1014**	**1013**	**1014**	**1014**	**1014**	**1014**	**1014**	**1015**	**1014**	**1014**	**1014**	**1014**	**1013**	**1013**	**1013**	**1013**	**1013**	**1014**	**1014**	**1014**	**1015**	**1015**		
Min.	**979**	**978**	**977**	**978**	**980**	**980**	**981**	**981**	**982**	**982**	**983**	**985**	**985**	**986**	**986**	**987**	**986**	**984**	**983**	**982**	**982**	**981**	**980**	**980**		**977**	
Avg.	**1002**	**1002**	**1001**	**1001**	**1001**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**			**1001.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

May 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1014	1014	1014	1014	1013	1013	1013	1012	1012	1011	1011	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1006	1006	1014	1006	1010.2
2	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1011	1011	1011	1011	1006	1008.4
3	1010	1010	1010	1009	1009	1008	1007	1007	1006	1005	1004	1002	1001	1000	999	998	998	997	996	996	995	995	995	994	1010	994	1002.2
4	995	995	995	996	996	996	996	996	995	995	994	995	994	995	995	994	994	994	993	993	992	992	991	990	996	990	994.1
5	989	989	989	988	987	987	986	986	986	986	986	986	986	987	987	987	986	986	985	985	985	986	985	985	989	985	986.5
6	985	985	985	986	986	986	987	987	988	988	989	989	990	990	991	991	991	991	991	992	993	993	993	994	994	985	989.2
7	995	995	996	996	997	997	997	998	998	998	999	999	1000	1000	1001	1000	1001	1001	1001	1001	1002	1003	1003	1003	1003	995	999.1
8	1003	1003	1004	1004	1005	1005	1005	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1007	1007	1007	1003	1005.9
9	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006.6
10	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1011	1011	1012	1012	1012	1007	1009.0
11	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1012	1014.3
12	1017	1017	1018	1018	1019	1019	1020	1020	1020	1021	1021	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1025	1025	1025	1017	1021.2
13	1025	1026	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1026	1026	1026	1026	1025	1025	1025	1025	1025	1027	1025	1026.2
14	1025	1024	1023	1023	1023	1023	1023	1023	1022	1023	1023	1023	1023	1024	1024	1024	1024	1025	1025	1026	1026	1027	1028	1028	1028	1022	1024.1
15	1028	1028	1029	1029	1029	1029	1029	1029	1029	1029	1028	1028	1028	1027	1027	1027	1026	1026	1025	1024	1024	1023	1023	1022	1029	1022	1026.7
16	1021	1020	1020	1020	1019	1019	1018	1017	1017	1017	1016	1016	1015	1015	1014	1013	1013	1012	1012	1012	1011	1011	1011	1011	1021	1011	1015.4
17	1011	1011	1011	1011	1010	1011	1010	1011	1011	1011	1011	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1010	1012.0
18	1014	1014	1014	1014	1014	1015	1014	1015	1014	1014	1014	1014	1014	1015	1016	1016	1015	1016	1016	1016	1017	1017	1017	1018	1018	1014	1015.1
19	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1015	1015	1014	1013	1012	1012	1011	1010	1010	1010	1009	1008	1018	1008	1014.3
20	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1001	1001	1001	1001	1000	1000	1001	1001	1002	1003	1004	1005	1005	1006	1008	1000	1003.3
21	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1006	1008.1
22	1009	1009	1009	1009	1009	1009	1009	1008	1009	1008	1008	1008	1008	1007	1007	1006	1006	1006	1005	1005	1005	1006	1005	1005	1009	1005	1007.4
23	1005	1006	1006	1006	1006	1007	1007	1008	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1012	1012	1012	1013	1013	1005	1009.3
24	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1013	1014.9
25	1016	1016	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1016	1017.6
26	1018	1018	1018	1018	1018	1019	1019	1019	1018	1019	1019	1019	1018	1018	1018	1017	1016	1016	1016	1015	1015	1015	1014	1014	1019	1014	1017.3
27	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1009	1009	1008	1008	1008	1008	1008	1008	1009	1009	1014	1008	1010.7
28	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1012	1012	1009	1010.0
29	1012	1012	1013	1013	1014	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1017	1012	1015.4
30	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1015	1015	1015	1015	1015	1015	1014	1017	1014	1016.0
31	1014	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1014	1012	1012.4
Max.	**1028**	**1028**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1028**	**1028**	**1028**	**1027**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1027**	**1028**	**1028**	**1029**		
Min.	**985**	**985**	**985**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**987**	**987**	**987**	**986**	**986**	**985**	**985**	**985**	**986**	**985**	**985**		**985**	
Avg.	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**			**1010.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1012	1012	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1012	1009	1011.2
2	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1006	1006	1006	1006	1005	1005	1005	1005	1006	1006	1006	1009	1005	1006.8
3	1006	1006	1006	1007	1007	1008	1008	1009	1009	1009	1010	1010	1009	1010	1009	1009	1009	1009	1009	1009	1009	1009	1010	1011	1011	1006	1008.6
4	1011	1011	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1013	1013	1013	1013	1013	1012	1012	1012	1013	1013	1013	1014	1011	1012.7
5	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1012	1012.6
6	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1016	1016	1012	1013.4
7	1016	1016	1015	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1015	1016.8
8	1018	1018	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1014	1013	1013	1012	1011	1010	1011	1011	1010	1009	1018	1009	1014.2
9	1008	1007	1007	1006	1005	1005	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1007	1007	1008	1008	1009	1009	1009	1009	1004	1005.8
10	1010	1010	1010	1010	1011	1011	1011	1012	1013	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1017	1018	1010	1014.3
11	1017	1017	1017	1017	1017	1017	1016	1016	1017	1016	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1012	1012	1012	1017	1012	1014.9
12	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013	1011	1011.6
13	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1010	1011	1010	1010	1010	1010	1010	1010	1010	1013	1010	1011.3
14	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1005	1005	1005	1004	1009	1004	1007.2
15	1004	1004	1003	1003	1003	1004	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1002	1002	1002	1001	1001	1001	1000	1000	1004	1000	1002.2
16	1000	1000	999	999	999	999	999	999	999	999	999	1000	1000	1001	1001	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	999	1000.4
17	1002	1002	1002	1003	1003	1003	1004	1004	1004	1004	1005	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1002	1005.5
18	1009	1008	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1008	1010.1
19	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1011	1011	1010	1010	1010	1012	1013	1013	1013	1014	1014	1014	1014	1010	1011.5
20	1014	1014	1015	1015	1014	1015	1015	1015	1015	1015	1016	1017	1018	1019	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1020	1014	1017.0
21	1019	1019	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1014	1014	1019	1014	1016.2
22	1014	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1019	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1014	1018.4
23	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1024	1024	1024	1023	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1022	1022.9
24	1024	1024	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1021	1021	1020	1020	1020	1020	1020	1020	1020	1024	1020	1021.7
25	1020	1019	1020	1020	1019	1019	1019	1020	1020	1021	1021	1021	1021	1021	1021	1022	1021	1021	1021	1022	1022	1022	1022	1022	1022	1019	1020.7
26	1022	1022	1022	1023	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1021	1021	1021	1023	1021	1022.2
27	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1017	1017	1017	1017	1018	1020	1017	1018.8
28	1018	1019	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1018	1018.2
29	1018	1018	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1018	1021.2
30	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1024	1024	1024	1023	1023	1023	1023	1023	1024	1022	1022.8
Max.	**1024**	**1024**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**		
Min.	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1001**	**1001**	**1001**	**1002**	**1002**	**1002**	**1001**	**1001**	**1001**	**1000**	**1000**		**999**	
Avg.	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**			**1013.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Barometric Pressure (mbar)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1023	1023	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1023	1022	1022	1021	1021	1021	1021	1024	1021	1023.2
2	1021	1021	1020	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1018	1018	1021	1017	1019.5
3	1018	1018	1019	1018	1018	1019	1019	1020	1019	1020	1020	1020	1020	1020	1021	1021	1021	1020	1020	1020	1020	1021	1021	1021	1021	1018	1019.8
4	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1022	1022	1022	1022	1021	1021.4
5	1022	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1017	1016	1016	1022	1016	1019.2
6	1016	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1016	1013	1013.7
7	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1016	1014	1015.1
8	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1015	1014	1014.3
9	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1015	1013	1014.0
10	1012	1012	1011	1011	1010	1010	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1012	1006	1008.4
11	1006	1006	1006	1005	1005	1005	1005	1005	1005	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1004	1005.5
12	1007	1007	1007	1006	1006	1006	1005	1006	1005	1005	1005	1005	1005	1005	1004	1004	1003	1002	1002	1003	1003	1003	1003	1003	1007	1002	1004.5
13	1003	1003	1003	1003	1004	1004	1005	1006	1006	1006	1006	1007	1006	1006	1006	1007	1007	1006	1006	1006	1007	1007	1008	1008	1008	1003	1005.8
14	1008	1009	1008	1008	1008	1008	1007	1008	1008	1008	1008	1008	1008	1008	1008	1009	1008	1008	1009	1009	1008	1009	1009	1010	1010	1007	1008.3
15	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1018	1010	1013.4
16	1018	1019	1018	1019	1019	1019	1019	1020	1020	1021	1021	1021	1021	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1022	1018	1020.3
17	1021	1020	1020	1020	1020	1020	1019	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1021	1018	1019.4
18	1018	1018	1017	1017	1017	1017	1017	1016	1016	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1018	1014	1015.8
19	1014	1014	1013	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1007	1014	1007	1010.4
20	1007	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1008	1009	1010	1010	1010	1010	1005	1006.2
21	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1013	1013	1014	1014	1014	1015	1015	1015	1014	1014	1014	1014	1015	1015	1015	1010	1012.9
22	1015	1014	1014	1014	1013	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1013	1013	1013	1013	1015	1012	1012.9
23	1013	1012	1012	1012	1011	1011	1010	1009	1009	1008	1006	1006	1005	1004	1003	1003	1003	1001	1000	1001	1000	1000	1000	1000	1013	1000	1005.8
24	999	999	999	999	998	998	998	998	998	998	998	998	998	999	999	999	999	999	999	999	999	999	998	998	999	998	998.7
25	998	998	997	997	998	998	998	998	998	998	998	999	999	999	999	999	1000	1000	1000	1001	1002	1002	1003	1004	1004	997	999.2
26	1005	1005	1006	1006	1007	1008	1009	1009	1010	1010	1011	1012	1013	1013	1014	1014	1015	1016	1016	1016	1017	1017	1018	1019	1019	1005	1011.8
27	1019	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1023	1022	1022	1022	1022	1022	1022	1021	1022	1021	1021	1021	1023	1019	1021.4
28	1021	1021	1020	1020	1020	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1018	1018	1017	1017	1017	1017	1021	1017	1019.2
29	1017	1016	1016	1016	1015	1015	1015	1014	1013	1013	1013	1013	1013	1013	1014	1013	1013	1013	1012	1012	1012	1012	1011	1010	1017	1010	1013.5
30	1010	1009	1009	1008	1007	1007	1006	1005	1004	1004	1004	1004	1003	1002	1002	1001	1001	1000	1000	1000	1001	1001	1001	1002	1010	1000	1003.7
31	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1005	1006	1005	1006	1006	1006	1007	1007	1002	1004.5
Max.	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1023**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1024**		
Min.	**998**	**998**	**997**	**997**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**998**	**998**		**997**	
Avg.	**1013**	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**1012.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.7	1.4	2.3	1.6	1.0	0.6	0.6	0.9	1.0	0.8	1.4	1.3	2.8	2.4	1.7	3.0	2.8	1.4	1.9	1.6	2.0	2.1	1.6	2.6	3.7	0.6	1.8
2	2.6	2.4	2.8	2.4	3.2	3.6	3.8	4.4	4.2	4.5	4.5	4.7	5.1	5.6	5.2	5.6	6.6	7.2	6.9	7.3	5.7	6.6	5.5	6.8	7.3	2.4	4.9
3	6.2	6.7	6.1	6.5	6.0	5.7	4.8	2.5	1.3	1.2	1.3	1.6	1.4	2.6	2.4	1.6	1.9	1.2	1.1	1.2	1.6	1.6	2.2	2.2	6.7	1.1	3.0
4	1.3	0.8	1.0	1.2	1.3	2.0	2.4	1.8	2.4	1.5	1.3	1.5	2.1	3.0	3.7	3.0	4.3	4.1	1.9	0.9	1.6	2.5	4.2	4.0	4.3	0.8	2.2
5	5.6	6.2	6.2	6.8	7.1	6.9	6.3	6.1	5.1	4.7	4.2	3.7	2.4	3.5	2.3	1.0	2.4	5.1	6.0	5.2	4.4	4.5	6.1	7.2	7.2	1.0	5.0
6	8.1	6.9	6.9	7.4	7.4	7.0	7.2	5.9	5.2	3.7	1.5	1.2	1.3	1.7	2.3	1.2	4.5	2.7	1.3	1.4	1.6	2.3	2.8	4.6	8.1	1.2	4.0
7	3.0	2.0	1.9	2.1	1.5	2.8	5.3	5.8	6.0	6.8	6.2	6.3	5.4	5.2	4.2	4.9	4.4	4.5	4.0	4.7	4.2	2.4	3.1	3.1	6.8	1.5	4.2
8	2.9	2.8	2.7	2.0	2.2	2.6	2.6	3.2	2.7	2.0	2.8	3.3	3.2	3.2	3.4	3.4	3.4	2.5	1.9	1.2	0.8	0.7	1.5	2.0	3.4	0.7	2.5
9	1.5	1.6	1.4	1.2	1.5	1.0	3.6	3.5	1.6	3.3	4.0	4.5	4.4	4.2	3.6	3.7	3.5	2.8	2.1	1.8	1.7	1.4	2.2	1.6	4.5	1.0	2.6
10	2.4	5.0	2.1	1.3	0.9	1.5	4.7	4.9	3.0	3.2	3.1	3.6	4.6	3.9	4.0	4.0	4.0	3.8	2.3	1.3	1.1	0.8	0.8	0.9	5.0	0.8	2.8
11	0.8	0.9	0.6	0.8	0.9	0.8	1.6	2.4	2.2	2.0	2.5	3.2	3.0	2.6	3.2	3.2	2.6	2.0	1.5	0.9	1.0	3.0	2.4	1.7	3.2	0.6	1.9
12	1.6	1.2	0.8	1.1	2.0	2.0	0.9	0.9	1.0	3.1	2.5	3.1	3.3	3.4	3.2	3.2	3.0	2.0	1.8	2.0	1.5	2.3	3.0	2.2	3.4	0.8	2.1
13	1.0	1.6	1.0	1.8	2.0	1.5	1.7	1.4	2.8	2.3	1.4	1.5	3.5	2.9	2.2	2.8	3.2	3.5	3.5	2.6	1.7	1.8	2.7	2.4	3.5	1.0	2.2
14	1.8	2.1	2.3	2.2	2.0	2.3	2.0	1.5	1.9	2.1	2.8	2.2	2.1	2.3	3.0	3.1	3.0	3.1	2.8	2.5	1.6	1.2	1.9	1.6	3.1	1.2	2.2
15	1.5	1.5	1.4	1.4	1.6	1.0	1.5	1.6	1.4	2.5	1.3	1.8	1.6	1.2	2.6	2.1	3.0	3.3	3.0	1.9	1.7	2.1	2.2	2.1	3.3	1.0	1.9
16	1.4	2.8	3.2	1.7	1.4	3.7	3.9	4.7	3.7	4.1	2.4	2.3	3.3	3.3	3.1	3.2	2.1	1.6	1.3	1.9	3.1	3.0	2.1	2.1	4.7	1.3	2.7
17	2.3	4.5	5.0	4.8	4.9	5.5	6.6	7.4	7.7	7.5	7.0	7.7	7.0	7.2	7.7	7.9	8.8	9.1	7.8	7.5	6.6	5.8	6.3	6.2	9.1	2.3	6.6
18	5.2	5.6	5.5	5.7	5.4	4.8	5.4	6.3	5.8	2.8	3.4	2.8	3.6	3.5	2.9	3.1	2.7	2.2	1.9	1.7	1.1	1.2	0.6	0.7	6.3	0.6	3.5
19	1.1	1.5	0.8	1.1	1.3	3.6	3.4	3.4	2.6	1.8	1.2	1.6	2.3	2.2	2.0	3.0	4.1	4.9	3.4	3.1	4.3	6.1	4.7	4.8	6.1	0.8	2.8
20	2.8	2.9	8.4	8.1	5.0	4.2	4.8	3.6	4.5	4.0	3.4	3.6	4.8	3.8	5.7	3.8	3.9	3.4	3.1	2.5	7.2	9.5	11.9	6.9	11.9	2.5	5.1
21	5.6	6.7	10.5	8.7	8.5	12.4	10.7	11.1	10.0	6.1	4.2	5.2	5.0	3.8	3.4	2.9	2.6	3.3	1.8	1.6	1.4	1.6	1.9	1.4	12.4	1.4	5.4
22	1.3	2.0	1.6	1.3	3.2	3.9	3.6	4.3	4.3	2.4	2.5	2.5	2.2	1.8	3.3	5.6	4.4	4.4	4.3	4.3	5.9	6.0	4.9	5.4	6.0	1.3	3.6
23	5.8	5.6	6.1	6.0	5.7	5.3	4.2	3.2	2.7	5.9	3.4	5.4	4.2	2.0	3.2	2.8	3.5	1.7	0.7	1.8	2.1	1.8	1.2	2.1	6.1	0.7	3.6
24	2.4	1.5	1.8	3.3	3.2	2.9	1.9	1.7	1.6	1.1	1.1	4.6	4.9	5.8	3.8	4.6	3.6	7.1	8.2	8.1	5.6	3.1	2.9	4.1	8.2	1.1	3.7
25	4.0	3.9	4.3	5.5	4.4	5.3	5.8	5.3	3.6	4.7	3.3	1.5	3.2	3.8	4.1	3.2	2.8	2.6	1.9	1.3	1.2	0.9	1.0	2.7	5.8	0.9	3.3
26	3.0	1.1	1.8	2.9	2.5	3.2	2.2	3.0	3.9	3.5	2.3	2.8	3.1	2.9	5.6	4.1	5.2	2.5	2.1	3.2	4.6	6.3	6.8	8.1	8.1	1.1	3.6
27	9.2	9.0	9.3	7.6	3.5	4.7	4.6	4.4	4.1	3.7	2.7	3.2	3.7	4.2	2.7	3.4	5.0	4.7	6.2	6.4	6.7	7.0	9.3	8.3	9.3	2.7	5.6
28	6.8	3.2	3.1	2.2	1.8	1.4	1.6	1.0	2.5	1.4	0.6	0.9	2.6	2.3	1.5	1.4	4.0	4.4	8.9	11.3	9.6	10.5	12.6	10.6	12.6	0.6	4.4
29	8.8	7.6	8.6	7.6	7.4	9.6	8.9	5.2	4.6	8.0	6.7	7.9	8.1	7.6	6.4	8.2	6.6	5.8	8.4	5.5	4.7	5.4	5.2	4.0	9.6	4.0	6.9
30	4.3	5.6	4.8	4.4	6.0	4.8	5.8	4.8	3.7	3.3	2.6	2.2	3.8	3.5	4.1	3.1	6.2	6.5	4.3	4.6	7.2	8.5	7.9	7.2	8.5	2.2	5.0
31	6.8	6.7	7.8	7.7	6.5	6.5	3.7	5.0	6.8	6.0	5.7	5.6	4.5	4.1	4.6	5.5	5.7	3.8	3.7	5.0	6.7	8.0	8.1	7.7	8.1	3.7	5.9
Max.	**9.2**	**9.0**	**10.5**	**8.7**	**8.5**	**12.4**	**10.7**	**11.1**	**10.0**	**8.0**	**7.0**	**7.9**	**8.1**	**7.6**	**7.7**	**8.2**	**8.8**	**9.1**	**8.9**	**11.3**	**9.6**	**10.5**	**12.6**	**10.6**	**12.6**		
Min.	**0.8**	**0.8**	**0.6**	**0.8**	**0.9**	**0.6**	**0.6**	**0.9**	**1.0**	**0.8**	**0.6**	**0.9**	**1.3**	**1.2**	**1.5**	**1.0**	**1.9**	**1.2**	**0.7**	**0.9**	**0.8**	**0.7**	**0.6**	**0.7**		**0.6**	
Avg.	**3.7**	**3.6**	**3.9**	**3.8**	**3.6**	**4.0**	**4.1**	**3.9**	**3.7**	**3.5**	**3.0**	**3.3**	**3.6**	**3.5**	**3.6**	**3.6**	**4.0**	**3.8**	**3.5**	**3.4**	**3.5**	**3.9**	**4.2**	**4.1**			**3.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	6.0	4.2	3.5	3.3	2.7	5.4	5.4	5.7	5.7	4.3	2.4	4.5	6.1	3.6	4.0	6.2	6.4	7.5	5.3	3.7	5.2	7.3	5.1	7.5	2.4	5.0
2	3.2	2.8	3.3	3.2	3.5	2.8	2.3	3.4	3.3	3.1	1.8	1.8	1.7	2.7	3.0	3.5	3.1	1.5	1.5	2.1	2.6	2.6	2.2	2.6	3.5	1.5	2.6
3	2.8	1.6	1.4	2.5	2.6	2.3	3.5	4.9	5.0	5.6	5.5	5.4	6.2	6.4	6.5	6.8	7.6	8.2	8.3	8.6	8.4	8.8	8.5	8.1	8.8	1.4	5.6
4	6.9	6.6	6.5	6.8	7.1	7.6	7.0	6.7	6.5	6.0	5.7	5.6	5.2	4.2	3.6	2.9	1.8	2.0	3.6	5.0	3.2	1.6	0.9	1.8	7.6	0.9	4.8
5	1.8	1.8	1.6	1.4	2.3	2.7	2.1	3.8	3.8	4.5	4.5	3.2	2.0	1.9	1.7	2.3	1.9	1.8	2.5	3.7	4.7	4.8	5.0	4.6	5.0	1.4	2.9
6	4.8	4.6	3.5	3.4	2.4	2.7	2.0	1.4	1.5	4.9	8.1	7.4	8.9	8.8	6.8	5.1	2.3	5.1	1.7	6.0	6.6	8.0	5.5	4.1	8.9	1.4	4.8
7	7.3	6.2	7.8	7.8	5.4	5.2	6.7	6.7	8.6	7.2	5.7	4.0	3.0	4.8	2.5	4.4	2.8	3.2	4.0	4.5	5.4	4.5	5.0	7.0	8.6	2.5	5.4
8	6.6	8.8	8.2	8.4	8.8	7.6	6.1	4.8	5.7	4.9	3.2	1.4	1.8	1.6	1.9	1.8	1.8	1.9	1.7	1.3	1.8	2.7	4.5	2.6	8.8	1.3	4.2
9	3.4	5.3	6.9	7.2	6.7	6.4	5.8	4.5	4.9	4.6	5.9	4.8	4.1	3.4	2.7	2.1	1.6	3.8	4.5	2.8	1.4	1.8	3.1	4.2	7.2	1.4	4.2
10	5.7	5.3	4.6	7.9	7.5	8.6	8.7	8.7	9.5	6.8	5.7	6.9	6.1	4.8	2.2	2.2	4.7	3.1	0.9	1.9	1.4	0.9	1.9	2.1	9.5	0.9	4.9
11	2.0	3.7	3.5	3.5	4.3	4.0	4.2	2.7	2.1	2.4	3.5	3.8	5.0	4.9	5.1	5.9	4.3	4.7	4.6	3.9	2.8	2.3	2.3	2.6	5.9	2.0	3.7
12	1.9	1.3	2.2	4.0	3.5	6.4	7.5	4.7	3.4	3.9	9.1	11.2	9.8	6.8	7.4	8.1	10.3	8.8	13.3	14.3	12.0	12.5	7.7	9.4	14.3	1.3	7.5
13	10.6	8.9	10.4	4.2	3.4	4.1	3.1	6.8	4.7	4.3	4.5	2.9	2.2	3.9	5.4	6.1	6.7	6.2	5.3	6.8	6.8	3.4	5.4	4.4	10.6	2.2	5.4
14	4.2	5.3	3.0	1.6	1.6	1.7	1.7	2.0	3.4	3.2	1.4	1.1	1.3	2.3	2.5	4.8	4.4	4.1	3.9	3.2	3.1	2.4	2.8	3.0	5.3	1.1	2.8
15	3.7	3.4	3.4	3.7	1.8	2.6	2.8	2.4	2.3	3.7	3.3	4.2	2.9	2.8	2.4	1.9	2.0	2.1	1.8	2.5	5.2	4.0	3.9	4.6	5.2	1.8	3.1
16	4.3	4.2	3.5	6.6	6.5	6.2	5.4	4.3	6.4	6.6	6.5	4.5	4.3	5.5	5.3	4.2	4.9	5.4	2.7	1.3	1.6	1.3	1.9	2.9	6.6	1.3	4.4
17	4.7	4.8	3.7	2.8	3.6	3.2	3.2	3.4	3.1	3.9	3.6	4.1	3.9	3.3	1.8	1.0	1.0	1.5	1.9	0.9	1.8	1.4	3.4	5.8	5.8	0.9	3.0
18	6.4	6.6	7.2	7.7	7.3	7.2	7.6	5.6	4.7	4.0	4.8	4.4	3.8	3.8	4.6	4.9	5.2	4.1	4.9	4.4	4.7	4.7	3.5	4.4	7.7	3.5	5.3
19	3.8	4.6	5.2	4.4	5.8	7.4	8.0	7.4	8.0	6.9	4.8	4.9	3.4	3.3	2.9	3.1	4.3	3.5	4.9	5.4	6.0	7.0	7.6	7.5	8.0	2.9	5.4
20	8.2	8.7	8.3	8.1	7.7	7.3	5.6	5.1	5.4	5.1	3.5	3.8	3.9	6.3	6.0	3.5	4.4	4.3	3.7	4.9	5.0	4.8	3.0	4.4	8.7	3.0	5.4
21	5.6	6.0	6.5	6.3	6.4	5.4	4.9	4.7	2.1	1.7	2.1	2.9	2.0	1.1	1.0	1.4	3.4	3.9	3.6	3.3	2.6	1.4	1.5	2.1	6.5	1.0	3.4
22	2.2	2.0	3.2	4.9	4.7	5.2	5.8	5.8	3.8	3.7	3.9	3.0	2.9	2.2	2.6	2.0	2.8	4.0	4.0	4.0	2.5	2.2	2.6	1.8	5.8	1.8	3.4
23	3.3	3.0	3.2	1.9	1.5	1.4	1.8	0.6	1.4	0.9	2.3	4.9	3.5	1.7	2.0	2.2	2.3	2.4	2.5	3.3	4.2	17.3	11.4	17.0	17.3	0.6	4.0
24	16.0	17.7	13.2	11.9	9.5	6.6	7.7	9.1	9.0	8.6	7.0	8.0	7.7	11.2	6.5	6.5	7.4	5.6	7.5	6.8	7.1	4.9	6.7	6.6	17.7	4.9	8.7
25	7.7	8.0	9.3	10.4	10.7	10.9	8.7	10.0	9.1	9.1	7.7	8.4	7.9	8.2	8.4	6.3	6.8	5.6	7.3	7.2	3.3	2.1	3.9	3.1	10.9	2.1	7.5
26	1.6	2.1	2.2	1.3	1.9	3.8	5.6	4.8	3.6	3.3	3.9	4.3	3.2	2.9	5.6	6.1	6.5	7.6	7.5	7.5	8.0	7.6	8.4	10.1	10.1	1.3	5.0
27	11.5	11.3	11.9	12.1	12.1	12.9	14.1	13.1	13.2	13.7	13.5	14.0	14.2	13.4	13.1	13.5	12.0	9.6	9.3	10.0	7.8	7.3	7.1	6.6	14.2	6.6	11.6
28	6.2	5.8	5.7	5.7	4.4	2.5	2.5	3.8	1.2	1.9	1.8	0.6	1.2	1.2	1.2	3.2	4.7	2.7	2.2	1.9	2.1	2.0	3.6	4.4	6.2	0.6	3.0
29	5.5	5.2	4.7	5.8	4.3	5.5	6.2	5.8	6.2	5.8	5.7	5.8	4.8	8.2	7.3	7.3	5.8	7.6	6.1	6.9	7.9	8.3	8.3	8.4	8.4	4.3	6.4
30	7.7	7.8	7.3	7.2	6.0	6.3	7.4	5.8	5.1	5.3	5.1	5.1	5.6	4.6	4.9	3.9	4.2	4.8	6.4	6.4	6.7	5.8	5.5	5.9	7.8	3.9	5.9
Max.	**16.0**	**17.7**	**13.2**	**12.1**	**12.1**	**12.9**	**14.1**	**13.1**	**13.2**	**13.7**	**13.5**	**14.0**	**14.2**	**13.4**	**13.1**	**13.5**	**12.0**	**9.6**	**13.3**	**14.3**	**12.0**	**17.3**	**11.4**	**17.0**	**17.7**		
Min.	**1.6**	**1.3**	**1.4**	**1.3**	**1.5**	**1.4**	**1.7**	**0.6**	**1.2**	**0.9**	**1.4**	**0.6**	**1.2**	**1.1**	**1.0**	**1.0**	**1.0**	**1.5**	**0.9**	**0.9**	**1.4**	**0.9**	**0.9**	**1.8**		**0.6**	
Avg.	**5.5**	**5.6**	**5.5**	**5.5**	**5.2**	**5.3**	**5.4**	**5.3**	**5.1**	**5.0**	**4.9**	**4.8**	**4.6**	**4.7**	**4.3**	**4.4**	**4.6**	**4.5**	**4.7**	**4.9**	**4.7**	**4.8**	**4.8**	**5.2**			**5.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.8	6.1	6.8	7.7	8.1	6.8	6.0	5.9	7.7	7.9	8.4	6.3	5.4	6.1	6.3	6.6	6.1	7.1	6.7	5.2	6.1	5.4	5.1	4.6	8.4	4.6	6.4
2	7.2	6.2	6.9	6.8	5.7	6.0	4.9	6.4	5.2	6.3	5.5	7.0	5.9	4.8	4.4	5.5	4.8	3.5	2.8	4.0	4.7	4.5	2.3	2.8	7.2	2.3	5.2
3	2.7	2.7	3.8	3.8	5.6	4.8	4.0	1.9	5.0	6.4	6.4	5.2	7.1	7.7	6.8	7.9	7.5	6.2	6.0	5.4	5.5	4.7	4.3	6.5	7.9	1.9	5.3
4	7.1	5.9	6.2	7.2	7.6	6.9	7.2	8.2	8.1	8.1	7.5	7.9	7.1	8.4	10.6	9.9	10.5	10.3	10.4	11.1	12.6	12.6	12.1	11.2	12.6	5.9	8.9
5	10.8	9.0	8.1	8.6	8.5	8.0	7.0	5.9	5.6	5.6	5.5	4.6	4.3	2.1	1.0	2.1	2.9	4.0	5.6	5.8	5.8	4.7	5.4	4.5	10.8	1.0	5.6
6	4.2	3.6	3.0	2.4	2.4	2.4	2.3	1.9	1.5	2.4	1.9	1.6	1.4	1.4	1.8	1.6	1.1	1.6	2.1	2.7	2.1	2.4	2.8	2.6	4.2	1.1	2.2
7	3.1	3.6	3.3	2.5	2.3	2.5	3.2	4.0	4.8	4.8	4.6	5.0	4.7	4.3	5.0	5.4	5.4	5.3	5.9	5.0	4.9	4.6	3.8	3.3	5.9	2.3	4.2
8	3.4	3.5	2.5	1.0	0.9	1.0	2.1	1.9	2.8	2.9	1.7	1.2	1.7	1.2	2.3	2.6	2.7	2.6	2.5	2.3	2.9	2.7	2.9	3.0	3.5	0.9	2.3
9	2.4	2.9	2.5	1.6	1.7	1.9	2.6	2.8	2.9	3.8	3.1	2.2	3.1	3.2	4.9	6.0	7.2	6.5	6.3	6.5	7.5	10.8	10.0	8.6	10.8	1.6	4.6
10	9.1	8.2	8.2	9.7	6.6	7.7	8.7	7.0	6.4	5.0	5.7	4.3	3.0	2.4	2.2	2.4	1.6	1.9	3.3	3.6	4.4	4.7	3.6	3.0	9.7	1.6	5.1
11	2.1	2.5	4.4	4.4	5.0	4.9	4.6	3.3	2.5	1.0	2.9	2.7	2.8	4.3	5.0	4.9	5.3	4.8	6.1	6.3	6.3	6.1	5.7	7.7	7.7	1.0	4.4
12	7.3	5.3	7.0	6.9	6.7	7.8	7.4	8.1	6.4	4.7	8.8	6.1	6.2	6.4	7.6	9.2	7.4	8.6	6.7	5.7	8.2	7.7	8.4	8.2	9.2	4.7	7.2
13	7.4	6.3	4.3	2.7	2.5	3.5	4.9	2.7	2.9	4.6	4.7	4.1	4.9	4.5	3.6	5.5	6.1	6.1	4.6	1.9	1.3	1.8	1.6	1.4	7.4	1.3	3.9
14	2.1	2.3	2.2	3.3	3.5	2.4	2.5	2.5	3.4	4.3	4.3	3.2	4.3	4.0	2.7	2.3	1.9	1.6	2.7	2.3	2.5	3.9	5.2	5.0	5.2	1.6	3.1
15	6.1	6.6	6.6	6.6	5.9	6.4	6.4	5.7	5.9	5.0	4.4	3.6	3.1	2.4	1.7	3.0	3.1	2.8	2.5	1.1	1.8	2.3	1.7	1.8	6.6	1.1	4.0
16	1.3	1.8	1.4	3.1	5.0	6.5	4.9	3.3	2.6	3.1	3.8	5.2	3.7	5.5	7.1	4.3	4.1	4.5	3.3	2.5	3.5	1.7	1.8	2.8	7.1	1.3	3.6
17	2.7	3.5	5.0	6.1	5.4	4.7	4.0	4.5	3.1	3.6	6.4	6.5	7.7	4.9	4.3	9.4	8.0	6.5	7.4	6.7	8.4	8.7	7.4	6.2	9.4	2.7	5.9
18	5.6	7.7	9.5	10.6	11.4	10.9	14.2	14.7	15.5	12.9	9.6	6.9	4.9	5.0	4.4	4.4	4.0	2.9	5.7	7.5	2.8	1.3	2.2	3.3	15.5	1.3	7.4
19	4.6	4.9	5.0	4.9	4.7	3.9	3.7	6.5	5.3	4.4	4.3	5.1	4.8	5.1	4.9	3.4	2.6	3.0	3.3	4.2	3.8	4.9	5.5	6.3	6.5	2.6	4.5
20	5.6	6.4	5.8	6.5	6.8	7.7	8.0	8.2	8.6	8.9	9.2	10.2	10.5	10.7	10.3	10.0	9.7	9.8	9.6	10.0	11.1	11.1	10.2	11.4	11.4	5.6	9.0
21	10.2	5.4	5.1	3.7	3.7	4.6	3.1	1.9	0.7	0.8	0.7	0.6	0.9	1.5	1.9	2.6	1.4	1.0	3.2	5.3	8.1	4.1	3.4	4.6	10.2	0.6	3.3
22	5.1	5.4	5.1	3.9	5.5	6.7	7.7	8.9	10.8	8.3	8.9	8.2	8.3	9.0	12.0	13.0	10.4	4.5	4.1	4.8	6.7	7.1	10.6	7.0	13.0	3.9	7.6
23	7.0	10.1	9.1	8.2	7.7	5.9	5.0	5.6	5.9	5.4	5.2	3.3	4.5	4.0	5.1	4.5	2.5	1.7	1.4	1.3	2.4	2.9	3.5	3.5	10.1	1.3	4.8
24	2.9	3.3	1.4	1.1	3.6	3.1	2.7	3.7	4.7	3.8	4.4	3.2	5.0	5.4	6.5	6.6	8.4	8.6	9.3	10.7	8.9	8.8	8.4	9.3	10.7	1.1	5.6
25	8.9	8.0	6.8	7.1	4.1	7.6	7.9	7.6	6.7	4.9	4.9	5.6	3.8	3.3	2.2	2.4	1.5	1.6	4.0	4.4	3.8	2.9	4.2	3.2	8.9	1.5	4.9
26	2.5	3.8	3.1	2.7	2.3	2.2	3.6	2.9	3.3	5.1	6.4	5.4	4.2	4.4	4.5	3.3	2.8	3.3	3.6	1.8	2.2	3.0	3.3	2.2	6.4	1.8	3.4
27	2.6	2.5	2.5	2.7	2.3	3.0	2.8	3.1	3.1	3.5	4.3	4.0	3.6	2.8	1.2	1.3	1.0	1.5	2.1	2.5	2.9	3.0	3.2	2.5	4.3	1.0	2.7
28	2.4	2.2	3.3	2.4	2.9	2.9	3.4	3.6	3.9	3.4	4.3	3.4	4.2	3.3	2.2	2.1	1.8	1.6	2.6	3.8	1.4	1.5	3.4	2.5	4.3	1.4	2.8
29	3.6	3.2	3.3	3.4	3.0	3.8	3.7	3.8	3.8	3.9	3.7	4.1	4.2	3.5	3.6	4.6	4.2	4.7	3.9	3.9	3.9	3.6	3.6	3.7	4.7	3.0	3.8
30	3.8	3.5	3.2	3.6	3.0	2.6	2.6	2.9	2.1	3.1	2.0	1.1	0.9	1.6	2.2	4.0	5.3	5.1	5.1	6.5	5.9	6.3	4.3	3.8	6.5	0.9	3.5
31	3.7	5.2	5.2	6.2	7.8	7.7	9.9	9.3	7.7	5.1	6.7	10.2	8.3	6.7	9.5	7.2	6.5	7.9	8.4	7.1	5.3	4.2	4.7	3.4	10.2	3.4	6.8
Max.	**10.8**	**10.1**	**9.5**	**10.6**	**11.4**	**10.9**	**14.2**	**14.7**	**15.5**	**12.9**	**9.6**	**10.2**	**10.5**	**10.7**	**12.0**	**13.0**	**10.5**	**10.3**	**10.4**	**11.1**	**12.6**	**12.6**	**12.1**	**11.4**	**15.5**		
Min.	**1.3**	**1.8**	**1.4**	**1.0**	**0.9**	**1.0**	**2.1**	**1.9**	**0.7**	**0.8**	**0.7**	**0.6**	**0.9**	**1.2**	**1.0**	**1.3**	**1.0**	**1.0**	**1.4**	**1.1**	**1.3**	**1.3**	**1.6**	**1.4**		**0.6**	
Avg.	**4.9**	**4.9**	**4.9**	**4.9**	**4.9**	**5.1**	**5.2**	**5.1**	**5.1**	**4.9**	**5.2**	**4.8**	**4.7**	**4.5**	**4.8**	**5.1**	**4.8**	**4.6**	**4.9**	**4.9**	**5.1**	**5.0**	**5.0**	**4.8**			**4.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.8	3.5	5.2	2.2	1.1	1.9	1.8	1.7	2.6	1.4	3.2	5.0	3.3	3.0	5.3	4.4	5.2	6.9	7.3	6.4	6.2	6.8	5.9	5.1	7.3	1.1	4.1
2	5.8	5.5	5.3	4.8	2.7	4.9	5.4	3.8	3.0	3.9	4.2	4.1	5.8	3.4	4.0	3.5	3.0	5.2	4.5	4.8	3.5	3.1	3.0	2.8	5.8	2.7	4.2
3	3.5	2.7	3.7	4.0	4.3	2.8	4.1	6.5	5.3	4.6	4.5	5.3	7.6	8.4	10.4	9.7	8.9	9.0	9.3	9.2	6.1	7.5	8.2	7.9	10.4	2.7	6.4
4	10.1	11.1	9.5	7.8	7.7	6.2	7.7	5.7	9.0	9.2	9.1	8.8	8.2	8.9	9.7	8.1	8.6	8.8	8.8	9.2	7.2	6.9	3.0	5.6	11.1	3.0	8.1
5	3.2	2.6	4.8	7.2	8.2	7.3	6.5	5.9	5.4	5.1	7.4	9.8	6.2	5.6	4.3	4.5	4.3	4.4	6.7	6.1	7.7	5.7	5.1	4.9	9.8	2.6	5.8
6	8.6	3.2	2.2	3.1	1.2	1.4	2.0	1.3	1.5	2.8	4.5	5.6	9.5	5.8	3.9	4.4	3.9	5.0	5.5	6.3	7.1	4.1	3.6	4.8	9.5	1.2	4.2
7	3.7	3.6	8.3	8.0	6.7	8.0	5.4	2.8	6.5	3.5	3.7	4.2	4.5	4.4	3.6	3.6	5.2	4.8	5.0	5.5	6.5	6.2	6.4	7.8	8.3	2.8	5.3
8	8.4	8.6	8.1	9.0	7.3	6.7	7.4	6.7	6.7	6.1	5.7	4.8	3.7	3.1	1.8	1.8	1.9	1.3	1.8	1.6	1.6	1.7	2.0	1.8	9.0	1.3	4.6
9	2.1	1.8	1.5	1.5	1.6	1.5	1.8	1.7	1.4	1.7	1.5	3.0	3.6	3.2	2.7	3.5	1.5	2.8	2.4	3.5	1.7	3.2	3.4	5.7	5.7	1.4	2.4
10	3.5	4.7	4.5	7.5	9.7	10.6	8.4	6.9	10.0	10.8	11.1	11.0	11.1	10.8	10.5	10.9	10.3	10.2	9.2	8.5	7.4	5.1	3.2	1.8	11.1	1.8	8.2
11	3.0	4.2	2.9	2.5	0.8	0.8	2.3	1.4	1.8	2.2	3.8	4.2	3.9	3.4	2.7	2.7	3.1	2.9	3.5	1.9	1.5	1.1	3.6	2.5	4.2	0.8	2.6
12	2.0	1.8	3.1	2.1	1.4	1.2	1.0	1.8	4.0	2.4	0.8	2.4	2.4	1.9	2.4	2.0	1.8	2.1	2.1	2.5	2.4	2.8	3.2	3.6	4.0	0.8	2.2
13	2.8	3.0	5.1	5.7	5.3	4.8	4.7	4.7	3.8	2.9	4.5	3.3	2.8	2.9	3.0	1.8	2.0	2.0	2.9	2.9	4.3	4.3	4.5	4.1	5.7	1.8	3.7
14	4.9	4.9	5.6	5.9	6.9	6.9	7.1	7.7	8.1	8.5	8.7	7.9	9.1	10.4	10.4	10.8	11.6	11.7	12.1	11.3	12.0	11.9	11.9	11.9	12.1	4.9	9.1
15	11.6	10.4	6.1	5.3	2.6	1.4	1.5	1.3	1.9	2.2	1.4	2.0	1.8	3.7	2.2	1.4	2.4	2.7	2.4	3.9	3.3	3.0	3.6	3.9	11.6	1.3	3.4
16	4.3	5.6	5.7	6.4	6.4	9.5	9.9	10.0	9.8	8.0	7.6	6.9	6.3	6.4	7.1	7.2	7.5	6.6	6.5	6.5	7.0	6.5	6.4	6.6	10.0	4.3	7.1
17	6.7	6.3	6.4	6.6	6.2	5.6	5.5	5.0	3.6	1.2	0.8	1.2	3.0	4.9	7.2	7.4	8.3	8.7	5.9	2.9	2.7	4.5	5.2	4.3	8.7	0.8	5.0
18	4.7	5.3	6.3	5.6	6.9	7.5	8.3	8.3	10.1	9.8	8.6	7.3	7.8	8.3	8.0	7.4	6.7	5.3	2.4	6.4	11.3	11.7	11.0	8.7	11.7	2.4	7.6
19	8.0	4.4	6.4	7.1	5.9	4.5	4.7	8.4	10.4	12.1	8.7	6.6	4.3	7.9	10.4	10.3	9.8	10.2	11.8	9.4	8.2	2.7	1.7	2.7	12.1	1.7	7.4
20	3.4	4.8	5.3	5.4	5.7	6.6	6.6	6.2	6.4	6.4	7.5	8.0	7.4	6.6	7.1	5.7	3.9	4.0	3.2	2.6	2.0	1.5	1.5	1.9	8.0	1.5	5.0
21	2.9	2.6	2.2	2.7	4.2	4.9	5.6	6.0	7.7	7.6	8.5	7.5	8.0	6.3	6.0	7.4	10.0	8.4	7.7	10.9	9.9	6.8	4.7	5.0	10.9	2.2	6.4
22	6.3	8.3	7.6	4.8	3.4	2.6	3.8	4.8	4.4	6.8	6.3	3.5	3.9	6.7	6.4	4.8	4.1	4.5	4.6	6.4	9.9	10.9	9.6	9.7	10.9	2.6	6.0
23	11.1	11.8	11.8	13.3	12.4	14.4	16.5	16.4	14.2	14.5	14.4	11.9	12.2	10.8	7.8	8.1	7.6	7.7	8.3	9.9	10.4	6.8	8.1	8.2	16.5	6.8	11.2
24	8.0	8.9	10.1	9.9	11.7	11.8	9.5	10.9	11.5	12.3	9.1	9.9	8.9	14.2	16.5	13.7	12.7	12.7	13.0	13.9	12.6	12.9	13.4	14.5	16.5	8.0	11.8
25	13.9	12.9	13.5	13.2	12.5	13.7	13.6	14.0	14.5	14.7	13.4	13.1	12.5	14.0	14.3	13.1	11.6	11.3	12.0	12.7	13.3	11.4	10.7	10.6	14.7	10.6	12.9
26	9.8	9.3	9.6	9.4	8.9	10.0	10.4	10.6	11.3	10.0	10.2	11.0	10.1	10.4	11.4	10.9	10.7	6.8	4.7	5.4	5.9	4.5	3.9	5.3	11.4	3.9	8.8
27	5.9	6.0	5.9	4.9	3.4	1.9	2.6	5.1	5.5	5.8	6.9	6.2	5.8	6.0	3.3	2.4	4.0	3.2	2.9	2.9	2.7	3.2	3.4	3.0	6.9	1.9	4.3
28	3.6	3.1	2.5	2.5	3.1	3.1	3.2	2.2	3.1	3.4	2.6	2.4	2.5	1.8	2.0	1.8	2.0	1.9	1.9	1.8	1.9	2.5	2.4	2.0	3.6	1.8	2.5
29	1.9	2.6	2.4	2.6	3.2	1.9	3.0	3.1	2.9	1.9	1.6	2.5	5.7	2.6	2.0	3.8	6.1	7.3	5.7	3.3	4.3	5.0	3.5	3.4	7.3	1.6	3.4
30	3.7	3.7	3.7	4.4	3.5	2.5	2.8	2.7	2.4	5.5	6.5	4.5	6.4	6.6	3.7	3.8	4.1	3.9	3.9	5.1	6.2	5.8	3.1	4.3	6.6	2.4	4.3
Max.	**13.9**	**12.9**	**13.5**	**13.3**	**12.5**	**14.4**	**16.5**	**16.4**	**14.5**	**14.7**	**14.4**	**13.1**	**12.5**	**14.2**	**16.5**	**13.7**	**12.7**	**12.7**	**13.0**	**13.9**	**13.3**	**12.9**	**13.4**	**14.5**	**16.5**		
Min.	**1.9**	**1.8**	**1.5**	**1.5**	**0.8**	**0.8**	**1.0**	**1.3**	**1.4**	**1.2**	**0.8**	**1.2**	**1.8**	**1.8**	**1.8**	**1.4**	**1.5**	**1.3**	**1.8**	**1.6**	**1.5**	**1.1**	**1.5**	**1.8**		**0.8**	
Avg.	**5.7**	**5.6**	**5.8**	**5.8**	**5.5**	**5.6**	**5.8**	**5.8**	**6.3**	**6.2**	**6.2**	**6.1**	**6.3**	**6.4**	**6.3**	**6.0**	**6.1**	**6.1**	**5.9**	**6.1**	**6.2**	**5.7**	**5.3**	**5.5**			**5.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.8	4.9	4.4	5.9	5.9	6.9	5.0	5.7	4.5	4.1	4.7	5.3	6.7	7.1	6.8	6.0	6.2	7.9	4.2	4.7	7.8	8.6	9.4	7.1	9.4	4.1	6.0
2	7.2	6.2	7.9	8.4	7.2	6.1	5.6	3.2	6.6	8.3	8.3	6.9	5.7	6.6	6.5	6.9	6.4	7.2	8.4	9.8	9.8	9.8	10.4	8.6	10.4	3.2	7.4
3	9.8	9.3	9.2	12.6	12.6	11.3	10.1	10.2	9.7	9.9	9.3	9.7	8.3	9.4	9.5	9.5	8.6	4.3	3.1	5.4	5.0	3.0	6.1	4.8	12.6	3.0	8.4
4	3.8	5.8	5.2	7.3	5.7	6.7	6.4	5.9	5.3	3.8	4.0	5.9	6.8	7.1	7.9	7.4	8.2	8.0	7.6	7.9	8.2	8.7	7.6	8.0	8.7	3.8	6.6
5	9.0	9.0	9.6	9.4	7.0	8.9	7.7	6.2	7.0	7.2	8.1	8.2	7.3	7.3	8.0	8.4	9.3	8.9	9.4	10.5	10.3	11.0	11.8	10.2	11.8	6.2	8.7
6	11.1	10.5	10.5	9.8	10.2	10.4	9.9	9.4	8.5	8.1	9.3	8.4	7.4	6.0	4.9	5.3	4.4	4.7	5.2	5.5	5.4	5.5	6.2	7.0	11.1	4.4	7.6
7	6.3	6.8	8.1	9.1	10.4	10.0	10.1	10.0	11.1	10.6	10.7	10.3	11.4	11.0	10.3	10.1	9.1	10.1	10.4	8.2	7.3	7.3	6.9	7.0	11.4	6.3	9.3
8	5.9	4.2	3.8	6.1	5.0	3.8	3.9	4.4	4.2	4.6	4.5	2.2	1.6	2.3	1.8	2.5	2.1	2.3	2.9	3.6	2.7	2.8	3.0	2.4	6.1	1.6	3.4
9	2.6	2.7	2.7	2.5	2.5	2.8	4.1	5.2	5.6	7.1	6.6	6.3	6.6	6.6	6.0	4.8	4.1	2.4	1.8	1.1	1.6	1.3	1.4	1.3	7.1	1.1	3.7
10	0.8	1.0	1.3	2.3	2.5	3.2	3.2	2.9	3.7	4.7	5.2	5.4	4.8	3.5	3.1	3.3	3.4	3.9	3.6	3.5	4.0	4.0	4.7	4.8	5.4	0.8	3.4
11	4.9	5.4	5.0	5.5	2.5	2.0	3.6	8.3	8.7	10.4	11.7	13.1	13.9	13.8	13.1	11.4	11.0	8.8	9.6	11.2	9.9	8.2	8.7	8.9	13.9	2.0	8.7
12	11.2	10.6	9.7	8.2	7.2	8.0	5.8	4.3	5.8	4.2	4.4	3.7	7.0	2.9	2.3	5.0	3.0	3.7	5.0	4.0	2.7	2.6	2.5	3.3	11.2	2.3	5.3
13	4.7	3.7	3.3	4.6	4.7	4.1	5.0	5.9	6.5	6.8	8.1	7.9	7.9	8.4	8.8	8.5	8.3	8.8	10.0	10.6	11.0	10.3	10.2	11.2	11.2	3.3	7.5
14	11.3	11.7	11.8	12.4	12.7	12.3	13.2	12.7	12.8	12.7	13.4	13.1	14.4	14.5	13.7	13.9	12.6	12.9	12.9	12.6	11.5	10.3	10.2	10.4	14.5	10.2	12.5
15	9.0	9.0	8.3	7.3	7.1	8.7	7.8	7.9	8.8	9.7	10.5	10.4	9.7	10.2	9.8	9.9	10.6	10.6	10.4	11.4	10.6	7.8	6.1	4.6	11.4	4.6	9.0
16	4.5	5.8	5.2	4.5	3.1	3.7	3.7	2.8	2.9	3.5	4.2	5.0	5.2	5.0	5.5	5.8	5.0	3.0	1.8	4.5	3.7	5.2	7.4	7.4	7.4	1.8	4.5
17	4.7	3.8	2.8	2.1	1.9	1.9	1.6	2.0	2.0	1.3	3.4	4.7	4.7	5.5	5.8	5.2	3.9	4.0	5.2	5.4	4.9	5.7	5.1	5.7	5.8	1.3	3.9
18	5.2	6.0	6.6	7.2	7.1	7.7	8.3	7.6	7.1	7.3	7.3	5.9	5.2	4.7	4.6	5.2	5.6	4.8	5.8	6.9	7.2	8.4	8.2	7.5	8.4	4.6	6.6
19	8.1	7.0	6.6	5.9	6.2	5.9	4.6	6.4	6.2	6.0	5.3	4.1	4.7	3.9	2.9	2.7	1.9	1.6	4.1	3.7	3.7	2.7	3.6	3.5	8.1	1.6	4.6
20	3.8	4.3	5.0	6.5	5.0	4.1	3.6	2.6	1.1	0.9	1.4	2.0	1.3	1.0	4.4	5.1	2.8	2.3	1.6	3.0	1.0	1.0	1.3	1.3	6.5	0.9	2.8
21	1.3	2.1	1.1	0.9	1.3	2.0	2.3	1.4	0.8	1.9	2.0	1.8	1.1	0.6	0.7	1.2	1.0	1.9	3.9	3.3	2.5	2.5	2.6	3.4	3.9	0.6	1.8
22	3.1	1.4	3.2	4.0	3.0	2.2	2.0	2.8	3.0	2.4	2.6	3.8	3.3	2.7	2.6	1.4	2.7	2.9	3.1	2.7	3.3	4.6	3.7	3.0	4.6	1.4	2.9
23	3.2	1.0	0.9	1.4	1.8	1.7	1.1	1.7	1.8	2.7	2.5	3.1	2.0	1.0	0.7	1.1	2.2	2.5	3.9	4.8	4.7	4.6	5.0	4.6	5.0	0.7	2.5
24	4.9	4.6	4.3	5.2	5.5	5.3	4.5	5.0	5.0	5.6	5.9	5.3	5.2	4.8	5.1	5.7	4.8	5.3	5.8	5.7	4.9	5.5	5.4	6.1	6.1	4.3	5.2
25	6.3	6.1	6.3	5.8	6.5	6.2	6.4	7.1	5.8	5.5	6.4	7.0	8.1	9.5	9.2	9.8	10.2	10.7	10.5	11.1	11.8	11.5	10.7	10.6	11.8	5.5	8.3
26	9.9	9.8	10.5	9.9	7.7	6.9	6.0	6.8	7.4	8.7	8.6	7.7	5.9	6.1	6.7	5.8	5.8	5.1	4.8	5.7	6.9	6.1	6.8	7.0	10.5	4.8	7.2
27	6.5	6.1	6.6	6.5	6.5	6.6	4.7	3.4	3.7	7.3	8.0	7.8	5.8	5.7	5.4	5.2	4.5	6.9	8.4	9.5	7.6	8.9	9.7	8.3	9.7	3.4	6.6
28	8.4	8.6	7.5	9.4	9.1	9.6	9.3	7.2	9.7	10.0	9.1	9.8	9.4	9.6	9.0	9.3	9.4	8.7	7.7	7.9	8.6	10.4	9.9	10.6	10.6	7.2	9.1
29	10.9	10.1	10.0	9.6	8.0	7.8	7.4	7.0	6.2	5.3	5.3	5.4	5.5	6.6	8.8	9.4	9.8	9.7	9.6	8.4	8.6	9.1	8.3	8.4	10.9	5.3	8.1
30	8.0	7.5	7.7	8.7	8.5	8.6	7.9	4.4	2.7	2.9	2.5	1.1	5.7	9.9	8.1	7.8	8.0	7.8	8.0	7.9	7.3	6.2	7.1	6.7	9.9	1.1	6.7
31	6.8	7.0	7.2	7.1	7.1	5.8	6.3	5.6	4.0	4.1	4.6	4.4	3.9	3.5	5.9	4.3	5.0	4.9	6.5	7.4	7.0	7.0	5.9	6.2	7.4	3.5	5.7
Max.	**11.3**	**11.7**	**11.8**	**12.6**	**12.7**	**12.3**	**13.2**	**12.7**	**12.8**	**12.7**	**13.4**	**13.1**	**14.4**	**14.5**	**13.7**	**13.9**	**12.6**	**12.9**	**12.9**	**12.6**	**11.8**	**11.5**	**11.8**	**11.2**	**14.5**		
Min.	**0.8**	**1.0**	**0.9**	**0.9**	**1.3**	**1.7**	**1.1**	**1.4**	**0.8**	**0.9**	**1.4**	**1.1**	**1.1**	**0.6**	**0.7**	**1.1**	**1.0**	**1.6**	**1.6**	**1.1**	**1.0**	**1.0**	**1.3**	**1.3**		**0.6**	
Avg.	**6.4**	**6.2**	**6.2**	**6.7**	**6.2**	**6.2**	**5.8**	**5.7**	**5.7**	**6.1**	**6.4**	**6.3**	**6.3**	**6.3**	**6.4**	**6.4**	**6.1**	**6.0**	**6.3**	**6.7**	**6.5**	**6.5**	**6.7**	**6.4**			**6.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	6.8	6.0	5.4	5.8	5.2	5.9	6.6	6.1	5.8	5.8	4.8	4.9	4.8	5.4	6.3	6.1	6.9	6.6	6.9	6.7	6.6	6.5	6.0	6.9	4.8	6.0
2	6.5	5.9	5.8	5.3	6.0	6.0	5.5	5.9	8.0	7.3	6.8	6.5	6.2	6.4	6.0	6.2	6.2	5.4	6.0	5.3	5.8	5.3	5.4	4.6	8.0	4.6	6.0
3	4.5	5.6	4.9	5.3	6.3	5.3	5.2	5.4	5.1	4.8	4.1	4.0	4.1	4.5	4.7	5.1	5.1	5.4	4.3	4.1	4.0	5.0	5.5	4.5	6.3	4.0	4.9
4	3.9	4.4	2.3	2.3	3.6	2.7	2.3	0.8	1.2	0.9	1.4	2.2	2.0	2.4	3.0	2.0	4.1	2.9	1.2	3.6	3.1	1.2	1.4	3.6	4.4	0.8	2.4
5	3.5	4.8	5.5	4.1	4.3	5.3	5.4	3.6	1.5	1.7	1.7	1.1	1.2	2.2	2.1	1.3	0.9	2.0	3.4	3.5	2.5	3.0	1.2	1.2	5.5	0.9	2.8
6	2.0	1.7	1.8	3.0	2.7	1.9	2.7	2.4	2.5	2.4	0.7	0.8	2.6	2.5	2.5	1.6	0.6	1.7	1.3	0.8	1.0	1.9	2.2	1.1	3.0	0.6	1.9
7	3.0	1.8	1.8	2.2	1.5	1.0	0.7	2.1	4.0	5.3	5.6	7.4	8.6	9.6	9.4	7.0	6.4	5.6	5.7	7.7	8.3	9.1	8.3	8.2	9.6	0.7	5.4
8	8.1	7.8	7.6	7.6	7.7	8.2	7.3	7.6	7.5	6.5	5.6	5.5	5.5	4.1	2.0	1.2	2.0	1.0	1.4	1.1	1.7	2.4	2.6	2.4	8.2	1.0	4.8
9	1.8	2.5	2.4	2.4	2.3	1.9	1.6	2.3	2.4	2.1	1.5	1.1	1.2	2.8	2.4	1.2	0.9	2.0	1.5	0.8	1.4	0.8	1.5	1.4	2.8	0.8	1.8
10	0.7	1.6	1.1	1.9	4.4	4.5	3.0	1.2	1.2	1.5	1.4	1.4	2.5	1.7	2.2	3.3	4.3	5.3	5.9	5.1	4.5	6.1	5.6	4.3	6.1	0.7	3.1
11	3.5	4.8	2.8	2.1	3.5	6.3	4.6	1.5	2.0	2.1	1.8	1.5	3.1	2.2	2.3	2.0	1.1	0.8	2.9	3.0	3.9	3.4	1.8	3.2	6.3	0.8	2.8
12	0.9	2.5	6.2	5.7	5.1	6.8	7.9	8.0	5.1	2.4	2.4	2.5	3.2	3.5	3.4	3.0	3.5	2.6	2.0	2.1	1.9	1.8	1.6	2.0	8.0	0.9	3.6
13	1.8	1.7	2.5	1.5	2.0	1.9	2.0	1.9	2.0	3.2	1.6	3.2	3.5	3.8	4.4	3.2	3.0	3.0	3.4	2.4	1.7	2.5	2.9	2.0	4.4	1.5	2.5
14	2.9	3.4	3.2	3.3	4.7	4.7	4.5	4.0	3.2	4.6	5.0	5.6	5.7	6.8	6.5	7.1	6.8	6.7	6.9	6.7	6.7	7.0	7.5	7.7	7.7	2.9	5.5
15	7.7	7.9	8.3	8.1	8.1	8.5	8.6	8.0	7.7	8.6	7.5	7.9	7.8	8.4	8.1	7.7	8.3	7.5	7.7	8.4	8.1	8.6	7.7	8.3	8.6	7.5	8.1
16	7.8	7.0	7.0	7.3	8.3	8.2	7.5	7.3	6.8	7.2	6.3					5.2	2.8	2.8	1.9	1.4	0.6	1.0	1.6	1.8	8.3	0.6	5.0
17	0.9	1.7	2.4	2.5	2.4	2.2	4.2	3.2	3.8	3.4	3.7	4.8	6.0	4.0	4.8	3.5	5.9	6.6	9.4	7.7	6.5	6.9	8.6	9.4	9.4	0.9	4.8
18	8.7	8.7	8.3	6.8	6.8	7.7	4.1	4.3	6.1	4.4	2.3	2.8	2.7	2.6	2.3	2.9	3.1	2.7	2.6	1.6	1.8	1.9	2.8	2.8	8.7	1.6	4.2
19	2.3	2.9	6.5	4.7	3.6	2.4	3.4	3.3	6.5	5.0	5.3	5.6	6.2	4.8	3.9	3.9	3.9	3.1	2.5	2.0	1.3	2.0	4.3	3.4	6.5	1.3	3.9
20	2.4	3.1	3.2	3.6	3.3	4.1	4.6	4.5	4.2	4.6	4.2	3.9	4.3	4.9	4.5	3.1	3.2	2.8	2.4	2.3	2.3	2.5	1.9	2.6	4.9	1.9	3.4
21	3.1	4.3	5.8	7.0	5.7	7.4	6.6	5.5	4.7	4.4	3.8	2.4	1.9	5.0	5.8	7.5	6.9	8.1	6.9	6.6	13.7	16.6	17.9	17.8	17.9	1.9	7.3
22	15.0	11.8	12.7	12.9	11.8	11.9	12.1	15.7	15.4	15.6	15.6	15.7	15.4	16.6	18.0	19.6	18.8	20.1	20.4	18.8	17.4	16.0	14.3	13.7	20.4	11.8	15.6
23	13.0	11.7	7.4	5.3	5.1	5.5	4.1	3.8	3.0	5.7	5.3	3.9	3.4	5.8	6.7	6.3	7.0	6.3	4.6	5.1	5.3	4.5	6.2	5.1	13.0	3.0	5.8
24	5.2	5.1	4.9	4.9	5.3	5.8	5.6	6.0	6.6	6.2	7.2	8.4	8.2	7.6	8.1	8.1	6.5	7.9	7.4	7.6	6.6	5.7	5.2	5.1	8.4	4.9	6.5
25	4.8	4.6	3.9	3.4	3.4	3.8	3.7	2.1	3.3	3.0	3.7	5.2	5.2	4.2	3.5	4.0	3.8	5.1	5.8	6.2	6.5	8.4	8.0	9.3	9.3	2.1	4.8
26	9.1	9.1	9.5	10.0	9.7	9.7	8.9	8.8	8.9	10.4	9.5	9.7	10.3	9.5	9.4	9.1	8.1	7.4	8.2	9.5	8.2	9.3	9.0	8.6	10.4	7.4	9.2
27	7.2	6.9	7.5	6.8	8.7	11.5	8.6	13.2	10.1	8.9	11.4	14.2	12.5	12.8	13.9	14.6	16.5	14.2	15.1	17.1	16.3	14.3	16.3	16.3	17.1	6.8	12.3
28	14.5	16.2	16.4	16.7	17.9	19.4	19.6	17.3	16.6	16.1	15.0	14.0	11.3	8.1	6.9	6.5	7.4	6.6	7.8	6.2	4.3	6.1	6.8	7.8	19.6	4.3	11.9
29	7.8	6.6	7.1	6.5	6.1	5.5	5.4	5.8	5.9	5.6	5.4	5.3	5.4	5.5	4.4	2.9	3.3	4.3	4.7	4.3	5.2	5.5	5.0	5.4	7.8	2.9	5.4
30	5.6	5.8	5.9	5.5	4.9	4.7	5.1	4.9	4.7	4.4	3.3	3.7	4.7	3.6	3.3	2.6	2.9	2.5	1.9	1.4	3.1	3.0	4.1	4.9	5.9	1.4	4.0
31	4.5	4.6	4.7	4.8	4.3	3.6	4.1	2.9	3.8	4.3	4.4	4.5	4.0	3.9	5.4	6.0	4.7	4.6	4.7	5.6	8.3	9.2	10.4	8.5	10.4	2.9	5.2
Max.	**15.0**	**16.2**	**16.4**	**16.7**	**17.9**	**19.4**	**19.6**	**17.3**	**16.6**	**16.1**	**15.6**	**15.7**	**15.4**	**16.6**	**18.0**	**19.6**	**18.8**	**20.1**	**20.4**	**18.8**	**17.4**	**16.6**	**17.9**	**17.8**	**20.4**		
Min.	**0.7**	**1.6**	**1.1**	**1.5**	**1.5**	**1.0**	**0.7**	**0.8**	**1.2**	**0.9**	**0.7**	**0.8**	**1.2**	**1.7**	**2.0**	**1.2**	**0.6**	**0.8**	**1.2**	**0.8**	**0.6**	**0.8**	**1.2**	**1.1**		**0.6**	
Avg.	**5.5**	**5.6**	**5.7**	**5.4**	**5.7**	**5.9**	**5.6**	**5.5**	**5.5**	**5.4**	**5.1**	**5.3**	**5.5**	**5.5**	**5.5**	**5.3**	**5.3**	**5.3**	**5.4**	**5.3**	**5.4**	**5.7**	**5.9**	**5.9**			**5.5**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.9	9.7	9.8	11.2	9.6	8.1	10.6	9.9	10.1	13.2	13.4	14.0	14.4	14.1	16.3	14.8	12.9	7.4	7.7	10.3	7.9	7.3	11.2	11.7	16.3	7.3	11.0
2	13.5	14.8	13.0	11.9	11.1	12.3	13.3	12.9	13.9	12.9	8.4	6.6	7.4	7.5	7.8	6.6	8.0	8.3	7.1	3.5	5.4	5.8	5.6	4.9	14.8	3.5	9.3
3	5.3	6.3	7.4	7.3	6.9	6.9	7.7	7.2	7.3	6.7	6.7	6.8	7.5	7.4	6.7	7.4	8.1	7.7	7.5	8.2	7.9	8.2	8.4	7.8	8.4	5.3	7.3
4	7.4	8.5	8.9	9.2	10.0	9.6	9.6	9.7	9.6	10.0	9.8	10.3	10.7	11.9	11.6	12.1	12.9	12.1	12.3	11.6	11.6	12.8	12.6	14.1	14.1	7.4	10.8
5	14.4	14.5	13.2	14.2	13.9	12.9	12.9	13.3	13.6	12.6	13.1	11.6	9.9	9.1	8.7	9.0	9.4	11.4	10.5	11.9	12.3	12.9	11.1	11.0	14.5	8.7	12.0
6	11.1	10.5	10.1	9.2	8.6	9.3	8.3	6.4	5.6	2.9	2.0	0.3	2.4	0.7	2.7	1.9	2.5	2.2	2.2	1.7	2.5	2.3	2.4	2.1	11.1	0.3	4.6
7	2.7	3.9	3.4	2.9	1.9	1.3	1.1	2.7	6.4	6.2	6.1	9.3	9.9	10.7	9.2	4.4	3.5	4.2	4.4	7.2	7.7	6.8	5.9	5.6	10.7	1.1	5.3
8	5.3	4.9	2.2	3.3	3.0	3.0	3.4	4.0	5.3	6.0	4.7	5.7	5.6	5.7	7.3	8.5	8.6	8.4	8.5	7.7	8.0	8.7	8.7	8.3	8.7	2.2	6.0
9	9.5	9.7	10.0	10.0	10.5	12.0	13.7	14.8	15.8	16.1	16.3	15.7	15.1	13.9	13.4	11.2	10.4	9.6	8.8	8.7	8.9	7.6	5.8	4.9	16.3	4.9	11.3
10	6.3	7.7	7.8	8.3	8.8	8.6	9.5	8.7	9.2	9.6	9.1	6.9	5.2	3.2			1.8	3.1	2.8	4.2	2.9	2.6	3.4	4.3	9.6	1.8	6.1
11	4.5	5.1	5.8	5.7	6.3	6.4	7.4	8.2	9.0	8.3	8.9	7.9	7.6	8.0	7.5	8.4	9.1	9.0	8.3	8.1	7.5	7.6	7.7	6.8	9.1	4.5	7.5
12	5.2	4.8	3.0	2.9	7.5	5.3	6.5	7.6	7.8	7.2	8.3	10.7	11.6	8.0	6.3	6.1	10.2	12.1	11.0	10.6	11.2	9.5	6.9	6.3	12.1	2.9	7.8
13	2.2	1.4	1.9	1.6	2.3	1.7	0.9	2.8	4.2	3.7	1.8	5.6	5.6	6.2	5.5	5.0	5.1	5.8	6.3	5.3	5.3	4.7	4.0	3.9	6.3	0.9	3.9
14	4.2	4.8	4.7	4.9	4.9	5.3	4.2	5.2	5.1	4.6	5.5	6.7	6.2	6.3	5.8	5.3	5.0	4.4	4.5	4.4	5.6	6.3	5.7	6.3	6.7	4.2	5.2
15	6.7	7.6	5.5	6.5	6.8	6.7	6.7	7.2	7.3	4.4	3.5	4.2	4.2	3.2	4.2	5.2	4.4	4.4	4.4	5.3	4.8	4.5	3.9	4.3	7.6	3.2	5.2
16	4.8	3.8	4.1	4.3	4.3	3.6	1.5	1.9	1.6	1.0	0.6	0.7	1.9	2.6	1.5	1.7	3.9	3.4	3.7	4.4	4.1	3.8	4.5	4.7	4.8	0.6	3.0
17	5.3	5.9	6.2	6.0	5.6	7.2	7.9	9.3	10.3	9.6	8.6	8.7	7.7	7.3	7.1	6.5	6.9	6.5	6.4	5.3	5.7	6.2	7.4	5.4	10.3	5.3	7.0
18	4.5	4.8	5.2	4.9	4.9	4.6	4.2	4.7	5.0	6.0	4.8	3.4	2.7	3.5	1.7	3.1	3.2	2.6	2.5	2.9	4.7	5.1	4.7	3.9	6.0	1.7	4.1
19	2.0	4.2	8.9	9.5	8.1	4.6	4.4	4.0	6.0	5.0	6.4	5.5	5.5	3.8	5.5	5.4	6.0	9.3	9.1	8.4	8.3	9.0	5.9	6.5	9.5	2.0	6.3
20	5.7	5.1	5.8	2.8	2.6	2.7	3.2	4.1	4.0	4.8	3.1	3.4	3.7	8.2	4.9	5.2	7.9	10.6	12.3	13.7	11.3	13.8	13.9	10.8	13.9	2.6	6.8
21	12.9	7.1	6.8	4.9	6.5	6.0	6.8	7.3	7.7	6.7	4.7	5.1	7.1	6.4	5.0	4.7	4.5	3.8	4.4	4.1	4.5	4.1	3.8	3.8	12.9	3.8	5.8
22	3.9	4.8	3.4	3.1	2.7	2.3	8.3	5.2	4.9	4.3	4.5	4.9	3.5	3.3	3.5	2.7	2.8	2.8	2.1	3.1	3.5	3.7	3.1	3.1	8.3	2.1	3.7
23	2.2	1.9	2.0	1.8	0.7	2.0	1.7	2.2	1.7	5.4	6.2	6.5	4.5	4.4	3.8	3.6	4.0	4.6	3.2	2.4	2.9	3.9	4.2	3.6	6.5	0.7	3.3
24	3.3	3.4	3.9	4.0	3.4	4.2	3.7	4.7	6.5	6.9	7.0	5.1	3.7	3.0	3.1	2.7	1.9	1.9	3.4	3.7	4.0	4.1	3.2	3.1	7.0	1.9	3.9
25	3.6	3.5	3.1	2.1	2.2	2.0	1.6	0.7	0.7	3.3	1.6	0.8	4.2	1.8	5.5	4.4	4.5	5.5	7.7	7.9	9.4	6.8	5.3	5.9	9.4	0.7	3.9
26	5.2	4.9	6.1	4.3	4.6	3.1	2.6	3.3	2.5	3.4	3.2	4.1	2.8	3.5	3.1	3.8	3.0	3.3	2.1	1.8	1.6	3.3	3.6	5.1	6.1	1.6	3.5
27	5.7	6.8	7.2	6.9	5.8	4.0	1.9	3.2	8.5	4.4	4.2	3.2	2.3	2.7	4.7	5.1	3.4	4.1	7.6	6.9	5.2	4.2	5.6	5.7	8.5	1.9	5.0
28	5.7	9.2	7.6	7.4	7.4	9.3	9.6	9.8	6.7	7.2	5.9	7.3	9.3	10.4	12.7	12.3	10.2	10.2	10.2	9.7	9.2	11.0	9.9	9.4	12.7	5.7	9.1
Max.	**14.4**	**14.8**	**13.2**	**14.2**	**13.9**	**12.9**	**13.7**	**14.8**	**15.8**	**16.1**	**16.3**	**15.7**	**15.1**	**14.1**	**16.3**	**14.8**	**12.9**	**12.1**	**12.3**	**13.7**	**12.3**	**13.8**	**13.9**	**14.1**	**16.3**		
Min.	**2.0**	**1.4**	**1.9**	**1.6**	**0.7**	**1.3**	**0.9**	**0.7**	**0.7**	**1.0**	**0.6**	**0.3**	**1.9**	**0.7**	**1.5**	**1.7**	**1.8**	**1.9**	**2.1**	**1.7**	**1.6**	**2.3**	**2.4**	**2.1**		**0.3**	
Avg.	**6.1**	**6.4**	**6.3**	**6.1**	**6.1**	**5.9**	**6.2**	**6.5**	**7.0**	**6.9**	**6.4**	**6.5**	**6.5**	**6.3**	**6.5**	**6.2**	**6.2**	**6.4**	**6.5**	**6.5**	**6.6**	**6.7**	**6.4**	**6.2**			**6.4**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.4	4.6	3.7	5.8	6.8	7.3	6.8	6.1	2.4	3.8	5.0	4.9	5.2	4.1	3.1	2.3	3.1	4.0	5.8	6.2	5.6	6.5	6.8	4.3	9.4	2.3	5.2
2	3.1	5.8	6.3	6.2	6.4	6.9	7.2	8.6	9.1	8.6	8.2	7.8	8.0	8.5	7.9	7.3	8.1	7.6	8.0	7.5	7.9	8.0	7.9	8.7	9.1	3.1	7.5
3	7.7	7.8	6.4	6.0	7.1	7.3	7.1	6.8	7.5	6.8	6.3	5.5	5.9	6.1	5.5	5.0	4.0	3.1	3.9	4.3	4.3	4.7	4.6	4.9	7.8	3.1	5.8
4	5.0	4.5	4.7	5.5	5.2	5.3	5.6	5.5	6.1	5.3	5.4	5.3	5.6	4.5	5.0	5.3	5.0	5.8	5.5	5.4	5.2	5.6	5.4	5.5	6.1	4.5	5.3
5	5.5	5.8	6.0	6.3	6.4	6.2	5.5	1.8	1.4	1.3	1.2	3.3	4.1	3.6	3.0	2.6	2.7	3.8	6.1	6.5	4.6	3.9	3.5	4.2	6.5	1.2	4.1
6	6.3	6.0	5.1	4.6	5.6	4.8	3.6	5.9	9.9	10.8	11.2	9.8	9.0	5.8	7.1	5.9	5.0	3.0	2.2	1.8	3.3	3.9	4.6	5.8	11.2	1.8	5.9
7	5.9	5.0	3.0	3.9	3.3	4.0	5.3	5.2	8.0	10.5	11.5	11.5	10.5	9.9	9.5	9.7	10.0	8.0	8.6	8.3	6.4	8.1	9.2	11.7	11.7	3.0	7.8
8	12.7	14.4	12.8	12.3	14.2	12.7	13.3	16.2	11.8	11.1	11.0	10.1	8.5	8.6	8.1	10.8	11.3	14.5	11.2	7.2	7.6	7.1	5.5	5.9	16.2	5.5	10.8
9	7.1	7.0	7.4	6.9	8.3	9.2	8.7	8.5	7.7	8.7	10.5	8.6	7.1	9.6	7.8	7.1	7.7	8.9	8.9	9.4	10.4	10.6	8.7	6.5	10.6	6.5	8.4
10	6.2	4.8	5.1	5.0	5.1	5.7	5.0	2.3	4.5	4.5	4.4	3.4	2.7	2.8	3.1	1.8	1.5	3.5	4.7	4.6	4.8	5.1	5.4	5.3	6.2	1.5	4.2
11	5.6	5.5	8.2	7.5	7.3	8.4	7.6	8.2	8.9	8.8	8.6	7.7	7.5	7.8	7.2	7.0	6.8	7.9	7.7	8.2	8.6	7.8	6.6	5.9	8.9	5.5	7.5
12	9.1	8.0	8.0	9.2	8.7	8.4	7.8	6.6	6.3	6.0	6.5	6.9	6.8	7.4	7.5	7.2	6.4	6.1	5.7	5.3	4.9	3.8	2.1	1.6	9.2	1.6	6.5
13	2.6	1.6	1.3	1.0	1.0	2.0	1.7	1.4	1.5	1.8	2.4	3.8	3.2	2.8	2.4	2.1	2.3	1.7	1.8	2.1	1.6	1.4	2.0	1.5	3.8	1.0	2.0
14	1.3	2.6	2.0	2.9	3.3	3.0	2.5	2.8	3.4	4.2	3.9	2.5	3.1	3.4	4.2	3.8	2.2	2.3	3.0	2.9	3.3	4.2	3.2	2.5	4.2	1.3	3.0
15	2.5	3.9	3.5	5.1	4.7	4.0	3.6	2.9	2.9	4.4	2.8	1.5	1.3	1.6	1.2	1.1	2.2	2.2	3.0	1.4	3.4	3.9	5.0	5.0	5.1	1.1	3.1
16	4.6	5.4	5.9	5.5	5.3	5.4	5.1	5.8	7.0	7.4	7.4	6.9	7.3	6.0	4.5	4.6	5.2	3.3	3.8	4.2	4.0	4.5	5.0	4.6	7.4	3.3	5.4
17	4.6	4.3	4.7	6.3	6.1	5.9	5.2	5.5	6.1	5.5	5.9	7.2	8.8	7.8	7.7	7.7	7.2	7.2	7.8	6.5	7.5	7.4	7.7	7.0	8.8	4.3	6.6
18	8.4	9.3	8.6	8.4	8.5	7.8	8.2	7.8	7.8	7.7	8.1	9.0	9.5	8.9	8.0	6.8	4.8	3.6	1.7	0.5	0.8	0.6	0.5	0.8	9.5	0.5	6.1
19	2.1	1.3	2.1	2.3	2.1	2.0	2.6	3.3	1.7	3.2	2.6	1.3	2.3	2.9	4.4	3.7	3.1	2.4	2.4	1.6	0.8	2.6	4.1	4.2	4.4	0.8	2.6
20	4.4	4.5	3.6	3.7	4.8	5.0	4.3	3.3	1.7	1.5	1.7	1.1	1.3	3.4	4.0	5.0	4.9	4.2	5.9	6.0	6.0	6.9	7.0	6.1	7.0	1.1	4.2
21	5.9	5.8	4.9	4.9	4.0	4.6	3.4	3.4	1.5	1.6	3.3	3.1	1.7	1.8	1.0	1.3	2.9	3.0	2.5	3.5	3.2	2.3	2.4	4.0	5.9	1.0	3.2
22	6.2	6.7	6.9	7.0	6.9	8.2	8.9	9.2	9.5	8.9	8.9	6.4	6.1	6.2	5.4	5.0	2.5	1.7	1.3	1.4	3.5	4.1	4.0	3.7	9.5	1.3	5.8
23	3.5	2.5	2.7	1.4	1.3	1.5	2.8	3.5	4.9	5.8	4.1	4.3	3.2	4.2	1.7	2.0	2.4	5.3	7.9	6.6	7.3	6.6	6.8	5.1	7.9	1.3	4.1
24	6.1	7.9	8.0	8.9	8.4	7.9	7.6	5.5	6.2	6.8	4.4	3.0	1.6	1.8	2.9	3.6	2.4	1.2	2.5	5.1	5.1	4.4	4.7	4.5	8.9	1.2	5.0
25	4.4	4.4	3.6	2.1	4.7	4.2	4.8	4.7	5.2	5.3	4.6	1.6	0.9	1.5	1.7	1.2	1.2	1.9	1.7	4.4	3.7	3.7	4.8	6.1	6.1	0.9	3.4
26	3.7	5.3	5.7	5.3	5.3	5.3	5.5	5.8	7.1	6.6	3.8	2.6	1.7	2.1	2.0	2.5	1.8	2.0	0.9	2.9	4.0	3.9	3.7	3.5	7.1	0.9	3.9
27	3.0	3.8	2.4	2.1	3.5	2.5	1.7	2.0	3.0	1.0	1.0	2.6	2.9	3.0	3.3	3.2	2.8	2.5	2.1	1.5	1.3	1.1	2.2	2.2	3.8	1.0	2.4
28	2.2	2.8	2.6	3.8	3.8	4.0	4.2	4.1	3.2	1.4	0.9	1.6	3.5	3.2	3.5	3.0	2.8	2.4	3.7	2.3	0.7	1.1	1.3	1.3	4.2	0.7	2.6
29	2.9	2.8	2.9	3.3	3.7	4.0	3.6	3.9	3.6	3.7	2.9	2.1	1.0	2.5	4.8	4.7	4.2	1.1	1.3	1.1	0.8	1.0	2.3	3.8	4.8	0.8	2.8
30	4.8	3.9	4.4	5.1	4.4	5.8	6.4	6.8	7.4	6.3	6.9	6.7	7.8	7.3	7.8	8.2	7.8	7.2	6.3	6.4	5.0	5.1	6.5	6.4	8.2	3.9	6.3
31	6.7	7.0	6.7	6.1	6.6	6.3	7.3	7.4	7.2	8.0	7.8	7.7	8.5	8.0	8.3	7.6	6.7	5.7	4.6	2.1					8.5	2.1	6.8
Max.	**12.7**	**14.4**	**12.8**	**12.3**	**14.2**	**12.7**	**13.3**	**16.2**	**11.8**	**11.1**	**11.5**	**11.5**	**10.5**	**9.9**	**9.5**	**10.8**	**11.3**	**14.5**	**11.2**	**9.4**	**10.4**	**10.6**	**9.2**	**11.7**	**16.2**		
Min.	**1.3**	**1.3**	**1.3**	**1.0**	**1.0**	**1.5**	**1.7**	**1.4**	**1.4**	**1.0**	**0.9**	**1.1**	**0.9**	**1.5**	**1.0**	**1.1**	**1.2**	**1.1**	**0.9**	**0.5**	**0.7**	**0.6**	**0.5**	**0.8**		**0.5**	
Avg.	**5.3**	**5.3**	**5.1**	**5.3**	**5.6**	**5.7**	**5.6**	**5.5**	**5.6**	**5.7**	**5.6**	**5.2**	**5.0**	**5.1**	**4.9**	**4.8**	**4.5**	**4.4**	**4.6**	**4.4**	**4.5**	**4.7**	**4.8**	**4.7**			**5.1**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					4.3	4.3	5.5	7.7	7.6	8.0	7.6	5.6	4.8	7.1	6.0	4.6	4.8	4.8	4.7	5.2	4.3	4.5	4.3	5.6	8.0	4.3	5.6
2	3.8	5.7	7.0	5.1	7.6	5.1	3.3	3.9	3.6	2.0	2.5	1.5	1.7	1.6	1.5	2.4	2.9	2.5	2.3	2.8	3.7	5.1	5.2	5.9	7.6	1.5	3.7
3	6.8	6.7	6.3	6.7	6.8	7.2	7.4	7.5	7.4	8.0	7.9	8.1	8.2	8.3	8.2	7.3	7.2	6.4	6.1	6.0	5.5	5.6	6.5	6.0	8.3	5.5	7.0
4	6.4	5.5	5.5	5.5	5.2	5.8	5.5	5.4	5.8	4.8	4.3	2.3	1.3	0.8	1.1	1.1	1.0	1.1	0.8	0.9	0.9	1.0	0.9	1.1	6.4	0.8	3.1
5	2.3	4.9	4.2	5.1	3.0	3.2	5.6	3.7	7.2	6.2	8.4	9.6	9.8	8.3	5.3	7.1	4.5	6.7	6.7	9.3	9.2	9.4	9.6	10.1	10.1	2.3	6.6
6	9.6	9.6	9.2	5.4	4.0	4.4	5.4	5.0	6.2	4.7	2.5	2.4	2.6	3.0	3.8	2.9	2.8	2.7	2.0	2.0	2.4	1.5	0.8	1.3	9.6	0.8	4.0
7	1.8	0.9	2.6	3.1	1.3	3.6	3.5	3.6	3.8	2.1	2.1	2.1	1.5	1.1	1.2	1.6	2.1	1.6	1.8	1.8	1.5	2.8	2.7	3.2	3.8	0.9	2.2
8	3.8	4.0	3.6	3.6	3.5	3.8	3.6	5.4	5.2	4.1	4.6	4.3	3.8	4.1	4.1	3.8	4.0	3.8	4.1	3.9	3.5	2.8	1.7	1.9	5.4	1.7	3.8
9	0.9	0.5	1.1	1.7	1.7	1.2	1.6	1.7	1.9	2.8	2.7	1.3	1.2	3.4	3.9	3.7	3.5	3.0	1.0	1.2	1.6	3.6	2.8	4.8	4.8	0.5	2.2
10	5.0	6.5	5.5	5.1	4.7	6.6	7.2	7.8	8.2	8.7	9.2	9.8	7.0	8.5	12.1	14.8	12.5	9.3	3.2	3.6	7.8	10.1	7.7	6.9	14.8	3.2	7.8
11	6.8	6.8	4.5	4.6	3.6	3.5	3.4	3.6	3.0	2.5	3.8	3.4	3.4	4.3	6.7	8.4	9.2	8.5	8.0	8.2	8.4	8.7	8.9	8.0	9.2	2.5	5.8
12	8.3	8.3	8.5	8.4	8.4	8.3	8.3	8.2	7.8	7.7	7.9	7.5	7.1	6.6	5.0	2.8	0.7	0.4	0.7	1.8	2.3	3.9	4.8	4.4	8.5	0.4	5.8
13	6.8	8.5	9.6	9.2	9.0	9.2	9.0	9.2	8.6	7.5	9.1	8.1	9.7	12.9	13.2	11.8	12.1	10.6	6.7	7.0	8.9	10.2	10.6	10.5	13.2	6.7	9.5
14	11.0	10.7	9.9	9.5	11.1	11.1	11.2	10.5	10.1	11.0	10.9	10.5	10.8	10.2	10.0	8.9	7.8	6.8	5.0	6.3	7.0	9.6	8.7	7.9	11.2	5.0	9.4
15	7.3	7.9	6.3	7.0	6.1	4.3	4.4	5.4	5.9	9.2	7.4	9.8	10.6	8.2	7.9	7.1	7.0	7.3	5.8	4.3	2.8	3.1	3.0	4.8	10.6	2.8	6.4
16	3.6	5.3	4.2	3.7	4.6	6.6	7.3	8.2	8.5	7.9	7.8	8.1	8.2	7.7	9.5	10.4	10.1	10.6	10.8	11.1	11.3	11.4	10.6	10.5	11.4	3.6	8.2
17	10.6	10.7	10.5	11.3	10.1	9.2	7.8	5.6	3.0	5.7	4.9	4.8	3.9	5.4	5.3	5.4	4.7	4.4	4.7	5.1	3.3	2.7	2.5	2.8	11.3	2.5	6.0
18	1.5	4.6	1.8	2.5	1.3	1.5	2.0	2.2	2.3	1.9	1.1	2.2	3.0	3.1	3.5	3.6	2.2	1.1	1.0	3.6	4.4	4.3	3.6	2.7	4.6	1.0	2.5
19	6.1	8.2	8.7	8.4	8.8	9.5	9.0	6.8	3.9	3.6	3.8	3.4	3.8	3.9	1.4	2.0	2.7	1.6	0.7	0.8	2.1	2.0	1.8	3.0	9.5	0.7	4.4
20	1.7	1.7	2.5	3.7	4.1	3.9	4.1	3.8	4.1	4.2	4.6	2.1	2.2	2.6	3.1	4.0	4.8	3.7	4.0	3.0	3.7	4.5	6.2	6.0	6.2	1.7	3.7
21	6.5	7.8	8.5	8.6	9.1	8.9	9.3	9.6	9.7	9.2	9.2	8.6	7.2	5.6	4.8	2.1	2.8	2.1	2.5	4.4	3.9	3.4	3.3	3.1	9.7	2.1	6.3
22	3.8	4.1	4.4	4.8	4.2	3.8	3.7	3.4	3.1	2.8	1.3	1.4	1.2	1.3	2.0	2.1	2.2	2.0	1.8	1.9	1.5	1.5	1.7	3.0	4.8	1.2	2.6
23	2.6	3.8	3.9	4.5	3.9	4.2	4.3	4.1	2.9	3.2	3.8	4.7	4.1	3.2	1.9	3.4	3.9	1.7	0.9	4.5	6.3	5.7	6.8	6.6	6.8	0.9	3.9
24	4.3	3.1	2.0	1.7	3.6	6.3	4.6	3.4	2.0	4.5	4.4	4.6	5.9	9.0	8.2	7.6	5.7	4.5	9.7	11.1	6.5	6.3	9.6	9.3	11.1	1.7	5.7
25	7.1	4.6	1.6	2.4	2.2	2.6	3.4	4.2	4.4	4.3	3.7	4.6	5.1	4.3	5.0	4.6	4.7	5.4	4.9	5.1	5.2	4.8	5.9	4.7	7.1	1.6	4.4
26	5.9	6.2	6.5	6.1	5.8	6.8	6.6	6.6	7.0	7.5	7.2	7.4	6.6	6.7	6.3	6.4	5.7	4.7	4.7	4.8	4.9	5.0	3.6	4.0	7.5	3.6	6.0
27	5.1	5.2	5.0	4.7	4.8	5.2	5.3	5.7	5.0	4.8	4.4	4.2	3.1	2.4	1.2	1.8	2.0	1.8	1.1	1.0	1.0	1.7	2.0	2.8	5.7	1.0	3.4
28	3.7	3.7	4.1	3.8	2.6	2.4	3.0	1.9	2.6	2.1	2.0	1.4	2.0	3.0	2.3	2.5	2.9	2.5	1.5	0.8	1.0	1.5	1.9	1.9	4.1	0.8	2.4
29	1.9	3.1	7.2	7.2	8.2	8.9	8.1	9.9	9.2	6.4	5.6	3.3	3.1	3.2	3.5	5.0	5.1	4.9	4.3	3.9	5.1	4.4	3.1	3.0	9.9	1.9	5.3
30	2.9	2.9	3.2	2.5	3.0	3.5	5.3	3.6	4.0	6.1	5.4	2.6	1.9	2.5	3.9	3.1	2.0	2.0	1.1	2.3	2.2	2.5	2.4	2.6	6.1	1.1	3.1
Max.	**11.0**	**10.7**	**10.5**	**11.3**	**11.1**	**11.1**	**11.2**	**10.5**	**10.1**	**11.0**	**10.9**	**10.5**	**10.8**	**12.9**	**13.2**	**14.8**	**12.5**	**10.6**	**10.8**	**11.1**	**11.3**	**11.4**	**10.6**	**10.5**	**14.8**		
Min.	**0.9**	**0.5**	**1.1**	**1.7**	**1.3**	**1.2**	**1.6**	**1.7**	**1.9**	**1.9**	**1.1**	**1.3**	**1.2**	**0.8**	**1.1**	**1.1**	**0.7**	**0.4**	**0.7**	**0.8**	**0.9**	**1.0**	**0.8**	**1.1**		**0.4**	
Avg.	**5.1**	**5.6**	**5.5**	**5.4**	**5.2**	**5.5**	**5.6**	**5.6**	**5.5**	**5.4**	**5.3**	**5.0**	**4.8**	**5.1**	**5.1**	**5.1**	**4.8**	**4.3**	**3.7**	**4.3**	**4.4**	**4.8**	**4.8**	**4.9**			**5.0**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.3	3.3	5.0	5.0	5.0	4.7	6.3	7.4	8.3	8.1	8.8	9.2	10.0	9.9	10.3	10.0	10.2	10.9	11.5	11.1	10.8	10.5	10.7	11.5	3.2	8.1
2	10.5	10.3	9.6	9.1	8.6	9.0	8.3	7.9	7.0	7.4	8.2	7.4	6.5	5.8	5.4	4.8	4.6	4.1	4.6	3.6	3.9	3.4	2.2	3.5	10.5	2.2	6.5
3	4.4	4.1	4.1	3.8	4.4	4.9	5.6	5.0	6.3	7.1	9.1	9.2	9.3	8.8	6.4	3.9	4.9	5.1	4.7	4.3	4.6	5.0	5.6	6.6	9.3	3.8	5.7
4	7.5	7.3	7.3	5.5	3.2	3.3	2.5	3.6	2.9	2.4	2.6	2.3	2.5	2.1	2.8	2.6	2.5	3.5	3.5	3.7	3.6	4.8	5.2	6.0	7.5	2.1	3.9
5	6.9	6.3	4.5	6.3	6.9	7.2	7.6	8.1	9.4	8.9	8.7	8.0	7.0	5.3	2.2	2.2	2.0	1.6	1.5	1.0	1.3	2.0	1.7	4.0	9.4	1.0	5.0
6	3.2	1.2	1.3	1.1	1.5	0.9	0.6	1.1	1.4	0.7	1.1	1.0	1.2	1.1	2.7	5.1	6.3	7.6	8.1	7.6	7.7	8.0	8.0	8.8	8.8	0.6	3.6
7	10.2	9.7	10.2	10.2	9.8	9.3	9.5	9.6	9.2	9.4	8.4	9.1	7.3	5.9	5.9	7.1	7.8	6.1	5.0	5.5	6.0	5.6	7.3	7.3	10.2	5.0	8.0
8	6.0	4.3	3.3	2.3	2.0	2.8	4.1	4.4	4.3	5.2	5.2	5.6	6.8	7.4	6.6	6.6	6.7	7.1	6.8	7.8	7.3	7.6	8.2	8.6	8.6	2.0	5.7
9	9.3	9.5	10.1	10.7	10.4	9.2	9.9	10.0	11.3	11.0	10.2	10.2	10.6	10.4	10.1	9.7	10.3	9.4	8.6	8.7	7.6	6.0	6.2	6.3	11.3	6.0	9.4
10	7.0	6.7	9.0	6.5	5.4	3.7	4.8	4.9	4.1	2.2	3.5	2.5	1.8	1.8	1.0	1.0	1.9	1.0	1.3	1.6	2.1	0.9	2.4	2.2	9.0	0.9	3.3
11	1.0	2.3	3.8	2.6	1.0	2.0	1.9	3.5	2.8	2.5	2.3	1.6	1.2	1.3	1.1	2.3	2.2	1.7	1.0	1.7	3.2	4.1	4.1	3.4	4.1	1.0	2.3
12	3.7	4.2	3.2	2.9	3.2	2.5	2.3	4.4	4.9	4.2	4.2	2.4	1.3	5.9	5.6	4.8	3.0	1.4	1.0	0.9	0.9	2.4	3.4	3.9	5.9	0.9	3.2
13	3.6	2.9	2.6	2.5	2.6	3.0	3.0	4.4	4.5	3.6	3.5	3.6	3.0	2.2	1.2	2.6	2.3	1.4	0.9	0.7	2.4	2.2	1.1	0.8	4.5	0.7	2.5
14	0.6	1.0	0.9	2.0	1.8	2.5	3.1	3.6	1.1	2.9	3.7	2.7	2.1	2.6	2.6	2.2	2.1	2.1	2.3	2.5	2.1	1.2	1.3	2.3	3.7	0.6	2.1
15	1.5	1.3	2.1	1.4	1.5	0.9	1.1	2.1	2.4	1.2	1.2	1.9	2.8	3.8	4.8	5.0	5.3	5.0	3.7	2.8	1.8	1.2	1.7	1.0	5.3	0.9	2.4
16	0.9	4.4	5.5	6.0	5.9	5.8	4.9	3.1	2.6	3.7	3.1	2.5	2.8	3.1	3.0	3.7	4.7	4.1	4.3	1.9	1.6	1.4	1.3	0.7	6.0	0.7	3.4
17	1.1	2.0	3.6	4.2	4.0	4.4	5.4	6.1	6.3	6.6	5.6	4.4	3.6	2.6	3.0	3.4	2.9	2.2	1.5	1.6	1.2	2.0	1.2	1.4	6.6	1.1	3.4
18	2.0	2.6	2.3	2.7	2.1	1.7	2.8	1.3	1.6	3.2	2.1	2.6	3.8	4.5	6.0	5.4	6.3	5.8	6.2	5.9	4.8	5.5	6.1	8.7	8.7	1.3	4.0
19	9.2	8.5	8.5	7.2	4.3	4.6	3.5	3.4	4.8	2.5	2.1	1.7	2.2	3.1	2.4	1.8	2.5	3.2	5.6	6.4	5.4	3.6	4.3	5.4	9.2	1.7	4.4
20	6.0	6.7	6.3	5.6	5.7	6.8	6.8	6.0	6.1	6.3	6.2	5.7	5.7	6.3	7.0	6.0	5.2	4.3	3.7	2.0	0.9	1.8	1.5	1.6	7.0	0.9	5.0
21	2.6	2.5	2.5	2.8	2.6	2.7	3.5	3.4	5.1	5.8	5.6	6.1	6.0	4.1	3.4	5.5	3.6	3.2	4.1	5.1	6.0	7.5	7.9	7.6	7.9	2.5	4.5
22	7.3	4.8	4.7	3.7	4.6	4.7	5.1	5.2	4.8	4.1	2.3	2.4	3.6	4.4	5.8	5.7	6.2	6.8	7.0	4.6	1.5	2.8	2.2	2.8	7.3	1.5	4.5
23	3.4	2.6	1.3	1.1	1.3	1.2	2.3	4.3	1.2	1.9	3.0	1.6	3.2	4.7	3.7	2.2	2.2	1.7	1.1	0.6	0.9	3.4	3.9	3.9	4.7	0.6	2.4
24	4.3	4.5	3.7	2.4	1.0	3.1	1.5	2.2	1.5	1.9	2.1	3.0	4.3	2.1	1.6	1.6	2.0	1.2	0.5	0.6	0.9	2.4	2.6	2.6	4.5	0.5	2.2
25	2.1	3.2	1.4	0.6	1.2	2.3	1.2	1.0	1.2	2.3	1.8	1.3	2.0	1.5	1.7	1.6	1.0	0.8	0.7	0.6	1.1	2.2	3.1	4.4	4.4	0.6	1.7
26	4.0	3.5	3.4	3.2	3.3	3.0	3.7	4.4	3.5	2.5	1.4	1.8	2.0	1.5	1.1	2.8	1.6	1.4	1.5	1.3	1.9	2.4	3.5	3.9	4.4	1.1	2.6
27	3.9	2.9	1.2	1.3	2.5	1.9	2.1	2.3	2.4	2.0	1.9	1.5	1.0	1.0	1.9	1.5	1.7	1.5	1.7	1.2	1.3	3.4	4.5	3.1	4.5	1.0	2.1
28	4.0	3.4	2.7	3.5	3.1	4.1	3.6	1.1	1.9	3.8	5.3	7.1	5.2	5.0	5.1	4.5	4.1	2.5	1.7	1.3	0.9	1.2	2.1	2.3	7.1	0.9	3.3
29	1.1	1.0	1.2	1.3	1.7	3.0	3.9	3.2	2.3	1.8	1.2	1.7	1.5	1.5	1.7	1.4	1.5	1.5	1.3	1.7	0.8	1.4	1.2	1.3	3.9	0.8	1.7
30	1.4	1.3	1.3	1.7	1.4	2.1	2.7	3.5	2.6	2.2	0.8	1.2	0.9	1.1	1.8	1.3	1.2	1.1	1.0	1.5	1.4	0.9	1.2	1.0	3.5	0.8	1.5
31	1.0	2.8	2.5	2.7	2.3	1.5	1.6	1.0	1.1	1.5	1.9	2.5	2.4	2.4	2.7	3.1	2.2	1.8	2.4	1.5	1.8	1.4	1.0	1.2	3.1	1.0	1.9
Max.	**10.5**	**10.3**	**10.2**	**10.7**	**10.4**	**9.3**	**9.9**	**10.0**	**11.3**	**11.0**	**10.2**	**10.2**	**10.6**	**10.4**	**10.1**	**10.3**	**10.3**	**10.2**	**10.9**	**11.5**	**11.1**	**10.8**	**10.5**	**10.7**	**11.5**		
Min.	**0.6**	**1.0**	**0.9**	**0.6**	**1.0**	**0.9**	**0.6**	**1.0**	**1.1**	**0.7**	**0.8**	**1.0**	**0.9**	**1.0**	**1.0**	**1.0**	**1.0**	**0.8**	**0.5**	**0.6**	**0.8**	**0.9**	**1.0**	**0.7**		**0.5**	
Avg.	**4.3**	**4.2**	**4.1**	**3.9**	**3.7**	**3.8**	**4.0**	**4.2**	**4.1**	**4.2**	**4.1**	**4.0**	**4.0**	**4.0**	**3.9**	**3.9**	**3.9**	**3.6**	**3.5**	**3.3**	**3.2**	**3.5**	**3.8**	**4.1**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.1	1.2	2.1	4.1	3.1	2.2	2.4	2.3	1.7	1.3	1.4	2.4	2.9	3.8	3.6	2.8	2.2	1.5	0.9	1.3	0.9	0.9	1.9	4.3	4.3	0.9	2.2
2	4.5	3.9	3.9	3.2	3.1	2.6	4.1	4.0	3.6	4.6	5.1	3.9	2.7	2.4	3.5	4.9	3.8	3.0	1.8	1.3	1.5	2.3	1.7	1.2	5.1	1.2	3.2
3	1.5	1.2	1.5	5.7	4.0	5.7	9.1	9.7	8.5	5.3	7.2	8.0	8.0	3.9	4.8	6.1	5.5	4.0	3.5	3.1	5.8	6.3	3.9	5.7	9.7	1.2	5.3
4	6.2	7.0	5.5	3.4	3.0	3.9	3.5	3.3	2.2	1.2	2.6	3.6	3.4	3.7	3.9	3.9	4.1	4.0	3.0	2.8	2.4	2.2	1.7	2.9	7.0	1.2	3.5
5	3.8	3.2	2.9	1.2	1.7	1.5	3.0	2.0	1.2	1.8	4.3	3.8	3.8	3.6	3.9	3.9	3.7	3.1	2.8	2.6	2.6	1.8	1.3	1.9	4.3	1.2	2.7
6	3.1	2.8	2.1	1.0	2.3	1.8	1.9	1.3	1.9	3.4	2.5	2.3	2.4	2.1	2.2	1.9	2.2	1.7	1.6	2.9	1.1	1.7	1.5	2.6	3.4	1.0	2.1
7	3.5	4.1	4.0	3.0	2.5	1.6	2.8	1.9	2.2	3.0	2.3	2.2	2.1	2.2	2.2	1.9	2.0	2.3	2.8	2.3	2.4	4.6	3.8	2.9	4.6	1.6	2.7
8	3.1	3.3	3.4	4.3	4.1	4.3	4.7	5.4	5.5	6.1	6.5	7.2	6.9	6.1	6.3	6.7	6.1	6.5	6.5	7.0	7.0	7.5	6.8	7.6	7.6	3.1	5.8
9	7.7	8.1	7.8	8.1	8.7	9.1	8.3	8.8	9.3	9.3	9.2	9.0	7.9	7.6	7.8	7.5	6.4	3.8	3.2	4.7	5.0	4.1	3.0	3.8	9.3	3.0	7.0
10	3.1	2.4	1.8	2.3	2.3	2.6	3.2	3.5	3.0	2.2	2.4	2.4	2.0	3.1	3.1	2.6	3.4	3.4	3.1	3.0	3.4	5.1	4.1	3.4	5.1	1.8	3.0
11	3.7	3.7	2.8	3.4	3.4	3.5	4.4	5.2	5.1	4.5	4.4	6.5	6.8	6.1	5.6	5.7	6.0	6.1	5.6	6.9	6.0	6.3	6.8	6.4	6.9	2.8	5.2
12	6.1	5.6	5.5	4.5	5.0	5.0	4.7	4.2	3.8	3.8	2.3	1.3	0.9	1.1	1.0	0.7	1.9	1.9	1.6	2.0	1.7	2.2	2.1	1.4	6.1	0.7	2.9
13	1.5	2.0	2.0	1.8	1.9	0.7	0.7	2.3	1.6	0.6	1.2	1.6	2.9	3.1	2.6	3.0	3.8	3.1	1.8	1.9	1.4	1.4	0.7	0.7	3.8	0.6	1.9
14	0.5	1.3	1.0	2.1	0.8	0.5	0.7	1.2	0.6	1.5	1.6	1.3	2.1	1.9	1.2	0.9	2.2	3.8	2.3	1.8	1.5	2.0	2.8	2.5	3.8	0.5	1.6
15	2.9	2.8	3.5	2.2	1.8	1.4	2.1	1.7	2.0	1.0	2.0	2.7	2.7	2.7	2.2	1.3	1.2	1.3	0.8	1.4	0.9	0.6	0.7	0.7	3.5	0.6	1.8
16	0.8	1.4	1.2	1.2	3.1	3.2	2.1	3.0	2.8	1.9	1.4	1.4	1.3	1.5	1.5	1.3	1.6	1.3	0.8	0.7	1.3	3.6	3.8	3.6	3.8	0.7	1.9
17	3.9	2.9	1.8	1.4	1.9	2.8	3.4	3.2	3.9	4.4	4.6	3.1	3.2	4.0	3.3	3.4	5.0	5.9	5.3	4.7	3.2	1.5	2.4	3.0	5.9	1.4	3.4
18	3.0	1.1	3.5	3.3	3.9	3.9	4.3	4.5	6.5	6.4	5.8	5.7	5.4	5.6	5.6	5.5	4.6	4.5	4.9	4.0	4.5	3.4	3.7	4.5	6.5	1.1	4.5
19	4.9	4.6	4.6	5.6	6.3	6.3	5.9	6.2	6.0	4.8	4.8	4.0	4.7	4.1	3.6	2.3	3.2	4.3	2.5	2.7	2.5	1.1	3.6	3.7	6.3	1.1	4.3
20	2.9	3.5	2.2	1.9	1.7	1.1	1.4	3.9	5.5	4.2	4.3	4.2	4.2	2.2	1.6	2.6	2.0	1.5	1.1	1.4	1.9	1.8	1.2	1.0	5.5	1.0	2.5
21	1.7	2.9	2.4	2.1	1.9	1.9	2.7	2.7	2.5	1.7	2.0	2.6	2.4	3.4	3.4	3.4	3.9	3.9	3.9	2.9	3.3	1.9	1.8	1.2	3.9	1.2	2.6
22	1.5	2.3	1.8	1.5	1.6	2.8	2.5	1.0	0.9	1.8	1.4	1.4	2.1	2.7	2.3	1.4	1.2	2.5	2.8	2.0	1.9	1.9	2.0	2.8	2.8	0.9	1.9
23	2.7	2.3	1.8	1.7	1.0	1.1	4.3	2.3	2.9	2.5	2.1	1.6	1.8	2.8	3.4	3.8	4.6	3.8	4.2	3.1	1.5	2.5	1.6	0.9	4.6	0.9	2.5
24	0.9	0.8	1.4	1.8	1.4	2.0	2.0	1.9	1.2	1.3	3.0	3.5	3.1	3.3	3.7	3.2	3.4	3.2	2.7	2.0	1.4	0.8	1.4	2.2	3.7	0.8	2.2
25	2.7	2.6	2.5	1.3	1.6	3.5	2.4	2.6	4.0	5.2	3.4	3.5	5.1	6.0	4.0	5.1	2.8	5.8	4.3	2.4	2.0	1.5	1.3	1.2	6.0	1.2	3.2
26	1.7	1.5	1.5	1.5	1.4	2.5	2.6	2.0	1.5	1.8	2.1	2.8	2.2	1.9	1.7	1.0	1.6	1.8	0.8	0.7	1.0	0.6	1.0	1.8	2.8	0.6	1.6
27	0.9	1.6	0.8	1.0	0.9	1.5	2.0	1.4	1.9	1.9	3.0	3.4	3.4	3.5	3.3	3.2	3.1	2.6	2.0	1.5	4.1	7.5	6.8	8.3	8.3	0.8	2.9
28	9.3	9.4	6.9	7.3	8.0	10.9	10.2	9.1	8.8	9.9	9.0	6.8	6.8	6.4	7.4	5.3	6.7	6.7	5.2	6.9	6.5	5.5	7.3	6.2	10.9	5.2	7.6
29	7.1	6.9	6.6	6.5	6.2	6.1	5.2	2.1	2.9	1.6	1.9	2.9	2.8	3.3	2.4	2.9	1.9	1.3	2.0	1.9	2.2	2.3	2.4	2.6	7.1	1.3	3.5
30	2.6	3.4	2.7	2.3	3.1	4.0	4.0	4.3	4.4	2.6	1.3	2.4	3.0	2.8	3.3	3.3	3.0	2.8	3.2	2.1	5.1	5.7	4.9	4.7	5.7	1.3	3.4
Max.	**9.3**	**9.4**	**7.8**	**8.1**	**8.7**	**10.9**	**10.2**	**9.7**	**9.3**	**9.9**	**9.2**	**9.0**	**8.0**	**7.6**	**7.8**	**7.5**	**6.7**	**6.7**	**6.5**	**7.0**	**7.0**	**7.5**	**7.3**	**8.3**	**10.9**		
Min.	**0.5**	**0.8**	**0.8**	**1.0**	**0.8**	**0.5**	**0.7**	**1.0**	**0.6**	**0.6**	**1.2**	**1.3**	**0.9**	**1.1**	**1.0**	**0.7**	**1.2**	**1.3**	**0.8**	**0.7**	**0.9**	**0.6**	**0.7**	**0.7**		**0.5**	
Avg.	**3.3**	**3.3**	**3.1**	**3.0**	**3.1**	**3.3**	**3.7**	**3.6**	**3.6**	**3.4**	**3.5**	**3.6**	**3.6**	**3.6**	**3.5**	**3.4**	**3.4**	**3.4**	**2.9**	**2.8**	**2.9**	**3.0**	**2.9**	**3.2**			**3.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.3	3.1	3.7	4.1	2.8	2.4	3.1	3.0	1.8	1.5	2.3	2.5	3.0	3.2	3.8	4.3	4.5	4.1	3.3	4.0	4.9	2.9	3.1	6.2	6.2	1.5	3.4
2	7.0	8.6	6.3	4.2	5.0	4.9	3.9	4.0	5.1	4.5	1.6	1.5	2.0	1.7	2.1	3.9	6.1	6.0	5.1	2.7	2.0	1.7	2.2	2.8	8.6	1.5	4.0
3	2.4	2.9	2.9	2.0	1.4	2.7	2.8	2.0	2.7	1.9	2.2	2.2	3.0	3.3	3.6	4.1	2.5	1.5	1.6	2.1	2.5	1.9	1.7	1.1	4.1	1.1	2.4
4	1.5	1.6	1.7	1.3	1.4	1.9	1.7	1.1	2.2	2.9	2.9	3.1	3.6	3.4	3.6	3.9	3.2	3.1	2.5	2.8	1.6	1.8	1.3	0.9	3.9	0.9	2.3
5	1.4	1.8	3.0	2.6	1.5	2.0	2.7	2.2	1.5	2.8	3.1	2.8	2.0	2.3	2.2	2.5	2.4	2.3	2.6	2.3	1.6	1.5	1.2	1.6	3.1	1.2	2.2
6	1.2	0.5	0.7	0.7	1.6	0.8	1.6	1.8	1.8	2.0	2.3	1.9	2.3	2.6	2.8	2.9	2.9	3.0	2.3	1.7	1.8	1.2	1.3	2.2	3.0	0.5	1.8
7	1.3	2.1	1.3	1.6	1.5	1.1	1.5	1.5	1.3	2.0	2.2	2.7	2.1	2.6	3.9	2.7	2.2	1.8	1.9	1.7	1.7	1.1	2.9	2.8	3.9	1.1	2.0
8	2.9	2.4	1.3	1.1	0.8	2.1	2.0	3.4	3.6	6.3	6.3	5.9	6.0	6.4	5.5	3.7	2.1	2.2	4.7	5.5	5.2	4.3	2.2	2.4	6.4	0.8	3.7
9	2.4	2.8	2.4	2.8	2.3	2.8	2.8	2.8	1.2	1.4	2.2	2.9	3.2	3.3	3.0	2.5	2.0	1.4	2.0	1.6	2.7	1.6	2.5	2.3	3.3	1.2	2.4
10	2.3	2.0	2.6	2.6	2.3	2.3	2.2	2.2	2.4	1.4	1.3	1.8	1.8	2.9	2.6	2.8	2.8	1.8	2.8	1.3	1.6	2.7	1.5	1.4	2.9	1.3	2.1
11	0.8	1.2	1.7	1.4	1.2	0.9	1.5	1.9	1.7	2.6	3.8	4.0	2.9	2.3	4.3	3.3	2.9	1.9	1.1	3.2	4.3	1.7	1.1	1.0	4.3	0.8	2.2
12	0.8	1.6	1.4	1.6	1.9	2.2	2.7	3.0	2.7	2.1	1.2	2.2	2.5	2.5	2.2	1.5	1.5	3.1	5.8	6.5	4.2	5.2	3.9	3.5	6.5	0.8	2.8
13	2.3	5.3	4.6	2.1	4.3	7.7	6.3	6.2	7.9	7.7	9.1	10.1	10.3	11.4	11.5	12.0	11.4	11.9	12.7	12.7	13.0	11.0	9.5	8.9	13.0	2.1	8.7
14	9.5	9.5	10.1	9.2	9.7	7.7	6.6	6.4	7.3	8.7	9.1	9.2	6.7	7.1	6.9	7.4	5.2	4.0	5.4	3.0	7.0	6.3	5.9	4.2	10.1	3.0	7.2
15	4.4	3.3	6.7	6.6	6.9	7.4	6.7	6.3	4.2	3.6	3.6	3.5	3.2	4.7	5.9	2.8	2.1	1.9	2.0	1.8	1.2	0.9	1.4	1.4	7.4	0.9	3.9
16	1.8	1.6	2.7	1.9	2.0	2.9	3.5	3.4	2.1	1.5	1.7	2.0	1.9	2.1	2.3	1.7	2.0	2.0	2.0	1.8	2.6	1.9	2.4	2.1	3.5	1.5	2.2
17	2.8	3.0	4.3	3.3	2.6	2.9	2.4	2.4	2.2	2.4	1.9	1.9	2.7	5.1	5.2	4.4	3.6	3.7	4.5	4.6	3.6	3.7	4.5	4.7	5.2	1.9	3.4
18	5.1	4.9	4.4	3.7	3.9	3.1	3.3	3.5	2.1	2.8	1.8	2.2	2.3	1.9	1.3	3.1	2.1	1.8	2.0	2.1	2.9	1.7	1.3	2.1	5.1	1.3	2.7
19	1.6	1.5	1.7	3.7	5.9	5.1	4.9	5.9	5.9	7.3	7.1	6.7	5.2	5.6	6.4	6.1	5.8	4.1	5.1	4.1	2.8	1.4	2.5	3.3	7.3	1.4	4.6
20	2.6	1.7	2.0	2.3	4.0	5.3	4.8	5.1	5.4	5.7	5.6	5.2	5.6	5.4	5.5	4.2	4.1	5.0	4.8	4.9	3.7	3.0	2.1	4.0	5.7	1.7	4.3
21	6.1	4.0	3.3	1.4	1.0	2.9	3.9	3.6	5.1	5.1	5.5	5.8	5.5	5.4	4.9	4.0	2.6	2.0	1.5	2.2	3.2	3.5	2.7	1.7	6.1	1.0	3.6
22	1.9	2.3	1.6	1.3	2.0	4.1	4.9	4.9	4.2	5.5	5.0	3.9	4.1	3.4	2.4	2.3	2.0	1.9	2.8	3.6	3.5	3.7	4.5	3.5	5.5	1.3	3.3
23	3.8	3.6	4.0	2.3	3.1	3.4	4.3	4.3	5.0	5.3	7.3	8.2	8.1	8.5	7.8	6.7	5.1	3.1	6.8	7.8	7.8	6.4	6.2	6.4	8.5	2.3	5.6
24	5.6	6.5	5.8	6.4	6.3	7.0	6.5	5.5	4.3	4.6	5.0	4.8	5.2	3.2	1.9	1.4	1.4	1.6	2.3	1.8	1.8	1.2	1.7	3.7	7.0	1.2	4.0
25	3.6	3.6	4.6	4.8	4.0	2.3	1.9	1.9	1.9	1.5	0.9	0.8	0.8	2.8	4.0	3.6	3.0	1.4	0.5	0.7	0.9	1.2	1.1	1.3	4.8	0.5	2.2
26	2.6	2.5	2.0	1.3	1.4	1.7	1.9	3.8	4.4	4.4	5.0	6.6	6.3	5.6	6.4	7.4	7.8	8.4	9.6	9.9	9.8	9.6	9.4	9.4	9.9	1.3	5.7
27	8.7	9.0	9.1	8.3	6.7	4.7	4.8	5.7	4.1	2.4	1.8	1.9	2.0	1.7	2.7	2.3	2.6	2.3	1.9	2.4	3.1	1.1	1.6	4.1	9.1	1.1	4.0
28	4.8	2.6	3.3	5.9	3.4	8.0	8.7	7.6	4.8	3.7	2.3	3.4	4.9	5.7	3.9	3.6	3.2	2.9	2.4	1.9	2.8	4.9	8.3	5.9	8.7	1.9	4.5
29	4.9	4.9	6.6	4.7	9.6	9.4	9.3	12.2	16.0	10.6	12.3	8.6	6.0	8.8	6.5	5.8	5.6	6.0	7.5	5.9	5.3	9.9	10.5	10.4	16.0	4.7	8.2
30	8.0	8.4	4.5	9.7	5.8	7.1	8.9	8.6	7.9	7.4	6.9	5.9	5.4	5.1	7.0	6.4	3.6	2.9	3.7	5.8	2.5	1.8	2.5	4.0	9.7	1.8	5.8
31	6.7	7.8	7.4	6.7	6.9	5.5	4.8	6.4	6.2	6.1	3.9	3.2	4.2	3.5	4.2	4.3	6.1	4.7	4.9	5.5	5.6	6.2	8.3	7.7	8.3	3.2	5.7
Max.	**9.5**	**9.5**	**10.1**	**9.7**	**9.7**	**9.4**	**9.3**	**12.2**	**16.0**	**10.6**	**12.3**	**10.1**	**10.3**	**11.4**	**11.5**	**12.0**	**11.4**	**11.9**	**12.7**	**12.7**	**13.0**	**11.0**	**10.5**	**10.4**	**16.0**		
Min.	**0.8**	**0.5**	**0.7**	**0.7**	**0.8**	**0.8**	**1.5**	**1.1**	**1.2**	**1.4**	**0.9**	**0.8**	**0.8**	**1.7**	**1.3**	**1.4**	**1.4**	**1.4**	**0.5**	**0.7**	**0.9**	**0.9**	**1.1**	**0.9**		**0.5**	
Avg.	**3.7**	**3.8**	**3.8**	**3.6**	**3.6**	**4.0**	**4.1**	**4.3**	**4.2**	**4.1**	**4.1**	**4.1**	**4.0**	**4.3**	**4.4**	**4.1**	**3.7**	**3.4**	**3.8**	**3.8**	**3.8**	**3.5**	**3.6**	**3.8**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	199.8	214.7	18.1	11.2	347.2	3.6	54.9	26.8	158.6	127.5	146.4	124.8	35.0	39.7	40.3	28.7	32.1	26.8	24.8	274.9	207.8	156.4	322.0	7.2
2	319.6	309.5	316.5	337.6	21.2	18.2	25.1	1.4	9.9	9.1	14.3	6.3	14.7	18.4	23.6	15.6	18.4	20.4	21.0	21.5	22.2	19.2	20.8	20.8
3	24.6	17.8	13.8	14.1	13.0	1.7	358.2	359.5	217.4	217.7	166.7	167.0	204.2	196.8	203.3	69.9	201.6	71.4	49.4	353.1	14.9	353.2	0.3	19.9
4	21.1	356.6	2.2	12.1	14.9	13.0	15.1	27.0	34.0	37.0	45.2	177.9	199.7	200.3	205.3	199.9	210.5	194.8	50.5	41.5	11.0	345.3	307.3	303.6
5	299.5	300.9	298.1	307.8	312.2	311.3	312.1	318.9	316.7	320.8	322.4	326.7	75.8	350.8	119.7	149.3	300.9	316.8	316.3	318.6	323.5	337.1	314.4	317.0
6	315.3	314.4	314.5	314.3	315.2	316.8	316.0	317.0	317.2	322.8	97.4	126.4	121.7	72.1	174.3	93.7	187.9	171.1	23.0	70.4	4.1	10.3	358.8	168.4
7	91.9	348.7	349.0	15.6	39.2	188.3	303.7	317.5	321.0	311.6	321.5	302.5	319.0	319.9	318.7	315.8	311.6	318.7	317.5	313.7	309.0	1.4	6.7	4.8
8	6.3	6.9	9.4	1.0	15.5	15.2	19.0	33.7	43.1	148.3	195.5	202.6	201.9	203.8	201.0	205.2	200.5	208.7	216.0	214.0	220.4	17.5	21.0	28.3
9	23.4	26.9	29.4	22.9	224.9	223.6	34.5	40.7	127.2	201.7	188.3	207.9	207.4	202.1	208.0	201.0	206.5	207.2	222.3	225.5	227.9	281.8	9.9	339.5
10	358.8	28.0	178.2	217.1	246.1	18.2	28.5	35.6	169.7	198.2	184.8	176.5	191.6	198.1	197.3	206.5	201.3	189.6	193.5	217.5	220.1	213.5	198.0	218.8
11	218.7	230.6	286.8	42.0	68.2	195.0	319.7	204.2	200.1	195.6	197.1	189.9	196.3	188.7	187.6	195.1	206.3	216.3	211.1	234.8	21.0	26.7	29.5	29.0
12	22.8	11.2	32.1	32.8	26.8	29.2	32.2	82.4	151.8	200.7	200.0	199.5	197.5	198.0	202.9	200.6	201.1	211.6	218.1	222.1	212.6	201.5	184.9	186.9
13	215.7	197.3	253.4	252.3	156.8	134.8	215.0	250.3	165.4	168.9	168.7	176.2	190.9	187.3	186.4	186.1	198.9	205.7	199.5	203.2	204.1	233.9	230.8	226.3
14	230.5	224.6	181.2	229.6	214.7	215.7	224.2	228.7	224.7	217.6	183.5	190.1	178.2	189.2	194.9	204.1	206.3	206.8	213.9	215.7	229.7	243.3	246.2	215.9
15	186.0	212.9	231.0	236.5	271.3	264.9	42.7	25.0	1.5	39.9	299.1	285.7	279.5	230.3	189.2	195.2	203.1	222.1	233.5	270.2	269.4	239.6	238.3	216.4
16	9.3	23.1	21.8	23.5	8.9	21.4	19.5	24.5	22.3	19.5	17.7	97.2	8.1	0.0	325.8	319.4	318.9	317.0	10.7	12.6	356.7	354.5	3.4	3.6
17	4.6	357.6	8.3	12.9	8.2	0.7	354.0	1.4	357.8	0.7	2.9	1.8	8.9	6.2	13.4	16.2	15.7	20.8	18.3	17.0	18.0	14.1	9.6	12.1
18	9.6	3.8	5.5	9.4	10.6	20.2	15.5	18.3	26.3	112.3	171.0	229.0	210.1	205.0	200.1	205.7	202.1	206.1	201.3	170.0	130.6	3.6	18.9	314.1
19	349.4	24.2	337.5	4.8	17.0	22.7	25.2	37.5	43.3	162.7	180.1	197.3	192.9	200.4	202.9	240.7	306.0	299.9	323.7	336.3	292.8	303.3	327.8	34.5
20	15.0	346.5	309.0	312.2	347.5	83.7	47.6	59.9	347.5	359.9	24.1	349.1	323.7	132.6	156.9	151.9	172.8	144.3	98.9	188.6	202.3	203.8	201.7	199.7
21	208.1	193.4	194.7	192.3	203.0	193.9	194.2	197.0	202.1	165.0	78.6	86.5	179.6	179.1	148.3	130.4	101.4	34.4	239.5	231.8	329.7	254.2	274.7	17.7
22	353.4	354.2	245.8	348.8	18.1	23.5	7.3	12.8	12.4	5.4	356.9	33.4	26.0	6.8	324.6	353.9	339.5	341.5	356.9	345.6	332.0	323.8	323.1	344.9
23	345.3	13.2	14.6	16.6	355.5	341.1	340.0	18.5	4.0	28.8	7.6	308.2	43.1	95.7	206.6	206.5	200.4	9.8	284.2	344.4	10.5	6.9	327.1	27.4
24	14.3	13.2	14.6	21.1	25.6	27.7	22.6	27.0	44.6	57.2	167.0	201.8	204.2	190.7	179.3	179.3	154.8	183.9	186.0	192.2	164.6	156.8	162.7	107.6
25	128.3	142.4	169.4	54.3	70.6	31.2	279.7	326.4	34.9	315.2	59.4	84.8	197.8	212.4	204.7	207.7	207.6	215.2	238.6	242.0	261.9	266.0	299.5	18.0
26	22.2	23.2	13.6	19.2	20.8	20.8	19.5	34.9	42.8	50.0	68.9	92.5	93.9	70.3	38.7	50.0	46.3	6.1	314.5	180.3	185.8	286.9	290.3	302.5
27	314.1	313.3	313.7	313.2	352.5	332.3	324.2	39.8	44.2	32.9	46.1	10.1	35.8	151.8	118.0	122.6	132.8	104.5	29.6	23.1	313.3	313.5	314.7	307.5
28	329.9	359.5	33.5	129.5	353.6	3.8	0.2	351.9	209.1	18.5	32.5	66.1	198.1	183.5	181.8	197.0	197.8	183.2	172.3	190.6	194.0	183.8	188.0	187.8
29	192.8	201.8	203.9	188.6	196.9	193.8	203.3	202.5	185.7	189.1	196.6	190.6	189.3	199.1	196.2	189.4	182.3	168.8	190.2	193.1	195.9	174.4	188.0	167.1
30	11.1	318.2	332.0	343.6	308.5	304.9	311.0	331.5	10.3	7.8	30.1	66.4	311.4	103.3	159.6	143.2	175.6	188.2	171.5	301.0	310.2	313.5	317.3	308.6
31	307.0	309.4	310.8	308.0	306.5	305.9	316.7	292.3	313.4	307.0	345.6	18.6	71.7	93.9	164.2	163.1	139.4	103.7	123.2	335.8	300.8	312.7	311.2	312.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	311.8	309.7	331.2	19.4	14.8	6.1	41.4	48.7	57.2	61.0	62.8	76.2	164.2	204.5	199.6	190.4	208.7	211.8	202.1	164.9	62.0	319.7	314.2	326.1
2	14.7	13.9	13.2	14.3	21.2	14.0	20.9	33.6	37.4	41.9	89.6	198.3	106.2	50.0	106.5	124.2	38.6	22.6	352.9	355.4	358.1	5.8	350.4	0.3
3	342.2	98.2	325.2	319.6	243.7	326.5	341.9	357.2	0.5	358.3	0.5	357.2	0.2	0.3	349.6	9.4	7.3	7.6	7.4	7.8	7.8	9.8	5.3	5.7
4	9.4	5.6	1.0	354.2	356.5	357.7	1.6	4.8	6.2	13.8	21.7	25.7	23.4	23.5	25.5	27.4	13.9	289.4	213.6	213.3	210.2	338.4	241.2	228.3
5	226.9	210.3	346.8	356.7	23.6	16.9	13.4	28.4	9.3	9.1	2.7	353.1	332.4	120.4	43.7	329.3	346.3	64.3	74.7	10.9	11.6	23.9	20.4	18.8
6	26.4	25.4	24.9	26.9	20.4	228.7	22.1	355.4	5.6	190.4	197.3	199.7	201.3	195.5	193.2	190.6	226.3	210.1	173.7	194.7	190.5	196.5	194.1	236.0
7	201.4	204.6	192.0	199.3	190.5	198.4	201.4	205.9	200.3	195.9	189.0	156.7	213.0	202.0	149.1	193.4	104.3	75.9	63.9	87.1	54.3	84.0	140.0	165.4
8	140.6	286.3	298.8	305.3	309.1	305.4	313.7	9.9	50.4	39.3	41.2	50.3	200.6	196.0	185.6	236.7	246.9	209.6	246.9	301.3	121.6	336.0	12.0	20.7
9	8.2	7.7	0.1	11.3	11.7	16.2	358.1	348.7	356.3	326.8	311.8	316.6	293.5	219.7	129.6	1.2	1.3	29.7	27.1	11.4	340.9	14.5	105.9	91.1
10	52.9	89.8	86.1	173.8	195.2	193.6	194.3	197.2	181.1	157.8	123.3	80.5	70.2	31.2	173.5	126.6	276.3	327.1	297.1	12.8	242.3	278.9	13.5	19.9
11	324.0	32.0	18.5	20.1	34.6	29.8	26.5	25.2	9.1	15.2	10.9	8.3	1.9	12.1	17.7	21.0	17.8	359.9	309.4	318.4	335.2	53.6	334.9	106.9
12	75.6	355.6	186.2	177.2	199.2	322.6	79.0	126.8	147.3	131.8	193.9	191.2	196.6	195.2	206.8	210.4	198.7	188.6	179.2	191.3	200.0	200.7	207.6	210.1
13	204.4	202.1	197.3	155.6	93.8	42.7	58.2	170.9	168.8	66.8	56.9	161.2	157.7	122.0	307.4	311.1	305.7	312.3	319.9	314.0	318.4	39.8	305.8	305.5
14	28.8	42.2	18.8	309.5	325.6	347.0	359.4	17.2	36.5	37.8	52.9	201.3	193.0	160.0	217.6	128.9	89.1	24.7	348.4	348.5	352.2	336.8	340.4	332.4
15	355.6	345.5	9.8	352.3	4.0	277.2	196.0	212.9	93.6	177.6	185.1	174.8	171.3	333.8	318.0	282.3	300.6	36.6	80.9	11.9	6.0	12.2	20.3	11.8
16	14.0	25.4	12.8	303.4	298.4	314.1	306.7	205.2	286.2	294.9	303.0	291.4	331.2	25.1	66.8	126.7	164.1	158.9	169.4	290.8	71.6	311.4	207.8	104.1
17	334.2	312.9	322.6	6.1	10.3	9.0	20.6	20.5	28.6	25.1	26.5	28.4	25.6	32.9	143.9	203.5	157.6	20.3	3.7	308.9	7.8	2.3	320.7	318.8
18	310.7	304.5	310.4	309.7	299.5	303.3	307.8	291.9	102.3	119.4	186.0	160.9	128.8	132.8	66.7	58.3	118.2	123.8	162.1	165.7	169.4	173.7	156.3	177.7
19	147.8	159.8	141.9	137.3	75.6	320.6	307.1	332.2	27.5	6.4	312.2	88.2	114.8	80.9	88.6	115.6	164.7	129.8	13.6	286.5	288.8	299.5	309.6	309.9
20	311.1	310.2	309.4	312.2	312.5	309.5	322.7	300.3	340.6	64.4	144.0	159.1	126.0	149.6	169.7	126.3	143.3	128.4	144.5	111.0	91.2	122.3	181.5	180.8
21	61.2	10.6	301.3	291.0	306.6	327.7	329.0	356.8	12.2	7.5	34.3	40.6	42.1	214.9	150.1	29.2	13.9	20.5	17.9	13.6	349.7	9.2	24.6	25.3
22	27.1	29.2	29.2	28.1	27.1	15.4	18.1	6.3	344.2	336.9	327.2	352.9	28.0	22.9	351.3	8.8	351.1	7.3	19.6	27.2	16.9	20.3	30.1	201.5
23	38.2	51.4	29.7	348.7	282.3	300.1	354.6	259.6	5.2	300.5	1.4	18.9	358.5	24.2	330.2	54.2	79.0	90.1	156.8	184.5	210.7	194.4	190.2	196.8
24	198.0	195.9	190.8	198.0	189.5	200.0	215.3	210.0	203.2	190.6	204.1	215.2	214.4	193.3	195.1	208.8	196.2	198.6	205.0	208.7	215.9	223.6	202.8	198.3
25	207.6	197.5	203.4	202.2	198.7	196.6	202.6	202.2	203.3	200.6	195.4	200.7	207.3	200.4	199.6	204.4	193.6	186.0	191.7	187.3	279.5	14.9	200.8	349.4
26	326.4	5.2	11.8	358.6	352.1	28.7	31.2	33.1	6.7	350.0	2.1	32.8	108.3	85.0	21.6	19.2	0.5	357.8	7.4	10.4	6.9	6.5	9.3	19.3
27	20.2	18.1	18.7	19.0	19.5	20.3	22.3	18.2	18.9	21.7	23.4	26.0	25.7	23.0	20.9	18.6	21.8	24.3	25.0	19.5	15.3	22.9	14.0	14.6
28	24.3	26.0	24.7	23.8	25.3	25.5	324.8	17.7	176.1	20.1	2.8	331.1	49.6	42.1	202.8	206.8	211.1	243.5	358.6	3.3	12.6	9.9	1.8	321.5
29	312.8	34.3	72.1	75.0	49.8	329.5	288.1	302.6	304.8	333.0	328.7	293.3	147.1	181.8	168.9	173.4	175.6	178.4	180.7	192.1	183.7	191.5	189.2	186.5
30	181.6	178.4	187.2	181.9	179.6	184.5	173.1	159.7	142.1	109.8	13.3	318.3	303.5	304.7	282.4	307.4	1.4	300.7	312.7	311.7	311.3	310.3	315.0	316.4

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	312.7	316.4	310.9	311.5	312.4	305.8	298.5	296.1	291.8	293.3	294.0	306.3	319.4	59.7	35.7	76.1	108.5	57.1	26.5	336.2	41.7	67.4	85.5	95.7
2	50.3	55.8	55.2	49.8	19.3	306.4	294.9	302.6	288.0	289.8	59.4	300.1	344.4	147.7	158.8	149.0	160.7	73.2	63.9	1.7	302.5	308.4	3.4	7.1
3	4.8	0.4	10.5	15.6	21.1	33.6	22.4	353.0	25.4	27.7	13.9	13.4	17.5	24.7	23.2	32.4	21.4	18.7	3.3	8.5	356.0	354.7	18.1	7.8
4	13.5	10.7	9.6	9.4	15.2	13.0	12.1	20.1	17.2	15.4	18.4	22.2	25.0	24.6	22.9	24.6	22.2	20.6	23.0	25.8	30.0	29.3	29.6	30.0
5	29.5	19.0	15.0	18.5	19.3	20.3	16.8	18.7	17.8	15.2	10.6	14.6	11.4	358.0	237.7	4.8	8.3	10.8	18.5	20.6	23.4	25.0	28.6	29.2
6	20.3	25.1	25.2	12.1	13.3	12.9	7.3	16.0	26.3	38.8	47.5	55.8	51.6	106.9	68.7	281.0	285.4	3.5	352.7	356.7	1.4	21.7	26.4	33.6
7	30.5	29.1	13.0	1.7	4.2	350.5	357.3	346.5	338.7	348.6	1.7	8.3	1.5	3.4	355.8	353.4	6.6	8.3	2.4	350.1	356.9	353.9	6.4	10.8
8	18.5	31.4	17.3	349.8	349.4	4.2	32.0	20.7	40.1	39.5	17.6	18.7	31.3	29.3	39.2	23.4	16.3	23.7	18.2	12.2	16.3	17.7	15.9	19.4
9	14.7	19.5	7.3	20.3	10.4	23.3	17.2	16.5	8.4	17.5	5.8	16.0	48.1	7.0	311.3	313.6	315.7	315.8	309.9	307.5	307.9	313.7	303.3	307.6
10	314.4	314.2	315.2	314.3	303.6	307.6	308.0	313.4	324.3	43.7	57.5	46.1	37.7	43.2	39.0	44.9	88.0	7.6	352.7	0.2	358.3	6.8	21.9	1.9
11	269.2	14.3	355.1	2.9	358.2	5.1	356.2	359.8	26.0	60.9	38.3	42.9	319.5	317.1	43.6	114.6	81.1	326.3	36.1	7.6	83.0	106.0	104.9	73.5
12	68.5	117.8	87.4	83.4	87.9	77.2	101.7	89.7	146.0	154.7	42.8	144.0	139.7	92.8	150.7	168.4	146.6	146.3	125.2	79.2	45.6	312.1	310.4	314.6
13	312.9	313.1	320.3	351.9	15.0	11.9	31.3	10.0	19.9	36.9	39.2	40.2	9.7	79.9	112.5	29.8	19.6	302.7	353.8	121.5	273.0	290.7	36.7	352.6
14	352.7	5.8	10.9	42.3	43.1	29.0	20.6	17.4	28.4	33.1	34.9	33.1	34.6	32.5	18.0	12.0	128.3	49.8	348.7	358.7	275.8	347.9	4.9	8.1
15	356.4	359.2	359.7	1.0	8.3	9.6	12.2	12.1	15.1	15.7	26.4	28.1	36.2	36.6	94.9	205.8	211.7	220.1	217.6	10.7	11.3	30.7	31.5	26.9
16	359.4	11.5	355.0	335.0	313.1	308.3	2.1	103.6	17.6	182.5	100.8	188.5	163.7	192.5	181.0	63.3	153.2	53.5	147.1	225.3	212.5	342.2	17.3	12.6
17	24.5	25.7	355.3	12.5	21.8	24.6	173.1	167.0	170.9	200.6	195.9	191.3	193.1	195.6	165.7	188.1	209.1	206.9	201.6	208.6	218.3	222.4	219.5	220.4
18	212.8	217.5	215.1	209.6	202.7	192.1	192.7	193.1	196.0	192.3	193.0	122.3	75.3	79.9	98.6	157.5	202.3	212.4	199.1	198.7	23.4	21.9	4.0	17.4
19	23.3	24.2	18.2	16.6	20.8	13.8	1.9	188.3	188.3	185.6	173.2	171.5	166.4	164.6	166.1	122.0	83.1	58.8	323.9	249.6	309.7	14.7	11.5	15.8
20	5.8	11.1	22.1	4.6	7.0	357.0	2.6	9.7	13.0	17.0	19.4	19.6	24.0	23.7	24.2	17.8	17.9	19.3	20.7	20.5	20.7	21.1	20.6	22.8
21	36.1	16.6	13.7	14.0	15.1	11.7	350.6	333.3	308.1	315.8	329.4	335.5	28.1	34.9	27.4	21.7	353.5	40.6	230.6	199.2	191.0	174.2	95.4	74.4
22	135.6	193.2	316.2	108.1	112.5	316.1	312.2	310.1	312.5	298.9	296.8	26.9	97.2	164.1	193.1	158.0	162.4	110.5	109.6	168.4	176.1	159.7	177.1	163.6
23	188.2	170.2	170.1	179.3	168.7	119.6	182.2	10.8	324.3	52.9	299.3	338.8	318.3	325.5	311.6	305.0	28.5	24.7	347.9	352.7	29.9	12.8	8.8	10.1
24	16.3	12.5	26.7	341.4	22.2	6.9	359.5	21.0	36.7	23.5	42.6	44.2	49.5	24.2	314.6	316.0	315.3	305.7	320.1	313.9	309.0	307.6	312.5	309.7
25	308.1	310.3	309.5	319.6	21.9	321.3	316.0	317.5	316.8	42.5	56.2	56.9	44.8	38.9	39.8	42.1	350.8	348.2	41.7	43.8	31.1	21.6	39.1	19.8
26	6.6	28.4	17.3	13.4	9.1	359.8	21.2	11.4	21.4	47.5	50.9	50.0	36.8	45.0	39.3	47.6	34.6	3.9	313.4	1.2	13.1	14.6	25.1	7.2
27	14.7	5.3	2.4	6.4	357.9	8.4	8.8	16.0	19.3	31.9	36.7	36.0	38.4	38.8	164.6	201.3	329.8	9.8	9.7	20.1	23.4	21.0	19.5	21.0
28	15.0	0.7	19.6	10.8	17.4	17.3	19.7	18.8	14.4	26.9	32.5	33.2	47.9	38.6	324.7	322.7	12.0	354.4	19.7	39.8	348.9	331.6	22.9	1.3
29	14.4	12.5	11.6	16.6	25.4	18.2	19.4	18.7	23.7	24.7	24.3	24.4	30.5	22.2	21.6	28.6	22.8	26.1	7.4	6.4	5.2	10.6	13.1	19.4
30	18.8	22.2	18.1	23.0	15.1	12.0	18.4	7.4	358.2	39.9	27.0	34.2	200.9	50.7	356.0	313.3	312.4	315.1	315.2	317.3	314.9	316.1	319.9	325.2
31	322.1	317.4	312.5	313.7	315.6	315.4	315.9	315.5	315.6	345.9	351.7	317.4	316.6	319.8	311.8	309.2	312.0	312.7	316.4	317.8	338.1	350.7	33.8	17.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	13.0	47.6	45.8	8.0	326.5	6.5	3.0	357.5	18.9	6.8	31.0	55.8	44.6	45.9	62.1	9.8	317.8	312.4	320.4	314.5	309.9	312.8	307.6	311.2
2	316.1	316.1	344.6	51.9	240.7	21.6	31.6	26.0	354.3	31.0	24.0	26.7	35.8	50.0	56.6	55.8	68.1	82.9	65.7	65.7	61.1	41.9	25.0	44.1
3	65.3	64.9	79.3	14.0	99.2	30.8	317.1	289.2	306.8	303.7	297.2	335.3	307.0	301.3	313.3	311.1	306.8	306.3	314.9	311.5	316.8	329.1	311.4	313.2
4	311.0	316.6	310.6	307.6	310.7	303.2	309.0	353.1	313.8	314.4	312.3	312.8	310.0	308.9	315.9	301.4	320.3	318.8	315.3	313.3	309.3	314.1	357.7	47.1
5	6.0	8.9	3.8	314.0	307.8	310.4	310.2	327.3	338.0	318.8	325.3	319.4	337.1	88.8	150.0	140.5	97.8	229.7	175.6	163.2	173.1	154.7	142.1	112.9
6	47.7	38.1	348.9	21.5	307.5	359.4	8.0	258.7	350.5	74.8	53.2	68.9	200.4	175.5	72.3	69.8	73.3	87.7	40.7	44.4	34.3	66.1	116.6	194.3
7	214.8	197.5	54.9	162.4	292.7	309.0	311.1	0.3	48.1	10.2	23.5	24.9	28.8	26.7	24.0	18.0	23.3	7.0	3.6	6.5	5.1	7.5	9.9	17.8
8	22.4	26.5	27.1	32.2	24.4	18.6	18.8	14.9	8.2	9.3	2.5	7.1	23.7	22.7	22.7	26.2	3.5	346.4	2.0	358.2	351.2	0.9	4.4	5.0
9	3.3	8.1	8.0	10.8	15.1	13.6	15.2	10.7	5.3	7.5	10.8	45.3	57.3	62.3	61.7	59.3	75.5	47.8	34.5	43.8	32.5	32.6	336.9	322.8
10	42.4	9.2	338.7	311.9	310.4	310.8	310.6	318.4	312.6	316.2	317.4	317.4	316.9	317.4	314.9	317.1	316.8	317.3	315.5	315.4	314.3	328.5	61.3	18.1
11	57.4	61.9	59.1	42.4	310.3	316.0	36.6	14.1	25.6	13.8	48.5	53.8	46.6	48.9	47.4	37.5	45.2	26.4	45.0	24.4	1.3	339.9	46.7	29.9
12	20.1	8.1	21.0	20.2	5.5	292.1	271.6	11.3	30.6	33.0	36.4	34.2	32.2	35.5	40.0	36.2	22.3	18.2	12.1	19.5	19.5	11.1	14.3	22.0
13	6.8	20.8	34.9	44.7	54.6	48.5	49.6	52.9	42.6	27.9	48.6	32.4	32.2	30.1	30.6	28.5	32.8	23.4	31.6	25.9	10.8	12.6	23.7	12.8
14	25.6	23.3	21.5	14.9	20.1	19.6	18.7	21.6	14.5	19.3	13.7	5.9	26.9	39.2	33.5	32.0	31.3	32.4	32.2	32.9	33.6	35.2	34.9	32.0
15	31.1	28.8	18.9	18.6	329.4	302.2	234.7	275.8	359.0	16.2	117.2	31.5	44.4	40.7	34.7	316.0	122.9	33.5	320.2	322.2	16.6	8.1	13.5	32.7
16	31.1	8.8	14.9	9.4	9.6	3.8	5.0	357.9	358.3	9.9	9.2	8.1	16.4	21.6	11.5	8.3	21.8	18.9	19.5	18.5	19.7	22.0	17.4	25.6
17	28.9	29.7	27.4	27.9	30.0	29.5	28.6	28.1	27.1	29.1	76.6	173.5	16.3	14.7	315.6	305.1	310.8	315.8	314.0	5.7	10.3	20.2	33.1	16.4
18	6.6	11.8	358.9	341.0	5.3	11.7	3.9	11.0	12.2	5.5	9.1	7.0	8.8	12.4	14.5	15.2	20.9	22.7	336.6	318.0	299.3	306.0	340.9	37.0
19	64.7	104.8	164.6	176.7	341.2	45.3	157.1	193.4	200.2	201.3	192.5	168.2	171.8	193.5	187.2	187.2	190.0	184.7	190.9	193.3	189.1	248.6	321.0	0.4
20	7.3	19.8	20.2	22.2	21.0	25.1	24.3	23.3	22.3	22.2	15.8	17.0	23.5	17.6	22.9	30.8	29.9	24.9	29.3	22.8	24.5	23.6	5.7	9.6
21	13.1	9.1	18.9	14.7	337.2	317.9	315.7	315.9	312.3	312.6	313.3	315.9	311.7	308.8	348.8	326.3	313.3	324.1	52.0	51.8	53.8	43.2	76.2	173.0
22	173.1	170.8	157.0	179.7	171.6	90.6	205.5	172.3	226.9	311.5	315.0	346.0	44.6	54.9	52.4	39.0	31.0	41.6	37.8	324.5	314.4	311.7	314.8	312.9
23	312.2	311.2	311.9	313.2	310.6	314.1	312.2	308.2	303.1	309.0	312.8	317.9	289.2	300.8	314.2	314.3	322.5	335.9	299.4	309.6	313.2	313.3	314.7	344.0
24	306.4	315.2	328.2	304.3	312.6	314.5	311.6	313.9	309.9	307.8	134.7	155.4	130.5	156.9	172.4	167.8	158.0	128.5	18.1	323.1	296.0	306.6	308.0	311.4
25	316.6	317.2	315.4	314.9	315.4	313.5	314.8	314.1	312.2	313.6	313.9	315.2	316.1	313.6	316.2	313.9	315.2	316.1	317.7	315.5	314.0	315.2	316.4	315.7
26	315.3	314.9	314.4	313.5	313.2	311.0	313.6	315.4	313.4	316.0	317.4	315.2	313.5	313.4	315.1	313.0	313.4	331.2	359.8	10.6	51.1	44.3	35.7	45.3
27	50.2	46.5	42.5	35.2	33.9	11.5	24.0	40.3	34.5	41.0	47.0	48.9	51.2	50.9	50.9	36.5	32.0	22.4	23.0	24.5	26.5	28.5	30.8	30.1
28	31.2	30.8	29.8	28.7	31.2	29.7	30.7	26.2	31.1	28.8	29.2	30.5	29.6	30.5	33.4	29.5	25.4	25.5	25.9	26.1	23.6	20.7	19.2	22.6
29	21.3	25.8	24.7	30.8	31.0	26.5	28.7	30.6	27.6	26.9	14.0	27.5	38.2	28.6	22.0	161.8	175.4	160.3	153.6	79.6	109.0	78.0	161.9	121.7
30	100.5	120.4	139.3	67.3	70.5	121.7	70.8	82.3	221.8	43.5	45.5	172.9	173.7	183.8	186.9	306.8	291.9	312.4	330.9	308.8	317.5	315.9	341.3	314.4

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	312.8	311.9	318.1	317.0	310.7	308.7	315.2	321.2	351.3	350.6	40.6	36.0	318.3	315.3	309.8	332.9	15.6	320.4	352.3	344.8	324.2	311.2	308.5	312.2
2	334.4	329.5	324.5	314.9	321.9	307.9	334.5	178.2	314.9	312.9	312.6	320.6	349.9	138.4	77.9	72.9	22.1	356.6	304.3	311.4	306.4	299.3	326.9	147.1
3	172.3	153.5	106.4	294.2	311.8	307.9	309.9	313.3	318.7	318.2	315.6	318.5	316.5	316.2	317.2	315.1	315.7	335.7	29.5	47.5	44.0	8.8	52.5	39.3
4	27.6	44.8	38.8	41.1	30.6	30.3	31.1	29.9	23.1	13.9	15.4	22.1	11.0	14.9	20.1	24.9	25.5	23.8	23.7	24.7	20.8	29.8	24.5	28.6
5	31.2	29.8	30.9	27.9	20.1	27.3	25.7	16.7	7.9	2.2	354.0	3.0	8.2	10.2	14.2	8.5	7.9	15.2	14.0	8.5	6.5	3.9	11.3	15.1
6	8.0	9.5	12.1	11.1	11.8	11.2	11.4	9.7	16.2	17.6	0.5	5.9	0.3	6.3	19.3	34.0	29.6	22.9	19.8	16.8	17.5	13.1	356.3	345.4
7	344.8	345.7	358.8	357.4	7.1	7.7	4.7	1.2	8.0	10.5	13.5	13.2	14.4	17.3	11.2	5.5	6.3	357.9	1.2	6.6	1.6	357.2	350.1	353.9
8	356.0	335.2	10.2	20.1	23.1	26.7	29.7	29.8	28.8	25.6	18.3	345.9	323.7	287.9	264.7	290.3	254.1	161.3	25.9	340.5	332.0	330.9	313.2	304.1
9	324.6	322.2	0.9	358.1	342.9	340.2	348.6	342.1	356.6	4.2	9.9	18.9	15.8	7.9	16.4	21.1	9.1	352.1	358.7	320.8	21.2	343.1	11.3	320.5
10	327.1	15.2	15.6	21.6	22.1	19.2	27.7	25.2	28.3	20.5	12.7	11.7	3.8	7.9	318.9	352.0	360.0	329.7	326.4	342.9	358.4	6.0	14.5	4.0
11	4.2	18.6	22.9	23.8	23.2	13.1	335.2	313.8	314.4	319.4	314.6	312.8	310.1	313.8	303.0	302.2	290.9	315.0	292.9	293.7	311.5	109.3	115.2	148.9
12	163.3	165.3	160.8	94.5	85.9	67.5	81.8	170.4	165.1	118.9	171.0	183.6	46.1	133.6	174.1	317.3	12.7	349.5	39.1	13.4	358.5	8.6	37.9	19.2
13	20.5	4.4	5.6	19.2	24.9	18.5	15.6	14.4	13.2	13.0	2.8	8.3	16.0	11.7	9.7	10.1	10.8	5.5	11.8	18.5	20.7	18.1	20.8	23.6
14	22.8	23.1	18.9	20.0	20.4	20.5	22.0	23.4	22.7	22.7	22.6	21.2	20.1	21.2	19.9	22.0	17.1	16.4	14.3	9.6	7.1	4.5	2.2	357.8
15	348.9	347.2	348.2	4.2	9.2	12.8	20.4	22.7	16.5	18.4	24.5	20.7	23.2	19.2	17.2	15.9	15.0	11.8	11.0	7.1	356.2	346.1	345.2	0.9
16	3.0	1.6	345.1	335.1	309.9	332.4	352.2	355.4	325.8	335.0	337.4	354.2	3.3	351.1	335.1	16.2	19.8	35.5	35.6	40.6	17.9	340.1	317.0	313.7
17	358.3	28.8	18.4	3.0	7.1	10.7	10.4	9.2	358.3	354.5	28.4	24.5	7.0	7.2	355.3	354.2	355.2	350.3	357.4	1.6	356.2	347.2	5.7	1.8
18	352.8	353.9	356.6	5.0	9.2	5.8	7.5	1.4	359.2	355.4	348.2	350.2	350.2	356.5	12.6	354.0	347.1	349.6	15.2	13.9	12.2	9.8	7.9	7.8
19	12.8	11.9	9.9	6.6	10.0	9.4	7.8	10.3	4.8	3.4	6.4	8.4	10.5	9.8	354.1	270.3	222.8	245.4	0.4	343.6	352.7	2.6	15.2	23.0
20	11.6	20.7	7.1	3.4	9.1	6.5	18.4	23.9	261.8	44.2	16.6	199.2	215.0	41.8	210.2	223.7	357.8	10.2	7.8	16.5	332.6	28.7	31.8	345.4
21	208.4	28.6	22.1	221.8	31.5	20.7	23.8	24.8	301.0	235.6	19.6	14.7	23.6	30.9	28.0	27.3	13.7	23.7	40.3	39.6	38.4	39.6	24.9	32.6
22	23.4	357.8	30.2	41.5	29.4	35.8	14.8	19.9	24.0	16.3	23.8	28.6	33.9	31.3	30.2	23.3	29.7	25.6	19.1	20.4	27.4	25.4	29.9	23.4
23	21.6	22.4	268.7	25.1	19.6	15.6	22.4	24.9	23.6	25.9	30.8	27.2	29.3	22.6	28.7	26.9	28.7	30.3	26.9	31.1	27.7	15.5	5.3	11.2
24	4.6	356.4	17.1	2.1	18.2	22.2	20.3	18.1	16.5	9.5	18.3	18.2	20.2	23.2	29.0	24.7	27.3	16.1	11.8	6.2	6.8	16.1	18.4	15.4
25	14.6	6.4	4.3	1.0	344.5	348.7	358.8	356.2	356.6	2.9	5.5	358.7	14.8	16.3	15.7	13.6	14.9	16.2	15.4	18.5	19.4	21.9	21.8	20.5
26	18.0	7.0	359.3	358.6	354.6	0.0	15.5	15.9	12.8	16.4	19.0	17.8	16.8	14.7	13.9	19.5	17.9	19.6	19.6	18.7	9.2	14.1	10.5	8.9
27	13.1	16.7	16.6	15.6	19.5	17.8	22.5	18.0	16.4	21.8	22.1	18.6	16.9	19.2	29.1	16.7	16.7	16.7	21.8	20.2	23.4	23.0	18.1	14.5
28	18.1	17.3	17.8	15.3	16.9	19.3	17.1	13.6	21.6	21.3	19.4	19.1	20.4	23.3	20.3	20.3	18.9	20.3	19.2	20.4	24.3	27.9	25.3	25.3
29	22.5	20.8	18.5	14.3	14.3	356.8	359.0	356.9	349.7	336.9	355.4	356.1	1.2	11.7	14.4	16.5	15.3	14.0	12.8	10.6	10.7	15.2	13.3	15.9
30	18.5	20.4	18.9	18.2	17.3	18.4	17.3	23.8	14.5	17.4	355.2	233.6	19.2	19.8	17.7	17.8	22.5	22.9	21.3	18.8	17.8	13.4	13.9	14.8
31	17.0	18.4	16.1	19.6	20.8	21.2	22.9	7.9	14.9	14.4	15.0	19.3	22.3	25.6	16.5	9.2	19.0	17.7	23.0	15.5	18.0	16.0	15.0	18.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	28.7	29.1	22.3	19.8	20.9	15.6	0.0	348.1	353.5	347.9	350.0	17.4	23.1	15.6	19.6	17.3	8.2	352.8	356.7	6.7	3.2	4.2	6.9	3.6
2	353.1	7.5	15.9	20.4	8.5	15.3	17.7	23.5	18.0	9.9	8.4	4.4	3.4	8.5	4.2	5.0	8.1	13.8	355.4	4.5	3.3	12.0	1.7	14.3
3	354.9	354.3	358.3	358.4	357.6	7.2	345.3	359.0	9.7	12.9	22.0	13.5	17.3	20.8	18.2	6.8	18.9	15.9	19.5	22.1	11.5	9.2	23.0	18.9
4	22.9	15.7	11.7	17.3	20.7	15.5	5.3	4.4	21.2	25.4	26.5	39.0	38.8	39.0	38.5	20.9	23.0	19.2	253.6	23.2	47.4	22.1	216.5	28.2
5	19.8	22.4	16.0	11.8	24.3	19.4	21.0	26.2	13.6	41.5	10.5	331.8	25.0	31.4	21.9	332.9	0.9	20.0	25.6	24.1	20.2	30.3	21.5	358.4
6	23.3	14.2	247.0	23.8	21.2	24.2	25.2	26.5	27.0	22.5	17.4	225.5	30.4	30.3	35.0	36.2	353.4	17.4	299.4	236.7	326.6	13.5	19.8	235.1
7	139.8	22.4	29.0	26.1	23.7	17.3	346.5	21.9	27.5	29.0	15.1	22.2	23.2	22.7	24.9	15.6	18.8	22.4	15.4	16.7	18.4	26.9	21.2	27.4
8	21.4	16.8	18.3	15.7	19.7	26.5	26.2	23.8	17.8	12.1	16.8	24.5	20.9	15.1	53.7	23.8	21.2	21.1	21.8	8.8	17.5	16.6	21.5	17.4
9	11.9	14.8	24.9	23.9	26.9	27.4	24.1	24.1	18.8	14.8	13.8	24.9	18.3	42.5	30.4	18.3	17.7	28.7	27.0	33.7	28.8	328.5	25.8	24.1
10	19.8	22.4	24.9	29.3	29.6	24.3	25.1	309.4	229.6	112.3	175.7	20.5	38.4	60.8	189.6	191.8	55.5	56.5	57.0	60.3	60.4	59.2	54.5	53.1
11	40.7	49.6	30.9	18.0	58.2	53.2	45.3	25.0	26.2	4.2	22.0	12.4	39.1	36.2	42.4	21.8	12.4	271.4	51.3	37.2	43.8	42.4	28.8	39.3
12	292.0	56.1	60.6	50.7	50.7	60.4	55.2	56.1	36.3	40.1	8.9	31.7	35.6	36.5	35.2	35.1	38.2	32.9	16.1	24.6	18.5	11.5	27.3	12.9
13	30.7	8.2	20.6	4.3	12.5	20.6	10.4	17.8	26.3	38.5	347.6	40.6	41.4	40.9	47.5	30.7	29.8	21.2	14.0	4.2	13.8	15.4	16.5	19.5
14	31.6	31.7	22.7	18.7	27.5	28.5	27.0	23.6	20.0	34.9	29.6	30.8	27.7	26.0	24.5	23.5	23.6	25.2	23.8	22.6	26.9	30.1	25.6	23.2
15	18.1	22.7	26.1	24.2	22.9	23.2	23.5	18.8	20.7	23.5	16.9	25.1	23.5	26.7	24.5	16.5	1.1	21.7	17.5	21.0	20.0	12.5	19.7	18.7
16	17.7	22.1	22.5	29.0	34.9	29.2	27.6	24.2	20.6	11.9						26.6	12.1	20.4	24.1	22.5	299.2	6.1	28.6	27.2
17	25.5	14.7	19.8	351.8	354.9	357.2	36.6	16.4	22.3	16.6	27.2	40.8	61.2	70.1	62.9	342.6	3.3	351.0	329.9	342.3	10.8	45.2	55.0	52.7
18	46.9	48.1	50.8	39.2	46.3	55.7	37.0	33.9	52.9	46.9	13.2	37.0	33.1	35.1	29.4	42.1	37.3	21.7	22.1	353.1	12.0	8.7	19.9	43.9
19	5.3	342.4	55.5	42.6	29.3	13.0	24.2	20.7	49.0	46.2	48.5	45.2	51.9	47.1	33.2	50.2	48.3	33.7	32.2	21.2	10.8	26.5	40.4	46.2
20	6.5	27.2	25.7	20.4	11.1	20.4	18.3	18.2	15.6	17.5	17.3	19.6	19.0	22.2	23.0	13.5	21.5	10.9	1.8	20.3	18.5	30.0	16.0	23.9
21	23.1	23.3	29.0	27.2	28.9	29.2	26.3	20.6	22.2	23.1	29.8	34.0	45.3	54.3	51.6	56.8	57.4	60.1	58.4	345.6	317.4	316.1	314.4	311.5
22	304.8	349.7	41.2	47.9	13.0	318.6	296.9	291.0	293.9	299.2	298.5	283.8	290.8	307.1	310.0	312.7	309.6	313.6	312.1	312.6	315.0	316.7	315.3	316.5
23	315.2	317.5	331.9	51.6	47.1	53.7	37.2	44.7	22.9	54.2	46.4	68.3	56.8	59.4	55.5	55.7	56.2	48.7	42.9	42.1	42.6	50.7	47.3	37.0
24	50.8	44.6	46.6	47.4	46.4	43.3	39.0	38.6	40.1	35.9	40.2	52.3	56.1	53.9	54.4	53.6	43.9	53.5	49.3	46.9	40.7	31.1	34.4	29.4
25	23.7	27.9	15.8	5.9	4.5	14.7	14.9	5.5	8.0	8.0	25.5	35.0	36.0	36.3	36.3	44.9	33.0	39.5	39.5	43.3	45.6	52.0	48.0	51.0
26	53.2	50.2	55.2	57.5	55.7	57.2	55.4	54.0	47.7	54.0	49.3	48.2	52.2	51.4	51.6	53.2	52.0	47.4	44.9	43.2	36.5	50.2	60.6	58.2
27	59.1	42.1	320.1	339.2	306.5	10.3	44.8	298.4	347.6	74.7	289.6	307.6	308.7	313.0	315.0	315.4	313.6	315.3	310.2	312.7	310.7	308.1	308.9	309.2
28	315.0	313.5	314.7	315.2	313.9	311.3	312.9	310.6	311.5	311.9	315.7	315.3	310.6	319.7	55.7	56.1	54.6	59.9	60.1	54.3	51.3	57.3	51.6	52.8
29	53.8	52.6	51.8	51.0	50.8	48.5	48.4	51.5	52.3	49.3	52.3	53.6	54.8	53.2	49.4	48.9	41.9	46.2	46.2	49.7	52.0	48.3	43.7	52.3
30	54.8	51.7	52.0	51.3	49.7	46.0	49.4	49.4	44.1	40.7	44.9	43.7	49.7	49.4	45.5	46.0	39.4	30.7	28.0	15.2	30.6	29.3	26.9	22.2
31	22.0	18.6	22.4	21.8	20.6	21.5	16.4	13.2	34.4	34.9	41.8	46.3	42.5	42.8	48.6	50.3	48.0	49.7	48.2	46.5	52.6	52.8	59.1	55.3

Total Hours in Month 744 **Hours Data Available** 739 **Data Recovery** 99.3%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	66.1	68.1	59.9	70.2	54.6	4.9	328.3	331.0	337.3	329.2	327.6	329.1	327.4	329.0	328.0	326.5	319.7	44.6	166.5	197.3	204.9	196.1	318.6	325.6
2	328.8	329.7	328.3	331.0	323.8	328.2	330.4	331.3	332.6	326.7	328.4	354.7	65.9	71.8	68.2	59.9	70.4	68.6	62.7	27.0	44.8	49.1	43.4	45.2
3	39.9	36.7	33.9	24.7	33.5	28.4	29.3	22.9	21.9	27.1	33.3	42.4	32.2	34.4	36.2	34.1	28.7	18.8	30.7	26.0	25.6	25.8	29.9	27.1
4	26.4	15.5	24.6	21.9	16.5	24.2	26.8	31.4	26.0	26.1	30.0	34.0	32.8	32.9	33.5	29.9	26.7	28.6	29.1	30.2	34.2	35.1	36.7	35.4
5	34.5	35.2	35.1	37.0	36.5	36.2	36.3	36.7	37.9	42.9	40.5	28.3	16.9	27.4	18.6	28.7	33.3	35.9	34.4	35.8	34.9	31.0	25.9	22.4
6	26.9	24.6	18.9	13.6	16.2	20.2	30.8	30.4	21.0	33.4	219.4	241.1	104.2	153.8	187.9	31.8	3.9	30.8	41.2	26.2	47.6	48.3	31.6	21.6
7	37.1	47.7	46.2	40.7	28.9	3.8	86.2	214.4	211.5	217.8	217.0	206.9	197.1	191.1	202.1	82.3	116.8	185.6	209.5	211.0	180.1	170.6	114.3	106.8
8	42.6	348.5	13.1	41.1	32.9	31.3	35.0	39.1	42.8	25.5	37.7	39.5	37.8	31.6	13.9	13.4	20.6	14.5	20.4	20.0	18.3	23.0	17.9	21.8
9	29.6	26.6	30.4	31.5	30.1	31.4	33.9	36.5	36.8	36.9	37.5	38.2	37.4	35.0	32.8	35.3	37.2	28.6	27.2	21.2	22.5	20.5	28.0	25.5
10	4.2	13.5	21.4	23.9	26.4	10.7	13.0	22.5	22.2	18.5	3.5	352.3	355.0	319.8			344.0	320.9	354.8	314.0	317.1	8.0	334.1	274.7
11	358.5	349.8	358.8	22.2	11.5	17.7	20.2	19.6	12.7	11.8	15.5	21.3	21.8	17.2	11.1	8.3	1.8	357.3	358.7	357.1	358.9	359.6	351.6	346.1
12	347.6	343.7	333.3	212.8	208.6	227.2	306.4	318.0	314.4	306.3	333.6	173.1	172.0	162.5	172.3	161.4	166.7	170.5	150.7	306.4	309.6	316.3	312.7	332.1
13	8.2	335.3	353.3	305.7	4.2	327.0	234.7	21.7	29.3	33.9	208.6	33.8	29.4	18.4	21.2	13.1	22.1	14.8	3.7	349.9	353.5	359.0	354.3	352.7
14	354.7	342.3	347.1	347.4	0.3	351.5	1.9	345.9	2.1	4.9	355.3	3.8	353.2	357.5	354.9	4.1	3.7	358.7	356.6	349.2	7.5	5.1	5.9	6.5
15	9.5	359.5	12.6	350.1	355.3	354.1	0.0	353.9	354.5	6.4	14.9	14.7	192.4	18.5	8.8	347.2	351.3	332.3	346.7	346.7	337.9	321.9	351.9	31.6
16	38.9	28.3	34.2	33.7	34.8	33.0	23.6	11.7	31.3	10.1	26.9	44.0	27.9	32.9	33.4	13.8	13.2	20.1	16.4	14.4	21.2	24.9	30.0	22.7
17	22.0	21.3	17.1	17.9	13.3	8.5	8.2	1.0	352.2	3.2	349.9	345.1	349.7	354.3	358.5	0.7	3.7	2.6	1.3	4.3	5.1	347.8	321.9	330.4
18	337.7	12.5	18.0	9.3	10.5	6.2	358.9	18.6	335.2	323.9	325.4	332.2	307.1	272.2	311.0	284.5	316.1	289.0	302.9	22.0	22.7	32.1	31.9	30.2
19	34.1	71.8	190.5	188.5	183.5	150.7	182.4	174.6	179.8	174.4	196.0	193.7	194.9	342.4	205.4	203.9	213.9	201.7	195.1	199.4	190.5	188.8	196.9	193.0
20	196.9	192.5	192.9	187.0	56.7	46.8	202.6	179.6	165.4	155.3	75.4	81.0	95.2	184.3	181.6	195.7	202.3	208.8	192.7	194.4	192.0	194.0	190.6	194.9
21	199.9	199.5	199.2	193.2	205.4	181.4	194.7	187.3	198.3	196.5	173.1	182.8	189.0	156.9	106.1	73.9	62.9	87.0	76.2	78.8	91.6	160.5	144.2	98.9
22	191.6	201.4	133.3	199.8	191.2	228.0	185.5	192.0	200.3	198.9	182.5	186.3	174.3	152.7	71.0	124.6	110.0	77.0	5.7	141.6	55.0	76.1	101.3	180.8
23	49.2	10.5	17.0	7.9	229.8	22.6	26.1	183.5	18.1	186.8	133.1	54.9	159.1	141.4	128.9	126.4	140.1	147.6	123.3	119.6	299.5	309.3	314.1	358.2
24	1.3	16.2	27.2	15.6	5.2	22.0	26.3	32.7	46.9	45.5	50.2	47.6	34.9	37.0	35.6	34.6	40.1	17.5	39.8	34.0	36.5	27.0	16.1	14.1
25	19.3	18.9	24.0	26.7	25.9	26.4	25.4	5.6	259.5	198.4	215.9	64.4	199.4	160.1	206.5	188.0	54.9	63.5	52.4	47.1	38.0	45.5	54.5	45.8
26	42.6	38.1	23.1	66.6	105.1	213.5	241.0	175.6	173.1	188.1	191.4	193.3	207.3	195.3	162.2	98.8	97.4	46.9	25.2	335.2	20.2	27.4	28.8	26.4
27	25.3	25.9	25.2	27.2	29.3	23.0	23.6	349.5	213.3	225.0	240.2	257.4	3.1	52.8	313.7	310.4	316.8	331.5	315.4	316.3	331.6	338.2	35.0	44.9
28	326.1	315.0	314.5	314.7	317.6	317.9	316.7	315.6	6.4	336.5	338.4	314.6	307.9	308.8	313.9	301.1	295.2	303.2	295.7	322.9	300.4	313.9	310.5	314.6

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	315.3	349.9	26.0	42.1	52.7	55.2	48.4	41.4	2.9	48.8	46.4	37.5	36.6	32.3	44.2	37.9	28.1	14.6	34.9	32.0	28.5	27.7	26.5	19.2
2	19.2	26.4	26.1	15.1	17.2	14.6	14.7	30.7	31.1	30.5	24.9	22.6	24.3	25.2	23.3	16.3	14.7	14.7	12.4	14.8	12.3	8.0	9.2	12.2
3	9.7	16.0	13.5	17.0	15.0	22.4	26.5	16.4	15.8	12.5	14.6	13.5	20.3	26.4	28.0	30.2	31.2	23.7	29.3	28.7	28.6	22.6	27.7	26.6
4	24.9	24.2	25.9	22.5	24.9	25.5	22.6	21.6	22.5	26.5	25.1	27.7	22.1	4.0	16.7	19.6	20.5	21.7	14.3	21.4	19.2	18.2	15.5	17.1
5	17.2	17.6	8.5	6.8	7.7	12.8	13.0	316.0	40.7	29.4	226.0	189.7	140.2	173.7	190.2	103.8	82.4	147.8	173.8	177.9	150.9	73.5	75.0	96.8
6	180.7	189.0	179.3	175.9	208.0	209.0	205.7	173.3	301.2	304.3	310.4	315.3	318.3	316.5	317.1	322.1	321.5	359.5	5.2	350.5	29.4	29.4	36.2	46.3
7	54.4	58.0	40.9	37.2	53.7	54.1	62.5	350.0	313.0	313.5	312.6	314.5	315.7	313.8	316.1	307.4	293.0	41.8	9.3	66.5	139.0	134.7	345.4	287.1
8	291.0	302.4	294.0	299.5	298.9	340.1	318.6	307.4	330.9	353.3	311.0	78.6	70.0	71.1	144.4	179.7	174.6	175.9	174.6	162.9	188.7	192.1	31.4	19.5
9	202.6	285.4	118.7	148.5	148.7	145.1	85.1	58.5	26.8	122.1	167.9	133.9	150.0	85.4	126.5	307.9	293.2	289.5	298.1	302.9	304.6	306.3	315.6	328.9
10	48.5	37.5	44.3	36.6																				
11																								
12														11.9	18.4	24.9	26.5	28.5	26.0	27.5	24.2	17.6	22.1	12.9
13	30.4	6.8	335.2	96.9	26.3	30.8	28.9	10.4	357.0	39.3	182.1	191.5	192.2	195.2	193.6	199.4	201.9	214.5	223.5	236.4	235.9	299.8	27.4	17.1
14	11.0	22.8	15.2	20.5	12.6	12.8	12.7	12.7	21.7															
15														47.0	64.5	121.5	213.3	220.6	218.9	347.4	3.2	13.9	8.9	4.7
16	5.4	1.7	7.1	12.0	19.9	9.5	5.9	7.6	12.7	20.5	23.9	24.5	24.7	22.1	16.1	15.9	15.2	5.8	18.4	2.4	358.4	356.1	353.9	358.9
17	2.7	12.0	26.1	29.0	25.9	25.0	20.7	17.1	17.7	30.6	23.5	17.1	24.7	20.8	16.8	18.4	9.0	3.6	6.9	17.7	31.7	18.0	12.8	24.9
18	13.5	16.7	17.1	10.7	14.7	15.5	15.3	14.4	17.5	22.0	19.1	16.6	22.9	19.7	18.4	18.2	18.8	16.9	329.8	346.6	318.5	210.9	354.6	281.7
19	19.6	5.9	5.2	5.3	7.8	20.0	21.5	30.5	31.5	37.3	37.6	68.3	195.6	199.5	210.4	207.5	181.6	179.0	170.2	208.2	317.3	18.7	29.3	28.4
20	28.4	33.1	28.7	27.4	26.2	28.9	29.2	24.0	233.5	21.4	201.8	60.9	106.1	180.8	206.9	211.5	301.4	313.8	310.1	307.2	318.9	311.6	314.5	319.7
21	328.1	334.7	14.8	40.2	52.6	57.4	55.9	42.6	48.4	95.2	47.2	54.1	94.4	169.5	97.8	68.8	56.1	46.3	42.3	40.1	24.3	3.9	359.5	27.2
22	41.0	36.3	47.6	51.2	47.3	55.6	54.9	51.3	14.8	46.0	63.3	51.3	53.7	47.8	48.6	45.6	21.3	0.1	224.0	34.0	29.9	19.2	17.6	13.1
23	9.2	12.0	6.5	10.0	26.7	1.0	17.6	15.4	43.9	43.9	50.6	62.5	101.0	61.9	123.2	155.8	169.2	327.1	312.2	343.1	41.9	15.3	357.1	31.4
24	49.6	52.3	52.8	53.7	55.3	53.2	53.0	51.8	56.5	54.7	64.0	47.2	67.1	41.6	52.3	40.6	28.8	40.2	82.3	51.1	48.6	42.4	46.2	42.3
25	39.9	34.3	40.4	125.5	59.6	41.1	43.8	37.1	45.4	49.4	51.5	44.3	101.5	68.0	37.8	49.8	54.7	48.5	9.0	53.4	61.2	59.0	57.4	53.9
26	40.5	58.4	56.2	50.9	51.5	50.3	44.7	42.2	48.5	52.6	71.3	61.5	44.5	42.4	40.0	40.2	49.1	33.0	308.3	57.4	39.6	37.4	22.9	27.4
27	19.6	23.8	24.4	30.2	29.1	24.2	291.7	26.1	30.4	61.9	170.0	203.8	202.5	205.6	207.9	209.0	208.8	215.0	210.6	223.1	41.9	28.1	26.0	29.6
28	26.8	30.1	26.6	31.1	28.3	31.5	31.0	31.5	38.3	95.6	197.5	195.7	204.4	197.9	208.8	205.0	208.7	213.2	206.2	204.2	249.0	13.2	29.2	260.8
29	18.7	31.3	11.1	24.6	18.3	23.1	16.5	28.3	36.4	46.5	40.4	51.5	96.0	182.7	205.7	211.9	201.5	3.4	215.3	202.6	332.8	15.3	16.1	22.6
30	32.5	27.8	3.1	7.7	16.9	9.3	9.4	7.0	14.4	356.0	359.1	347.1	3.5	349.5	356.8	354.3	355.1	352.6	354.1	345.5	4.5	1.3	346.5	355.2
31	355.1	336.7	341.7	337.1	332.1	350.0	335.8	326.5	358.5	350.5	357.4	0.9	355.5	355.7	356.9	356.2	358.8	13.8	26.1	28.0	77.7	54.7	59.9	55.2

Total Hours in Month 744 **Hours Data Available** 659 **Data Recovery** 88.6%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	55.4	49.4	42.1	344.7	317.7	337.9	328.3	309.1	307.0	310.3	308.8	332.7	312.2	60.6	77.2	91.4	111.2	154.2	173.4	199.4	176.8	170.9	159.9	170.5
2	174.2	171.0	172.6	204.0	193.0	197.4	123.6	145.8	122.2	185.4	50.4	79.7	93.7	74.0	93.0	42.9	32.0	35.1	26.6	19.8	11.1	24.2	21.8	10.8
3	24.1	21.1	19.7	8.9	9.5	9.4	9.5	14.8	13.3	1.9	6.4	6.5	10.3	9.9	1.1	359.9	8.2	18.9	24.7	19.5	22.9	6.8	12.1	10.6
4	351.2	12.6	13.6	29.2	32.9	28.4	27.0	29.1	26.5	26.2	22.0	66.0	199.4	183.7	169.2	199.5	195.4	196.9	201.1	183.2	271.3	23.8	6.3	42.6
5	32.1	304.9	334.3	327.4	32.5	44.2	311.8	339.2	306.1	291.6	318.4	303.6	302.4	292.6	114.0	76.5	149.2	149.0	144.3	50.7	339.1	298.4	290.8	313.4
6	313.7	314.7	316.1	43.3	45.2	51.1	60.9	62.3	63.2	50.9	44.7	41.1	41.2	45.4	41.2	43.5	43.9	38.4	33.7	16.0	41.6	34.1	270.6	357.4
7	31.7	229.8	34.1	27.7	7.7	21.8	27.7	27.3	32.7	29.5	32.4	25.3	45.7	86.2	173.9	273.6	261.8	260.6	128.0	339.5	320.2	315.4	0.5	357.0
8	356.7	351.4	350.1	15.9	1.1	14.2	7.2	347.6	345.7	354.4	348.8	5.4	8.4	338.9	330.2	355.3	348.7	23.7	22.6	25.4	35.2	31.7	10.5	25.4
9	24.6	293.8	334.2	32.3	32.5	3.8	27.5	32.9	34.0	35.9	42.7	57.2	179.4	202.0	197.6	206.4	190.0	147.3	151.6	11.7	16.6	68.8	27.5	322.5
10	323.3	49.5	17.8	57.1	56.2	182.4	190.3	199.2	191.2	199.1	189.4	198.9	195.5	199.3	203.0	193.6	200.7	196.1	210.4	199.3	195.6	194.8	199.9	174.5
11	67.0	64.2	70.0	39.2	23.7	4.0	19.1	39.1	38.9	39.5	29.6	32.0	18.3	12.5	25.0	22.2	22.4	17.0	14.6	11.4	7.6	4.0	2.4	5.3
12	2.3	2.6	5.1	6.7	6.1	5.4	5.8	11.8	8.7	10.1	3.1	4.4	16.5	24.0	28.7	27.3	27.7	156.4	70.8	16.7	252.4	92.9	58.2	122.8
13	301.2	307.7	309.0	310.1	308.4	308.8	309.1	291.8	3.3	315.1	319.0	336.9	170.9	187.0	180.6	171.9	152.4	157.9	101.5	47.0	298.8	296.1	312.1	312.4
14	313.3	315.8	314.8	316.8	314.2	316.9	315.5	314.8	318.0	316.8	317.9	316.5	313.7	313.1	310.5	300.4	290.6	35.5	109.2	314.8	306.4	308.5	302.3	297.8
15	275.8	291.2	284.9	282.6	288.6	291.6	311.5	301.8	72.1	306.6	307.8	326.4	308.8	310.3	298.5	316.4	316.1	313.4	316.5	329.7	321.5	28.6	4.8	23.0
16	18.6	25.9	23.3	32.4	11.4	0.9	4.7	358.7	19.0	11.9	16.5	19.6	22.0	16.2	20.3	22.4	13.1	11.5	12.0	13.6	13.3	22.8	12.4	16.6
17	18.0	15.1	16.8	19.0	18.5	13.7	18.1	12.6	11.0	9.3	20.8	5.9	18.9	7.2	14.1	19.9	27.4	14.5	8.8	7.8	20.8	29.7	29.8	8.7
18	44.2	24.1	0.4	19.6	332.4	22.2	25.2	30.6	40.5	45.2	130.7	194.0	193.5	201.9	199.3	202.8	189.1	186.3	202.1	304.5	312.9	304.6	351.7	337.6
19	308.4	311.3	315.9	314.6	315.5	315.9	316.6	322.1	33.8	41.1	18.2	35.7	45.9	40.0	91.8	94.3	39.4	24.4	302.7	207.1	50.7	26.8	8.0	32.3
20	12.2	1.2	19.7	25.3	32.9	29.1	28.2	20.4	22.7	32.1	10.8	23.7	119.4	74.4	27.2	23.7	345.2	4.4	8.4	339.4	353.7	5.9	353.0	356.2
21	353.5	357.7	0.6	5.1	9.8	13.7	14.0	10.9	8.9	7.2	10.9	4.4	358.0	358.7	10.8	356.6	23.5	2.2	29.6	25.0	5.9	329.6	345.4	353.0
22	347.9	9.5	6.8	5.5	13.2	18.3	28.3	26.7	29.7	43.1	84.9	62.1	72.1	171.3	186.9	182.3	190.3	180.9	206.6	177.4	188.7	303.1	11.5	35.8
23	19.6	31.6	22.5	25.2	15.7	25.4	19.1	29.2	25.9	26.8	11.3	27.7	35.5	35.3	134.8	201.6	202.1	261.4	253.8	310.9	311.8	308.1	308.9	313.9
24	334.8	21.5	226.7	185.3	330.4	311.4	349.6	17.7	123.1	79.6	80.1	133.1	153.5	163.2	158.9	158.2	147.7	146.1	166.8	163.0	108.7	324.7	305.1	316.5
25	318.6	321.5	335.8	358.2	4.0	19.3	24.8	30.5	31.5	33.7	13.2	17.6	25.8	23.2	17.9	15.1	4.9	2.6	358.6	3.8	353.4	356.7	345.6	13.5
26	3.6	351.3	353.9	3.8	0.7	7.1	10.2	9.7	21.5	23.7	21.8	20.2	23.3	20.0	17.9	18.3	18.0	11.9	11.5	9.8	11.5	11.5	25.5	17.5
27	6.9	3.0	10.0	10.1	10.4	11.1	12.3	11.1	7.6	11.3	14.1	27.3	27.8	36.3	117.9	15.3	18.7	320.3	268.0	2.7	222.4	358.2	3.0	19.9
28	15.2	0.7	4.6	10.7	10.1	7.5	13.7	17.9	54.9	51.1	34.1	40.3	38.6	40.0	2.9	43.2	38.3	40.4	7.8	321.6	358.9	350.8	3.0	351.1
29	350.6	1.9	314.0	317.0	314.1	309.7	307.6	312.7	308.7	310.4	313.1	32.5	15.2	54.7	357.0	318.8	314.8	312.4	304.6	312.8	309.5	318.0	16.5	11.6
30	16.7	14.9	8.6	358.4	19.9	19.4	45.1	57.0	36.8	35.8	36.9	64.2	201.1	210.3	148.4	145.7	214.9	274.6	336.0	9.9	37.5	330.1	330.9	10.0

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	23.9	356.0	11.3	3.7	8.7	7.7	11.6	7.3	16.0	22.3	23.5	24.6	29.5	30.1	29.8	29.0	25.3	25.3	27.8	26.6	20.5	14.4	14.4	16.2
2	15.3	13.1	14.5	18.3	18.8	25.6	20.9	21.1	17.3	11.3	20.9	22.1	18.4	10.7	359.4	6.3	10.5	17.7	9.6	5.4	0.9	78.4	3.0	346.8
3	345.0	350.1	0.1	11.8	352.8	355.8	6.6	9.8	19.4	22.8	26.6	28.9	27.8	26.6	19.6	7.1	22.8	2.1	352.4	343.6	348.8	0.6	3.7	4.5
4	17.5	8.9	351.0	348.0	353.7	5.8	19.6	340.7	350.0	319.0	1.6	32.0	37.6	82.2	38.2	1.5	10.3	21.6	10.5	345.1	338.3	16.1	3.6	5.7
5	355.8	0.7	358.3	349.7	0.7	7.3	6.2	11.0	9.2	7.9	9.3	3.3	358.1	357.0	62.4	24.2	24.6	46.7	93.2	240.8	231.4	278.1	329.1	31.2
6	46.0	251.5	271.9	339.2	229.8	312.6	350.2	21.1	33.9	144.3	182.2	60.2	155.9	92.2	45.5	316.6	313.4	314.7	307.4	299.6	298.9	291.7	290.6	301.8
7	309.1	302.4	294.2	294.4	296.3	292.0	291.5	295.3	295.7	305.6	312.0	301.5	304.4	43.9	1.7	44.1	65.7	95.1	104.8	100.2	51.8	18.2	314.7	312.9
8	315.9	308.1	315.4	356.5	356.3	15.7	33.0	33.3	25.2	18.1	25.2	21.8	16.1	20.8	17.6	18.6	15.0	14.4	8.9	10.5	6.7	13.0	14.3	16.4
9	17.8	18.4	17.8	20.1	17.7	17.5	17.7	17.8	19.9	16.9	14.5	15.2	18.8	20.7	22.6	24.5	25.7	26.4	24.2	25.1	23.1	20.4	19.3	18.8
10	16.4	19.6	26.5	15.2	20.4	19.3	4.2	16.0	16.5	55.9	190.8	193.3	183.9	86.3	149.6	141.9	100.8	196.0	194.8	187.6	212.1	258.5	12.8	19.5
11	354.7	24.6	28.8	24.2	244.4	24.1	22.4	27.7	37.2	41.4	46.2	78.3	81.7	177.2	143.0	61.0	59.8	23.9	324.4	348.4	21.3	12.7	15.4	18.1
12	21.1	13.9	6.2	12.2	16.0	11.6	16.3	32.4	47.2	57.1	53.7	105.7	130.1	323.7	316.3	310.5	34.6	358.1	276.4	313.8	328.0	23.6	11.7	18.2
13	1.2	6.3	0.5	13.5	7.9	13.7	27.6	45.0	51.2	61.1	40.7	42.9	49.4	165.6	147.8	46.4	46.2	238.3	297.4	3.5	12.6	6.8	348.5	214.1
14	210.4	314.6	6.1	24.6	4.1	26.8	34.5	35.2	120.8	148.1	150.1	167.6	175.0	139.2	135.1	114.6	99.5	80.0	81.0	68.9	114.4	116.0	57.3	315.8
15	277.4	251.3	239.8	251.5	11.1	31.2	331.4	37.1	37.0	56.5	112.9	166.5	183.8	204.2	209.2	212.4	208.2	207.7	197.7	187.0	131.1	9.5	346.7	280.9
16	344.4	292.3	317.9	318.0	318.8	315.9	321.7	27.1	59.4	51.3	63.8	68.5	139.5	166.1	177.5	205.5	213.5	212.2	207.9	216.2	232.2	235.9	227.1	253.9
17	19.8	21.0	21.5	19.7	19.2	29.0	27.5	30.7	25.8	28.5	34.1	108.3	115.2	117.5	130.4	132.4	142.0	186.6	288.8	165.8	191.9	153.7	331.4	349.5
18	11.8	21.8	24.4	26.3	27.1	32.5	37.6	67.0	158.5	110.0	106.1	134.4	158.0	102.7	143.6	23.2	66.3	111.7	167.1	154.1	141.6	127.1	19.2	299.8
19	308.0	300.9	313.7	318.6	321.3	330.7	45.6	34.1	35.0	47.0	194.1	169.0	148.6	97.1	26.2	91.8	71.3	61.9	2.0	350.0	346.7	19.9	345.5	18.1
20	13.1	4.0	5.8	15.6	15.5	5.4	4.6	5.0	3.8	7.8	7.2	7.1	15.5	22.7	23.6	16.7	10.9	0.7	25.3	21.0	8.9	343.7	332.9	26.0
21	8.6	30.2	359.6	39.4	9.3	18.0	32.8	39.5	324.6	311.1	317.4	321.5	315.6	310.4	124.6	172.6	153.8	177.3	302.8	301.6	307.3	309.5	311.5	314.0
22	324.8	6.1	10.0	3.8	15.5	19.4	32.4	41.5	44.2	49.3	116.3	194.6	50.7	314.3	320.8	318.2	318.5	315.7	316.3	313.4	322.7	17.0	6.6	16.2
23	16.1	23.2	18.1	241.4	9.4	28.6	49.5	38.1	172.3	179.7	183.2	166.7	184.6	199.6	188.4	184.8	186.4	197.7	207.1	342.4	80.4	9.7	16.9	18.2
24	16.6	16.2	21.7	24.0	344.2	24.8	25.8	35.1	125.4	207.1	211.2	195.9	201.0	170.1	196.6	201.0	194.3	200.8	294.0	173.5	357.0	23.5	26.0	21.8
25	24.0	17.1	358.1	188.9	31.5	28.4	37.1	69.5	50.3	163.4	204.9	213.5	203.3	173.1	164.2	168.5	155.4	164.2	25.0	319.1	16.6	21.0	24.0	21.8
26	23.1	24.7	19.9	14.3	17.0	11.5	27.7	30.5	37.1	73.5	204.8	201.0	203.6	205.8	190.5	203.2	192.0	217.9	212.0	226.0	6.2	18.4	21.7	26.6
27	30.4	21.0	242.0	229.5	17.9	12.7	21.7	28.4	29.8	41.4	53.5	207.0	195.4	205.9	207.4	204.0	203.2	215.1	225.1	227.1	15.1	22.3	26.5	24.6
28	34.0	32.1	3.3	20.4	31.4	30.5	40.7	140.8	192.0	204.6	206.1	207.6	205.8	205.8	206.9	209.3	207.3	203.6	205.9	221.0	243.7	241.1	223.4	225.4
29	246.6	35.5	4.8	263.7	302.4	21.6	33.0	38.7	212.8	189.4	181.6	180.3	183.1	197.6	171.9	143.5	51.5	91.3	223.6	230.2	240.8	252.4	297.1	297.9
30	281.4	337.1	18.2	28.2	29.0	38.0	33.9	95.2	132.2	122.8	50.0	82.9	74.9	222.0	276.1	240.6	217.2	31.4	136.0	335.6	279.6	280.9	149.0	104.0
31	340.2	12.5	24.0	29.2	23.0	13.4	17.8	26.0	48.2	178.2	152.6	183.5	186.0	188.7	194.9	189.9	208.1	200.6	188.9	177.0	161.6	166.3	213.8	194.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	358.2	302.1	11.7	332.8	13.2	13.3	47.2	59.5	155.4	156.0	156.7	154.1	133.9	173.6	179.5	166.0	175.2	172.7	186.6	218.7	224.2	216.9	12.8	20.6
2	32.6	14.8	28.6	12.2	13.1	13.1	41.6	49.2	43.3	34.9	34.6	37.7	41.5	11.5	102.1	103.1	116.0	131.7	354.0	290.9	340.7	354.2	339.7	12.2
3	9.9	4.6	47.6	160.6	189.8	128.9	308.5	308.5	50.8	89.7	343.9	286.9	177.3	154.8	197.3	197.0	196.6	121.3	91.5	89.3	170.9	181.5	181.3	288.4
4	304.3	309.4	330.7	8.7	10.1	36.3	38.1	53.0	64.4	115.4	134.4	173.1	193.1	160.1	159.7	173.7	185.0	213.1	226.7	227.4	240.7	251.1	13.0	25.2
5	23.9	27.5	23.2	31.9	340.8	40.0	37.5	42.9	85.9	135.5	198.5	203.8	184.1	183.0	186.2	190.9	189.0	194.5	195.0	220.5	216.0	220.7	245.5	334.8
6	28.2	28.3	23.7	16.6	31.0	36.2	42.3	67.1	193.2	160.9	199.2	187.4	174.4	196.2	207.1	206.8	190.3	209.1	263.2	313.9	336.0	8.8	344.8	354.2
7	356.8	6.7	356.0	25.6	2.2	4.1	12.7	325.1	13.3	348.5	336.0	86.1	171.9	332.1	340.8	88.3	8.4	325.3	292.8	279.6	11.5	324.8	337.2	343.0
8	321.4	1.4	354.5	345.7	340.6	351.4	346.9	352.6	351.2	358.9	3.3	2.9	12.8	8.4	7.3	11.8	16.0	14.2	11.5	7.3	7.7	9.1	9.1	9.2
9	7.8	9.1	11.1	13.9	14.2	14.4	11.9	11.7	9.7	10.2	9.2	14.1	13.0	10.4	5.7	14.3	9.9	64.4	16.8	1.7	7.8	348.1	341.6	308.8
10	2.7	3.7	342.4	5.7	36.7	24.9	12.1	11.4	28.9	73.6	69.9	308.8	30.1	339.9	348.4	54.7	22.4	0.8	10.5	331.8	335.3	348.1	344.5	333.9
11	295.1	354.6	319.4	3.6	7.9	9.3	352.5	353.9	349.6	2.0	4.0	6.1	3.2	9.0	6.8	7.3	0.5	0.7	3.8	347.5	352.1	354.8	352.0	353.7
12	350.1	359.6	353.5	358.7	353.8	1.3	1.8	8.5	25.9	4.1	17.7	183.6	194.0	67.4	168.5	181.5	164.6	237.9	214.4	217.5	219.7	241.8	266.3	234.3
13	2.3	338.2	340.9	295.6	132.6	194.8	200.3	33.1	17.6	146.3	205.6	198.0	202.7	202.1	201.8	207.0	194.9	183.8	181.3	182.4	190.1	189.7	206.5	297.8
14	286.5	30.6	12.4	23.8	247.7	288.1	7.3	29.5	17.3	205.9	198.4	182.9	203.9	201.9	201.1	189.8	36.9	29.6	29.0	13.4	346.0	18.0	11.5	9.3
15	12.8	8.6	13.7	0.9	15.3	262.3	24.5	143.7	191.3	175.9	190.9	204.7	194.4	206.8	199.7	199.0	214.7	214.9	231.6	223.5	188.7	344.0	348.4	340.3
16	309.7	25.7	44.0	233.6	207.6	202.1	204.5	209.4	201.1	202.0	203.2	203.1	194.3	161.9	234.3	223.4	218.9	224.2	242.7	221.8	30.2	25.6	34.6	32.8
17	35.6	30.9	225.8	232.9	206.5	216.1	211.5	215.4	208.5	208.2	210.7	229.6	250.8	215.6	222.3	222.7	215.1	211.0	213.5	222.2	205.2	18.3	23.9	24.7
18	25.9	14.5	26.2	25.5	15.4	21.7	19.5	10.8	4.1	11.2	12.6	9.4	11.6	8.2	7.8	358.5	348.1	5.5	4.5	14.0	4.9	21.5	22.9	20.4
19	16.2	8.1	4.5	3.4	13.6	14.1	14.4	12.9	16.7	9.8	11.5	20.6	27.0	23.0	25.5	40.7	212.1	215.4	222.6	226.6	213.9	4.7	22.1	25.5
20	20.5	8.7	360.0	213.2	23.7	196.7	38.8	200.0	208.5	207.0	209.4	228.0	143.9	177.3	2.4	333.3	332.1	268.1	220.1	238.8	258.7	247.5	243.9	292.3
21	22.9	24.7	21.4	26.5	19.4	26.8	29.7	27.7	34.5	74.9	187.1	201.0	198.2	203.9	203.8	197.0	202.3	202.5	190.0	203.0	204.5	198.9	192.1	316.0
22	263.9	205.3	232.0	266.6	9.5	20.1	4.0	292.3	120.0	324.0	355.7	1.9	37.3	330.3	266.6	61.3	301.5	278.0	277.7	264.7	264.8	283.7	288.5	22.8
23	26.2	24.9	26.6	20.9	227.1	216.3	212.0	14.1	36.6	39.1	61.0	190.4	180.8	203.7	208.8	209.7	209.0	211.5	209.5	214.2	211.3	222.4	220.9	260.5
24	243.5	325.2	19.5	24.4	23.0	34.2	31.1	39.7	67.1	162.6	188.8	193.4	208.5	217.7	209.9	215.6	217.6	208.8	204.6	208.6	198.1	166.7	354.0	23.9
25	27.2	14.1	12.4	329.2	31.9	24.7	43.2	202.3	206.9	221.4	214.9	202.7	207.6	207.7	208.1	213.4	208.4	212.3	201.2	195.4	232.9	239.2	252.7	272.9
26	251.5	263.5	272.1	283.6	338.4	28.1	25.7	50.0	104.6	168.9	133.0	134.8	113.6	145.8	143.4	73.4	136.8	143.1	193.1	147.3	299.9	249.0	353.4	5.9
27	354.2	15.6	243.5	350.6	172.8	34.9	43.2	151.6	186.9	162.8	170.6	175.0	178.2	190.0	202.0	205.6	211.5	205.8	207.8	225.8	331.6	308.8	298.9	307.8
28	304.6	304.4	294.9	307.9	308.1	313.5	317.8	315.8	322.0	330.1	323.8	336.2	324.0	173.1	175.3	138.6	172.5	127.8	159.3	154.0	123.2	139.9	69.6	93.7
29	67.4	103.6	9.3	28.8	35.7	322.7	330.1	345.4	61.5	149.1	196.7	163.0	203.1	180.2	246.1	315.4	357.2	85.5	359.4	31.9	309.9	216.5	331.3	331.7
30	348.1	12.7	17.4	20.4	357.5	15.3	10.7	18.0	25.1	30.7	126.3	161.1	178.9	181.2	184.9	184.0	197.1	201.0	192.3	252.5	293.4	312.4	321.6	320.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	358.2	11.1	4.3	28.4	359.7	5.7	48.6	60.3	81.1	154.4	164.0	182.2	178.1	176.1	173.2	188.2	196.9	207.3	213.6	235.8	54.1	39.2	50.7	303.3
2	301.8	312.1	300.9	347.2	11.9	18.0	32.8	39.7	54.1	60.5	131.7	131.1	183.2	185.9	193.2	254.0	356.7	69.1	74.7	97.0	13.5	359.9	215.2	213.9
3	223.4	210.8	191.3	238.0	357.4	118.2	128.7	114.9	123.2	110.8	126.6	146.4	170.6	176.1	178.9	185.2	187.1	181.5	208.8	224.6	213.2	235.5	249.9	243.6
4	277.6	319.1	317.6	347.4	335.8	34.2	55.0	86.3	155.2	169.4	199.1	185.0	174.4	190.9	189.5	196.5	208.0	212.6	206.5	190.7	192.5	202.0	241.0	249.9
5	352.6	35.3	134.3	149.5	140.0	326.2	111.2	133.1	142.1	124.7	122.9	140.1	162.5	171.6	164.8	184.7	189.7	186.5	189.3	148.2	210.3	159.6	152.9	152.0
6	209.5	305.2	310.1	241.2	168.0	187.5	149.7	136.3	130.4	128.0	153.7	167.8	180.5	186.6	192.0	197.8	211.7	199.5	208.3	234.8	160.1	273.5	321.9	333.4
7	336.8	332.6	346.5	315.0	335.2	268.9	236.7	221.4	174.4	148.7	154.4	130.4	24.9	38.6	119.3	101.6	359.0	294.0	152.3	206.1	3.2	221.6	19.8	26.9
8	20.5	18.8	5.1	11.7	331.3	5.7	24.2	147.2	48.6	319.2	317.7	314.4	317.2	317.1	314.9	218.6	165.5	183.5	309.2	311.5	309.9	314.0	354.0	352.8
9	354.1	0.5	355.8	7.5	15.7	15.6	26.1	50.4	176.8	184.5	199.0	202.7	205.0	206.4	207.2	207.9	341.7	164.8	221.0	219.5	279.8	260.5	328.7	314.4
10	322.4	351.7	329.1	340.4	349.4	335.4	311.0	98.9	193.3	219.5	209.6	189.5	185.6	237.2	243.6	264.5	288.2	242.0	168.3	36.2	15.4	352.6	8.2	214.0
11	261.5	213.4	160.9	275.3	286.1	239.9	233.9	226.6	212.3	43.7	16.7	15.3	6.1	214.1	211.2	221.5	213.5	204.2	187.1	188.8	215.7	210.1	331.3	271.4
12	258.9	7.0	13.0	18.5	29.2	25.0	30.7	37.3	46.9	47.6	137.4	188.6	177.1	195.2	203.1	193.4	167.7	334.0	316.5	325.6	104.9	299.2	8.6	19.5
13	6.0	304.0	325.6	36.1	330.7	293.6	281.9	16.9	302.2	311.9	303.4	313.6	318.3	316.9	313.8	306.0	308.0	305.9	309.3	313.3	311.7	306.3	281.5	292.6
14	303.4	308.9	296.5	293.8	300.9	335.1	14.4	294.7	292.5	293.1	308.7	313.6	320.8	317.4	317.6	304.1	52.1	117.0	161.3	114.7	181.2	186.2	196.3	192.6
15	190.9	209.2	203.2	202.2	200.9	195.2	193.7	188.9	141.8	166.2	134.8	115.3	255.3	196.6	208.0	206.1	214.8	202.2	279.9	240.5	154.8	338.5	317.5	3.9
16	341.2	347.4	7.7	32.3	34.1	21.5	13.4	349.9	341.1	353.8	295.2	355.5	25.4	96.8	98.2	117.9	77.9	84.6	41.4	23.6	84.9	31.3	2.8	354.3
17	345.0	336.6	345.0	355.6	343.2	332.9	356.9	356.4	301.7	335.6	11.9	322.9	5.4	12.8	6.8	18.1	358.1	353.9	13.6	20.0	14.5	359.2	18.9	7.5
18	348.0	9.2	15.4	11.4	7.2	21.0	5.2	11.5	49.2	132.1	105.0	77.8	48.6	79.2	50.5	349.3	114.7	168.5	167.1	324.8	346.4	311.8	259.2	338.0
19	334.2	355.1	325.7	348.0	354.8	359.6	3.1	4.2	10.1	21.8	25.7	27.3	21.5	23.2	23.4	27.1	17.9	14.8	16.4	5.5	333.2	230.4	320.6	4.6
20	19.5	2.3	18.5	16.0	21.9	18.2	24.4	20.0	22.6	19.7	18.9	24.0	21.0	17.1	20.7	22.7	13.9	5.3	13.2	11.8	246.4	219.3	220.0	25.7
21	30.1	16.7	22.2	278.5	223.0	16.8	9.0	21.1	22.3	20.0	17.0	22.0	23.5	18.6	16.8	42.3	214.3	209.8	202.2	34.5	2.4	226.5	227.1	240.3
22	214.2	212.0	212.4	215.0	20.7	18.6	18.6	14.4	13.8	7.2	12.0	9.1	5.9	12.9	201.3	213.0	194.2	301.7	333.1	3.6	2.3	2.8	358.3	13.5
23	8.3	17.1	359.6	109.2	135.9	28.5	356.5	3.1	355.0	0.1	10.3	7.0	11.4	11.9	7.8	2.2	110.3	57.2	4.6	5.3	6.7	7.1	4.3	357.6
24	347.3	359.1	5.5	12.4	8.0	13.2	13.4	19.6	12.7	8.0	4.1	11.5	356.9	290.3	221.0	220.7	265.5	315.2	308.9	295.8	332.0	38.3	353.3	351.9
25	5.3	16.1	8.9	6.3	37.1	13.7	327.5	173.6	154.7	198.9	186.5	168.7	166.7	39.5	29.5	30.6	11.0	210.7	205.0	209.4	307.9	4.5	6.3	1.7
26	17.3	25.5	28.4	358.5	7.3	17.2	20.1	320.1	14.0	357.0	321.1	293.5	296.7	301.4	304.3	296.5	304.5	306.5	300.1	305.3	306.3	308.4	309.5	315.9
27	318.2	315.9	318.9	318.2	317.5	340.8	44.4	55.4	54.6	45.5	60.9	55.3	112.5	171.1	178.0	181.8	193.3	197.2	211.8	210.7	210.7	246.7	27.6	28.7
28	38.6	222.8	250.4	25.4	27.5	33.2	30.7	35.1	41.2	50.3	175.2	179.7	188.4	206.5	207.0	206.2	194.0	193.9	195.7	172.4	75.6	60.9	135.0	165.7
29	48.3	162.2	199.6	200.9	195.2	197.5	195.9	192.5	189.9	190.1	186.6	189.2	184.7	193.7	186.0	53.5	56.8	71.1	178.7	175.5	164.9	166.7	135.0	60.2
30	138.2	97.3	113.3	178.3	187.1	181.9	160.5	150.7	156.6	173.4	310.0	49.6	300.7	5.4	305.7	338.2	137.9	135.5	126.0	170.6	144.1	172.8	141.0	116.9
31	286.9	310.5	309.7	308.0	310.9	323.3	343.2	315.5	309.7	310.0	244.4	151.4	113.5	73.6	36.9	39.1	288.8	325.1	301.6	290.3	311.6	313.8	314.1	301.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.6	21.9	16.6	50.8	50.1	44.0	57.2	34.0	29.1	26.4	13.7	24.3	7.7	9.0	19.0	8.8	17.5	32.0	14.9	26.6	24.8	35.2	44.3	22.2	57.2	5.6	26.5
2	30.8	30.6	23.4	19.4	7.6	8.3	7.5	9.9	9.1	9.0	9.9	11.1	10.4	9.6	10.1	10.1	9.4	9.9	9.6	9.9	9.9	10.6	10.0	9.3	30.8	7.5	12.3
3	9.5	10.2	9.5	8.9	8.4	10.4	9.4	17.3	47.9	33.9	36.6	82.6	45.0	28.2	17.1	43.2	27.5	17.0	43.3	40.8	14.1	23.3	40.1	36.4	82.6	8.4	27.5
4	44.0	73.6	22.1	59.7	20.3	7.3	6.5	49.6	6.7	5.5	8.4	22.5	6.5	5.5	4.2	6.4	4.6	25.1	39.6	61.2	44.3	68.6	38.0	47.3	73.6	4.2	28.2
5	25.2	26.8	26.8	19.7	12.5	17.4	18.1	15.0	16.4	15.3	18.1	40.2	51.8	29.7	67.4	30.9	43.5	12.4	11.9	11.7	17.3	22.6	14.7	13.6	67.4	11.7	24.1
6	13.7	14.2	13.2	13.0	12.1	12.7	14.2	14.0	15.8	45.8	29.3	31.5	45.2	27.7	39.6	26.5	10.5	43.8	69.8	76.6	60.5	69.1	70.4	43.3	76.6	10.5	33.9
7	66.3	72.6	50.3	55.1	67.4	75.3	57.5	61.1	33.8	30.1	43.7	33.6	22.8	22.4	29.6	17.5	20.2	24.6	22.0	14.4	24.9	28.6	19.9	15.1	75.3	14.4	37.9
8	14.7	13.3	10.3	11.6	10.3	8.5	9.2	5.8	5.9	16.1	5.2	7.1	5.9	5.8	5.0	4.3	4.3	10.6	11.7	50.9	26.6	41.0	10.3	8.6	50.9	4.3	12.6
9	18.5	14.5	11.0	15.2	41.3	39.2	4.8	4.3	21.4	5.9	13.0	6.5	6.7	6.4	22.4	13.8	6.5	11.0	13.0	13.6	10.8	25.7	51.9	42.1	51.9	4.3	17.5
10	42.8	6.6	48.8	39.6	51.2	39.9	7.0	4.7	36.7	5.9	10.5	14.0	9.3	9.4	9.4	6.1	6.3	5.7	10.1	11.8	12.9	17.2	20.0	22.0	51.2	4.7	18.7
11	34.7	17.3	57.4	69.4	46.7	61.1	34.2	8.1	9.9	8.8	6.5	4.3	4.3	4.9	4.6	4.2	6.7	10.2	10.2	45.2	18.5	8.2	9.7	14.2	69.4	4.2	20.8
12	48.4	43.3	52.4	17.9	9.7	10.6	39.1	27.7	23.0	5.3	5.1	5.8	4.2	4.2	5.4	4.3	6.8	9.3	10.0	10.4	10.7	11.8	8.0	12.8	52.4	4.2	16.1
13	31.5	23.0	25.6	17.1	17.8	27.2	25.8	39.8	11.5	15.1	28.6	14.9	9.2	10.3	12.6	12.3	9.0	8.9	9.0	10.6	16.9	11.8	8.7	12.9	39.8	8.7	17.1
14	27.8	20.4	25.1	20.2	21.0	16.1	17.6	23.5	18.2	14.9	10.5	9.5	12.5	11.8	7.6	8.4	8.2	7.8	9.9	11.7	19.3	16.8	11.6	15.8	27.8	7.6	15.3
15	24.9	29.1	26.7	34.3	15.6	45.5	16.2	13.0	19.1	11.6	49.5	27.6	52.2	44.1	9.1	10.2	7.3	10.4	12.1	21.6	16.3	13.5	10.9	48.1	52.2	7.3	23.7
16	23.2	8.4	10.0	14.3	56.5	7.8	12.0	7.5	8.4	9.7	32.2	40.8	26.5	35.8	40.2	28.7	70.3	59.1	68.1	48.9	31.9	51.6	53.6	56.6	70.3	7.5	33.4
17	54.3	10.9	9.0	9.3	8.8	9.3	10.9	9.6	9.8	9.9	9.6	11.5	9.0	9.4	9.1	10.1	9.9	10.0	10.1	9.8	11.3	9.7	8.8	8.9	54.3	8.8	11.6
18	9.6	10.3	10.3	10.7	9.5	8.7	9.2	8.9	7.0	33.3	21.8	13.7	5.1	5.5	6.1	5.9	6.9	5.9	13.2	20.3	39.1	36.3	59.2	51.0	59.2	5.1	17.0
19	20.4	31.9	62.0	21.9	56.2	23.4	10.3	8.6	10.9	26.3	17.8	13.9	15.8	18.7	31.1	37.9	25.7	35.8	60.6	70.8	47.8	20.9	56.9	43.8	70.8	8.6	32.1
20	40.6	58.9	18.5	19.1	63.5	70.7	69.5	37.6	42.7	27.8	51.9	42.2	54.9	45.4	51.7	54.1	60.9	52.7	60.6	60.7	19.5	16.6	12.0	18.9	70.7	12.0	43.8
21	21.5	35.6	21.8	21.7	13.6	24.7	19.4	10.5	16.4	55.4	39.6	47.4	65.1	57.0	55.6	42.4	56.3	68.7	77.7	26.2	56.2	43.2	54.5	65.4	77.7	10.5	41.5
22	78.0	27.4	36.8	44.4	11.8	7.3	12.6	11.4	9.1	20.9	41.8	49.5	36.7	62.2	56.7	15.3	32.2	29.4	29.2	36.7	23.2	30.5	32.8	34.0	78.0	7.3	32.1
23	39.6	21.5	11.3	17.2	26.7	28.5	64.6	75.1	33.9	14.3	37.1	53.4	39.4	48.8	12.1	23.1	31.4	35.4	65.9	24.6	19.0	42.2	47.6	25.7	75.1	11.3	34.9
24	8.6	20.9	35.8	7.9	6.1	7.0	36.1	11.8	41.3	14.2	18.0	9.8	11.6	18.3	38.1	28.7	41.7	27.3	30.4	23.8	35.7	43.4	61.0	56.4	61.0	6.1	26.4
25	69.1	70.4	40.3	34.1	66.4	71.4	44.3	21.9	42.0	33.0	12.7	20.0	23.0	10.8	5.3	5.6	7.1	8.8	10.6	24.5	32.8	47.0	52.0	8.4	71.4	5.3	31.7
26	6.5	34.9	35.1	18.7	21.4	23.5	27.6	12.1	7.2	10.9	23.6	33.8	29.5	27.7	12.7	18.9	25.1	48.2	57.4	62.4	44.5	50.0	29.9	22.4	62.4	6.5	28.5
27	14.7	14.9	12.7	18.4	22.2	20.1	27.9	20.1	18.1	30.5	27.3	56.2	47.7	35.3	48.2	46.4	49.9	55.9	65.9	55.2	16.4	15.4	14.5	20.8	65.9	12.7	31.4
28	25.8	49.0	53.5	65.9	31.4	36.9	10.4	29.0	11.0	50.2	31.6	30.4	9.5	8.7	13.5	30.4	6.3	17.2	38.6	21.1	15.0	21.7	22.1	21.9	65.9	6.3	27.1
29	19.5	16.4	15.7	23.0	23.8	18.1	16.4	23.9	19.6	16.3	19.3	20.2	17.7	16.9	22.6	19.8	20.1	26.5	19.6	25.4	36.4	29.1	39.6	59.7	59.7	15.7	23.6
30	45.2	28.8	60.0	53.5	15.8	17.9	15.1	29.5	26.4	26.5	34.7	43.4	56.9	37.0	58.4	65.1	23.9	18.6	32.5	54.4	15.8	11.4	13.4	17.8	65.1	11.4	33.4
31	22.0	17.2	16.8	17.8	19.0	21.8	43.3	42.9	22.3	36.8	58.6	61.5	65.1	55.1	35.5	33.7	58.4	57.6	57.1	56.0	27.9	12.3	11.0	14.3	65.1	11.0	36.0
Max.	**78.0**	**73.6**	**62.0**	**69.4**	**67.4**	**75.3**	**69.5**	**75.1**	**47.9**	**55.4**	**58.6**	**82.6**	**65.1**	**62.2**	**67.4**	**65.1**	**70.3**	**68.7**	**77.7**	**76.6**	**60.5**	**69.1**	**70.4**	**65.4**	**82.6**		
Min.	**5.6**	**6.6**	**9.0**	**7.9**	**6.1**	**7.0**	**4.8**	**4.3**	**5.9**	**5.3**	**5.1**	**4.3**	**4.2**	**4.2**	**4.2**	**4.2**	**4.3**	**5.7**	**9.0**	**9.8**	**9.9**	**8.2**	**8.0**	**8.4**		**4.2**	
Avg.	**30.2**	**28.2**	**28.0**	**27.4**	**27.2**	**26.5**	**24.3**	**22.2**	**20.3**	**21.5**	**24.7**	**28.5**	**26.0**	**23.3**	**24.5**	**21.7**	**23.1**	**25.7**	**32.1**	**33.5**	**25.8**	**28.6**	**30.2**	**28.7**			**26.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.6	14.2	30.8	21.3	16.3	18.8	16.3	10.6	6.7	8.5	12.0	38.6	33.4	24.5	54.4	48.5	16.9	17.2	15.6	30.3	71.6	43.6	12.6	15.4	71.6	6.7	24.6
2	7.2	9.9	6.7	7.3	6.7	8.1	24.1	6.7	4.2	4.0	30.0	11.5	22.6	19.8	29.3	35.3	19.5	35.5	53.3	38.6	31.7	47.7	63.4	49.1	63.4	4.0	23.8
3	41.5	64.3	61.1	32.9	26.2	23.4	14.9	7.8	8.2	8.2	9.9	12.4	14.4	12.8	19.8	9.4	9.9	8.4	8.7	8.6	8.8	8.2	8.8	8.7	64.3	7.8	18.2
4	9.2	8.6	9.5	9.3	10.4	10.9	9.0	9.6	8.9	8.6	8.0	6.2	6.9	7.8	6.9	7.7	12.2	17.5	7.2	5.6	10.3	39.5	45.4	12.2	45.4	5.6	12.0
5	13.2	29.6	22.6	31.0	6.0	6.8	22.0	6.3	8.7	7.7	7.2	32.1	47.6	46.4	56.6	70.2	81.9	49.0	27.1	7.4	8.6	7.2	7.7	7.6	81.9	6.0	25.4
6	5.3	6.0	6.6	6.5	8.6	46.9	64.8	33.2	47.7	19.7	12.9	17.7	23.2	16.9	18.6	28.0	67.8	37.4	64.6	18.6	18.8	19.0	22.3	53.3	67.8	5.3	27.7
7	21.3	25.1	16.2	9.9	27.6	21.6	20.3	15.3	13.3	23.2	37.3	54.3	56.9	28.7	78.6	49.1	60.8	41.6	38.5	38.9	31.9	51.2	50.8	37.6	78.6	9.9	35.4
8	54.8	37.8	27.7	24.2	16.2	17.7	16.3	30.8	7.1	8.5	4.9	20.0	16.0	33.8	15.6	23.3	26.0	13.8	26.9	48.0	69.2	54.0	15.3	32.4	69.2	4.9	26.7
9	21.3	8.4	8.2	10.6	16.6	16.8	22.3	30.6	36.9	50.1	26.6	35.2	50.3	43.1	58.2	36.3	25.5	31.3	7.4	16.9	56.5	60.7	64.4	51.1	64.4	7.4	32.7
10	34.6	51.3	44.2	35.1	16.6	18.2	10.7	10.4	23.1	35.9	60.9	48.9	46.0	57.1	44.6	41.9	41.7	32.1	27.4	15.8	23.2	47.0	15.7	15.0	60.9	10.4	33.2
11	30.5	8.0	16.6	14.6	8.7	7.6	7.3	8.9	29.1	31.7	13.0	11.3	10.0	8.9	9.4	13.4	18.1	30.7	27.8	31.3	53.8	70.3	56.0	57.0	70.3	7.3	23.9
12	42.5	64.4	35.1	13.5	28.2	60.9	50.8	43.6	54.2	42.7	19.6	17.3	17.2	27.0	17.3	13.3	22.4	31.4	26.4	17.6	24.8	17.5	23.8	19.7	64.4	13.3	30.5
13	22.5	22.3	16.4	42.3	60.4	35.4	59.8	33.8	53.9	49.1	38.9	59.5	62.2	46.9	26.4	22.3	26.2	25.2	17.5	18.0	15.3	60.6	27.9	48.3	62.2	15.3	37.1
14	56.6	20.5	51.2	69.1	44.0	63.7	31.0	34.4	5.2	4.2	29.9	12.4	20.1	10.0	36.7	13.5	18.2	17.4	40.7	54.0	58.0	48.0	74.1	57.5	74.1	4.2	36.3
15	44.4	61.1	69.7	38.1	70.4	67.8	57.5	52.5	67.3	27.5	28.6	23.1	53.1	56.0	56.9	71.5	75.3	74.6	68.8	66.5	24.1	9.1	7.9	9.5	75.3	7.9	49.2
16	9.0	9.4	17.6	26.9	44.5	63.5	54.7	71.2	47.5	30.9	25.3	59.3	77.0	60.4	49.2	44.8	36.4	36.9	61.3	64.1	60.7	63.2	56.3	76.3	77.0	9.0	47.8
17	54.7	21.9	27.8	9.9	7.9	6.7	7.5	8.6	8.9	9.4	8.0	6.8	11.3	22.8	43.9	61.4	38.9	16.5	11.8	50.0	11.1	26.2	47.4	17.7	61.4	6.7	22.4
18	15.0	20.5	14.9	13.8	23.8	24.8	24.4	54.6	58.5	66.1	47.6	53.7	45.8	63.4	41.2	33.2	42.8	59.4	45.9	58.2	43.2	48.4	72.2	51.5	72.2	13.8	42.6
19	77.3	45.9	55.4	65.5	62.0	53.2	44.9	54.0	49.7	61.0	79.2	63.4	50.3	36.4	41.6	41.9	40.4	54.2	52.0	30.8	40.1	23.3	17.1	18.8	79.2	17.1	48.3
20	15.3	13.2	13.6	16.7	17.5	19.8	44.0	45.1	42.2	37.8	34.1	40.0	58.0	37.1	34.6	59.2	48.4	42.2	47.5	45.7	45.6	42.1	52.4	66.9	66.9	13.2	38.3
21	60.9	55.3	33.4	30.4	24.5	35.9	25.3	43.5	31.6	20.1	17.5	8.0	44.0	37.7	40.9	18.3	8.1	8.0	10.0	8.5	9.1	30.1	49.8	9.2	60.9	8.0	27.5
22	7.8	22.9	7.1	6.5	6.8	10.9	10.1	15.8	27.4	31.0	28.3	48.9	74.2	59.8	68.1	76.1	27.5	11.7	9.2	7.4	28.9	45.8	51.1	76.4	76.4	6.5	31.6
23	57.4	68.0	39.6	45.3	26.7	52.3	52.3	49.0	38.0	29.8	27.7	10.0	28.1	55.3	50.7	63.2	62.3	51.1	49.4	20.8	9.1	19.3	23.9	14.6	68.0	9.1	39.3
24	14.6	14.0	23.6	21.6	27.6	35.3	24.7	18.1	23.8	29.0	24.0	13.9	12.6	18.6	31.6	35.2	32.5	26.8	15.6	20.8	18.7	12.5	24.8	26.9	35.3	12.5	22.8
25	18.8	19.0	10.9	11.0	17.4	15.5	15.1	11.8	18.0	15.8	22.6	20.2	16.9	17.4	15.2	28.8	19.8	30.1	21.5	20.3	28.9	65.7	45.8	57.6	65.7	10.9	23.5
26	45.2	28.7	30.9	33.6	26.8	7.6	6.6	8.3	30.4	27.4	20.6	38.7	54.5	62.8	15.8	18.9	14.5	13.0	11.0	10.1	11.7	12.6	11.3	11.2	62.8	6.6	23.0
27	10.6	10.5	10.1	10.2	10.5	11.3	10.6	11.4	11.0	9.9	9.2	9.2	9.4	9.7	9.9	10.2	9.4	9.5	9.0	9.6	9.2	9.7	8.5	8.5	11.4	8.5	9.9
28	8.2	6.7	7.0	8.0	9.3	34.7	28.9	19.9	82.3	42.2	51.7	38.7	26.1	10.7	32.6	6.6	5.8	47.1	37.9	12.6	21.1	17.2	26.3	21.2	82.3	5.8	25.1
29	15.1	39.3	44.2	42.6	72.1	48.3	50.9	40.5	37.7	38.2	50.0	54.5	64.7	29.9	34.6	29.6	32.6	28.0	31.8	26.1	27.0	22.5	24.8	19.8	72.1	15.1	37.7
30	25.8	25.9	22.2	28.7	36.1	33.8	28.5	35.9	46.5	51.6	62.0	58.0	40.3	49.0	31.6	44.8	34.3	23.3	12.4	13.8	12.8	15.1	13.7	14.6	62.0	12.4	31.7
Max.	**77.3**	**68.0**	**69.7**	**69.1**	**72.1**	**67.8**	**64.8**	**71.2**	**82.3**	**66.1**	**79.2**	**63.4**	**77.0**	**63.4**	**78.6**	**76.1**	**81.9**	**74.6**	**68.8**	**66.5**	**71.6**	**70.3**	**74.1**	**76.4**	**82.3**		
Min.	**5.3**	**6.0**	**6.6**	**6.5**	**6.0**	**6.7**	**6.6**	**6.3**	**4.2**	**4.0**	**4.9**	**6.2**	**6.9**	**7.8**	**6.9**	**6.6**	**5.8**	**8.0**	**7.2**	**5.6**	**8.6**	**7.2**	**7.7**	**7.6**		**4.0**	
Avg.	**28.4**	**27.8**	**26.0**	**24.5**	**25.9**	**29.3**	**28.5**	**27.4**	**30.9**	**27.7**	**28.2**	**30.8**	**36.4**	**33.7**	**35.7**	**35.2**	**32.5**	**30.7**	**29.5**	**27.2**	**29.5**	**34.6**	**34.1**	**32.2**			**30.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.5	13.2	16.7	17.9	16.0	24.5	34.2	39.5	34.1	30.2	30.9	37.0	66.9	47.5	57.9	35.5	38.6	38.3	42.9	52.7	44.9	57.9	55.8	72.3	72.3	13.2	38.3
2	38.9	63.0	47.5	68.1	64.8	59.3	66.8	36.3	53.2	41.4	64.2	32.5	63.2	47.0	55.6	36.2	37.8	42.9	62.0	42.8	22.7	14.2	23.4	9.2	68.1	9.2	45.5
3	9.1	10.3	8.0	9.8	9.4	8.5	22.8	44.4	10.2	6.6	10.6	11.8	11.4	10.9	10.5	8.6	10.3	11.4	10.2	10.4	13.7	11.3	21.0	10.6	44.4	6.6	12.6
4	11.1	12.7	11.2	10.5	10.1	9.2	9.5	9.9	10.8	10.8	10.5	10.4	10.1	10.4	10.1	10.5	10.2	9.5	10.0	9.7	9.4	9.0	9.1	9.1	12.7	9.0	10.2
5	8.5	9.5	9.7	9.4	9.1	8.9	9.7	10.8	8.8	10.9	9.7	10.7	10.9	46.7	50.2	19.2	11.3	9.8	9.1	8.2	7.3	8.4	6.6	7.8	50.2	6.6	13.0
6	13.6	8.6	10.5	10.0	9.1	7.9	9.5	13.2	8.9	7.6	6.1	17.1	16.9	26.5	40.0	59.0	32.9	38.2	12.1	11.9	12.3	6.9	6.9	8.1	59.0	6.1	16.4
7	7.9	13.1	28.5	19.8	36.5	32.9	10.7	15.0	16.8	18.3	13.0	9.6	9.4	11.6	11.3	9.8	9.3	9.0	8.2	15.9	13.5	9.4	8.9	7.8	36.5	7.8	14.4
8	8.1	9.5	11.7	34.4	32.5	41.0	49.3	28.4	21.9	19.0	15.1	34.9	13.6	19.9	10.0	16.8	15.9	10.6	17.1	11.6	7.9	7.1	8.0	6.9	49.3	6.9	18.8
9	28.4	12.4	34.4	50.2	42.5	41.5	11.0	10.6	13.3	12.6	11.9	23.2	17.5	30.9	17.8	15.0	13.8	18.3	17.9	22.8	22.0	14.0	22.0	21.4	50.2	10.6	21.9
10	18.2	15.0	14.5	14.0	33.1	28.1	38.1	42.1	43.5	18.8	8.1	13.0	7.2	7.1	5.8	7.5	34.9	25.4	7.7	9.0	8.8	12.0	18.6	43.2	43.5	5.8	19.7
11	51.9	28.5	10.5	11.0	10.6	8.7	9.8	10.1	8.6	52.5	4.3	9.7	42.7	40.2	49.0	48.7	61.4	66.1	58.4	57.4	54.3	50.5	57.7	43.9	66.1	4.3	35.3
12	40.3	53.2	50.5	51.0	49.7	54.3	51.7	48.7	41.6	54.2	33.0	50.6	53.0	56.7	68.7	44.7	47.0	40.6	46.1	37.5	31.8	46.5	17.3	17.1	68.7	17.1	45.2
13	14.2	18.6	39.6	38.7	47.7	31.2	14.3	13.5	10.5	8.0	11.3	38.5	54.3	43.6	61.6	54.2	51.7	26.7	48.8	56.6	56.3	50.0	55.5	28.0	61.6	8.0	36.4
14	12.7	15.1	15.3	15.5	20.0	16.0	18.4	9.8	7.1	6.1	9.6	7.1	5.2	9.8	29.4	49.0	51.5	43.1	26.1	70.6	56.9	34.3	12.3	11.7	70.6	5.2	23.0
15	12.3	9.4	9.6	9.4	10.3	8.7	9.5	9.4	8.3	10.2	8.0	7.7	5.2	6.1	21.7	4.4	6.0	20.3	63.7	57.2	67.5	35.5	50.4	68.9	68.9	4.4	21.7
16	25.8	17.4	35.7	65.3	29.1	22.1	34.9	65.3	60.9	36.6	45.3	31.6	37.2	31.2	24.5	39.6	60.8	53.5	57.9	43.5	18.9	32.6	47.3	11.9	65.3	11.9	38.7
17	7.7	9.6	9.2	9.0	9.7	34.6	23.9	17.5	50.4	27.9	10.8	10.5	7.8	48.8	33.7	21.5	27.9	33.7	22.1	24.1	11.3	11.0	12.0	10.8	50.4	7.7	20.2
18	9.0	12.5	11.3	11.4	19.3	17.6	14.3	14.1	13.6	17.6	22.9	35.3	35.5	43.2	64.6	54.6	35.5	33.5	44.2	14.2	47.9	16.8	14.8	18.3	64.6	9.0	25.9
19	8.3	8.0	7.9	7.4	8.4	9.1	37.5	12.4	12.2	14.4	16.6	17.8	18.6	17.1	25.7	49.1	74.1	71.6	72.2	73.7	75.6	58.0	44.7	19.6	75.6	7.4	31.7
20	44.3	21.1	20.8	19.0	18.5	15.5	10.6	9.6	10.9	10.8	10.1	11.1	10.4	11.4	11.2	11.0	10.3	10.1	9.5	9.6	10.2	10.2	11.5	10.4	44.3	9.5	13.7
21	7.4	11.3	12.4	15.3	11.7	10.3	17.3	24.3	41.4	35.5	24.3	12.0	15.4	6.7	9.1	9.1	25.3	73.6	63.0	23.4	17.2	56.7	56.1	38.1	73.6	6.7	25.7
22	63.8	36.0	53.0	82.1	57.0	21.5	19.7	15.4	15.7	30.4	31.8	58.8	53.1	51.7	29.4	27.5	26.0	37.8	44.9	36.7	32.9	42.3	28.9	41.0	82.1	15.4	39.0
23	29.8	29.7	41.9	37.1	38.8	34.6	54.1	53.9	51.2	62.2	55.3	62.9	37.9	29.4	26.0	35.0	27.8	16.5	14.1	9.0	15.3	7.9	6.7	7.0	62.9	6.7	32.7
24	8.8	6.3	45.9	71.4	6.6	10.0	21.5	25.1	23.0	24.2	15.3	15.4	13.9	32.8	15.2	13.3	13.8	23.9	19.1	14.2	15.2	17.0	17.7	20.8	71.4	6.3	20.4
25	23.4	19.9	19.5	27.6	44.9	26.1	14.0	14.1	15.3	24.0	10.1	9.3	7.5	8.6	13.5	9.7	22.6	23.1	20.5	19.8	25.6	27.4	17.7	27.1	44.9	7.5	19.6
26	25.4	23.4	20.8	21.8	28.1	27.7	23.8	26.6	23.3	11.8	7.2	11.5	7.6	9.0	8.4	26.6	39.4	41.0	21.4	31.8	34.9	36.0	18.9	24.8	41.0	7.2	23.0
27	31.4	19.5	14.2	17.1	24.1	12.6	10.1	7.7	6.7	5.8	3.7	3.0	2.9	4.7	19.9	16.1	50.1	27.8	11.2	6.6	5.6	7.3	8.7	16.9	50.1	2.9	13.9
28	11.6	13.2	9.6	14.1	15.9	23.0	15.7	8.9	9.8	30.2	6.4	9.2	12.4	25.1	32.4	18.1	14.0	16.7	17.5	23.0	45.6	23.4	23.2	12.2	45.6	6.4	18.0
29	7.2	8.0	9.2	7.2	5.0	4.9	6.7	6.4	6.4	6.9	7.5	8.0	8.5	8.9	11.3	8.4	9.5	9.4	8.1	7.7	9.3	9.3	8.5	11.9	11.9	4.9	8.1
30	12.0	14.1	12.6	10.3	10.3	9.8	12.5	7.9	13.8	12.5	20.5	41.1	61.4	43.1	30.8	13.9	14.1	15.2	14.5	13.3	14.9	14.8	16.5	19.6	61.4	7.9	18.7
31	18.8	16.8	15.2	15.3	14.7	14.0	14.2	14.4	13.7	25.6	24.7	14.7	16.6	17.9	15.6	17.7	17.2	13.9	14.2	14.5	34.5	33.9	18.0	27.6	34.5	13.7	18.5
Max.	**63.8**	**63.0**	**53.0**	**82.1**	**64.8**	**59.3**	**66.8**	**65.3**	**60.9**	**62.2**	**64.2**	**62.9**	**66.9**	**56.7**	**68.7**	**59.0**	**74.1**	**73.6**	**72.2**	**73.7**	**75.6**	**58.0**	**57.7**	**72.3**	**82.1**		
Min.	**7.2**	**6.3**	**7.9**	**7.2**	**5.0**	**4.9**	**6.7**	**6.4**	**6.4**	**5.8**	**3.7**	**3.0**	**2.9**	**4.7**	**5.8**	**4.4**	**6.0**	**9.0**	**7.7**	**6.6**	**5.6**	**6.9**	**6.6**	**6.9**		**2.9**	
Avg.	**20.1**	**18.0**	**21.2**	**25.8**	**24.0**	**21.7**	**22.4**	**21.5**	**21.5**	**22.0**	**18.0**	**21.5**	**23.7**	**25.9**	**28.1**	**25.5**	**29.1**	**29.4**	**28.9**	**27.1**	**27.2**	**24.9**	**23.4**	**22.1**			**23.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	29.1	40.4	23.7	26.0	38.1	19.3	24.7	43.5	9.0	17.1	18.0	8.1	16.3	21.0	15.6	22.1	18.3	19.2	16.5	15.5	24.4	31.3	49.9	26.9	49.9	8.1	23.9
2	19.5	21.2	51.4	64.1	49.1	27.7	20.9	28.3	39.6	17.3	12.1	10.1	13.0	47.4	26.5	25.5	33.6	33.6	34.9	34.2	49.0	59.0	54.3	50.8	64.1	10.1	34.3
3	36.4	55.6	35.6	55.5	55.5	36.4	46.2	24.5	25.3	44.8	51.4	62.5	31.7	25.3	17.6	14.7	16.2	16.9	13.9	14.7	26.6	36.8	18.1	16.6	62.5	13.9	32.4
4	17.9	14.2	14.7	16.2	15.5	23.6	17.7	35.6	16.4	14.6	13.0	13.6	14.9	18.8	19.5	30.7	21.2	17.6	18.8	16.8	14.4	13.7	30.1	19.8	35.6	13.0	18.7
5	40.8	26.6	35.1	14.9	14.6	15.8	16.5	30.4	32.9	46.4	44.2	13.6	54.7	48.6	67.1	58.8	79.5	63.9	56.9	52.1	41.1	34.5	54.5	52.9	79.5	13.6	41.5
6	21.5	64.0	41.2	22.7	30.6	46.8	44.4	52.0	74.1	70.0	39.0	48.6	21.9	38.1	31.6	36.5	38.7	42.7	31.5	43.9	42.6	67.7	57.0	36.2	74.1	21.5	43.5
7	33.9	45.0	17.9	30.0	49.3	16.4	16.9	29.5	21.0	19.1	13.7	11.1	8.7	7.7	9.9	11.8	11.1	9.2	9.1	9.9	9.5	9.8	9.4	8.6	49.3	7.7	17.4
8	9.1	8.5	9.7	9.4	9.2	10.5	9.7	10.2	10.5	11.2	10.4	10.6	11.3	12.3	16.4	13.5	11.1	20.1	9.8	13.3	16.4	10.2	7.3	8.6	20.1	7.3	11.2
9	9.1	7.9	7.6	6.7	8.7	8.6	8.3	7.7	8.4	10.6	27.1	25.4	13.5	15.5	34.3	14.8	54.9	20.1	27.1	28.8	49.4	43.9	40.7	33.9	54.9	6.7	21.4
10	31.4	48.8	34.7	18.9	14.3	13.6	20.1	40.4	14.9	14.9	14.2	14.0	14.4	14.2	15.6	14.5	14.2	13.6	14.1	14.9	15.4	23.9	25.1	61.3	61.3	13.6	21.7
11	21.3	10.6	19.6	27.3	36.9	51.0	18.2	50.2	41.4	39.2	20.0	16.3	11.8	13.6	17.5	13.7	21.4	31.2	17.5	36.2	29.7	38.0	23.1	26.7	51.0	10.6	26.3
12	26.1	24.3	16.4	58.0	42.5	67.8	60.3	68.7	30.8	19.5	45.0	8.5	7.7	12.4	9.0	13.7	14.6	12.9	12.4	7.7	11.6	15.0	21.7	31.5	68.7	7.7	26.6
13	30.9	37.2	17.6	20.3	11.4	18.5	24.8	13.4	18.5	17.9	14.9	15.5	11.0	10.9	10.0	14.0	14.6	14.6	11.5	10.3	7.9	6.0	5.9	7.2	37.2	5.9	15.2
14	6.1	7.1	7.3	8.4	8.3	8.2	9.3	7.4	9.2	8.9	9.1	9.7	9.7	5.3	6.8	7.1	8.3	8.2	7.9	7.8	7.5	6.6	7.1	8.2	9.7	5.3	7.9
15	8.1	8.6	9.8	10.4	23.0	33.3	15.0	52.5	17.2	10.1	56.8	9.9	52.5	23.3	38.7	66.3	55.0	74.9	45.1	44.5	19.8	12.0	11.6	5.6	74.9	5.6	29.3
16	4.4	9.6	9.0	9.4	9.5	10.0	10.0	11.3	10.0	9.3	9.0	9.9	9.2	7.9	9.5	9.4	8.9	8.3	8.7	10.0	7.7	7.8	8.9	6.5	11.3	4.4	8.9
17	6.2	5.5	6.1	5.6	5.2	5.0	6.4	6.9	10.6	56.5	26.9	36.7	42.7	50.4	42.9	29.9	22.8	13.7	12.4	23.0	16.8	11.8	8.3	11.0	56.5	5.0	19.3
18	19.6	17.1	22.2	19.5	9.3	9.3	8.8	9.1	9.3	9.3	9.5	10.1	8.8	9.1	8.7	9.1	8.5	8.8	30.5	67.0	27.3	24.5	29.7	48.3	67.0	8.5	18.1
19	42.6	70.3	43.6	32.4	55.9	58.5	54.7	19.4	13.9	14.0	25.7	35.9	43.0	21.3	25.0	26.4	24.6	26.3	22.3	16.5	19.9	43.6	30.9	24.5	70.3	13.9	33.0
20	8.9	6.0	6.6	7.3	8.2	7.1	7.2	7.1	7.6	7.6	9.4	9.3	9.1	9.4	8.8	7.6	7.5	7.2	10.6	8.7	8.3	11.3	8.9	11.6	11.6	6.0	8.4
21	8.0	10.0	12.3	12.2	24.7	16.9	15.4	14.7	14.0	16.8	13.9	14.2	21.1	54.5	67.9	48.7	18.2	33.1	38.1	24.5	24.4	25.5	60.2	45.6	67.9	8.0	26.5
22	30.1	31.2	38.9	50.3	64.8	54.1	56.5	63.8	66.5	17.7	15.0	27.8	15.0	7.2	6.7	15.4	23.8	16.9	25.0	25.2	12.8	15.0	15.7	16.8	66.5	6.7	29.7
23	18.1	19.7	16.8	16.7	18.3	16.8	17.2	17.6	28.5	25.7	29.4	36.3	29.2	30.7	49.4	36.6	47.4	59.9	41.6	21.3	19.5	33.8	24.0	31.5	59.9	16.7	28.6
24	26.5	33.3	44.9	33.1	15.9	12.3	15.4	14.3	18.5	22.5	47.1	47.3	59.2	37.4	28.1	31.8	42.2	48.5	53.1	40.8	27.9	22.7	20.0	15.2	59.2	12.3	31.6
25	14.0	13.8	14.8	14.9	14.6	14.9	13.7	15.4	18.7	18.9	16.4	14.7	15.7	13.9	13.1	16.1	13.2	15.2	14.1	13.5	12.8	12.6	12.7	14.1	18.9	12.6	14.6
26	13.7	14.6	13.2	14.1	17.2	14.1	13.2	13.0	13.1	15.1	14.7	13.3	13.9	12.7	12.8	13.3	12.3	32.8	37.1	34.0	12.7	19.8	43.3	37.7	43.3	12.3	18.8
27	13.4	14.1	16.4	28.3	45.9	67.7	75.6	20.2	19.1	16.5	9.7	8.9	9.2	8.3	13.9	27.0	15.1	11.5	13.1	8.9	8.1	5.5	5.0	5.7	75.6	5.0	19.5
28	5.7	4.9	7.3	7.6	7.6	5.8	5.3	8.5	4.5	7.2	6.3	6.1	7.0	7.5	7.4	7.5	8.0	8.8	8.3	7.1	9.6	7.7	9.0	7.6	9.6	4.5	7.2
29	22.7	10.5	12.4	10.3	8.8	43.9	13.5	11.8	11.3	14.9	34.3	47.0	48.9	62.9	56.6	44.9	39.8	43.6	48.0	55.4	55.3	51.3	49.0	59.5	62.9	8.8	35.7
30	54.6	45.5	44.5	37.3	43.3	56.7	65.8	78.4	47.1	44.9	17.2	32.1	25.5	23.3	53.8	39.7	22.1	17.6	18.9	18.8	11.4	13.2	38.9	18.1	78.4	11.4	36.2
Max.	**54.6**	**70.3**	**51.4**	**64.1**	**64.8**	**67.8**	**75.6**	**78.4**	**74.1**	**70.0**	**56.8**	**62.5**	**59.2**	**62.9**	**67.9**	**66.3**	**79.5**	**74.9**	**56.9**	**67.0**	**55.3**	**67.7**	**60.2**	**61.3**	**79.5**		
Min.	**4.4**	**4.9**	**6.1**	**5.6**	**5.2**	**5.0**	**5.3**	**6.9**	**4.5**	**7.2**	**6.3**	**6.1**	**7.0**	**5.3**	**6.7**	**7.1**	**7.5**	**7.2**	**7.9**	**7.1**	**7.5**	**5.5**	**5.0**	**5.6**		**4.4**	
Avg.	**21.0**	**24.2**	**21.7**	**22.9**	**25.2**	**26.3**	**24.4**	**26.9**	**22.1**	**21.9**	**22.4**	**20.9**	**21.7**	**22.4**	**24.7**	**24.0**	**24.2**	**25.0**	**23.6**	**24.2**	**21.3**	**23.8**	**26.0**	**24.9**			**23.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	23.9	13.1	26.0	21.0	20.0	15.4	21.5	17.4	23.4	30.4	20.5	19.5	15.7	14.1	15.1	22.9	23.2	17.8	25.0	28.2	27.0	13.2	11.6	17.9	30.4	11.6	20.2
2	29.2	24.5	19.5	15.2	19.9	26.2	43.5	58.1	49.1	15.4	17.9	42.2	57.0	59.3	44.0	58.6	68.2	60.4	36.5	22.3	25.5	36.1	51.6	57.3	68.2	15.2	39.1
3	36.3	49.2	49.3	34.9	18.9	17.8	16.0	13.4	15.6	14.0	14.1	14.0	15.3	13.4	13.6	15.1	15.6	29.0	19.3	26.3	33.2	26.8	19.1	40.3	49.3	13.4	23.4
4	44.8	23.0	37.0	12.6	9.7	9.5	6.1	5.0	9.1	8.0	7.6	8.1	11.3	10.1	9.0	6.8	6.9	8.9	9.4	6.2	8.2	6.0	8.5	7.2	44.8	5.0	11.6
5	6.7	7.5	6.3	6.5	9.4	6.4	6.6	11.0	9.2	10.0	9.5	10.8	10.4	9.9	10.1	10.5	9.8	8.4	10.3	9.8	9.2	9.4	8.3	9.0	11.0	6.3	9.0
6	9.8	9.3	8.9	9.9	9.4	9.5	9.0	9.8	9.4	8.6	10.2	8.5	10.3	12.9	11.2	3.4	5.5	6.6	8.1	21.8	26.7	23.9	18.4	15.4	26.7	3.4	11.5
7	14.0	11.0	9.3	9.4	8.2	9.2	10.0	10.8	8.8	9.1	9.5	9.1	9.2	9.6	9.8	9.6	8.9	13.0	12.4	11.1	9.7	9.3	9.8	11.2	14.0	8.2	10.1
8	12.1	23.0	15.1	8.4	8.0	7.2	5.4	4.6	6.5	11.5	11.3	58.8	63.1	66.9	46.7	47.1	56.8	74.7	38.5	40.2	63.8	42.6	61.6	67.7	74.7	4.6	35.1
9	49.8	51.4	54.5	51.8	65.8	59.9	41.8	41.8	37.5	8.3	9.7	9.0	10.2	10.9	10.4	9.5	10.3	24.5	68.0	77.5	11.0	54.7	43.3	32.1	77.5	8.3	35.2
10	63.6	51.5	18.0	10.1	21.3	8.2	11.2	11.1	6.1	8.6	8.3	9.1	14.0	31.1	28.3	21.0	10.7	19.2	44.9	24.9	13.1	9.2	9.9	11.0	63.6	6.1	19.3
11	11.5	8.4	7.4	8.4	46.4	18.3	57.3	15.8	16.9	15.5	17.5	15.1	17.0	17.5	27.5	42.4	42.2	76.3	58.4	37.3	53.8	76.3	47.5	42.2	76.3	7.4	32.4
12	38.2	43.5	43.4	46.7	40.6	31.3	43.1	45.2	42.6	72.4	45.0	41.2	43.1	61.1	59.4	43.3	41.8	55.6	38.0	31.9	37.5	36.7	32.2	22.5	72.4	22.5	43.2
13	14.0	28.4	23.6	9.8	7.7	9.4	8.6	8.4	8.0	8.6	8.5	8.5	8.2	8.5	8.9	8.7	10.5	10.0	9.3	9.1	9.4	9.7	9.6	10.0	28.4	7.7	10.6
14	9.7	9.9	9.8	9.9	9.4	9.6	9.3	9.5	9.3	9.0	9.3	9.6	9.7	9.2	10.1	10.2	9.2	9.1	8.6	9.1	9.5	9.7	9.6	9.0	10.2	8.6	9.5
15	11.1	10.6	11.8	10.2	10.3	9.8	9.8	9.2	9.5	9.9	9.0	10.5	9.2	8.7	8.4	8.2	8.6	9.2	9.0	9.2	9.4	18.5	24.6	31.1	31.1	8.2	11.5
16	50.7	46.7	45.0	64.6	58.5	55.4	50.1	53.8	47.9	66.7	46.7	32.5	15.9	27.6	27.2	14.7	14.3	42.0	53.9	18.2	19.7	26.3	16.6	15.3	66.7	14.3	37.9
17	22.0	16.7	13.1	14.8	11.1	11.5	16.3	18.2	18.8	35.6	7.7	7.8	12.1	9.9	13.0	11.3	17.1	18.4	10.7	12.3	10.4	11.6	12.4	9.2	35.6	7.7	14.3
18	9.5	9.6	10.9	9.8	10.3	9.6	10.3	10.6	10.3	9.0	9.7	10.9	15.9	11.0	12.2	9.8	11.8	11.5	8.9	9.8	10.2	9.5	9.7	9.9	15.9	8.9	10.5
19	9.8	10.3	9.4	9.7	9.2	8.5	12.9	10.2	9.2	9.4	9.5	11.4	11.1	12.2	12.1	26.0	27.7	40.9	9.7	15.5	18.2	35.9	7.7	10.5	40.9	7.7	14.5
20	9.8	7.4	11.5	10.2	8.5	9.3	9.2	49.8	72.0	45.4	14.5	33.9	27.5	55.8	36.1	31.1	41.7	15.5	28.9	15.9	58.6	25.9	43.7	22.3	72.0	7.4	28.5
21	34.7	5.9	34.0	26.1	48.1	37.6	9.6	16.7	52.5	13.2	19.8	11.6	15.5	20.8	21.0	10.2	19.7	15.8	9.6	14.4	24.8	22.3	29.7	18.6	52.5	5.9	22.2
22	19.9	28.5	20.2	13.3	13.5	46.1	31.7	23.0	17.5	9.5	9.6	7.0	5.8	6.3	8.0	42.0	33.5	6.2	8.7	9.5	7.4	7.4	5.2	9.0	46.1	5.2	16.2
23	10.7	29.1	57.8	25.1	15.1	16.5	30.1	11.4	16.2	7.8	6.9	7.1	9.5	18.9	22.4	11.9	6.5	6.9	7.3	5.6	8.4	9.7	9.0	8.6	57.8	5.6	14.9
24	10.2	11.8	8.9	9.6	7.3	7.6	7.6	7.0	8.6	9.3	7.5	7.2	7.3	9.5	7.6	7.3	7.3	9.0	8.6	10.2	10.7	9.1	9.2	9.4	11.8	7.0	8.7
25	9.4	10.2	9.4	9.3	10.7	11.8	10.2	10.6	10.8	11.7	10.6	11.1	9.9	10.5	9.9	9.3	10.2	9.7	9.9	9.9	9.4	9.0	10.2	10.1	11.8	9.0	10.2
26	10.5	9.7	10.7	8.8	10.7	11.2	9.4	8.8	8.9	9.3	9.3	9.3	9.4	9.4	9.6	9.0	9.7	9.8	9.2	7.9	9.0	9.0	8.6	8.5	11.2	7.9	9.4
27	9.0	9.5	9.7	9.7	9.9	10.4	11.2	13.0	11.9	10.6	10.1	10.4	11.2	8.7	7.2	11.5	10.9	10.3	9.6	9.6	9.6	9.7	9.8	10.2	13.0	7.2	10.2
28	9.4	9.2	10.1	9.8	10.4	9.5	9.5	9.3	9.6	9.7	9.4	9.6	8.6	9.8	10.0	9.8	9.9	10.0	9.6	10.5	9.4	10.4	9.1	9.2	10.5	8.6	9.7
29	9.3	8.7	8.7	8.9	9.4	10.6	11.0	15.5	20.7	29.3	22.3	11.6	10.7	9.8	9.8	9.9	9.4	9.8	9.8	9.6	9.6	10.0	9.8	10.1	29.3	8.7	11.8
30	9.6	9.6	9.1	9.7	9.9	9.5	10.4	11.4	15.2	16.6	45.4	52.4	43.9	9.8	10.3	10.8	9.8	9.9	9.0	9.5	9.8	9.5	10.6	9.7	52.4	9.0	15.0
31	9.0	10.3	9.3	10.3	9.4	10.0	9.5	9.9	9.0	9.1	9.2	10.0	12.8	11.1	9.4	11.2	10.5	8.8	8.4	9.2	9.2	9.1	9.3	9.8	12.8	8.4	9.7
Max.	**63.6**	**51.5**	**57.8**	**64.6**	**65.8**	**59.9**	**57.3**	**58.1**	**72.0**	**72.4**	**46.7**	**58.8**	**63.1**	**66.9**	**59.4**	**58.6**	**68.2**	**76.3**	**68.0**	**77.5**	**63.8**	**76.3**	**61.6**	**67.7**	**77.5**		
Min.	**6.7**	**5.9**	**6.3**	**6.5**	**7.3**	**6.4**	**5.4**	**4.6**	**6.1**	**7.8**	**6.9**	**7.0**	**5.8**	**6.3**	**7.2**	**3.4**	**5.5**	**6.2**	**7.3**	**5.6**	**7.4**	**6.0**	**5.2**	**7.2**		**3.4**	
Avg.	**19.9**	**19.3**	**19.9**	**16.6**	**18.0**	**16.9**	**17.7**	**17.7**	**19.4**	**17.5**	**14.7**	**16.7**	**17.1**	**18.8**	**17.4**	**17.8**	**18.7**	**21.2**	**19.6**	**17.5**	**18.8**	**19.6**	**18.6**	**18.2**			**18.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.0	9.4	7.2	8.0	8.8	9.7	9.6	9.5	10.5	11.4	10.8	10.1	9.9	10.5	8.9	8.9	8.9	8.8	9.1	9.0	8.5	12.0	11.6	9.9	12.0	7.2	9.6
2	11.4	9.2	9.8	8.0	10.3	8.5	9.6	9.6	9.7	9.5	9.7	9.2	9.7	9.1	9.7	9.6	9.8	10.1	13.4	10.7	10.7	8.9	13.4	16.1	16.1	8.0	10.2
3	13.1	15.8	13.7	17.2	11.6	12.2	15.4	10.0	8.2	8.7	9.1	8.1	8.0	7.5	7.7	9.6	8.5	8.1	7.7	6.6	10.3	8.7	9.1	7.4	17.2	6.6	10.1
4	7.5	8.8	49.8	21.9	9.7	9.5	45.7	52.9	45.3	43.4	16.5	8.4	5.1	5.3	4.0	13.0	9.4	27.9	49.2	8.9	27.9	32.7	58.5	15.0	58.5	4.0	24.0
5	17.1	9.0	9.1	9.7	9.8	8.0	8.6	35.9	52.7	36.9	11.7	67.1	36.2	9.3	9.0	38.6	38.2	26.9	6.4	6.4	11.6	6.0	69.2	40.0	69.2	6.0	23.9
6	17.3	28.8	19.0	6.1	7.3	13.7	7.2	5.3	8.7	10.9	50.4	16.8	23.2	11.0	6.1	24.6	45.3	6.4	22.3	30.3	23.9	8.4	9.2	66.2	66.2	5.3	19.5
7	31.1	31.5	8.0	10.4	22.9	18.2	36.9	29.0	18.2	8.8	9.7	9.5	9.6	9.2	8.6	9.6	9.1	9.4	8.9	10.3	9.6	8.8	9.2	8.6	36.9	8.0	14.4
8	8.5	9.4	9.3	10.1	9.0	8.5	9.1	8.8	9.3	10.1	11.3	9.3	9.1	8.9	71.6	35.5	14.7	51.5	30.5	35.6	18.3	12.7	10.4	11.6	71.6	8.5	17.6
9	14.0	9.9	7.7	7.5	8.3	11.8	11.8	14.5	15.1	16.9	30.2	37.9	60.5	25.4	11.6	14.4	22.5	7.4	11.0	16.4	8.6	30.8	39.7	25.0	60.5	7.4	19.1
10	65.2	18.5	26.1	17.1	5.9	8.4	13.6	60.7	71.9	62.2	61.8	45.1	9.7	72.0	51.5	38.0	15.3	12.0	10.0	15.9	29.6	10.6	12.9	46.0	72.0	5.9	32.5
11	49.4	27.6	44.4	66.0	51.9	9.3	12.9	51.6	29.0	31.8	42.8	41.6	18.2	15.6	9.7	12.4	33.0	54.4	21.7	22.9	19.1	20.3	33.2	36.4	66.0	9.3	31.5
12	53.9	43.7	11.3	37.5	28.6	13.4	12.2	9.0	26.4	50.4	14.3	21.0	13.9	12.9	17.2	15.1	12.9	14.7	38.2	33.6	29.1	23.4	57.1	27.9	57.1	9.0	25.7
13	52.9	25.8	21.7	33.2	27.2	28.4	20.5	32.8	36.7	28.7	51.8	42.0	29.5	18.4	21.8	17.5	24.0	25.5	22.8	34.0	47.7	25.6	15.1	31.3	52.9	15.1	29.8
14	14.1	10.5	14.8	11.9	9.5	6.5	6.7	10.7	13.8	8.0	12.5	9.2	7.4	7.6	8.3	8.3	7.3	8.4	7.6	8.0	8.1	6.6	7.1	8.1	14.8	6.5	9.2
15	9.8	7.9	7.2	8.4	8.1	7.7	7.4	9.2	9.3	8.2	9.7	7.2	8.5	7.0	7.7	8.8	9.2	9.2	8.9	8.7	8.3	8.8	8.7	9.3	9.8	7.0	8.5
16	8.9	8.7	8.8	8.6	7.5	9.1	9.4	9.5	9.7	9.6						7.8	11.6	13.1	21.5	18.0	61.0	24.9	8.8	7.2	61.0	7.2	13.9
17	24.4	14.2	10.6	11.1	11.7	17.0	19.2	22.0	25.8	19.3	31.6	27.5	12.4	65.1	65.0	82.7	44.2	41.3	20.2	29.5	34.0	13.6	9.5	8.5	82.7	8.5	27.5
18	12.5	8.9	10.4	22.2	18.5	12.0	21.1	23.0	20.8	38.2	22.1	13.0	13.4	16.5	17.3	13.4	21.2	36.0	26.0	21.4	42.5	41.8	43.1	63.5	63.5	8.9	24.1
19	46.8	50.7	16.6	23.0	25.5	23.2	33.2	27.5	25.0	26.1	26.5	14.0	14.0	15.5	15.2	18.2	24.6	22.2	26.1	30.5	44.3	43.9	14.5	17.2	50.7	14.0	26.0
20	17.7	10.9	19.2	7.9	9.8	8.0	8.0	6.8	6.6	7.6	6.1	7.3	9.1	8.3	9.6	9.8	8.3	7.9	10.4	11.3	10.7	10.2	9.7	8.6	19.2	6.1	9.6
21	8.7	7.9	7.1	6.6	8.5	5.5	6.9	8.1	9.9	8.9	8.1	6.3	10.3	11.7	8.4	6.3	13.9	10.8	11.8	30.0	12.8	14.4	14.1	20.4	30.0	5.5	10.7
22	32.7	58.3	60.4	50.2	55.9	58.9	59.6	28.7	27.5	25.2	27.4	30.2	28.5	22.7	18.4	15.0	17.8	15.9	13.9	14.6	14.6	15.2	15.8	14.9	60.4	13.9	30.1
23	14.4	14.3	29.8	15.6	13.1	17.8	23.9	19.6	39.3	13.4	12.3	22.1	24.4	15.3	13.6	23.7	15.0	31.6	47.9	43.9	28.4	49.6	18.3	21.2	49.6	12.3	23.7
24	19.5	23.7	37.2	32.2	18.7	18.4	18.9	17.8	16.1	17.7	15.8	10.7	12.0	12.8	11.0	10.4	29.7	9.5	11.6	13.2	17.4	18.7	21.2	20.0	37.2	9.5	18.1
25	23.0	20.5	24.8	18.9	25.6	25.5	19.9	19.5	13.9	12.3	9.9	5.4	5.4	6.3	8.6	10.2	18.1	18.5	13.5	13.6	11.5	9.6	12.7	11.9	25.6	5.4	15.0
26	9.9	11.0	9.3	8.6	8.9	9.5	11.0	8.8	11.8	6.8	7.8	7.9	6.4	7.7	7.8	7.4	7.7	10.5	10.1	13.3	28.5	21.4	13.3	18.2	28.5	6.4	11.0
27	20.2	62.3	30.9	48.6	51.3	47.7	72.3	29.0	55.1	48.4	32.5	21.8	19.5	13.7	14.2	14.2	13.8	14.4	13.5	13.0	15.4	15.8	16.0	14.4	72.3	13.0	29.1
28	12.9	14.1	13.3	13.2	13.4	13.1	13.4	13.7	13.7	14.8	15.2	16.8	15.7	28.2	23.5	15.2	10.8	27.7	11.4	18.0	42.7	19.8	26.4	11.4	42.7	10.8	17.4
29	9.1	10.2	8.7	9.4	9.1	11.9	12.5	12.4	11.6	11.3	8.8	9.1	10.5	10.0	12.8	34.0	20.3	33.1	22.8	25.4	11.4	12.8	28.6	11.3	34.0	8.7	14.9
30	8.8	8.6	8.8	9.2	13.5	13.5	10.7	12.3	14.7	14.9	18.1	17.2	10.2	13.1	12.6	11.5	14.9	20.7	23.9	55.2	7.7	7.8	6.2	8.9	55.2	6.2	14.3
31	7.8	7.5	8.3	9.3	8.6	8.7	9.0	8.6	12.3	7.8	7.8	7.9	9.4	11.0	8.0	6.2	17.8	19.6	23.2	33.9	12.2	12.9	8.8	13.1	33.9	6.2	11.7
Max.	**65.2**	**62.3**	**60.4**	**66.0**	**55.9**	**58.9**	**72.3**	**60.7**	**71.9**	**62.2**	**61.8**	**67.1**	**60.5**	**72.0**	**71.6**	**82.7**	**45.3**	**54.4**	**49.2**	**55.2**	**61.0**	**49.6**	**69.2**	**66.2**	**82.7**		
Min.	**7.5**	**7.5**	**7.1**	**6.1**	**5.9**	**5.5**	**6.7**	**5.3**	**6.6**	**6.8**	**6.1**	**5.4**	**5.1**	**5.3**	**4.0**	**6.2**	**7.3**	**6.4**	**6.4**	**6.4**	**7.7**	**6.0**	**6.2**	**7.2**		**4.0**	
Avg.	**21.0**	**19.3**	**18.2**	**18.3**	**17.0**	**15.3**	**18.6**	**19.9**	**21.9**	**20.3**	**20.1**	**18.6**	**15.3**	**16.3**	**16.6**	**17.7**	**18.0**	**19.8**	**18.6**	**20.7**	**21.5**	**18.0**	**20.4**	**20.3**			**18.8**

Total Hours in Month 744 **Hours Data Available** 739 **Data Recovery** 99.3%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.0	9.5	13.0	11.3	24.4	27.8	16.5	15.2	20.4	13.1	14.3	13.9	14.8	13.9	12.7	19.2	27.1	79.3	73.0	39.2	42.1	67.0	31.2	29.7	79.3	9.5	26.7
2	26.5	15.2	20.5	20.9	23.7	18.5	14.5	17.3	10.9	14.8	29.9	46.3	20.5	10.6	12.2	19.1	14.2	12.9	17.3	17.2	8.1	5.2	7.2	6.8	46.3	5.2	17.1
3	6.3	7.7	8.3	8.8	8.4	8.7	9.5	9.9	9.4	9.8	8.5	7.8	9.4	8.6	8.9	10.2	10.4	10.5	10.2	9.1	9.6	9.2	9.0	9.4	10.5	6.3	9.1
4	11.0	11.3	9.8	9.8	10.4	10.5	10.5	10.6	10.2	9.9	11.8	10.4	10.0	10.2	9.6	9.7	9.5	9.7	9.7	9.4	9.1	9.2	9.6	9.7	11.8	9.1	10.1
5	9.6	9.4	10.0	8.9	9.2	9.3	8.9	8.8	8.6	9.1	9.2	9.9	11.5	8.5	11.1	9.5	9.2	8.7	9.2	9.3	9.3	9.3	9.0	8.9	11.5	8.5	9.3
6	9.6	9.4	9.5	9.3	9.4	9.2	8.6	9.6	11.4	19.9	37.2	44.1	59.7	47.0	30.2	55.6	37.1	11.7	14.9	18.3	16.6	23.7	12.9	10.7	59.7	8.6	21.9
7	7.6	5.2	6.8	6.8	40.4	46.9	75.2	65.2	24.4	28.7	30.8	19.1	21.0	24.5	22.6	32.1	50.7	39.9	31.8	25.9	22.4	19.7	44.1	72.2	75.2	5.2	31.8
8	72.6	54.4	42.0	50.3	35.8	10.8	13.0	13.8	7.5	10.0	8.1	11.8	9.8	9.4	11.1	10.1	9.9	10.2	9.1	9.3	10.7	10.0	10.4	9.6	72.6	7.5	18.7
9	10.0	10.0	9.0	9.5	10.0	9.7	9.3	9.4	9.4	9.1	8.7	8.7	9.0	9.2	9.5	9.5	10.6	10.0	9.8	9.5	10.2	11.2	16.3	23.2	23.2	8.7	10.4
10	13.2	12.2	9.8	9.8	10.8	10.4	8.7	10.0	10.7	9.6	9.4	11.9	28.2	42.8			60.8	43.3	35.9	36.8	62.8	51.0	68.5	35.4	68.5	8.7	26.9
11	38.3	17.7	9.4	6.7	9.0	9.1	7.9	7.8	8.3	10.1	9.1	9.9	9.3	9.2	10.5	9.9	9.9	9.7	9.9	8.2	9.2	10.2	9.8	10.3	38.3	6.7	10.8
12	9.9	11.1	28.4	48.2	6.7	15.4	23.8	16.8	16.3	43.4	43.1	27.9	26.0	37.6	40.5	42.9	36.0	30.2	44.3	32.5	20.8	15.5	26.8	29.2	48.2	6.7	28.0
13	61.5	36.3	18.4	43.1	30.7	25.9	62.2	9.8	7.3	30.9	54.1	6.3	5.7	10.4	11.1	20.7	18.9	14.2	12.9	20.6	20.1	13.4	25.3	23.7	62.2	5.7	24.3
14	31.3	32.3	33.0	19.3	13.9	14.9	16.4	18.1	20.8	22.1	12.5	11.5	11.5	11.1	10.0	8.9	11.1	10.4	11.2	17.8	9.4	8.1	9.7	10.4	33.0	8.1	15.6
15	12.1	11.0	13.3	11.0	11.6	11.3	10.5	11.0	14.3	30.1	20.9	54.7	30.7	57.5	14.3	37.5	37.5	41.5	31.4	29.9	37.4	34.0	54.7	32.1	57.5	10.5	27.1
16	9.1	15.9	12.9	4.3	3.4	4.0	53.3	16.9	16.7	33.3	44.9	50.0	55.1	10.8	13.7	45.9	9.3	9.6	9.3	8.9	9.2	8.0	6.5	6.9	55.1	3.4	19.1
17	9.9	8.9	8.1	8.7	9.8	9.9	9.5	10.4	11.1	9.6	10.9	11.3	15.4	16.9	18.3	11.6	9.3	10.5	14.7	23.6	21.3	18.6	17.3	30.7	30.7	8.1	13.6
18	37.1	23.0	13.6	18.2	10.7	9.8	32.4	13.5	20.4	20.4	31.2	53.3	45.2	41.3	66.2	27.8	34.5	49.6	53.2	26.7	9.5	5.6	5.5	7.3	66.2	5.5	27.3
19	46.7	49.8	17.6	17.7	22.3	50.0	48.7	52.6	37.3	36.8	30.6	63.6	50.9	61.2	22.7	30.4	43.7	16.3	18.6	23.2	21.8	19.6	18.8	20.5	63.6	16.3	34.2
20	21.1	22.2	19.4	61.6	71.4	55.6	40.8	39.2	41.2	44.0	50.6	36.4	46.8	25.1	37.1	49.1	16.2	18.8	22.8	15.4	22.8	14.7	15.3	18.7	71.4	14.7	33.6
21	14.7	36.0	38.7	57.1	34.7	63.2	44.2	48.6	32.9	32.1	42.4	32.8	29.9	46.1	43.3	45.9	40.2	42.8	35.7	43.6	36.0	56.0	63.0	42.7	63.2	14.7	41.8
22	45.0	43.8	57.5	50.7	54.5	56.0	21.7	29.7	26.9	44.5	46.2	35.4	59.9	42.6	36.3	51.0	32.5	47.2	51.0	57.2	54.8	40.0	52.5	43.5	59.9	21.7	45.0
23	68.9	21.2	44.6	10.7	37.4	7.5	33.2	52.6	45.6	39.6	39.3	20.3	38.0	38.9	38.8	37.2	36.6	44.0	52.8	72.1	31.0	21.1	19.3	30.2	72.1	7.5	36.7
24	20.2	23.8	19.6	21.8	28.6	17.2	21.8	16.9	8.4	7.1	5.9	9.1	7.7	7.6	8.4	11.1	24.0	24.2	24.9	22.1	17.9	15.9	12.6	11.2	28.6	5.9	16.2
25	7.5	8.5	7.6	8.2	10.0	12.0	8.6	15.8	47.6	7.3	24.1	51.5	9.1	41.7	51.2	34.5	35.0	39.0	23.5	26.4	22.2	29.7	41.1	31.0	51.5	7.3	24.7
26	40.4	50.7	38.0	70.6	58.2	59.1	65.7	58.0	67.0	22.9	36.2	48.2	31.2	53.1	61.6	55.5	56.3	34.5	28.7	17.9	16.9	6.9	6.7	6.1	70.6	6.1	41.3
27	7.4	6.8	7.1	8.5	8.3	9.8	18.6	38.3	7.7	10.8	21.3	28.8	52.8	22.9	13.7	13.9	19.2	26.7	12.8	18.8	36.1	46.1	33.1	34.3	52.8	6.8	21.0
28	28.4	15.1	16.9	22.1	22.0	14.8	12.5	13.7	39.6	31.1	34.2	23.2	15.7	16.9	13.9	28.2	31.9	28.6	29.5	53.2	41.7	13.8	14.2	13.5	53.2	12.5	23.9
Max.	**72.6**	**54.4**	**57.5**	**70.6**	**71.4**	**63.2**	**75.2**	**65.2**	**67.0**	**44.5**	**54.1**	**63.6**	**59.9**	**61.2**	**66.2**	**55.6**	**60.8**	**79.3**	**73.0**	**72.1**	**62.8**	**67.0**	**68.5**	**72.2**	**79.3**		
Min.	**6.3**	**5.2**	**6.8**	**4.3**	**3.4**	**4.0**	**7.9**	**7.8**	**7.3**	**7.1**	**5.9**	**6.3**	**5.7**	**7.6**	**8.4**	**8.9**	**9.2**	**8.7**	**9.1**	**8.2**	**8.1**	**5.2**	**5.5**	**6.1**		**3.4**	
Avg.	**24.6**	**20.6**	**19.4**	**22.6**	**22.3**	**21.7**	**25.2**	**22.8**	**21.1**	**21.8**	**25.9**	**27.1**	**26.2**	**26.3**	**23.7**	**27.3**	**26.5**	**26.2**	**25.3**	**25.1**	**22.8**	**21.2**	**23.2**	**22.1**			**23.8**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.1	30.3	22.9	23.5	16.6	13.0	16.2	21.1	29.2	15.7	6.5	6.4	4.2	6.4	6.9	8.1	9.1	9.3	7.1	8.1	8.0	6.6	7.1	9.6	30.3	4.2	12.7
2	13.0	7.3	7.9	8.7	9.5	9.2	9.5	7.5	6.5	7.4	6.8	7.9	7.3	7.0	6.8	8.9	8.5	9.4	9.7	9.5	9.6	8.4	9.3	7.8	13.0	6.5	8.5
3	8.7	8.1	8.9	8.9	8.9	7.5	6.7	8.4	8.1	8.7	8.8	8.8	8.9	5.7	5.2	5.3	5.3	7.2	5.6	6.2	6.3	7.7	5.9	6.3	8.9	5.2	7.3
4	6.8	7.1	6.6	7.6	7.6	6.8	7.9	7.9	7.9	7.2	8.1	7.1	13.6	27.6	21.5	19.3	15.1	8.7	9.4	10.7	14.1	8.3	8.3	7.6	27.6	6.6	10.5
5	8.8	7.9	11.8	9.6	8.7	8.3	10.5	26.8	51.0	72.3	61.7	30.9	50.7	46.2	31.7	65.0	52.0	52.4	34.0	25.8	40.5	44.8	37.5	37.4	72.3	7.9	34.4
6	31.8	21.6	42.4	39.5	24.0	26.1	42.8	53.0	27.6	21.1	13.3	13.0	12.2	19.5	14.7	24.7	17.6	22.5	32.8	40.1	27.8	20.4	20.4	9.8	53.0	9.8	25.8
7	8.3	10.6	24.7	24.3	42.5	25.3	14.6	27.2	14.2	12.1	11.4	10.5	13.1	13.3	14.7	24.6	30.7	59.9	62.7	61.4	61.4	64.4	73.1	32.0	73.1	8.3	30.7
8	29.1	23.1	27.4	26.4	29.9	55.8	40.6	28.5	60.0	61.6	63.0	46.6	51.2	48.6	53.6	43.6	34.4	47.2	46.6	48.1	65.5	59.4	83.2	71.8	83.2	23.1	47.7
9	55.1	78.8	70.6	71.4	69.9	66.7	69.5	46.7	78.7	56.8	51.6	62.0	70.5	49.8	63.4	71.2	46.7	28.0	26.4	22.8	18.9	14.0	17.1	24.4	78.8	14.0	51.3
10	14.2	23.3	32.2	26.5																					32.2	14.2	24.1
11																											
12														9.1	8.4	6.9	5.9	5.8	6.9	6.4	7.3	8.3	37.5	42.8	42.8	5.8	13.2
13	9.6	21.9	34.2	49.1	47.9	7.6	36.2	37.5	39.7	9.9	15.3	12.7	8.4	7.4	8.3	6.1	6.8	11.9	15.4	8.4	9.2	35.5	13.5	29.1	49.1	6.1	20.1
14	42.1	9.2	12.8	8.2	5.9	7.0	7.9	8.9	12.0																42.1	5.9	12.7
15														11.7	26.7	40.3	11.1	13.6	37.2	33.4	7.8	7.8	8.0	9.2	40.3	7.8	18.8
16	7.8	8.5	8.2	8.1	6.9	8.3	8.2	8.2	9.1	8.7	7.8	7.2	7.0	10.2	11.8	11.8	9.4	9.8	12.1	10.3	9.7	9.3	10.9	9.5	12.1	6.9	9.1
17	8.6	9.2	5.7	4.7	6.5	7.2	7.6	7.8	8.1	7.4	7.7	9.3	8.3	9.4	8.5	8.6	9.8	11.2	10.9	10.1	8.4	9.5	8.6	8.9	11.2	4.7	8.4
18	8.4	8.4	9.7	9.3	8.4	8.9	8.2	10.2	9.5	8.7	8.6	8.2	8.0	8.5	8.6	9.2	9.4	9.8	41.5	46.1	39.6	17.9	39.5	21.2	46.1	8.0	15.2
19	15.3	20.5	11.3	12.8	10.4	8.7	7.8	7.9	49.2	10.4	8.7	36.3	6.7	5.4	11.1	7.4	16.5	25.3	25.6	24.0	56.2	8.8	6.2	6.5	56.2	5.4	16.6
20	7.5	4.8	6.8	6.3	6.5	5.8	6.2	8.9	52.8	32.5	21.0	28.7	65.2	10.1	5.4	7.4	33.1	19.0	17.4	19.4	23.7	16.4	12.4	14.8	65.2	4.8	18.0
21	23.4	30.7	30.1	18.5	22.6	26.3	46.9	29.9	48.5	60.7	29.1	18.7	51.2	27.0	65.7	47.5	36.5	25.8	68.1	33.9	25.1	46.3	54.2	26.0	68.1	18.5	37.2
22	25.7	18.7	16.4	16.7	18.8	15.5	10.9	12.8	26.1	29.3	9.1	9.4	8.5	7.3	8.6	7.8	16.6	54.5	37.4	69.4	38.2	17.7	21.4	17.4	69.4	7.3	21.4
23	17.8	22.2	16.6	44.5	69.4	57.0	10.9	19.1	11.3	10.3	15.9	27.3	53.7	22.2	58.8	37.0	48.2	28.7	15.0	32.2	25.7	27.6	32.9	32.6	69.4	10.3	30.7
24	16.3	12.4	11.0	9.2	8.0	9.4	8.3	20.0	16.0	10.6	14.4	12.2	27.5	47.3	26.3	7.1	22.6	70.3	56.2	17.4	12.9	16.1	14.6	15.7	70.3	7.1	20.1
25	15.7	14.8	15.7	61.6	15.9	30.0	25.8	13.6	10.0	11.0	9.6	10.7	38.0	26.4	19.7	32.0	49.2	56.6	33.8	19.2	32.4	26.5	18.5	17.1	61.6	9.6	25.2
26	44.3	25.3	14.0	15.7	15.8	17.0	19.3	29.5	11.7	11.8	34.7	18.3	9.2	7.2	7.3	5.4	12.4	11.1	62.1	40.8	24.8	34.7	20.1	23.0	62.1	5.4	21.5
27	22.8	11.0	39.2	21.7	11.3	33.8	54.3	13.1	7.6	25.4	34.0	5.9	4.9	5.1	3.1	4.6	8.3	10.3	9.5	14.9	24.9	19.9	8.9	56.1	56.1	3.1	18.8
28	10.7	26.1	46.7	7.6	7.4	5.2	4.3	4.2	50.5	49.4	52.3	13.9	4.7	6.0	5.7	5.1	6.5	8.6	6.8	10.8	49.7	22.7	15.3	77.4	77.4	4.2	20.7
29	39.1	29.8	29.4	14.4	15.2	18.0	14.0	15.3	12.0	6.6	4.9	6.4	14.9	16.8	4.4	5.6	15.0	44.6	35.1	61.6	48.7	49.7	12.7	6.2	61.6	4.4	21.7
30	5.2	7.7	9.9	9.0	11.0	11.5	12.2	15.4	9.7	21.1	26.3	24.4	16.2	23.4	17.1	13.1	14.5	17.7	18.8	26.1	42.5	25.4	26.6	21.2	42.5	5.2	17.8
31	20.9	25.2	24.9	29.1	22.0	17.5	17.3	29.6	16.4	13.0	8.6	8.8	9.0	8.8	8.4	8.8	10.6	9.5	9.3	67.1	59.9	17.1	14.9	27.8	67.1	8.4	20.2
Max.	**55.1**	**78.8**	**70.6**	**71.4**	**69.9**	**66.7**	**69.5**	**53.0**	**78.7**	**72.3**	**63.0**	**62.0**	**70.5**	**49.8**	**65.7**	**71.2**	**52.0**	**70.3**	**68.1**	**69.4**	**65.5**	**64.4**	**83.2**	**77.4**	**83.2**		
Min.	**5.2**	**4.8**	**5.7**	**4.7**	**5.9**	**5.2**	**4.3**	**4.2**	**6.5**	**6.6**	**4.9**	**5.9**	**4.2**	**5.1**	**3.1**	**4.6**	**5.3**	**5.8**	**5.6**	**6.2**	**6.3**	**6.6**	**5.9**	**6.2**		**3.1**	
Avg.	**19.0**	**18.7**	**21.3**	**21.2**	**19.5**	**19.0**	**19.4**	**19.2**	**25.3**	**22.7**	**20.7**	**17.4**	**22.0**	**17.6**	**19.0**	**19.4**	**20.1**	**24.6**	**26.9**	**28.0**	**28.5**	**23.3**	**22.8**	**23.9**			**21.7**

Total Hours in Month 744 **Hours Data Available** 659 **Data Recovery** 88.6%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	20.6	11.3	18.5	33.1	41.3	42.0	32.4	17.3	19.2	22.5	22.1	64.6	71.5	54.5	41.7	61.3	64.2	46.0	47.7	38.2	48.9	43.1	58.3	52.4	71.5	11.3	40.5
2	49.8	25.5	23.1	27.9	20.9	31.4	47.2	57.7	44.3	38.3	37.6	21.3	27.1	20.7	24.3	7.9	9.5	7.2	8.6	7.8	8.9	6.7	7.3	8.4	57.7	6.7	23.7
3	6.4	7.0	7.9	8.1	7.9	7.9	7.8	8.2	8.3	9.6	8.0	8.3	7.9	8.1	9.7	10.6	8.3	7.8	7.8	8.2	7.6	11.3	8.7	9.8	11.3	6.4	8.4
4	11.2	12.0	7.8	6.0	4.7	5.6	6.7	5.5	5.9	6.2	7.6	39.5	15.4	44.3	45.3	29.6	48.3	19.1	23.4	56.3	72.6	73.5	71.3	59.0	73.5	4.7	28.2
5	64.5	41.9	41.2	50.0	48.0	54.0	37.8	61.3	17.5	28.7	33.5	24.3	23.6	44.7	59.4	34.3	47.2	38.6	46.8	54.0	44.9	32.6	27.3	18.3	64.5	17.5	40.6
6	15.0	12.9	12.4	25.5	35.0	41.1	17.2	18.7	14.6	10.1	16.9	8.4	8.6	7.7	5.9	7.8	8.0	10.5	10.2	21.8	51.8	49.1	49.7	50.1	51.8	5.9	21.2
7	50.0	37.4	42.4	44.9	67.3	10.4	7.8	6.8	4.9	12.0	33.6	30.6	26.1	64.8	27.1	46.1	49.2	55.1	51.3	48.9	46.1	33.3	22.9	30.8	67.3	4.9	35.4
8	39.8	40.7	36.6	38.4	47.8	53.2	34.1	10.4	16.6	21.5	20.1	15.4	15.4	29.9	30.5	32.9	24.9	18.9	8.7	7.5	3.9	9.8	20.4	42.6	53.2	3.9	25.8
9	39.6	66.9	53.3	8.4	15.2	23.1	16.9	20.6	8.2	4.7	3.4	41.5	18.4	4.9	5.5	5.9	12.7	15.8	59.2	52.5	63.1	55.9	89.1	50.9	89.1	3.4	30.6
10	44.7	36.3	47.4	46.8	30.5	51.5	16.0	12.9	16.8	18.6	19.9	23.1	32.4	21.2	13.9	16.8	18.1	30.5	57.0	73.7	40.3	24.4	24.0	33.1	73.7	12.9	31.2
11	34.6	26.4	44.5	42.3	72.0	61.2	27.8	18.0	22.2	12.1	12.1	8.5	9.3	12.4	11.9	8.6	7.9	8.0	7.8	8.4	9.6	8.9	9.4	9.5	72.0	7.8	20.6
12	9.5	9.9	8.0	7.7	8.0	8.4	8.8	8.0	8.2	8.9	9.1	9.4	8.2	6.8	5.9	9.5	10.7	19.6	41.1	39.3	34.2	56.4	62.9	86.1	86.1	5.9	20.2
13	53.5	19.1	19.7	17.9	21.6	18.0	17.9	28.9	59.7	51.1	26.7	54.2	41.7	21.7	24.3	32.6	36.9	28.5	45.6	64.6	34.2	26.2	14.2	13.3	64.6	13.3	32.2
14	13.0	12.6	12.7	13.5	12.5	12.3	12.9	13.5	13.4	12.9	13.5	14.0	16.6	19.6	21.5	29.2	31.0	56.6	53.7	55.6	51.8	28.3	25.7	27.1	56.6	12.3	23.9
15	21.2	27.5	31.4	23.8	26.5	46.5	58.1	47.7	67.0	33.8	52.0	48.6	22.0	22.0	27.3	20.4	16.6	15.3	15.4	12.5	16.2	41.7	23.0	11.4	67.0	11.4	30.3
16	13.2	6.4	7.8	9.7	12.8	10.7	9.0	10.2	9.8	8.5	10.2	10.3	10.5	10.4	10.9	9.9	9.0	9.1	8.9	9.0	10.2	10.1	9.6	10.1	13.2	6.4	9.8
17	9.2	8.7	9.5	9.1	9.9	9.3	10.6	9.3	14.7	9.3	14.5	13.1	17.7	16.1	12.4	10.6	8.6	11.5	10.9	9.5	11.6	10.6	8.0	36.7	36.7	8.0	12.1
18	52.6	8.4	32.4	14.9	53.1	61.4	48.2	9.3	5.0	5.4	15.3	4.6	3.6	6.2	5.2	6.5	8.8	27.0	72.7	48.5	15.0	31.8	36.9	65.4	72.7	3.6	26.6
19	44.1	11.9	11.8	12.1	12.7	12.2	13.2	22.5	33.2	26.3	20.6	35.0	9.8	7.9	23.5	24.4	14.2	49.6	50.9	56.5	53.6	26.3	42.3	22.2	56.5	7.9	26.5
20	39.1	20.5	13.5	13.4	8.6	8.0	7.2	10.8	12.4	8.1	15.5	48.2	38.3	35.1	31.4	13.2	27.6	38.2	15.5	27.3	36.8	17.7	12.3	11.3	48.2	7.2	21.2
21	10.0	8.1	7.9	8.5	8.1	8.7	9.4	9.1	9.1	9.4	10.4	9.4	10.6	10.8	13.3	45.2	45.1	12.7	51.3	9.8	20.4	23.4	37.8	28.1	51.3	7.9	17.4
22	15.9	14.7	11.2	8.8	9.9	9.0	6.8	9.5	7.6	16.3	49.0	28.1	31.0	25.8	6.6	7.6	6.4	5.9	9.8	12.3	14.5	21.0	13.9	15.3	49.0	5.9	14.9
23	10.4	8.9	11.4	8.4	10.4	9.5	7.9	7.3	11.3	9.7	11.0	7.8	4.7	11.3	22.3	5.8	6.7	35.2	50.6	19.5	12.1	15.6	13.9	14.1	50.6	4.7	13.6
24	24.9	21.8	48.9	38.3	53.9	14.9	59.0	44.1	67.2	63.4	61.1	47.9	39.1	28.4	27.8	30.1	40.2	50.6	23.7	23.8	57.3	55.0	20.8	13.9	67.2	13.9	39.8
25	13.9	36.8	36.2	44.4	28.9	12.0	7.5	6.7	5.1	4.8	12.7	12.3	8.3	8.8	9.4	11.7	11.1	11.0	13.6	11.1	12.7	15.5	11.8	14.3	44.4	4.8	15.0
26	10.6	10.6	9.4	9.1	8.5	9.2	9.6	9.7	9.7	8.8	9.2	9.4	9.9	9.9	11.1	10.9	10.4	10.0	9.3	9.0	9.3	10.5	10.6	9.6	11.1	8.5	9.8
27	9.3	9.0	8.6	10.5	9.4	9.5	10.5	9.0	10.1	11.2	11.5	9.8	12.3	14.6	59.9	24.2	21.1	40.0	37.2	64.5	37.0	27.4	34.6	42.5	64.5	8.6	22.2
28	21.2	31.5	22.3	13.2	13.1	16.3	19.8	27.3	32.3	22.8	10.9	32.5	12.6	15.3	31.8	4.9	5.6	3.0	28.9	48.9	26.2	32.4	16.1	12.1	48.9	3.0	20.9
29	17.3	25.0	14.9	13.7	13.5	13.4	17.2	10.9	12.9	16.1	17.2	25.1	27.4	6.5	32.0	14.4	13.6	16.4	31.9	32.9	17.0	21.8	25.4	24.6	32.9	6.5	19.2
30	8.5	9.8	11.4	16.6	23.0	21.0	13.5	20.0	5.2	3.8	4.4	55.5	35.1	50.4	10.2	11.6	20.0	38.8	49.1	46.9	64.1	62.7	67.3	56.4	67.3	3.8	29.4
Max.	**64.5**	**66.9**	**53.3**	**50.0**	**72.0**	**61.4**	**59.0**	**61.3**	**67.2**	**63.4**	**61.1**	**64.6**	**71.5**	**64.8**	**59.9**	**61.3**	**64.2**	**56.6**	**72.7**	**73.7**	**72.6**	**73.5**	**89.1**	**86.1**	**89.1**		
Min.	**6.4**	**6.4**	**7.8**	**6.0**	**4.7**	**5.6**	**6.7**	**5.5**	**4.9**	**3.8**	**3.4**	**4.6**	**3.6**	**4.9**	**5.2**	**4.9**	**5.6**	**3.0**	**7.8**	**7.5**	**3.9**	**6.7**	**7.3**	**8.4**		**3.0**	
Avg.	**25.8**	**20.6**	**22.1**	**20.8**	**24.5**	**23.1**	**20.0**	**18.4**	**19.1**	**17.2**	**19.6**	**25.4**	**20.5**	**21.4**	**22.1**	**19.5**	**21.4**	**24.6**	**31.6**	**32.6**	**31.1**	**29.4**	**29.2**	**29.3**			**23.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	27.8	17.8	12.3	11.4	12.7	15.1	12.3	8.7	11.1	10.9	10.7	10.7	10.5	9.8	9.9	11.3	10.3	11.2	11.7	11.7	11.2	10.1	10.2	10.3	27.8	8.7	12.1
2	10.1	10.0	9.7	9.4	9.7	8.9	9.8	8.9	9.7	9.4	9.2	9.4	9.9	10.9	9.9	9.9	11.0	11.2	8.1	9.0	7.5	31.9	37.9	18.6	37.9	7.5	12.1
3	10.7	11.6	11.0	10.6	10.0	9.3	9.1	9.9	10.2	9.1	9.4	9.8	9.3	9.1	10.3	13.0	13.4	15.7	11.9	10.3	10.9	11.6	10.5	10.1	15.7	9.1	10.7
4	9.4	9.5	11.4	9.9	14.8	33.1	63.2	38.4	49.9	46.7	26.9	46.9	58.0	66.5	37.5	45.3	67.0	30.6	41.5	43.6	73.0	33.8	15.4	16.6	73.0	9.4	37.0
5	11.3	12.7	19.9	13.5	11.5	10.2	9.4	9.6	8.4	9.6	9.6	9.3	9.8	10.1	56.7	42.4	55.0	75.8	42.7	38.5	28.0	42.3	42.5	10.3	75.8	8.4	24.5
6	13.0	45.4	39.0	21.6	17.5	17.7	17.9	10.6	7.3	26.9	16.7	18.7	17.4	18.8	34.3	14.7	15.0	14.4	20.0	28.6	29.3	31.4	32.7	28.0	45.4	7.3	22.4
7	20.5	25.5	30.5	28.0	33.2	39.4	34.1	28.2	28.2	26.1	23.6	29.2	48.9	68.8	56.3	48.7	31.8	42.7	46.1	42.6	49.3	56.7	19.4	16.6	68.8	16.6	36.4
8	14.8	27.4	36.3	17.0	11.7	9.1	8.0	5.9	8.7	11.6	9.0	9.8	9.5	9.6	10.6	10.4	10.5	10.0	9.3	9.5	9.4	9.8	9.8	10.1	36.3	5.9	12.0
9	10.1	9.8	10.0	9.8	10.0	10.2	9.8	11.0	9.8	10.3	10.3	10.2	9.8	9.7	9.3	10.1	10.1	9.3	9.4	10.4	10.4	10.3	10.3	10.6	11.0	9.3	10.0
10	10.5	10.0	10.8	10.2	9.5	8.9	10.0	12.9	13.6	23.1	22.9	16.1	33.7	37.5	35.2	41.6	49.5	60.4	37.4	60.2	15.7	36.3	9.9	21.7	60.4	8.9	24.9
11	22.6	5.9	8.8	23.1	49.8	12.4	11.5	6.4	5.3	5.5	6.4	24.3	23.5	34.4	39.3	18.6	9.7	26.0	43.4	11.4	32.4	13.8	14.7	20.6	49.8	5.3	19.6
12	12.7	13.4	13.7	9.8	16.3	13.7	39.3	12.9	10.5	16.8	17.7	39.3	39.1	26.7	14.1	24.5	59.1	65.8	65.0	59.5	66.0	12.7	18.0	8.8	66.0	8.8	28.1
13	9.1	7.1	14.2	11.7	11.4	11.7	12.8	13.0	12.3	14.7	6.8	9.9	27.3	42.4	38.7	26.9	38.1	38.2	65.7	56.1	19.0	12.2	29.9	57.5	65.7	6.8	24.4
14	53.3	22.6	24.5	17.3	33.1	12.4	9.1	5.0	36.6	29.7	11.7	16.0	20.9	23.5	19.2	18.0	17.4	24.6	16.9	19.9	16.2	39.0	54.8	12.2	54.8	5.0	23.1
15	21.2	36.1	8.9	22.1	36.7	16.5	43.0	13.2	11.5	20.6	17.9	12.1	6.3	8.7	6.0	5.3	5.6	6.0	10.6	13.9	29.8	25.5	19.2	62.5	62.5	5.3	19.1
16	65.4	38.7	13.7	13.1	17.4	14.4	20.3	28.5	14.1	5.0	10.4	13.4	11.3	15.7	9.4	7.2	6.0	7.7	5.8	20.5	9.1	7.9	9.8	20.2	65.4	5.0	16.0
17	37.2	9.9	5.6	6.2	5.5	6.7	7.8	7.4	9.2	9.0	10.0	13.2	11.3	15.7	13.2	11.3	13.8	22.5	25.4	30.1	33.2	40.8	55.7	17.0	55.7	5.5	17.4
18	8.0	9.4	10.9	6.2	6.9	18.4	3.4	14.2	41.2	27.6	23.8	35.6	34.6	28.0	44.1	63.0	57.5	36.4	38.0	40.3	36.5	62.5	65.2	29.7	65.2	3.4	30.9
19	22.9	26.1	17.1	15.0	18.1	28.3	12.5	7.5	4.6	34.9	15.3	26.4	18.1	31.2	27.8	53.0	57.6	37.6	14.2	13.9	41.3	38.1	24.4	13.8	57.6	4.6	25.0
20	9.5	9.7	8.8	11.4	10.6	8.4	8.7	9.4	10.2	9.4	9.8	10.9	9.5	8.8	8.3	10.5	10.6	11.2	8.4	14.7	28.7	29.4	19.4	56.2	56.2	8.3	13.9
21	37.1	31.1	62.1	48.3	64.9	39.6	16.2	14.3	31.1	16.0	15.0	15.8	20.3	51.2	46.7	29.2	56.1	59.7	40.5	25.7	21.1	13.6	12.4	14.6	64.9	12.4	32.6
22	18.0	18.8	14.7	17.3	18.0	15.6	13.3	10.8	12.1	10.9	49.8	20.0	36.7	38.1	17.5	15.8	15.1	13.7	13.1	24.3	58.7	12.2	27.0	18.4	58.7	10.8	21.2
23	7.0	23.3	51.2	62.4	51.3	54.9	32.9	34.8	40.3	17.4	20.6	26.9	10.1	6.5	7.4	10.8	19.5	14.3	21.7	58.2	64.9	19.7	9.3	10.1	64.9	6.5	28.1
24	7.5	7.5	10.1	57.1	54.2	12.3	32.9	9.8	23.6	8.3	8.4	13.4	2.2	64.6	20.0	16.3	13.8	18.2	51.8	45.2	55.8	23.8	10.5	10.6	64.6	2.2	24.1
25	14.0	9.3	60.1	51.3	37.1	12.4	49.8	56.3	52.8	33.1	9.2	13.3	7.6	18.5	23.2	12.9	29.3	39.3	49.7	74.0	23.8	12.2	10.8	9.4	74.0	7.6	29.6
26	8.9	10.1	11.1	8.4	10.2	13.0	10.2	8.2	8.0	41.0	24.5	10.1	7.5	18.7	46.7	13.0	16.5	25.7	30.0	57.4	40.6	13.7	9.9	24.0	57.4	7.5	19.5
27	11.6	9.2	71.1	56.1	11.5	14.3	16.0	13.7	18.6	15.1	30.3	12.9	59.4	57.9	9.8	20.1	16.3	31.1	20.3	31.6	53.0	14.7	7.7	17.9	71.1	7.7	25.8
28	8.8	13.0	38.2	16.1	13.7	10.9	41.7	47.6	22.9	5.3	5.5	4.7	4.6	4.6	3.4	4.2	3.9	8.0	12.4	15.1	33.3	19.5	18.1	15.9	47.6	3.4	15.5
29	44.6	45.2	46.9	37.3	57.6	31.9	12.4	49.9	28.7	15.5	48.9	18.2	28.6	30.3	28.1	44.7	68.1	49.2	53.1	40.6	66.6	32.8	46.8	43.8	68.1	12.4	40.4
30	39.2	23.7	41.9	20.4	35.2	8.5	9.5	10.2	17.1	11.8	39.5	40.2	46.4	42.3	37.0	50.8	22.3	67.7	39.9	38.1	62.1	66.1	46.9	33.7	67.7	8.5	35.4
31	62.4	8.3	10.4	11.2	11.4	14.5	15.7	36.8	18.7	14.1	10.3	8.2	5.7	6.4	9.0	8.8	8.0	8.0	17.3	19.1	11.1	18.7	24.5	45.6	62.4	5.7	16.8
Max.	**65.4**	**45.4**	**71.1**	**62.4**	**64.9**	**54.9**	**63.2**	**56.3**	**52.8**	**46.7**	**49.8**	**46.9**	**59.4**	**68.8**	**56.7**	**63.0**	**68.1**	**75.8**	**65.7**	**74.0**	**73.0**	**66.1**	**65.2**	**62.5**	**75.8**		
Min.	**7.0**	**5.9**	**5.6**	**6.2**	**5.5**	**6.7**	**3.4**	**5.0**	**4.6**	**5.0**	**5.5**	**4.7**	**2.2**	**4.6**	**3.4**	**4.2**	**3.9**	**6.0**	**5.8**	**9.0**	**7.5**	**7.9**	**7.7**	**8.8**		**2.2**	
Avg.	**21.3**	**18.0**	**23.7**	**21.4**	**22.9**	**17.2**	**19.4**	**17.9**	**18.9**	**17.6**	**17.4**	**17.9**	**20.9**	**26.6**	**23.8**	**23.0**	**26.4**	**28.8**	**28.4**	**31.4**	**33.8**	**25.9**	**23.7**	**22.4**			**22.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.6	60.1	63.6	25.7	32.6	21.3	14.7	10.9	18.6	13.3	10.3	8.3	12.1	7.2	5.9	7.6	6.2	14.5	27.4	18.5	36.5	28.3	22.0	8.2	64.6	5.9	22.4
2	14.1	15.5	9.4	6.3	8.9	19.6	11.9	9.8	7.1	5.1	5.1	4.6	9.0	70.1	39.5	34.5	32.9	38.6	49.5	77.0	68.3	21.9	46.0	39.1	77.0	4.6	26.8
3	48.5	65.9	64.6	35.0	43.3	59.2	25.3	21.8	39.0	48.9	68.4	30.9	38.9	52.3	49.9	33.8	30.9	63.8	36.7	57.6	37.0	34.2	73.6	30.7	73.6	21.8	45.4
4	23.8	14.2	22.3	27.9	14.3	14.1	10.5	6.8	16.1	20.1	29.2	10.5	12.9	6.4	6.1	8.7	10.1	11.7	10.0	11.7	13.5	11.6	39.3	8.1	39.3	6.1	15.0
5	6.7	7.2	17.7	57.1	71.9	52.2	4.3	5.3	23.8	30.9	10.8	5.5	5.1	5.4	5.0	4.9	6.2	7.2	10.4	7.7	6.4	15.0	21.2	17.1	71.9	4.3	16.9
6	6.6	7.8	8.9	58.5	7.3	22.6	6.9	19.4	19.3	20.3	18.5	12.2	10.3	12.6	12.3	17.8	23.0	47.4	50.3	48.2	47.1	32.6	61.0	19.7	61.0	6.6	24.6
7	18.9	9.1	20.0	37.3	47.8	58.6	46.6	78.7	60.4	36.4	75.7	51.9	84.2	75.1	71.0	55.6	56.1	48.7	41.7	65.5	51.0	23.4	42.0	38.4	84.2	9.1	49.8
8	42.1	28.9	31.2	17.2	18.2	10.9	15.2	10.5	10.2	9.1	8.6	10.2	10.2	10.3	11.7	10.9	12.8	11.6	11.7	9.2	11.8	10.2	9.0	9.1	42.1	8.6	14.2
9	10.4	10.3	10.2	10.7	9.8	10.8	9.9	10.2	9.7	9.4	10.1	10.4	10.8	10.4	9.9	11.2	11.3	50.7	46.2	46.2	32.0	60.5	28.6	45.6	60.5	9.4	20.2
10	51.8	56.8	74.8	39.9	52.3	57.3	78.9	66.3	73.2	64.5	61.3	71.3	73.5	69.3	53.8	66.1	49.4	65.6	60.2	61.4	53.0	28.8	37.9	63.5	78.9	28.8	59.6
11	68.9	42.8	56.0	26.6	22.8	14.7	33.8	14.1	14.8	17.5	14.6	9.6	9.2	9.8	9.8	10.4	9.3	9.6	10.3	10.2	11.8	9.8	10.0	9.3	68.9	9.2	19.0
12	9.5	9.4	11.0	9.3	9.7	10.1	9.3	10.0	9.1	12.3	34.2	25.5	36.4	46.0	27.7	67.4	28.9	23.7	22.7	11.8	19.3	15.0	37.9	58.5	67.4	9.1	23.1
13	29.1	31.0	22.0	42.2	27.1	70.1	23.3	26.4	32.2	48.0	15.4	7.7	4.8	5.2	6.0	7.1	3.5	5.3	7.1	10.4	9.1	8.4	27.1	55.8	70.1	3.5	21.8
14	39.4	18.8	58.4	34.6	29.1	53.8	49.5	16.0	82.8	8.8	13.0	11.6	7.3	11.3	38.2	42.1	26.3	6.3	7.4	40.5	27.5	21.7	9.9	8.1	82.8	6.3	27.6
15	9.3	9.6	10.4	10.1	14.9	38.7	27.7	19.3	18.4	16.2	11.4	7.8	8.1	15.1	8.7	10.9	34.3	41.3	28.6	16.5	45.7	54.5	26.6	52.1	54.5	7.8	22.3
16	36.9	24.2	24.2	52.0	15.5	13.0	26.5	8.0	12.9	8.4	8.4	41.3	30.3	13.8	48.4	51.3	34.0	27.4	32.5	52.1	28.4	7.6	5.4	9.7	52.1	5.4	25.5
17	6.4	39.2	18.5	71.1	23.5	10.0	5.7	8.0	4.2	4.7	8.4	24.3	28.5	13.8	11.4	11.8	8.7	6.4	8.4	10.8	31.2	37.3	14.2	14.0	71.1	4.2	17.5
18	13.0	56.6	9.8	9.1	9.7	10.4	11.2	10.8	10.2	11.1	9.2	10.2	10.0	10.0	9.8	10.0	9.9	9.5	9.4	8.6	10.3	14.8	10.0	8.8	56.6	8.6	12.2
19	10.2	8.8	10.2	8.7	9.6	9.3	9.4	9.6	11.6	12.3	13.1	11.9	8.6	10.1	11.0	22.3	43.6	23.6	19.1	11.5	10.3	26.6	11.0	6.3	43.6	6.3	13.7
20	13.2	10.7	48.5	13.7	50.0	52.9	7.4	27.6	3.8	4.5	6.3	13.7	19.8	44.0	40.7	19.1	60.1	54.7	20.8	29.9	9.2	9.8	17.8	18.3	60.1	3.8	24.9
21	14.3	8.3	16.7	10.1	11.8	13.3	10.2	8.5	8.3	20.7	12.6	6.9	7.8	3.8	4.9	7.3	4.4	6.3	6.9	12.4	13.9	44.7	64.4	56.5	64.4	3.8	15.6
22	71.8	17.3	15.4	39.6	17.0	11.9	39.1	54.7	56.2	21.1	19.9	29.1	8.9	24.9	40.9	40.1	53.5	17.1	19.6	21.7	21.9	15.7	41.6	6.9	71.8	6.9	29.4
23	9.1	10.1	16.1	18.2	45.8	60.4	6.9	32.3	7.0	4.2	19.0	10.8	12.7	9.3	7.1	4.1	3.5	7.4	4.0	6.0	13.9	7.9	23.1	24.9	60.4	3.5	15.2
24	26.9	26.4	24.0	9.6	14.8	7.9	8.7	6.5	18.9	25.1	5.7	3.8	9.0	12.2	8.4	16.4	13.2	8.6	8.8	8.8	23.5	35.7	20.6	18.4	35.7	3.8	15.1
25	12.5	14.4	32.5	78.0	46.7	27.2	18.2	46.2	10.8	11.7	17.0	14.1	6.9	6.2	15.1	7.2	12.5	6.7	11.6	22.0	19.1	23.4	25.3	31.9	78.0	6.2	21.5
26	27.4	18.7	28.5	46.7	50.2	47.2	8.9	11.3	35.5	26.9	46.0	19.5	16.0	23.1	35.1	59.7	18.3	9.7	35.8	52.1	27.2	46.8	13.4	16.6	59.7	8.9	30.0
27	29.0	30.4	62.2	42.7	57.2	11.6	6.5	26.3	9.7	10.6	5.8	5.6	6.4	5.4	6.3	5.5	6.1	5.0	16.6	70.9	63.2	21.9	41.1	25.2	70.9	5.0	23.8
28	23.7	37.1	58.6	41.8	31.4	17.7	15.7	14.8	14.8	14.4	15.5	41.2	42.3	48.2	40.8	47.3	43.9	32.5	51.1	45.5	43.6	46.7	41.3	55.7	58.6	14.4	36.1
29	43.3	48.2	51.3	41.3	45.5	40.0	32.6	56.2	25.4	39.0	36.3	13.3	19.4	11.7	41.8	33.3	39.5	43.1	34.6	58.3	73.7	75.5	76.2	75.7	76.2	11.7	44.0
30	62.0	17.9	52.9	39.0	19.3	9.1	9.1	9.1	8.5	9.0	45.9	11.9	8.4	8.7	7.4	7.5	9.6	13.0	14.5	45.8	46.9	23.7	14.3	18.9	62.0	7.4	21.3
Max.	**71.8**	**65.9**	**74.8**	**78.0**	**71.9**	**70.1**	**78.9**	**78.7**	**82.8**	**64.5**	**75.7**	**71.3**	**84.2**	**75.1**	**71.0**	**67.4**	**60.1**	**65.6**	**60.2**	**77.0**	**73.7**	**75.5**	**76.2**	**75.7**	**84.2**		
Min.	**6.4**	**7.2**	**8.9**	**6.3**	**7.3**	**7.9**	**4.3**	**5.3**	**3.8**	**4.2**	**5.1**	**3.8**	**4.8**	**3.8**	**4.9**	**4.1**	**3.5**	**5.0**	**4.0**	**6.0**	**6.4**	**7.6**	**5.4**	**6.3**		**3.5**	
Avg.	**28.1**	**25.2**	**31.7**	**32.0**	**28.6**	**28.5**	**19.5**	**21.8**	**22.4**	**19.5**	**21.8**	**17.8**	**18.9**	**21.7**	**22.8**	**24.4**	**23.4**	**23.9**	**23.8**	**31.6**	**30.2**	**27.1**	**30.4**	**28.4**			**25.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (Climatronics)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	22.2	16.5	24.8	19.6	14.2	18.2	19.5	21.8	24.4	19.3	10.9	10.0	12.4	11.8	10.9	8.6	6.9	10.6	24.6	55.9	52.6	38.6	70.7	32.0	70.7	6.9	23.2
2	20.5	10.7	24.6	40.4	23.2	22.2	19.2	12.7	11.2	11.4	27.3	47.6	17.2	27.6	14.0	38.6	31.9	32.5	54.9	78.7	74.6	31.1	41.9	17.8	78.7	10.7	30.5
3	18.4	33.5	26.5	27.0	14.9	33.9	12.8	22.4	10.1	15.8	11.0	16.7	9.4	6.7	6.9	6.1	12.0	40.6	27.1	17.0	19.7	18.1	22.8	50.6	50.6	6.1	20.0
4	38.1	20.0	31.2	43.2	41.4	15.3	14.0	14.1	11.2	9.9	8.4	7.5	6.8	7.1	5.4	5.3	6.7	14.3	9.8	10.8	20.7	19.9	11.4	31.6	43.2	5.3	16.8
5	25.9	49.4	19.7	12.3	22.3	20.8	28.7	20.2	33.1	11.3	10.3	13.7	11.1	10.3	9.3	9.8	10.4	8.8	9.3	11.1	19.7	16.1	16.8	11.0	49.4	8.8	17.1
6	20.3	48.0	33.7	26.0	12.3	21.9	15.8	13.2	9.7	10.1	6.8	7.3	8.3	8.9	7.2	7.7	10.4	8.6	10.9	29.7	23.9	49.1	54.3	36.1	54.3	6.8	20.0
7	61.6	31.2	71.2	65.9	52.6	53.7	40.8	43.5	42.1	18.6	27.3	12.7	28.8	30.3	14.5	32.4	49.8	38.6	20.9	33.7	42.9	65.3	12.0	7.5	71.2	7.5	37.4
8	7.6	9.3	47.9	27.2	45.7	18.1	41.0	39.6	65.4	21.5	25.1	22.9	15.9	14.3	15.4	40.9	16.8	28.5	37.9	15.3	16.8	28.3	39.8	16.7	65.4	7.6	27.4
9	15.6	17.5	18.0	11.4	12.8	11.1	12.6	10.9	25.9	23.3	12.7	8.6	6.2	7.2	6.0	17.2	56.5	33.5	24.1	30.8	26.9	46.1	46.5	25.0	56.5	6.0	21.1
10	34.2	40.8	37.9	19.0	30.9	38.7	51.3	41.9	24.4	40.3	24.1	22.1	28.1	35.8	28.7	43.9	42.9	65.3	18.2	53.4	29.5	21.6	44.1	45.9	65.3	18.2	36.0
11	51.0	36.1	30.2	25.0	37.9	37.3	23.7	21.0	10.9	31.4	11.2	10.1	32.6	33.0	5.2	12.6	9.3	27.5	30.8	23.9	9.0	13.6	44.5	43.2	51.0	5.2	25.5
12	64.9	16.7	15.6	14.9	8.0	9.5	10.0	8.0	15.8	8.5	26.6	15.0	10.1	7.8	6.9	25.7	49.9	57.0	12.9	36.7	58.9	58.2	42.6	15.6	64.9	6.9	24.8
13	60.4	36.7	50.8	72.4	75.2	29.1	62.9	84.4	51.5	46.3	28.4	14.4	14.1	14.6	18.6	22.9	26.2	28.0	21.3	20.1	17.3	26.8	30.8	40.1	84.4	14.1	37.2
14	32.1	32.3	34.1	36.7	30.1	51.5	72.0	69.3	55.5	36.7	26.8	21.3	18.9	19.6	21.6	39.1	65.0	62.4	45.7	66.6	27.7	33.1	32.4	30.6	72.0	18.9	40.0
15	31.3	34.6	13.7	16.0	24.4	16.9	16.3	20.6	38.1	32.7	55.6	81.3	65.9	37.7	7.8	16.0	29.7	43.4	24.6	29.9	60.2	80.4	63.9	15.9	81.3	7.8	35.7
16	11.0	41.7	18.7	35.2	58.5	17.3	14.8	21.0	47.5	67.9	76.7	42.1	72.8	45.5	28.7	38.1	59.2	37.5	49.7	57.7	34.3	66.3	51.8	38.9	76.7	11.0	43.0
17	57.0	63.7	21.2	25.6	40.2	26.6	43.6	60.3	69.2	58.3	63.8	55.0	38.4	14.1	8.9	11.0	30.5	28.3	15.4	13.4	13.0	27.8	12.1	16.3	69.2	8.9	33.9
18	20.5	17.4	12.7	14.1	17.9	14.2	9.7	16.0	54.7	18.0	53.9	36.4	55.4	49.5	59.9	21.4	59.5	37.3	31.5	38.2	17.6	42.5	58.2	38.5	59.9	9.7	33.1
19	49.4	60.4	38.7	19.1	13.1	12.2	9.9	8.8	10.2	10.3	9.9	9.2	9.3	10.5	9.7	9.9	10.1	12.4	10.4	10.3	46.0	49.9	25.7	10.3	60.4	8.8	19.4
20	13.1	12.5	13.4	14.2	9.2	10.0	9.8	11.0	10.4	11.0	9.9	9.2	9.4	10.6	10.1	10.5	9.0	9.7	10.0	9.6	53.9	12.6	38.1	46.8	53.9	9.0	15.2
21	6.9	13.1	11.8	58.6	38.4	25.2	12.5	12.8	11.4	9.8	11.0	10.8	10.8	10.7	11.5	35.3	26.2	12.3	25.9	14.9	38.0	16.4	14.8	22.8	58.6	6.9	19.2
22	10.2	16.5	16.3	12.9	27.8	9.2	10.0	9.3	10.2	10.2	9.1	9.5	10.0	31.2	31.7	17.4	35.3	64.5	20.8	11.3	9.1	9.8	8.3	11.3	64.5	8.3	17.2
23	13.4	10.3	15.7	57.1	16.4	22.9	15.2	15.1	10.7	11.6	10.2	9.6	9.8	9.8	9.7	10.1	43.5	42.3	11.2	9.6	9.3	8.8	8.9	10.2	57.1	8.8	16.3
24	11.5	11.8	11.7	9.4	9.8	9.2	10.1	10.0	13.2	13.8	11.4	10.3	11.3	53.7	33.5	34.3	60.6	52.9	33.5	44.1	34.2	51.8	36.7	18.1	60.6	9.2	24.9
25	13.6	9.1	8.7	9.2	35.2	41.6	59.3	48.4	34.3	20.8	37.6	46.8	23.8	7.1	6.9	9.3	13.5	56.7	42.2	16.7	24.1	37.8	21.7	26.6	59.3	6.9	27.1
26	24.2	10.9	13.1	44.6	49.2	49.2	59.9	52.1	73.0	73.2	60.2	33.1	29.9	39.5	35.4	29.8	31.9	29.7	27.9	25.3	19.5	16.1	13.1	13.7	73.2	10.9	35.6
27	13.2	13.6	13.9	14.4	15.6	29.2	18.0	7.3	8.8	11.1	23.8	29.7	17.0	14.2	10.9	6.4	5.4	7.6	11.2	7.9	8.0	40.0	15.4	8.0	40.0	5.4	14.6
28	32.7	14.3	30.7	14.0	62.2	4.9	6.3	6.2	10.0	36.4	10.8	11.7	11.0	6.7	6.0	6.5	5.6	6.0	7.9	45.9	71.9	39.1	53.7	43.0	71.9	4.9	22.6
29	49.7	59.6	26.5	39.2	23.2	23.4	22.3	19.8	17.2	24.7	23.3	44.3	45.1	28.4	34.0	28.3	33.6	28.8	45.0	40.6	48.5	37.3	47.5	38.2	59.6	17.2	34.5
30	46.3	50.6	56.4	38.7	48.5	38.5	43.0	45.9	57.2	41.6	56.8	59.8	74.8	70.4	33.0	41.4	37.3	44.5	44.2	37.9	62.1	58.8	59.3	65.6	74.8	33.0	50.5
31	38.9	21.3	18.6	17.6	14.7	32.3	33.4	17.9	22.9	25.3	55.6	40.9	76.8	62.2	63.3	65.3	32.6	68.8	59.1	49.9	20.2	12.5	12.6	24.8	76.8	12.5	37.0
Max.	**64.9**	**63.7**	**71.2**	**72.4**	**75.2**	**53.7**	**72.0**	**84.4**	**73.0**	**73.2**	**76.7**	**81.3**	**76.8**	**70.4**	**63.3**	**65.3**	**65.0**	**68.8**	**59.1**	**78.7**	**74.6**	**80.4**	**70.7**	**65.6**	**84.4**		
Min.	**6.9**	**9.1**	**8.7**	**9.2**	**8.0**	**4.9**	**6.3**	**6.2**	**8.8**	**8.5**	**6.8**	**7.3**	**6.2**	**6.7**	**5.2**	**5.3**	**5.4**	**6.0**	**7.9**	**7.9**	**8.0**	**8.8**	**8.3**	**7.5**		**4.9**	
Avg.	**29.5**	**27.7**	**26.1**	**28.4**	**29.9**	**24.6**	**26.4**	**26.0**	**28.7**	**25.2**	**27.0**	**24.8**	**25.5**	**23.8**	**18.4**	**22.6**	**29.6**	**33.5**	**26.4**	**30.5**	**32.6**	**34.6**	**33.9**	**27.5**			**27.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.2	2.8	4.9	4.1	1.8	1.3	1.5	2.7	2.3	1.7	2.6	3.2	3.8	3.7	3.0	4.1	5.5	2.6	3.3	2.9	3.6	5.4	3.4	5.2	5.5	1.3	3.4
2	6.4	5.3	5.2	4.6	4.6	5.8	6.3	7.2	6.3	6.8	8.1	7.6	8.6	9.6	9.2	9.9	11.0	11.1	11.0	12.3	10.8	12.1	9.7	11.3	12.3	4.6	8.4
3	10.1	12.2	10.1	9.7	9.2	10.4	7.7	6.0	2.8	1.9	2.6	4.6	3.2	4.5	4.1	4.1	3.1	2.1	2.3	2.5	2.5	3.0	5.7	4.6	12.2	1.9	5.4
4	3.2	1.9	1.8	2.3	2.6	2.8	2.9	3.7	3.5	2.1	2.1	2.6	2.9	5.2	6.0	3.9	6.8	6.6	4.4	2.3	3.5	7.4	10.1	13.6	13.6	1.8	4.3
5	11.5	11.9	12.3	14.6	11.3	12.3	11.6	11.4	9.8	10.5	8.9	8.2	7.0	8.7	6.7	2.3	7.9	9.2	9.5	9.2	7.9	10.0	10.6	12.2	14.6	2.3	9.8
6	13.1	11.8	12.2	13.2	12.1	12.1	12.0	10.0	9.7	8.2	2.7	2.1	2.5	6.1	5.1	2.1	9.3	7.4	3.6	3.6	4.9	9.4	8.1	10.4	13.2	2.1	8.0
7	11.5	7.0	3.8	5.1	4.7	11.3	12.9	18.0	14.9	14.3	14.8	15.7	14.5	10.4	9.9	9.4	9.2	8.4	7.6	9.2	9.9	6.0	6.6	5.4	18.0	3.8	10.0
8	5.3	4.4	3.9	3.0	3.0	3.4	3.5	4.3	4.3	3.1	3.7	4.2	3.9	3.8	4.1	4.0	4.2	3.9	2.8	2.5	2.0	1.3	2.4	3.0	5.3	1.3	3.5
9	3.2	2.9	2.1	2.1	2.3	2.2	5.6	5.3	3.2	4.4	5.7	6.1	6.0	5.5	7.9	5.9	5.3	4.4	3.2	3.4	2.9	2.7	5.2	4.0	7.9	2.1	4.2
10	5.5	8.1	5.3	2.1	1.8	3.8	7.1	7.4	4.8	5.2	5.0	6.1	6.4	5.3	5.7	5.1	5.0	4.7	3.9	1.8	2.1	1.4	1.4	1.5	8.1	1.4	4.4
11	1.7	1.5	1.3	2.0	1.8	2.3	3.0	3.2	2.9	3.1	3.8	3.9	4.0	3.0	3.9	4.2	4.2	3.1	2.4	2.3	1.7	4.8	4.5	3.0	4.8	1.3	3.0
12	3.1	2.3	1.8	1.9	3.4	3.2	2.7	1.4	2.1	3.8	3.8	4.0	4.1	4.0	3.8	4.2	4.1	2.8	2.8	3.6	2.6	3.6	4.2	3.5	4.2	1.4	3.2
13	2.1	2.7	1.9	3.3	3.7	3.2	3.7	3.5	4.4	3.9	2.9	3.0	4.9	4.4	3.6	4.1	4.4	5.0	5.0	4.4	3.0	2.9	4.4	4.5	5.0	1.9	3.7
14	3.8	3.6	4.2	3.8	3.8	4.1	4.9	3.3	3.4	3.7	4.0	3.6	3.1	3.3	4.2	4.0	4.1	4.2	4.1	4.0	3.0	2.2	2.8	2.9	4.9	2.2	3.7
15	3.1	3.4	2.5	2.7	2.8	3.0	2.8	2.5	2.5	3.4	3.8	4.1	4.0	2.9	3.8	3.7	4.3	4.9	4.9	3.3	3.2	4.0	3.2	3.8	4.9	2.5	3.4
16	2.7	4.4	4.5	3.0	3.8	5.9	6.9	6.9	5.3	6.3	6.3	6.6	9.6	10.4	8.6	7.9	7.3	4.8	4.2	4.9	7.7	8.7	5.2	6.6	10.4	2.7	6.2
17	7.6	7.7	7.6	8.4	8.1	8.8	11.1	12.2	12.3	13.1	10.9	13.5	12.5	11.4	11.7	12.9	14.2	14.6	13.4	12.0	12.6	9.8	10.7	9.1	14.6	7.6	11.1
18	8.4	9.3	9.1	9.9	9.1	7.5	10.8	10.7	8.0	5.8	8.2	4.4	4.4	4.3	3.8	4.1	4.0	3.1	3.0	2.6	2.2	1.9	1.4	1.1	10.8	1.1	5.7
19	2.5	3.4	1.4	2.2	3.3	7.9	6.9	6.0	4.4	3.1	2.0	2.8	4.2	4.4	3.6	8.0	9.3	11.4	10.8	9.4	9.6	12.2	11.2	12.7	12.7	1.4	6.4
20	6.6	9.9	17.8	16.4	15.4	14.4	12.1	12.1	12.7	9.6	8.4	13.0	12.5	10.1	13.0	11.1	12.3	9.9	8.3	8.0	14.2	24.3	23.1	19.9	24.3	6.6	13.1
21	15.4	19.0	25.6	22.4	22.4	29.3	24.6	20.6	18.8	15.6	10.5	14.0	19.0	11.5	9.9	9.0	10.3	8.4	5.5	3.7	4.0	3.1	3.5	3.1	29.3	3.1	13.7
22	3.1	4.6	3.8	2.9	5.5	5.2	5.6	6.9	6.8	5.9	5.0	7.5	6.8	4.7	9.2	9.0	8.9	13.1	10.6	11.6	14.5	15.6	12.3	16.3	16.3	2.9	8.1
23	14.6	10.9	10.6	10.8	11.1	17.1	13.2	10.2	6.1	8.7	7.7	12.9	10.4	5.2	5.9	5.4	5.7	3.5	1.3	3.0	4.1	3.6	2.7	4.0	17.1	1.3	7.9
24	3.8	2.8	4.1	4.8	5.1	4.9	3.6	3.1	2.6	2.3	4.3	7.3	11.6	10.7	8.6	10.7	11.1	14.9	19.3	16.0	14.3	13.2	17.7	17.3	19.3	2.3	8.9
25	13.6	11.3	11.3	17.4	14.9	18.6	13.9	11.1	8.1	10.6	6.2	2.9	8.8	7.3	6.0	4.4	4.8	3.8	3.0	2.6	2.5	1.9	3.3	3.9	18.6	1.9	8.0
26	4.2	3.4	3.7	5.2	4.4	5.8	4.9	4.8	5.7	5.9	5.6	9.1	7.8	6.1	11.3	13.7	12.2	8.2	5.6	10.4	12.3	16.4	14.5	17.5	17.5	3.4	8.3
27	16.1	15.9	15.5	15.6	9.1	10.6	10.5	7.4	7.5	8.8	8.0	9.2	9.5	13.9	7.6	8.5	13.7	20.4	20.9	19.9	16.6	13.2	19.5	15.4	20.9	7.4	13.0
28	13.9	9.5	8.3	6.3	6.8	3.3	2.5	1.9	6.3	5.4	1.1	1.8	4.5	3.5	2.2	2.6	6.7	22.1	26.4	25.5	20.3	31.1	31.4	26.9	31.4	1.1	11.3
29	24.6	18.5	16.4	24.6	18.1	28.0	18.7	14.0	11.9	15.6	12.4	15.3	15.8	12.8	15.1	15.6	13.1	12.9	16.1	13.6	11.7	12.5	15.4	11.6	28.0	11.6	16.0
30	11.2	12.7	12.6	13.3	11.8	9.4	11.0	11.7	8.4	7.3	7.9	8.0	9.3	9.9	12.2	8.5	12.2	12.6	9.2	11.2	13.9	16.1	13.9	13.7	16.1	7.3	11.2
31	15.2	12.8	14.2	13.9	12.3	13.7	11.1	15.8	13.8	14.8	16.2	16.4	13.3	12.3	13.4	14.8	17.6	11.6	10.8	13.9	14.5	12.3	11.9	12.3	17.6	10.8	13.7
Max.	**24.6**	**19.0**	**25.6**	**24.6**	**22.4**	**29.3**	**24.6**	**20.6**	**18.8**	**15.6**	**16.2**	**16.4**	**19.0**	**13.9**	**15.1**	**15.6**	**17.6**	**22.1**	**26.4**	**25.5**	**20.3**	**31.1**	**31.4**	**26.9**	**31.4**		
Min.	**1.7**	**1.5**	**1.3**	**1.9**	**1.8**	**1.3**	**1.5**	**1.4**	**2.1**	**1.7**	**1.1**	**1.8**	**2.5**	**2.9**	**2.2**	**2.1**	**3.1**	**2.1**	**1.3**	**1.8**	**1.7**	**1.3**	**1.4**	**1.1**		**1.1**	
Avg.	**8.1**	**7.7**	**7.7**	**8.1**	**7.4**	**8.8**	**8.2**	**7.9**	**6.9**	**6.9**	**6.3**	**7.2**	**7.7**	**7.1**	**7.2**	**7.0**	**8.1**	**8.2**	**7.7**	**7.6**	**7.7**	**8.8**	**9.0**	**9.0**			**7.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.7	10.5	10.2	6.9	6.3	5.8	9.0	8.1	8.4	8.2	7.7	5.2	13.3	13.8	9.9	11.7	13.9	13.4	13.6	12.5	12.0	12.3	13.0	9.6	13.9	5.2	10.3
2	4.9	4.1	4.8	4.4	4.4	3.9	4.2	4.8	4.4	4.2	3.9	2.7	5.0	6.2	7.1	7.1	7.5	4.2	5.0	6.0	5.7	5.9	7.6	6.0	7.6	2.7	5.2
3	8.2	4.1	3.6	7.3	5.2	4.3	6.5	7.6	7.5	8.3	9.2	9.9	9.8	9.9	11.4	11.5	11.9	12.1	12.3	12.8	12.3	12.4	12.8	12.1	12.8	3.6	9.3
4	10.8	10.3	10.9	10.9	12.2	15.4	11.4	11.4	11.0	9.4	8.4	7.8	6.9	6.0	5.2	3.9	3.3	4.4	5.6	6.2	5.2	3.8	2.0	2.9	15.4	2.0	7.7
5	3.3	3.4	3.0	3.3	3.7	4.4	3.8	5.7	5.9	6.8	6.4	7.0	5.3	4.3	4.7	6.2	6.1	5.7	5.8	5.2	7.3	6.8	7.2	6.3	7.3	3.0	5.3
6	6.0	6.0	5.2	4.4	3.8	9.8	5.9	3.0	4.9	12.2	17.8	15.6	24.6	20.2	14.8	12.9	8.8	14.4	3.7	14.3	15.3	18.2	18.2	13.2	24.6	3.0	11.4
7	16.2	14.2	14.9	17.4	15.7	10.8	13.1	14.0	18.8	15.9	13.1	11.0	9.3	11.1	8.4	12.2	8.6	7.9	11.4	11.2	12.6	12.3	14.5	18.5	18.8	7.9	13.0
8	21.6	21.2	16.8	16.9	15.8	14.7	11.3	9.8	8.0	8.7	5.1	2.2	3.4	3.0	3.0	4.3	4.0	3.4	3.7	4.2	4.9	7.6	8.8	6.0	21.6	2.2	8.7
9	8.1	8.5	10.1	10.8	10.5	9.9	11.2	14.3	13.0	14.0	13.1	13.2	9.2	8.5	11.0	6.1	3.0	6.8	6.6	5.2	2.6	9.4	10.2	12.9	14.3	2.6	9.5
10	13.9	13.0	13.2	17.1	15.5	17.3	15.7	14.8	18.6	18.9	19.8	20.9	17.7	16.1	5.3	7.6	11.7	7.3	1.6	3.9	3.2	2.0	3.6	3.5	20.9	1.6	11.8
11	3.7	5.9	6.8	5.6	6.1	5.7	6.2	4.2	4.9	5.6	5.6	6.5	8.8	7.9	8.1	8.8	6.9	9.1	10.2	12.5	7.8	5.5	6.2	7.5	12.5	3.7	6.9
12	4.7	3.5	5.7	7.3	15.6	18.1	20.7	14.9	10.4	14.2	18.9	24.7	23.3	16.1	16.5	21.5	26.8	22.7	33.9	32.0	32.4	32.3	20.9	22.0	33.9	3.5	19.1
13	24.7	21.3	20.1	13.9	9.4	10.3	9.3	16.6	12.8	13.8	18.0	8.3	6.4	14.6	13.1	12.9	14.9	13.0	9.4	14.3	12.6	10.9	12.7	11.1	24.7	6.4	13.5
14	13.3	16.7	9.6	4.1	3.1	3.7	3.5	3.3	4.7	4.7	2.5	2.3	2.4	3.6	7.0	10.2	10.0	6.7	9.4	13.0	9.8	6.3	10.5	8.5	16.7	2.3	7.0
15	11.0	12.0	9.7	10.0	5.3	8.1	10.1	7.4	8.3	8.7	6.5	8.3	7.1	7.3	8.6	5.5	5.9	7.1	4.8	8.0	9.2	6.0	5.3	7.1	12.0	4.8	7.8
16	7.0	5.6	8.0	14.4	14.1	19.6	13.4	13.7	15.5	14.5	15.5	11.4	13.9	16.0	15.4	12.5	12.0	14.1	11.1	2.8	4.2	3.3	8.7	10.2	19.6	2.8	11.5
17	14.6	9.7	7.6	4.4	5.4	4.6	4.8	4.5	4.3	5.9	5.0	5.5	6.9	6.8	5.6	2.4	2.1	3.2	2.9	1.9	3.0	5.8	7.8	9.8	14.6	1.9	5.6
18	10.5	13.3	13.5	13.4	16.0	14.2	14.0	15.6	17.1	15.5	17.7	14.2	10.8	10.1	13.2	15.6	14.2	11.6	16.7	10.8	10.7	11.1	13.9	12.1	17.7	10.1	13.6
19	13.0	14.7	12.4	14.8	23.2	18.7	22.8	21.5	24.1	20.0	13.8	13.4	12.2	10.2	7.7	7.9	9.7	9.7	13.0	13.2	13.7	14.2	15.2	14.9	24.1	7.7	14.7
20	14.0	16.0	14.8	13.7	15.4	14.5	12.1	12.0	13.3	15.3	8.7	12.7	11.3	15.4	15.1	10.0	9.5	10.3	11.9	19.4	19.2	14.7	8.0	14.3	19.4	8.0	13.4
21	16.8	17.7	13.9	13.8	14.0	12.8	10.8	11.5	4.6	2.9	3.9	4.1	3.9	2.7	2.2	3.7	5.4	6.1	6.2	5.5	4.2	3.0	3.3	3.7	17.7	2.2	7.4
22	3.3	3.6	5.6	7.2	6.3	8.5	9.1	10.0	9.9	9.9	9.0	8.5	9.9	5.9	7.8	6.4	6.9	7.0	6.6	5.8	5.1	4.3	9.7	5.7	10.0	3.3	7.2
23	8.5	12.3	7.1	4.8	2.9	3.1	4.8	1.4	2.5	2.8	6.1	7.3	6.6	3.7	5.3	7.4	6.3	5.7	6.1	7.0	32.5	35.9	28.9	35.3	35.9	1.4	10.2
24	36.2	37.1	31.3	30.1	25.3	18.8	20.3	17.6	25.9	22.7	20.3	16.5	19.7	30.5	17.5	19.4	19.0	15.5	17.7	14.5	25.9	11.5	16.7	19.2	37.1	11.5	22.1
25	18.1	17.4	18.2	21.3	22.1	24.4	19.0	19.6	19.4	19.4	20.1	19.5	17.0	21.5	18.8	16.3	13.9	13.2	15.0	14.6	11.0	6.8	9.4	9.0	24.4	6.8	16.9
26	4.2	4.1	3.7	2.5	4.1	5.3	7.5	6.8	6.2	8.5	10.4	11.0	7.4	7.9	11.5	13.5	12.3	16.0	11.6	12.0	13.8	17.8	14.4	17.2	17.8	2.5	9.6
27	20.0	18.3	19.1	20.1	19.7	22.6	23.6	24.8	22.7	21.3	21.1	21.7	22.5	22.5	20.0	22.6	20.4	16.4	15.4	15.0	13.9	10.7	11.1	9.4	24.8	9.4	18.9
28	8.8	8.2	7.7	7.8	7.0	5.1	5.7	6.3	3.0	3.7	3.9	1.3	1.9	1.8	2.4	4.4	6.9	5.3	5.3	2.8	3.6	4.4	7.6	9.2	9.2	1.3	5.2
29	10.4	15.0	14.7	15.4	14.9	15.4	15.3	15.3	13.4	13.6	14.8	15.4	13.0	17.0	16.7	19.2	12.8	15.6	17.2	14.3	15.4	16.6	16.2	15.4	19.2	10.4	15.1
30	17.2	15.8	14.3	13.4	15.3	13.8	16.5	17.1	14.4	16.3	15.7	14.1	13.5	11.2	12.9	9.4	11.1	9.9	10.4	10.7	11.0	11.8	9.5	10.8	17.2	9.4	13.2
Max.	**36.2**	**37.1**	**31.3**	**30.1**	**25.3**	**24.4**	**23.6**	**24.8**	**25.9**	**22.7**	**21.1**	**24.7**	**24.6**	**30.5**	**20.0**	**22.6**	**26.8**	**22.7**	**33.9**	**32.0**	**32.5**	**35.9**	**28.9**	**35.3**	**37.1**		
Min.	**3.3**	**3.4**	**3.0**	**2.5**	**2.9**	**3.1**	**3.5**	**1.4**	**2.5**	**2.8**	**2.5**	**1.3**	**1.9**	**1.8**	**2.2**	**2.4**	**2.1**	**3.2**	**1.6**	**1.9**	**2.6**	**2.0**	**2.0**	**2.9**		**1.3**	
Avg.	**12.2**	**12.1**	**11.2**	**11.2**	**11.3**	**11.5**	**11.4**	**11.2**	**11.3**	**11.5**	**11.4**	**10.7**	**10.8**	**11.0**	**10.2**	**10.4**	**10.2**	**9.9**	**10.1**	**10.4**	**11.3**	**10.8**	**11.1**	**11.4**			**11.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.2	10.0	11.5	14.7	14.2	14.2	14.8	14.7	16.9	15.7	18.6	16.0	14.2	16.5	16.9	20.2	19.0	18.2	23.6	16.5	15.8	20.9	16.0	18.1	23.6	10.0	16.1
2	17.1	19.6	19.8	21.3	17.8	15.8	12.5	15.3	15.1	13.7	19.7	16.8	16.7	15.2	15.3	16.1	12.6	8.4	9.8	12.6	9.1	8.0	4.6	3.9	21.3	3.9	14.0
3	4.0	4.6	5.9	6.2	8.2	6.8	6.2	4.9	7.6	9.1	11.2	9.9	11.9	13.0	13.6	12.2	13.0	10.3	10.8	10.8	11.9	8.1	10.9	10.7	13.6	4.0	9.2
4	12.0	10.9	11.0	11.6	13.1	10.9	11.6	13.1	13.1	13.8	13.5	12.8	11.5	15.5	16.6	16.3	18.1	17.6	17.2	18.3	20.8	20.1	18.2	17.1	20.8	10.9	14.8
5	16.6	14.2	13.1	13.9	13.0	11.7	11.6	9.9	9.2	10.0	12.1	8.1	7.8	4.5	2.3	3.9	5.7	8.0	8.1	8.3	8.4	7.5	7.6	6.7	16.6	2.3	9.3
6	6.3	5.0	5.5	3.5	3.7	3.7	3.6	3.8	2.4	3.7	3.3	3.0	2.9	2.5	6.3	4.3	4.6	4.6	3.3	4.2	3.5	3.8	4.4	4.4	6.3	2.4	4.0
7	5.1	5.4	6.0	4.2	5.8	4.7	6.1	8.1	9.6	9.1	7.7	8.2	8.3	6.8	8.4	8.8	8.7	8.5	8.3	8.5	7.9	6.6	5.7	4.6	9.6	4.2	7.1
8	4.5	5.3	4.3	2.5	2.8	3.1	5.7	5.3	6.1	5.0	4.8	3.5	3.2	2.8	4.6	4.3	5.8	4.5	4.7	4.6	3.8	4.6	3.9	4.0	6.1	2.5	4.3
9	3.8	4.6	4.4	3.5	3.4	4.4	4.0	4.8	5.1	6.7	5.4	6.1	6.3	8.6	9.9	11.3	13.0	12.3	14.2	13.1	16.8	19.0	18.4	15.9	19.0	3.4	9.0
10	17.1	14.3	14.7	16.8	13.9	16.8	19.0	16.0	20.2	10.1	8.4	7.5	4.6	3.9	3.0	3.4	3.6	4.4	4.5	6.4	6.6	7.8	5.6	6.3	20.2	3.0	9.8
11	5.8	5.6	7.3	8.3	8.4	8.2	7.7	6.1	3.8	2.6	3.9	3.9	7.6	8.9	15.0	18.0	14.8	13.5	20.5	23.1	22.4	18.6	17.6	21.6	23.1	2.6	11.4
12	23.1	16.0	24.1	20.1	23.4	29.5	26.5	26.7	17.4	11.9	25.0	17.8	20.0	20.3	26.4	28.7	19.0	20.8	19.3	16.5	19.8	17.0	16.8	15.9	29.5	11.9	20.9
13	14.3	12.3	11.9	6.4	5.7	7.3	10.9	5.3	4.4	7.5	9.6	8.4	18.6	11.0	10.3	21.2	15.2	14.4	11.5	8.4	4.1	4.4	4.1	3.2	21.2	3.2	9.6
14	4.7	4.6	4.5	6.1	5.5	4.7	4.4	4.1	5.1	6.4	6.8	5.1	5.8	6.4	5.0	4.3	4.7	3.7	6.0	6.1	7.7	7.6	8.1	8.7	8.7	3.7	5.7
15	10.3	10.9	10.3	9.9	9.3	9.4	10.7	9.6	8.6	8.0	7.0	4.9	4.2	3.5	2.8	3.8	4.4	5.4	6.4	2.8	5.1	5.6	3.4	5.6	10.9	2.8	6.7
16	2.6	3.3	2.9	13.5	11.7	12.8	13.2	13.2	10.2	6.9	7.8	13.8	9.3	11.6	17.8	11.7	11.7	13.3	11.6	6.4	8.6	4.6	3.8	4.0	17.8	2.6	9.4
17	4.0	5.6	8.7	9.5	9.1	8.9	8.9	9.2	8.0	8.8	11.0	10.5	10.9	9.8	17.3	23.1	23.2	18.1	18.0	16.8	17.2	16.4	16.5	10.6	23.2	4.0	12.5
18	9.9	17.8	17.8	22.3	27.4	22.9	25.6	27.4	29.0	25.0	22.9	16.1	14.8	15.5	12.3	15.4	12.3	7.5	13.9	19.5	6.5	2.5	3.7	4.6	29.0	2.5	16.3
19	7.0	7.2	7.0	6.8	6.7	6.0	6.8	11.0	8.4	8.5	8.1	10.0	9.8	10.1	10.1	9.5	7.3	9.2	11.8	17.9	12.2	13.6	15.6	13.2	17.9	6.0	9.7
20	13.2	13.5	11.0	15.7	14.1	15.0	12.3	13.9	14.8	15.4	15.7	17.1	18.2	17.3	18.1	17.0	16.3	17.1	15.1	17.6	17.6	18.0	17.3	19.3	19.3	11.0	15.9
21	15.4	10.0	10.8	6.7	6.7	8.3	6.4	4.9	1.4	2.1	1.5	1.2	1.6	2.1	3.7	3.6	2.9	2.2	10.8	11.7	18.8	15.9	10.4	12.9	18.8	1.2	7.2
22	13.1	15.4	15.8	11.9	16.9	14.3	14.8	15.9	19.7	19.0	18.8	25.7	23.5	30.1	31.9	28.7	26.0	11.8	12.9	12.0	18.9	18.6	22.4	19.5	31.9	11.8	19.1
23	14.9	25.5	20.2	23.5	20.6	16.9	16.0	15.3	14.8	19.2	14.7	8.8	11.0	10.3	11.1	9.5	7.6	3.0	2.2	2.1	4.5	4.6	5.3	5.1	25.5	2.1	11.9
24	4.1	5.1	3.8	2.9	6.1	4.7	6.2	8.7	10.3	7.3	8.8	7.8	9.4	14.0	13.0	13.3	15.4	16.0	18.0	17.8	16.0	15.8	18.8	17.0	18.8	2.9	10.8
25	17.2	17.7	14.6	14.2	9.3	16.7	13.4	14.3	13.4	8.9	8.3	8.9	6.8	5.1	3.6	4.3	4.1	3.3	7.5	7.5	7.2	5.8	6.9	6.1	17.7	3.3	9.4
26	5.9	6.8	6.3	6.2	5.9	4.4	7.5	8.8	7.0	8.9	8.8	9.9	7.8	7.7	8.3	6.8	6.7	8.8	9.6	4.8	7.6	7.0	6.4	4.7	9.9	4.4	7.2
27	5.8	5.2	5.4	5.5	5.4	5.7	4.3	4.1	4.4	4.6	5.5	5.0	4.2	3.7	2.4	2.5	2.1	3.0	3.5	3.6	4.1	4.2	4.4	4.9	5.8	2.1	4.3
28	4.2	3.8	5.3	4.0	5.1	5.5	6.3	5.6	6.0	7.6	6.0	6.4	7.2	6.0	5.5	4.5	2.9	2.9	6.6	6.6	3.7	3.4	6.6	5.2	7.6	2.9	5.3
29	5.2	4.9	5.2	4.4	4.0	4.6	4.8	4.9	5.0	5.3	5.6	5.8	6.2	5.5	5.6	6.6	6.3	7.2	6.0	6.6	6.4	6.6	6.0	6.1	7.2	4.0	5.6
30	6.1	5.7	5.7	6.9	5.0	4.9	5.0	4.4	3.5	5.4	4.7	3.0	2.1	3.2	5.5	8.4	10.7	10.0	10.0	11.3	12.1	10.9	10.8	8.4	12.1	2.1	6.8
31	9.4	11.1	11.5	13.0	14.7	14.5	18.7	18.5	15.5	12.5	16.2	17.9	16.8	14.7	21.5	16.2	12.9	15.0	14.8	13.7	12.5	13.2	9.4	8.8	21.5	8.8	14.3
Max.	**23.1**	**25.5**	**24.1**	**23.5**	**27.4**	**29.5**	**26.5**	**27.4**	**29.0**	**25.0**	**25.0**	**25.7**	**23.5**	**30.1**	**31.9**	**28.7**	**26.0**	**20.8**	**23.6**	**23.1**	**22.4**	**20.9**	**22.4**	**21.6**	**31.9**		
Min.	**2.6**	**3.3**	**2.9**	**2.5**	**2.8**	**3.1**	**3.6**	**3.8**	**1.4**	**2.1**	**1.5**	**1.2**	**1.6**	**2.1**	**2.3**	**2.5**	**2.1**	**2.2**	**2.2**	**2.1**	**3.5**	**2.5**	**3.4**	**3.2**		**1.2**	
Avg.	**9.4**	**9.7**	**9.9**	**10.2**	**10.2**	**10.2**	**10.5**	**10.6**	**10.2**	**9.6**	**10.4**	**9.7**	**9.8**	**9.9**	**11.1**	**11.5**	**10.7**	**9.8**	**11.0**	**10.8**	**10.9**	**10.3**	**10.0**	**9.6**			**10.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.8	8.9	10.3	7.2	5.5	4.9	4.1	3.7	4.3	2.8	7.0	6.9	6.7	7.4	8.8	10.0	11.1	12.8	14.7	13.0	13.3	13.7	14.3	12.0	14.7	2.8	8.8
2	11.9	12.0	12.5	15.2	10.0	10.1	9.1	8.7	8.2	8.3	6.4	7.0	10.8	9.6	10.3	12.6	8.4	11.3	14.3	12.7	9.6	11.1	10.3	8.9	15.2	6.4	10.4
3	8.4	10.7	12.4	11.6	14.8	8.6	10.3	14.1	11.8	11.3	12.8	14.1	18.4	16.7	20.1	18.1	17.7	16.3	16.0	16.7	16.0	19.2	15.7	14.5	20.1	8.4	14.4
4	18.2	20.1	18.7	15.2	13.5	13.5	15.9	13.1	16.3	15.9	15.1	16.3	15.0	16.9	20.4	17.4	16.7	16.1	16.4	17.2	14.0	13.6	6.5	9.5	20.4	6.5	15.5
5	8.5	7.2	13.7	13.7	16.6	14.2	13.1	12.1	13.2	12.4	17.1	17.2	13.9	16.9	14.3	11.5	16.4	17.2	17.8	19.3	24.4	16.7	15.0	12.1	24.4	7.2	14.8
6	19.6	11.1	7.1	7.4	2.2	3.8	4.4	3.1	4.9	8.4	16.2	15.7	22.2	16.9	8.9	10.4	13.4	12.9	14.6	17.8	19.9	12.7	10.4	12.5	22.2	2.2	11.5
7	10.5	11.8	17.1	20.8	15.1	15.8	14.7	10.0	10.6	9.7	8.4	7.0	6.2	5.9	5.4	7.3	7.9	7.5	8.0	9.6	10.9	9.2	12.3	12.5	20.8	5.4	10.6
8	12.4	12.4	11.9	12.8	11.5	10.1	11.2	9.9	10.9	9.3	8.4	7.7	5.3	5.2	3.1	3.4	2.9	2.7	2.8	2.6	2.8	2.9	2.9	2.8	12.8	2.6	7.0
9	3.1	2.7	2.3	2.3	2.5	2.2	3.0	2.4	2.0	2.7	4.3	6.6	6.9	6.0	5.9	6.6	4.3	6.6	6.1	7.6	5.2	7.8	10.3	13.2	13.2	2.0	5.1
10	9.1	11.3	14.7	16.3	19.0	22.9	18.7	17.9	19.3	21.4	19.7	21.1	20.2	21.1	22.0	19.8	17.4	17.9	16.8	16.3	15.1	14.0	6.8	5.8	22.9	5.8	16.9
11	6.6	7.2	6.7	4.8	1.9	2.4	6.4	3.7	5.3	6.0	7.7	8.0	7.7	7.9	5.7	6.7	7.0	7.5	8.1	5.4	4.5	2.2	7.6	7.2	8.1	1.9	6.0
12	5.7	3.2	5.4	5.5	4.1	3.8	2.6	5.2	7.0	5.1	2.0	3.5	3.5	3.7	3.8	4.4	3.5	3.7	4.0	3.9	3.6	5.7	6.1	7.6	7.6	2.0	4.5
13	6.4	7.8	8.8	8.8	8.9	8.8	8.4	8.3	9.0	8.2	9.7	6.8	4.4	4.7	5.3	3.2	3.5	3.6	5.6	5.0	6.6	5.8	6.0	5.7	9.7	3.2	6.6
14	6.7	7.7	8.1	9.0	9.7	10.2	10.6	10.7	11.8	12.3	12.2	12.5	14.3	13.3	14.8	15.5	17.0	18.0	18.0	17.7	17.8	16.5	17.5	18.0	18.0	6.7	13.3
15	17.9	16.0	9.7	8.7	8.1	2.3	2.8	2.3	4.2	3.5	3.7	3.5	5.9	10.0	6.0	4.1	5.9	8.9	7.9	9.7	5.7	4.7	6.1	5.2	17.9	2.3	6.8
16	5.8	8.5	8.9	10.6	10.0	15.4	17.0	16.6	17.0	13.8	11.2	10.8	9.8	9.2	10.4	10.4	11.7	9.8	9.5	9.5	10.2	10.3	10.0	10.0	17.0	5.8	11.1
17	9.8	8.8	8.9	9.2	8.4	7.4	7.4	6.7	6.2	3.8	1.8	3.2	9.4	15.5	16.6	17.7	16.7	15.0	12.2	6.9	5.5	7.7	7.1	6.7	17.7	1.8	9.1
18	8.1	9.9	14.5	11.7	11.5	11.1	13.1	12.6	16.2	15.5	15.0	10.9	11.9	13.0	13.9	11.4	10.3	8.4	6.3	23.0	22.2	25.6	25.4	24.4	25.6	6.3	14.4
19	25.2	14.9	16.6	18.6	18.2	16.7	11.8	16.0	25.2	21.9	20.9	16.7	13.1	18.3	22.0	24.8	20.7	22.0	23.8	21.5	17.5	9.4	3.9	6.6	25.2	3.9	17.8
20	5.6	6.2	6.8	7.5	9.0	9.3	8.5	8.4	9.0	9.4	12.3	12.4	11.4	12.7	11.8	9.4	5.7	5.6	4.7	3.9	2.7	2.3	2.1	3.4	12.7	2.1	7.5
21	4.2	3.5	3.6	4.4	8.3	9.3	9.9	10.1	13.2	13.5	14.8	13.1	16.9	15.6	18.0	16.9	19.5	17.3	21.1	26.7	27.2	16.3	10.6	12.9	27.2	3.5	13.6
22	13.9	17.0	19.6	15.7	9.8	8.7	11.8	13.0	12.3	13.4	11.5	9.8	8.4	9.6	8.8	8.1	7.9	7.5	9.7	16.4	16.9	18.7	17.2	19.2	19.6	7.5	12.7
23	19.3	20.1	24.0	25.1	22.4	25.6	26.8	29.4	31.7	27.8	31.2	25.6	24.9	24.2	21.6	19.7	22.2	22.1	19.8	19.3	20.9	15.7	15.7	17.0	31.7	15.7	23.0
24	16.7	21.3	23.8	20.1	21.5	18.6	16.4	19.5	22.1	25.4	23.6	25.8	28.0	34.4	37.3	31.2	32.5	39.5	33.1	32.0	27.2	25.5	23.5	23.8	39.5	16.4	25.9
25	23.2	22.8	23.3	22.1	21.1	24.9	22.4	24.4	27.0	27.0	25.7	25.6	22.6	23.4	25.8	22.0	20.2	20.3	22.0	19.9	21.2	20.9	19.9	19.5	27.0	19.5	22.8
26	17.3	16.3	17.5	18.6	18.1	17.8	18.4	18.2	19.0	17.6	17.2	18.8	20.1	19.0	19.1	22.6	19.4	18.2	13.5	13.3	11.1	9.6	9.3	10.3	22.6	9.3	16.7
27	10.8	10.7	10.9	10.2	9.0	8.7	10.0	9.3	9.8	9.2	10.9	9.9	9.2	8.6	7.2	6.6	7.1	5.3	6.3	4.4	4.8	4.2	5.2	4.2	10.9	4.2	8.0
28	5.0	5.0	3.9	3.9	4.9	4.2	4.4	3.3	4.4	5.0	3.5	3.5	3.5	3.1	2.7	2.6	3.9	3.1	2.6	2.7	3.2	3.5	3.2	2.9	5.0	2.6	3.7
29	3.8	3.8	4.2	5.2	5.9	4.7	5.8	7.1	4.3	3.5	3.2	11.8	14.4	11.3	4.3	15.4	15.9	20.1	17.4	10.8	9.8	12.0	14.5	11.5	20.1	3.2	9.2
30	11.8	11.2	8.9	14.4	9.3	7.5	9.0	9.4	7.3	14.6	17.8	10.3	14.4	16.1	8.4	8.4	9.2	7.6	7.5	9.7	10.4	10.9	8.0	8.7	17.8	7.3	10.4
Max.	**25.2**	**22.8**	**24.0**	**25.1**	**22.4**	**25.6**	**26.8**	**29.4**	**31.7**	**27.8**	**31.2**	**25.8**	**28.0**	**34.4**	**37.3**	**31.2**	**32.5**	**39.5**	**33.1**	**32.0**	**27.2**	**25.6**	**25.4**	**24.4**	**39.5**		
Min.	**3.1**	**2.7**	**2.3**	**2.3**	**1.9**	**2.2**	**2.6**	**2.3**	**2.0**	**2.7**	**1.8**	**3.2**	**3.5**	**3.1**	**2.7**	**2.6**	**2.9**	**2.7**	**2.6**	**2.6**	**2.7**	**2.2**	**2.1**	**2.8**		**1.8**	
Avg.	**11.1**	**11.0**	**11.8**	**11.9**	**11.0**	**10.8**	**10.9**	**11.0**	**12.1**	**11.9**	**12.4**	**12.1**	**12.6**	**13.2**	**12.7**	**12.6**	**12.5**	**12.8**	**12.7**	**13.2**	**12.7**	**11.6**	**10.8**	**10.9**			**11.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.7	8.6	10.4	12.2	12.2	11.6	9.6	9.6	9.2	10.7	8.3	10.2	12.9	14.2	11.6	12.4	12.9	13.8	10.6	9.9	17.7	14.7	16.0	13.8	17.7	8.3	11.8
2	13.3	12.9	15.0	13.9	13.1	14.2	13.3	8.4	15.3	15.4	15.5	17.0	17.0	18.0	23.4	22.4	21.8	20.6	18.4	21.1	20.3	22.8	27.3	25.2	27.3	8.4	17.7
3	21.6	22.9	24.0	30.4	24.1	21.4	19.7	17.0	18.6	16.6	18.7	18.1	17.7	17.1	17.6	19.2	17.5	11.9	6.3	10.1	9.7	9.8	12.8	10.3	30.4	6.3	17.2
4	10.9	10.1	11.3	11.3	9.5	10.0	9.1	7.8	7.7	5.4	6.0	9.4	11.1	10.4	11.4	10.3	11.5	11.7	10.9	10.8	11.5	12.2	10.9	12.0	12.2	5.4	10.1
5	12.9	12.7	12.8	13.6	10.8	12.1	11.0	9.7	10.8	11.1	12.9	13.8	11.7	11.8	12.2	14.1	15.1	13.2	16.1	16.9	16.0	19.0	20.8	15.9	20.8	9.7	13.6
6	17.4	16.4	17.2	15.6	15.7	15.8	16.0	14.8	12.9	13.1	15.4	16.3	11.9	10.3	8.9	6.4	6.0	6.8	8.9	9.8	10.3	9.9	13.4	15.0	17.4	6.0	12.7
7	11.8	11.7	12.8	15.5	15.5	16.0	15.6	17.2	16.8	16.6	18.2	16.2	16.9	17.3	17.2	15.7	14.1	19.3	20.3	12.9	12.3	12.5	11.2	11.7	20.3	11.2	15.2
8	9.5	9.2	7.4	9.3	8.8	6.2	4.9	6.0	5.8	6.8	6.8	6.1	4.7	5.9	5.4	8.7	6.0	6.0	8.2	11.0	7.7	8.0	7.9	7.8	11.0	4.7	7.2
9	7.0	6.1	7.3	7.6	6.6	9.3	11.8	14.1	14.7	11.1	11.1	10.3	10.3	12.1	10.1	7.5	6.1	4.7	4.9	3.5	2.6	2.9	2.8	2.9	14.7	2.6	7.8
10	2.4	1.9	2.5	4.0	4.8	4.4	4.4	4.3	5.7	7.0	8.0	8.2	8.0	8.2	6.4	5.7	5.8	7.4	10.5	12.3	6.1	7.1	7.3	8.2	12.3	1.9	6.3
11	9.2	9.1	7.3	8.0	6.4	4.9	11.7	16.3	16.2	18.4	22.3	22.4	25.3	27.0	24.7	26.7	24.2	30.5	24.1	27.3	25.3	29.7	27.8	32.2	32.2	4.9	19.9
12	30.4	27.1	23.8	24.2	22.5	22.2	13.2	12.9	14.7	11.3	11.6	12.9	19.5	9.2	7.0	12.4	8.6	10.6	9.7	11.0	7.3	6.3	5.3	6.6	30.4	5.3	14.2
13	8.2	8.2	6.0	6.8	6.4	5.7	7.5	9.7	10.0	10.3	11.9	12.1	11.8	13.1	13.5	12.9	13.4	14.7	15.6	17.9	18.1	16.5	16.6	17.4	18.1	5.7	11.8
14	19.5	19.4	18.0	19.3	21.2	20.0	19.7	21.4	21.0	19.3	21.8	20.5	22.1	24.1	21.9	21.3	20.0	19.4	19.5	18.7	17.0	16.4	15.0	14.9	24.1	14.9	19.7
15	14.1	13.9	13.3	11.7	12.2	14.4	13.9	13.9	14.4	17.8	17.2	18.5	17.1	15.7	15.4	15.4	15.1	16.4	15.7	17.0	16.4	16.2	13.8	11.6	18.5	11.6	15.0
16	12.9	18.2	16.4	19.6	10.9	8.6	10.8	7.6	8.2	11.1	12.1	10.2	10.8	12.5	12.4	8.8	8.3	7.1	6.1	7.8	8.0	11.7	13.7	13.1	19.6	6.1	11.1
17	11.1	7.0	4.7	3.8	3.1	3.3	3.8	4.2	4.2	2.0	5.8	6.4	7.7	9.0	9.2	8.9	7.6	7.2	8.2	8.5	8.7	10.4	8.5	9.0	11.1	2.0	6.8
18	8.0	9.4	11.2	11.7	10.7	13.7	15.1	12.6	12.0	11.7	11.4	9.4	8.7	9.2	7.4	8.9	10.2	9.8	9.1	13.5	12.4	12.6	14.3	13.1	15.1	7.4	11.1
19	14.2	12.1	11.2	9.3	10.0	9.4	9.4	9.9	10.1	10.2	9.2	6.9	8.4	7.4	5.1	5.0	4.2	5.4	6.8	6.0	6.0	6.4	5.4	5.0	14.2	4.2	8.0
20	5.9	6.2	8.9	12.9	9.0	6.3	6.0	5.3	2.8	1.7	2.3	3.9	3.7	2.2	9.5	11.6	8.1	4.9	4.1	4.8	2.0	2.0	2.7	2.6	12.9	1.7	5.4
21	3.7	3.2	2.3	1.7	3.3	3.5	3.5	2.9	1.7	3.6	3.5	4.0	2.0	1.1	1.5	2.1	1.8	4.2	6.4	5.2	4.3	4.2	5.1	5.6	6.4	1.1	3.3
22	6.0	3.7	5.9	6.6	6.5	5.3	6.2	5.7	6.7	4.3	4.5	5.2	4.7	3.7	4.2	4.3	4.6	4.3	4.5	3.7	4.8	7.2	5.2	4.7	7.2	3.7	5.1
23	5.4	2.1	2.1	3.6	3.5	3.1	2.1	3.6	2.9	4.1	3.7	4.5	3.1	2.6	1.5	1.8	3.5	3.7	6.0	6.4	6.6	7.3	7.8	7.0	7.8	1.5	4.1
24	7.7	7.5	6.8	8.8	7.3	7.5	6.1	7.6	9.1	8.7	8.4	7.3	7.1	8.1	7.1	8.1	7.4	8.8	8.7	9.0	8.0	8.8	9.1	9.7	9.7	6.1	8.0
25	9.6	10.1	10.1	9.2	10.6	10.1	10.5	12.4	9.5	9.0	11.2	11.9	14.4	15.4	14.5	14.9	15.9	16.4	17.3	17.1	18.6	18.4	17.4	19.8	19.8	9.0	13.5
26	16.9	14.6	17.5	16.2	13.1	12.3	10.7	11.8	11.5	15.4	13.4	14.4	12.2	12.1	11.0	9.0	8.9	7.9	7.2	8.8	10.4	10.4	10.6	11.5	17.5	7.2	12.0
27	10.1	9.5	11.1	9.9	10.6	12.6	9.8	5.9	7.6	12.0	13.0	11.9	9.2	9.1	7.9	7.6	11.1	11.3	18.5	16.0	12.1	15.3	16.8	15.0	18.5	5.9	11.4
28	13.3	14.6	13.7	15.3	15.4	16.7	16.2	12.6	15.6	15.2	15.6	16.6	15.1	15.2	14.4	16.6	15.3	15.8	13.0	14.3	15.5	17.0	15.8	16.5	17.0	12.6	15.2
29	16.0	15.4	14.7	15.6	12.6	12.2	11.7	13.1	13.9	13.2	10.5	9.8	9.3	12.8	14.7	15.2	15.2	14.9	14.3	14.2	13.9	15.4	13.8	15.0	16.0	9.3	13.6
30	12.1	13.0	11.7	13.9	14.7	13.2	13.2	9.2	6.0	5.7	6.0	3.5	14.0	16.4	13.4	12.8	14.2	12.8	13.3	13.1	12.3	9.9	11.1	11.5	16.4	3.5	11.5
31	11.7	11.1	11.9	13.5	11.9	9.7	10.1	10.0	6.6	6.0	8.0	7.3	7.9	6.8	9.8	7.1	9.5	8.4	9.7	13.2	11.5	11.0	10.6	12.2	13.5	6.0	9.8
Max.	**30.4**	**27.1**	**24.0**	**30.4**	**24.1**	**22.2**	**19.7**	**21.4**	**21.0**	**19.3**	**22.3**	**22.4**	**25.3**	**27.0**	**24.7**	**26.7**	**24.2**	**30.5**	**24.1**	**27.3**	**25.3**	**29.7**	**27.8**	**32.2**	**32.2**		
Min.	**2.4**	**1.9**	**2.1**	**1.7**	**3.1**	**3.1**	**2.1**	**2.9**	**1.7**	**1.7**	**2.3**	**3.5**	**2.0**	**1.1**	**1.5**	**1.8**	**1.8**	**3.7**	**4.1**	**3.5**	**2.0**	**2.0**	**2.7**	**2.6**		**1.1**	
Avg.	**11.7**	**11.2**	**11.3**	**12.1**	**11.1**	**10.8**	**10.5**	**10.2**	**10.4**	**10.5**	**11.1**	**11.1**	**11.5**	**11.5**	**11.3**	**11.4**	**11.1**	**11.3**	**11.4**	**12.0**	**11.4**	**12.0**	**12.1**	**12.1**			**11.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.0	10.6	8.3	8.3	8.7	10.7	9.3	10.4	11.1	9.5	9.6	7.3	7.4	8.7	8.4	9.9	9.0	11.4	10.4	10.3	10.0	10.9	11.8	11.9	11.9	7.3	9.7
2	11.6	8.9	9.4	7.8	9.5	9.5	8.9	10.2	13.9	13.2	12.0	11.1	10.2	9.4	9.8	9.6	9.5	9.0	13.2	8.6	8.5	9.4	8.8	9.7	13.9	7.8	10.1
3	7.2	10.4	8.1	9.6	10.8	8.8	9.1	9.1	7.7	7.2	6.0	5.8	6.6	7.3	6.8	7.6	7.9	8.1	6.9	6.4	6.0	7.6	8.0	6.4	10.8	5.8	7.7
4	5.4	7.1	4.4	4.8	6.5	4.2	5.2	1.6	3.4	2.4	2.1	3.0	2.8	4.1	4.3	3.4	7.1	6.4	2.9	6.2	6.1	2.9	4.0	6.3	7.1	1.6	4.4
5	6.4	7.6	9.4	6.7	6.9	8.5	8.4	6.0	4.0	4.5	2.8	2.2	2.4	3.6	3.5	2.0	1.6	3.9	5.2	4.7	3.9	4.4	3.5	2.5	9.4	1.6	4.8
6	3.4	3.1	3.7	3.9	3.5	3.0	3.7	3.1	4.1	3.9	2.3	1.7	3.7	3.7	3.5	2.9	1.4	2.6	2.2	1.5	1.5	3.5	3.3	5.1	5.1	1.4	3.1
7	6.0	3.6	3.3	3.3	3.1	1.9	1.2	4.8	8.5	9.0	9.3	11.6	14.2	15.0	15.4	12.3	10.2	9.7	9.0	14.2	13.1	13.1	14.6	13.5	15.4	1.2	9.2
8	12.3	11.3	11.3	12.3	12.2	12.5	12.1	12.0	12.5	11.2	9.6	9.0	8.9	6.0	5.9	2.9	3.0	2.9	3.2	3.0	3.2	3.7	4.5	4.2	12.5	2.9	7.9
9	3.4	3.6	3.7	3.3	4.0	3.9	2.5	3.9	4.2	4.1	4.3	2.5	2.6	4.8	3.8	2.0	1.5	3.3	2.6	1.5	2.3	1.8	2.9	2.7	4.8	1.5	3.1
10	1.4	2.8	2.4	5.0	6.1	6.9	4.8	4.1	3.7	4.8	3.8	2.9	3.8	4.0	5.2	8.3	7.5	7.6	8.8	8.3	9.6	10.0	9.7	9.8	10.0	1.4	5.9
11	10.8	10.4	8.6	7.2	9.0	9.0	7.6	4.7	5.8	7.3	5.6	5.9	6.2	4.1	3.7	3.7	2.7	3.0	7.5	7.6	6.8	7.0	4.6	7.9	10.8	2.7	6.5
12	3.8	8.1	10.4	11.0	11.0	11.2	12.4	12.8	11.7	8.1	4.6	6.4	6.5	6.6	6.1	5.2	6.5	5.2	4.3	4.4	5.7	4.0	4.4	5.7	12.8	3.8	7.3
13	6.2	4.1	5.2	3.6	4.3	4.1	4.1	5.7	7.9	9.2	4.4	10.0	8.9	10.0	9.7	8.1	9.7	8.3	10.3	7.6	6.5	7.5	5.5	5.2	10.3	3.6	6.9
14	5.4	7.1	5.9	6.5	6.9	6.5	6.8	5.2	5.2	6.7	7.4	8.2	8.1	10.0	9.4	10.0	9.1	9.5	9.9	9.5	9.3	9.4	11.2	10.8	11.2	5.2	8.1
15	11.3	11.1	11.1	12.1	11.6	12.3	12.5	13.3	11.3	12.0	10.8	10.9	11.1	12.1	11.1	11.5	12.4	10.8	11.5	12.4	13.0	13.9	12.3	13.1	13.9	10.8	11.9
16	11.6	11.5	10.7	10.7	13.7	13.1	12.3	11.9	10.5	10.9	9.8					7.2	5.3	5.6	4.0	2.6	1.4	2.1	2.6	2.7	13.7	1.4	8.0
17	2.2	3.0	3.4	3.9	3.5	5.0	8.5	7.1	8.6	7.5	7.4	9.5	10.8	11.5	12.8	14.4	18.5	17.5	23.3	15.9	15.4	12.4	13.1	13.1	23.3	2.2	10.3
18	14.4	13.8	11.8	13.3	12.5	12.5	12.3	14.5	13.1	10.1	6.3	5.1	5.6	5.8	4.5	6.3	7.6	7.6	7.8	3.5	7.1	6.8	11.3	8.2	14.5	3.5	9.2
19	10.2	11.1	12.3	10.8	10.3	8.1	9.4	10.5	12.8	11.6	12.4	11.7	12.9	11.2	7.6	9.4	11.1	6.7	6.1	4.9	4.8	5.9	7.8	7.2	12.9	4.8	9.4
20	6.2	5.2	6.0	4.8	5.3	6.5	7.1	5.9	5.6	6.1	5.3	5.7	6.4	6.2	6.7	5.3	5.1	4.5	4.0	3.3	3.7	4.3	3.4	4.7	7.1	3.3	5.3
21	4.5	8.4	8.3	10.1	8.5	10.4	9.6	9.2	8.2	7.0	6.2	3.8	6.0	7.8	9.6	10.1	14.3	13.8	11.6	18.1	24.4	27.2	28.3	32.6	32.6	3.8	12.4
22	31.7	32.0	35.7	38.3	37.9	28.8	29.0	30.7	33.1	29.8	30.8	31.7	35.4	31.4	31.5	32.6	34.2	34.2	35.5	34.9	29.9	31.1	26.5	23.1	38.3	23.1	32.1
23	22.7	20.9	18.8	10.2	8.6	11.0	10.8	9.9	9.2	11.7	11.2	10.6	12.3	11.3	12.3	12.0	12.9	12.5	10.3	11.1	10.7	10.3	12.0	11.1	22.7	8.6	12.3
24	10.9	10.8	11.4	13.1	10.8	10.8	9.8	11.5	11.3	13.2	12.4	12.9	12.8	13.3	14.3	13.4	12.8	12.7	11.8	13.1	11.1	11.2	10.1	9.6	14.3	9.6	11.9
25	9.4	9.1	8.9	7.1	7.6	8.6	8.5	5.4	6.2	5.4	6.5	7.3	7.5	6.1	5.6	6.3	7.0	8.9	9.1	9.9	9.9	12.4	12.3	15.7	15.7	5.4	8.4
26	14.4	15.5	14.3	14.7	14.5	14.9	13.5	14.3	14.5	14.7	13.6	14.5	14.3	13.5	14.3	12.9	11.1	11.2	12.2	14.7	15.8	16.9	15.5	15.0	16.9	11.1	14.2
27	14.7	19.0	16.8	26.0	26.0	34.1	27.2	25.6	23.5	23.6	25.1	29.1	24.3	22.7	24.0	25.8	27.4	25.1	25.2	29.1	28.1	24.8	27.4	26.7	34.1	14.7	25.0
28	25.7	27.8	26.7	26.6	28.2	33.0	33.5	29.2	29.4	28.4	30.1	26.4	24.0	20.7	13.7	12.6	12.4	13.3	14.0	12.3	12.5	13.8	11.9	12.3	33.5	11.9	21.6
29	10.7	10.0	9.6	10.1	8.9	7.9	8.6	9.2	9.2	9.4	8.0	7.7	9.4	8.2	8.6	8.1	9.2	8.2	8.4	8.2	8.3	9.3	8.7	8.3	10.7	7.7	8.8
30	8.2	8.2	8.9	8.2	8.2	7.2	7.4	7.3	8.0	7.2	6.8	6.6	7.3	6.1	5.1	4.5	4.9	4.8	4.0	3.7	4.5	4.9	6.3	7.0	8.9	3.7	6.5
31	6.9	6.9	7.6	8.4	6.0	5.1	5.7	4.8	6.3	6.3	6.7	6.6	5.9	6.2	7.8	8.1	8.2	10.1	12.3	13.0	13.3	15.8	15.5	14.9	15.8	4.8	8.7
Max.	**31.7**	**32.0**	**35.7**	**38.3**	**37.9**	**34.1**	**33.5**	**30.7**	**33.1**	**29.8**	**30.8**	**31.7**	**35.4**	**31.4**	**31.5**	**32.6**	**34.2**	**34.2**	**35.5**	**34.9**	**29.9**	**31.1**	**28.3**	**32.6**	**38.3**		
Min.	**1.4**	**2.8**	**2.4**	**3.3**	**3.1**	**1.9**	**1.2**	**1.6**	**3.4**	**2.4**	**2.1**	**1.7**	**2.4**	**3.6**	**3.5**	**2.0**	**1.4**	**2.6**	**2.2**	**1.5**	**1.4**	**1.8**	**2.6**	**2.5**		**1.2**	
Avg.	**10.0**	**10.4**	**10.2**	**10.4**	**10.5**	**10.6**	**10.4**	**10.1**	**10.5**	**10.2**	**9.5**	**9.6**	**9.9**	**9.7**	**9.5**	**9.3**	**9.7**	**9.6**	**9.9**	**9.8**	**9.9**	**10.3**	**10.4**	**10.5**			**10.0**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.1	14.5	14.6	16.6	19.0	17.7	22.9	19.0	22.8	24.4	20.7	24.8	23.4	26.5	27.5	27.2	25.8	22.2	22.2	23.0	18.9	22.4	28.2	27.1	28.2	13.1	21.8
2	25.3	24.7	24.5	23.2	22.6	23.7	22.4	25.3	22.9	22.4	16.0	15.5	13.6	12.5	13.9	14.7	13.6	12.2	11.3	9.1	8.3	7.5	7.9	7.1	25.3	7.1	16.7
3	7.5	9.4	10.6	10.4	10.6	11.2	12.3	10.5	10.4	9.5	9.7	9.0	11.2	11.2	9.5	10.9	12.3	12.4	11.4	11.4	12.0	12.3	12.5	12.5	12.5	7.5	10.9
4	12.5	12.6	14.7	14.8	16.1	16.4	16.3	17.8	17.2	15.8	18.7	16.8	17.0	18.4	17.7	19.4	20.6	20.0	19.1	17.0	17.9	19.2	20.6	22.5	22.5	12.5	17.5
5	21.6	23.1	21.0	20.7	21.9	20.7	20.8	20.5	19.8	19.6	20.8	19.3	16.0	13.5	13.0	14.4	16.0	18.2	16.7	18.8	18.8	19.5	17.5	17.1	23.1	13.0	18.7
6	19.1	16.5	14.9	14.5	13.7	14.2	13.9	10.2	10.6	7.5	3.9	2.8	9.2	4.9	9.3	7.3	5.3	4.0	4.4	3.3	4.6	4.2	4.1	2.9	19.1	2.8	8.6
7	4.0	5.3	5.1	4.0	3.2	2.7	3.1	9.0	16.6	15.9	13.1	19.7	23.0	28.1	23.4	9.9	10.0	8.2	12.4	16.6	14.7	12.0	18.5	18.7	28.1	2.7	12.4
8	19.3	16.0	8.3	6.6	5.4	5.2	5.4	6.7	7.4	9.4	8.0	10.0	8.4	10.6	14.1	12.8	13.4	14.2	13.3	12.2	13.1	13.3	13.1	12.7	19.3	5.2	10.8
9	16.9	17.9	14.8	17.3	15.8	20.3	21.1	22.6	24.6	24.4	23.8	23.2	22.5	24.2	21.5	17.9	18.6	17.7	15.6	14.1	14.3	12.7	11.9	11.0	24.6	11.0	18.5
10	13.5	14.8	13.3	14.1	14.9	15.8	14.6	15.4	14.3	15.1	14.6	12.4	10.4	9.6			4.8	9.6	8.0	9.6	8.2	7.8	10.1	12.4	15.8	4.8	12.0
11	11.2	10.8	9.5	7.7	9.8	12.3	10.4	12.2	13.3	13.4	14.1	13.1	10.9	11.5	12.1	14.4	14.1	13.9	14.2	12.4	11.6	13.2	12.2	11.4	14.4	7.7	12.1
12	9.0	9.2	8.0	8.0	11.8	11.2	12.7	13.1	17.0	16.9	21.7	27.1	27.1	21.3	16.4	16.4	23.5	25.8	28.1	23.0	21.7	18.5	14.7	13.3	28.1	8.0	17.3
13	6.9	3.6	4.0	4.6	4.3	2.9	2.0	5.5	6.4	6.0	5.2	8.0	8.0	9.3	8.5	8.6	7.5	11.1	9.8	11.6	9.1	6.9	7.4	7.2	11.6	2.0	6.9
14	9.5	10.5	13.5	9.7	8.8	9.6	7.1	11.7	9.8	8.4	8.3	10.0	11.1	9.7	8.7	7.9	7.9	7.3	7.6	8.6	10.2	10.7	11.3	11.2	13.5	7.1	9.5
15	11.2	11.9	9.7	10.7	12.2	10.8	11.3	12.1	14.4	9.7	5.5	9.4	8.2	8.6	9.4	14.8	12.0	10.6	10.2	14.7	11.2	9.2	8.4	6.8	14.8	5.5	10.5
16	6.6	5.9	5.6	5.2	5.4	5.0	3.2	2.9	2.9	2.8	2.1	2.2	4.1	4.1	2.8	4.3	6.1	5.0	6.5	7.3	6.0	6.0	6.5	6.5	7.3	2.1	4.8
17	9.1	8.8	9.1	9.2	9.0	11.1	12.2	14.3	17.2	17.2	14.1	12.8	15.0	11.4	12.7	11.8	11.0	9.2	11.2	11.4	14.5	12.6	14.2	12.2	17.2	8.8	12.1
18	12.7	9.8	8.2	8.2	7.0	7.3	9.2	7.8	11.5	13.7	18.2	9.2	7.6	9.1	4.2	7.8	6.6	6.5	6.5	6.8	7.3	6.8	6.4	6.1	18.2	4.2	8.5
19	4.6	17.8	25.7	23.6	15.4	11.9	11.1	14.9	16.8	13.2	16.0	16.2	15.4	9.8	13.4	13.0	19.3	23.9	25.6	23.0	16.5	19.1	12.8	13.3	25.7	4.6	16.3
20	10.8	13.9	12.1	10.5	7.3	7.7	7.8	10.4	11.5	15.1	9.8	8.9	9.5	20.0	16.2	16.7	22.1	26.7	32.0	28.7	24.9	26.8	30.3	31.0	32.0	7.3	17.1
21	25.7	19.3	18.7	14.7	17.8	21.0	17.7	18.9	22.6	16.2	14.6	13.9	18.4	17.8	14.8	14.6	11.0	10.2	9.6	9.3	10.6	10.2	13.7	12.4	25.7	9.3	15.6
22	11.2	12.2	10.0	7.3	7.2	7.6	17.2	17.8	11.2	10.4	11.2	14.7	10.3	9.6	7.7	5.8	6.8	6.4	6.0	15.6	9.1	9.6	8.2	8.0	17.8	5.8	10.0
23	5.6	5.1	4.7	3.4	1.7	3.7	3.4	5.2	3.7	11.7	16.1	12.6	13.2	11.9	13.3	7.9	9.2	13.1	10.3	6.3	7.9	8.0	8.6	9.0	16.1	1.7	8.2
24	7.4	8.1	9.9	9.0	8.2	7.8	8.5	7.6	10.0	9.4	8.9	9.3	6.0	5.0	4.9	4.5	4.0	4.2	8.3	6.7	6.8	7.1	5.8	4.8	10.0	4.0	7.2
25	4.8	4.6	5.2	3.3	3.3	3.3	2.5	1.8	1.5	4.8	4.0	1.5	7.5	4.4	19.4	10.6	13.5	13.7	17.0	18.7	21.9	20.2	12.7	12.7	21.9	1.5	8.9
26	19.5	13.1	16.8	12.0	12.5	12.2	8.6	10.5	7.3	8.4	7.8	9.9	9.7	12.0	7.8	8.9	7.9	8.2	5.6	3.0	2.7	5.5	5.7	8.0	19.5	2.7	9.3
27	8.8	9.0	10.1	9.8	9.1	7.1	4.0	11.1	13.8	7.9	8.7	7.6	6.9	5.0	10.1	8.6	9.3	11.5	13.5	14.7	11.7	11.1	11.1	11.9	14.7	4.0	9.7
28	14.2	17.3	15.9	15.4	17.3	17.7	17.2	17.8	19.2	14.9	12.6	15.7	18.5	20.4	22.8	25.6	23.6	22.8	20.6	26.9	20.6	17.5	17.0	16.4	26.9	12.6	18.7
Max.	**25.7**	**24.7**	**25.7**	**23.6**	**22.6**	**23.7**	**22.9**	**25.3**	**24.6**	**24.4**	**23.8**	**27.1**	**27.1**	**28.1**	**27.5**	**27.2**	**25.8**	**26.7**	**32.0**	**28.7**	**24.9**	**26.8**	**30.3**	**31.0**	**32.0**		
Min.	**4.0**	**3.6**	**4.0**	**3.3**	**1.7**	**2.7**	**2.0**	**1.8**	**1.5**	**2.8**	**2.1**	**1.5**	**4.1**	**4.1**	**2.8**	**4.3**	**4.0**	**4.0**	**4.4**	**3.0**	**2.7**	**4.2**	**4.1**	**2.9**		**1.5**	
Avg.	**12.2**	**12.3**	**12.1**	**11.2**	**11.1**	**11.4**	**11.4**	**12.6**	**13.4**	**13.0**	**12.4**	**12.7**	**12.9**	**12.9**	**13.1**	**12.5**	**12.7**	**13.2**	**13.5**	**13.7**	**12.7**	**12.5**	**12.6**	**12.4**			**12.5**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	19.6	13.4	8.0	12.0	11.8	11.5	11.5	11.2	7.3	8.7	8.2	6.6	6.7	6.1	4.5	3.7	5.2	5.9	8.5	8.9	7.8	9.0	10.0	9.0	19.6	3.7	9.0
2	5.6	8.8	9.3	8.8	10.0	10.2	10.8	11.8	12.0	12.0	12.0	11.0	11.2	12.2	10.8	11.4	13.1	11.3	11.7	11.3	11.5	12.4	11.5	12.2	13.1	5.6	10.9
3	11.9	11.2	10.5	9.4	11.3	10.9	10.0	10.5	11.1	10.7	9.9	8.0	8.7	8.0	7.6	7.3	5.5	4.6	5.5	5.9	6.4	6.8	6.0	7.0	11.9	4.6	8.5
4	6.7	6.8	7.3	8.3	7.6	7.2	7.9	8.3	8.7	7.8	7.2	7.0	8.5	8.9	9.5	8.0	7.9	8.3	8.1	7.9	8.1	8.3	8.4	8.2	9.5	6.7	7.9
5	8.5	8.2	10.1	9.5	10.2	9.4	9.5	3.9	7.5	3.8	4.2	10.8	10.7	9.5	7.6	6.3	7.5	11.2	14.0	15.9	12.6	10.8	9.0	10.6	15.9	3.8	9.2
6	15.8	13.9	16.4	13.6	15.3	11.3	10.6	19.9	23.2	21.2	21.5	15.6	17.0	13.0	12.6	11.7	10.4	8.6	6.8	5.8	7.5	7.9	8.4	8.8	23.2	5.8	13.2
7	9.0	8.5	8.5	9.5	9.8	7.9	9.3	10.7	16.2	17.1	18.4	18.3	16.2	15.7	18.1	18.6	20.3	22.8	24.8	36.0	22.7	24.8	26.1	25.0	36.0	7.9	17.3
8	28.1	30.0	27.8	26.4	29.9	34.0	34.0	35.8	32.7	29.5	28.8	26.2	27.2	25.3	30.2	30.1	31.9	37.4	30.3	21.9	29.9	21.0	18.4	17.7	37.4	17.7	28.5
9	24.9	24.2	22.8	21.6	38.1	35.9	24.9	31.7	21.9	32.9	31.6	27.6	26.7	27.6	26.7	21.9	20.5	22.4	17.3	20.1	19.3	18.4	18.2	16.1	38.1	16.1	24.7
10	11.1	9.9	9.2	9.8	9.7	10.0	10.8	5.5	7.6	6.3	6.0	4.7	4.1	3.8	4.2	3.0	3.3	6.9	8.2	7.0	7.9	8.7	9.2	8.7	11.1	3.0	7.3
11	9.2	8.8	13.1	13.5	11.6	13.5	11.6	12.6	13.6	14.4	13.3	13.3	11.3	12.6	12.3	10.9	10.6	12.6	12.1	13.3	12.9	11.9	11.4	10.0	14.4	8.8	12.1
12	14.8	13.1	13.6	13.5	12.6	12.1	10.8	10.1	9.0	8.1	8.7	10.3	10.1	10.8	11.4	10.2	8.8	8.2	8.2	7.3	6.8	5.6	4.7	4.3	14.8	4.3	9.7
13	4.9	4.0	2.8	2.2	2.5	3.0	3.1	3.8	2.9	3.3	6.0	7.1	4.4	4.0	3.4	3.2	3.2	2.8	2.8	2.9	2.3	2.1	3.4	2.9	7.1	2.1	3.5
14	2.9	3.8	3.5	4.0	4.4	4.0	3.5	4.2	5.7	6.0	6.1	4.1	5.1	4.6	5.6	6.2	3.7	6.1	6.4	5.7	6.8	7.0	7.0	4.6	7.0	2.9	5.1
15	6.2	6.4	6.3	7.3	7.1	7.6	6.8	5.8	5.3	6.4	4.0	2.9	2.3	2.2	2.2	2.5	3.9	3.7	5.6	4.3	5.0	6.2	7.9	7.8	7.9	2.2	5.2
16	6.9	9.6	8.8	7.8	7.8	7.9	8.1	9.2	10.3	10.7	10.5	9.1	9.5	9.0	6.9	8.4	8.2	5.2	6.9	7.0	7.3	8.1	9.0	7.1	10.7	5.2	8.3
17	7.3	7.4	6.3	8.1	8.4	8.1	7.6	8.6	8.4	8.3	8.7	11.9	12.7	13.3	11.0	11.2	10.2	10.6	11.3	9.7	10.3	11.4	11.2	10.7	13.3	6.3	9.7
18	12.4	15.4	13.8	13.0	12.0	11.8	12.3	11.5	11.8	10.4	12.1	13.1	13.8	14.3	12.3	10.4	7.9	6.0	4.0	1.8	1.4	1.7	0.9	1.7	15.4	0.9	9.4
19	3.5	2.8	3.5	3.8	3.1	3.0	4.6	4.8	5.0	5.1	4.2	3.0	3.4	4.2	7.5	6.5	5.8	4.6	4.5	3.2	2.0	4.4	6.1	6.1	7.5	2.0	4.4
20	5.7	5.6	5.2	5.3	6.4	6.6	6.0	5.0	4.0	4.8	3.7	2.1	3.6	4.9	5.1	9.6	9.9	8.9	11.7	12.3	11.5	12.4	11.8	11.6	12.4	2.1	7.2
21	11.9	11.8	11.1	8.9	8.4	10.0	8.0	7.9	5.4	5.5	7.7	7.0	3.6	4.4	2.9	4.1	6.6	7.7	6.6	7.9	7.4	7.9	7.2	9.5	11.9	2.9	7.5
22	11.8	12.8	12.6	12.6	12.4	14.4	15.7	15.2	20.6	16.4	13.8	11.4	12.6	10.4	9.3	8.0	5.3	5.3	2.2	4.2	7.4	8.4	7.9	7.1	20.6	2.2	10.7
23	8.1	5.3	4.8	3.3	3.1	3.5	4.9	7.7	8.3	9.9	8.1	10.7	8.4	9.2	3.8	5.1	7.9	15.4	16.9	16.2	14.7	17.3	16.4	11.9	17.3	3.1	9.2
24	11.3	11.6	13.1	12.7	11.7	11.9	11.6	11.0	11.4	11.6	10.2	7.6	4.4	3.5	5.2	6.0	4.2	6.3	6.9	9.0	9.7	9.4	8.6	8.0	13.1	3.5	9.0
25	8.0	7.5	7.3	5.2	7.9	7.4	8.0	7.7	7.7	8.0	9.3	2.7	1.9	3.1	3.0	2.5	4.0	6.3	6.2	9.0	8.3	8.0	9.3	10.6	10.6	1.9	6.6
26	9.2	10.6	10.6	10.8	10.2	10.3	10.8	12.1	11.2	11.2	9.1	7.1	2.9	3.3	3.1	3.9	3.9	4.3	2.0	8.9	7.3	8.6	6.9	7.0	12.1	2.0	7.7
27	7.0	6.1	5.9	5.1	5.7	5.5	3.6	3.9	4.3	2.5	2.4	3.4	3.6	3.8	4.3	3.9	3.9	3.8	3.2	2.7	2.3	2.1	4.8	4.6	7.0	2.1	4.1
28	3.7	4.8	4.6	5.7	5.3	5.6	5.7	5.2	5.7	3.6	1.8	3.3	4.5	4.5	4.7	3.9	4.0	3.7	5.4	3.5	2.1	1.8	2.6	6.1	6.1	1.8	4.2
29	9.7	7.2	5.7	5.8	6.6	7.6	6.1	7.1	5.3	5.7	4.0	3.3	1.9	5.3	5.9	6.7	6.9	1.9	3.1	2.6	1.7	1.8	4.4	5.0	9.7	1.7	5.0
30	6.7	5.3	7.0	7.5	7.2	10.6	9.8	10.8	10.9	11.6	10.9	12.9	12.1	22.1	13.5	14.5	12.5	14.9	12.3	15.9	12.7	16.7	18.8	13.5	22.1	5.3	12.1
31	17.8	17.2	14.8	17.2	16.5	12.4	16.3	17.4	11.4	14.1	11.2	11.3	14.5	12.3	12.3	11.6	10.4	9.7	7.3	6.5					17.8	6.5	13.1
Max.	**28.1**	**30.0**	**27.8**	**26.4**	**38.1**	**35.9**	**34.0**	**35.8**	**32.7**	**32.9**	**31.6**	**27.6**	**27.2**	**27.6**	**30.2**	**30.1**	**31.9**	**37.4**	**30.3**	**36.0**	**29.9**	**24.8**	**26.1**	**25.0**	**38.1**		
Min.	**2.9**	**2.8**	**2.8**	**2.2**	**2.5**	**3.0**	**3.1**	**3.8**	**2.9**	**2.5**	**1.8**	**2.1**	**1.9**	**2.2**	**2.2**	**2.5**	**3.2**	**1.9**	**2.0**	**1.8**	**1.4**	**1.7**	**0.9**	**1.7**		**0.9**	
Avg.	**10.3**	**10.1**	**9.8**	**9.7**	**10.5**	**10.5**	**10.1**	**10.7**	**10.5**	**10.6**	**10.1**	**9.5**	**9.1**	**9.4**	**9.0**	**8.7**	**8.6**	**9.3**	**9.1**	**9.5**	**9.1**	**9.4**	**9.5**	**9.1**			**9.7**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					10.4	10.3	12.1	14.4	15.9	15.4	15.8	16.9	16.6	23.4	20.9	16.7	14.3	16.2	13.7	14.8	13.2	11.6	17.4	13.7	23.4	10.3	15.2
2	10.3	13.9	15.1	15.0	16.3	14.4	9.9	10.7	8.1	6.6	7.3	3.2	3.2	3.0	3.7	4.2	4.3	3.5	3.0	4.4	5.6	6.7	7.1	8.6	16.3	3.0	7.8
3	9.2	9.2	9.0	9.6	10.0	10.3	10.4	11.0	11.0	12.7	11.8	11.4	12.4	11.6	12.3	12.2	10.6	9.2	8.3	8.4	8.4	9.2	9.5	9.8	12.7	8.3	10.3
4	10.0	8.3	8.4	6.6	6.8	7.9	7.1	7.3	7.9	7.5	6.0	5.6	2.8	2.0	2.2	2.1	2.4	1.8	1.7	1.9	2.4	2.6	2.8	2.4	10.0	1.7	4.9
5	5.7	11.5	10.5	11.7	8.3	7.8	11.0	13.1	15.1	13.0	16.7	18.1	18.4	19.8	18.3	18.1	13.8	19.4	20.4	28.4	24.2	22.3	21.3	20.4	28.4	5.7	16.1
6	15.8	17.0	15.7	10.5	9.5	11.5	11.5	10.2	11.5	10.4	4.9	4.4	4.4	5.2	4.7	4.6	4.6	4.4	3.2	3.7	5.1	3.2	2.0	2.6	17.0	2.0	7.5
7	3.7	2.3	5.5	4.8	3.2	6.7	5.4	5.3	5.3	4.0	3.9	4.4	2.8	2.6	2.7	3.1	6.2	3.6	4.3	4.4	3.4	7.2	7.0	7.3	7.3	2.3	4.5
8	10.1	15.0	10.0	9.4	10.8	9.1	9.5	10.0	11.9	7.2	10.2	7.1	6.6	11.7	8.5	8.3	9.3	8.6	6.6	5.6	4.7	4.1	2.6	3.7	15.0	2.6	8.4
9	1.8	1.3	2.1	3.2	2.8	2.1	3.4	3.9	3.2	4.2	3.6	2.2	2.8	4.9	5.2	4.9	6.4	4.8	2.1	2.7	3.7	10.0	8.5	13.6	13.6	1.3	4.3
10	14.4	20.3	16.2	14.7	12.2	16.0	14.6	14.7	17.8	16.2	25.0	22.8	18.7	22.7	25.2	29.1	23.7	23.6	11.5	9.9	21.2	21.3	18.7	17.3	29.1	9.9	18.7
11	15.2	14.9	14.0	14.4	11.9	11.5	8.2	6.5	6.5	4.6	5.8	4.7	5.9	9.1	11.7	12.4	12.9	13.1	11.8	12.4	12.9	13.2	14.5	12.3	15.2	4.6	10.9
12	12.3	13.1	11.9	11.5	11.6	13.0	12.5	11.6	10.7	11.0	12.1	11.7	10.0	9.3	7.3	5.0	1.4	0.9	1.6	4.0	4.0	12.7	15.4	16.3	16.3	0.9	9.6
13	18.7	18.1	18.4	18.8	18.2	18.0	16.2	22.7	22.4	19.3	20.8	20.8	24.0	26.0	27.9	28.4	33.4	29.3	19.3	20.8	21.5	20.1	18.6	17.8	33.4	16.2	21.6
14	17.6	17.8	16.6	16.1	16.9	19.8	18.5	17.9	17.8	19.5	20.7	18.2	21.3	18.7	19.5	22.2	16.6	18.3	15.6	16.1	16.4	21.7	18.6	17.0	22.2	15.6	18.3
15	15.5	18.0	14.0	15.3	13.2	12.7	10.5	14.2	18.5	19.0	19.3	23.6	20.7	17.2	18.3	15.1	12.6	13.7	10.3	9.9	7.6	7.3	5.7	8.8	23.6	5.7	14.2
16	6.0	7.6	5.8	5.7	10.0	10.8	12.9	13.2	13.5	12.3	12.0	13.9	13.4	11.6	15.6	18.9	15.1	16.0	16.6	16.7	17.0	19.6	18.0	17.4	19.6	5.7	13.3
17	16.2	16.7	16.1	17.3	18.0	14.3	14.3	9.5	5.2	9.3	9.4	6.9	7.3	9.4	8.8	8.3	6.9	8.3	8.7	8.4	5.3	3.8	3.6	9.4	18.0	3.6	10.1
18	5.1	6.9	4.8	3.7	2.9	2.8	3.7	3.3	3.4	2.7	2.5	3.1	4.3	4.1	5.4	6.7	3.0	2.3	2.4	8.0	8.5	9.2	8.0	9.4	9.4	2.3	4.8
19	13.9	13.5	14.7	14.7	15.8	17.0	16.4	14.0	9.1	10.5	9.5	8.5	6.6	6.1	2.7	4.4	4.2	3.7	1.3	1.8	6.0	5.9	5.1	5.3	17.0	1.3	8.8
20	4.3	3.2	4.2	5.1	6.5	5.7	5.3	5.4	5.8	6.3	7.8	6.6	7.4	5.6	6.7	7.0	10.3	10.7	7.7	8.2	9.7	11.2	10.1	9.9	11.2	3.2	7.1
21	10.7	12.0	12.3	13.0	13.0	13.2	17.2	14.1	17.4	15.8	14.5	13.5	11.5	9.8	7.5	6.0	7.0	3.8	4.7	6.2	6.4	7.4	6.4	7.1	17.4	3.8	10.4
22	6.0	7.2	7.0	7.2	7.1	6.4	5.3	4.8	4.4	5.4	2.6	2.7	2.2	2.7	2.7	3.0	3.0	2.8	2.5	3.0	2.7	2.8	3.5	5.0	7.2	2.2	4.2
23	4.4	5.8	6.9	6.7	6.3	7.6	6.9	5.2	4.8	4.4	5.7	6.6	5.5	6.0	2.8	4.9	5.9	3.7	2.9	9.2	11.7	10.1	10.9	12.4	12.4	2.8	6.5
24	10.2	7.7	4.3	4.9	8.9	12.1	16.8	10.1	5.4	19.3	12.3	16.2	17.0	21.0	23.3	16.2	14.8	13.6	20.8	26.5	22.0	15.8	19.8	16.0	26.5	4.3	14.8
25	14.1	10.6	3.7	8.2	5.5	6.2	5.3	5.8	6.0	5.5	6.1	7.1	7.3	6.8	7.8	7.4	9.2	8.6	9.5	7.9	8.8	8.0	9.0	8.3	14.1	3.7	7.6
26	10.8	10.2	10.5	9.9	10.8	12.8	12.1	10.7	11.0	13.1	11.1	11.1	10.8	10.9	9.9	10.1	9.7	8.7	7.8	8.3	8.4	8.5	6.5	7.4	13.1	6.5	10.0
27	8.4	7.7	8.0	9.2	9.1	9.3	9.4	9.8	9.2	8.1	7.2	6.4	6.1	4.3	2.7	3.7	3.4	4.0	2.9	2.9	1.9	3.7	4.7	4.8	9.8	1.9	6.1
28	7.7	7.5	7.9	6.8	4.6	4.4	6.8	4.5	4.9	3.8	3.0	2.5	3.0	4.3	4.1	3.9	4.0	3.1	3.0	1.5	1.8	2.9	3.1	3.2	7.9	1.5	4.3
29	3.1	9.6	12.6	12.4	14.0	14.4	14.5	15.1	16.2	13.9	10.8	10.2	8.5	4.7	8.0	8.7	8.7	8.7	9.0	8.5	9.2	7.7	6.8	6.3	16.2	3.1	10.1
30	5.0	4.3	5.4	4.0	7.2	7.7	8.5	8.6	6.0	7.8	7.3	5.5	3.9	6.0	5.8	5.4	4.1	6.8	2.1	5.0	5.8	7.8	6.3	7.5	8.6	2.1	6.0
Max.	**18.7**	**20.3**	**18.4**	**18.8**	**18.2**	**19.8**	**18.5**	**22.7**	**22.4**	**19.5**	**25.0**	**23.6**	**24.0**	**26.0**	**27.9**	**29.1**	**33.4**	**29.3**	**20.8**	**28.4**	**24.2**	**22.3**	**21.3**	**20.4**	**33.4**		
Min.	**1.8**	**1.3**	**2.1**	**3.2**	**2.8**	**2.1**	**3.4**	**3.3**	**3.2**	**2.7**	**2.5**	**2.2**	**2.2**	**2.0**	**2.2**	**2.1**	**1.4**	**0.9**	**1.3**	**1.5**	**1.8**	**2.6**	**2.0**	**2.4**		**0.9**	
Avg.	**9.9**	**10.7**	**10.1**	**10.0**	**10.1**	**10.5**	**10.5**	**10.3**	**10.2**	**10.3**	**10.2**	**9.9**	**9.5**	**10.0**	**10.1**	**10.0**	**9.4**	**9.2**	**7.8**	**9.0**	**9.3**	**9.9**	**9.7**	**10.0**			**9.9**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.0	6.2	6.4	8.6	9.2	9.1	8.2	10.6	12.8	14.4	12.7	15.4	16.5	15.4	17.7	16.0	16.5	19.0	19.9	21.2	22.0	17.5	16.6	16.8	22.0	6.2	14.0
2	17.1	15.8	14.9	14.3	13.1	14.4	14.1	13.9	11.0	11.9	13.2	12.7	10.7	9.5	8.4	7.6	7.6	6.7	6.8	5.4	5.6	6.0	5.9	6.9	17.1	5.4	10.6
3	7.0	8.3	6.3	5.8	7.1	9.7	8.2	7.8	10.7	11.5	14.7	15.5	15.0	13.9	11.3	7.6	9.9	8.9	8.2	7.6	8.7	8.5	9.8	10.6	15.5	5.8	9.7
4	11.1	13.3	12.7	9.7	7.2	7.2	7.7	9.5	7.5	6.2	5.3	6.0	5.3	6.2	6.8	6.9	6.8	8.6	8.7	8.6	10.5	10.4	9.2	12.0	13.3	5.3	8.5
5	11.5	10.6	11.0	15.7	12.5	11.6	12.5	13.5	16.2	13.6	13.1	13.1	12.3	9.0	6.6	5.6	5.1	4.9	3.6	2.2	2.6	5.4	3.8	5.8	16.2	2.2	9.2
6	5.2	2.0	2.5	1.9	2.5	1.9	1.3	2.0	2.0	1.5	1.8	1.8	2.2	1.8	6.9	10.5	11.6	13.6	14.7	17.4	16.5	16.9	21.0	20.0	21.0	1.3	7.5
7	18.5	19.1	20.9	24.3	25.2	22.7	19.8	21.7	22.5	17.9	17.8	18.3	18.6	19.6	18.9	18.8	22.0	21.9	13.7	16.0	16.2	17.8	14.3	13.2	25.2	13.2	19.1
8	9.7	9.8	7.8	7.0	3.3	4.1	5.6	5.9	7.0	8.3	7.8	8.6	11.0	11.2	11.5	11.3	10.8	11.3	11.5	12.2	12.2	12.2	13.2	15.6	15.6	3.3	9.5
9	14.5	14.9	15.0	17.6	16.5	15.1	15.5	16.2	18.0	17.8	17.0	17.5	17.3	16.1	15.9	16.4	16.4	14.7	14.6	14.3	13.1	10.1	10.4	10.8	18.0	10.1	15.2
10	12.4	11.4	15.9	11.1	10.0	6.2	8.3	7.8	6.9	6.2	7.2	5.2	3.5	5.2	2.1	2.4	4.4	3.2	2.8	4.4	3.7	2.0	4.8	4.5	15.9	2.0	6.3
11	2.1	4.9	6.0	5.5	2.4	3.2	3.6	5.5	3.9	3.4	3.5	3.2	2.2	2.2	2.5	3.8	3.4	3.3	2.2	2.4	9.5	5.8	7.6	6.5	9.5	2.1	4.1
12	7.1	7.2	5.5	4.8	5.8	5.1	6.3	7.7	7.7	8.4	7.3	5.3	3.5	11.1	10.5	9.9	9.4	3.9	2.2	2.2	2.2	4.0	5.4	5.9	11.1	2.2	6.2
13	5.3	4.5	4.5	4.0	3.9	5.1	6.3	7.8	9.2	8.5	5.2	5.7	4.5	4.3	2.3	4.3	3.8	2.7	2.1	1.3	4.9	3.3	2.5	2.3	9.2	1.3	4.5
14	1.1	1.9	2.0	3.2	3.7	4.2	4.4	5.1	2.9	5.4	5.7	5.1	3.9	4.9	5.1	4.2	4.4	4.8	4.0	4.3	3.8	2.9	3.0	4.4	5.7	1.1	3.9
15	3.7	2.6	3.1	2.3	3.3	1.9	2.5	3.4	4.3	2.4	2.1	4.5	4.1	5.7	6.2	7.2	7.2	7.1	5.8	4.2	3.3	2.3	3.4	2.3	7.2	1.9	3.9
16	2.5	10.5	9.7	10.6	12.3	10.3	10.7	8.0	5.1	5.0	6.0	4.2	4.6	5.4	4.4	5.1	6.4	5.6	6.4	4.4	2.1	1.9	2.2	1.5	12.3	1.5	6.0
17	2.5	3.7	5.5	5.6	6.0	6.1	7.9	8.5	9.7	9.6	9.3	8.6	6.2	4.4	5.6	5.3	4.8	4.4	3.0	3.4	3.3	3.2	2.7	2.2	9.7	2.2	5.5
18	2.8	3.6	3.8	3.7	3.1	3.0	3.6	2.9	4.9	6.7	4.5	6.9	8.6	14.5	14.6	17.9	17.1	19.1	17.8	17.3	11.7	15.4	16.8	19.8	19.8	2.8	10.0
19	20.2	17.7	17.0	14.7	8.9	11.3	6.2	5.5	6.3	4.8	3.9	2.9	4.2	6.8	6.9	4.8	7.2	8.4	9.8	12.1	11.7	8.7	7.6	8.6	20.2	2.9	9.0
20	9.2	10.7	11.0	10.8	9.2	10.0	9.9	9.4	9.2	9.9	10.4	9.8	8.6	9.7	11.1	10.4	8.6	9.1	5.2	3.8	1.9	4.0	2.9	6.0	11.1	1.9	8.3
21	6.6	4.4	7.0	7.1	8.4	5.8	7.0	7.1	10.6	11.7	10.4	11.4	12.1	10.4	10.6	12.3	12.4	11.1	9.3	12.7	11.7	12.8	12.8	14.1	14.1	4.4	10.0
22	13.1	11.1	7.9	6.9	9.5	8.7	8.7	8.4	8.5	7.2	6.8	5.0	9.0	10.2	9.8	9.8	12.6	11.7	11.9	9.1	5.4	4.8	4.0	4.4	13.1	4.0	8.5
23	4.6	5.4	4.3	2.6	2.6	3.7	7.2	7.8	2.4	3.0	5.7	3.2	5.1	6.2	6.4	3.4	3.7	2.7	2.5	1.3	2.7	5.4	5.6	5.5	7.8	1.3	4.3
24	6.3	6.3	5.7	5.4	2.5	6.6	3.6	3.8	3.2	3.1	3.7	3.8	5.1	4.4	2.5	2.5	3.8	2.1	0.9	1.3	3.0	4.1	4.4	4.3	6.6	0.9	3.9
25	4.0	4.5	4.2	1.4	2.6	3.9	3.3	2.2	2.5	3.7	2.8	2.1	2.6	2.5	3.5	2.9	2.7	2.6	1.4	1.2	2.9	4.3	5.4	6.3	6.3	1.2	3.1
26	5.8	5.9	5.0	4.6	5.1	4.5	6.0	6.4	6.9	5.7	2.5	2.5	3.1	3.1	2.4	5.1	2.5	2.4	2.9	3.1	3.9	4.5	6.2	6.7	6.9	2.4	4.5
27	6.6	4.7	3.3	2.9	3.9	3.4	3.7	3.9	5.1	4.1	3.0	2.2	3.1	2.5	3.3	3.2	3.4	3.0	2.6	2.6	4.1	6.6	6.1	6.4	6.6	2.2	3.9
28	6.0	6.0	5.4	6.4	5.3	7.1	6.5	2.2	6.8	5.9	7.3	9.5	6.7	6.1	6.0	5.8	5.1	3.9	2.5	2.4	1.8	2.0	4.4	4.0	9.5	1.8	5.2
29	2.1	2.1	3.3	5.0	3.3	6.4	5.6	5.8	7.4	3.6	2.8	3.4	2.6	3.4	3.1	3.4	4.5	4.6	3.4	4.1	2.0	3.3	2.8	2.6	7.4	2.0	3.8
30	3.0	3.3	2.5	2.6	2.2	3.0	4.5	6.2	4.8	4.5	1.7	2.4	1.8	2.8	4.4	2.5	2.3	3.2	2.7	4.5	2.8	1.8	2.1	2.3	6.2	1.7	3.1
31	2.5	4.4	3.8	4.6	4.4	2.4	3.1	2.5	1.9	2.6	2.5	3.5	3.1	3.4	3.9	4.3	3.2	2.9	3.8	3.0	2.8	2.7	1.6	2.2	4.6	1.6	3.1
Max.	**20.2**	**19.1**	**20.9**	**24.3**	**25.2**	**22.7**	**19.8**	**21.7**	**22.5**	**17.9**	**17.8**	**18.3**	**18.6**	**19.6**	**18.9**	**18.8**	**22.0**	**21.9**	**19.9**	**21.2**	**22.0**	**17.8**	**21.0**	**20.0**	**25.2**		
Min.	**1.1**	**1.9**	**2.0**	**1.4**	**2.2**	**1.9**	**1.3**	**2.0**	**1.9**	**1.5**	**1.7**	**1.8**	**1.8**	**1.8**	**2.1**	**2.4**	**2.3**	**2.1**	**0.9**	**1.2**	**1.8**	**1.8**	**1.6**	**1.5**		**0.9**	
Avg.	**7.5**	**7.6**	**7.5**	**7.4**	**6.9**	**7.0**	**7.1**	**7.4**	**7.7**	**7.4**	**7.0**	**7.1**	**7.0**	**7.5**	**7.5**	**7.5**	**7.7**	**7.5**	**6.7**	**6.8**	**6.7**	**6.8**	**7.0**	**7.6**			**7.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.8	2.8	6.7	9.2	7.9	4.6	3.7	4.4	2.8	2.3	2.1	3.4	5.2	5.4	4.8	4.1	3.2	2.6	1.6	2.3	2.0	1.8	4.6	6.5	9.2	1.6	4.0
2	10.9	8.3	6.1	4.4	4.4	4.8	6.8	6.0	6.2	7.0	7.0	5.9	4.9	8.6	8.1	13.2	10.0	7.9	4.4	4.4	4.0	5.2	4.0	2.8	13.2	2.8	6.5
3	3.2	2.7	4.0	14.6	11.1	17.4	18.6	19.9	20.2	15.7	19.0	18.9	18.5	13.1	12.4	15.0	14.8	11.5	8.9	11.1	17.4	14.0	11.7	14.2	20.2	2.7	13.7
4	12.9	12.1	13.1	7.7	5.9	6.3	6.0	5.0	4.0	1.9	6.9	5.7	5.2	4.9	5.1	5.3	5.3	5.8	4.7	4.5	4.0	3.3	3.9	5.3	13.1	1.9	6.0
5	5.5	5.2	5.3	3.1	4.8	3.7	4.1	2.7	2.2	4.5	6.1	5.0	4.7	4.6	4.8	5.5	5.1	3.9	4.0	3.5	3.3	2.7	2.9	4.2	6.1	2.2	4.2
6	4.4	4.4	3.4	2.5	3.1	3.3	3.2	2.2	4.4	7.2	4.3	4.1	4.1	3.0	3.8	3.8	3.6	4.8	3.9	5.7	2.7	4.6	4.3	5.5	7.2	2.2	4.0
7	7.9	7.3	7.9	8.3	7.4	5.9	6.7	6.0	7.3	8.1	6.0	6.4	6.9	5.2	6.1	5.4	5.2	6.1	7.2	6.8	7.5	10.0	7.9	8.1	10.0	5.2	7.0
8	9.2	8.6	7.1	8.8	9.2	7.6	8.1	8.6	8.6	9.2	10.6	11.7	10.8	9.7	10.9	12.4	11.5	12.6	10.8	10.0	13.8	11.6	10.8	12.9	13.8	7.1	10.2
9	13.0	14.9	13.3	14.8	13.9	18.4	13.5	14.8	14.3	14.2	15.7	14.3	15.3	12.4	12.3	11.5	12.9	9.2	10.8	11.5	11.0	11.7	8.6	9.4	18.4	8.6	13.0
10	9.9	7.9	6.9	5.8	6.1	7.6	12.9	9.7	10.9	6.8	5.4	7.7	7.2	11.3	11.4	9.2	9.7	13.2	8.7	12.9	8.9	12.3	12.5	11.9	13.2	5.4	9.4
11	11.6	10.2	7.3	6.6	6.4	7.6	9.9	9.3	9.9	9.5	9.9	10.3	10.2	10.1	8.4	8.4	9.5	9.5	9.5	11.7	10.8	10.9	10.0	10.0	11.7	6.4	9.5
12	9.4	10.4	9.0	9.1	8.3	7.8	8.7	7.1	6.2	7.3	5.0	2.7	2.2	2.3	2.1	1.7	4.1	3.9	2.9	3.0	3.9	4.5	5.4	3.8	10.4	1.7	5.5
13	3.8	4.7	4.3	5.3	4.5	1.8	1.9	3.4	2.7	1.2	2.1	2.5	3.9	3.8	3.3	4.4	4.7	4.6	2.4	2.7	2.6	2.1	1.4	1.9	5.3	1.2	3.2
14	1.1	2.7	2.9	3.8	1.5	1.1	1.6	1.9	1.5	2.4	2.4	2.0	2.7	2.9	2.2	2.0	4.5	5.1	4.0	3.3	2.4	3.1	4.0	3.4	5.1	1.1	2.7
15	4.4	4.4	5.8	3.8	2.9	2.6	4.2	3.7	4.1	1.5	3.3	3.6	3.7	5.3	3.4	2.0	2.7	2.7	2.1	2.2	2.0	1.1	1.5	1.0	5.8	1.0	3.1
16	2.1	3.6	2.8	4.5	4.9	4.8	3.9	5.1	4.6	2.9	2.2	3.5	2.5	2.7	2.9	3.7	3.3	3.5	1.4	1.4	2.5	5.4	5.1	5.6	5.6	1.4	3.6
17	5.8	5.2	5.1	4.1	3.7	4.4	4.2	4.4	5.1	6.5	6.3	5.8	6.1	6.1	6.0	5.3	7.7	7.8	8.0	8.7	5.7	2.8	4.8	5.2	8.7	2.8	5.6
18	4.7	2.8	5.1	4.7	7.1	6.3	7.4	8.0	13.2	10.8	10.6	8.6	9.0	10.0	8.9	8.7	8.1	7.6	7.6	7.3	7.6	6.9	7.1	6.8	13.2	2.8	7.7
19	7.9	6.8	8.9	9.6	11.5	10.3	9.6	9.7	9.3	8.1	9.6	6.4	7.3	7.2	5.9	4.9	8.3	10.5	6.1	4.4	4.1	2.5	6.1	4.8	11.5	2.5	7.5
20	6.1	6.6	4.3	3.2	3.0	2.1	2.6	6.8	7.6	5.3	5.6	6.2	10.3	7.3	5.3	5.5	6.4	3.7	2.8	3.2	3.1	2.8	2.4	1.8	10.3	1.8	4.7
21	3.5	4.7	4.0	3.6	3.4	3.5	4.3	3.9	3.7	2.8	2.9	3.4	2.9	4.4	4.3	4.6	4.8	5.0	5.3	5.3	6.9	4.9	4.9	3.1	6.9	2.8	4.2
22	4.7	4.9	3.4	3.0	3.3	5.1	4.7	2.5	3.8	3.1	2.4	2.3	3.4	6.9	5.9	2.8	2.6	5.8	8.2	4.2	3.6	3.1	3.6	3.7	8.2	2.3	4.0
23	3.9	3.8	3.4	3.0	2.0	3.0	7.0	6.0	4.2	3.1	3.0	2.5	3.1	4.0	4.6	5.1	5.7	5.4	5.2	5.1	2.4	3.7	3.7	1.7	7.0	1.7	3.9
24	1.6	1.8	2.3	3.2	3.0	3.3	2.8	2.5	2.1	2.6	4.0	4.2	5.2	5.4	6.1	5.5	5.4	4.9	3.7	2.9	2.3	2.4	3.0	4.3	6.1	1.6	3.5
25	4.4	5.0	4.7	2.6	2.9	6.0	6.3	4.7	7.5	8.1	7.5	7.0	8.4	9.5	7.4	8.8	6.2	8.9	8.4	4.7	4.7	3.0	2.5	3.1	9.5	2.5	5.9
26	3.3	2.8	3.6	3.7	2.9	4.5	4.3	3.0	3.5	2.8	4.7	5.1	4.5	3.5	3.8	3.1	3.0	3.1	1.7	1.3	2.0	1.6	2.1	2.6	5.1	1.3	3.2
27	1.9	2.7	2.2	2.1	2.6	2.9	3.3	2.9	3.0	3.3	4.0	4.1	4.7	4.5	4.1	4.0	4.1	3.3	3.5	3.7	11.5	13.1	16.3	18.5	18.5	1.9	5.3
28	17.5	20.1	18.6	19.3	19.3	19.6	17.1	15.1	16.7	16.7	17.8	15.4	17.0	16.5	18.1	17.6	17.5	15.6	14.6	16.5	21.8	14.2	24.3	17.2	24.3	14.2	17.7
29	22.5	21.8	18.8	16.6	17.6	17.9	11.5	8.3	6.1	4.0	4.6	4.6	4.9	5.4	5.4	8.2	5.1	3.3	4.6	6.7	7.1	6.5	6.6	8.4	22.5	3.3	9.4
30	9.8	7.2	8.1	5.4	7.3	6.5	6.0	6.2	6.8	4.3	2.9	3.8	4.5	4.1	4.4	4.7	4.4	4.9	5.4	4.5	11.4	12.0	10.3	10.9	12.0	2.9	6.5
Max.	**22.5**	**21.8**	**18.8**	**19.3**	**19.3**	**19.6**	**18.6**	**19.9**	**20.2**	**16.7**	**19.0**	**18.9**	**18.5**	**16.5**	**18.1**	**17.6**	**17.5**	**15.6**	**14.6**	**16.5**	**21.8**	**14.2**	**24.3**	**18.5**	**24.3**		
Min.	**1.1**	**1.8**	**2.2**	**2.1**	**1.5**	**1.1**	**1.6**	**1.9**	**1.5**	**1.2**	**2.1**	**2.0**	**2.2**	**2.3**	**2.1**	**1.7**	**2.6**	**2.6**	**1.4**	**1.3**	**2.0**	**1.1**	**1.4**	**1.0**		**1.0**	
Avg.	**7.0**	**6.9**	**6.6**	**6.5**	**6.4**	**6.7**	**6.8**	**6.5**	**6.8**	**6.1**	**6.5**	**6.2**	**6.6**	**6.7**	**6.4**	**6.5**	**6.6**	**6.5**	**5.8**	**5.9**	**6.4**	**6.1**	**6.6**	**6.6**			**6.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.6	8.1	10.5	6.9	5.0	5.5	6.7	6.5	5.3	2.5	3.7	3.6	4.7	5.0	6.1	6.4	6.0	5.9	5.7	11.3	15.3	10.2	12.7	13.2	15.3	2.5	7.3
2	13.3	12.4	12.5	10.7	11.4	12.9	9.2	7.2	8.8	8.0	4.4	3.7	3.6	3.0	3.8	11.2	15.4	16.0	13.8	14.1	11.0	3.4	4.7	5.1	16.0	3.0	9.1
3	4.6	5.7	6.3	3.5	2.3	4.9	6.1	3.6	4.4	3.8	3.6	4.0	4.0	4.3	5.0	5.2	4.0	3.2	3.3	3.3	3.6	3.1	3.7	2.2	6.3	2.2	4.1
4	2.9	3.8	3.5	3.5	2.7	3.2	2.6	1.8	3.7	3.8	4.1	4.2	6.1	4.6	5.2	4.9	4.2	4.5	3.9	4.1	3.6	3.5	2.8	2.5	6.1	1.8	3.7
5	2.5	4.7	5.5	4.4	2.8	3.8	5.3	4.4	4.0	4.8	4.8	4.3	3.2	3.4	3.5	3.7	3.3	3.5	3.7	3.5	3.2	2.2	2.3	2.5	5.5	2.2	3.7
6	2.5	0.9	1.1	1.1	2.5	1.5	2.5	2.8	2.7	2.9	2.9	2.6	2.9	3.4	3.6	3.9	4.7	4.3	3.3	3.7	3.5	2.3	2.8	4.9	4.9	0.9	2.9
7	3.2	3.9	3.1	4.9	4.6	2.4	3.2	3.5	3.2	4.4	4.1	4.3	4.0	4.9	7.5	6.5	4.7	3.8	4.4	4.5	5.1	3.2	5.0	4.2	7.5	2.4	4.3
8	4.1	3.7	2.5	2.6	2.2	4.1	5.3	8.4	14.4	13.2	13.1	13.2	12.1	11.3	10.3	8.9	4.4	5.5	10.8	10.2	9.6	9.1	6.1	4.2	14.4	2.2	7.9
9	3.9	5.1	4.0	4.5	4.3	4.4	4.8	4.8	2.8	2.5	3.9	4.3	4.3	4.2	3.8	4.2	4.6	3.7	4.0	4.4	6.3	4.8	5.8	5.0	6.3	2.5	4.4
10	6.4	4.4	4.9	5.4	6.8	6.4	6.2	6.1	4.9	3.6	2.9	3.4	4.7	6.5	4.9	6.0	7.2	4.4	4.4	3.2	4.4	5.0	3.7	3.5	7.2	2.9	5.0
11	2.2	2.7	3.7	2.4	2.8	2.1	2.7	3.3	2.7	6.0	7.0	6.5	6.3	4.8	6.3	4.9	4.3	3.7	2.7	7.2	6.6	3.3	2.4	2.2	7.2	2.1	4.1
12	2.0	2.5	2.4	2.8	2.9	3.5	4.4	4.6	5.3	4.0	2.2	3.8	3.4	3.3	3.4	2.3	5.5	8.5	11.5	14.2	16.3	14.2	10.0	6.3	16.3	2.0	5.8
13	8.7	12.7	13.0	5.5	16.9	16.0	19.4	18.5	19.2	19.2	18.7	17.8	16.5	20.8	21.5	24.1	23.3	24.5	23.6	23.2	22.9	21.0	22.8	19.0	24.5	5.5	18.7
14	26.4	20.1	23.9	22.8	19.8	20.2	17.6	19.0	18.8	20.5	18.4	17.9	16.1	16.5	17.6	15.2	16.6	15.4	13.8	12.6	15.9	13.4	14.8	9.9	26.4	9.9	17.6
15	10.5	8.0	13.5	16.5	13.3	14.7	14.4	12.2	9.3	8.3	10.7	10.5	8.8	8.6	9.2	5.1	4.3	4.4	4.0	3.5	3.8	2.1	3.1	2.9	16.5	2.1	8.4
16	3.2	3.4	5.2	5.5	5.1	4.9	7.8	6.9	6.3	4.4	5.0	4.8	7.1	5.1	5.5	4.3	5.2	4.9	5.2	4.8	6.0	5.5	6.3	5.4	7.8	3.2	5.3
17	6.0	7.7	8.7	8.3	7.1	6.8	5.8	6.8	6.1	6.5	5.6	5.5	9.3	7.5	7.3	7.3	7.2	7.5	7.7	7.5	5.3	6.7	8.0	7.6	9.3	5.3	7.1
18	9.8	9.2	7.5	6.9	7.1	5.1	6.3	5.6	5.2	6.0	5.8	5.3	5.2	4.6	3.6	6.9	6.1	6.0	4.3	5.8	6.0	3.7	3.7	3.8	9.8	3.6	5.8
19	3.4	3.7	3.0	8.1	9.6	9.3	8.3	9.8	9.3	12.0	11.7	10.3	8.4	10.4	10.7	9.8	10.8	7.9	9.6	6.9	5.9	3.2	4.4	5.9	12.0	3.0	8.0
20	6.5	2.6	2.7	2.9	9.9	8.2	6.8	8.6	9.6	10.5	9.2	8.6	10.8	8.9	9.0	6.9	8.3	8.0	10.1	7.9	13.2	4.7	5.4	7.5	13.2	2.6	7.8
21	8.1	7.8	4.6	3.7	3.8	6.4	7.2	6.4	11.0	8.3	9.6	9.7	9.2	8.4	8.8	8.4	6.3	2.9	3.4	4.4	6.3	6.7	5.2	3.8	11.0	2.9	6.7
22	3.3	4.1	3.4	2.4	3.8	6.5	7.3	7.3	6.7	9.6	7.9	6.3	6.7	6.8	6.0	4.3	3.9	7.0	6.2	5.6	5.8	6.0	7.0	6.0	9.6	2.4	5.8
23	8.0	5.9	6.7	5.5	5.0	6.0	8.2	8.1	9.3	10.3	13.4	13.6	13.3	14.2	12.7	11.9	13.1	8.9	11.7	13.8	13.3	9.9	9.8	10.3	14.2	5.0	10.1
24	9.9	11.8	10.2	10.7	10.7	10.1	11.0	8.2	7.6	8.9	9.4	8.0	9.6	7.7	4.1	3.2	3.8	3.9	5.1	4.5	5.2	4.2	5.2	7.6	11.8	3.2	7.5
25	6.8	5.8	6.8	7.5	7.8	5.4	4.5	4.0	4.0	2.5	1.6	1.9	1.7	5.5	5.7	5.9	6.3	2.9	1.1	1.5	1.6	1.9	2.1	2.3	7.8	1.1	4.1
26	5.8	4.0	3.5	2.5	3.0	3.7	7.0	11.0	12.2	14.7	15.3	13.9	15.3	13.0	14.9	15.1	17.5	18.8	19.5	19.5	17.6	19.1	15.5	15.4	19.5	2.5	12.4
27	14.9	15.7	16.8	15.9	12.8	12.3	8.1	10.4	7.3	3.6	3.4	4.0	3.6	3.8	5.4	3.2	3.2	3.1	3.2	3.2	4.9	3.0	2.8	6.5	16.8	2.8	7.1
28	8.0	5.7	7.0	11.0	9.1	11.6	12.2	11.8	9.1	6.7	3.4	5.6	7.4	7.8	5.4	4.6	4.2	3.8	3.4	4.6	8.6	15.5	22.8	17.4	22.8	3.4	8.6
29	15.1	12.9	14.2	12.2	20.7	18.9	18.7	27.2	30.0	24.3	24.4	19.9	16.4	19.7	17.2	13.4	14.6	13.5	17.8	17.2	16.6	24.7	29.7	25.9	30.0	12.2	19.4
30	20.5	23.0	21.2	23.1	17.3	17.6	22.1	23.5	23.2	24.6	22.6	18.6	17.3	17.6	16.5	16.1	11.1	9.0	10.5	15.7	8.3	5.4	9.6	15.1	24.6	5.4	17.1
31	14.7	13.7	14.4	12.3	14.0	11.3	11.9	12.9	13.0	13.0	10.8	8.6	13.2	10.8	13.4	12.6	12.9	14.4	13.2	11.5	10.7	11.1	14.5	15.1	15.1	8.6	12.7
Max.	**26.4**	**23.0**	**23.9**	**23.1**	**20.7**	**20.2**	**22.1**	**27.2**	**30.0**	**24.6**	**24.4**	**19.9**	**17.3**	**20.8**	**21.5**	**24.1**	**23.3**	**24.5**	**23.6**	**23.2**	**22.9**	**24.7**	**29.7**	**25.9**	**30.0**		
Min.	**2.0**	**0.9**	**1.1**	**1.1**	**2.2**	**1.5**	**2.5**	**1.8**	**2.7**	**2.5**	**1.6**	**1.9**	**1.7**	**3.0**	**3.4**	**2.3**	**3.2**	**2.9**	**1.1**	**1.5**	**1.6**	**1.9**	**2.1**	**2.2**		**0.9**	
Avg.	**7.9**	**7.6**	**7.9**	**7.6**	**8.0**	**8.1**	**8.5**	**8.9**	**9.0**	**8.8**	**8.5**	**8.0**	**8.2**	**8.3**	**8.3**	**7.9**	**8.0**	**7.5**	**7.9**	**8.3**	**8.6**	**7.5**	**8.2**	**7.8**			**8.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.8	2.3	4.0	3.8	1.7	1.5	1.4	2.5	2.1	1.4	2.2	2.8	3.5	3.4	2.9	3.6	4.9	2.4	3.0	2.7	3.0	5.0	3.1	4.5	5.0	1.4	3.0
2	5.1	4.2	4.1	3.9	4.0	4.8	5.4	6.0	5.4	5.7	6.2	6.7	6.9	7.5	7.5	7.7	8.4	8.8	9.1	9.5	8.7	9.0	7.5	8.7	9.5	3.9	6.7
3	8.6	9.4	8.0	8.4	7.5	7.9	6.4	5.0	2.3	1.8	2.4	3.6	3.0	4.0	3.8	3.6	2.9	2.0	2.2	2.2	2.2	2.6	4.3	3.6	9.4	1.8	4.5
4	2.6	1.7	1.7	2.0	2.4	2.5	2.7	3.3	3.3	1.9	1.9	2.5	2.7	4.1	4.5	3.6	5.7	6.3	3.5	2.3	3.2	5.6	6.6	8.2	8.2	1.7	3.5
5	8.4	9.2	9.6	10.2	9.3	9.3	8.8	8.6	7.1	7.0	7.2	6.6	5.6	6.9	5.5	2.1	6.1	7.1	7.4	7.1	6.2	7.9	8.2	9.5	10.2	2.1	7.5
6	10.3	9.2	9.2	10.1	9.5	9.3	9.6	8.2	7.4	6.1	2.3	1.7	2.0	4.9	4.3	2.0	8.6	6.0	2.8	3.1	3.4	5.9	5.1	7.7	10.3	1.7	6.2
7	7.9	4.7	3.2	3.7	4.0	8.7	9.1	12.1	10.6	10.7	9.4	10.6	9.2	7.7	7.0	8.0	7.0	6.2	5.5	6.5	7.8	4.5	4.7	4.6	12.1	3.2	7.2
8	4.3	3.7	3.4	2.7	2.8	3.1	3.1	3.8	3.9	2.6	3.5	3.8	3.6	3.6	4.0	3.9	3.9	3.7	2.5	2.0	1.5	1.3	2.2	2.7	4.3	1.3	3.2
9	2.9	2.6	1.9	2.0	2.1	2.0	5.2	5.0	3.0	4.1	5.2	5.2	5.1	5.0	5.5	5.0	4.2	3.9	2.7	2.7	2.3	2.4	4.2	3.5	5.5	1.9	3.6
10	4.4	6.9	4.4	2.0	1.6	3.2	6.3	6.2	4.5	4.5	4.0	5.3	5.6	4.6	4.8	4.6	4.5	4.3	3.4	1.6	1.8	1.3	1.3	1.4	6.9	1.3	3.9
11	1.5	1.4	1.2	1.9	1.6	1.9	2.6	2.9	2.6	2.9	3.5	3.7	3.7	2.8	3.7	3.9	3.7	2.5	2.1	1.9	1.6	4.2	4.0	2.6	4.2	1.2	2.7
12	2.8	1.8	1.5	1.7	3.0	3.0	2.5	1.3	1.9	3.5	3.5	3.7	3.9	3.8	3.8	3.9	3.8	2.5	2.2	2.6	2.3	3.2	3.7	3.1	3.9	1.3	2.9
13	1.8	2.3	1.6	2.9	2.9	2.7	3.2	3.2	3.7	3.4	2.5	2.7	4.4	3.8	3.4	3.7	3.9	4.5	4.4	4.0	2.6	2.6	3.4	3.7	4.5	1.6	3.2
14	2.9	3.0	3.8	3.4	3.5	3.8	3.7	2.9	3.0	3.2	3.6	3.3	2.7	3.1	3.6	3.5	3.8	3.7	3.5	3.6	2.5	1.9	2.4	2.5	3.8	1.9	3.2
15	2.7	3.0	2.1	2.3	2.4	2.5	2.4	2.2	2.2	3.1	3.1	3.2	3.4	2.2	3.5	3.4	4.0	4.6	4.2	3.0	2.8	3.3	2.8	3.5	4.6	2.1	3.0
16	2.5	3.8	4.3	2.7	3.6	5.0	5.7	6.2	4.7	5.2	4.8	5.0	7.2	7.2	6.6	5.4	5.2	3.7	3.4	3.9	6.2	7.3	3.7	4.7	7.3	2.5	4.9
17	5.8	6.3	6.6	6.6	6.5	7.4	8.9	9.3	9.9	9.7	9.0	10.5	9.6	9.1	9.3	11.0	11.5	11.3	10.4	9.5	10.1	7.7	9.0	7.6	11.5	5.8	8.9
18	7.3	7.7	7.0	8.6	7.1	6.3	7.5	8.4	7.2	5.0	6.2	3.9	4.1	3.9	3.6	3.8	3.8	2.8	2.9	2.4	1.8	1.8	1.3	1.0	8.6	1.0	4.8
19	2.3	3.0	1.4	2.1	3.0	5.5	5.5	5.2	4.1	3.0	1.9	2.6	3.2	3.3	3.0	5.7	7.0	7.9	7.1	6.5	7.4	8.8	8.6	10.2	10.2	1.4	4.9
20	6.0	7.7	13.5	11.6	9.6	10.1	9.5	6.9	9.0	7.2	6.7	8.3	9.3	8.0	10.8	9.5	9.4	6.9	5.7	5.3	11.2	18.7	17.4	13.2	18.7	5.3	9.6
21	10.9	15.4	18.0	14.4	16.5	19.4	17.9	14.6	16.0	11.4	9.3	8.8	14.2	9.1	7.1	7.2	4.6	6.8	4.1	2.8	2.9	2.8	3.0	2.8	19.4	2.8	10.0
22	2.8	3.9	3.2	2.6	5.0	4.9	4.9	6.2	5.5	4.2	4.4	5.6	5.5	3.8	7.7	7.4	7.0	9.4	7.7	8.1	11.5	9.3	8.7	12.2	12.2	2.6	6.3
23	10.9	8.1	9.3	8.5	8.9	9.5	9.1	7.2	4.6	7.8	7.0	9.4	7.8	4.1	5.3	4.9	5.3	3.2	1.2	2.7	3.6	3.2	2.6	3.8	10.9	1.2	6.2
24	3.1	2.4	3.6	4.2	4.5	4.1	3.2	2.8	2.4	2.1	2.9	6.4	8.9	8.7	7.6	8.5	8.7	11.5	14.8	13.3	11.4	8.0	8.9	11.0	14.8	2.1	6.8
25	9.3	7.8	7.9	11.6	10.9	11.0	9.3	8.8	6.1	8.0	5.4	2.7	7.5	5.9	5.5	3.9	4.3	3.4	2.5	2.3	2.0	1.6	2.9	3.8	11.6	1.6	6.0
26	3.8	2.9	3.2	4.3	4.1	4.8	4.7	4.3	5.2	5.2	4.4	6.0	6.5	4.6	9.0	8.8	9.6	6.7	4.4	8.0	10.0	10.6	9.4	11.6	11.6	2.9	6.3
27	11.1	11.1	11.8	9.9	7.1	7.6	7.6	6.7	6.6	6.0	5.9	7.4	7.0	8.7	6.0	6.2	9.4	12.1	12.9	15.6	11.1	9.9	12.4	11.0	15.6	5.9	9.2
28	10.9	7.2	6.2	4.7	4.9	3.0	2.3	1.7	5.6	4.6	0.9	1.5	4.2	3.2	2.1	2.4	6.3	13.7	19.5	17.8	15.8	17.5	21.0	18.9	21.0	0.9	8.2
29	16.4	12.5	11.7	15.3	12.2	15.1	14.5	11.5	8.2	12.1	9.4	13.1	11.9	10.9	11.6	12.9	10.2	9.7	11.7	10.2	9.0	9.0	10.9	8.9	16.4	8.2	11.6
30	8.5	7.8	8.9	8.1	9.6	7.2	8.3	8.6	6.6	5.9	5.7	6.4	7.1	6.9	9.0	6.8	10.3	10.6	7.9	8.1	9.4	11.0	9.7	9.6	11.0	5.7	8.2
31	9.3	9.2	11.4	11.0	9.3	9.7	7.0	8.3	9.3	8.5	11.2	12.3	10.2	9.0	9.0	10.6	10.7	7.1	7.3	10.9	9.8	10.0	9.5	9.6	12.3	7.0	9.6
Max.	**16.4**	**15.4**	**18.0**	**15.3**	**16.5**	**19.4**	**17.9**	**14.6**	**16.0**	**12.1**	**11.2**	**13.1**	**14.2**	**10.9**	**11.6**	**12.9**	**11.5**	**13.7**	**19.5**	**17.8**	**15.8**	**18.7**	**21.0**	**18.9**	**21.0**		
Min.	**1.5**	**1.4**	**1.2**	**1.7**	**1.6**	**1.5**	**1.4**	**1.3**	**1.9**	**1.4**	**0.9**	**1.5**	**2.0**	**2.2**	**2.1**	**2.0**	**2.9**	**2.0**	**1.2**	**1.6**	**1.5**	**1.3**	**1.3**	**1.0**		**0.9**	
Avg.	**6.2**	**5.9**	**6.1**	**6.0**	**5.8**	**6.3**	**6.4**	**6.1**	**5.6**	**5.4**	**5.0**	**5.7**	**6.1**	**5.6**	**5.8**	**5.7**	**6.4**	**6.3**	**5.9**	**5.9**	**6.0**	**6.4**	**6.5**	**6.8**			**6.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.8	8.5	8.2	5.9	5.6	4.4	7.8	6.8	7.7	7.3	6.7	3.9	10.2	10.8	8.5	9.7	11.1	11.1	10.6	9.7	8.4	9.0	9.5	7.6	11.1	3.9	8.2
2	4.3	3.7	4.3	3.9	4.1	3.6	3.9	4.3	4.0	4.0	3.8	2.5	4.4	5.6	5.5	5.7	6.5	3.5	3.8	4.3	4.3	4.8	4.9	5.2	6.5	2.5	4.4
3	5.6	3.2	2.8	5.9	4.7	3.7	5.1	6.8	6.2	7.4	7.7	7.1	8.1	8.4	8.6	8.8	9.5	10.5	10.3	11.0	10.7	10.3	10.5	10.3	11.0	2.8	7.6
4	9.0	8.6	8.9	9.0	9.9	9.9	9.4	9.3	9.4	7.7	6.8	6.9	6.2	5.4	4.5	3.6	2.9	3.7	4.9	5.8	4.7	3.0	1.9	2.6	9.9	1.9	6.4
5	2.5	3.0	2.8	3.1	3.3	3.9	3.5	5.1	5.1	5.9	5.8	5.1	4.1	3.5	3.9	4.4	4.5	4.5	5.1	4.5	6.2	5.8	6.2	5.5	6.2	2.5	4.5
6	5.3	5.4	4.5	4.1	3.2	6.5	4.3	2.8	3.3	9.3	13.2	11.6	15.2	15.2	10.9	10.3	7.6	11.0	3.0	11.1	11.0	13.3	13.3	10.5	15.2	2.8	8.6
7	12.0	10.7	11.8	10.9	11.8	8.9	11.1	10.4	12.8	12.8	9.9	9.3	7.3	8.9	6.3	9.1	6.6	6.5	8.5	7.6	9.6	8.5	11.1	12.5	12.8	6.3	9.8
8	13.2	13.0	11.8	12.5	11.7	10.6	8.3	7.4	7.3	7.6	4.8	2.1	2.6	2.7	2.7	3.2	3.3	2.9	3.1	3.5	4.4	6.4	6.4	5.0	13.2	2.1	6.5
9	6.5	7.0	8.9	9.3	8.7	8.2	8.4	10.2	10.0	9.9	10.2	9.1	6.2	5.7	6.6	4.2	2.5	5.8	5.6	4.8	2.3	6.1	7.4	8.8	10.2	2.3	7.2
10	10.2	10.0	8.9	12.7	12.0	13.2	12.1	12.1	13.8	12.7	12.1	13.0	13.6	11.4	3.7	6.7	9.1	5.9	1.5	3.4	2.8	2.1	3.3	3.2	13.8	1.5	8.7
11	3.1	5.4	6.1	5.0	5.8	5.5	5.4	3.9	3.5	4.4	4.9	5.3	6.8	6.6	6.9	8.0	5.8	7.2	7.9	8.2	5.7	4.3	5.1	5.4	8.2	3.1	5.7
12	3.4	3.5	4.3	6.2	10.1	12.0	14.6	9.1	7.7	9.7	15.1	19.3	19.3	12.5	11.9	15.7	21.7	16.0	25.2	26.1	20.5	22.0	15.4	17.7	26.1	3.4	14.1
13	18.3	14.9	15.1	10.2	7.2	7.6	7.5	13.0	10.8	8.8	10.3	5.7	4.7	10.2	9.3	9.6	9.8	10.1	7.3	9.5	10.1	8.8	9.7	7.3	18.3	4.7	9.8
14	9.3	10.8	6.9	4.1	2.5	3.4	3.0	2.9	4.5	4.5	2.5	2.0	2.1	3.2	6.1	7.9	7.9	5.7	7.0	8.7	5.3	4.3	6.2	6.8	10.8	2.0	5.3
15	7.5	6.6	7.2	7.6	3.6	5.7	6.9	5.5	4.8	6.4	5.4	6.8	5.4	5.7	6.9	3.6	4.7	4.4	3.3	5.9	7.7	5.2	4.6	5.7	7.7	3.3	5.7
16	5.5	5.1	6.3	10.0	10.8	10.2	9.4	7.8	10.6	11.0	10.5	7.5	7.4	9.9	10.3	9.9	8.8	10.3	8.5	2.3	3.1	2.5	5.6	8.2	11.0	2.3	8.0
17	8.5	7.4	5.7	4.0	4.9	4.3	4.4	4.1	4.1	5.3	4.5	5.1	6.4	6.0	4.4	1.9	1.9	2.8	2.6	1.8	2.6	4.2	6.3	8.1	8.5	1.8	4.6
18	8.4	9.4	9.4	10.6	10.3	10.4	10.7	10.0	10.9	9.7	10.2	10.7	8.0	7.2	9.1	9.2	10.3	8.6	12.3	9.0	8.1	8.1	9.7	8.2	12.3	7.2	9.5
19	9.8	9.2	8.4	11.4	14.4	14.6	12.8	13.2	14.8	12.9	8.9	10.2	8.0	6.8	6.1	5.9	7.8	6.6	8.6	8.4	9.6	10.1	10.0	10.3	14.8	5.9	10.0
20	10.8	10.8	10.6	10.9	11.2	9.9	9.9	9.1	9.1	10.7	6.1	9.3	8.4	11.1	10.2	8.0	7.7	6.7	8.4	11.7	11.8	10.5	6.2	9.3	11.8	6.1	9.5
21	11.7	10.9	9.8	9.6	9.6	9.5	8.7	8.8	4.3	2.6	3.7	3.9	3.5	2.4	1.8	3.2	4.6	5.5	4.9	4.5	3.5	2.8	2.9	3.5	11.7	1.8	5.7
22	3.0	3.2	5.0	6.5	5.7	6.7	7.7	7.2	6.6	6.4	7.1	5.9	6.5	4.2	5.3	4.6	4.8	5.9	5.3	5.0	4.4	3.7	6.1	4.0	7.7	3.0	5.5
23	7.0	7.5	5.2	3.7	2.5	2.7	4.1	1.2	2.3	1.9	5.4	6.5	5.8	3.0	4.6	5.7	4.2	4.6	4.3	5.5	21.2	24.4	22.1	24.1	24.4	1.2	7.5
24	22.2	25.7	23.8	18.8	18.1	14.1	13.9	13.0	17.0	16.0	14.5	12.4	11.9	17.7	11.7	14.5	15.8	11.9	14.7	11.0	13.2	8.4	13.7	11.2	25.7	8.4	15.2
25	12.6	13.9	13.6	14.7	16.3	18.2	12.9	14.2	14.2	14.2	14.3	13.9	12.6	13.4	13.2	13.0	11.3	10.2	11.4	11.3	9.3	5.6	7.3	6.6	18.2	5.6	12.4
26	2.8	3.6	3.5	2.3	3.4	4.8	6.8	6.2	5.3	6.2	7.8	8.0	6.2	5.6	9.2	9.9	8.9	11.0	9.6	9.7	10.3	11.3	11.4	13.1	13.1	2.3	7.4
27	15.2	14.1	14.7	15.1	15.3	17.0	18.5	19.4	17.1	17.1	16.6	17.2	17.4	18.2	16.6	16.3	15.1	12.7	12.9	12.5	11.1	9.2	8.8	8.0	19.4	8.0	14.8
28	7.8	7.4	6.8	7.1	6.4	4.5	5.0	5.5	2.2	3.5	3.5	1.1	1.7	1.7	2.2	3.8	6.1	4.7	4.5	2.4	3.3	3.5	5.9	6.4	7.8	1.1	4.5
29	7.8	10.5	10.3	11.3	10.3	9.4	10.6	9.4	9.6	9.1	9.3	11.1	10.5	12.3	12.8	12.7	10.7	12.4	10.9	10.5	11.4	12.4	11.4	12.3	12.8	7.8	10.8
30	13.3	12.1	11.5	11.4	10.6	10.5	12.3	12.3	10.8	10.2	10.2	8.5	8.6	7.8	8.2	6.3	7.4	6.6	8.5	8.5	8.5	7.5	7.8	8.0	13.3	6.3	9.5
Max.	**22.2**	**25.7**	**23.8**	**18.8**	**18.1**	**18.2**	**18.5**	**19.4**	**17.1**	**17.1**	**16.6**	**19.3**	**19.3**	**18.2**	**16.6**	**16.3**	**21.7**	**16.0**	**25.2**	**26.1**	**21.2**	**24.4**	**22.1**	**24.1**	**26.1**		
Min.	**2.5**	**3.0**	**2.8**	**2.3**	**2.5**	**2.7**	**3.0**	**1.2**	**2.2**	**1.9**	**2.5**	**1.1**	**1.7**	**1.7**	**1.8**	**1.9**	**1.9**	**2.8**	**1.5**	**1.8**	**2.3**	**2.1**	**1.9**	**2.6**		**1.1**	
Avg.	**8.8**	**8.8**	**8.6**	**8.6**	**8.5**	**8.5**	**8.6**	**8.4**	**8.3**	**8.5**	**8.4**	**8.0**	**8.0**	**8.1**	**7.6**	**7.8**	**8.0**	**7.6**	**7.8**	**7.9**	**8.2**	**7.9**	**8.4**	**8.5**			**8.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.3	8.6	9.4	10.9	11.2	11.1	9.6	9.4	11.6	11.8	12.5	11.3	8.8	12.3	12.6	13.5	11.2	11.5	10.9	9.3	11.5	12.9	11.7	10.8	13.5	8.3	10.9
2	12.3	12.9	11.9	12.7	12.6	12.2	8.9	11.4	9.9	10.6	9.5	10.8	10.8	11.5	9.5	12.8	9.4	6.4	7.3	8.6	7.0	6.6	4.1	3.6	12.9	3.6	9.7
3	3.3	4.1	5.2	5.2	7.2	6.3	5.4	4.4	6.9	8.2	8.7	7.6	9.3	10.1	11.5	11.0	10.7	8.1	9.0	8.9	8.6	6.2	8.4	8.4	11.5	3.3	7.6
4	9.8	8.6	8.9	9.0	10.0	8.9	9.2	10.0	10.8	10.4	10.7	10.4	9.9	12.9	12.8	13.2	14.1	13.4	13.5	14.0	16.6	15.9	15.9	14.5	16.6	8.6	11.8
5	14.4	11.0	9.9	10.6	10.2	9.6	8.9	7.8	7.5	8.0	9.4	6.7	6.6	4.0	2.0	3.4	4.8	5.7	6.9	7.1	7.5	6.4	6.7	5.8	14.4	2.0	7.5
6	5.7	4.5	5.0	3.1	3.0	3.4	3.1	3.2	2.1	3.5	3.1	2.8	2.4	2.4	4.6	3.6	3.4	3.5	2.9	3.7	2.9	3.4	3.9	4.1	5.7	2.1	3.5
7	4.6	5.1	5.4	3.4	4.5	3.7	4.5	5.9	7.3	7.7	6.6	6.4	6.6	5.7	6.6	7.7	7.4	7.1	6.9	7.2	6.5	6.0	4.8	4.1	7.7	3.4	5.9
8	4.2	4.6	3.6	2.1	2.1	2.5	4.7	4.3	5.2	4.5	3.7	3.4	2.8	2.6	4.1	3.8	4.2	3.9	4.1	3.6	3.4	4.0	3.4	3.7	5.2	2.1	3.7
9	3.5	4.1	3.9	3.2	3.1	3.9	3.7	3.9	3.9	5.9	4.5	5.0	4.6	6.6	7.2	8.1	9.6	8.9	9.7	9.4	11.1	12.8	13.0	12.4	13.0	3.1	6.8
10	12.6	11.3	11.2	12.6	11.8	11.5	14.0	11.8	13.3	8.8	7.7	6.7	4.2	3.7	2.8	3.1	3.4	3.8	3.9	5.6	5.9	6.6	4.8	5.3	14.0	2.8	7.8
11	4.9	4.7	6.1	6.9	6.9	6.5	6.6	5.2	3.5	2.3	3.5	3.7	6.0	6.7	9.2	10.9	9.9	8.5	12.2	14.1	11.9	11.5	11.7	13.8	14.1	2.3	7.8
12	14.8	10.4	15.3	16.0	14.2	14.3	13.8	16.1	11.9	8.6	16.6	11.1	12.3	13.7	17.5	17.2	14.0	14.9	13.5	11.1	13.6	11.5	11.9	11.6	17.5	8.6	13.6
13	10.7	8.9	9.2	5.7	4.9	6.1	7.1	4.7	4.1	6.1	6.5	6.8	12.0	8.3	7.9	11.0	9.6	9.2	8.7	8.1	3.0	3.8	3.7	2.5	12.0	2.5	7.0
14	3.9	3.7	3.0	5.3	5.2	4.4	3.6	3.7	4.7	6.0	6.2	4.4	5.3	5.6	4.1	3.8	3.8	3.2	4.5	3.9	5.6	6.2	6.9	7.2	7.2	3.0	4.8
15	8.5	8.6	8.3	8.5	8.2	7.9	8.1	7.6	7.4	7.0	5.6	4.1	3.9	2.9	2.5	3.6	4.1	5.1	5.4	2.3	3.8	4.3	3.0	4.4	8.6	2.3	5.6
16	2.4	2.7	2.6	8.4	7.7	8.7	9.2	8.6	8.9	5.7	6.5	9.7	6.8	8.6	12.1	8.4	9.6	9.3	8.1	5.5	6.8	4.0	3.3	3.6	12.1	2.4	6.9
17	3.7	5.2	7.3	7.4	7.3	7.8	6.5	6.7	6.3	6.8	8.7	8.5	9.5	8.8	12.1	14.9	17.3	13.7	12.5	12.3	12.8	12.2	12.0	8.6	17.3	3.7	9.5
18	7.3	13.3	13.7	15.7	17.7	18.6	19.1	20.1	21.5	19.1	16.2	11.6	10.8	11.2	8.6	11.4	9.6	6.1	11.5	12.2	5.8	1.9	3.4	4.2	21.5	1.9	12.1
19	6.1	6.6	6.3	5.8	5.9	5.2	5.4	9.1	7.1	7.0	6.7	7.4	7.1	7.3	7.7	6.5	5.2	6.4	6.9	8.7	7.4	10.5	11.2	10.2	11.2	5.2	7.2
20	10.5	10.6	8.6	12.1	10.3	10.7	10.5	10.5	11.2	11.6	12.6	14.1	13.7	13.9	14.3	13.1	13.1	12.6	12.2	13.6	13.9	13.9	13.9	15.4	15.4	8.6	12.4
21	12.3	9.2	8.9	5.5	5.7	6.2	5.3	4.2	1.2	1.6	1.3	1.1	1.4	1.8	3.0	3.1	2.6	1.9	8.7	8.9	11.3	12.0	7.5	9.9	12.3	1.1	5.6
22	10.5	10.7	9.6	7.6	11.3	9.4	10.6	12.1	14.0	12.7	12.2	14.5	17.4	16.7	19.0	20.4	17.9	9.2	6.9	8.6	11.8	12.9	18.0	12.9	20.4	6.9	12.8
23	11.4	18.9	16.7	14.8	13.5	10.5	9.2	11.3	10.3	11.1	10.1	7.0	8.6	7.7	8.3	7.5	5.6	2.5	2.1	1.9	3.6	3.9	4.6	4.5	18.9	1.9	8.6
24	3.8	4.4	3.4	2.3	5.2	4.1	5.4	7.2	8.6	6.5	7.6	6.6	7.8	9.0	9.1	9.7	12.6	11.9	12.2	13.8	11.7	12.2	12.5	13.7	13.8	2.3	8.4
25	13.3	12.1	11.3	10.6	7.2	11.0	10.3	11.1	9.5	6.9	7.3	7.5	5.9	4.5	3.2	3.7	3.4	2.9	6.6	6.7	6.0	5.2	6.1	5.3	13.3	2.9	7.4
26	4.2	6.2	5.4	5.6	5.3	3.7	6.9	6.4	6.0	7.8	7.7	8.1	6.6	7.0	6.4	5.4	5.7	6.6	6.8	3.4	4.8	6.1	5.6	3.8	8.1	3.4	5.9
27	4.9	4.1	3.9	4.5	4.0	4.1	3.7	3.5	3.8	4.3	5.3	4.7	4.2	3.5	2.3	2.1	1.6	2.6	3.1	3.2	3.8	3.9	4.1	4.4	5.3	1.6	3.7
28	3.9	3.3	4.7	3.7	4.3	4.5	5.2	5.0	5.3	6.3	5.7	4.8	6.5	5.3	3.8	3.9	2.6	2.3	5.5	5.7	3.0	2.8	6.1	4.1	6.5	2.3	4.5
29	4.4	4.0	4.7	3.9	3.7	4.3	4.2	4.4	4.4	4.6	4.4	5.1	5.3	4.8	4.9	5.8	5.3	6.0	4.9	5.6	5.7	5.4	4.9	5.6	6.0	3.7	4.9
30	5.2	5.1	4.9	5.8	4.0	3.4	4.0	3.7	3.0	4.6	3.8	2.6	1.8	2.9	4.2	6.2	8.3	7.5	7.5	9.0	8.5	8.3	7.6	7.0	9.0	1.8	5.4
31	6.8	8.2	7.7	9.3	10.2	11.1	13.1	12.2	11.4	9.5	12.3	13.3	12.3	11.0	15.1	10.4	9.5	11.0	11.3	10.5	9.0	9.6	8.2	7.5	15.1	6.8	10.4
Max.	**14.8**	**18.9**	**16.7**	**16.0**	**17.7**	**18.6**	**19.1**	**20.1**	**21.5**	**19.1**	**16.6**	**14.5**	**17.4**	**16.7**	**19.0**	**20.4**	**17.9**	**14.9**	**13.5**	**14.1**	**16.6**	**15.9**	**18.0**	**15.4**	**21.5**		
Min.	**2.4**	**2.7**	**2.6**	**2.1**	**2.1**	**2.5**	**3.1**	**3.2**	**1.2**	**1.6**	**1.3**	**1.1**	**1.4**	**1.8**	**2.0**	**2.1**	**1.6**	**1.9**	**2.1**	**1.9**	**2.9**	**1.9**	**3.0**	**2.5**		**1.1**	
Avg.	**7.5**	**7.6**	**7.6**	**7.7**	**7.7**	**7.6**	**7.7**	**7.9**	**7.8**	**7.6**	**7.8**	**7.3**	**7.5**	**7.5**	**8.0**	**8.4**	**8.0**	**7.3**	**7.9**	**8.0**	**7.9**	**7.8**	**7.8**	**7.5**			**7.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	7.7	8.5	6.5	3.8	4.1	3.5	3.4	3.7	2.5	6.3	6.3	5.5	6.1	7.3	7.7	8.1	9.9	10.9	9.4	10.4	9.8	11.2	9.1	11.2	2.5	7.0
2	9.2	7.5	8.2	9.5	7.4	7.7	7.9	7.6	6.2	6.4	5.3	6.1	8.2	7.6	7.9	8.6	6.7	8.6	10.0	8.8	6.4	7.1	6.2	5.4	10.0	5.3	7.5
3	7.4	7.2	8.7	7.7	9.6	6.0	6.9	9.3	8.0	8.6	8.6	9.4	10.8	12.6	14.2	12.9	12.3	12.8	13.2	13.1	11.5	12.5	12.4	11.1	14.2	6.0	10.3
4	13.6	14.8	13.7	12.5	10.0	10.7	11.4	10.2	13.1	11.7	11.4	11.0	11.0	12.6	14.4	12.2	11.8	12.2	12.0	12.7	10.7	10.6	5.5	8.5	14.8	5.5	11.6
5	6.1	5.5	8.4	10.2	10.9	11.0	9.5	9.5	10.9	8.6	13.7	12.4	11.0	12.3	10.3	9.3	10.1	12.2	12.4	14.8	15.0	12.5	10.3	9.0	15.0	5.5	10.7
6	15.3	8.5	5.0	5.6	2.0	3.4	4.0	2.8	4.3	5.4	13.1	12.0	18.2	16.0	7.5	6.8	8.5	9.2	11.5	13.1	13.3	8.8	8.3	9.0	18.2	2.0	8.8
7	7.2	9.0	13.1	13.5	10.7	12.5	11.0	7.9	8.7	8.2	6.5	5.8	5.3	5.2	4.9	6.3	7.1	6.1	7.1	7.0	8.4	8.1	9.7	10.3	13.5	4.9	8.3
8	9.9	10.3	10.5	11.1	9.7	8.7	9.3	8.2	8.7	7.6	7.2	6.3	4.8	4.4	2.7	3.1	2.6	2.6	2.3	2.3	2.4	2.5	2.4	2.6	11.1	2.3	5.9
9	2.9	2.4	2.1	2.1	2.3	2.0	2.7	2.2	1.7	2.3	3.3	5.7	5.9	5.3	5.2	5.7	3.6	5.8	5.6	6.3	4.7	5.7	7.1	9.1	9.1	1.7	4.2
10	6.9	8.6	9.5	11.4	14.1	14.8	12.1	11.6	13.7	14.5	14.2	15.2	14.6	15.0	14.2	14.6	13.4	13.7	12.9	11.4	11.7	9.3	6.1	4.2	15.2	4.2	12.0
11	5.2	5.7	5.4	4.0	1.7	2.0	5.2	3.1	4.3	4.9	6.4	6.8	6.1	5.9	4.6	5.3	6.1	6.6	7.2	3.3	3.4	2.0	6.5	6.1	7.2	1.7	4.9
12	3.9	2.8	4.9	4.8	3.2	3.3	2.3	4.3	6.1	5.0	1.6	3.3	3.2	3.0	3.4	3.8	3.1	3.5	3.1	3.4	3.1	4.8	4.9	6.6	6.6	1.6	3.8
13	5.5	6.8	7.3	7.7	7.5	7.2	7.1	7.1	7.4	6.4	7.8	5.9	3.8	4.1	4.5	2.6	3.2	3.1	5.2	4.5	5.4	5.0	5.5	5.3	7.8	2.6	5.7
14	5.9	6.6	7.1	7.6	8.5	8.7	9.3	9.4	9.6	10.5	10.4	10.4	12.0	11.8	13.0	13.4	14.4	14.8	15.0	14.6	14.2	14.5	14.5	15.9	15.9	5.9	11.3
15	14.4	14.0	8.2	7.4	5.9	2.1	2.5	2.1	3.4	3.2	3.2	3.3	4.0	8.0	4.2	3.4	4.6	6.4	6.0	7.4	5.3	4.1	5.6	4.9	14.4	2.1	5.6
16	5.3	7.1	7.6	8.8	7.9	12.4	12.4	13.7	13.8	10.7	9.6	9.3	8.4	7.7	9.3	9.3	9.8	8.4	8.0	8.1	8.6	9.2	8.7	8.5	13.8	5.3	9.3
17	8.9	7.8	8.2	8.0	7.3	6.8	6.6	6.0	5.9	3.2	1.7	3.0	6.9	9.5	12.2	12.0	12.6	11.4	9.7	5.8	4.3	6.3	6.7	5.9	12.6	1.7	7.4
18	7.0	7.6	12.2	8.9	10.0	9.2	10.8	10.2	12.8	12.3	11.5	9.1	9.9	10.4	10.9	8.9	8.6	6.7	5.1	14.3	15.3	17.4	17.7	14.8	17.7	5.1	10.9
19	13.7	9.0	12.4	12.5	12.7	9.3	10.3	13.1	16.3	16.7	14.5	12.1	9.2	13.3	16.4	15.6	16.3	16.1	17.9	14.8	12.1	6.5	3.1	5.9	17.9	3.1	12.5
20	5.0	5.7	6.1	6.9	8.0	7.9	7.9	7.8	7.6	7.7	9.7	9.9	9.8	10.1	9.7	8.5	5.1	4.9	4.2	3.3	2.4	2.2	2.0	3.0	10.1	2.0	6.5
21	3.7	3.2	3.1	3.9	6.1	7.6	7.2	7.8	11.1	10.2	11.2	9.6	12.2	11.6	10.6	13.9	14.4	12.6	12.8	17.7	17.1	12.5	8.6	9.7	17.7	3.1	9.9
22	11.8	12.9	12.9	10.2	7.1	6.3	7.4	10.3	9.6	9.6	8.5	7.0	7.3	8.3	7.4	6.8	6.5	6.4	7.5	10.5	12.8	14.0	12.7	13.9	14.0	6.3	9.5
23	14.9	15.6	16.4	17.9	17.1	19.4	20.7	21.6	19.3	21.4	20.8	17.9	17.0	16.4	14.1	13.8	11.4	12.6	13.8	14.2	14.4	11.9	11.5	11.9	21.6	11.4	16.1
24	11.7	13.2	15.8	14.5	15.6	15.3	12.6	14.7	15.9	17.1	15.8	19.6	20.2	23.9	24.0	22.8	22.2	25.1	22.0	19.5	18.7	18.2	17.7	19.3	25.1	11.7	18.1
25	17.2	16.5	17.1	17.6	16.3	18.5	16.8	17.8	18.8	20.1	18.8	17.9	17.1	18.0	17.5	17.0	15.4	14.1	15.1	16.4	16.7	14.7	13.6	14.9	20.1	13.6	16.8
26	12.8	11.4	12.5	12.5	12.7	12.9	13.4	13.4	13.5	13.5	13.0	14.3	12.7	14.2	14.9	13.7	13.8	12.7	8.7	10.2	9.2	8.0	8.5	8.9	14.9	8.0	12.1
27	8.6	8.6	8.5	8.5	7.1	6.1	7.9	8.0	7.9	8.3	9.0	8.1	8.2	7.6	6.0	5.8	6.1	5.6	4.4	3.8	4.1	3.8	4.5	3.7	9.0	3.7	6.7
28	4.2	4.6	3.5	3.5	4.2	3.8	3.9	3.1	4.1	4.6	3.1	3.1	3.2	3.0	2.5	2.3	3.4	2.8	2.3	2.4	2.9	3.2	2.9	2.6	4.6	2.3	3.3
29	3.4	3.4	3.7	4.8	4.6	4.1	5.1	5.7	3.7	3.3	2.7	8.2	10.2	6.9	3.5	10.7	12.3	15.6	12.0	7.4	7.8	8.3	8.3	7.1	15.6	2.7	6.8
30	9.0	7.7	6.5	10.0	6.3	5.7	6.3	7.3	5.2	9.9	12.0	8.7	11.7	11.5	7.1	6.4	6.5	5.9	6.0	7.4	7.8	8.0	6.0	6.4	12.0	5.2	7.7
Max.	**17.2**	**16.5**	**17.1**	**17.9**	**17.1**	**19.4**	**20.7**	**21.6**	**19.3**	**21.4**	**20.8**	**19.6**	**20.2**	**23.9**	**24.0**	**22.8**	**22.2**	**25.1**	**22.0**	**19.5**	**18.7**	**18.2**	**17.7**	**19.3**	**25.1**		
Min.	**2.9**	**2.4**	**2.1**	**2.1**	**1.7**	**2.0**	**2.3**	**2.1**	**1.7**	**2.3**	**1.6**	**3.0**	**3.2**	**3.0**	**2.5**	**2.3**	**2.6**	**2.6**	**2.3**	**2.3**	**2.4**	**2.0**	**2.0**	**2.6**		**1.6**	
Avg.	**8.6**	**8.4**	**8.9**	**9.0**	**8.3**	**8.3**	**8.5**	**8.6**	**9.2**	**9.1**	**9.4**	**9.3**	**9.6**	**10.1**	**9.5**	**9.4**	**9.3**	**9.6**	**9.5**	**9.6**	**9.3**	**8.7**	**8.3**	**8.5**			**9.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.8	7.3	7.5	9.5	8.2	9.1	8.0	7.9	7.3	6.9	7.5	7.7	9.8	9.5	8.9	8.5	11.2	11.5	7.6	7.0	12.9	11.2	12.5	10.7	12.9	6.9	9.0
2	10.1	9.0	11.8	11.2	11.0	10.1	9.9	6.5	10.1	11.4	11.3	11.6	10.6	13.6	13.7	13.5	12.6	12.9	12.0	13.3	14.2	16.1	16.1	18.0	18.0	6.5	12.1
3	16.2	17.0	15.1	19.2	17.1	16.0	15.0	14.0	13.6	12.2	12.4	13.5	12.2	12.2	13.0	13.6	12.5	7.9	5.3	8.9	8.6	7.5	10.3	8.9	19.2	5.3	12.6
4	8.6	8.9	9.1	9.2	8.4	8.2	8.0	7.2	6.6	4.8	5.3	7.7	8.8	9.1	9.6	9.2	9.9	10.6	9.8	9.5	10.4	10.6	9.6	10.4	10.6	4.8	8.7
5	11.0	11.3	11.1	11.8	9.4	10.4	9.2	8.1	9.4	9.3	10.4	11.3	10.0	9.5	9.9	10.6	11.7	11.2	14.0	12.7	12.8	15.2	17.5	13.1	17.5	8.1	11.3
6	14.7	13.5	12.8	13.3	12.5	12.4	12.3	11.8	10.2	10.2	12.4	12.2	9.7	8.4	6.8	6.0	5.5	6.0	7.3	8.8	9.4	8.0	9.0	10.9	14.7	5.5	10.2
7	8.2	8.6	10.7	12.8	12.8	12.2	12.3	13.5	14.1	13.6	13.1	13.2	13.9	13.5	12.9	13.3	11.9	14.5	14.4	10.9	10.4	10.4	9.4	9.5	14.5	8.2	12.1
8	8.5	7.7	6.3	8.4	7.1	5.5	4.6	5.5	5.1	6.3	5.9	5.2	3.9	4.2	3.6	5.9	4.0	4.7	6.4	7.3	5.6	4.7	6.1	5.6	8.5	3.6	5.8
9	4.6	4.4	5.2	5.4	4.3	6.1	7.3	9.4	8.5	9.1	8.4	7.9	8.1	9.1	7.7	6.3	5.3	4.0	4.1	2.9	2.4	2.7	2.6	2.6	9.4	2.4	5.8
10	2.1	1.7	2.4	3.7	4.4	4.1	4.1	4.0	5.2	6.1	7.0	7.0	6.4	6.5	5.5	5.0	4.9	5.9	7.6	7.0	5.3	6.0	6.5	6.3	7.6	1.7	5.2
11	7.4	7.3	6.1	7.1	5.4	4.2	8.4	11.9	13.3	14.0	14.9	17.8	18.6	19.0	19.3	18.2	16.7	15.1	15.4	18.7	17.3	15.7	16.6	16.7	19.3	4.2	13.5
12	20.0	17.6	16.3	16.4	17.1	17.9	10.6	8.6	10.5	7.9	8.2	6.8	14.4	6.1	4.9	9.6	7.0	8.0	8.2	8.9	5.9	5.2	4.7	6.0	20.0	4.7	10.3
13	6.9	7.2	5.0	5.7	5.7	5.0	6.5	7.7	8.1	8.5	10.0	10.2	9.4	10.6	11.6	11.0	11.1	12.1	11.9	14.9	13.5	12.6	12.6	14.2	14.9	5.0	9.7
14	15.2	15.5	14.4	15.1	15.7	15.9	15.9	17.6	16.2	15.2	18.5	18.2	17.4	18.4	16.9	17.2	15.5	14.9	15.9	15.7	14.2	13.1	12.8	12.8	18.5	12.8	15.7
15	11.2	11.4	10.8	9.6	10.0	11.4	10.9	10.9	11.7	13.2	13.7	14.4	12.2	13.4	11.9	11.9	12.3	13.1	13.4	13.7	13.1	13.1	10.3	7.8	14.4	7.8	11.9
16	9.8	13.0	11.0	10.8	7.4	6.5	7.3	6.3	6.2	7.1	8.5	8.3	8.5	8.3	9.0	7.7	7.0	6.5	4.5	6.8	6.8	8.7	11.0	9.8	13.0	4.5	8.2
17	8.4	5.7	3.9	3.0	2.8	2.9	3.2	3.5	3.1	1.9	5.1	5.9	6.1	7.4	7.7	7.4	6.2	6.0	7.2	6.8	7.0	7.9	7.4	7.9	8.4	1.9	5.6
18	6.6	7.5	8.8	9.5	8.9	10.5	12.0	10.2	9.3	9.8	9.0	7.8	6.8	7.3	6.9	7.1	8.4	7.7	7.8	10.9	9.6	10.8	11.1	9.3	12.0	6.6	8.9
19	10.8	9.0	8.9	7.7	8.4	7.7	7.7	8.3	8.1	8.5	7.9	6.0	6.7	5.6	4.0	4.4	4.1	4.4	5.6	5.0	4.9	5.1	4.8	4.4	10.8	4.0	6.6
20	5.1	5.7	7.5	10.1	7.9	5.5	4.9	4.3	2.3	1.7	2.2	3.5	3.4	2.0	7.8	10.0	6.7	4.5	3.7	4.4	1.9	1.8	2.5	2.3	10.1	1.7	4.6
21	3.2	2.9	2.2	1.5	3.1	3.2	3.1	2.7	1.6	3.2	3.1	3.2	1.8	0.9	1.4	2.0	1.7	3.7	5.1	4.7	3.7	3.6	4.6	5.1	5.1	0.9	3.0
22	5.4	3.1	5.4	6.0	5.7	4.6	5.5	5.0	5.8	3.2	3.8	4.7	4.2	3.4	3.7	3.9	4.2	3.9	4.0	3.3	4.6	6.2	4.8	4.3	6.2	3.1	4.5
23	4.5	2.3	2.0	3.2	3.1	3.1	2.0	3.2	2.5	3.6	3.3	3.9	2.7	2.4	1.4	1.6	3.2	3.5	4.9	5.6	6.0	6.6	6.5	6.0	6.6	1.4	3.6
24	6.6	6.5	5.6	7.5	6.5	6.7	5.2	6.7	7.9	7.0	7.2	6.2	6.7	7.1	6.5	7.2	6.0	7.4	7.5	7.5	6.4	6.9	7.8	8.0	8.0	5.2	6.9
25	8.3	8.0	8.4	7.7	8.8	8.4	8.7	9.3	7.7	7.5	9.1	9.7	11.7	12.2	12.3	12.3	13.2	13.4	13.5	13.8	14.3	14.7	13.9	14.5	14.7	7.5	10.9
26	13.7	11.9	14.2	13.5	10.6	9.7	8.4	9.5	9.7	11.7	10.8	10.0	9.2	9.1	8.7	7.3	7.4	6.2	5.9	7.4	8.4	8.3	8.7	9.1	14.2	5.9	9.6
27	7.7	7.9	8.6	7.9	8.5	8.9	7.6	4.9	5.6	9.7	10.9	9.8	8.0	8.0	7.2	6.6	7.8	9.6	13.9	14.6	10.2	12.3	13.8	12.2	14.6	4.9	9.3
28	11.4	11.1	11.3	11.9	12.2	12.2	12.0	10.4	11.5	12.2	11.7	13.1	11.6	12.5	11.4	12.0	11.7	12.9	10.1	11.0	12.9	14.3	12.9	13.3	14.3	10.1	12.0
29	12.5	12.1	11.8	12.4	9.8	10.1	10.1	9.9	10.3	9.1	8.2	8.3	7.7	9.6	11.7	12.7	12.4	12.1	11.8	11.4	11.6	12.2	11.1	10.8	12.7	7.7	10.8
30	10.7	9.6	9.6	11.0	11.2	10.8	10.3	7.8	4.4	5.4	5.0	3.2	11.2	13.1	10.3	10.3	10.3	9.9	11.1	10.2	9.5	7.9	9.2	9.1	13.1	3.2	9.2
31	9.8	9.3	9.3	9.9	10.0	7.7	8.4	8.4	5.4	5.6	6.4	6.6	6.0	6.2	8.2	5.8	7.2	7.1	7.8	9.8	8.9	9.2	9.0	9.1	10.0	5.4	7.9
Max.	**20.0**	**17.6**	**16.3**	**19.2**	**17.1**	**17.9**	**15.9**	**17.6**	**16.2**	**15.2**	**18.5**	**18.2**	**18.6**	**19.0**	**19.3**	**18.2**	**16.7**	**15.1**	**15.9**	**18.7**	**17.3**	**16.1**	**17.5**	**18.0**	**20.0**		
Min.	**2.1**	**1.7**	**2.0**	**1.5**	**2.8**	**2.9**	**2.0**	**2.7**	**1.6**	**1.7**	**2.2**	**3.2**	**1.8**	**0.9**	**1.4**	**1.6**	**1.7**	**3.5**	**3.7**	**2.9**	**1.9**	**1.8**	**2.5**	**2.3**		**0.9**	
Avg.	**9.3**	**8.8**	**8.8**	**9.4**	**8.8**	**8.6**	**8.4**	**8.2**	**8.1**	**8.2**	**8.7**	**8.9**	**9.0**	**9.0**	**8.9**	**9.0**	**8.7**	**8.7**	**9.0**	**9.5**	**9.1**	**9.3**	**9.5**	**9.3**			**8.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.4	8.5	7.2	6.6	7.2	8.1	7.9	8.2	9.3	7.6	7.8	6.3	6.2	7.0	6.7	7.9	7.4	9.3	9.0	8.6	8.6	8.8	9.3	9.3	9.3	6.2	8.0
2	9.1	7.7	7.7	6.4	7.7	7.3	7.4	8.3	11.0	10.6	10.1	9.2	7.7	8.1	8.4	8.0	7.7	7.4	9.1	7.3	7.3	7.7	7.0	6.9	11.0	6.4	8.1
3	6.4	8.3	6.3	7.6	8.5	7.1	7.4	7.0	6.3	6.2	5.3	5.3	5.4	5.9	5.7	6.6	6.6	7.0	5.9	5.6	5.1	6.4	7.2	5.7	8.5	5.1	6.4
4	4.9	5.9	3.9	4.2	5.2	3.6	4.3	1.4	2.8	2.4	2.1	2.7	2.5	3.8	4.0	3.1	6.0	5.3	2.5	5.6	5.2	2.7	2.8	5.1	6.0	1.4	3.8
5	5.3	5.9	7.1	5.7	5.8	7.2	7.0	5.2	3.8	4.1	2.2	1.9	1.9	3.2	3.1	1.7	1.4	3.4	4.6	4.1	3.7	3.9	3.1	2.3	7.2	1.4	4.1
6	2.9	2.9	3.3	3.7	3.1	2.9	3.4	2.8	3.6	3.3	1.9	1.5	3.4	3.4	3.3	2.8	1.2	2.4	2.1	1.4	1.5	3.1	2.9	4.5	4.5	1.2	2.8
7	5.5	3.3	3.0	3.0	2.9	1.8	1.2	4.3	7.9	8.0	7.8	9.1	11.6	12.0	12.2	10.4	8.0	8.0	7.5	11.7	11.7	11.1	11.9	10.5	12.2	1.2	7.7
8	10.0	9.4	9.4	10.9	9.8	10.0	9.5	9.8	9.6	8.5	7.6	6.9	7.4	5.2	5.2	2.3	2.7	2.5	2.7	2.7	2.9	3.3	3.9	3.3	10.9	2.3	6.5
9	2.7	3.3	3.2	2.9	3.5	3.5	2.4	3.5	3.8	3.5	3.3	2.2	2.5	4.5	3.6	1.8	1.3	3.0	2.3	1.3	2.1	1.6	2.6	2.5	4.5	1.3	2.8
10	1.3	2.6	2.2	4.5	5.5	6.1	4.4	3.3	3.1	4.3	3.0	2.8	3.7	3.7	4.3	7.3	6.5	7.1	7.3	7.2	7.6	8.0	8.4	7.9	8.4	1.3	5.1
11	8.1	9.0	5.8	6.2	7.0	7.9	6.8	4.0	5.2	6.5	4.4	5.0	5.4	3.4	3.2	3.3	2.3	2.4	6.0	6.3	6.1	6.0	4.1	6.9	9.0	2.3	5.5
12	2.3	7.2	8.0	9.2	8.9	9.6	11.1	9.7	10.3	6.6	4.0	4.9	5.5	5.6	5.2	4.4	5.5	4.1	3.6	3.9	4.4	3.4	3.7	4.5	11.1	2.3	6.1
13	5.1	3.4	4.2	3.1	3.5	3.7	3.6	5.1	5.8	7.6	3.9	7.5	7.5	8.1	8.1	6.8	8.2	6.6	8.5	6.3	4.8	6.0	4.2	4.5	8.5	3.1	5.7
14	4.5	6.1	4.5	5.6	6.3	5.9	6.0	4.7	4.4	5.7	6.4	7.2	7.1	8.3	8.0	8.8	8.0	7.8	8.5	7.9	8.5	8.3	8.9	9.1	9.1	4.4	6.9
15	9.8	9.4	9.6	10.0	10.3	10.3	10.2	10.9	10.1	10.3	9.4	9.9	9.6	9.8	9.8	9.9	10.7	9.1	9.9	10.6	10.4	11.0	9.5	10.2	11.0	9.1	10.0
16	9.5	8.7	9.1	9.3	11.4	11.2	9.7	9.4	8.7	9.1	8.4					6.4	4.7	4.7	3.4	2.6	1.2	2.0	2.3	2.4	11.4	1.2	6.7
17	1.9	2.7	3.2	3.3	3.1	4.2	7.7	6.4	7.2	6.5	6.5	8.5	9.5	9.3	10.4	8.5	10.8	11.3	13.5	12.2	11.9	10.0	10.3	11.4	13.5	1.9	7.9
18	11.1	10.7	10.4	10.7	10.1	10.2	10.4	9.8	10.5	8.1	5.1	4.3	4.9	4.9	3.8	5.3	6.1	6.3	5.2	2.7	5.6	5.0	7.6	6.2	11.1	2.7	7.3
19	6.8	8.5	10.1	9.2	8.0	4.8	7.5	8.7	9.8	9.3	10.0	9.9	10.6	9.6	6.2	7.4	8.2	5.6	4.7	4.0	4.0	5.0	6.2	6.4	10.6	4.0	7.5
20	4.5	4.5	5.3	4.4	4.5	5.4	5.8	5.2	4.9	5.7	4.7	4.9	5.4	5.7	5.7	4.7	4.5	3.8	3.5	3.1	3.4	3.7	2.9	4.1	5.8	2.9	4.6
21	3.9	7.2	7.6	8.8	7.5	8.8	7.9	7.7	6.7	6.2	5.5	3.5	5.3	7.1	7.8	8.8	10.2	10.5	9.7	12.0	18.0	21.1	23.2	24.3	24.3	3.5	10.0
22	21.2	19.4	19.5	21.1	19.9	19.4	20.2	21.2	21.7	22.3	22.3	21.8	22.5	21.2	22.2	24.2	23.7	24.2	25.0	24.3	21.8	20.6	18.3	17.5	25.0	17.5	21.5
23	16.8	15.9	13.0	8.7	7.6	8.8	8.9	6.7	7.7	10.3	9.1	8.0	9.3	9.7	10.2	9.8	11.3	9.6	7.8	8.9	8.7	8.0	9.5	8.6	16.8	6.7	9.7
24	8.8	9.2	9.0	10.8	8.6	9.0	8.0	9.2	9.8	9.0	10.1	10.6	11.2	10.8	11.3	10.8	10.2	10.2	10.0	10.3	9.1	8.9	8.0	7.9	11.3	7.9	9.6
25	7.5	7.7	7.6	5.4	6.0	7.3	7.0	4.5	5.1	4.8	5.8	6.5	6.4	5.2	4.8	5.5	6.1	7.3	8.2	7.9	8.7	10.8	10.5	12.1	12.1	4.5	7.0
26	12.5	12.2	11.5	12.9	12.1	12.1	11.1	11.1	11.7	12.8	11.4	11.8	12.2	11.3	11.8	10.9	9.8	9.4	10.9	13.2	13.7	13.9	12.5	12.5	13.9	9.4	11.9
27	12.5	13.4	11.0	14.3	15.6	19.6	14.5	17.7	18.1	17.1	16.8	20.2	16.4	17.6	18.3	20.9	20.4	18.2	18.9	21.9	21.6	19.3	20.7	20.0	21.9	11.0	17.7
28	17.6	20.8	20.0	19.9	20.9	23.9	24.1	21.7	21.2	19.5	20.7	18.8	17.6	13.5	11.1	9.6	11.0	11.6	11.7	10.6	10.9	10.8	10.0	9.9	24.1	9.6	16.1
29	9.4	8.5	8.5	8.0	7.3	7.0	7.5	7.8	7.8	7.2	6.6	6.6	7.1	7.1	7.1	6.3	6.6	6.8	6.8	7.0	6.6	7.6	7.7	6.7	9.4	6.3	7.3
30	6.7	6.7	7.3	7.0	6.7	6.0	6.3	6.5	6.3	6.0	5.9	5.7	5.8	5.2	4.5	3.9	4.2	4.3	3.3	3.4	4.0	4.3	5.1	6.1	7.3	3.3	5.5
31	6.2	5.7	6.7	7.0	5.5	4.4	5.4	4.3	5.7	5.5	5.9	5.8	5.1	5.7	6.6	7.1	7.2	8.4	9.7	11.3	11.1	13.4	13.2	12.0	13.4	4.3	7.4
Max.	**21.2**	**20.8**	**20.0**	**21.1**	**20.9**	**23.9**	**24.1**	**21.7**	**21.7**	**22.3**	**22.3**	**21.8**	**22.5**	**21.2**	**22.2**	**24.2**	**23.7**	**24.2**	**25.0**	**24.3**	**21.8**	**21.1**	**23.2**	**24.3**	**25.0**		
Min.	**1.3**	**2.6**	**2.2**	**2.9**	**2.9**	**1.8**	**1.2**	**1.4**	**2.8**	**2.4**	**1.9**	**1.5**	**1.9**	**3.2**	**3.1**	**1.7**	**1.2**	**2.4**	**2.1**	**1.3**	**1.2**	**1.6**	**2.3**	**2.3**		**1.2**	
Avg.	**7.8**	**8.2**	**7.9**	**8.1**	**8.1**	**8.3**	**8.2**	**7.9**	**8.4**	**8.2**	**7.5**	**7.6**	**7.9**	**7.9**	**7.8**	**7.6**	**7.7**	**7.7**	**7.8**	**7.9**	**8.1**	**8.2**	**8.3**	**8.4**			**8.0**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.3	12.7	12.7	13.1	13.1	11.5	13.8	14.7	14.5	17.7	16.0	19.5	18.3	18.6	20.6	21.6	16.9	15.1	16.1	17.0	13.1	14.0	19.1	18.9	21.6	11.3	15.8
2	19.0	19.0	18.3	17.5	16.7	16.5	18.0	18.0	17.7	17.3	12.4	11.8	10.5	10.9	11.1	12.1	11.3	10.3	9.9	8.7	7.5	6.9	7.1	6.4	19.0	6.4	13.1
3	6.6	8.0	8.9	9.0	9.2	8.7	10.2	8.6	9.4	8.2	8.5	7.9	9.6	9.1	8.2	9.0	10.3	9.6	9.3	9.7	10.2	11.0	10.5	10.9	11.0	6.6	9.2
4	10.8	10.5	11.4	12.9	13.0	12.3	12.5	12.5	12.9	12.2	13.5	13.7	13.1	14.6	13.7	15.8	16.7	14.6	15.8	13.4	14.9	16.5	16.0	17.4	17.4	10.5	13.8
5	17.8	18.3	15.8	16.8	17.0	16.3	15.5	15.8	16.3	16.0	17.2	14.8	11.9	11.6	11.3	11.7	13.0	15.0	12.5	14.9	14.6	15.4	14.0	13.5	18.3	11.3	14.9
6	13.8	13.3	12.8	12.0	11.9	12.0	10.9	7.9	8.7	6.6	3.5	1.9	6.2	3.1	6.6	4.8	4.3	3.2	3.8	3.6	4.2	3.8	3.6	2.6	13.8	1.9	6.9
7	3.6	5.0	4.6	3.6	3.0	2.4	2.9	7.2	12.6	11.8	10.6	13.4	14.5	17.4	16.1	8.1	7.4	6.6	8.8	12.6	12.0	8.9	11.2	10.8	17.4	2.4	9.0
8	10.1	11.4	6.1	5.9	5.1	4.6	4.5	6.1	6.5	7.6	7.4	7.8	7.5	8.4	12.1	11.3	10.8	11.5	11.1	9.5	10.1	10.6	11.1	10.0	12.1	4.5	8.6
9	13.0	12.0	12.6	13.1	12.7	15.3	16.1	17.7	19.1	19.5	19.2	18.6	18.2	17.4	16.6	13.9	14.0	13.0	11.3	10.7	11.5	10.7	8.5	8.0	19.5	8.0	14.3
10	9.9	11.2	10.5	11.2	10.9	12.8	11.9	11.4	11.8	11.8	12.4	10.7	8.1	6.7			4.4	7.2	5.5	7.5	6.3	5.0	7.2	8.3	12.8	4.4	9.2
11	9.1	8.7	7.9	7.2	8.4	9.6	9.0	10.1	11.2	11.3	11.1	10.4	9.7	9.6	9.7	11.8	12.1	11.3	11.3	10.7	9.5	10.4	10.7	9.4	12.1	7.2	10.0
12	7.4	7.0	6.9	7.4	10.7	9.9	10.1	10.5	12.2	11.1	15.5	16.7	18.1	13.9	11.9	10.8	16.7	20.3	20.1	14.5	16.2	14.4	11.5	10.3	20.3	6.9	12.7
13	5.4	2.7	3.4	3.5	3.8	2.7	1.7	5.0	5.6	5.5	4.5	7.3	7.7	8.0	7.4	7.4	6.9	8.7	8.1	8.4	8.0	6.1	6.0	6.3	8.7	1.7	5.8
14	7.4	8.1	8.3	7.9	7.0	7.6	6.2	9.1	8.0	7.5	6.9	8.8	8.7	8.4	7.4	6.8	6.6	6.6	6.3	6.9	8.0	9.4	8.0	9.8	9.8	6.2	7.7
15	9.6	10.1	8.5	8.9	9.9	9.0	9.8	10.2	9.7	7.6	5.3	7.8	6.8	6.7	7.4	9.2	9.0	8.5	8.6	9.8	8.0	7.4	6.5	6.3	10.2	5.3	8.4
16	6.1	5.3	5.3	4.9	5.0	4.7	2.9	2.7	2.7	2.5	1.9	2.1	3.9	3.9	2.5	3.5	4.9	4.4	5.4	6.2	5.3	5.1	5.7	5.8	6.2	1.9	4.3
17	7.1	7.9	7.8	7.8	7.3	9.2	10.2	11.8	13.7	12.8	10.5	11.2	11.7	10.0	10.1	9.8	9.5	7.9	8.4	8.6	8.8	8.8	10.4	9.0	13.7	7.1	9.6
18	9.3	7.7	7.1	7.2	6.4	6.1	7.1	6.3	7.9	9.9	10.1	7.1	5.5	6.5	3.1	5.6	5.7	4.9	5.2	5.5	6.7	6.2	5.8	5.7	10.1	3.1	6.6
19	4.3	13.6	16.0	14.2	11.4	9.5	7.5	8.2	12.1	9.0	12.1	12.5	11.4	7.1	10.0	10.3	13.7	14.5	15.6	15.2	12.9	13.1	9.9	9.8	16.0	4.3	11.4
20	8.2	9.5	8.8	8.0	5.6	6.5	5.9	7.8	8.3	10.4	7.5	6.8	7.1	13.7	12.4	11.8	13.2	19.3	21.1	20.4	17.2	19.4	19.3	16.9	21.1	5.6	11.9
21	17.6	15.0	15.2	10.4	13.4	15.1	13.9	12.8	16.2	11.0	10.3	10.5	14.6	12.1	10.8	10.5	8.3	7.5	7.5	7.4	8.9	7.0	7.8	8.5	17.6	7.0	11.3
22	8.4	9.3	7.8	5.7	5.9	6.3	13.3	10.3	8.1	8.1	8.9	9.9	8.1	6.1	5.9	5.0	5.5	5.1	5.3	9.1	7.9	7.4	6.6	5.6	13.3	5.0	7.5
23	4.6	4.2	4.0	3.5	1.6	3.4	2.9	4.3	3.2	9.5	12.6	10.1	9.2	8.8	9.2	6.6	7.4	10.0	7.4	4.8	5.9	6.2	5.9	6.9	12.6	1.6	6.3
24	6.5	5.7	6.0	6.6	6.0	7.1	7.4	7.4	8.5	8.3	8.0	7.8	5.2	4.4	4.3	4.2	3.2	3.6	6.4	6.1	6.1	6.1	4.8	4.2	8.5	3.2	6.0
25	4.3	4.1	4.6	2.9	3.0	2.8	2.3	1.7	1.4	4.5	3.9	1.3	6.6	3.9	13.7	9.1	11.3	9.1	13.3	13.5	15.2	12.0	9.1	10.2	15.2	1.3	6.8
26	12.0	9.9	12.7	9.6	9.9	8.9	6.8	7.7	5.6	5.7	6.1	8.0	6.8	9.2	7.5	6.5	6.5	6.7	4.5	2.8	2.4	4.8	5.1	6.2	12.7	2.4	7.2
27	7.9	8.1	8.8	8.5	7.9	6.0	3.7	9.8	12.3	6.8	6.9	5.4	5.5	4.2	6.7	6.8	6.7	8.9	10.4	10.1	8.5	7.6	9.5	9.3	12.3	3.7	7.7
28	11.1	12.0	10.9	11.8	12.0	13.2	13.5	12.9	12.6	12.2	9.0	11.4	13.0	14.0	16.5	18.5	14.9	14.3	14.6	16.0	13.9	13.9	12.8	13.0	18.5	9.0	13.2
Max.	**19.0**	**19.0**	**18.3**	**17.5**	**17.0**	**16.5**	**18.0**	**18.0**	**19.1**	**19.5**	**19.2**	**19.5**	**18.3**	**18.6**	**20.6**	**21.6**	**16.9**	**20.3**	**21.1**	**20.4**	**17.2**	**19.4**	**19.3**	**18.9**	**21.6**		
Min.	**3.6**	**2.7**	**3.4**	**2.9**	**1.6**	**2.4**	**1.7**	**1.7**	**1.4**	**2.5**	**1.9**	**1.3**	**3.9**	**3.1**	**2.5**	**3.5**	**3.2**	**3.2**	**3.8**	**2.8**	**2.4**	**3.8**	**3.6**	**2.6**		**1.3**	
Avg.	**9.4**	**9.6**	**9.4**	**9.0**	**8.8**	**8.9**	**8.9**	**9.6**	**10.3**	**10.1**	**9.7**	**9.8**	**9.9**	**9.6**	**10.1**	**9.7**	**9.7**	**9.9**	**10.1**	**10.1**	**9.8**	**9.6**	**9.4**	**9.3**			**9.6**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.8	9.5	5.9	10.2	9.8	9.3	10.1	10.1	5.8	6.7	7.1	5.8	5.7	5.6	4.1	3.2	4.2	5.1	7.5	7.9	6.9	8.1	8.7	8.1	14.8	3.2	7.5
2	4.7	7.5	8.1	7.7	7.9	8.8	8.6	10.2	10.8	10.7	10.1	9.7	9.8	10.3	9.2	9.3	11.1	9.4	9.8	9.7	10.0	10.5	9.7	10.5	11.1	4.7	9.3
3	9.7	9.8	8.8	7.6	8.7	9.1	8.6	8.5	9.4	8.6	8.5	6.9	7.1	7.3	6.5	6.4	4.8	4.2	4.9	5.2	5.2	5.7	5.5	6.2	9.8	4.2	7.2
4	5.9	5.7	6.0	7.1	6.3	6.3	6.8	6.8	7.6	6.9	6.6	6.4	7.3	7.4	7.9	7.4	7.5	7.4	7.2	6.7	7.3	7.2	7.2	6.8	7.9	5.7	6.9
5	7.0	7.0	8.6	8.0	8.1	7.5	7.8	2.8	5.0	2.5	2.9	8.2	7.6	8.0	5.6	4.9	5.9	8.3	10.0	11.4	9.0	9.2	6.7	7.9	11.4	2.5	7.1
6	11.5	10.9	9.7	10.4	9.7	8.3	7.8	12.8	15.7	14.7	16.3	12.2	13.9	9.0	10.0	9.0	7.8	6.3	5.6	4.9	5.8	6.8	7.0	7.9	16.3	4.9	9.7
7	8.0	6.7	6.5	7.2	7.3	7.0	8.1	7.7	12.1	13.5	14.0	15.2	13.6	12.4	13.1	14.2	15.0	14.9	15.9	14.8	13.3	18.8	15.0	16.8	18.8	6.5	12.1
8	18.8	20.1	18.4	17.3	21.8	22.2	20.4	22.7	20.5	18.5	17.9	17.5	18.0	17.3	18.0	20.8	22.5	24.4	21.5	15.2	18.2	13.7	10.6	13.3	24.4	10.6	18.7
9	16.4	13.9	16.2	13.5	20.9	21.2	15.7	15.6	15.8	17.2	19.3	17.4	15.3	16.8	13.7	14.6	13.2	13.9	11.9	14.1	14.5	13.5	12.8	11.2	21.2	11.2	15.3
10	9.5	8.6	8.1	8.4	7.8	8.2	9.3	4.3	6.6	5.6	5.5	4.1	3.7	3.5	3.7	2.9	3.1	5.6	6.7	5.7	5.8	7.5	7.5	7.0	9.5	2.9	6.2
11	6.9	7.7	10.7	11.1	9.6	11.2	9.8	10.9	11.0	11.8	10.9	10.0	9.5	10.2	9.5	8.9	8.9	10.5	9.9	10.0	10.5	10.0	9.1	7.7	11.8	6.9	9.8
12	12.0	11.1	10.9	11.5	10.5	10.4	9.2	8.7	7.4	7.1	7.7	8.4	9.2	8.8	9.1	9.1	8.1	7.1	7.2	6.4	5.9	4.8	4.1	3.5	12.0	3.5	8.3
13	3.9	3.4	2.4	2.0	2.3	2.7	2.9	3.3	2.6	3.0	5.2	6.3	4.1	3.5	3.0	2.9	3.0	2.5	2.4	2.6	2.0	2.0	3.0	2.7	6.3	2.0	3.1
14	2.6	3.4	3.2	3.7	4.0	3.4	3.0	3.4	5.0	5.4	5.4	3.7	4.6	4.2	5.1	5.7	3.4	4.9	5.7	4.3	5.0	6.1	5.6	3.7	6.1	2.6	4.4
15	5.7	5.7	5.3	6.6	6.5	6.0	5.9	5.3	4.8	5.9	3.8	2.6	2.0	2.0	2.0	2.2	3.4	3.4	5.0	3.6	4.5	5.5	6.8	6.9	6.9	2.0	4.6
16	6.0	8.2	7.7	6.6	6.7	7.0	6.6	7.8	8.6	9.2	9.1	8.3	8.5	7.8	5.8	7.4	7.0	4.4	6.3	6.0	5.8	6.1	7.6	6.0	9.2	4.4	7.1
17	5.9	6.0	5.8	7.3	7.7	7.3	6.5	6.9	7.5	6.6	7.7	10.4	11.4	11.2	9.5	9.6	9.0	9.3	9.9	7.9	9.1	9.3	9.3	9.0	11.4	5.8	8.3
18	10.5	11.8	10.7	11.1	10.2	9.8	9.7	9.8	9.8	9.1	9.8	10.8	11.5	11.1	10.4	9.0	6.2	5.2	3.3	1.6	1.3	1.6	0.8	1.5	11.8	0.8	7.8
19	3.3	2.1	2.9	3.3	2.7	2.6	4.2	4.3	4.6	4.7	3.8	2.9	3.1	3.9	6.2	6.1	5.0	3.9	3.5	2.6	1.8	3.9	5.7	5.7	6.2	1.8	3.9
20	5.4	5.2	5.0	4.9	5.6	5.9	5.3	4.6	3.6	4.2	3.4	2.1	3.2	4.2	4.6	7.9	7.4	6.9	8.8	9.1	8.4	9.8	9.9	8.1	9.9	2.1	6.0
21	8.4	9.2	7.6	7.6	7.2	7.4	6.5	6.9	4.4	4.3	6.8	5.8	3.3	3.5	2.4	3.3	5.6	6.7	5.6	6.2	5.8	5.5	5.0	7.4	9.2	2.4	5.9
22	10.0	10.2	10.2	10.3	11.0	11.4	11.9	11.9	13.8	11.6	11.2	10.0	9.8	8.5	7.4	7.3	4.7	4.6	2.1	3.4	6.4	6.8	6.7	5.8	13.8	2.1	8.6
23	5.7	4.2	4.2	3.0	2.9	3.1	4.0	5.8	6.6	8.1	8.1	8.4	6.0	7.1	3.3	3.7	6.2	11.8	11.8	11.3	10.6	11.6	11.1	9.1	11.8	2.9	7.0
24	9.4	10.0	10.7	10.5	10.3	10.2	10.2	9.0	9.1	9.5	8.2	6.1	3.8	3.2	4.4	5.3	3.8	4.8	5.9	7.8	8.2	8.2	7.3	6.9	10.7	3.2	7.6
25	6.1	6.3	6.4	4.3	6.8	6.2	6.8	7.0	6.8	7.1	7.7	2.3	1.7	2.7	2.7	2.1	3.0	4.9	4.4	6.9	6.6	7.1	8.0	9.0	9.0	1.7	5.5
26	8.1	8.7	8.4	8.3	8.8	8.5	9.5	10.1	9.7	8.9	7.8	5.8	2.4	2.8	2.6	3.4	3.7	3.9	1.9	6.4	5.8	6.8	5.6	5.9	10.1	1.9	6.4
27	6.1	5.1	5.5	4.6	4.9	5.0	3.2	3.4	3.8	1.9	2.3	3.1	3.3	3.4	4.2	3.7	3.4	3.2	2.7	2.3	2.1	1.8	4.3	4.2	6.1	1.8	3.7
28	3.3	4.1	4.3	5.3	4.9	5.1	5.1	4.7	5.3	3.4	1.7	2.9	4.3	4.2	4.5	3.6	3.7	3.3	4.9	3.1	1.9	1.6	2.4	4.1	5.3	1.6	3.8
29	6.4	5.5	4.5	5.3	5.6	6.7	4.7	6.0	4.9	5.1	3.4	3.1	1.6	4.6	5.7	6.1	6.1	1.6	2.5	2.2	1.5	1.6	4.1	4.7	6.7	1.5	4.3
30	6.0	4.8	5.7	6.5	6.2	9.1	8.4	9.5	9.2	8.9	8.7	9.8	9.9	13.3	10.8	11.1	10.7	11.2	8.8	11.2	10.7	11.9	13.7	9.4	13.7	4.8	9.4
31	11.9	12.3	11.2	11.8	10.6	9.8	10.3	12.0	9.7	10.5	9.4	9.5	11.5	10.6	10.4	9.7	8.4	7.7	5.9	5.9					12.3	5.9	9.9
Max.	**18.8**	**20.1**	**18.4**	**17.3**	**21.8**	**22.2**	**20.4**	**22.7**	**20.5**	**18.5**	**19.3**	**17.5**	**18.0**	**17.3**	**18.0**	**20.8**	**22.5**	**24.4**	**21.5**	**15.2**	**18.2**	**18.8**	**15.0**	**16.8**	**24.4**		
Min.	**2.6**	**2.1**	**2.4**	**2.0**	**2.3**	**2.6**	**2.9**	**2.8**	**2.6**	**1.9**	**1.7**	**2.1**	**1.6**	**2.0**	**2.0**	**2.1**	**3.0**	**1.6**	**1.9**	**1.6**	**1.3**	**1.6**	**0.8**	**1.5**		**0.8**	
Avg.	**8.1**	**7.9**	**7.7**	**7.8**	**8.2**	**8.3**	**8.0**	**8.1**	**8.3**	**8.1**	**8.1**	**7.6**	**7.3**	**7.4**	**6.9**	**7.1**	**7.0**	**7.1**	**7.1**	**7.0**	**7.0**	**7.4**	**7.4**	**7.2**			**7.6**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					8.0	7.4	8.9	11.1	12.3	11.1	12.4	10.4	9.4	16.6	14.0	10.1	10.8	12.5	11.2	10.6	8.4	9.2	9.6	10.8	16.6	7.4	10.7
2	7.8	10.8	10.9	10.6	12.8	9.8	8.0	7.9	6.5	5.4	5.2	3.0	2.9	2.7	3.2	3.9	3.9	3.1	2.7	4.0	4.9	6.1	6.4	7.6	12.8	2.7	6.2
3	8.0	8.3	7.7	8.5	8.2	8.5	8.9	9.5	9.7	10.7	10.2	9.7	10.7	10.3	10.6	10.5	9.4	7.9	7.2	7.6	7.6	8.0	8.3	8.0	10.7	7.2	8.9
4	8.6	7.5	7.3	6.2	6.1	7.1	6.1	6.4	7.0	6.2	5.3	4.5	2.4	1.7	1.9	1.8	2.3	1.7	1.5	1.8	2.0	2.3	2.5	2.3	8.6	1.5	4.3
5	4.6	8.6	8.3	8.2	6.1	6.8	9.4	8.7	10.8	10.4	12.5	14.2	14.1	13.5	11.2	12.9	10.0	12.7	12.5	16.3	15.8	14.8	14.8	14.0	16.3	4.6	11.3
6	12.2	12.8	11.7	8.4	8.2	8.4	9.2	8.5	9.5	8.6	4.6	3.6	3.8	4.7	4.4	4.1	4.3	4.1	3.0	3.2	4.4	2.8	1.8	2.3	12.8	1.8	6.2
7	3.1	2.0	5.2	4.6	2.8	5.9	5.1	4.7	4.8	3.9	3.9	4.0	2.6	2.3	2.5	2.6	4.9	2.7	3.2	3.2	2.8	5.4	6.0	5.5	6.0	2.0	3.9
8	7.0	10.4	6.7	7.6	8.5	7.0	6.7	8.7	8.8	5.9	6.4	5.7	5.5	8.6	6.5	6.6	6.9	6.9	6.1	5.1	4.4	3.7	2.4	3.3	10.4	2.4	6.5
9	1.5	1.2	2.0	2.9	2.6	2.0	3.2	3.6	2.5	4.1	3.4	2.1	2.6	4.7	4.9	4.4	5.4	4.4	1.9	2.5	3.2	7.7	6.3	8.5	8.5	1.2	3.7
10	8.7	12.0	11.5	11.3	8.7	11.9	10.8	11.6	12.6	13.3	15.8	17.2	13.2	15.1	19.9	21.1	18.8	17.9	8.7	7.3	16.5	16.7	14.3	13.4	21.1	7.3	13.7
11	12.4	10.6	9.9	9.0	6.9	8.7	6.4	5.9	5.9	4.1	5.3	4.8	4.7	8.0	9.7	10.3	10.8	11.0	10.3	10.2	10.4	11.4	11.5	10.1	12.4	4.1	8.7
12	10.5	10.8	9.9	10.1	10.0	11.0	10.9	10.5	9.5	9.5	9.9	9.5	8.7	7.9	6.4	4.6	1.3	0.8	1.5	3.4	3.6	8.6	9.8	8.5	11.0	0.8	7.8
13	10.7	12.7	12.7	12.8	13.5	13.2	12.5	13.7	14.4	12.2	13.0	12.7	18.2	18.8	20.4	22.4	21.7	21.2	12.2	14.3	13.8	14.0	13.3	13.7	22.4	10.7	14.9
14	13.8	14.0	13.2	12.5	14.0	14.2	14.4	13.7	13.9	14.0	14.3	14.5	14.4	14.0	13.9	13.2	12.6	12.1	10.5	10.3	11.7	15.2	12.5	11.6	15.2	10.3	13.3
15	12.3	10.9	10.3	10.1	9.8	8.9	7.2	10.1	12.8	12.3	12.1	14.8	15.9	11.0	11.8	10.5	9.8	10.4	9.0	7.7	6.4	6.4	5.1	8.1	15.9	5.1	10.1
16	5.1	6.5	5.1	4.5	7.7	8.7	10.2	10.6	11.2	9.9	9.8	10.8	11.4	10.2	12.4	14.8	12.5	13.1	12.8	13.5	14.1	15.0	12.7	13.9	15.0	4.5	10.7
17	13.0	13.2	12.8	13.9	12.6	11.4	11.1	7.8	4.6	7.9	8.1	5.9	6.4	7.8	7.2	6.8	6.1	7.0	6.9	7.0	4.7	3.4	3.3	7.6	13.9	3.3	8.2
18	4.7	5.7	4.3	3.4	2.5	2.3	3.4	3.1	3.3	2.5	2.4	3.0	4.0	3.7	5.1	6.1	2.7	2.0	2.0	6.0	6.6	7.4	5.8	6.4	7.4	2.0	4.1
19	9.8	11.5	11.4	12.3	10.7	13.0	12.1	10.7	6.9	8.0	7.0	5.8	5.9	5.5	2.2	3.9	3.5	3.1	1.2	1.5	5.5	4.3	4.6	4.8	13.0	1.2	6.9
20	3.6	3.1	3.6	4.7	5.5	5.2	5.0	5.2	5.4	5.8	6.7	5.0	5.7	4.7	5.6	6.1	8.2	7.9	6.0	6.1	6.6	8.4	8.0	8.3	8.4	3.1	5.8
21	8.7	10.1	10.6	10.7	11.2	10.6	12.2	11.9	12.4	12.4	11.5	10.9	9.5	7.9	6.5	4.4	6.0	3.5	4.2	5.5	5.8	5.4	5.3	5.9	12.4	3.5	8.5
22	5.4	6.3	5.7	6.4	6.1	5.1	4.7	4.4	4.0	4.4	2.4	2.5	2.0	2.5	2.5	2.5	2.7	2.7	2.3	2.7	2.4	2.5	3.1	4.8	6.4	2.0	3.8
23	3.9	5.5	6.2	5.7	5.8	7.0	6.0	4.7	4.5	4.1	5.0	6.0	5.1	4.4	2.4	4.5	5.2	2.9	2.5	7.2	7.9	8.5	8.7	8.6	8.7	2.4	5.5
24	7.8	5.7	4.1	3.8	7.1	9.0	10.9	7.2	4.4	9.7	9.8	10.0	11.6	15.0	13.5	11.8	11.1	9.4	15.0	19.0	14.1	10.5	13.4	12.0	19.0	3.8	10.2
25	10.6	8.2	3.2	6.5	4.5	4.9	4.6	5.1	5.4	5.1	5.4	6.0	6.4	5.9	6.7	6.5	7.8	7.5	8.1	6.8	7.6	6.7	7.6	7.1	10.6	3.2	6.4
26	8.2	8.6	8.3	8.0	8.0	10.0	9.9	9.1	9.4	10.7	9.2	9.3	8.8	8.9	8.1	8.0	7.6	6.9	6.3	6.9	6.9	7.1	5.5	5.9	10.7	5.5	8.2
27	6.4	6.4	6.6	6.8	7.6	7.8	7.9	7.8	7.6	7.1	6.0	6.0	5.4	3.7	2.7	2.9	2.8	3.1	2.4	2.1	1.8	3.1	3.7	4.1	7.9	1.8	5.1
28	5.9	6.2	5.5	5.5	4.0	3.8	5.8	4.2	4.3	3.7	2.9	2.3	2.9	4.0	3.6	3.5	3.6	3.0	2.8	1.3	1.5	2.4	2.6	2.7	6.2	1.3	3.7
29	2.7	7.1	9.7	9.3	10.9	11.5	11.7	11.7	11.7	9.5	8.9	7.5	6.1	4.3	6.6	6.9	7.1	6.6	6.6	6.0	6.4	6.7	4.8	4.3	11.7	2.7	7.7
30	4.0	3.7	4.3	3.4	6.2	6.2	7.2	7.5	5.3	7.3	6.6	5.2	3.6	4.4	4.9	4.8	3.7	4.3	1.8	4.0	5.2	5.2	5.0	5.7	7.5	1.8	5.0
Max.	**13.8**	**14.0**	**13.2**	**13.9**	**14.0**	**14.2**	**14.4**	**13.7**	**14.4**	**14.0**	**15.8**	**17.2**	**18.2**	**18.8**	**20.4**	**22.4**	**21.7**	**21.2**	**15.0**	**19.0**	**16.5**	**16.7**	**14.8**	**14.0**	**22.4**		
Min.	**1.5**	**1.2**	**2.0**	**2.9**	**2.5**	**2.0**	**3.2**	**3.1**	**2.5**	**2.5**	**2.4**	**2.1**	**2.0**	**1.7**	**1.9**	**1.8**	**1.3**	**0.8**	**1.2**	**1.3**	**1.5**	**2.3**	**1.8**	**2.3**		**0.8**	
Avg.	**7.6**	**8.3**	**7.9**	**7.8**	**7.9**	**8.2**	**8.3**	**8.2**	**8.0**	**8.0**	**7.9**	**7.6**	**7.5**	**7.7**	**7.7**	**7.8**	**7.4**	**7.1**	**6.1**	**6.8**	**7.1**	**7.6**	**7.3**	**7.7**			**7.6**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.6	5.1	5.2	7.0	6.9	7.2	7.0	8.6	10.7	11.3	10.6	11.6	11.8	12.8	13.5	13.1	13.1	14.5	14.9	16.8	16.2	13.9	13.1	13.3	16.8	5.1	11.0
2	13.7	12.7	11.9	11.5	10.2	11.2	11.4	11.5	9.1	9.1	11.2	10.2	9.4	8.0	6.9	6.2	6.5	5.4	5.7	4.6	4.8	5.2	4.6	4.8	13.7	4.6	8.6
3	5.9	5.9	5.3	5.0	6.2	6.9	7.1	6.4	9.2	10.1	11.8	12.5	12.7	11.1	9.3	5.9	7.6	7.1	6.5	6.2	6.2	6.4	7.7	8.7	12.7	5.0	7.8
4	9.3	10.5	10.1	7.6	5.1	5.7	5.0	7.6	5.3	4.9	4.5	4.6	4.3	4.3	5.2	5.6	5.6	7.0	7.1	5.9	6.3	8.4	7.5	9.7	10.5	4.3	6.6
5	9.5	9.1	8.6	10.5	9.6	8.9	9.8	11.0	11.4	11.6	10.9	9.8	9.4	7.6	5.0	4.2	4.1	3.9	2.6	1.9	2.2	4.4	3.3	5.1	11.6	1.9	7.3
6	5.0	1.8	2.2	1.7	2.1	1.9	1.3	1.6	1.8	1.4	1.6	1.5	2.0	1.5	5.5	7.9	8.7	11.2	11.6	12.3	11.3	11.9	12.8	13.5	13.5	1.3	5.6
7	13.9	14.1	14.8	15.2	14.0	14.0	13.2	14.7	12.9	14.8	12.9	13.4	13.3	12.4	10.7	12.0	13.2	13.7	9.4	10.5	10.7	12.2	11.3	10.3	15.2	9.4	12.8
8	8.3	6.7	6.4	4.2	2.8	3.4	4.9	5.3	6.4	7.3	6.8	7.2	9.3	9.3	9.0	8.3	8.9	9.0	9.0	10.1	9.7	9.5	10.1	11.3	11.3	2.8	7.6
9	12.3	11.8	12.1	13.6	12.5	11.8	13.1	12.7	14.6	13.6	12.8	14.1	13.8	12.8	12.4	13.2	13.0	12.5	11.0	11.7	10.6	8.2	8.0	8.6	14.6	8.0	12.1
10	9.5	8.8	12.1	9.2	8.3	5.2	6.6	6.3	5.7	4.5	6.4	4.6	2.8	4.4	1.8	2.2	3.9	2.8	2.7	3.6	3.3	1.8	4.3	3.7	12.1	1.8	5.2
11	1.8	4.2	5.3	5.2	2.1	2.9	3.1	4.8	3.6	3.2	3.0	3.0	2.0	1.9	2.1	3.7	3.0	3.2	1.9	2.1	6.4	5.0	5.9	6.1	6.4	1.8	3.6
12	5.8	6.3	4.7	4.0	4.8	4.5	5.1	6.4	6.8	6.7	6.6	4.6	2.9	8.7	7.5	7.2	6.8	2.9	1.8	2.0	1.9	3.5	5.2	5.5	8.7	1.8	5.1
13	4.6	3.9	3.9	3.5	3.4	4.5	5.4	6.7	7.3	6.9	4.7	5.1	4.1	3.9	2.0	3.8	3.5	2.4	1.9	1.2	3.8	2.9	2.3	1.9	7.3	1.2	3.9
14	1.1	1.7	1.9	2.8	3.1	3.9	4.2	4.4	2.9	4.8	5.2	4.6	2.9	4.2	4.6	3.3	3.9	3.9	3.5	3.7	3.2	2.5	2.8	3.9	5.2	1.1	3.5
15	3.2	2.1	2.6	2.1	2.9	1.8	2.3	3.1	3.8	2.2	1.7	4.1	3.8	5.1	5.7	6.3	6.3	6.1	5.0	4.0	2.6	2.1	2.9	2.0	6.3	1.7	3.5
16	1.9	7.8	7.6	8.4	9.2	8.5	7.7	5.7	4.2	4.7	5.0	4.0	4.2	4.9	3.9	4.7	5.6	5.0	5.2	4.1	1.9	1.9	1.8	1.4	9.2	1.4	5.0
17	2.0	3.3	4.7	5.1	5.0	5.7	7.2	7.7	8.3	8.3	7.6	7.3	5.0	3.7	4.2	4.6	4.2	3.4	2.3	3.0	2.3	3.0	2.4	2.0	8.3	2.0	4.7
18	2.6	3.3	3.2	3.3	2.8	2.6	3.3	2.8	3.6	5.4	3.9	5.0	7.0	10.4	10.5	12.5	10.9	12.3	14.1	12.8	8.8	11.5	12.9	12.9	14.1	2.6	7.4
19	12.7	12.4	11.7	10.4	7.3	7.9	4.9	5.0	5.7	4.6	3.5	2.7	3.7	6.2	5.5	3.6	6.4	6.7	7.5	9.6	9.3	7.4	6.3	7.3	12.7	2.7	7.0
20	7.9	8.8	9.3	9.1	7.7	8.4	8.3	8.0	7.4	7.9	8.7	7.9	7.2	7.7	8.8	8.6	6.9	6.8	4.6	3.5	1.8	3.0	2.5	3.5	9.3	1.8	6.8
21	5.2	3.9	4.8	5.4	7.0	5.1	5.3	5.4	7.3	8.7	7.8	9.0	8.6	7.4	7.1	9.4	7.9	7.7	7.7	7.4	9.4	9.6	10.0	9.9	10.0	3.9	7.4
22	9.7	8.0	6.2	5.2	8.7	7.0	7.3	7.2	7.1	5.7	5.8	4.2	6.7	7.7	8.0	7.9	8.3	8.8	9.6	7.0	3.8	4.0	3.4	4.0	9.7	3.4	6.7
23	4.3	4.4	3.3	2.1	2.4	3.3	6.8	7.3	2.0	2.9	5.1	3.0	4.8	5.6	5.5	3.2	3.3	2.4	2.2	1.0	2.0	4.3	4.8	4.8	7.3	1.0	3.8
24	5.8	5.5	5.2	5.0	2.1	6.0	3.4	3.4	2.9	2.9	3.4	3.7	4.8	4.2	2.2	2.4	3.6	1.8	0.8	1.2	2.5	3.7	3.8	4.0	6.0	0.8	3.5
25	3.6	4.1	3.8	1.4	2.4	3.5	3.1	1.8	2.3	3.4	2.8	1.7	2.5	2.3	3.3	2.6	2.1	2.4	1.3	1.1	2.5	3.9	4.3	5.8	5.8	1.1	2.8
26	5.2	5.4	4.6	4.5	4.4	3.9	5.4	5.4	5.1	5.0	2.2	2.4	3.0	3.0	2.3	4.8	2.4	2.3	2.7	2.9	3.6	3.8	5.5	6.0	6.0	2.2	4.0
27	6.2	4.3	3.1	2.6	3.5	2.9	3.3	3.6	3.9	3.4	2.7	2.0	2.3	2.3	3.1	3.0	3.0	2.7	2.4	2.0	3.5	5.9	5.6	5.4	6.2	2.0	3.4
28	5.4	5.5	4.9	5.8	4.8	6.0	5.6	2.0	6.0	5.7	6.5	8.8	6.1	5.9	5.7	5.3	4.7	3.7	2.3	2.2	1.5	1.6	3.8	3.3	8.8	1.5	4.7
29	1.9	1.9	2.7	4.0	2.8	5.6	5.5	5.4	4.0	2.9	2.3	2.7	2.2	2.7	2.6	2.7	3.1	3.1	2.7	3.0	1.8	2.8	2.4	2.1	5.6	1.8	3.0
30	2.5	3.0	2.3	2.4	2.1	2.9	4.0	5.3	4.6	4.2	1.5	2.0	1.5	2.1	3.4	2.3	1.9	2.5	2.5	3.9	2.6	1.5	1.9	2.0	5.3	1.5	2.7
31	2.3	3.8	3.2	3.9	3.9	2.2	2.6	2.1	1.8	2.4	2.4	3.2	2.9	3.1	3.6	3.8	2.9	2.6	3.4	2.5	2.4	2.2	1.4	2.1	3.9	1.4	2.8
Max.	**13.9**	**14.1**	**14.8**	**15.2**	**14.0**	**14.0**	**13.2**	**14.7**	**14.6**	**14.8**	**12.9**	**14.1**	**13.8**	**12.8**	**13.5**	**13.2**	**13.2**	**14.5**	**14.9**	**16.8**	**16.2**	**13.9**	**13.1**	**13.5**	**16.8**		
Min.	**1.1**	**1.7**	**1.9**	**1.4**	**2.1**	**1.8**	**1.3**	**1.6**	**1.8**	**1.4**	**1.5**	**1.5**	**1.5**	**1.5**	**1.8**	**2.2**	**1.9**	**1.8**	**0.8**	**1.0**	**1.5**	**1.5**	**1.4**	**1.4**		**0.8**	
Avg.	**6.1**	**6.1**	**6.0**	**5.8**	**5.5**	**5.6**	**5.9**	**6.1**	**6.0**	**6.1**	**5.9**	**5.8**	**5.7**	**6.0**	**5.8**	**5.9**	**6.0**	**5.8**	**5.4**	**5.3**	**5.1**	**5.4**	**5.6**	**6.0**			**5.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.4	2.1	5.0	6.9	5.2	3.5	3.5	3.7	2.5	2.0	1.9	3.1	4.8	4.8	4.3	3.7	3.1	2.3	1.5	2.0	1.7	1.7	4.4	5.7	6.9	1.5	3.4
2	8.3	6.2	5.6	3.8	3.9	4.0	5.6	5.3	5.4	5.8	6.5	5.2	4.3	5.6	5.9	8.3	6.6	6.4	3.5	3.7	3.4	3.9	3.2	2.4	8.3	2.4	5.1
3	2.8	2.4	2.8	10.5	8.5	11.9	12.5	12.9	13.0	10.3	12.9	12.0	14.9	9.7	10.1	11.7	10.4	7.8	6.8	8.7	11.9	9.7	8.4	10.0	14.9	2.4	9.7
4	9.4	9.1	9.3	5.9	5.1	5.9	5.3	4.6	3.4	1.6	5.9	4.6	4.4	4.5	4.7	5.0	4.9	4.9	3.9	3.7	3.4	2.9	3.5	4.5	9.4	1.6	5.0
5	4.6	4.2	4.8	2.7	4.3	3.3	3.7	2.6	2.0	3.9	5.6	4.6	4.2	4.2	4.5	4.8	4.5	3.6	3.8	3.0	3.1	2.5	2.2	3.9	5.6	2.0	3.8
6	3.9	4.1	2.7	2.3	2.9	2.9	2.7	2.1	3.9	5.2	3.4	2.9	3.6	2.8	3.4	3.5	3.1	4.1	3.1	4.6	2.1	3.6	3.7	4.9	5.2	2.1	3.4
7	5.5	5.8	6.7	6.9	4.4	4.5	5.3	4.8	5.4	5.4	4.5	3.9	5.1	3.9	4.7	4.0	3.7	5.0	4.7	4.4	4.8	7.7	6.5	6.9	7.7	3.7	5.2
8	7.4	5.4	5.2	7.4	6.5	6.6	6.9	7.2	7.2	8.2	9.1	9.8	9.1	8.1	8.1	9.1	9.0	9.0	8.7	8.7	9.8	9.2	8.8	10.3	10.3	5.2	8.1
9	9.4	10.2	9.9	10.7	10.6	12.0	10.3	11.9	11.8	11.4	12.6	11.5	10.8	9.5	10.1	9.2	9.9	7.1	7.5	8.5	8.3	7.7	5.9	7.3	12.6	5.9	9.8
10	6.2	5.7	4.2	4.6	4.4	5.0	6.6	6.9	7.9	4.6	4.1	4.8	5.2	7.4	8.1	7.0	6.8	8.0	6.1	7.3	7.0	8.5	8.1	8.8	8.8	4.1	6.4
11	7.9	7.5	6.0	5.5	5.3	6.3	7.3	7.5	7.9	7.6	7.5	8.4	8.3	8.5	6.8	7.0	7.7	7.6	7.8	9.3	8.2	9.2	8.2	7.8	9.3	5.3	7.5
12	8.2	8.9	7.1	7.6	6.2	6.7	7.3	6.2	5.4	5.7	4.3	2.4	1.8	2.1	1.9	1.6	3.5	3.3	2.7	2.8	3.0	3.7	4.1	3.3	8.9	1.6	4.6
13	3.0	3.8	3.5	4.2	4.1	1.4	1.7	3.3	2.5	1.0	2.0	2.4	3.7	3.7	3.2	4.3	4.3	4.2	2.3	2.6	2.5	1.8	1.3	1.7	4.3	1.0	2.9
14	1.0	2.4	2.5	3.6	1.4	0.9	1.4	1.7	1.3	2.3	2.3	1.8	2.6	2.8	2.1	1.8	4.3	4.7	3.4	3.0	2.3	2.9	3.6	3.2	4.7	0.9	2.5
15	3.7	3.7	4.8	3.3	2.7	2.5	4.0	3.7	3.8	1.4	3.1	3.4	3.5	3.8	3.1	1.7	2.2	2.1	1.8	2.2	1.9	1.1	1.4	1.0	4.8	1.0	2.7
16	2.0	3.2	2.6	3.8	4.6	4.5	3.9	4.1	3.8	2.5	2.1	3.1	2.3	2.5	2.6	3.3	2.8	2.7	1.2	1.3	2.0	4.9	4.7	4.8	4.9	1.2	3.1
17	5.3	4.9	4.4	3.6	3.1	3.8	4.0	4.0	4.6	6.0	5.9	5.1	4.8	5.0	4.3	4.4	6.8	6.9	6.9	7.9	4.9	2.5	4.5	4.6	7.9	2.5	4.9
18	4.2	2.5	4.6	4.2	5.8	5.2	6.4	6.3	9.4	8.5	8.6	7.0	6.9	8.3	7.2	7.3	6.0	5.9	6.4	5.4	6.1	5.7	5.7	5.7	9.4	2.5	6.2
19	6.5	5.6	7.2	7.6	8.5	8.2	7.7	8.0	7.6	6.5	7.2	5.4	6.0	5.6	4.9	4.1	7.4	8.4	4.7	3.7	3.5	2.3	5.1	4.3	8.5	2.3	6.1
20	5.0	5.7	3.9	2.8	2.8	2.0	2.4	6.2	6.9	5.1	5.2	5.6	9.1	6.1	3.9	3.7	4.5	3.0	2.2	2.4	2.7	2.6	2.3	1.6	9.1	1.6	4.1
21	3.0	4.2	3.7	3.3	2.8	3.3	4.0	3.5	3.2	2.6	2.7	3.1	2.8	4.2	3.9	4.2	4.3	4.5	4.8	4.5	5.5	4.2	3.7	2.5	5.5	2.5	3.7
22	4.1	4.6	3.1	2.6	2.8	4.3	4.3	2.0	2.5	2.8	2.1	2.0	3.2	5.0	4.9	2.4	2.0	4.1	5.8	3.3	3.1	2.7	2.9	3.3	5.8	2.0	3.3
23	3.6	3.5	3.1	2.7	1.8	2.2	6.0	5.5	3.9	3.0	2.9	2.2	2.9	3.8	4.1	4.8	5.1	4.8	4.8	4.8	2.1	3.4	3.0	1.5	6.0	1.5	3.6
24	1.5	1.6	2.0	2.9	2.5	2.9	2.6	2.3	1.9	2.4	3.6	3.8	4.2	4.3	4.8	4.8	4.9	4.3	3.3	2.8	2.2	2.0	2.6	3.8	4.9	1.5	3.1
25	3.9	4.2	4.1	2.4	2.6	5.6	5.5	4.5	6.2	6.5	6.3	6.1	7.1	7.8	6.4	7.6	5.7	7.8	6.5	4.0	4.0	2.5	2.1	2.3	7.8	2.1	5.1
26	2.8	2.4	3.0	2.7	2.3	4.2	3.7	2.8	2.8	2.5	4.3	4.8	3.4	3.0	3.1	2.8	2.6	2.9	1.6	1.1	1.7	1.1	1.9	2.3	4.8	1.1	2.7
27	1.6	2.5	2.0	1.9	1.9	2.4	3.1	2.6	2.8	2.9	3.6	3.8	3.9	4.2	3.8	3.8	3.5	3.2	3.3	3.3	9.3	10.9	11.5	12.8	12.8	1.6	4.4
28	13.8	14.5	10.3	13.3	12.1	14.6	14.1	12.1	12.4	12.7	12.3	10.5	12.7	11.5	13.0	11.8	12.3	10.1	11.3	12.9	12.6	10.2	14.9	10.6	14.9	10.1	12.4
29	14.8	14.1	11.2	10.9	10.5	10.1	7.9	5.8	4.9	3.6	4.1	4.3	4.0	4.9	4.7	5.5	3.9	2.8	3.7	4.2	5.1	4.5	4.9	6.4	14.8	2.8	6.5
30	7.4	5.4	6.3	4.0	5.1	4.8	5.4	5.3	5.7	4.0	2.6	3.4	3.7	3.8	3.9	4.2	3.8	3.8	4.5	3.8	9.2	9.2	8.0	8.2	9.2	2.6	5.2
Max.	**14.8**	**14.5**	**11.2**	**13.3**	**12.1**	**14.6**	**14.1**	**12.9**	**13.0**	**12.7**	**12.9**	**12.0**	**14.9**	**11.5**	**13.0**	**11.8**	**12.3**	**10.1**	**11.3**	**12.9**	**12.6**	**10.9**	**14.9**	**12.8**	**14.9**		
Min.	**1.0**	**1.6**	**2.0**	**1.9**	**1.4**	**0.9**	**1.4**	**1.7**	**1.3**	**1.0**	**1.9**	**1.8**	**1.8**	**2.1**	**1.9**	**1.6**	**2.0**	**2.1**	**1.2**	**1.1**	**1.7**	**1.1**	**1.3**	**1.0**		**0.9**	
Avg.	**5.4**	**5.3**	**5.0**	**5.2**	**4.8**	**5.2**	**5.5**	**5.3**	**5.4**	**4.9**	**5.3**	**5.0**	**5.4**	**5.4**	**5.2**	**5.2**	**5.3**	**5.2**	**4.6**	**4.7**	**4.9**	**4.8**	**5.0**	**5.2**			**5.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.5	6.2	7.4	6.2	4.2	4.7	5.3	5.4	4.3	2.3	3.3	3.0	4.0	4.4	5.1	5.7	5.5	5.4	5.0	7.1	10.4	7.4	8.6	9.8	10.4	2.3	5.7
2	10.1	10.1	10.3	8.2	8.4	8.1	7.2	6.6	6.9	6.8	3.5	3.2	3.2	2.9	3.6	8.4	10.4	10.5	9.1	9.2	6.5	3.0	4.2	3.9	10.5	2.9	6.8
3	4.0	4.9	4.6	3.0	2.2	4.1	4.5	3.3	3.5	3.1	3.1	3.7	3.6	4.0	4.6	4.8	3.8	2.7	2.6	3.1	3.4	2.5	3.0	1.9	4.9	1.9	3.5
4	2.6	3.1	3.1	2.5	2.5	2.8	2.5	1.6	3.5	3.6	3.7	3.6	4.7	4.0	4.6	4.6	3.6	3.9	3.7	3.8	2.8	3.1	2.2	2.0	4.7	1.6	3.3
5	2.3	4.0	4.8	4.1	2.4	3.4	4.4	4.0	3.4	4.3	4.5	4.1	2.8	2.9	2.9	3.4	3.0	2.8	3.4	2.9	2.6	2.0	2.2	2.2	4.8	2.0	3.3
6	2.3	0.8	0.9	1.0	2.2	1.4	2.3	2.5	2.4	2.5	2.6	2.2	2.5	3.2	3.3	3.4	4.0	3.8	2.9	3.0	2.9	2.0	2.3	4.2	4.2	0.8	2.5
7	2.4	3.3	2.6	3.8	3.2	1.8	2.6	2.8	2.7	3.9	3.6	3.9	3.7	4.4	6.4	5.2	4.0	2.9	3.9	3.9	4.2	2.8	4.6	3.5	6.4	1.8	3.6
8	3.8	3.2	2.2	2.2	2.1	3.7	4.1	6.3	8.7	8.9	9.6	8.7	9.7	8.5	8.0	7.0	3.7	3.1	7.6	8.1	7.4	7.1	4.8	3.3	9.7	2.1	5.9
9	3.3	4.0	3.5	3.8	3.4	3.7	4.2	4.1	2.5	2.2	2.8	3.8	3.8	3.8	3.3	3.5	3.8	3.1	3.4	3.0	4.6	4.0	5.1	4.1	5.1	2.2	3.6
10	4.5	3.9	4.0	4.5	5.6	4.4	5.1	4.8	4.0	3.0	2.4	3.0	4.0	4.8	4.5	4.7	5.0	3.2	3.8	2.4	3.6	4.3	3.3	2.8	5.6	2.4	4.0
11	1.5	2.3	3.2	2.1	2.4	1.7	2.3	2.6	2.4	4.9	5.9	5.2	5.3	4.4	5.9	4.7	3.8	3.4	2.5	6.5	5.8	3.0	2.1	1.8	6.5	1.5	3.6
12	1.7	2.2	2.1	2.6	2.6	3.2	3.7	4.1	4.9	3.4	2.2	3.3	3.2	3.1	3.1	2.2	3.9	6.4	8.4	10.5	11.1	8.7	7.7	5.0	11.1	1.7	4.6
13	6.1	9.4	8.3	4.3	9.7	11.6	13.1	11.8	12.8	13.4	12.9	13.0	13.2	15.6	18.1	17.0	16.9	18.5	16.8	19.1	16.4	16.3	13.6	13.4	19.1	4.3	13.4
14	14.5	13.7	16.0	14.7	13.6	12.6	12.7	12.3	12.4	14.2	13.6	13.2	11.4	10.0	10.2	10.9	11.3	9.8	10.2	8.8	11.9	10.3	11.3	7.1	16.0	7.1	11.9
15	8.5	6.2	9.5	11.0	10.4	11.4	11.1	10.3	6.9	6.3	8.1	7.3	6.4	7.3	8.3	4.5	3.6	3.1	3.4	2.7	3.0	1.6	2.6	2.4	11.4	1.6	6.5
16	2.9	3.0	4.5	4.7	4.6	4.4	5.8	5.8	4.5	3.1	4.0	4.0	5.0	4.2	4.0	3.3	4.2	4.0	4.3	4.0	5.1	4.3	4.6	3.9	5.8	2.9	4.3
17	4.8	6.7	6.5	6.8	5.0	4.6	3.8	4.6	4.9	5.0	4.7	4.4	6.5	6.4	6.1	5.7	5.8	6.1	6.6	6.6	4.5	6.0	7.2	6.5	7.2	3.8	5.7
18	7.5	7.5	6.1	5.9	5.8	4.7	5.0	4.9	4.7	5.3	3.8	4.1	4.3	3.6	3.0	5.8	4.6	4.6	3.5	4.9	4.8	3.2	2.7	3.2	7.5	2.7	4.7
19	2.8	2.9	2.6	6.8	8.1	7.4	6.6	8.0	7.6	10.1	9.4	8.8	6.7	7.7	8.2	8.5	8.5	6.4	7.9	6.1	4.8	2.9	3.7	5.3	10.1	2.6	6.6
20	5.2	2.1	2.4	2.6	8.4	6.6	6.1	7.1	7.4	7.7	7.4	6.6	8.3	6.9	7.2	5.7	6.4	6.3	7.6	6.7	9.3	4.5	4.1	6.8	9.3	2.1	6.2
21	7.1	6.7	4.3	3.3	2.6	5.3	5.9	5.5	8.3	6.6	7.6	8.2	7.7	7.0	7.5	6.1	5.3	2.7	2.9	4.0	5.3	6.0	4.4	3.1	8.3	2.6	5.6
22	2.8	3.4	3.0	2.1	3.5	5.4	6.2	6.2	5.6	7.4	6.3	5.5	5.6	5.2	4.9	3.4	3.3	5.4	5.1	4.5	5.0	5.1	5.7	4.7	7.4	2.1	4.8
23	6.5	4.8	5.7	4.5	4.4	5.2	6.6	6.7	7.3	8.3	9.9	10.3	9.6	10.5	10.0	9.5	10.7	7.1	9.6	9.9	9.9	8.2	7.8	8.2	10.7	4.4	8.0
24	8.0	8.9	8.3	8.0	8.9	8.8	8.9	6.7	6.3	7.1	7.0	6.6	7.4	6.4	3.3	2.6	3.4	3.5	3.8	3.6	3.8	3.4	3.9	6.2	8.9	2.6	6.0
25	5.5	4.6	5.8	6.1	6.6	4.7	3.5	2.9	3.4	2.4	1.5	1.8	1.5	4.6	5.1	4.7	4.9	2.7	1.0	1.4	1.3	1.7	2.0	2.1	6.6	1.0	3.4
26	4.7	3.5	3.2	2.3	2.6	3.2	4.1	7.3	7.4	8.5	9.5	10.2	10.6	8.6	9.8	10.7	11.4	12.5	13.9	14.1	12.7	12.1	11.3	12.6	14.1	2.3	8.6
27	11.3	12.3	12.2	10.7	9.5	8.9	7.2	7.9	6.2	3.3	3.1	3.6	3.2	3.4	4.5	2.8	3.1	3.0	2.8	2.8	4.4	2.8	2.5	5.9	12.3	2.5	5.7
28	7.1	4.8	6.0	9.1	8.0	9.7	10.5	10.5	7.7	6.1	3.1	4.9	6.3	7.0	4.9	4.2	3.9	3.5	3.1	3.5	5.8	12.2	16.5	12.8	16.5	3.1	7.1
29	11.2	10.2	11.6	9.3	15.7	14.7	14.2	20.0	21.7	17.7	18.1	16.3	12.1	15.7	12.7	10.5	8.9	10.6	14.3	10.9	11.6	17.5	18.0	16.6	21.7	8.9	14.2
30	13.7	15.8	13.6	17.9	11.4	14.2	14.6	17.1	14.9	13.6	13.2	10.7	10.2	9.6	10.8	10.5	7.3	7.0	7.0	9.5	5.6	4.1	6.0	10.2	17.9	4.1	11.2
31	11.0	10.2	9.7	9.9	10.1	8.4	8.8	8.8	8.8	9.7	7.6	6.8	9.5	7.6	9.6	8.6	9.6	10.0	9.2	8.2	8.1	8.5	11.9	11.7	11.9	6.8	9.3
Max.	**14.5**	**15.8**	**16.0**	**17.9**	**15.7**	**14.7**	**14.6**	**20.0**	**21.7**	**17.7**	**18.1**	**16.3**	**13.2**	**15.7**	**18.1**	**17.0**	**16.9**	**18.5**	**16.8**	**19.1**	**16.4**	**17.5**	**18.0**	**16.6**	**21.7**		
Min.	**1.5**	**0.8**	**0.9**	**1.0**	**2.1**	**1.4**	**2.3**	**1.6**	**2.4**	**2.2**	**1.5**	**1.8**	**1.5**	**2.9**	**2.9**	**2.2**	**3.0**	**2.7**	**1.0**	**1.4**	**1.3**	**1.6**	**2.0**	**1.8**		**0.8**	
Avg.	**6.0**	**6.0**	**6.1**	**5.9**	**6.1**	**6.3**	**6.5**	**6.9**	**6.7**	**6.6**	**6.4**	**6.2**	**6.3**	**6.4**	**6.6**	**6.2**	**6.0**	**5.7**	**6.1**	**6.3**	**6.4**	**5.8**	**6.1**	**6.0**			**6.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.6	1.2	2.2	1.4	0.8	0.4	0.3	0.7	0.8	0.5	1.2	1.2	2.8	2.4	1.6	3.0	2.8	1.2	1.8	1.5	1.8	1.8	1.4	2.6	3.6	0.3	1.6
2	2.4	2.1	2.6	2.3	3.1	3.7	3.8	4.5	4.2	4.5	4.6	4.7	5.2	5.6	5.2	5.6	6.7	7.2	6.9	7.3	5.7	6.6	5.4	6.8	7.3	2.1	4.9
3	6.2	6.7	6.1	6.6	6.1	5.8	4.9	2.5	1.2	1.1	1.1	1.3	1.2	2.5	2.3	1.4	1.8	1.0	0.9	1.0	1.5	1.5	2.1	2.1	6.7	0.9	2.9
4	1.1	0.5	0.9	1.0	1.1	1.9	2.3	1.7	2.4	1.4	1.2	1.3	2.0	3.0	3.7	3.0	4.3	4.1	1.6	0.7	1.5	2.1	3.8	3.6	4.3	0.5	2.1
5	4.9	5.6	5.5	6.0	6.2	6.0	5.6	5.5	4.6	4.2	3.7	3.3	2.1	3.2	1.9	0.8	2.1	4.6	5.4	4.7	4.0	4.2	5.4	6.5	6.5	0.8	4.4
6	7.2	6.1	6.1	6.5	6.5	6.3	6.4	5.3	4.6	3.3	1.2	0.9	1.1	1.5	2.1	0.9	4.5	2.5	1.1	1.2	1.4	2.0	2.4	4.2	7.2	0.9	3.6
7	2.6	1.7	1.7	1.9	1.3	2.6	4.8	5.1	5.5	6.0	5.6	5.5	4.8	4.7	3.7	4.3	3.8	3.9	3.5	4.2	3.6	2.2	3.0	3.1	6.0	1.3	3.7
8	2.9	2.8	2.7	1.9	2.1	2.6	2.5	3.2	2.6	1.9	2.8	3.2	3.2	3.1	3.3	3.4	3.4	2.4	1.7	1.0	0.6	0.5	1.4	1.8	3.4	0.5	2.4
9	1.3	1.4	1.2	1.1	1.3	0.8	3.6	3.5	1.5	3.2	3.9	4.5	4.3	4.2	3.4	3.6	3.4	2.8	2.0	1.7	1.6	1.2	2.0	1.3	4.5	0.8	2.5
10	2.3	5.0	1.9	1.1	0.6	1.3	4.7	5.0	2.9	3.2	3.0	3.6	4.5	3.9	4.0	4.0	4.0	3.8	2.2	1.1	0.9	0.6	0.5	0.7	5.0	0.5	2.7
11	0.5	0.7	0.3	0.5	0.6	0.5	1.5	2.3	2.1	1.9	2.4	3.2	3.0	2.5	3.2	3.2	2.5	1.8	1.4	0.7	0.8	2.9	2.3	1.6	3.2	0.3	1.8
12	1.4	1.1	0.6	0.9	1.9	1.9	0.6	0.7	0.7	3.0	2.5	3.0	3.3	3.4	3.2	3.2	2.9	1.9	1.6	1.9	1.3	2.1	3.0	2.1	3.4	0.6	2.0
13	0.8	1.5	0.7	1.6	1.8	1.3	1.6	1.2	2.7	2.2	1.2	1.4	3.5	2.8	2.0	2.7	3.1	3.5	3.5	2.5	1.5	1.6	2.6	2.2	3.5	0.7	2.1
14	1.6	1.9	2.2	2.0	1.9	2.2	1.9	1.3	1.7	2.0	2.7	2.1	2.0	2.3	2.9	3.0	2.9	3.1	2.7	2.4	1.3	1.1	1.8	1.5	3.1	1.1	2.1
15	1.3	1.3	1.2	1.2	1.5	0.8	1.4	1.4	1.3	2.5	1.1	1.6	1.4	0.9	2.5	2.0	2.9	3.2	2.9	1.7	1.5	2.0	2.0	1.9	3.2	0.8	1.7
16	1.3	2.7	3.1	1.5	1.2	3.7	3.9	4.8	3.7	4.1	2.3	2.1	3.2	3.1	2.7	2.9	1.8	1.4	1.0	1.7	2.9	2.8	1.9	1.9	4.8	1.0	2.6
17	2.1	4.5	5.0	4.8	4.9	5.6	6.6	7.4	7.7	7.5	7.1	7.7	7.0	7.3	7.6	7.8	8.7	9.1	7.8	7.4	6.6	5.8	6.3	6.2	9.1	2.1	6.6
18	5.2	5.7	5.6	5.8	5.5	4.8	5.4	6.3	5.9	2.5	3.2	2.7	3.6	3.5	2.8	3.1	2.7	2.1	1.8	1.5	0.8	1.0	0.4	0.5	6.3	0.4	3.4
19	0.9	1.3	0.5	1.0	1.1	3.5	3.4	3.4	2.5	1.7	1.0	1.5	2.1	2.1	1.8	2.7	3.6	4.4	2.9	2.7	3.8	5.5	4.1	4.5	5.5	0.5	2.6
20	2.7	2.6	7.4	7.2	4.4	3.6	4.3	3.4	4.1	3.7	3.2	3.2	4.3	3.5	5.4	3.5	3.6	3.1	2.7	2.3	7.0	9.2	11.6	6.7	11.6	2.3	4.7
21	5.5	6.5	10.1	8.5	8.3	12.0	10.4	10.8	9.6	5.8	3.8	4.7	4.7	3.4	3.0	2.6	2.3	3.1	1.5	1.4	1.2	1.4	1.7	1.2	12.0	1.2	5.2
22	1.2	1.9	1.4	1.2	3.2	3.9	3.6	4.3	4.3	2.3	2.4	2.2	2.0	1.5	3.1	5.5	4.2	4.2	4.2	4.1	5.6	5.5	4.4	5.1	5.6	1.2	3.4
23	5.5	5.6	6.1	6.0	5.5	5.0	3.8	2.7	2.5	6.0	3.3	4.8	4.1	1.8	3.2	2.7	3.4	1.5	0.4	1.7	2.0	1.7	1.0	2.0	6.1	0.4	3.4
24	2.3	1.4	1.7	3.2	3.2	2.9	1.8	1.6	1.4	0.9	0.9	4.6	4.8	5.7	3.6	4.3	3.4	6.8	7.9	7.9	5.3	2.7	2.5	3.5	7.9	0.9	3.5
25	3.6	3.4	3.9	5.2	3.8	4.7	5.1	4.8	3.4	4.2	3.1	1.3	3.0	3.7	4.0	3.1	2.7	2.5	1.8	1.2	1.1	0.7	0.8	2.7	5.2	0.7	3.1
26	3.0	0.8	1.7	2.8	2.4	3.2	2.1	2.9	3.9	3.5	2.2	2.5	2.8	2.7	5.6	3.9	5.1	2.3	1.9	2.9	4.2	5.6	6.1	7.2	7.2	0.8	3.4
27	8.0	7.8	8.2	6.6	3.4	4.4	4.1	4.3	4.0	3.5	2.5	2.8	3.3	3.9	2.4	3.1	4.7	4.2	5.5	5.8	5.9	6.2	8.2	7.4	8.2	2.4	5.0
28	6.2	3.0	2.9	2.0	1.6	1.3	1.5	0.8	2.3	1.2	0.4	0.7	2.5	2.2	1.3	1.3	4.0	4.3	8.4	10.8	9.3	10.1	12.0	10.2	12.0	0.4	4.2
29	8.6	7.4	8.4	7.3	7.2	9.3	8.6	5.0	4.5	7.8	6.5	7.7	7.8	7.4	6.2	8.0	6.5	5.6	8.1	5.3	4.5	5.1	5.0	3.7	9.3	3.7	6.7
30	4.0	5.0	4.3	4.0	5.2	4.3	5.1	4.4	3.5	3.0	2.3	1.9	3.4	3.1	3.7	2.8	5.9	6.3	4.1	4.1	6.2	7.4	7.0	6.3	7.4	1.9	4.5
31	5.9	5.9	6.9	6.8	5.7	5.7	3.3	4.4	6.0	5.3	5.1	5.1	4.0	3.7	4.3	5.1	5.3	3.3	3.3	4.5	5.9	7.0	7.0	6.8	7.0	3.3	5.3
Max.	**8.6**	**7.8**	**10.1**	**8.5**	**8.3**	**12.0**	**10.4**	**10.8**	**9.6**	**7.8**	**7.1**	**7.7**	**7.8**	**7.4**	**7.6**	**8.0**	**8.7**	**9.1**	**8.4**	**10.8**	**9.3**	**10.1**	**12.0**	**10.2**	**12.0**		
Min.	**0.5**	**0.5**	**0.3**	**0.5**	**0.6**	**0.4**	**0.3**	**0.7**	**0.7**	**0.5**	**0.4**	**0.7**	**1.1**	**0.9**	**1.3**	**0.8**	**1.8**	**1.0**	**0.4**	**0.7**	**0.6**	**0.5**	**0.4**	**0.5**		**0.3**	
Avg.	**3.4**	**3.4**	**3.6**	**3.5**	**3.3**	**3.7**	**3.8**	**3.7**	**3.5**	**3.4**	**2.8**	**3.1**	**3.5**	**3.4**	**3.4**	**3.4**	**3.8**	**3.6**	**3.3**	**3.2**	**3.3**	**3.6**	**3.8**	**3.8**			**3.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.0	5.3	3.7	3.4	3.1	2.6	5.4	5.3	5.7	5.5	4.2	2.2	4.3	5.9	3.3	3.8	6.0	6.2	7.3	5.1	3.2	4.6	6.4	4.6	7.3	2.2	4.7
2	3.2	2.8	3.3	3.3	3.5	2.8	2.2	3.4	3.3	3.1	1.7	1.7	1.5	2.6	2.7	3.3	3.0	1.3	1.3	1.9	2.5	2.4	2.0	2.3	3.5	1.3	2.5
3	2.6	1.4	1.2	2.4	2.4	2.2	3.5	5.0	5.0	5.7	5.6	5.5	6.1	6.4	6.3	6.8	7.6	8.2	8.4	8.7	8.4	8.9	8.5	8.2	8.9	1.2	5.6
4	7.0	6.7	6.5	6.8	7.1	7.6	7.1	6.7	6.5	6.0	5.8	5.8	5.3	4.2	3.7	2.9	1.7	1.9	3.5	4.9	3.1	1.4	0.7	1.7	7.6	0.7	4.8
5	1.6	1.6	1.5	1.3	2.3	2.6	2.1	3.9	3.8	4.5	4.6	3.0	1.8	1.6	1.4	2.0	1.6	1.5	2.3	3.7	4.7	4.9	5.0	4.6	5.0	1.3	2.8
6	4.9	4.7	3.5	3.4	2.3	2.6	1.8	1.3	1.3	4.7	7.9	7.2	8.6	8.6	6.6	4.9	2.0	4.9	1.4	5.8	6.5	7.7	5.3	3.8	8.6	1.3	4.7
7	7.1	6.0	7.7	7.8	5.3	5.0	6.6	6.5	8.4	7.0	5.4	3.6	2.8	4.5	2.2	4.2	2.5	2.9	3.7	4.1	5.0	4.1	4.5	6.4	8.4	2.2	5.1
8	5.8	7.8	7.2	7.4	7.7	6.6	5.4	4.5	5.7	4.9	3.2	1.2	1.7	1.4	1.8	1.6	1.6	1.8	1.4	1.0	1.5	2.6	4.5	2.5	7.8	1.0	3.8
9	3.4	5.4	6.9	7.2	6.7	6.5	5.6	4.2	4.6	4.0	5.2	4.3	3.7	3.1	2.2	1.9	1.5	3.8	4.5	2.7	1.2	1.6	2.7	3.8	7.2	1.2	4.0
10	5.3	4.9	4.2	7.6	7.4	8.4	8.5	8.6	9.3	6.3	5.0	6.3	5.6	4.4	1.9	2.0	4.4	2.7	0.7	1.8	1.3	0.7	1.7	2.1	9.3	0.7	4.6
11	1.9	3.7	3.5	3.5	4.4	4.0	4.2	2.7	2.0	2.3	3.5	3.8	5.1	4.9	5.2	6.0	4.3	4.5	4.2	3.5	2.4	1.9	2.0	2.3	6.0	1.9	3.6
12	1.6	1.0	2.0	3.9	3.3	5.7	6.8	4.3	3.0	3.6	8.8	10.9	9.4	6.6	7.3	7.9	9.9	8.4	12.6	13.8	11.5	11.9	7.3	9.0	13.8	1.0	7.1
13	10.1	8.5	10.0	3.9	3.0	3.8	2.8	6.4	4.3	3.9	4.2	2.6	1.9	3.4	4.7	5.4	5.9	5.6	4.7	6.1	6.1	3.1	4.8	4.0	10.1	1.9	5.0
14	3.8	5.2	2.7	1.5	1.5	1.5	1.5	1.9	3.4	3.3	1.3	1.0	1.1	2.2	2.2	4.5	4.1	4.1	3.7	2.9	2.8	2.2	2.5	2.7	5.2	1.0	2.6
15	3.4	3.0	3.1	3.5	1.6	2.3	2.5	2.0	1.9	3.5	3.0	4.0	2.5	2.4	2.1	1.6	1.6	1.8	1.4	2.2	5.1	4.0	3.9	4.6	5.1	1.4	2.8
16	4.3	4.2	3.4	5.9	5.8	5.5	4.8	3.7	5.7	5.9	5.8	4.0	3.7	5.0	4.9	3.8	4.5	5.0	2.4	1.1	1.3	1.0	1.6	2.5	5.9	1.0	4.0
17	4.2	4.2	3.3	2.8	3.6	3.2	3.2	3.4	3.1	3.9	3.6	4.1	3.9	3.3	1.6	0.8	0.8	1.4	1.8	0.7	1.8	1.3	2.9	5.1	5.1	0.7	2.8
18	5.7	5.9	6.3	6.7	6.4	6.3	6.6	5.0	4.2	3.5	4.4	4.0	3.4	3.4	4.3	4.6	4.8	3.7	4.4	4.0	4.3	4.3	3.1	4.1	6.7	3.1	4.7
19	3.3	4.2	4.7	3.9	5.2	6.6	7.0	6.7	7.5	6.2	4.1	4.4	3.0	3.0	2.6	2.9	4.0	3.1	4.5	4.8	5.4	6.2	6.6	6.6	7.5	2.6	4.9
20	7.2	7.5	7.3	7.1	6.8	6.5	5.1	4.5	4.8	4.8	3.3	3.4	3.5	5.9	5.6	3.1	4.0	3.9	3.4	4.5	4.4	4.3	2.6	4.0	7.5	2.6	4.9
21	5.0	5.4	5.7	5.6	5.7	4.8	4.4	4.3	2.0	1.5	2.0	2.9	1.8	0.8	0.7	1.2	3.4	3.9	3.7	3.3	2.6	1.3	1.3	2.0	5.7	0.7	3.1
22	2.1	1.9	3.2	5.0	4.8	5.2	5.8	5.8	3.6	3.3	3.6	2.8	2.5	1.9	2.3	1.7	2.6	4.1	4.1	4.1	2.5	2.0	2.3	1.5	5.8	1.5	3.3
23	3.1	2.7	3.0	1.7	1.3	1.3	1.6	0.4	1.3	0.6	2.2	4.9	3.4	1.4	1.8	1.9	2.0	2.0	2.3	3.2	4.1	16.5	10.9	16.3	16.5	0.4	3.7
24	15.3	16.8	12.6	11.5	9.2	6.2	7.5	8.9	8.7	8.4	6.8	7.8	7.5	10.8	6.2	6.3	7.2	5.4	7.4	6.7	6.9	4.8	6.5	6.4	16.8	4.8	8.4
25	7.5	7.8	9.1	10.2	10.3	10.6	8.4	9.8	8.8	8.9	7.5	8.1	7.7	8.0	8.3	6.1	6.7	5.4	7.1	6.9	3.2	1.9	3.7	2.8	10.6	1.9	7.3
26	1.3	2.0	2.1	1.2	1.8	3.8	5.7	4.9	3.5	3.2	3.8	4.2	2.8	2.6	5.6	6.1	6.5	7.6	7.5	7.5	7.9	7.6	8.4	10.0	10.0	1.2	4.9
27	11.3	11.1	11.7	11.9	11.9	12.6	13.8	12.8	12.9	13.4	13.2	13.7	13.9	13.1	12.8	13.2	11.8	9.6	9.2	9.9	7.8	7.3	7.1	6.6	13.9	6.6	11.4
28	6.3	5.9	5.8	5.8	4.4	2.4	2.4	3.8	0.9	1.8	1.6	0.4	1.0	1.1	1.0	3.1	4.7	2.6	2.0	1.8	2.0	1.9	3.4	3.9	6.3	0.4	2.9
29	4.8	4.8	4.2	5.3	3.7	5.0	5.5	5.1	5.4	5.1	5.1	5.2	4.4	8.0	6.9	6.9	5.5	7.3	5.9	6.7	7.6	8.0	8.1	8.2	8.2	3.7	5.9
30	7.4	7.6	7.2	6.8	5.6	6.0	7.0	5.4	4.6	4.7	4.6	4.5	5.0	4.0	4.4	3.5	3.9	4.2	5.5	5.6	5.8	5.0	4.9	5.3	7.6	3.5	5.4
Max.	**15.3**	**16.8**	**12.6**	**11.9**	**11.9**	**12.6**	**13.8**	**12.8**	**12.9**	**13.4**	**13.2**	**13.7**	**13.9**	**13.1**	**12.8**	**13.2**	**11.8**	**9.6**	**12.6**	**13.8**	**11.5**	**16.5**	**10.9**	**16.3**	**16.8**		
Min.	**1.3**	**1.0**	**1.2**	**1.2**	**1.3**	**1.3**	**1.5**	**0.4**	**0.9**	**0.6**	**1.3**	**0.4**	**1.0**	**0.8**	**0.7**	**0.8**	**0.8**	**1.3**	**0.7**	**0.7**	**1.2**	**0.7**	**0.7**	**1.5**		**0.4**	
Avg.	**5.2**	**5.3**	**5.2**	**5.3**	**4.9**	**5.0**	**5.2**	**5.0**	**4.8**	**4.8**	**4.7**	**4.6**	**4.3**	**4.5**	**4.1**	**4.1**	**4.3**	**4.3**	**4.4**	**4.6**	**4.4**	**4.5**	**4.5**	**4.9**			**4.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.1	5.4	6.0	6.7	7.1	5.9	5.3	5.2	6.8	6.9	7.3	5.5	4.7	5.6	5.9	6.0	5.4	6.5	6.3	4.7	5.5	4.8	4.6	4.1	7.3	4.1	5.7
2	6.8	5.6	6.3	6.1	5.0	5.4	4.2	5.7	4.6	5.6	4.9	6.1	5.3	4.4	4.0	5.2	4.5	3.2	2.5	3.7	4.1	3.9	2.2	2.8	6.8	2.2	4.7
3	2.7	2.7	3.8	3.8	5.6	4.8	4.0	1.8	5.1	6.5	6.4	5.2	7.1	7.7	6.8	7.9	7.5	6.1	6.0	5.4	5.5	4.6	4.2	6.5	7.9	1.8	5.3
4	7.0	5.9	6.2	7.2	7.6	6.9	7.2	8.1	8.0	8.1	7.5	7.9	7.1	8.3	10.4	9.8	10.4	10.2	10.3	11.0	12.3	12.4	11.8	11.0	12.4	5.9	8.8
5	10.7	8.9	8.1	8.5	8.4	8.0	6.9	5.9	5.6	5.6	5.5	4.5	4.3	2.0	0.8	2.1	2.9	4.0	5.6	5.8	5.8	4.8	5.5	4.5	10.7	0.8	5.6
6	4.3	3.6	3.0	2.3	2.3	2.3	2.3	1.8	1.4	2.3	1.8	1.5	1.3	1.2	1.6	1.3	0.9	1.5	2.0	2.6	2.0	2.4	2.8	2.6	4.3	0.9	2.1
7	3.0	3.6	3.2	2.4	2.1	2.3	3.2	3.9	4.5	4.6	4.6	5.0	4.7	4.3	5.1	5.4	5.4	5.4	5.9	4.9	4.9	4.6	3.8	3.4	5.9	2.1	4.2
8	3.4	3.5	2.5	0.8	0.6	0.8	1.9	1.8	2.7	2.8	1.6	1.0	1.6	1.0	2.2	2.6	2.6	2.5	2.3	2.3	2.9	2.7	2.8	3.0	3.5	0.6	2.2
9	2.3	2.8	2.4	1.4	1.6	1.8	2.5	2.8	2.9	3.8	3.1	2.1	3.0	2.9	4.3	5.3	6.3	5.8	5.5	5.7	6.4	9.3	8.7	7.5	9.3	1.4	4.2
10	8.0	7.2	7.2	8.4	5.8	6.7	7.5	6.2	5.7	4.9	5.6	4.3	3.0	2.3	2.2	2.3	1.4	1.8	3.3	3.6	4.4	4.7	3.6	2.9	8.4	1.4	4.7
11	1.9	2.4	4.5	4.4	5.0	4.9	4.6	3.3	2.5	0.8	2.9	2.6	2.5	3.8	4.5	4.4	4.7	4.1	5.4	5.5	5.7	5.5	5.0	7.0	7.0	0.8	4.1
12	6.6	4.7	6.4	6.2	6.0	6.9	6.6	7.2	5.8	4.3	8.3	5.6	5.6	5.7	6.7	8.4	6.8	8.1	6.1	5.2	7.7	6.8	7.3	7.1	8.4	4.3	6.5
13	6.5	5.5	3.8	2.4	2.2	3.4	4.8	2.7	2.9	4.6	4.7	3.9	4.7	4.1	3.2	5.0	5.6	5.3	4.2	1.6	1.1	1.5	1.4	1.2	6.5	1.1	3.6
14	2.0	2.2	2.1	3.2	3.4	2.3	2.4	2.5	3.4	4.3	4.3	3.2	4.3	4.1	2.7	2.2	1.6	1.4	2.5	2.1	2.2	3.8	5.2	5.0	5.2	1.4	3.0
15	6.1	6.6	6.6	6.6	5.9	6.4	6.4	5.7	5.8	5.0	4.5	3.6	3.1	2.4	1.5	2.9	3.0	2.6	2.2	0.9	1.5	2.2	1.5	1.6	6.6	0.9	3.9
16	1.0	1.7	1.2	2.7	4.6	5.7	4.3	2.9	2.4	2.9	3.6	5.0	3.4	5.3	6.8	4.0	3.8	4.1	3.0	2.4	3.3	1.6	1.7	2.8	6.8	1.0	3.3
17	2.6	3.5	5.0	6.1	5.4	4.7	3.8	4.3	2.8	3.4	6.3	6.4	7.6	4.7	4.1	9.1	7.8	6.2	7.2	6.4	8.2	8.5	7.3	6.1	9.1	2.6	5.7
18	5.6	7.6	9.3	10.4	11.0	10.5	13.7	14.2	14.8	12.4	9.2	6.5	4.5	4.7	4.1	4.1	3.8	2.7	5.5	7.3	2.7	1.2	2.1	3.2	14.8	1.2	7.1
19	4.6	4.9	5.1	4.9	4.7	3.9	3.6	6.3	5.1	4.3	4.2	4.9	4.7	5.0	4.6	3.0	2.2	2.6	2.9	3.6	3.4	4.7	5.4	6.2	6.3	2.2	4.4
20	5.4	6.3	5.7	6.4	6.8	7.6	8.0	8.2	8.6	8.9	9.1	10.0	10.3	10.6	10.2	9.9	9.6	9.7	9.5	9.8	10.9	10.9	10.1	11.2	11.2	5.4	8.9
21	10.1	5.3	5.0	3.6	3.7	4.6	3.1	1.7	0.5	0.6	0.5	0.4	0.6	1.4	1.9	2.5	1.2	0.7	3.0	5.1	7.9	3.8	3.0	4.2	10.1	0.4	3.1
22	4.7	5.1	4.5	3.5	5.1	6.0	6.8	7.8	9.3	7.3	7.8	7.4	7.6	8.3	11.3	12.4	9.9	4.1	3.7	4.5	6.4	6.8	10.2	6.6	12.4	3.5	7.0
23	6.7	9.5	8.5	7.8	7.4	5.4	4.4	5.1	5.2	4.9	4.7	2.9	4.1	3.6	4.5	4.0	2.3	1.5	1.2	1.2	2.3	2.9	3.5	3.6	9.5	1.2	4.5
24	2.9	3.3	1.3	0.9	3.5	3.0	2.7	3.5	4.5	3.7	4.4	3.1	4.9	5.2	5.6	5.8	7.3	7.4	8.1	9.4	7.7	7.7	7.4	8.1	9.4	0.9	5.1
25	7.8	7.0	5.9	6.3	3.8	6.7	6.9	6.7	5.8	4.8	4.7	5.5	3.8	3.3	2.1	2.3	1.4	1.5	3.9	4.3	3.7	2.7	4.0	3.0	7.8	1.4	4.5
26	2.4	3.7	2.9	2.6	2.2	2.1	3.5	2.7	3.2	5.0	6.4	5.3	4.2	4.3	4.5	3.2	2.6	3.0	3.1	1.6	2.0	2.8	3.1	2.0	6.4	1.6	3.3
27	2.4	2.4	2.4	2.6	2.2	2.9	2.7	3.1	3.1	3.5	4.4	4.1	3.7	2.8	1.0	1.2	0.8	1.4	2.0	2.5	2.9	2.9	3.2	2.4	4.4	0.8	2.6
28	2.4	2.1	3.2	2.4	2.8	2.7	3.3	3.6	3.9	3.3	4.4	3.4	4.2	3.1	1.9	1.8	1.7	1.5	2.5	3.7	1.2	1.4	3.3	2.4	4.4	1.2	2.8
29	3.6	3.1	3.3	3.4	2.9	3.8	3.6	3.8	3.7	3.9	3.7	4.1	4.2	3.5	3.6	4.7	4.2	4.7	3.9	4.0	3.9	3.6	3.6	3.7	4.7	2.9	3.8
30	3.8	3.5	3.2	3.6	3.0	2.5	2.5	2.8	2.0	3.0	1.9	0.8	0.7	1.3	1.9	3.5	4.6	4.5	4.4	5.8	5.2	5.6	3.8	3.3	5.8	0.7	3.2
31	3.3	4.5	4.5	5.3	6.8	6.7	8.6	8.2	6.7	4.5	6.0	8.9	7.3	5.9	8.2	6.3	5.7	6.9	7.4	6.3	4.8	3.8	4.6	3.3	8.9	3.3	6.0
Max.	**10.7**	**9.5**	**9.3**	**10.4**	**11.0**	**10.5**	**13.7**	**14.2**	**14.8**	**12.4**	**9.2**	**10.0**	**10.3**	**10.6**	**11.3**	**12.4**	**10.4**	**10.2**	**10.3**	**11.0**	**12.3**	**12.4**	**11.8**	**11.2**	**14.8**		
Min.	**1.0**	**1.7**	**1.2**	**0.8**	**0.6**	**0.8**	**1.9**	**1.7**	**0.5**	**0.6**	**0.5**	**0.4**	**0.6**	**1.0**	**0.8**	**1.2**	**0.8**	**0.7**	**1.2**	**0.9**	**1.1**	**1.2**	**1.4**	**1.2**		**0.4**	
Avg.	**4.7**	**4.7**	**4.6**	**4.6**	**4.7**	**4.8**	**4.9**	**4.8**	**4.8**	**4.7**	**5.0**	**4.5**	**4.4**	**4.3**	**4.5**	**4.8**	**4.4**	**4.2**	**4.6**	**4.6**	**4.8**	**4.7**	**4.7**	**4.6**			**4.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.6	3.3	5.0	2.1	0.9	1.8	1.7	1.6	2.5	1.2	3.1	4.9	3.2	2.8	5.1	4.1	4.7	6.1	6.5	5.7	5.5	6.0	5.3	4.5	6.5	0.9	3.8
2	5.1	4.9	4.9	4.4	2.4	4.7	5.3	3.6	2.8	3.8	4.2	4.1	5.7	3.1	3.7	3.3	2.7	4.9	4.2	4.4	3.2	2.7	2.7	2.5	5.7	2.4	3.9
3	3.2	2.4	3.4	3.6	3.8	2.6	3.6	5.9	4.7	4.0	4.0	4.7	6.7	7.4	9.0	8.3	7.6	7.7	8.1	8.0	5.4	6.5	7.1	6.9	9.0	2.4	5.6
4	8.7	9.7	8.2	6.7	6.6	5.4	6.7	5.2	7.8	8.1	7.9	7.6	7.1	7.7	8.5	7.1	7.8	7.9	7.8	8.2	6.2	6.0	2.8	5.5	9.7	2.8	7.1
5	2.9	2.4	4.4	6.3	7.1	6.3	5.7	5.2	4.9	4.5	6.5	8.7	5.4	5.0	3.8	4.0	3.6	3.9	6.3	5.6	7.1	5.3	4.7	4.5	8.7	2.4	5.2
6	8.1	2.8	2.1	3.0	1.0	1.2	1.9	1.3	1.6	3.2	4.8	5.3	9.1	5.4	3.6	4.1	3.5	4.6	5.2	5.9	6.7	3.7	3.3	4.6	9.1	1.0	4.0
7	3.5	3.3	8.0	7.6	5.9	6.9	4.7	2.6	6.4	3.5	3.7	4.1	4.5	4.4	3.6	3.6	5.1	4.8	5.1	5.5	6.5	6.3	6.3	7.7	8.0	2.6	5.2
8	8.3	8.5	8.0	9.0	7.3	6.6	7.4	6.6	6.7	6.1	5.7	4.8	3.7	3.0	1.7	1.6	1.8	1.2	1.7	1.5	1.6	1.7	1.9	1.8	9.0	1.2	4.5
9	2.0	1.7	1.4	1.4	1.5	1.5	1.8	1.6	1.4	1.7	1.4	3.0	3.6	3.0	2.5	3.4	1.3	2.7	2.2	3.3	1.5	3.0	3.0	5.0	5.0	1.3	2.3
10	3.4	4.3	3.9	6.4	8.3	9.0	7.2	6.0	8.6	9.3	9.7	9.6	9.7	9.4	9.2	9.5	9.0	8.9	8.1	7.4	6.4	4.6	3.1	1.6	9.7	1.6	7.2
11	2.8	4.1	2.7	2.3	0.6	0.6	2.2	1.2	1.7	2.1	3.7	4.1	3.8	3.4	2.6	2.7	3.1	2.8	3.5	1.7	1.4	0.9	3.6	2.4	4.1	0.6	2.5
12	1.9	1.8	3.0	2.0	1.2	1.1	0.8	1.6	4.0	2.3	0.6	2.3	2.3	1.8	2.3	1.9	1.7	2.0	2.0	2.5	2.3	2.8	3.1	3.5	4.0	0.6	2.1
13	2.6	2.9	4.9	5.7	5.2	4.7	4.6	4.6	3.6	2.8	4.4	3.3	2.8	2.8	3.0	1.7	1.9	1.9	2.8	2.8	4.3	4.4	4.5	4.1	5.7	1.7	3.6
14	5.0	4.9	5.6	5.9	6.9	6.9	7.1	7.7	8.0	8.5	8.6	7.9	9.1	10.4	10.3	10.8	11.4	11.5	11.9	11.1	11.7	11.7	11.7	11.7	11.9	4.9	9.0
15	11.4	10.3	6.1	5.2	2.4	1.2	1.4	1.2	1.8	2.1	1.2	1.9	1.6	3.6	2.0	1.2	2.1	2.4	2.2	3.4	3.3	2.9	3.6	3.9	11.4	1.2	3.3
16	4.4	5.6	5.7	6.4	6.4	9.5	10.0	9.9	9.7	8.0	7.6	6.9	6.3	6.4	7.0	7.2	7.5	6.6	6.5	6.5	7.0	6.6	6.4	6.6	10.0	4.4	7.1
17	6.8	6.4	6.5	6.8	6.4	5.7	5.6	5.1	3.6	1.0	0.6	1.0	2.8	4.6	6.3	6.6	7.1	7.6	5.1	2.8	2.7	4.4	5.2	4.4	7.6	0.6	4.8
18	4.7	5.3	6.1	5.3	6.9	7.5	8.3	8.3	10.0	9.8	8.6	7.4	7.8	8.2	8.0	7.4	6.7	5.3	2.3	5.8	9.7	10.1	10.0	7.9	10.1	2.3	7.4
19	7.4	3.9	6.0	6.7	5.2	4.0	4.3	8.2	10.1	11.6	8.4	6.3	4.0	7.6	9.9	9.9	9.4	9.8	11.4	9.1	8.0	2.5	1.5	2.6	11.6	1.5	7.0
20	3.4	4.8	5.3	5.4	5.7	6.7	6.7	6.2	6.4	6.5	7.5	8.0	7.4	6.6	7.1	5.9	4.3	4.3	3.4	2.7	2.1	1.6	1.6	2.1	8.0	1.6	5.1
21	3.3	2.9	2.4	3.0	4.1	4.6	5.2	5.5	6.7	6.7	7.4	6.6	7.1	5.6	5.4	6.5	8.7	7.5	7.2	10.4	9.4	6.5	4.4	4.6	10.4	2.4	5.9
22	6.1	7.9	7.2	4.4	3.1	2.4	3.4	4.4	3.9	6.0	5.6	3.2	3.8	6.6	6.3	4.7	4.0	4.4	4.5	5.6	8.6	9.5	8.4	8.5	9.5	2.4	5.5
23	9.7	10.3	10.2	11.5	10.6	12.4	14.0	14.0	12.1	12.2	12.3	10.2	10.6	9.2	6.7	7.1	6.7	6.8	7.2	8.6	9.0	6.0	7.2	7.6	14.0	6.0	9.7
24	7.1	7.8	8.9	8.7	10.1	10.1	8.2	9.5	9.9	10.6	8.2	9.0	7.9	13.1	15.4	12.7	11.6	11.4	11.5	12.2	10.9	11.0	11.5	12.3	15.4	7.1	10.4
25	12.0	11.1	11.6	11.3	10.8	11.7	11.6	12.0	12.4	12.5	11.5	11.2	10.8	11.8	12.2	11.3	10.0	9.9	10.4	10.8	11.4	9.8	9.2	9.2	12.5	9.2	11.1
26	8.5	8.1	8.2	8.1	7.7	8.6	8.9	9.1	9.6	8.7	8.8	9.5	8.6	8.9	9.8	9.3	9.1	5.9	4.2	5.0	5.7	4.4	3.7	5.1	9.8	3.7	7.6
27	5.7	5.9	5.7	4.7	3.2	1.6	2.3	4.9	5.3	5.7	6.7	6.1	5.7	6.0	3.2	2.2	3.9	3.2	2.9	2.8	2.7	3.1	3.4	2.9	6.7	1.6	4.2
28	3.6	3.1	2.5	2.4	3.0	3.1	3.2	2.2	3.1	3.3	2.5	2.4	2.5	1.7	1.9	1.7	1.9	1.8	1.8	1.7	1.9	2.4	2.3	1.9	3.6	1.7	2.4
29	1.8	2.5	2.3	2.5	3.2	1.7	2.9	3.1	2.9	1.8	1.5	2.4	5.2	2.2	1.7	3.5	5.7	6.8	5.2	2.9	3.9	4.6	3.2	3.1	6.8	1.5	3.2
30	3.3	3.3	3.4	4.1	3.1	2.1	2.4	2.3	2.2	5.3	6.3	4.3	6.3	6.4	3.4	3.4	3.7	3.5	3.6	4.5	5.5	5.1	2.7	3.9	6.4	2.1	3.9
Max.	**12.0**	**11.1**	**11.6**	**11.5**	**10.8**	**12.4**	**14.0**	**14.0**	**12.4**	**12.5**	**12.3**	**11.2**	**10.8**	**13.1**	**15.4**	**12.7**	**11.6**	**11.5**	**11.9**	**12.2**	**11.7**	**11.7**	**11.7**	**12.3**	**15.4**		
Min.	**1.8**	**1.7**	**1.4**	**1.4**	**0.6**	**0.6**	**0.8**	**1.2**	**1.4**	**1.0**	**0.6**	**1.0**	**1.6**	**1.7**	**1.7**	**1.2**	**1.3**	**1.2**	**1.7**	**1.5**	**1.4**	**0.9**	**1.5**	**1.6**		**0.6**	
Avg.	**5.3**	**5.2**	**5.5**	**5.4**	**5.0**	**5.1**	**5.3**	**5.3**	**5.8**	**5.8**	**5.8**	**5.7**	**5.8**	**5.9**	**5.9**	**5.6**	**5.6**	**5.6**	**5.5**	**5.6**	**5.7**	**5.2**	**4.9**	**5.1**			**5.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.1	4.3	4.0	5.2	5.2	6.0	4.4	5.0	4.2	3.8	4.6	5.0	5.9	6.3	6.0	5.4	5.9	6.8	3.9	4.4	6.8	7.5	8.1	6.1	8.1	3.8	5.4
2	6.5	5.6	7.0	7.4	6.4	5.4	5.0	2.8	5.8	7.2	7.2	6.3	5.1	6.1	5.9	6.2	5.6	6.4	7.4	8.5	8.4	8.5	9.2	7.7	9.2	2.8	6.6
3	9.2	8.5	8.4	10.9	10.7	9.7	8.8	8.8	8.5	8.7	8.1	8.5	7.2	8.1	8.3	8.2	7.4	3.9	2.9	5.2	4.8	2.8	5.9	4.6	10.9	2.8	7.4
4	3.6	5.6	5.1	7.2	5.7	6.7	6.5	6.0	5.4	3.8	4.0	6.0	6.8	7.1	7.9	7.5	8.4	8.2	7.9	8.1	8.3	8.9	7.8	8.1	8.9	3.6	6.7
5	9.1	9.2	9.8	9.6	7.0	9.0	7.8	6.1	7.0	7.2	8.1	8.2	7.4	7.4	8.0	8.4	9.2	8.8	9.3	10.4	10.2	10.9	11.7	10.1	11.7	6.1	8.7
6	11.0	10.4	10.4	9.7	10.1	10.2	9.8	9.3	8.5	8.0	9.3	8.5	7.5	6.0	4.9	5.4	4.5	4.8	5.3	5.5	5.3	5.4	6.1	6.8	11.0	4.5	7.6
7	6.3	6.8	8.2	9.0	10.3	10.0	10.1	9.9	11.1	10.5	10.6	10.2	11.2	10.9	10.2	10.1	9.1	10.0	10.3	8.2	7.4	7.3	7.0	7.0	11.2	6.3	9.2
8	6.0	3.9	3.8	6.2	5.1	3.9	4.0	4.5	4.2	4.7	4.5	2.1	1.4	2.0	1.5	2.2	1.9	1.9	2.7	3.3	2.3	2.5	2.7	2.0	6.2	1.4	3.3
9	2.2	2.4	2.4	2.2	2.1	2.5	3.7	4.7	5.5	7.1	6.6	6.3	6.6	6.6	6.0	4.9	4.2	2.4	1.5	0.9	1.5	1.1	1.2	1.1	7.1	0.9	3.6
10	0.6	0.9	1.1	2.2	2.4	3.2	3.1	2.8	3.7	4.8	5.2	5.4	4.8	3.4	2.7	3.2	3.5	3.7	3.2	3.4	4.0	4.1	4.7	4.9	5.4	0.6	3.4
11	4.9	5.4	5.1	5.6	2.5	1.9	3.2	7.4	7.8	9.3	10.2	11.2	11.9	11.9	11.2	9.9	9.5	7.5	8.2	9.6	8.6	7.0	7.7	8.1	11.9	1.9	7.7
12	10.4	9.8	8.9	7.4	6.5	7.5	5.3	4.0	5.5	3.8	4.1	3.4	6.7	2.6	2.1	4.5	2.8	3.3	4.7	3.9	2.6	2.4	2.4	3.2	10.4	2.1	4.9
13	4.6	3.7	3.2	4.6	4.7	4.1	5.0	5.9	6.5	6.8	8.1	7.9	7.8	8.3	8.8	8.4	8.2	8.7	9.9	10.4	10.8	10.1	10.0	11.0	11.0	3.2	7.4
14	11.1	11.5	11.6	12.1	12.4	12.0	12.9	12.4	12.4	12.4	13.1	12.7	14.0	14.1	13.3	13.6	12.3	12.6	12.6	12.5	11.6	10.2	10.1	10.4	14.1	10.1	12.2
15	8.9	8.9	8.3	7.3	7.1	8.6	7.7	7.9	8.8	9.6	10.4	10.2	9.6	10.1	9.7	9.8	10.4	10.4	10.3	11.3	10.6	7.7	5.9	4.4	11.3	4.4	8.9
16	4.3	5.4	5.0	4.1	2.7	3.3	3.4	2.5	2.5	3.0	3.8	4.9	5.2	4.8	5.1	5.8	5.1	2.9	1.6	4.4	3.6	4.7	6.6	6.5	6.6	1.6	4.2
17	4.5	3.7	2.7	2.1	1.9	1.8	1.5	1.9	1.9	1.1	3.4	4.7	4.7	5.5	5.8	5.2	3.8	4.0	5.3	5.4	4.9	5.7	5.2	5.7	5.8	1.1	3.9
18	5.2	6.1	6.6	7.3	7.1	7.7	8.2	7.6	7.1	7.4	7.3	6.0	5.2	4.7	4.6	5.3	5.6	4.8	5.8	6.9	7.1	8.4	8.2	7.5	8.4	4.6	6.6
19	8.1	6.9	6.6	6.0	6.2	5.9	4.6	6.3	6.2	6.0	5.4	4.1	4.7	3.9	2.8	2.7	1.8	1.5	4.1	3.6	3.6	2.5	3.7	3.5	8.1	1.5	4.6
20	3.8	4.3	5.0	6.5	5.1	4.1	3.6	2.4	0.8	0.7	1.3	1.9	1.2	0.8	4.3	5.0	2.7	2.2	1.4	3.0	0.8	0.9	1.2	1.2	6.5	0.7	2.7
21	1.2	2.1	0.9	0.7	1.1	1.8	2.2	1.2	0.6	1.8	1.9	1.7	1.0	0.4	0.6	1.3	1.0	2.1	4.1	3.2	2.4	2.4	2.4	3.3	4.1	0.4	1.7
22	2.9	1.2	3.1	4.0	2.9	2.1	1.9	2.8	2.9	2.3	2.5	3.8	3.3	2.6	2.6	1.2	2.6	2.9	3.1	2.7	3.3	4.6	3.7	3.0	4.6	1.2	2.8
23	3.2	0.8	0.8	1.3	1.7	1.5	0.9	1.5	1.7	2.7	2.5	3.1	1.9	0.8	0.5	0.9	2.1	2.4	3.9	4.9	4.8	4.7	5.0	4.6	5.0	0.5	2.4
24	4.9	4.6	4.3	5.2	5.5	5.3	4.5	5.0	5.0	5.7	5.9	5.3	5.3	4.8	5.2	5.8	4.8	5.3	5.8	5.7	4.9	5.5	5.4	6.1	6.1	4.3	5.2
25	6.3	6.1	6.3	5.8	6.5	6.2	6.4	7.1	5.8	5.5	6.5	7.0	8.0	9.4	9.1	9.7	10.1	10.5	10.3	10.8	11.6	11.3	10.6	10.4	11.6	5.5	8.2
26	9.8	9.7	10.5	9.9	7.7	7.0	6.0	6.7	7.4	8.6	8.5	7.7	5.8	6.1	6.6	5.8	5.8	5.0	4.7	5.7	6.9	6.1	6.8	7.0	10.5	4.7	7.2
27	6.5	6.1	6.5	6.4	6.5	6.5	4.7	3.4	3.6	7.3	7.9	7.8	5.8	5.7	5.5	5.2	4.5	6.8	8.4	9.4	7.5	8.8	9.6	8.3	9.6	3.4	6.6
28	8.4	8.6	7.5	9.3	9.0	9.4	9.2	7.2	9.5	9.9	9.0	9.7	9.4	9.4	8.9	9.2	9.2	8.7	7.6	7.8	8.5	10.2	9.8	10.5	10.5	7.2	9.0
29	10.8	10.0	9.9	9.5	8.0	7.9	7.5	6.9	6.0	5.0	5.1	5.4	5.6	6.6	8.8	9.4	9.6	9.7	9.5	8.4	8.5	9.0	8.3	8.3	10.8	5.0	8.1
30	8.0	7.4	7.6	8.6	8.4	8.6	7.8	4.3	2.6	2.9	2.4	0.9	5.6	9.8	8.1	7.8	8.0	7.8	8.0	7.9	7.3	6.3	7.1	6.7	9.8	0.9	6.7
31	6.8	7.0	7.2	7.1	7.1	5.8	6.3	5.6	4.0	4.1	4.7	4.4	3.9	3.5	5.9	4.3	5.0	4.8	6.5	7.4	6.9	6.9	5.9	6.2	7.4	3.5	5.7
Max.	**11.1**	**11.5**	**11.6**	**12.1**	**12.4**	**12.0**	**12.9**	**12.4**	**12.4**	**12.4**	**13.1**	**12.7**	**14.0**	**14.1**	**13.3**	**13.6**	**12.3**	**12.6**	**12.6**	**12.5**	**11.6**	**11.3**	**11.7**	**11.0**	**14.1**		
Min.	**0.6**	**0.8**	**0.8**	**0.7**	**1.1**	**1.5**	**0.9**	**1.2**	**0.6**	**0.7**	**1.3**	**0.9**	**1.0**	**0.4**	**0.5**	**0.9**	**1.0**	**1.5**	**1.4**	**0.9**	**0.8**	**0.9**	**1.2**	**1.1**		**0.4**	
Avg.	**6.2**	**6.0**	**6.0**	**6.5**	**6.0**	**6.0**	**5.7**	**5.5**	**5.6**	**5.9**	**6.2**	**6.1**	**6.1**	**6.1**	**6.2**	**6.2**	**5.9**	**5.8**	**6.1**	**6.5**	**6.3**	**6.3**	**6.4**	**6.3**			**6.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	6.8	6.1	5.4	5.8	5.2	5.9	6.6	6.2	5.8	5.8	4.8	5.0	4.8	5.4	6.3	6.1	7.0	6.6	7.0	6.8	6.6	6.6	6.0	7.0	4.8	6.1
2	6.5	5.9	5.8	5.3	6.0	6.0	5.5	5.9	7.9	7.3	6.9	6.5	6.3	6.4	6.1	6.2	6.2	5.4	5.9	5.3	5.9	5.3	5.4	4.5	7.9	4.5	6.0
3	4.5	5.5	4.8	5.3	6.3	5.3	5.1	5.4	5.1	4.8	4.1	4.0	4.1	4.5	4.7	5.1	5.1	5.4	4.3	4.2	4.0	5.0	5.6	4.5	6.3	4.0	4.9
4	3.9	4.3	2.1	2.2	3.5	2.6	2.2	0.6	1.0	0.7	1.2	2.2	2.0	2.3	3.0	1.9	4.0	2.8	1.0	3.5	2.9	1.0	1.2	3.5	4.3	0.6	2.3
5	3.4	4.8	5.5	4.1	4.3	5.3	5.4	3.5	1.4	1.5	1.6	0.9	1.1	2.2	2.0	1.1	0.7	1.9	3.4	3.4	2.4	2.9	1.0	1.1	5.5	0.7	2.7
6	1.9	1.6	1.7	3.0	2.6	1.7	2.6	2.3	2.4	2.4	0.5	0.6	2.5	2.5	2.5	1.5	0.3	1.6	1.2	0.6	0.9	1.8	2.1	0.9	3.0	0.3	1.7
7	3.0	1.7	1.7	2.1	1.4	0.9	0.4	2.0	4.0	5.3	5.6	7.3	8.5	9.5	9.3	7.0	6.3	5.6	5.7	7.7	8.2	9.0	8.2	8.2	9.5	0.4	5.4
8	8.1	7.7	7.5	7.6	7.6	8.2	7.3	7.6	7.4	6.4	5.6	5.5	5.5	4.1	1.9	1.0	1.9	0.8	1.3	0.9	1.6	2.3	2.6	2.3	8.2	0.8	4.7
9	1.7	2.5	2.4	2.3	2.2	1.8	1.5	2.2	2.3	2.1	1.3	0.9	1.0	2.8	2.3	1.0	0.7	1.9	1.4	0.6	1.3	0.6	1.4	1.2	2.8	0.6	1.6
10	0.5	1.5	1.0	2.3	5.4	4.8	2.9	1.0	0.9	1.3	1.2	1.2	2.4	1.5	2.1	3.1	4.1	5.2	5.8	4.9	4.2	5.9	5.4	4.1	5.9	0.5	3.0
11	3.3	4.6	2.6	1.9	3.3	6.2	4.6	1.4	1.8	2.0	1.6	1.2	3.0	2.1	2.2	1.9	0.9	0.6	2.7	2.9	3.8	3.3	1.7	3.0	6.2	0.6	2.6
12	0.6	2.3	6.1	5.5	4.9	6.6	7.7	7.8	4.9	2.2	2.3	2.3	3.2	3.5	3.3	2.9	3.5	2.5	1.8	1.9	1.8	1.7	1.4	1.9	7.8	0.6	3.4
13	1.6	1.5	2.4	1.3	1.9	1.7	1.9	1.8	1.8	3.0	1.4	3.0	3.3	3.7	4.3	3.1	2.9	2.9	3.3	2.3	1.5	2.4	2.9	1.8	4.3	1.3	2.4
14	2.8	3.3	3.1	3.2	4.7	4.8	4.5	4.0	3.1	4.6	5.0	5.6	5.8	6.8	6.5	7.1	6.8	6.7	7.0	6.7	6.8	7.1	7.6	7.7	7.7	2.8	5.5
15	7.7	7.9	8.4	8.1	8.1	8.5	8.7	8.0	7.7	8.6	7.5	8.0	7.9	8.4	8.2	7.7	8.3	7.5	7.7	8.4	8.1	8.6	7.7	8.2	8.7	7.5	8.1
16	7.7	6.9	7.0	7.3	8.3	8.2	7.5	7.3	6.7	7.2	6.4					5.2	2.7	2.7	1.8	1.2	0.4	0.8	1.5	1.7	8.3	0.4	4.9
17	0.7	1.6	2.3	2.5	2.3	2.2	4.1	3.0	3.6	3.3	3.5	4.6	5.7	3.7	4.3	3.2	5.5	6.2	8.6	6.9	6.0	6.7	8.4	9.2	9.2	0.7	4.5
18	8.5	8.6	8.2	6.6	6.6	7.5	3.9	4.2	5.9	4.1	2.2	2.8	2.7	2.5	2.2	2.8	3.0	2.5	2.5	1.5	1.6	1.7	2.6	2.5	8.6	1.5	4.1
19	2.1	2.6	6.3	4.6	3.4	2.3	3.2	3.1	6.3	4.8	5.1	5.5	6.0	4.7	3.8	3.8	3.7	3.0	2.4	1.9	1.1	1.8	4.2	3.2	6.3	1.1	3.7
20	2.3	3.0	3.1	3.6	3.2	4.1	4.5	4.4	4.2	4.6	4.2	3.9	4.3	4.9	4.5	3.1	3.2	2.7	2.3	2.3	2.2	2.5	2.0	2.8	4.9	2.0	3.4
21	3.3	4.5	6.0	7.2	5.8	7.6	6.7	5.6	4.8	4.5	3.9	2.4	1.8	5.0	5.8	7.4	6.7	7.8	6.6	5.9	11.8	14.2	15.2	15.0	15.2	1.8	6.9
22	12.8	10.1	11.1	11.5	10.3	10.2	10.0	13.3	13.1	13.2	13.1	13.4	13.1	14.1	15.2	16.6	15.9	17.1	17.3	16.0	14.9	13.7	12.3	11.8	17.3	10.0	13.3
23	11.2	10.1	6.4	5.1	5.0	5.3	4.0	3.7	2.8	5.5	5.2	3.7	3.2	5.5	6.5	5.9	6.7	6.0	4.3	4.8	5.1	4.2	6.0	4.9	11.2	2.8	5.5
24	5.0	4.9	4.6	4.6	5.1	5.7	5.4	5.8	6.3	6.0	7.0	8.2	7.9	7.4	7.9	7.9	6.3	7.7	7.2	7.4	6.4	5.5	5.0	4.9	8.2	4.6	6.3
25	4.6	4.5	3.8	3.3	3.3	3.6	3.5	2.0	3.3	3.0	3.7	5.2	5.2	4.1	3.4	3.9	3.7	4.9	5.7	6.0	6.3	8.2	7.8	8.9	8.9	2.0	4.7
26	8.8	8.8	9.1	9.6	9.4	9.4	8.6	8.5	8.7	10.1	9.3	9.5	10.1	9.3	9.2	8.9	8.0	7.2	8.0	9.2	7.9	8.9	8.6	8.2	10.1	7.2	8.9
27	6.8	6.5	6.8	6.0	7.5	10.3	7.4	11.5	8.8	8.0	10.0	12.2	10.8	11.0	12.0	12.5	14.0	12.1	12.9	14.5	13.9	12.2	13.8	13.8	14.5	6.0	10.6
28	12.4	13.8	14.0	14.2	15.2	16.3	16.5	14.7	14.1	13.5	12.7	12.0	9.6	6.9	6.6	6.3	7.2	6.3	7.5	5.9	4.0	5.9	6.5	7.6	16.5	4.0	10.4
29	7.6	6.5	7.1	6.8	6.5	6.0	5.9	6.7	6.7	6.3	6.0	5.8	5.9	6.2	4.8	3.1	3.6	4.8	5.3	4.9	5.9	6.3	5.7	6.1	7.6	3.1	5.9
30	6.5	6.5	6.4	5.7	4.9	4.4	4.5	4.0	3.4	2.8	1.9	2.0	2.4	1.9	4.5	3.5	4.1	3.4	2.7	1.8	4.5	4.2	5.3	5.3	6.5	1.8	4.0
31	4.5	4.6	4.7	4.8	4.3	3.6	4.1	2.9	3.8	4.3	4.4	4.5	4.0	3.9	5.5	6.0	4.6	4.5	4.5	5.4	8.2	9.0	10.1	8.3	10.1	2.9	5.2
Max.	**12.8**	**13.8**	**14.0**	**14.2**	**15.2**	**16.3**	**16.5**	**14.7**	**14.1**	**13.5**	**13.1**	**13.4**	**13.1**	**14.1**	**15.2**	**16.6**	**15.9**	**17.1**	**17.3**	**16.0**	**14.9**	**14.2**	**15.2**	**15.0**	**17.3**		
Min.	**0.5**	**1.5**	**1.0**	**1.3**	**1.4**	**0.9**	**0.4**	**0.6**	**0.9**	**0.7**	**0.5**	**0.6**	**1.0**	**1.5**	**1.9**	**1.0**	**0.3**	**0.6**	**1.0**	**0.6**	**0.4**	**0.6**	**1.0**	**0.9**		**0.3**	
Avg.	**5.2**	**5.3**	**5.4**	**5.3**	**5.5**	**5.7**	**5.4**	**5.2**	**5.2**	**5.1**	**4.8**	**5.0**	**5.1**	**5.2**	**5.3**	**5.1**	**5.1**	**5.1**	**5.1**	**5.0**	**5.2**	**5.5**	**5.7**	**5.6**			**5.2**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.7	9.5	9.6	10.8	9.2	7.6	9.2	8.6	8.8	11.3	11.4	12.1	12.3	12.1	13.9	12.6	11.3	6.5	6.8	9.6	7.2	6.5	9.7	10.0	13.9	6.5	9.8
2	11.6	12.7	11.1	10.2	9.5	10.5	11.3	11.0	11.9	11.0	7.3	5.8	7.1	7.4	7.6	6.4	7.7	8.1	7.0	3.4	5.5	5.8	5.6	5.0	12.7	3.4	8.4
3	5.4	6.3	7.4	7.4	6.9	7.0	7.6	7.2	7.3	6.7	6.7	6.9	7.5	7.4	6.7	7.4	8.1	7.6	7.5	8.1	7.9	8.2	8.3	7.8	8.3	5.4	7.3
4	7.4	8.5	8.8	9.2	10.0	9.5	9.5	9.5	9.5	9.9	9.7	10.2	10.6	11.6	11.4	11.8	12.7	11.8	12.1	11.3	11.4	12.5	12.4	13.8	13.8	7.4	10.6
5	14.0	14.1	12.8	13.8	13.6	12.7	12.7	13.1	13.3	12.3	12.8	11.4	9.8	9.1	8.8	9.0	9.3	11.1	10.4	11.7	12.1	13.1	12.1	12.1	14.1	8.8	11.9
6	11.1	10.4	10.1	9.2	8.6	9.3	8.3	6.7	5.6	2.8	2.4	0.1	3.1	2.3	3.8	2.2	2.7	2.6	2.6	2.0	3.1	2.8	2.9	2.6	11.1	0.1	4.9
7	3.4	4.9	4.1	3.6	2.2	1.4	1.1	3.0	6.8	6.3	6.1	9.2	9.6	10.3	8.9	4.1	3.2	3.9	4.2	6.9	7.5	6.6	5.5	4.8	10.3	1.1	5.3
8	4.7	4.4	2.1	3.2	3.0	2.9	3.3	3.9	5.3	6.0	4.7	5.8	5.6	5.8	7.3	8.5	8.6	8.5	8.5	7.7	8.0	8.7	8.7	8.3	8.7	2.1	6.0
9	9.4	9.6	9.9	9.9	10.4	11.8	13.3	14.3	15.3	15.5	15.8	15.2	14.8	13.9	13.0	11.0	10.2	9.5	8.8	8.7	8.9	7.6	5.8	4.8	15.8	4.8	11.1
10	6.2	7.7	7.8	8.3	8.8	8.6	9.5	8.7	9.2	9.5	9.1	6.6	4.9	2.9			1.4	2.8	2.6	3.8	2.6	2.3	2.9	4.0	9.5	1.4	5.9
11	4.2	5.0	5.8	5.8	6.3	6.4	7.4	8.2	9.0	8.3	8.9	7.9	7.6	8.0	7.5	8.4	9.1	9.0	8.3	8.2	7.6	7.6	7.7	6.8	9.1	4.2	7.5
12	5.2	4.8	2.9	2.8	7.5	5.3	5.7	6.8	7.0	6.4	7.4	10.0	11.0	7.5	5.9	5.7	9.6	11.4	10.1	9.2	9.8	8.4	6.1	5.6	11.4	2.8	7.2
13	1.9	1.2	1.8	1.4	2.3	1.6	0.7	2.8	4.1	3.7	1.6	5.7	5.7	6.2	5.6	4.9	5.1	5.7	6.3	5.0	5.2	4.8	4.0	3.8	6.3	0.7	3.8
14	4.0	4.5	4.5	4.7	4.9	5.2	4.2	5.0	5.1	4.5	5.5	6.7	6.2	6.3	5.8	5.3	5.0	4.4	4.5	4.3	5.6	6.3	5.7	6.3	6.7	4.0	5.2
15	6.7	7.6	5.5	6.4	6.8	6.7	6.8	7.2	7.3	4.3	3.5	4.0	3.9	2.9	4.2	5.0	4.2	4.0	4.1	5.0	4.4	4.1	3.5	4.3	7.6	2.9	5.1
16	4.9	3.8	4.1	4.5	4.3	3.6	1.4	1.8	1.6	0.8	0.4	0.6	1.8	2.5	1.4	1.5	3.9	3.4	3.7	4.4	4.0	3.7	4.5	4.7	4.9	0.4	3.0
17	5.2	5.9	6.1	5.9	5.6	7.2	7.9	9.2	10.3	9.5	8.6	8.7	7.6	7.2	7.0	6.5	6.9	6.5	6.4	5.1	5.6	5.8	6.7	5.0	10.3	5.0	6.9
18	4.1	4.7	5.1	4.8	4.9	4.6	3.9	4.7	4.7	5.5	4.4	3.1	2.4	3.2	1.4	2.8	2.9	2.3	2.3	3.0	4.8	5.3	4.9	3.9	5.5	1.4	3.9
19	1.9	4.0	8.6	9.3	7.8	4.3	4.2	3.7	5.6	4.7	6.1	5.1	5.1	3.5	5.3	5.2	5.8	9.0	8.8	8.0	8.0	8.7	5.7	6.3	9.3	1.9	6.0
20	5.5	4.9	5.6	2.6	2.3	2.5	3.0	3.9	3.7	4.5	2.7	3.1	3.3	7.9	4.6	5.0	7.7	10.3	11.7	13.1	10.8	13.2	13.4	10.4	13.4	2.3	6.5
21	12.3	6.7	6.4	4.6	6.0	5.5	6.3	6.9	7.3	6.4	4.4	4.8	6.7	5.9	4.6	4.3	4.1	3.4	4.1	3.8	4.1	3.7	3.4	3.5	12.3	3.4	5.4
22	3.6	4.6	3.0	2.9	2.5	2.0	8.0	5.0	4.8	4.0	4.2	4.7	3.2	2.9	3.2	2.5	2.6	2.5	1.9	2.8	3.1	3.4	2.8	2.8	8.0	1.9	3.5
23	1.9	1.8	1.9	1.7	0.5	2.0	1.7	2.3	1.6	5.3	6.0	6.3	4.2	4.0	3.5	3.3	3.7	4.2	2.8	2.2	2.5	3.5	3.7	3.4	6.3	0.5	3.1
24	3.2	3.3	3.8	3.9	3.2	4.2	3.6	4.6	6.5	6.9	6.9	5.0	3.7	2.9	3.1	2.6	1.8	1.8	3.3	3.6	3.9	4.0	3.1	3.1	6.9	1.8	3.8
25	3.5	3.4	3.0	2.0	2.1	1.9	1.5	0.6	0.6	3.4	1.5	0.6	4.4	1.7	5.5	4.1	4.2	5.2	7.3	7.5	8.9	6.4	4.9	5.5	8.9	0.6	3.7
26	4.8	4.6	5.7	3.9	4.3	2.8	2.4	3.0	2.3	3.3	3.0	3.9	2.5	3.3	2.8	3.5	2.7	3.0	1.9	1.7	1.4	3.4	3.7	5.2	5.7	1.4	3.3
27	5.8	6.9	7.2	7.0	5.8	4.0	1.8	3.2	8.4	4.4	4.1	3.0	2.0	2.6	4.1	4.4	3.0	3.7	6.7	6.1	4.6	3.6	5.2	5.2	8.4	1.8	4.7
28	5.0	8.0	6.6	6.4	6.4	8.1	8.3	8.5	6.1	6.5	5.3	6.4	8.1	9.1	10.9	10.5	8.9	8.9	9.0	8.5	7.9	9.5	8.6	8.2	10.9	5.0	7.9
Max.	**14.0**	**14.1**	**12.8**	**13.8**	**13.6**	**12.7**	**13.3**	**14.3**	**15.3**	**15.5**	**15.8**	**15.2**	**14.8**	**13.9**	**13.9**	**12.6**	**12.7**	**11.8**	**12.1**	**13.1**	**12.1**	**13.2**	**13.4**	**13.8**	**15.8**		
Min.	**1.9**	**1.2**	**1.8**	**1.4**	**0.5**	**1.4**	**0.7**	**0.6**	**0.6**	**0.8**	**0.4**	**0.1**	**1.8**	**1.7**	**1.4**	**1.5**	**1.4**	**1.8**	**1.9**	**1.7**	**1.4**	**2.3**	**2.8**	**2.6**		**0.1**	
Avg.	**5.9**	**6.2**	**6.1**	**5.9**	**5.9**	**5.7**	**5.9**	**6.2**	**6.7**	**6.6**	**6.1**	**6.2**	**6.2**	**6.1**	**6.2**	**5.9**	**5.9**	**6.1**	**6.2**	**6.2**	**6.3**	**6.4**	**6.1**	**6.0**			**6.1**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.2	4.2	3.6	5.7	6.6	7.1	6.7	6.0	2.3	3.7	5.0	4.9	5.3	4.2	3.1	2.2	3.1	4.0	5.9	6.2	5.7	6.6	6.9	4.3	8.2	2.2	5.0
2	3.0	5.8	6.3	6.3	6.3	6.9	7.1	8.6	9.1	8.6	8.2	7.8	8.0	8.5	7.9	7.3	8.1	7.5	8.0	7.5	7.9	8.1	7.9	8.7	9.1	3.0	7.5
3	7.7	7.8	6.4	6.0	7.1	7.3	7.2	6.9	7.5	6.8	6.3	5.5	5.9	6.2	5.7	5.1	4.1	3.1	3.9	4.3	4.4	4.7	4.7	5.2	7.8	3.1	5.8
4	5.2	4.7	4.9	5.6	5.4	5.4	5.7	5.5	6.2	5.3	5.5	5.4	5.7	4.5	4.9	5.3	5.0	5.9	5.6	5.5	5.4	5.7	5.4	5.6	6.2	4.5	5.4
5	5.6	5.9	6.1	6.3	6.5	6.3	5.5	1.7	1.3	1.4	1.2	3.4	3.9	3.4	2.9	2.3	2.4	3.5	5.9	6.3	4.3	3.6	3.2	3.8	6.5	1.2	4.0
6	6.0	5.8	4.8	4.2	5.4	4.6	3.4	5.3	8.7	9.3	9.7	8.7	8.0	5.1	6.3	5.2	4.4	2.8	2.0	1.7	3.1	3.8	4.5	5.7	9.7	1.7	5.4
7	5.8	4.9	2.8	3.8	3.1	3.9	5.1	4.7	7.0	9.1	10.0	10.0	9.2	8.7	8.4	8.5	8.7	7.1	7.7	7.4	5.7	7.2	8.0	10.3	10.3	2.8	7.0
8	11.1	12.4	11.2	10.7	12.3	11.1	11.7	13.8	10.1	9.4	9.4	8.9	7.6	7.8	7.3	9.8	10.3	13.2	10.1	6.5	6.8	6.5	5.0	5.2	13.8	5.0	9.5
9	6.3	6.0	6.6	6.0	7.4	8.1	7.7	7.4	6.8	7.8	9.5	7.7	6.2	8.7	6.9	6.2	6.8	7.9	7.9	8.1	9.0	9.2	7.7	5.8	9.5	5.8	7.4
10	6.1	4.6	4.9	4.9	4.9	5.6	4.8	2.2	4.4	4.4	4.4	3.3	2.6	2.7	3.1	1.6	1.4	3.4	4.7	4.6	4.8	5.1	5.4	5.3	6.1	1.4	4.1
11	5.6	5.6	8.2	7.4	7.3	8.3	7.5	8.2	8.8	8.7	8.5	7.7	7.5	7.8	7.2	7.0	6.8	7.9	7.7	8.1	8.6	7.7	6.7	5.9	8.8	5.6	7.5
12	9.1	8.0	8.0	9.1	8.7	8.4	7.8	6.6	6.3	6.1	6.5	7.0	6.9	7.4	7.5	7.3	6.5	6.2	5.7	5.3	4.9	3.8	2.0	1.4	9.1	1.4	6.5
13	2.5	1.4	1.2	0.8	0.9	1.9	1.6	1.2	1.3	1.7	2.2	3.8	3.1	2.8	2.3	2.1	2.2	1.6	1.7	2.0	1.5	1.2	1.9	1.4	3.8	0.8	1.8
14	1.1	2.5	1.9	2.9	3.4	3.0	2.5	2.8	3.4	4.2	3.9	2.5	3.1	3.5	4.3	3.9	2.1	2.1	2.8	2.8	3.3	4.1	3.0	2.4	4.3	1.1	3.0
15	2.4	3.8	3.4	5.1	4.6	3.9	3.5	2.8	2.8	4.4	2.8	1.2	1.1	1.5	1.1	0.9	2.1	2.1	3.0	1.3	3.5	3.9	5.0	5.0	5.1	0.9	3.0
16	4.7	5.4	6.0	5.5	5.4	5.5	5.2	5.9	7.0	7.4	7.4	7.0	7.3	6.1	4.5	4.6	5.2	3.3	3.8	4.2	4.0	4.6	5.0	4.7	7.4	3.3	5.4
17	4.6	4.3	4.8	6.4	6.2	6.0	5.2	5.5	6.2	5.6	6.0	7.3	8.8	7.9	7.8	7.7	7.2	7.2	7.9	6.5	7.6	7.4	7.7	7.1	8.8	4.3	6.6
18	8.3	9.2	8.5	8.4	8.5	7.9	8.3	7.9	7.9	7.9	8.2	9.0	9.5	8.9	8.0	6.8	4.8	3.7	1.6	0.2	0.6	0.4	0.1	0.6	9.5	0.1	6.1
19	2.2	1.2	2.1	2.4	2.1	2.1	2.8	3.5	1.7	3.4	2.7	1.2	2.2	2.8	4.4	3.7	3.3	2.5	2.4	1.6	0.7	2.7	4.3	4.4	4.4	0.7	2.6
20	4.6	4.7	3.7	3.8	5.0	5.2	4.4	3.3	1.5	1.5	1.6	0.9	1.0	3.3	4.0	5.0	4.3	3.7	5.2	5.3	5.3	6.0	6.2	5.4	6.2	0.9	3.9
21	5.2	5.1	4.6	4.8	3.8	4.4	3.2	3.3	1.4	1.4	3.3	3.0	1.5	1.6	0.8	1.0	2.7	2.7	2.2	3.3	3.1	2.1	2.1	3.8	5.2	0.8	2.9
22	6.0	6.4	6.7	6.7	6.7	7.9	8.6	8.9	8.9	8.3	8.5	6.3	6.1	6.2	5.4	5.0	2.4	1.5	1.1	1.1	3.3	4.0	3.9	3.5	8.9	1.1	5.6
23	3.4	2.3	2.7	1.3	1.1	1.3	2.7	3.4	4.8	5.7	4.0	4.0	2.9	3.9	1.4	1.7	2.1	4.7	6.9	6.0	7.1	6.2	6.1	4.8	7.1	1.1	3.8
24	5.9	7.8	7.8	8.7	8.2	7.8	7.4	5.3	5.9	6.6	4.2	2.9	1.4	1.6	2.8	3.6	2.3	0.9	2.2	4.9	5.0	4.3	4.6	4.4	8.7	0.9	4.8
25	4.3	4.3	3.5	2.0	4.7	4.2	4.9	4.7	5.3	5.3	4.6	1.5	0.7	1.3	1.6	0.9	0.9	1.7	1.5	4.2	3.4	3.4	4.6	5.9	5.9	0.7	3.3
26	3.5	5.1	5.5	5.1	5.1	5.1	5.4	5.7	7.0	6.4	3.6	2.4	1.6	2.0	1.9	2.4	1.7	1.9	0.7	2.6	3.8	3.7	3.5	3.3	7.0	0.7	3.7
27	2.9	3.8	2.3	2.0	3.5	2.4	1.5	1.9	3.0	0.8	0.8	2.6	2.8	3.0	3.3	3.1	2.8	2.4	1.9	1.3	1.1	0.9	2.1	2.0	3.8	0.8	2.3
28	2.1	2.7	2.5	3.8	3.8	4.0	4.3	4.2	3.1	1.2	0.6	1.4	3.4	3.2	3.5	3.0	2.7	2.3	3.6	2.1	0.4	0.9	1.2	1.1	4.3	0.4	2.6
29	2.7	2.7	2.8	3.2	3.6	3.9	3.5	3.7	3.5	3.7	2.9	2.0	0.8	2.5	4.8	4.7	4.1	0.9	1.1	0.9	0.7	0.8	2.2	3.8	4.8	0.7	2.7
30	4.8	4.0	4.4	5.1	4.4	5.8	6.5	6.8	7.4	6.1	6.8	6.3	7.8	7.1	7.7	8.2	8.2	7.7	6.9	6.7	5.1	5.5	6.9	6.9	8.2	4.0	6.4
31	7.0	6.9	6.5	5.8	6.3	6.3	7.0	6.7	7.2	8.2	7.8	7.9	8.7	8.1	8.4	7.6	6.8	5.7	4.6	2.6	3.3	3.1	3.9	2.5	8.7	2.5	6.2
Max.	**11.1**	**12.4**	**11.2**	**10.7**	**12.3**	**11.1**	**11.7**	**13.8**	**10.1**	**9.4**	**10.0**	**10.0**	**9.5**	**8.9**	**8.4**	**9.8**	**10.3**	**13.2**	**10.1**	**8.1**	**9.0**	**9.2**	**8.0**	**10.3**	**13.8**		
Min.	**1.1**	**1.2**	**1.2**	**0.8**	**0.9**	**1.3**	**1.5**	**1.2**	**1.3**	**0.8**	**0.6**	**0.9**	**0.7**	**1.3**	**0.8**	**0.9**	**0.9**	**0.9**	**0.7**	**0.2**	**0.4**	**0.4**	**0.1**	**0.6**		**0.1**	
Avg.	**5.1**	**5.1**	**5.0**	**5.2**	**5.4**	**5.5**	**5.4**	**5.3**	**5.4**	**5.5**	**5.4**	**4.9**	**4.9**	**4.9**	**4.8**	**4.7**	**4.4**	**4.2**	**4.4**	**4.2**	**4.3**	**4.4**	**4.6**	**4.5**			**4.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.5	3.2	3.0	3.7	4.3	4.0	5.0	6.9	6.8	7.3	7.0	5.2	4.1	6.4	5.4	4.1	4.3	4.5	4.4	5.0	4.0	4.3	4.0	5.3	7.3	2.5	4.8
2	3.5	5.5	6.8	5.0	7.4	4.8	3.0	3.6	3.2	1.8	2.3	1.3	1.5	1.4	1.3	2.4	2.9	2.4	2.2	2.7	3.7	5.2	5.2	5.9	7.4	1.3	3.5
3	6.9	6.8	6.4	6.9	6.9	7.3	7.5	7.7	7.7	8.2	8.0	8.2	8.2	8.3	8.3	7.3	7.3	6.4	6.1	6.1	5.5	5.6	6.5	6.0	8.3	5.5	7.1
4	6.4	5.5	5.6	5.6	5.3	5.8	5.5	5.5	5.8	4.9	4.4	2.2	1.2	0.6	0.9	0.9	0.8	1.0	0.6	0.6	0.7	0.8	0.6	0.8	6.4	0.6	3.0
5	2.1	4.3	3.7	4.5	2.7	3.0	5.0	3.3	6.4	5.6	7.5	8.4	8.6	7.2	4.7	6.7	4.1	6.2	6.0	8.4	8.3	8.2	8.4	8.7	8.7	2.1	5.9
6	8.4	8.4	8.0	5.1	3.8	4.2	5.2	4.8	5.9	4.6	2.4	2.4	2.6	2.9	3.8	2.9	2.8	2.6	1.9	1.9	2.2	1.3	0.6	1.1	8.4	0.6	3.7
7	1.6	0.7	2.5	3.0	1.1	3.6	3.4	3.6	3.9	2.0	2.0	2.0	1.3	0.9	1.1	1.3	1.7	1.3	1.5	1.6	1.2	2.6	2.5	3.1	3.9	0.7	2.1
8	3.6	3.7	3.4	3.4	3.3	3.7	3.6	5.5	5.1	4.1	4.5	4.3	3.8	3.8	3.8	3.6	3.7	3.8	4.1	3.9	3.5	2.8	1.5	1.8	5.5	1.5	3.7
9	0.6	0.3	0.9	1.6	1.6	1.1	1.5	1.6	1.8	2.9	2.7	1.2	1.0	3.3	3.9	3.6	3.4	2.8	0.8	1.1	1.4	3.2	2.5	4.3	4.3	0.3	2.0
10	4.4	6.1	5.2	4.7	4.4	6.4	7.0	7.6	7.9	8.4	8.9	9.4	6.6	8.2	11.7	14.1	11.9	8.8	2.9	3.2	7.3	9.7	7.4	6.6	14.1	2.9	7.4
11	6.4	6.4	4.1	4.3	3.2	3.2	3.2	3.6	2.9	2.4	3.8	3.5	3.4	4.3	6.8	8.4	9.2	8.5	8.0	8.3	8.4	8.9	9.1	8.1	9.2	2.4	5.8
12	8.5	8.4	8.6	8.5	8.6	8.4	8.4	8.2	7.9	7.8	8.0	7.5	7.2	6.8	5.1	2.9	0.5	0.2	0.6	1.8	2.2	3.5	4.2	3.8	8.6	0.2	5.7
13	6.1	7.4	8.4	8.2	7.9	8.1	8.0	8.1	7.7	6.5	8.0	7.3	9.1	12.3	12.6	11.1	11.2	10.0	6.1	6.2	7.9	9.0	9.1	9.2	12.6	6.1	8.6
14	9.6	9.4	8.7	8.4	9.6	9.7	9.7	9.2	8.9	9.6	9.5	9.1	9.4	8.9	8.7	7.8	6.8	6.2	4.5	5.7	6.3	8.3	7.6	6.9	9.7	4.5	8.3
15	6.8	7.1	5.8	6.4	5.6	3.8	4.0	4.9	5.4	8.0	6.5	8.8	9.2	7.1	7.0	6.3	6.2	6.4	5.2	3.9	2.5	2.9	2.9	4.7	9.2	2.5	5.7
16	3.5	5.3	4.2	3.7	4.6	6.6	7.3	8.2	8.5	8.0	7.8	8.1	8.2	7.7	9.4	10.2	10.1	10.6	10.7	11.1	11.2	11.2	10.5	10.5	11.2	3.5	8.2
17	10.6	10.7	10.6	11.4	10.5	9.5	8.1	6.3	3.5	6.4	4.9	4.8	3.9	5.4	5.3	5.5	4.8	4.4	4.7	5.1	3.3	2.7	2.4	2.7	11.4	2.4	6.1
18	1.3	4.7	1.7	2.4	1.1	1.4	1.9	2.2	2.3	1.9	0.9	2.2	2.9	3.1	3.5	3.6	2.1	0.8	0.8	3.1	3.9	3.9	3.4	2.3	4.7	0.8	2.4
19	5.5	7.2	7.6	7.3	7.7	8.3	7.9	6.0	3.7	3.3	3.6	3.2	3.8	3.9	1.1	1.8	2.6	1.4	0.4	0.5	1.8	1.8	1.6	2.9	8.3	0.4	3.9
20	1.6	1.5	2.4	3.7	4.2	3.9	4.2	3.9	4.1	4.3	4.6	1.9	2.0	2.3	2.9	4.2	4.6	3.6	4.0	2.8	3.8	4.5	6.2	6.3	6.3	1.5	3.6
21	7.1	8.3	8.6	8.7	9.1	8.9	9.3	9.6	9.7	9.2	9.2	8.6	7.2	5.7	4.8	1.8	2.7	2.0	2.4	4.4	3.8	3.1	3.1	2.9	9.7	1.8	6.3
22	3.7	4.1	4.4	4.9	4.2	3.9	3.7	3.4	3.1	2.7	1.1	1.3	1.0	1.2	1.9	2.1	2.1	2.0	1.7	1.8	1.4	1.3	1.6	2.9	4.9	1.0	2.6
23	2.7	3.8	3.9	4.5	4.0	4.3	4.3	4.1	3.0	3.3	3.7	4.8	4.1	3.2	1.7	3.3	3.9	1.4	0.6	4.0	5.6	5.1	6.0	5.8	6.0	0.6	3.8
24	3.9	3.0	1.9	1.5	3.1	5.6	4.1	3.1	1.7	3.9	3.9	4.2	5.5	8.5	7.8	7.2	5.4	4.1	9.2	10.6	5.9	5.5	8.4	8.2	10.6	1.5	5.3
25	6.3	4.1	1.5	2.3	2.0	2.6	3.4	4.3	4.5	4.4	3.7	4.6	5.2	4.6	5.1	4.6	4.7	5.4	4.9	5.2	5.3	4.8	5.9	4.7	6.3	1.5	4.3
26	5.9	6.3	6.5	6.2	5.8	6.8	6.6	6.6	7.0	7.5	7.2	7.3	6.6	6.6	6.3	6.4	5.7	4.7	4.7	4.8	4.9	5.0	3.5	4.0	7.5	3.5	6.0
27	5.0	5.2	5.1	4.7	4.8	5.2	5.4	5.7	5.1	4.9	4.4	4.2	3.1	2.3	1.0	1.6	1.9	1.6	0.9	0.7	0.7	1.6	1.9	2.7	5.7	0.7	3.3
28	3.6	3.5	4.0	3.8	2.5	2.4	2.9	1.7	2.4	2.0	2.0	1.2	1.9	2.9	2.1	2.5	2.9	2.5	1.4	0.5	0.8	1.3	1.9	1.8	4.0	0.5	2.3
29	1.8	2.9	6.3	6.4	7.2	7.8	7.2	8.6	8.1	5.6	4.9	3.1	2.8	3.1	3.1	4.4	4.5	4.4	3.8	3.5	4.5	3.9	3.0	2.9	8.6	1.8	4.7
30	2.9	2.9	3.2	2.4	2.9	3.3	5.2	3.4	4.0	6.2	5.5	2.5	1.7	2.2	3.8	3.0	1.8	1.7	0.8	2.2	2.0	2.2	2.1	2.3	6.2	0.8	2.9
Max.	**10.6**	**10.7**	**10.6**	**11.4**	**10.5**	**9.7**	**9.7**	**9.6**	**9.7**	**9.6**	**9.5**	**9.4**	**9.4**	**12.3**	**12.6**	**14.1**	**11.9**	**10.6**	**10.7**	**11.1**	**11.2**	**11.2**	**10.5**	**10.5**	**14.1**		
Min.	**0.6**	**0.3**	**0.9**	**1.5**	**1.1**	**1.1**	**1.5**	**1.6**	**1.7**	**1.8**	**0.9**	**1.2**	**1.0**	**0.6**	**0.9**	**0.9**	**0.5**	**0.2**	**0.4**	**0.5**	**0.7**	**0.8**	**0.6**	**0.8**		**0.2**	
Avg.	**4.8**	**5.2**	**5.1**	**5.1**	**5.0**	**5.2**	**5.4**	**5.4**	**5.3**	**5.2**	**5.1**	**4.8**	**4.6**	**4.8**	**4.8**	**4.8**	**4.6**	**4.1**	**3.5**	**4.0**	**4.1**	**4.5**	**4.5**	**4.6**			**4.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	28.2	18.4	12.4	12.4	13.3	16.0	13.0	9.5	11.5	11.0	10.3	10.4	10.4	9.7	9.8	11.2	10.0	11.0	11.6	11.6	10.7	10.1	10.9	10.1	28.2	9.5	12.2
2	10.1	10.7	9.8	9.3	9.6	8.6	9.5	8.8	9.5	10.2	8.8	9.0	9.7	11.7	11.5	10.8	11.4	10.9	8.3	9.9	9.5	32.2	39.2	19.1	39.2	8.3	12.4
3	11.5	12.8	12.1	10.8	11.8	11.6	9.9	10.7	10.0	8.6	9.1	9.5	9.0	8.9	10.3	13.6	13.4	16.5	13.4	11.2	12.7	13.0	11.6	11.2	16.5	8.6	11.4
4	9.3	11.7	13.5	11.7	15.9	34.4	64.1	39.0	50.3	47.0	27.3	47.0	58.6	66.4	37.8	46.1	66.4	30.9	41.2	44.2	74.0	34.2	16.0	17.4	74.0	9.3	37.7
5	13.4	14.0	20.7	14.9	12.7	11.5	11.0	10.4	8.7	11.2	10.3	11.7	12.5	11.4	57.0	43.2	55.1	76.5	42.5	37.7	25.9	42.1	41.6	10.6	76.5	8.7	25.3
6	13.4	43.8	37.7	22.2	17.0	17.6	19.0	10.8	7.2	25.8	15.7	16.7	16.8	18.0	33.8	15.4	16.2	15.1	20.9	29.5	30.1	32.0	32.9	29.0	43.8	7.2	22.4
7	20.9	26.5	31.6	28.4	34.1	39.9	34.5	28.8	29.0	26.6	24.6	30.0	50.1	70.0	57.9	49.0	31.6	42.6	47.4	42.4	50.0	58.1	20.1	17.4	70.0	17.4	37.1
8	15.7	28.3	36.3	17.2	12.5	9.1	8.2	6.0	8.8	11.9	8.6	9.2	9.6	9.4	10.7	10.5	11.2	9.9	9.9	10.3	10.2	10.4	10.4	10.4	36.3	6.0	12.3
9	9.8	9.7	10.4	9.5	9.7	10.0	9.8	10.9	9.4	10.2	10.3	10.3	9.8	9.4	9.2	9.8	10.0	9.0	9.1	10.0	10.1	10.0	10.0	10.3	10.9	9.0	9.9
10	10.7	9.9	10.7	10.6	9.1	8.7	11.6	13.1	14.0	22.6	22.5	15.6	32.7	37.0	35.6	42.8	50.3	60.3	37.6	59.7	15.4	33.4	9.8	22.8	60.3	8.7	24.8
11	24.2	5.5	8.6	23.1	48.3	12.4	11.4	6.1	5.2	5.8	6.6	24.3	23.6	33.6	37.4	18.7	10.2	25.7	44.7	11.5	32.5	14.1	14.8	21.8	48.3	5.2	19.6
12	12.6	13.7	14.2	10.0	16.6	14.0	40.1	13.3	11.1	17.0	19.1	39.4	39.9	27.5	14.9	25.4	60.2	65.5	65.1	57.7	67.3	12.6	17.8	9.1	67.3	9.1	28.5
13	9.9	7.9	14.4	12.2	12.1	12.0	13.0	13.5	13.0	15.0	7.2	10.2	27.3	42.6	38.3	25.2	38.9	40.2	64.9	56.6	19.0	12.9	28.3	61.0	64.9	7.2	24.8
14	52.2	20.4	23.0	17.6	33.8	12.2	8.7	5.1	36.6	30.1	11.9	15.3	20.2	25.4	19.8	18.4	17.6	25.1	17.3	20.0	16.3	38.4	54.8	12.6	54.8	5.1	23.0
15	20.4	35.3	8.6	20.0	38.0	16.9	43.1	13.3	12.0	20.8	17.8	12.6	6.0	8.4	5.8	5.0	5.3	5.7	10.4	14.0	29.0	24.9	19.7	63.1	63.1	5.0	19.0
16	65.5	38.7	14.4	13.8	18.1	15.2	21.6	28.6	13.3	5.4	10.9	13.4	11.5	15.6	9.1	7.1	5.6	7.5	5.6	19.9	9.1	7.6	9.6	18.2	65.5	5.4	16.1
17	36.5	10.1	5.6	5.9	5.4	6.5	7.5	7.2	8.9	8.8	10.0	13.4	11.4	15.6	13.7	11.5	13.9	21.4	26.1	30.1	32.8	43.3	55.6	17.1	55.6	5.4	17.4
18	8.1	9.2	10.7	6.2	6.7	19.2	3.5	13.9	41.4	28.0	23.9	35.0	34.1	28.1	44.8	63.8	57.7	36.5	37.7	41.0	36.5	62.5	66.2	30.8	66.2	3.5	31.1
19	23.9	27.1	18.0	15.7	18.6	29.1	12.9	7.4	4.4	34.4	14.7	27.9	18.2	31.7	28.3	53.4	57.0	38.1	15.3	15.6	41.7	38.2	24.9	13.6	57.0	4.4	25.4
20	9.5	10.9	9.8	11.9	10.7	9.7	9.7	11.3	11.6	10.0	11.0	11.8	9.6	8.4	8.0	10.5	11.4	12.8	8.0	14.9	29.9	33.3	18.6	56.0	56.0	8.0	14.6
21	36.2	31.7	62.4	50.0	62.8	39.8	15.7	14.7	31.9	16.9	15.6	16.4	21.4	52.1	46.9	29.2	56.0	58.9	41.2	26.5	21.4	14.5	13.4	15.6	62.8	13.4	33.0
22	18.9	19.5	15.4	17.9	18.6	15.7	13.5	11.2	12.6	11.5	50.3	19.0	36.4	38.2	18.3	16.9	15.6	14.6	14.0	27.7	55.8	12.4	16.9	15.6	55.8	11.2	21.1
23	7.0	22.0	51.0	61.0	49.8	56.3	32.4	34.2	41.3	17.1	20.4	27.2	10.1	6.5	7.6	11.0	21.1	14.0	21.0	54.8	64.1	21.3	9.6	10.3	64.1	6.5	28.0
24	7.4	7.7	10.3	56.3	56.9	12.2	33.5	10.1	23.4	7.7	7.9	13.6	2.1	63.7	19.5	15.7	13.7	17.1	49.9	43.6	51.3	24.9	10.7	10.9	63.7	2.1	23.7
25	14.7	9.9	57.7	52.8	35.5	12.0	50.8	57.4	50.6	33.3	8.8	11.9	7.8	18.1	23.8	13.5	31.5	36.4	49.9	75.0	22.7	12.8	10.7	9.6	75.0	7.8	29.5
26	8.8	10.1	11.4	8.7	10.4	13.4	10.1	8.1	8.3	40.8	19.8	9.9	7.0	14.9	45.1	13.1	16.2	22.6	27.2	55.3	40.5	14.2	10.4	24.6	55.3	7.0	18.8
27	11.8	9.4	71.5	55.6	11.8	15.0	15.9	13.7	18.8	15.7	30.7	12.5	60.3	53.7	9.8	21.2	17.1	25.5	19.3	30.5	58.2	15.0	7.7	18.1	71.5	7.7	25.8
28	9.1	13.5	38.7	17.2	13.7	10.9	42.6	52.1	23.5	5.2	5.3	4.6	4.4	4.4	3.3	3.9	3.6	7.8	11.8	14.6	31.1	18.7	17.5	15.8	52.1	3.3	15.6
29	46.1	44.1	47.0	37.0	56.3	31.6	12.4	49.6	28.1	14.9	48.1	17.8	29.5	29.2	27.9	43.3	68.3	50.2	52.2	39.9	64.7	32.3	45.5	44.0	68.3	12.4	40.0
30	38.2	20.0	39.4	19.8	34.6	8.5	9.5	10.0	17.6	11.9	40.7	40.4	46.4	41.1	36.4	48.5	21.5	65.8	45.4	40.1	61.7	65.2	46.5	32.1	65.8	8.5	35.0
31	63.8	8.6	10.2	11.3	11.4	14.9	16.1	37.9	18.6	14.2	10.4	7.9	5.6	6.3	8.8	8.7	7.8	7.8	17.3	18.8	11.0	18.1	24.4	46.0	63.8	5.6	16.9
Max.	**65.5**	**44.1**	**71.5**	**61.0**	**62.8**	**56.3**	**64.1**	**57.4**	**50.6**	**47.0**	**50.3**	**47.0**	**60.3**	**70.0**	**57.9**	**63.8**	**68.3**	**76.5**	**65.1**	**75.0**	**74.0**	**65.2**	**66.2**	**63.1**	**76.5**		
Min.	**7.0**	**5.5**	**5.6**	**5.9**	**5.4**	**6.5**	**3.5**	**5.1**	**4.4**	**5.2**	**5.3**	**4.6**	**2.1**	**4.4**	**3.3**	**3.9**	**3.6**	**5.7**	**5.6**	**9.9**	**9.1**	**7.6**	**7.7**	**9.1**		**2.1**	
Avg.	**21.5**	**18.1**	**23.8**	**21.6**	**23.1**	**17.6**	**19.8**	**18.3**	**19.0**	**17.7**	**17.4**	**17.9**	**21.0**	**26.3**	**23.9**	**23.1**	**26.6**	**28.4**	**28.6**	**31.4**	**33.7**	**26.2**	**23.4**	**22.7**			**23.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.9	1.0	1.9	3.7	2.9	2.1	2.2	2.2	1.6	1.2	1.1	2.2	2.6	3.8	3.6	2.8	2.1	1.3	0.6	1.1	0.6	0.7	1.8	4.4	4.4	0.6	2.0
2	4.5	3.9	3.9	3.2	3.0	2.5	4.1	3.9	3.6	4.7	5.2	3.9	2.6	2.2	3.2	4.5	3.5	2.7	1.5	1.0	1.3	2.2	1.5	1.0	5.2	1.0	3.1
3	1.4	1.0	1.2	5.4	3.7	5.2	7.9	8.5	8.0	4.7	6.3	7.0	7.5	3.5	4.5	5.8	5.2	3.6	3.1	2.8	5.5	6.0	3.5	5.1	8.5	1.0	4.9
4	5.5	6.1	4.9	3.2	2.9	3.9	3.5	3.2	2.0	0.9	2.4	3.5	3.3	3.6	3.8	4.0	4.1	3.9	2.9	2.7	2.3	2.1	1.6	2.8	6.1	0.9	3.3
5	3.8	3.1	2.8	1.0	1.5	1.4	3.0	1.9	0.9	1.5	4.2	3.8	3.8	3.6	3.9	3.9	3.7	3.1	2.8	2.6	2.5	1.7	1.1	1.8	4.2	0.9	2.6
6	3.0	2.7	2.0	0.7	2.3	1.6	1.8	1.2	1.7	3.3	2.4	2.2	2.3	2.0	2.1	1.7	2.0	1.5	1.3	2.6	0.8	1.5	1.3	2.6	3.3	0.7	1.9
7	3.5	4.2	3.9	2.9	2.2	1.3	2.5	1.6	1.9	2.9	2.0	1.9	1.7	1.9	1.9	1.6	1.8	1.9	2.4	1.9	2.1	4.2	3.5	2.7	4.2	1.3	2.4
8	2.9	3.2	3.3	4.2	4.0	4.3	4.5	5.5	5.5	6.1	6.6	7.2	6.8	6.2	6.3	6.7	6.1	6.6	6.5	7.0	7.0	7.5	6.9	7.6	7.6	2.9	5.8
9	7.7	8.1	7.7	8.1	8.7	9.0	8.3	8.7	9.2	9.3	9.1	9.0	7.9	7.6	7.8	7.5	6.4	3.5	2.8	4.5	4.9	3.9	2.7	3.4	9.3	2.7	6.9
10	2.8	2.1	1.6	2.0	2.1	2.3	2.8	3.1	2.6	1.8	2.0	2.0	1.7	2.8	2.8	2.3	3.2	3.1	2.9	2.7	3.2	4.8	3.9	3.0	4.8	1.6	2.6
11	3.2	3.5	2.4	3.3	3.4	3.5	4.4	5.2	5.1	4.5	4.4	6.5	6.8	6.1	5.6	5.7	6.1	6.1	5.6	6.9	6.0	6.3	6.9	6.4	6.9	2.4	5.2
12	6.1	5.7	5.5	4.6	5.0	5.0	4.8	4.3	3.8	3.8	2.2	1.1	0.6	0.9	0.7	0.4	1.7	1.7	1.5	1.9	1.5	2.0	1.9	1.2	6.1	0.4	2.8
13	1.4	1.8	1.9	1.6	1.6	0.4	0.5	2.1	1.4	0.3	1.1	1.5	2.9	3.1	2.6	3.0	3.7	3.1	1.8	1.8	1.3	1.2	0.5	0.4	3.7	0.3	1.7
14	0.3	1.1	0.8	2.0	0.5	0.3	0.4	1.0	0.4	1.4	1.5	1.1	2.0	1.7	1.0	0.7	2.1	3.9	2.2	1.7	1.4	1.9	2.8	2.4	3.9	0.3	1.4
15	2.9	2.8	3.5	2.1	1.7	1.2	2.0	1.6	1.8	0.8	1.9	2.6	2.7	2.6	2.1	1.2	1.0	1.1	0.5	1.2	0.7	0.4	0.5	0.4	3.5	0.4	1.6
16	0.6	1.2	1.0	1.0	3.0	3.1	2.0	2.9	2.7	1.8	1.3	1.2	1.1	1.3	1.2	1.0	1.4	1.1	0.6	0.5	1.1	3.5	3.8	3.5	3.8	0.5	1.8
17	3.9	2.8	1.7	1.3	1.8	2.8	3.4	3.2	3.9	4.4	4.6	3.0	3.0	3.9	3.2	3.3	4.9	5.9	5.3	4.7	3.1	1.4	2.3	2.9	5.9	1.3	3.4
18	3.0	0.9	3.5	3.3	3.9	3.9	4.3	4.5	6.5	6.4	5.9	5.7	5.5	5.7	5.6	5.6	4.7	4.5	4.9	4.0	4.5	3.3	3.6	4.5	6.5	0.9	4.5
19	5.0	4.6	4.6	5.6	6.3	6.3	5.9	6.2	6.0	4.8	4.8	4.0	4.7	4.1	3.6	2.2	3.0	4.2	2.4	2.6	2.5	1.0	3.6	3.7	6.3	1.0	4.2
20	2.8	3.5	2.1	1.7	1.5	0.9	1.3	3.9	5.5	4.2	4.3	4.1	3.9	1.9	1.4	2.3	1.6	1.2	0.9	1.2	1.8	1.7	1.1	0.9	5.5	0.9	2.3
21	1.5	2.9	2.3	2.0	1.7	1.8	2.6	2.6	2.4	1.5	1.9	2.5	2.3	3.4	3.3	3.4	3.9	3.8	3.8	2.7	3.2	1.7	1.5	0.9	3.9	0.9	2.5
22	1.2	2.2	1.7	1.3	1.5	2.8	2.4	0.8	0.6	1.5	1.2	1.3	2.0	2.6	2.1	1.2	0.9	2.3	2.6	1.8	1.7	1.8	1.9	2.8	2.8	0.6	1.8
23	2.6	2.2	1.6	1.6	0.8	0.8	4.3	2.1	2.8	2.4	2.0	1.5	1.7	2.7	3.3	3.8	4.6	3.7	4.2	3.1	1.3	2.3	1.4	0.7	4.6	0.7	2.4
24	0.7	0.6	1.2	1.7	1.2	1.9	1.9	1.8	1.0	1.1	3.0	3.4	3.1	3.2	3.7	3.1	3.3	3.1	2.6	1.8	1.2	0.6	1.2	2.1	3.7	0.6	2.0
25	2.6	2.6	2.5	1.1	1.4	3.4	2.3	2.4	3.9	5.2	3.3	3.4	5.0	5.9	4.0	5.0	2.7	5.8	4.2	2.3	1.9	1.2	1.1	1.0	5.9	1.0	3.1
26	1.5	1.3	1.3	1.3	1.1	2.4	2.5	1.9	1.3	1.6	1.9	2.6	1.9	1.7	1.4	0.7	1.3	1.6	0.5	0.4	0.7	0.4	0.9	1.7	2.6	0.4	1.4
27	0.7	1.5	0.6	0.8	0.7	1.3	1.9	1.2	1.8	1.8	3.0	3.5	3.4	3.5	3.3	3.2	3.1	2.5	1.8	1.2	3.6	6.7	6.1	7.3	7.3	0.6	2.7
28	8.2	8.0	6.0	6.4	7.1	9.6	9.1	8.0	7.9	9.2	8.2	6.2	6.0	5.9	6.8	4.7	6.2	6.2	4.7	6.4	5.8	5.0	6.5	5.5	9.6	4.7	6.8
29	6.5	6.3	6.1	6.1	5.8	5.4	4.7	1.8	2.6	1.4	1.7	2.7	2.7	3.3	2.2	2.6	1.5	1.0	1.8	1.6	1.9	2.0	2.0	2.2	6.5	1.0	3.2
30	2.4	3.4	2.5	2.2	3.0	4.0	4.0	4.3	4.4	2.5	1.1	2.2	3.0	2.7	3.3	3.3	2.9	2.7	3.1	1.9	4.6	5.0	4.4	4.1	5.0	1.1	3.2
Max.	**8.2**	**8.1**	**7.7**	**8.1**	**8.7**	**9.6**	**9.1**	**8.7**	**9.2**	**9.3**	**9.1**	**9.0**	**7.9**	**7.6**	**7.8**	**7.5**	**6.4**	**6.6**	**6.5**	**7.0**	**7.0**	**7.5**	**6.9**	**7.6**	**9.6**		
Min.	**0.3**	**0.6**	**0.6**	**0.7**	**0.5**	**0.3**	**0.4**	**0.8**	**0.4**	**0.3**	**1.1**	**1.1**	**0.6**	**0.9**	**0.7**	**0.4**	**0.9**	**1.0**	**0.5**	**0.4**	**0.6**	**0.4**	**0.5**	**0.4**		**0.3**	
Avg.	**3.1**	**3.1**	**2.9**	**2.8**	**2.9**	**3.1**	**3.5**	**3.4**	**3.4**	**3.2**	**3.4**	**3.4**	**3.5**	**3.4**	**3.3**	**3.2**	**3.3**	**3.2**	**2.7**	**2.6**	**2.7**	**2.8**	**2.7**	**3.0**			**3.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.0	3.6	4.0	2.7	2.3	3.0	2.8	1.6	1.3	2.2	2.5	2.9	3.2	3.8	4.3	4.5	4.1	3.2	3.7	4.4	2.5	2.7	5.4	5.4	1.3	3.2
2	6.2	7.4	5.5	4.1	4.9	4.7	3.8	3.9	5.0	4.3	1.3	1.2	1.9	1.5	2.0	3.5	5.4	5.6	4.6	2.3	1.7	1.5	2.1	2.7	7.4	1.2	3.6
3	2.3	2.6	2.8	1.8	1.2	2.4	2.5	1.8	2.4	1.7	1.9	2.0	3.0	3.3	3.6	4.0	2.5	1.2	1.4	2.0	2.4	1.7	1.5	0.9	4.0	0.9	2.2
4	1.3	1.3	1.5	1.1	1.1	1.7	1.5	0.9	2.0	2.9	2.9	3.1	3.7	3.4	3.6	3.8	3.1	3.0	2.5	2.7	1.4	1.6	1.2	0.7	3.8	0.7	2.2
5	1.3	1.6	2.7	2.4	1.3	1.7	2.5	1.9	1.3	2.5	2.9	2.6	1.9	2.2	2.2	2.4	2.4	2.2	2.5	2.1	1.4	1.3	1.0	1.5	2.9	1.0	2.0
6	1.1	0.2	0.4	0.4	1.4	0.5	1.4	1.5	1.6	1.8	2.2	1.8	2.2	2.5	2.8	2.8	2.8	2.9	2.2	1.6	1.6	1.0	1.1	1.9	2.9	0.2	1.6
7	1.0	1.9	1.0	1.3	1.3	0.8	1.2	1.3	1.1	1.8	2.0	2.5	1.9	2.4	3.6	2.4	2.0	1.6	1.7	1.5	1.5	0.9	2.8	2.8	3.6	0.8	1.8
8	2.9	2.4	1.0	0.9	0.6	2.0	1.9	3.1	3.2	5.6	5.6	5.2	5.3	5.6	4.8	3.3	1.9	2.1	4.0	4.8	4.5	3.7	2.0	2.3	5.6	0.6	3.3
9	2.4	2.7	2.4	2.7	2.2	2.8	2.7	2.7	1.0	1.3	2.0	2.8	3.1	3.3	2.9	2.4	1.8	1.2	1.8	1.4	2.5	1.4	2.3	2.1	3.3	1.0	2.2
10	2.1	1.7	2.3	2.5	2.1	2.0	2.0	2.0	2.2	1.2	1.1	1.6	1.6	2.6	2.5	2.3	2.4	1.4	2.6	1.0	1.5	2.5	1.3	1.2	2.6	1.0	1.9
11	0.5	1.0	1.4	1.2	0.9	0.7	1.3	1.7	1.6	2.4	3.8	3.9	2.8	2.1	4.3	3.3	2.8	1.7	0.8	3.0	4.2	1.5	0.9	0.8	4.3	0.5	2.0
12	0.6	1.5	1.2	1.4	1.8	2.1	2.7	3.0	2.6	2.0	0.9	2.1	2.4	2.5	2.1	1.3	1.2	2.7	5.1	5.8	3.7	4.7	3.6	3.5	5.8	0.6	2.5
13	2.0	4.7	4.1	1.8	3.8	6.8	5.6	5.5	6.9	6.6	7.9	8.8	9.0	10.0	9.9	10.4	9.9	10.2	10.9	10.9	11.2	9.4	8.4	7.8	11.2	1.8	7.6
14	8.2	8.2	8.7	8.0	8.4	6.8	5.8	5.5	6.3	7.6	7.9	8.0	6.0	6.3	6.1	6.5	4.5	3.5	5.0	2.6	6.7	6.0	5.6	4.0	8.7	2.6	6.3
15	4.1	3.1	6.5	6.4	6.8	7.3	6.6	6.0	3.9	3.4	3.1	3.0	2.8	4.5	5.8	2.7	1.9	1.6	1.7	1.6	0.9	0.6	1.1	1.3	7.3	0.6	3.6
16	1.8	1.5	2.7	1.7	1.8	2.8	3.5	3.3	1.9	1.2	1.4	1.8	1.6	1.8	1.9	1.4	1.8	1.7	1.6	1.5	2.3	1.6	2.2	1.9	3.5	1.2	1.9
17	2.5	2.7	4.1	3.1	2.4	2.6	2.2	2.1	1.8	2.0	1.6	1.6	2.5	5.1	5.2	4.4	3.4	3.5	4.5	4.7	3.6	3.6	4.6	4.6	5.2	1.6	3.3
18	4.9	4.9	4.4	3.7	3.9	3.1	3.3	3.5	1.8	2.5	1.5	2.0	2.0	1.6	1.0	3.0	1.8	1.5	1.8	1.8	2.8	1.4	1.0	1.9	4.9	1.0	2.6
19	1.4	1.2	1.4	3.6	5.9	5.1	5.0	5.9	5.9	7.3	7.1	6.7	5.2	5.6	6.3	6.1	5.8	4.1	5.1	4.1	2.7	1.2	2.4	3.3	7.3	1.2	4.5
20	2.5	1.6	1.9	2.2	3.9	5.3	4.8	5.1	5.4	5.7	5.6	5.2	5.6	5.4	5.5	4.2	4.1	5.1	4.8	5.0	3.5	2.9	2.0	3.9	5.7	1.6	4.2
21	6.2	4.0	3.2	1.2	0.7	2.9	3.9	3.6	5.0	5.1	5.5	5.8	5.5	5.4	4.9	3.9	2.5	1.9	1.4	2.1	3.1	3.5	2.6	1.5	6.2	0.7	3.6
22	1.8	2.2	1.5	1.1	1.9	4.1	4.9	4.9	4.3	5.6	5.0	3.9	4.1	3.3	2.3	2.2	1.8	1.5	2.6	3.6	3.6	3.7	4.5	3.5	5.6	1.1	3.2
23	3.7	3.6	4.0	2.1	2.8	3.3	4.3	4.2	5.0	5.3	7.3	8.2	8.1	8.5	7.8	6.7	4.7	2.8	6.8	7.8	7.8	6.5	6.3	6.5	8.5	2.1	5.6
24	5.6	6.5	5.8	6.4	6.3	7.0	6.6	5.5	4.3	4.6	5.0	4.8	5.2	3.1	1.7	1.2	1.1	1.3	2.0	1.6	1.6	1.0	1.6	3.6	7.0	1.0	3.9
25	3.5	3.6	4.7	4.8	3.8	2.2	1.7	1.7	1.7	1.3	0.6	0.5	0.7	2.8	4.0	3.6	3.0	1.2	0.3	0.5	0.7	1.1	0.9	1.1	4.8	0.3	2.1
26	2.4	2.4	1.8	1.1	1.1	1.5	1.6	3.4	3.9	3.8	4.3	5.7	5.6	4.9	5.6	6.5	6.7	7.4	8.3	8.5	8.5	8.3	8.2	8.2	8.5	1.1	5.0
27	7.7	7.9	8.0	7.3	5.9	4.2	4.7	5.6	4.0	2.3	1.6	1.7	1.9	1.5	2.6	2.3	2.5	2.2	1.7	2.3	3.0	0.9	1.5	4.1	8.0	0.9	3.6
28	4.8	2.5	3.2	5.9	3.2	8.1	8.8	7.7	4.8	3.7	2.2	3.4	4.9	5.7	3.9	3.6	3.1	2.8	2.3	1.7	2.4	4.5	7.6	5.5	8.8	1.7	4.4
29	4.5	4.6	6.3	4.4	9.2	9.0	8.9	11.6	15.2	10.1	11.7	8.1	5.5	8.3	6.0	5.5	5.2	5.5	7.1	5.5	4.9	9.2	9.5	9.6	15.2	4.4	7.7
30	7.2	7.7	3.9	9.1	5.3	6.6	8.3	7.8	7.3	6.8	6.1	5.2	4.7	4.3	6.1	5.7	3.2	2.7	3.3	5.5	2.2	1.5	2.2	3.5	9.1	1.5	5.3
31	5.9	6.7	6.4	5.8	6.1	4.9	4.4	5.6	5.4	5.3	3.4	2.9	3.7	3.1	3.8	3.8	5.3	4.1	4.4	4.8	5.0	5.5	7.2	6.8	7.2	2.9	5.0
Max.	**8.2**	**8.2**	**8.7**	**9.1**	**9.2**	**9.0**	**8.9**	**11.6**	**15.2**	**10.1**	**11.7**	**8.8**	**9.0**	**10.0**	**9.9**	**10.4**	**9.9**	**10.2**	**10.9**	**10.9**	**11.2**	**9.4**	**9.5**	**9.6**	**15.2**		
Min.	**0.5**	**0.2**	**0.4**	**0.4**	**0.6**	**0.5**	**1.2**	**0.9**	**1.0**	**1.2**	**0.6**	**0.5**	**0.7**	**1.5**	**1.0**	**1.2**	**1.1**	**1.2**	**0.3**	**0.5**	**0.7**	**0.6**	**0.9**	**0.7**		**0.2**	
Avg.	**3.4**	**3.4**	**3.5**	**3.3**	**3.4**	**3.8**	**3.9**	**4.0**	**3.9**	**3.8**	**3.8**	**3.8**	**3.8**	**4.1**	**4.2**	**3.9**	**3.4**	**3.0**	**3.5**	**3.5**	**3.5**	**3.1**	**3.3**	**3.5**			**3.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	204.8	220.2	21.6	13.4	350.1	7.3	3.0	32.7	157.6	130.1	150.8	126.7	38.8	43.7	45.1	32.4	36.0	32.8	29.1	278.0	211.5	160.7	324.9	11.2
2	323.4	313.7	319.7	341.2	24.9	22.0	28.8	5.5	14.2	13.3	18.2	10.7	18.6	22.5	27.4	19.7	22.5	24.2	24.8	25.4	26.1	23.3	24.6	24.7
3	28.4	21.9	18.0	18.4	17.2	6.0	2.3	3.5	221.7	222.4	171.2	172.2	207.3	203.0	208.1	73.7	206.2	75.9	54.2	357.4	19.3	357.5	4.9	23.2
4	24.7	355.6	5.9	15.5	17.8	16.7	19.0	31.1	37.7	41.1	49.4	182.8	203.9	205.3	210.2	204.4	215.0	198.9	55.9	46.5	14.9	348.3	310.3	306.6
5	301.9	303.1	300.6	310.7	315.4	314.5	315.0	322.0	319.7	323.9	325.5	330.7	81.0	354.5	119.5	155.9	303.2	320.6	319.7	322.2	327.0	340.6	317.6	320.4
6	318.6	317.5	317.5	317.6	318.5	320.1	319.3	320.1	320.3	325.7	101.9	130.4	124.8	75.9	178.2	97.2	192.3	175.2	18.6	71.3	6.3	15.0	1.5	172.5
7	96.5	352.9	351.6	18.5	42.1	194.6	305.8	320.2	323.9	314.6	324.2	304.8	322.1	323.0	321.3	319.1	314.7	322.2	320.4	316.9	312.0	4.7	10.1	8.1
8	9.3	10.0	12.5	3.9	18.4	18.3	22.4	37.0	46.9	153.4	200.8	207.3	206.6	208.6	206.0	210.1	205.4	213.4	220.2	218.4	225.7	23.5	24.5	31.5
9	27.3	30.4	32.8	26.8	230.3	237.1	38.0	44.5	131.1	207.0	193.4	212.8	212.3	207.0	212.0	205.4	210.7	211.5	226.4	229.9	232.0	286.4	14.1	342.9
10	2.4	31.6	227.5	223.1	253.4	21.3	31.9	39.1	175.8	203.3	190.0	181.7	196.6	202.9	202.1	211.3	206.0	194.1	197.8	222.4	225.4	219.1	205.0	224.5
11	223.3	234.4	289.1	51.4	75.0	192.9	319.0	208.8	204.7	200.4	201.7	194.8	201.1	192.9	191.8	199.8	210.5	219.8	215.4	213.8	25.0	29.9	33.0	32.8
12	24.1	14.0	38.5	37.6	30.4	32.4	31.9	86.1	155.0	205.9	205.2	204.5	202.6	202.4	207.1	205.4	205.6	215.7	222.4	226.2	217.2	206.3	189.5	191.4
13	220.7	202.0	256.6	255.3	161.5	139.4	219.0	248.2	170.8	173.8	172.7	180.8	195.8	192.0	191.0	191.2	203.8	210.2	204.3	207.8	208.2	237.9	234.4	229.7
14	234.0	227.9	185.9	232.3	218.5	219.4	227.4	231.5	228.1	221.1	188.5	194.9	183.2	193.9	199.7	208.6	210.9	211.5	218.3	219.5	233.5	248.3	249.8	220.0
15	190.7	216.7	235.1	238.8	273.9	271.3	46.8	29.6	6.1	44.0	301.6	288.1	282.3	234.4	194.2	199.6	207.6	225.5	236.2	272.6	272.3	243.0	241.4	220.5
16	12.8	26.4	25.7	27.3	11.9	25.4	23.7	28.5	26.5	23.7	21.9	100.9	12.4	4.0	329.3	322.6	322.3	320.3	14.5	15.6	0.9	359.6	7.6	7.8
17	8.8	1.4	12.7	17.2	12.4	5.3	358.1	5.7	2.0	5.1	7.3	5.9	13.3	10.5	17.7	20.3	19.7	24.9	22.2	20.9	22.3	18.0	13.8	16.3
18	13.8	8.0	9.9	13.7	14.7	24.5	19.8	22.5	30.2	116.9	176.1	231.9	214.5	209.9	205.1	210.6	207.3	211.1	206.0	174.9	133.6	7.6	23.1	319.7
19	354.1	28.2	335.1	8.7	24.8	27.1	29.0	41.1	47.2	167.9	184.3	201.9	197.9	205.0	207.1	243.5	308.9	302.2	325.7	340.0	294.8	305.9	330.6	38.5
20	17.8	349.4	311.7	315.4	351.0	89.1	51.9	63.2	350.2	3.8	27.8	351.0	324.0	137.1	162.6	155.0	177.0	149.2	102.8	192.3	206.5	207.9	206.1	204.1
21	212.3	197.7	199.0	196.7	207.3	198.4	198.7	201.8	206.5	169.9	83.0	91.2	184.1	183.0	152.9	135.0	105.9	38.9	245.2	236.5	332.2	259.2	278.8	20.9
22	2.9	357.5	249.2	351.7	21.4	26.8	11.4	16.8	16.4	9.9	0.5	32.7	29.4	12.2	330.6	358.1	343.5	345.1	0.6	349.7	335.6	327.3	326.4	349.1
23	349.2	17.4	18.9	20.7	359.6	344.9	342.2	23.5	8.4	32.4	11.8	310.3	46.6	100.2	211.0	210.7	206.0	13.6	301.9	347.8	13.8	10.6	330.3	31.4
24	17.6	16.4	19.9	24.9	29.4	31.3	26.4	30.9	46.8	61.5	170.6	206.7	208.9	195.8	183.6	184.2	159.4	188.4	190.6	196.8	169.4	161.1	167.2	111.3
25	132.3	145.7	173.5	58.2	75.4	38.4	281.7	329.7	39.1	317.8	63.4	88.5	202.0	216.5	209.6	212.5	212.2	219.1	241.7	246.6	266.2	270.7	307.8	21.4
26	25.6	27.2	17.1	22.3	24.1	24.2	23.0	38.3	46.4	54.0	72.9	96.8	98.6	74.5	42.8	54.0	50.4	9.1	316.7	183.8	190.4	288.3	292.6	305.0
27	317.4	316.4	317.0	316.5	356.6	335.8	327.7	43.8	48.1	37.0	50.3	12.5	41.1	156.6	122.5	127.4	137.9	108.5	37.0	27.1	316.7	316.6	317.9	310.4
28	333.2	2.6	37.2	134.3	356.4	7.9	3.6	355.4	213.8	22.4	39.2	73.6	202.8	188.4	186.4	201.6	203.0	188.5	177.0	195.1	198.7	188.6	192.6	192.4
29	197.2	205.9	208.0	192.9	201.3	198.2	207.6	206.4	190.4	193.9	201.2	195.3	194.0	203.8	200.6	194.0	187.1	173.7	194.6	197.6	200.2	179.3	192.9	171.7
30	15.5	320.9	333.7	346.7	311.3	307.4	313.8	335.2	14.2	11.2	33.3	67.7	315.1	107.3	163.5	147.3	180.5	193.0	175.7	302.2	312.8	316.7	320.7	311.1
31	309.4	312.0	313.4	310.6	309.2	308.3	319.7	294.4	316.0	309.4	348.1	23.0	76.2	98.7	169.0	167.4	143.8	108.6	127.2	339.1	303.2	315.8	314.4	315.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	315.1	312.7	335.3	22.9	18.3	9.2	45.4	52.9	61.6	65.0	66.9	79.9	168.8	209.0	204.0	195.0	212.6	215.7	206.5	169.6	66.0	322.5	317.5	329.4
2	17.9	16.9	16.4	17.5	24.0	17.0	25.0	36.8	40.6	45.7	93.0	203.0	108.9	54.1	110.9	129.0	42.5	27.3	356.7	357.9	1.3	10.0	353.6	3.9
3	345.5	101.8	327.7	323.4	247.3	329.4	345.1	0.7	4.5	2.4	4.5	1.1	4.4	4.9	353.7	13.5	11.5	12.1	11.6	11.8	12.0	13.9	9.6	10.0
4	13.4	9.8	5.1	358.0	0.6	1.7	5.8	8.9	10.6	17.9	25.6	29.5	27.3	27.2	29.1	31.1	18.1	294.0	217.5	217.3	214.4	341.4	249.5	232.2
5	230.7	216.0	349.8	0.5	26.8	20.7	17.0	32.1	13.5	13.1	7.1	358.3	336.6	124.4	50.0	335.0	344.6	72.4	79.0	14.9	15.6	27.7	24.4	22.7
6	30.0	29.2	28.8	30.6	24.2	232.3	22.4	0.9	8.5	195.1	202.0	204.2	205.7	200.0	197.6	195.3	229.3	214.7	177.9	199.1	195.2	201.0	198.9	238.3
7	205.7	208.7	196.6	204.0	195.2	202.7	205.8	210.5	205.0	200.6	193.8	160.0	216.2	206.1	155.1	197.4	108.9	80.4	68.3	91.5	58.3	88.0	144.0	169.6
8	146.0	288.5	301.2	307.8	312.0	308.1	316.5	14.3	54.7	43.0	45.1	54.9	205.3	201.2	190.5	239.3	248.9	214.1	249.8	304.9	125.0	340.4	16.5	24.8
9	12.2	12.1	4.3	15.8	16.2	20.5	2.9	353.5	1.0	330.6	314.9	319.8	297.3	223.2	134.6	5.0	5.6	33.9	31.1	15.6	342.4	25.1	108.9	96.1
10	57.6	94.1	90.7	179.0	200.1	198.4	199.4	202.3	186.3	162.6	127.2	84.9	74.4	35.6	179.1	130.3	279.0	330.6	301.3	16.1	247.6	285.3	17.0	23.7
11	327.4	35.6	22.4	24.1	38.4	33.7	30.5	29.3	13.6	19.2	15.2	12.6	6.2	16.3	21.9	25.1	22.2	4.5	312.1	321.5	338.7	57.5	337.4	112.2
12	80.1	349.3	190.4	182.7	204.1	325.4	83.7	131.2	152.3	136.1	198.8	196.1	201.2	199.5	211.1	214.6	203.1	193.2	183.8	195.8	204.4	205.2	211.3	214.1
13	208.8	206.2	201.9	159.8	97.5	46.4	62.2	175.4	173.2	70.0	60.6	165.0	161.3	127.3	310.1	314.1	308.4	315.0	323.2	317.2	321.7	45.3	308.5	307.8
14	32.4	46.1	21.5	312.0	328.7	350.4	2.9	20.1	39.9	41.0	56.2	206.2	197.6	165.3	220.6	133.2	93.4	28.3	352.3	351.8	354.7	340.2	343.1	336.4
15	358.9	349.3	14.1	355.9	8.9	280.5	201.7	216.1	96.2	182.5	189.7	180.0	176.4	336.3	321.2	287.1	300.2	41.1	90.0	12.7	9.7	16.2	24.4	16.1
16	18.4	29.3	16.8	305.9	300.7	316.1	308.4	206.4	287.4	296.9	305.5	292.0	332.3	29.7	71.4	130.8	168.5	163.4	174.3	294.4	74.4	312.8	211.7	125.9
17	338.4	316.0	326.5	9.8	13.9	12.6	24.3	24.5	32.7	28.9	30.3	32.2	29.4	36.6	148.7	206.1	160.9	24.6	7.2	317.7	11.3	6.7	323.9	322.5
18	313.7	307.0	313.4	312.6	301.7	306.0	310.7	293.4	107.3	123.1	190.3	164.8	133.3	137.7	71.5	62.4	122.7	127.9	165.8	169.6	174.2	178.3	163.2	182.2
19	149.7	163.8	146.8	143.2	79.8	322.8	309.9	335.0	31.2	10.2	313.1	92.8	118.0	85.4	92.4	119.7	169.2	132.8	17.8	288.3	290.8	301.8	312.5	312.8
20	314.2	313.2	312.3	315.1	315.4	312.2	325.4	302.4	343.7	68.8	148.9	163.2	130.8	154.3	174.0	130.6	148.1	132.7	148.4	115.3	95.1	126.1	185.2	184.6
21	64.6	17.1	303.8	293.1	309.3	331.0	332.5	0.8	15.9	11.3	37.8	44.7	48.4	218.0	146.2	34.7	17.9	24.2	21.8	17.5	352.7	12.3	28.4	28.8
22	30.6	33.0	33.0	31.9	30.9	19.5	22.2	10.8	348.3	340.7	330.6	356.6	31.0	24.8	355.7	10.5	355.3	11.6	23.8	31.2	20.9	24.2	34.9	201.9
23	44.3	57.3	34.0	352.7	286.0	305.8	357.9	260.2	9.6	310.4	5.6	23.2	2.9	27.8	333.1	48.7	84.0	93.3	161.8	190.3	215.1	199.1	194.7	201.5
24	202.7	200.6	195.3	202.5	193.8	203.8	218.6	213.9	207.3	195.5	208.3	219.0	218.0	197.9	199.3	213.4	200.9	202.9	209.4	213.2	219.5	226.8	207.2	202.5
25	211.6	202.0	207.8	206.7	203.3	201.0	207.1	206.8	207.7	205.2	199.7	205.3	211.3	204.8	204.2	208.5	198.3	190.6	196.0	191.8	281.5	17.8	205.0	353.4
26	328.9	8.3	15.6	2.0	355.9	32.8	35.0	36.9	11.0	354.1	5.9	36.5	112.4	87.3	25.4	22.7	4.3	1.6	11.3	14.6	11.0	10.5	13.4	22.9
27	24.0	21.9	22.4	22.9	23.5	24.1	26.0	22.0	22.7	25.3	27.1	29.6	29.4	26.8	24.7	22.5	25.6	28.0	28.7	23.3	19.3	26.8	18.2	18.8
28	28.1	30.1	28.8	27.8	29.1	28.9	327.8	21.6	181.0	26.3	6.6	352.5	54.2	46.7	207.2	211.8	215.7	246.2	2.9	6.3	16.2	13.3	6.6	325.4
29	315.8	38.8	76.6	79.6	55.2	332.7	289.8	304.0	307.1	336.7	331.5	295.0	152.0	186.7	173.8	178.1	180.3	183.2	185.5	196.9	188.6	196.3	193.8	191.4
30	186.5	183.3	191.9	186.8	184.3	188.9	177.9	163.8	146.8	114.6	17.2	321.2	305.8	306.9	284.5	310.6	5.3	303.4	315.8	314.4	314.0	313.0	318.4	319.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	315.9	319.8	313.7	313.9	315.0	308.6	300.7	298.1	293.7	295.5	295.9	308.0	321.9	64.2	41.0	80.5	113.0	61.4	31.1	339.6	46.2	72.0	90.2	100.0
2	54.3	59.9	59.4	54.9	24.5	308.6	295.2	305.1	289.4	292.0	64.4	301.9	348.2	152.2	163.5	153.7	165.2	77.6	67.1	7.9	304.8	311.5	6.9	10.4
3	7.9	3.1	14.1	19.4	24.9	36.9	25.9	356.1	29.3	31.2	17.8	17.4	21.4	28.3	26.7	35.8	25.1	22.6	7.3	12.5	359.6	358.7	22.2	12.1
4	17.6	14.7	13.6	13.6	19.4	17.3	16.2	24.0	21.1	19.5	22.5	25.9	28.9	28.2	26.7	28.4	26.1	24.4	26.8	29.6	33.7	33.1	33.1	33.5
5	33.3	23.2	19.4	22.6	23.3	24.4	20.9	22.8	21.9	19.5	14.8	18.7	15.6	2.7	237.9	8.6	12.2	14.8	22.4	24.9	27.2	29.0	32.4	33.2
6	24.4	29.1	29.1	15.8	17.2	16.6	11.0	19.6	30.2	42.9	52.0	60.3	56.6	110.2	73.5	286.0	291.0	7.4	356.0	0.1	4.9	25.0	30.0	37.5
7	34.1	33.1	17.4	6.6	9.1	354.6	1.3	350.8	343.1	353.0	6.2	12.8	5.8	7.7	359.9	357.2	11.1	12.9	6.9	354.5	1.4	358.2	10.9	15.1
8	22.7	35.2	21.6	355.1	358.9	24.7	36.8	24.9	44.7	43.9	22.0	25.2	36.2	37.2	43.2	27.1	20.4	27.5	22.0	15.9	20.2	21.4	19.8	23.2
9	18.7	23.5	11.1	25.5	15.1	27.5	21.1	20.4	12.4	21.6	10.0	20.1	52.4	10.8	314.5	317.0	318.9	318.9	312.7	310.4	310.5	316.5	306.1	310.5
10	317.7	317.6	318.3	317.5	306.6	310.2	310.7	315.9	327.4	48.0	62.3	50.5	41.9	47.6	43.3	49.5	92.4	11.4	356.2	4.4	2.2	11.2	25.9	6.1
11	273.0	19.1	359.1	7.6	2.9	9.7	0.8	4.0	29.7	64.5	42.0	47.3	320.6	320.0	47.8	119.1	87.4	329.0	41.2	11.7	88.5	110.7	109.0	77.9
12	73.1	122.1	91.6	88.5	92.4	81.9	105.8	94.9	150.6	159.1	46.8	148.5	143.9	96.7	155.3	172.3	151.0	150.9	129.6	83.3	50.3	314.4	312.9	317.7
13	316.1	316.4	323.8	355.1	18.5	15.7	35.0	13.5	23.5	40.4	43.0	44.4	12.9	84.4	115.7	34.5	23.7	305.5	358.2	125.2	275.2	294.7	40.5	356.0
14	356.0	9.3	14.7	46.3	47.5	32.8	24.4	21.1	31.9	36.6	38.4	36.8	38.3	36.5	22.3	17.4	132.4	53.0	353.0	2.8	277.3	351.2	9.0	12.2
15	0.8	3.0	3.7	5.1	12.7	13.7	16.4	16.3	19.3	20.0	30.1	31.9	39.8	40.4	98.2	210.9	216.3	224.2	219.9	15.8	14.6	35.3	34.2	32.5
16	3.6	15.1	358.7	336.8	315.9	310.8	5.4	107.6	17.5	187.4	104.8	193.5	168.3	197.3	185.7	67.5	157.2	58.7	151.1	228.6	216.9	345.2	21.9	16.4
17	28.4	29.8	359.1	16.8	25.7	28.5	178.3	172.5	176.6	205.5	201.6	197.1	198.7	200.7	172.8	192.8	213.4	211.2	206.2	212.6	222.1	225.7	223.1	223.9
18	217.0	221.4	219.1	214.2	207.3	197.2	197.8	198.3	200.9	197.1	197.8	126.9	79.5	84.0	102.7	162.3	206.3	216.6	204.2	203.4	27.4	25.8	7.3	21.5
19	27.2	28.2	22.5	20.8	24.7	18.2	6.1	193.7	193.7	191.1	178.8	177.0	171.7	170.2	171.4	127.2	87.3	64.9	325.9	251.9	314.1	18.4	15.6	19.7
20	9.3	14.9	25.6	8.4	10.6	0.7	6.5	13.8	17.2	20.7	22.9	23.2	27.4	27.5	27.7	21.6	21.8	23.0	24.4	24.2	24.5	24.8	24.4	26.4
21	39.5	20.5	17.4	17.8	19.2	15.8	354.2	336.8	312.5	320.7	335.2	0.7	33.1	38.9	31.3	25.5	357.9	47.2	226.5	203.6	196.0	178.4	99.5	78.2
22	140.3	197.3	317.1	114.1	119.0	318.9	315.1	312.9	315.3	301.2	298.9	30.7	101.5	168.6	198.1	162.9	167.3	115.0	113.5	172.6	180.9	164.4	182.0	168.3
23	192.6	175.1	174.6	183.8	173.6	124.1	189.2	14.5	326.8	56.8	301.8	341.3	321.2	329.3	314.2	307.6	32.8	28.3	351.0	356.0	33.1	16.7	12.7	13.9
24	19.9	16.2	33.1	352.9	25.6	10.3	2.8	24.9	40.2	26.8	46.4	48.3	53.4	28.3	318.3	319.6	318.6	308.3	323.0	316.6	311.7	310.4	315.3	312.7
25	310.7	312.9	312.1	322.7	26.2	324.6	319.2	320.7	319.9	46.3	60.1	61.0	48.4	42.5	43.7	46.0	354.4	351.6	45.8	47.8	34.9	25.4	42.7	23.4
26	10.2	31.9	20.8	17.0	12.6	3.0	24.9	15.0	25.2	51.0	54.7	53.8	40.3	48.7	42.7	51.7	38.8	7.8	316.7	4.6	15.9	18.1	28.6	11.0
27	18.4	9.0	6.1	10.3	1.0	11.9	12.0	19.0	22.6	35.0	39.7	39.2	41.8	42.4	169.2	205.5	334.1	12.9	13.0	23.7	26.6	24.4	22.8	24.6
28	18.4	4.0	23.1	14.6	21.3	20.6	23.5	22.5	18.3	30.8	35.7	36.1	51.9	42.9	328.5	326.6	15.6	357.4	23.3	43.6	352.6	334.7	26.3	5.0
29	18.4	16.4	15.5	20.3	29.0	21.9	23.2	22.3	27.3	28.3	28.1	28.1	34.0	26.0	25.3	32.1	26.2	29.7	11.5	10.8	9.1	14.5	17.3	23.1
30	22.7	26.0	22.1	26.9	19.2	16.0	22.0	11.6	1.8	43.9	31.2	38.7	203.3	55.7	0.1	316.5	315.3	318.4	318.4	320.4	318.0	319.0	323.4	328.7
31	325.9	320.8	315.2	316.8	318.4	318.2	319.0	318.4	318.4	348.9	354.9	320.7	319.8	323.2	314.7	311.9	314.9	315.4	319.5	320.8	341.4	354.5	37.5	21.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	16.6	51.4	50.1	11.6	330.4	9.8	6.2	0.6	22.3	10.0	35.0	60.2	48.7	50.0	66.5	13.7	320.8	315.0	323.3	317.3	312.7	315.7	309.5	313.7
2	318.8	318.9	347.1	56.9	243.4	25.4	35.1	29.6	357.3	34.5	27.3	30.1	39.0	54.8	60.6	60.0	72.7	87.4	69.9	69.6	65.1	46.9	29.4	48.3
3	69.2	70.0	83.8	18.8	105.4	35.0	320.2	291.4	309.3	306.1	298.9	337.3	309.9	303.9	316.5	314.2	309.3	308.5	317.7	314.3	319.6	331.6	314.0	315.7
4	313.7	319.7	313.1	310.2	313.5	305.6	311.6	356.5	316.8	317.2	315.0	315.7	312.8	311.7	318.7	303.8	323.1	321.5	318.1	316.2	311.8	317.0	1.0	51.3
5	9.9	12.1	7.7	316.8	310.3	313.1	312.6	330.3	341.1	321.3	328.9	322.4	340.1	93.7	155.3	144.8	97.9	235.3	180.1	167.7	178.1	159.4	147.0	117.6
6	51.7	41.6	352.8	24.8	309.4	1.3	10.8	262.2	350.3	79.3	56.9	73.1	205.2	180.8	76.4	73.6	77.5	92.1	44.3	48.2	38.2	69.7	120.6	198.3
7	218.9	200.5	58.8	167.1	294.8	311.2	313.9	3.0	52.3	13.4	26.7	28.3	32.1	30.1	27.5	21.6	26.7	10.5	7.1	10.1	9.1	11.5	13.6	21.4
8	25.8	29.6	30.4	35.6	27.9	22.0	21.9	18.4	11.6	12.7	6.2	11.0	27.0	26.1	26.2	30.0	6.5	349.0	4.7	1.3	353.9	3.7	7.4	8.2
9	6.4	11.4	11.5	14.4	18.5	17.1	18.9	14.4	8.5	10.8	14.5	49.4	61.5	66.3	65.6	63.4	78.8	51.7	38.1	48.0	37.9	36.7	340.1	325.6
10	46.3	13.0	341.8	314.4	312.9	313.4	313.0	320.9	315.3	319.2	320.5	320.6	319.9	320.6	317.8	319.9	319.9	320.2	318.4	318.6	317.3	331.5	65.4	22.6
11	61.3	66.2	63.0	46.5	316.8	320.2	40.1	18.4	29.8	17.5	52.7	57.9	50.3	52.8	51.4	41.1	49.2	30.5	49.1	28.4	4.7	343.4	50.9	33.5
12	23.6	11.8	24.6	24.1	10.0	295.6	275.3	19.4	34.0	36.4	47.0	37.5	35.6	39.1	43.7	40.4	25.2	20.9	14.9	22.4	22.4	14.2	17.3	25.2
13	9.7	24.6	38.3	48.8	58.8	52.6	53.7	57.3	46.5	31.5	52.8	36.1	35.8	33.5	34.2	32.3	36.6	26.8	35.1	29.6	14.7	16.4	27.3	16.9
14	29.2	27.0	25.1	18.7	23.7	23.3	22.3	25.1	18.4	23.1	17.3	9.7	30.2	42.6	36.9	35.3	34.5	35.6	35.6	36.2	36.8	38.3	38.1	35.4
15	34.3	32.2	22.6	22.3	332.1	305.0	239.1	277.2	2.5	20.0	121.8	35.4	49.1	44.5	38.1	323.7	126.0	36.8	324.1	325.4	20.0	11.4	17.0	36.2
16	34.7	12.7	18.7	13.5	13.6	7.5	8.8	1.5	2.1	14.0	13.2	12.0	20.3	25.4	15.6	12.5	25.4	22.6	23.2	22.2	23.4	25.7	21.2	29.4
17	32.6	33.3	31.1	31.6	33.6	33.1	32.4	31.9	30.6	36.4	81.3	179.6	20.1	16.8	318.2	306.9	313.2	318.9	317.3	9.2	13.7	23.9	36.8	20.2
18	10.9	16.0	2.9	345.0	9.3	15.9	7.9	14.9	16.2	9.5	13.0	10.9	12.7	16.3	18.5	18.9	24.4	26.3	339.7	318.9	301.3	308.1	343.7	41.2
19	68.7	108.8	169.4	181.5	344.2	49.2	162.5	198.5	205.3	206.1	197.3	173.0	176.9	198.2	192.0	192.1	194.8	189.3	195.8	198.3	193.8	252.3	323.9	3.3
20	10.7	23.7	24.1	25.7	24.6	28.9	27.9	27.3	26.1	26.0	19.6	20.6	27.0	21.4	26.4	34.2	33.3	28.4	32.7	26.3	28.2	27.3	9.2	13.4
21	17.1	12.7	22.3	18.3	340.8	321.0	318.8	318.7	315.0	315.4	316.3	319.1	314.3	311.0	351.2	329.3	316.2	326.6	55.9	55.8	57.9	47.1	80.0	176.9
22	177.9	175.9	161.6	184.5	176.1	97.4	209.5	176.6	227.0	314.1	317.7	349.3	48.4	59.1	56.5	42.8	34.8	45.2	41.8	327.6	317.2	314.3	317.4	315.7
23	314.6	313.8	314.3	316.0	313.3	317.1	315.3	310.9	305.5	312.0	315.5	320.9	291.2	302.9	316.6	317.0	325.2	339.5	301.3	312.1	316.3	315.4	317.3	346.9
24	308.6	317.9	330.9	306.9	315.6	317.7	314.4	317.0	312.5	310.2	139.2	159.9	134.6	161.8	177.2	172.7	163.0	133.1	22.1	325.5	298.2	309.3	310.6	314.4
25	319.7	320.1	318.4	317.8	318.5	316.6	317.8	317.0	314.9	316.5	316.7	318.2	319.0	316.6	319.5	317.1	318.5	319.1	320.9	318.7	317.4	318.5	319.8	319.1
26	318.7	318.0	317.8	316.8	316.3	313.8	316.8	318.8	316.4	319.2	320.4	318.6	317.0	316.8	318.7	316.2	317.1	334.2	3.3	14.7	55.0	48.2	38.6	49.2
27	54.3	50.3	46.3	39.2	37.8	15.8	26.3	43.9	37.9	44.5	50.5	51.4	53.6	54.0	44.5	32.5	22.2	7.9	1.5	0.6	1.1	1.9	3.3	3.6
28	4.7	10.9	12.9	16.0	14.0	18.3	28.0	29.0	34.2	32.3	32.5	33.8	33.0	34.2	37.1	33.2	29.2	29.3	29.6	29.8	27.2	24.2	22.7	26.3
29	26.5	29.4	28.3	34.4	34.7	30.7	32.1	33.8	31.4	30.8	17.2	31.3	42.6	32.8	25.7	167.2	180.2	165.1	157.7	83.1	134.1	83.2	166.2	126.6
30	106.0	124.5	143.9	71.9	74.6	125.5	74.9	85.3	227.2	47.1	49.2	177.9	178.8	189.1	191.8	308.7	294.0	315.4	334.1	311.4	320.8	319.0	345.1	317.3

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	315.8	314.9	321.2	320.2	313.6	311.7	318.6	324.7	355.0	354.4	44.5	39.9	321.7	318.9	312.8	336.3	19.5	323.7	355.8	348.7	327.1	314.3	311.2	315.2
2	338.3	332.8	327.5	318.2	325.2	310.4	337.4	183.4	317.4	315.9	315.6	322.6	354.1	143.0	82.5	78.3	27.4	359.3	307.1	313.9	308.9	301.3	326.3	151.8
3	177.5	158.5	111.8	296.7	314.6	310.6	312.7	316.5	321.8	321.5	318.7	321.7	319.5	319.7	320.7	318.3	319.0	339.2	33.2	52.5	48.3	11.8	56.8	43.6
4	31.6	48.9	42.9	44.7	34.0	33.7	34.7	33.4	26.6	17.8	19.3	25.8	14.8	18.8	24.1	28.5	29.4	27.5	27.5	28.4	24.6	33.4	28.2	32.3
5	34.9	33.5	34.5	31.5	23.8	30.8	29.4	20.7	12.0	6.2	357.8	6.8	12.4	14.4	18.0	12.7	11.9	18.9	18.0	12.6	10.5	7.9	15.2	19.1
6	12.1	13.6	16.0	15.0	15.7	15.2	15.5	13.5	19.8	21.3	4.5	10.1	4.4	10.7	23.5	37.8	33.5	26.9	23.7	20.9	21.7	17.2	360.0	349.2
7	348.3	349.2	2.9	1.3	11.3	11.9	9.0	5.5	12.4	14.4	17.6	17.2	18.4	21.3	15.1	9.7	10.3	2.0	5.4	10.6	5.6	1.3	353.7	357.7
8	359.7	339.1	14.1	24.0	26.9	30.6	33.5	33.7	32.6	29.7	22.6	349.6	326.5	290.6	267.8	293.1	256.2	167.1	29.5	344.4	332.7	334.3	317.3	307.3
9	328.0	325.0	4.7	0.5	347.5	344.3	352.6	345.7	0.8	8.4	14.1	22.8	19.9	11.8	20.2	24.8	13.0	355.2	3.9	328.0	25.0	344.3	18.5	319.5
10	336.9	17.3	19.5	25.4	25.4	22.7	31.1	28.7	31.8	24.6	16.8	15.9	7.9	12.0	322.2	355.7	3.8	333.1	329.2	346.8	2.3	9.8	18.7	8.2
11	8.2	22.7	26.8	27.7	27.2	17.1	337.6	316.8	317.4	322.3	317.6	315.5	312.7	316.5	305.5	304.4	293.1	318.1	294.7	295.3	313.4	115.9	120.5	153.6
12	168.4	170.5	166.1	99.0	90.3	71.8	86.4	176.1	170.0	124.8	177.1	188.1	49.8	138.0	178.8	320.3	16.5	352.5	42.8	17.2	1.9	11.6	41.5	23.0
13	24.1	8.1	8.9	23.2	28.9	22.5	19.7	18.3	17.2	17.0	6.7	12.3	19.9	15.8	13.9	14.4	14.7	9.4	15.9	22.2	24.4	21.6	24.2	27.1
14	26.3	26.6	22.5	23.5	24.1	23.9	25.4	26.8	26.2	26.2	26.3	24.8	23.7	24.9	23.4	25.5	20.8	20.2	18.3	13.4	11.4	8.1	6.2	1.8
15	352.8	351.0	351.7	8.2	13.4	16.8	24.1	26.2	20.3	22.4	28.1	24.2	26.8	22.8	21.0	20.0	18.9	15.8	14.8	11.1	359.9	350.0	349.4	4.8
16	6.9	5.8	348.9	337.1	312.2	335.0	355.6	358.6	327.2	336.4	341.0	357.6	7.3	354.8	338.8	20.5	23.8	39.2	41.0	44.7	21.7	343.9	320.2	317.0
17	2.6	32.5	22.2	6.7	10.5	14.2	14.1	12.8	1.8	358.5	32.3	28.6	11.6	11.6	359.4	358.0	359.3	354.5	1.2	6.0	0.1	350.9	9.8	5.8
18	356.4	357.6	0.9	9.1	13.4	10.1	11.8	5.6	3.3	359.4	351.9	353.9	354.3	0.7	17.2	357.4	350.7	353.4	19.5	18.2	16.7	14.0	12.3	12.0
19	17.0	16.0	14.4	10.6	13.9	13.4	11.7	14.2	9.1	7.7	11.0	13.0	15.0	14.0	357.9	273.7	227.9	252.6	4.5	347.4	356.9	6.8	19.6	27.1
20	16.0	25.0	11.7	7.7	13.4	10.8	22.8	27.1	270.4	49.3	20.7	204.3	219.3	43.6	215.5	227.8	1.5	14.8	13.3	20.7	336.5	33.8	36.9	348.9
21	215.3	32.7	26.5	226.1	35.8	24.9	27.9	29.3	305.6	240.0	24.2	19.3	28.5	37.8	34.5	31.5	18.1	27.6	44.3	43.7	42.6	44.2	28.7	36.7
22	27.0	1.7	34.3	45.6	33.3	40.3	19.0	23.8	27.9	20.2	27.7	32.5	37.8	35.4	34.4	32.5	33.5	29.8	23.3	24.6	31.4	29.5	33.9	27.6
23	25.6	27.2	270.7	31.6	23.5	19.7	29.3	29.6	28.2	30.0	35.0	31.3	33.7	29.0	36.7	31.0	33.1	34.5	31.1	35.1	31.8	19.9	9.6	15.5
24	8.8	0.7	21.0	6.5	22.7	26.4	24.4	22.3	20.8	14.1	22.6	22.5	24.6	27.5	33.2	28.9	31.5	20.6	16.0	11.0	11.2	20.4	22.7	19.6
25	18.8	10.6	8.6	5.2	348.2	352.9	2.7	0.3	0.9	7.2	9.4	2.5	18.8	20.4	19.6	17.7	19.1	20.1	19.3	22.4	23.3	25.7	25.7	24.6
26	21.7	11.1	3.5	2.4	358.7	4.2	19.6	19.8	17.1	20.5	23.1	21.8	20.9	18.6	18.3	23.5	22.1	23.7	23.3	22.9	13.6	18.3	14.5	13.3
27	17.4	20.8	20.7	19.7	23.2	21.9	26.3	21.8	20.0	25.6	26.1	22.5	20.9	23.1	32.9	20.4	20.4	20.8	25.7	24.0	27.4	26.8	22.1	18.6
28	22.2	21.2	21.9	19.2	20.8	23.2	21.0	17.6	25.4	25.3	23.3	22.9	24.4	27.2	24.2	24.3	22.9	24.4	23.1	24.3	28.2	31.7	29.1	29.2
29	26.3	24.7	22.5	18.4	18.5	1.0	3.3	1.1	354.3	341.0	359.8	0.1	5.5	16.3	18.7	20.7	19.4	18.3	17.0	15.0	14.9	19.1	17.5	20.0
30	22.4	24.6	23.0	22.1	21.5	22.4	21.4	27.9	18.7	21.4	357.6	240.9	24.7	23.6	22.0	21.8	26.5	26.7	25.3	22.8	21.7	17.7	18.0	19.3
31	21.3	22.5	20.1	23.4	24.7	25.1	26.8	12.3	19.3	18.5	19.2	23.6	26.6	29.7	20.5	13.3	23.1	22.0	27.1	19.7	22.2	20.3	19.4	22.9

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	32.7	33.0	26.1	23.8	24.8	19.6	4.2	351.8	357.2	351.7	353.9	21.8	27.3	19.9	23.7	21.6	12.7	356.6	0.9	11.3	7.4	8.1	11.3	7.8
2	356.8	11.9	20.1	24.6	12.7	19.5	21.9	27.6	22.0	14.3	12.7	8.8	7.8	12.8	8.7	9.3	12.5	18.1	359.5	8.9	7.7	16.7	6.1	18.7
3	359.1	358.3	2.7	2.7	1.9	11.2	349.3	3.7	14.0	17.5	26.1	18.2	21.8	25.1	22.7	11.3	23.4	20.3	24.0	26.1	15.9	13.7	27.2	23.2
4	27.1	20.1	15.3	21.3	24.8	19.6	8.9	10.5	27.5	30.8	30.6	43.2	43.1	43.3	42.7	25.0	27.0	23.2	257.5	27.3	51.4	27.4	217.6	32.3
5	24.0	26.5	20.5	15.7	28.4	23.7	25.0	30.4	17.0	44.5	14.0	335.3	29.1	35.5	25.4	336.8	4.6	27.4	29.4	27.9	24.5	34.2	31.2	360.0
6	27.4	19.3	251.1	27.7	24.8	27.4	29.0	30.1	30.6	26.1	28.8	231.0	34.4	34.3	39.1	42.4	1.1	21.3	303.7	241.7	330.2	17.1	23.8	243.1
7	144.6	26.7	32.8	30.0	27.7	22.3	357.9	25.9	31.3	33.2	19.5	26.1	27.0	26.6	28.5	19.8	23.0	26.1	19.4	20.7	22.3	30.5	24.9	30.9
8	25.4	20.9	22.2	19.7	23.6	30.2	30.0	27.8	22.0	16.3	20.8	28.4	25.0	19.3	56.0	27.6	25.2	25.1	25.8	13.1	21.0	20.3	25.2	21.1
9	15.2	18.6	28.4	27.4	30.7	31.4	27.8	27.9	22.8	18.5	17.5	29.1	21.2	46.2	34.5	22.3	22.2	32.5	30.9	38.5	32.8	332.6	29.2	28.2
10	28.7	26.5	29.3	33.2	33.1	28.3	28.9	315.7	237.0	114.7	183.8	24.8	42.6	65.1	192.0	196.6	60.2	61.1	61.7	64.9	64.8	63.9	59.2	58.0
11	45.5	54.3	34.7	22.7	62.8	57.8	49.9	29.7	30.3	8.9	26.9	17.1	43.3	40.7	46.5	25.9	17.5	280.5	55.8	41.8	48.2	46.7	33.6	43.8
12	295.2	61.5	65.5	55.8	55.8	65.6	59.9	60.8	40.8	43.9	12.5	35.7	39.5	40.5	39.2	39.1	42.2	36.8	19.8	28.9	22.5	15.4	31.8	16.9
13	34.6	11.7	24.5	7.7	16.5	25.0	14.3	21.6	30.1	42.6	351.3	45.1	45.7	44.8	51.9	34.8	33.9	24.9	18.0	6.8	17.6	19.1	20.3	23.6
14	35.2	35.3	26.5	22.4	31.2	32.4	30.9	27.4	23.9	38.5	33.3	34.4	31.7	29.9	28.4	27.3	27.5	29.0	27.7	26.7	30.5	33.9	29.5	27.1
15	22.1	26.5	29.9	27.9	26.8	27.0	27.4	22.9	24.6	27.5	21.2	29.0	27.2	30.3	28.3	20.5	5.1	25.5	21.5	24.7	23.8	16.6	23.4	22.5
16	21.5	25.8	26.3	32.5	38.3	32.8	31.2	27.7	24.3	15.7	14.1					29.6	15.9	23.9	28.3	25.7	305.2	7.9	32.4	29.9
17	28.7	18.5	23.0	354.6	357.8	0.2	39.6	19.5	25.4	20.2	29.8	44.0	64.8	72.6	66.4	344.6	7.4	354.9	333.4	345.6	14.6	48.3	58.5	56.1
18	50.2	51.2	54.2	42.4	49.6	59.3	40.1	37.3	57.0	50.4	16.2	40.2	36.3	38.5	32.3	45.4	40.6	24.7	25.2	355.4	14.6	11.9	22.8	46.7
19	8.9	346.3	59.0	45.9	32.5	15.7	27.2	23.9	52.6	49.8	51.8	48.1	55.1	50.2	36.4	53.6	52.0	36.9	35.7	25.0	14.7	29.4	43.5	49.5
20	9.7	30.0	28.5	23.9	14.8	23.9	21.8	21.9	19.3	21.2	20.9	23.1	22.6	25.8	26.5	17.1	25.3	14.8	5.2	23.8	22.1	33.1	19.6	27.3
21	26.5	26.8	32.2	30.4	32.0	32.2	29.6	24.2	25.6	26.4	32.8	36.9	48.5	58.1	55.1	60.7	61.1	63.9	62.1	348.9	320.8	319.1	316.8	311.9
22	300.8	346.6	38.7	45.5	11.5	329.9	307.3	301.1	303.2	308.1	306.3	290.1	296.2	312.7	315.0	317.6	313.8	317.6	316.1	316.2	318.4	320.5	319.0	320.1
23	318.9	321.3	335.6	55.0	50.5	57.5	40.7	48.4	26.3	57.8	49.7	71.9	60.2	63.1	59.3	59.1	59.9	52.5	45.3	46.1	46.3	54.8	51.1	40.5
24	54.1	48.3	50.5	51.0	50.0	46.6	42.5	42.2	43.5	39.2	43.3	55.7	59.7	57.6	58.1	57.3	47.5	57.3	52.8	50.4	44.3	34.7	38.1	32.8
25	27.3	31.7	19.1	10.1	8.4	18.6	18.6	8.9	11.7	11.7	28.4	37.8	38.9	39.2	39.6	48.3	36.7	43.0	42.5	46.6	49.0	55.6	51.5	54.7
26	56.9	53.8	59.0	61.5	59.5	61.3	59.3	57.9	51.2	57.9	52.6	51.3	55.7	54.9	55.1	56.9	55.8	51.0	48.4	46.8	40.2	54.0	64.6	62.3
27	62.9	45.7	323.4	342.5	309.0	14.4	48.7	301.4	351.2	79.4	292.1	311.1	311.6	316.5	318.6	319.1	317.0	318.4	313.7	316.2	314.0	310.9	311.9	312.3
28	318.2	316.9	318.0	318.4	316.8	314.3	316.1	313.5	314.1	314.6	318.5	318.1	313.0	322.2	58.7	59.1	57.4	63.5	63.1	57.0	54.5	60.4	54.5	55.7
29	56.6	55.3	54.3	53.6	53.5	51.3	51.0	54.0	54.8	51.8	54.7	56.3	57.7	56.0	52.3	52.1	44.9	49.6	49.3	53.1	54.7	50.8	46.4	54.9
30	57.6	54.1	54.5	53.9	52.4	48.7	52.2	51.8	46.1	42.4	46.8	45.3	51.0	51.3	46.7	47.2	41.2	33.1	30.4	18.7	32.8	31.7	29.3	25.1
31	24.7	21.5	25.2	24.7	23.7	24.5	19.5	16.1	37.0	37.4	44.3	49.1	45.1	45.5	51.2	52.8	50.5	52.7	51.0	49.3	55.7	55.7	62.1	58.3

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	53.1	55.0	46.7	57.1	41.7	352.5	314.9	317.6	324.2	316.0	314.1	315.8	314.1	315.6	314.9	312.8	305.8	33.8	153.3	184.6	191.6	183.8	304.5	311.4
2	315.1	316.0	314.6	317.1	309.7	314.3	316.7	317.6	319.0	313.0	314.4	341.2	52.6	58.3	54.6	46.6	57.1	55.2	49.1	13.6	31.0	35.4	29.8	31.6
3	26.4	23.4	20.8	11.9	20.3	15.4	16.3	10.2	9.2	14.3	20.1	28.8	19.2	21.1	22.8	21.0	15.8	6.5	17.7	13.1	13.1	13.3	17.0	14.4
4	13.8	3.0	11.8	9.3	4.2	11.5	14.0	18.3	13.4	13.5	17.1	20.9	19.8	20.0	20.5	17.0	13.8	15.7	16.1	17.2	21.0	21.9	23.3	22.2
5	21.7	22.1	21.9	23.7	23.2	23.2	23.1	23.5	24.7	29.4	27.1	15.6	4.5	14.5	6.4	16.0	20.3	22.9	21.2	22.6	21.6	18.3	13.6	10.1
6	14.1	12.2	6.3	1.3	4.3	8.3	18.5	18.4	9.1	21.4	213.2	232.0	93.3	143.5	176.4	16.2	352.0	17.0	27.0	12.7	33.1	34.2	18.1	7.9
7	22.8	32.8	31.3	26.2	15.5	347.6	81.7	202.8	198.8	204.9	204.1	194.5	184.7	178.7	189.3	69.1	103.8	173.1	197.1	198.2	167.6	158.2	101.8	100.5
8	29.9	334.6	358.8	27.6	19.5	17.8	21.0	25.6	29.3	12.6	24.9	26.4	24.6	18.9	1.6	1.2	8.0	2.1	8.1	7.5	5.9	10.4	5.6	9.5
9	16.5	13.9	17.3	18.5	17.1	18.4	20.7	23.2	23.3	23.6	24.2	24.7	24.0	21.8	19.6	21.9	23.9	15.8	14.5	8.8	10.0	8.1	15.1	12.5
10	351.4	1.0	8.8	11.3	13.7	358.4	1.0	10.0	9.6	6.3	350.2	339.1	342.4	304.4			347.4	323.7	356.5	316.5	319.4	12.6	336.5	276.0
11	1.2	353.6	2.2	25.2	14.8	21.0	23.6	23.0	16.4	15.5	19.0	24.5	24.9	20.5	14.7	12.1	5.4	0.9	2.1	0.5	2.2	3.3	354.9	349.0
12	350.4	346.6	336.0	219.2	212.5	229.9	309.0	320.5	316.8	307.7	336.0	176.9	175.8	166.3	175.6	165.2	170.3	174.3	154.3	308.4	311.9	319.2	315.5	335.0
13	12.0	337.7	355.3	307.2	6.8	329.3	243.3	24.5	32.2	37.0	211.1	36.9	32.3	21.7	24.5	16.8	25.5	18.1	7.7	353.7	356.9	2.0	357.2	356.2
14	357.7	345.1	350.0	350.7	3.5	354.3	4.9	348.8	5.7	8.3	358.4	6.9	356.1	0.4	357.9	7.5	6.9	1.8	359.9	352.3	10.5	8.4	9.2	9.7
15	12.7	3.0	15.8	353.1	358.4	357.1	3.1	356.9	357.8	9.5	17.9	17.9	196.7	21.1	11.9	350.1	355.0	335.5	350.0	350.1	340.7	324.1	355.3	35.0
16	42.0	31.2	37.3	36.8	37.8	36.0	26.1	15.0	35.1	11.2	57.0	80.2	33.2	36.1	37.3	17.3	16.8	23.5	20.0	18.0	24.5	28.1	33.0	25.9
17	25.3	24.6	20.4	21.3	16.5	11.9	11.5	4.2	355.4	6.7	353.1	348.1	352.9	357.7	2.0	4.1	7.1	5.9	4.7	7.6	9.0	351.3	325.0	333.0
18	340.6	16.1	21.3	12.9	13.8	9.5	3.1	21.8	338.4	326.9	328.2	335.3	308.8	273.6	310.3	286.0	317.9	289.9	302.8	24.7	26.1	35.4	35.0	33.4
19	37.1	75.5	194.3	192.5	187.3	154.9	185.8	177.7	184.1	178.1	199.3	196.9	198.6	343.4	208.9	207.2	217.0	205.4	198.7	203.0	194.3	192.7	200.7	196.8
20	200.4	196.2	197.0	189.2	61.1	49.5	206.0	183.3	169.2	159.5	78.3	84.1	99.0	188.2	185.1	199.3	205.9	212.2	196.4	198.4	196.0	197.9	194.5	198.7
21	203.7	203.0	202.7	195.9	208.1	185.0	197.8	191.0	201.5	200.1	176.8	186.6	192.4	160.2	109.7	76.8	66.3	90.2	79.0	82.2	94.9	164.2	148.1	102.1
22	195.4	204.9	136.1	202.9	194.2	231.0	189.3	195.3	203.4	201.9	186.4	189.7	178.8	155.3	74.0	127.7	113.4	79.4	4.9	144.9	58.2	78.7	106.1	184.4
23	52.6	13.0	19.3	10.6	236.0	24.9	28.9	187.7	20.5	191.1	136.8	57.7	162.5	144.3	132.7	129.8	143.7	151.6	127.2	124.0	301.0	311.4	316.0	1.0
24	4.0	19.1	29.8	18.2	8.3	25.0	29.4	35.3	49.8	48.1	53.1	50.3	37.3	39.4	38.1	37.3	42.8	20.6	43.0	36.7	39.2	29.5	19.0	16.7
25	22.2	21.8	26.7	29.5	28.6	29.1	28.1	7.3	262.5	202.4	218.6	66.9	203.7	165.8	209.7	191.0	58.5	66.5	55.4	49.7	40.6	48.3	57.9	49.0
26	45.5	41.0	25.7	69.4	108.9	216.4	242.4	181.2	179.3	191.9	194.6	196.4	210.1	198.0	167.0	102.3	101.4	50.2	27.8	338.1	23.3	30.2	31.3	29.2
27	28.1	28.7	27.9	29.9	31.9	25.7	26.8	350.3	216.7	227.1	241.8	258.4	6.0	55.9	316.0	312.5	319.3	334.2	318.0	318.7	334.7	341.4	38.1	48.1
28	328.5	317.4	317.0	317.0	320.1	320.5	319.4	318.0	9.7	338.8	341.4	316.7	309.6	311.1	316.8	302.9	296.9	304.8	296.8	324.6	301.6	316.2	312.7	316.7

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	317.8	353.0	28.4	45.1	55.7	58.3	51.3	44.4	5.2	51.7	49.2	39.8	39.0	35.0	47.2	40.6	31.0	17.8	37.4	34.5	31.1	30.4	29.3	21.6
2	21.8	28.9	28.7	18.1	20.1	17.8	17.8	33.3	33.6	33.3	27.7	25.6	27.3	28.1	26.4	19.6	18.0	17.9	15.7	18.0	15.7	11.4	12.5	15.5
3	12.9	19.1	16.7	20.3	18.0	25.3	29.0	19.4	19.0	15.9	17.9	16.7	23.4	29.3	30.8	32.8	33.9	26.6	31.9	31.4	31.3	25.7	30.4	29.3
4	27.8	27.1	28.7	25.3	27.7	28.2	25.6	24.7	25.2	29.2	28.0	30.3	24.9	7.1	19.6	22.6	23.3	24.7	17.3	24.6	22.3	21.3	18.9	20.4
5	20.4	21.0	11.7	10.1	11.1	16.4	16.6	316.1	43.0	29.5	228.9	193.8	143.8	176.9	193.6	108.1	86.0	151.8	177.4	181.8	154.6	77.3	78.4	99.9
6	184.1	192.6	183.2	179.5	211.1	211.9	208.8	177.0	302.8	306.2	312.7	317.8	321.1	319.1	320.2	325.0	324.5	2.0	7.7	352.1	32.1	32.0	38.9	49.2
7	57.6	61.4	44.2	40.7	56.5	57.4	65.9	353.0	315.4	316.0	315.1	316.9	318.4	316.3	318.6	309.2	294.5	46.0	11.8	68.9	142.2	138.2	348.3	287.9
8	292.1	304.0	295.4	301.0	300.2	342.7	319.8	309.2	332.7	355.6	312.6	81.7	72.7	73.7	147.1	183.1	178.3	179.2	178.1	166.4	191.5	194.3	34.7	23.4
9	205.4	285.9	122.5	152.2	151.0	148.6	87.8	61.5	31.2	124.3	171.5	137.1	153.3	88.7	129.9	307.3	294.0	290.2	299.4	304.7	306.3	308.0	317.6	331.2
10	51.6	40.3	47.5	39.3	29.6	5.3	7.6	0.4	4.8	13.1	20.2	28.1	33.2	41.3	43.2	46.2	19.4	15.1	14.8	13.8	26.7	15.4	16.0	11.4
11	15.6	4.7	4.2	13.7	11.4	17.3	19.9	9.7	10.8	359.3	359.2	11.8	8.1	1.6	1.8	1.8	1.1	1.9	3.0	3.2	2.2	3.9	5.3	4.0
12	2.9	5.6	6.1	5.3	3.2	4.5	12.9	9.5	10.1	7.2	6.4	8.9	17.1	12.9	19.9	25.5	27.3	30.9	28.6	30.0	26.7	20.6	28.5	15.1
13	31.7	8.2	338.3	104.0	23.5	26.7	26.2	9.7	359.6	37.6	180.4	193.3	194.4	198.1	196.8	202.4	205.0	217.6	226.4	239.2	239.1	302.6	29.5	17.7
14	13.3	25.1	17.2	22.6	15.0	14.6	13.9	13.1	17.4	30.6	26.7	24.6	28.2	24.4	25.2	27.2	32.2	38.6	31.6	9.0	7.5	23.7	18.9	11.0
15	12.4	8.4	6.5	7.6	13.4	5.8	15.6	5.8	10.9	14.0	16.8	45.1	66.3	45.4	64.4	121.5	215.6	221.0	219.2	346.8	2.9	5.7	5.7	6.6
16	8.3	4.7	10.1	15.3	22.8	12.9	9.3	10.9	15.6	23.0	26.3	27.2	27.3	25.2	19.3	18.8	18.5	8.7	21.3	5.1	1.4	358.7	356.7	2.1
17	6.1	15.5	28.8	31.5	28.5	27.8	23.5	20.3	20.6	33.1	26.4	20.3	27.2	23.6	20.0	21.4	12.3	6.5	9.9	20.9	34.2	21.2	16.3	27.6
18	16.7	19.6	19.7	14.1	17.9	18.5	18.4	17.6	20.6	24.9	22.0	19.7	25.5	22.6	21.5	21.0	21.7	19.8	330.3	346.3	321.6	221.9	342.8	283.1
19	21.7	7.7	7.2	7.4	9.5	21.5	23.1	32.1	33.9	39.7	40.4	70.9	199.0	203.0	213.4	210.9	185.1	182.4	174.3	211.3	320.9	21.4	31.9	30.9
20	31.0	35.5	31.2	29.9	28.8	31.5	31.7	26.4	236.7	23.9	205.4	64.5	114.8	184.7	210.4	214.5	303.3	315.8	311.5	308.7	321.1	313.8	316.5	322.3
21	330.7	337.5	17.4	42.9	55.8	60.7	59.3	45.7	51.9	105.0	50.1	57.1	101.6	173.2	107.8	76.2	59.7	49.2	45.4	42.4	27.1	6.4	2.3	29.8
22	43.6	38.9	50.6	54.2	50.3	58.6	58.0	54.2	18.0	49.1	66.3	54.1	56.8	50.7	51.5	48.6	23.7	355.0	228.0	27.6	31.9	21.6	19.8	15.6
23	11.9	14.1	8.6	11.2	24.6	1.0	20.0	17.8	46.4	46.3	53.3	66.0	103.9	65.3	125.3	159.0	167.7	329.6	314.0	346.1	44.9	18.0	359.8	34.6
24	52.8	55.5	56.0	56.9	58.6	56.2	56.1	54.8	59.4	57.5	67.0	50.1	70.3	44.7	55.3	43.3	31.2	42.9	85.0	53.9	51.5	44.9	48.9	45.0
25	42.4	36.8	42.9	132.5	62.9	44.1	46.7	39.9	48.2	52.4	54.4	47.3	105.3	70.9	40.5	52.1	58.1	53.9	11.4	56.4	64.4	62.1	60.6	57.1
26	43.3	61.7	59.2	53.8	54.3	53.2	47.4	45.1	51.5	55.5	74.7	64.6	47.2	45.3	42.7	42.9	52.2	35.7	311.6	59.1	42.5	40.5	25.3	30.0
27	21.7	26.2	26.1	31.6	31.3	27.4	287.3	28.6	32.7	65.9	173.4	207.6	206.4	209.3	211.3	212.1	211.6	217.5	213.7	226.4	43.2	31.2	28.5	32.2
28	29.1	32.5	28.6	33.2	30.4	33.7	33.2	33.8	39.6	98.6	201.2	199.5	207.8	201.5	212.0	208.3	212.0	215.9	209.8	207.7	255.2	13.2	31.4	262.3
29	21.4	33.6	12.7	26.8	20.6	25.4	19.2	30.7	38.7	49.1	42.9	54.3	99.6	186.6	209.2	214.8	204.7	6.6	219.0	206.9	333.7	17.5	18.3	25.6
30	35.2	30.6	6.1	10.9	19.8	12.2	12.4	9.9	17.6	359.4	2.3	350.4	6.7	352.3	359.8	357.2	357.9	355.0	356.9	348.0	6.8	4.1	349.2	357.9
31	357.4	339.5	344.1	339.2	334.2	352.1	338.2	329.1	1.4	352.9	0.3	4.0	358.3	358.9	360.0	358.9	1.8	17.2	28.9	30.7	81.6	58.0	63.1	58.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	58.4	52.0	45.1	347.7	319.6	340.1	330.7	310.8	308.3	311.8	310.5	334.5	313.1	64.3	80.6	95.1	115.1	157.7	177.1	202.4	180.3	175.1	164.1	174.0
2	177.2	174.6	176.5	207.0	196.5	200.4	127.5	149.9	125.4	188.8	54.4	83.3	96.9	77.7	96.5	45.7	34.5	37.6	29.2	22.4	14.1	27.1	24.7	13.9
3	27.1	24.2	22.8	12.3	12.9	12.9	12.9	18.0	16.6	4.9	9.9	9.7	13.8	13.2	4.1	2.8	11.8	22.1	27.9	22.8	26.2	10.4	15.8	14.2
4	354.2	16.3	17.0	32.1	35.6	31.3	30.0	32.0	29.5	29.2	25.2	69.3	203.1	189.9	176.2	203.4	198.9	200.6	205.9	197.0	268.5	24.0	7.5	46.6
5	34.2	306.2	336.8	329.8	35.8	46.8	314.7	340.8	307.8	292.4	320.2	304.9	303.8	293.9	116.8	79.8	152.0	152.1	147.6	53.0	342.2	299.3	292.3	315.3
6	315.7	317.2	318.5	46.5	48.2	54.1	63.9	65.5	66.3	53.5	47.6	43.5	43.9	48.2	43.9	46.3	46.7	40.9	36.4	18.7	44.4	36.5	270.5	1.9
7	33.3	235.7	36.5	29.4	10.2	24.5	30.3	29.8	35.2	32.2	34.7	29.4	50.2	82.0	177.3	273.7	261.2	262.4	138.0	340.9	321.9	317.0	3.4	359.3
8	359.1	353.7	351.8	19.0	3.3	16.8	9.8	350.2	348.7	357.8	352.3	8.7	11.9	342.1	332.4	358.2	352.1	26.8	25.8	28.5	37.8	34.4	13.5	28.2
9	25.9	289.7	335.9	34.8	35.2	5.7	31.0	35.6	36.7	38.6	45.7	60.4	184.9	205.9	201.5	210.0	193.7	151.0	157.2	15.1	11.6	72.0	32.1	323.2
10	325.3	52.9	20.6	60.9	59.3	186.3	193.9	203.0	195.0	202.7	193.2	202.3	198.8	202.8	206.5	197.2	204.1	199.8	212.7	201.2	199.1	198.3	203.2	178.2
11	69.9	67.3	73.5	41.8	27.2	6.5	21.6	41.4	41.6	41.9	32.2	34.4	21.1	15.2	27.9	24.9	25.1	19.9	17.7	14.5	10.9	7.3	5.9	8.4
12	5.7	5.9	8.4	10.0	9.4	9.0	9.0	15.3	12.2	13.5	6.2	7.9	19.7	26.6	31.1	29.6	30.3	165.7	74.6	19.7	254.6	96.6	60.1	132.0
13	302.2	309.2	310.6	311.8	310.2	310.6	310.8	292.8	5.7	316.1	320.7	339.0	174.2	190.6	184.0	175.2	155.5	161.7	105.3	50.8	300.3	297.2	314.1	314.5
14	315.9	318.0	317.3	319.1	316.5	319.4	317.8	317.0	320.4	319.1	320.4	318.9	315.8	315.1	312.5	302.3	292.0	38.9	112.3	315.0	306.4	310.0	303.9	299.2
15	276.3	292.3	285.8	283.0	290.1	292.1	312.0	301.3	75.0	308.2	307.6	327.9	310.4	312.1	299.7	318.0	318.2	315.1	318.9	331.9	323.8	31.8	7.6	25.6
16	21.1	28.6	26.1	35.0	14.3	4.0	8.1	2.0	21.8	15.2	19.4	22.4	24.7	19.2	23.0	25.0	16.2	14.6	15.0	16.6	16.6	25.5	15.4	19.7
17	21.0	18.1	19.8	21.8	21.2	16.8	20.8	15.7	13.8	12.3	23.7	9.0	21.5	10.3	17.2	23.1	30.2	17.9	12.1	11.3	23.9	32.6	32.4	10.8
18	43.1	27.0	2.7	22.2	332.7	24.3	27.2	33.0	42.5	47.7	135.4	197.8	197.4	205.4	202.9	206.2	192.9	189.9	205.8	305.3	314.9	305.7	353.5	338.3
19	309.2	313.4	318.3	316.8	317.5	318.1	318.8	324.4	37.0	44.2	21.3	38.8	48.8	42.5	95.1	97.9	42.1	29.6	302.4	210.1	51.0	29.1	10.2	35.0
20	14.4	2.8	22.0	27.8	35.3	31.5	30.8	23.3	25.5	34.7	13.5	26.0	123.4	77.8	29.8	26.2	347.7	7.2	11.1	341.2	356.3	8.2	355.8	358.9
21	356.2	0.4	3.6	8.6	13.4	17.2	17.2	14.2	12.2	10.4	14.1	7.5	0.8	1.5	13.7	356.9	24.9	5.2	32.5	27.8	8.6	332.1	347.7	355.8
22	350.8	12.9	10.1	8.6	16.3	21.4	30.7	29.2	32.4	45.9	81.2	66.1	76.1	175.9	190.4	185.6	193.5	184.7	209.5	181.2	193.2	304.0	13.9	38.5
23	21.8	34.4	25.5	27.9	18.6	27.8	22.2	31.8	28.3	29.6	14.6	30.5	38.3	38.4	138.6	205.1	205.4	259.0	256.6	312.6	313.5	309.7	310.5	315.6
24	337.5	24.6	229.3	183.7	331.8	313.3	351.4	20.2	125.4	83.3	83.6	136.5	157.3	167.0	162.7	161.7	151.4	150.0	170.6	166.7	112.3	326.3	306.7	318.8
25	321.0	323.8	337.2	0.5	6.8	22.1	27.6	33.3	34.4	36.6	16.4	20.9	28.8	26.2	21.2	18.5	8.3	5.6	1.6	6.7	355.9	359.7	347.9	16.7
26	7.0	354.0	356.7	7.2	4.0	10.3	13.3	12.9	24.4	26.5	24.6	23.4	26.0	22.8	20.8	21.4	21.2	15.3	14.9	13.2	15.1	14.8	28.2	20.8
27	10.2	6.2	13.4	13.4	13.7	14.4	15.4	14.2	11.0	14.5	17.4	29.8	30.6	39.3	122.4	19.4	21.5	322.4	271.5	4.6	226.1	0.0	5.3	22.9
28	18.3	4.1	8.4	13.9	12.4	9.7	16.4	19.6	58.0	53.7	36.7	43.2	41.5	42.9	5.4	46.0	40.7	43.2	10.6	322.6	1.4	353.0	5.0	352.6
29	352.2	4.3	315.8	319.4	316.4	311.4	309.1	314.7	310.1	312.3	314.6	35.8	18.6	57.8	359.4	321.0	316.9	313.8	305.6	313.8	310.6	319.9	18.9	14.3
30	19.2	17.1	10.8	0.3	22.1	21.4	47.4	59.5	38.7	37.9	39.0	67.0	204.0	211.8	152.7	149.9	217.6	274.8	340.4	11.8	38.7	330.6	332.0	11.9

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	26.6	358.5	14.1	6.6	11.5	10.5	14.6	10.6	19.0	25.1	26.2	27.3	31.7	32.4	32.0	31.3	27.8	27.7	30.0	28.9	23.3	17.5	17.2	19.0
2	18.4	16.2	17.5	21.4	21.8	28.1	23.6	23.9	20.3	14.3	23.5	24.7	21.5	13.8	2.5	9.6	13.5	20.4	12.6	8.4	4.0	82.0	4.8	349.7
3	347.2	353.0	3.5	15.0	355.2	358.5	9.9	13.0	22.1	25.2	28.9	31.2	30.2	29.0	22.0	10.1	25.1	4.3	354.8	345.2	350.9	3.4	6.9	7.7
4	20.7	12.0	353.7	350.4	356.2	8.2	22.3	343.8	352.4	320.7	4.6	34.7	40.0	85.8	41.1	4.5	12.0	24.0	12.8	347.2	339.3	18.7	6.1	8.5
5	358.7	3.7	1.3	352.0	3.9	10.6	9.5	14.3	12.7	11.2	12.5	6.3	1.2	360.0	66.5	26.5	28.6	51.1	97.2	243.0	235.6	280.4	331.3	34.5
6	49.0	255.7	275.9	341.1	233.0	313.8	349.7	24.6	36.8	150.4	187.1	64.2	160.3	96.2	49.4	319.0	315.4	316.9	309.1	301.2	299.9	292.9	291.3	303.3
7	311.1	303.9	295.3	295.6	297.4	292.2	292.0	296.4	296.6	307.4	313.7	303.2	305.5	48.1	4.7	47.4	68.9	98.4	107.5	103.0	55.1	21.7	316.5	315.4
8	318.5	309.1	317.0	358.3	357.9	18.1	35.2	35.6	27.8	20.9	27.8	24.8	19.2	23.6	20.7	21.7	17.9	17.5	12.2	13.6	9.8	16.2	17.5	19.6
9	20.7	21.3	20.9	23.1	20.5	20.4	20.6	20.7	22.8	19.8	17.6	18.3	21.9	23.6	25.4	27.3	28.3	28.9	26.7	27.5	25.6	23.1	22.1	21.7
10	19.3	22.5	28.9	18.3	23.1	22.1	7.0	18.7	19.3	60.3	195.0	197.0	187.7	90.0	155.0	146.5	105.3	194.7	198.4	192.0	215.0	262.5	15.6	22.0
11	357.1	26.8	31.1	26.4	247.1	26.4	24.9	30.3	39.0	43.7	48.6	82.1	86.3	180.8	147.1	64.0	62.5	26.2	326.7	349.2	24.0	15.2	17.7	19.9
12	23.4	16.2	8.3	14.3	18.3	13.7	17.9	34.1	49.3	59.4	56.4	108.6	132.4	325.9	318.4	312.0	38.3	357.3	280.3	314.3	327.7	25.5	14.8	20.5
13	3.2	8.4	2.0	15.3	9.8	15.9	29.5	47.0	53.5	63.7	42.9	45.3	52.2	168.8	150.8	49.6	47.9	236.0	291.5	4.1	14.4	8.7	348.4	220.3
14	213.9	316.3	7.4	26.3	6.5	29.1	36.7	37.3	123.5	151.3	154.2	171.6	179.2	143.0	138.8	117.5	102.2	82.9	83.5	71.5	117.4	123.3	59.3	317.7
15	278.5	253.3	241.8	254.5	12.7	33.8	335.0	39.4	39.0	60.1	116.0	170.1	187.3	207.3	212.2	215.2	211.1	210.6	200.8	190.2	134.2	10.4	348.3	280.7
16	346.6	293.3	320.0	320.1	320.2	317.7	323.8	29.5	62.0	53.8	66.1	71.0	143.0	169.2	180.9	208.3	216.0	214.9	211.0	218.8	235.2	239.1	230.2	257.7
17	22.3	22.9	24.0	22.2	21.7	31.3	29.7	32.6	28.1	30.4	36.4	111.3	118.4	120.6	133.8	136.2	145.8	190.2	289.8	169.6	195.1	156.7	335.6	350.8
18	13.8	24.1	26.5	28.3	29.5	35.1	39.5	69.7	163.7	113.0	109.2	138.2	160.4	105.6	146.5	27.5	69.6	114.8	170.2	157.7	145.3	131.1	23.4	300.8
19	309.0	301.7	315.1	320.5	323.4	332.8	48.1	36.0	36.9	50.0	197.2	173.9	152.0	100.3	29.1	94.5	71.8	64.3	4.4	352.2	349.1	22.2	348.0	20.9
20	16.2	6.9	9.1	18.5	18.3	8.5	7.5	7.9	6.7	11.2	10.3	10.2	18.6	25.3	26.1	19.5	14.0	3.3	27.8	23.8	14.6	345.2	335.0	28.3
21	11.5	32.6	2.8	42.5	10.0	20.7	35.2	42.0	325.8	312.8	319.2	323.3	317.0	311.1	127.5	175.7	156.9	180.9	303.8	302.6	308.6	311.1	313.3	316.1
22	326.8	8.6	12.4	6.2	18.0	21.6	34.4	43.6	46.3	51.7	120.5	197.6	53.0	316.4	322.7	319.7	320.4	317.5	318.2	315.1	331.0	19.1	10.1	19.3
23	18.5	24.5	18.4	244.3	10.6	28.0	52.1	40.4	177.4	183.6	185.9	169.9	187.7	202.5	191.2	189.0	190.0	201.1	212.8	337.9	313.7	11.6	19.1	20.1
24	18.8	18.5	23.8	24.8	344.0	26.9	27.7	37.1	132.1	210.0	214.1	199.0	203.9	172.0	198.8	204.0	197.7	205.0	292.6	178.5	354.0	25.2	27.8	23.9
25	25.9	19.0	354.1	214.9	34.7	30.0	41.1	74.0	54.5	167.9	207.9	216.0	205.8	177.2	169.2	172.9	159.5	167.7	24.6	314.6	14.9	22.9	25.6	23.7
26	24.9	26.2	21.7	16.2	18.8	13.2	29.6	32.2	38.7	75.5	208.2	205.1	206.7	207.2	194.6	205.7	195.5	217.8	215.2	228.4	7.4	20.0	23.6	28.4
27	32.4	22.9	240.1	231.9	19.5	14.3	24.0	30.5	32.1	43.7	55.8	209.8	201.5	210.2	210.5	205.3	205.1	218.7	226.3	230.0	16.3	24.5	28.6	26.4
28	36.2	34.0	5.1	22.8	34.3	32.6	42.5	134.1	194.8	207.6	209.2	210.6	208.8	208.9	210.0	212.0	209.7	205.7	209.5	224.2	247.6	244.3	226.3	227.9
29	248.2	38.9	8.5	265.5	303.9	22.7	35.1	40.5	215.1	192.7	188.1	184.1	185.5	201.4	174.7	146.1	53.9	96.0	224.4	231.7	247.0	254.3	297.0	297.9
30	282.0	337.9	20.8	30.2	30.8	40.0	35.9	98.1	135.4	125.7	52.5	86.5	77.8	224.2	276.5	238.1	219.7	46.8	143.4	336.8	272.1	282.2	153.3	110.8
31	346.6	14.7	26.1	30.9	24.8	15.0	19.5	28.3	50.9	182.0	156.3	186.8	189.1	191.6	197.9	193.1	211.0	203.6	191.6	180.7	165.5	170.0	216.7	198.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	357.3	302.9	13.2	335.2	15.3	15.3	49.5	62.3	158.9	159.7	160.3	157.7	137.0	177.0	182.8	169.5	178.6	176.0	190.1	221.6	229.3	224.4	14.9	22.8
2	34.9	16.7	30.7	14.1	15.0	15.2	43.6	51.5	45.5	36.6	36.3	39.4	43.7	12.8	105.3	106.1	118.9	136.8	354.6	289.4	339.6	355.9	339.3	13.1
3	11.1	4.7	48.4	164.1	192.6	131.6	309.7	309.3	53.5	92.2	343.3	287.2	181.2	156.9	200.1	200.0	199.2	124.6	94.6	91.8	174.1	184.4	185.4	288.7
4	304.9	310.3	332.7	10.9	11.7	38.4	40.0	55.5	67.1	117.5	137.9	176.8	196.3	164.0	163.7	177.1	188.2	215.4	228.0	228.9	242.2	253.3	14.1	27.0
5	25.9	29.2	25.5	22.6	341.6	42.3	39.2	45.0	87.9	139.0	201.9	207.1	187.5	186.2	189.1	193.6	191.6	196.9	197.7	222.5	218.5	223.5	248.4	335.9
6	29.8	29.8	25.5	22.1	32.5	38.3	44.3	70.0	197.1	164.5	202.4	190.7	178.0	198.9	209.6	209.2	193.3	212.4	265.0	314.9	336.8	10.3	345.7	355.9
7	358.7	8.9	358.0	27.3	3.9	5.1	14.6	322.3	12.8	350.6	336.2	89.1	174.5	329.6	341.6	90.9	9.7	326.1	293.5	279.8	13.1	326.4	339.2	344.1
8	322.9	3.0	356.2	347.5	342.4	353.3	349.3	354.7	353.4	1.0	5.8	5.5	15.1	11.2	9.9	14.4	18.6	16.7	14.3	10.0	10.4	11.7	12.0	12.0
9	10.4	11.5	13.4	16.6	16.7	16.8	14.4	14.3	12.3	13.1	11.8	16.4	15.4	12.9	8.3	16.6	12.1	66.8	18.5	3.1	9.5	350.7	344.1	310.2
10	4.6	5.5	341.4	6.4	37.5	25.9	14.6	12.3	28.7	77.4	70.5	294.5	31.2	339.5	350.1	56.3	24.6	3.2	11.0	333.6	337.7	349.6	346.7	335.3
11	295.1	356.0	320.8	5.8	10.2	11.5	354.5	356.1	352.1	4.5	6.6	9.1	6.0	11.7	9.8	10.2	3.3	3.5	6.7	349.2	354.4	357.1	354.0	355.8
12	351.9	2.2	356.0	1.4	355.8	3.9	4.7	11.1	28.3	6.6	20.1	187.5	199.2	69.5	171.6	190.0	168.8	239.4	216.5	220.2	222.2	243.2	265.8	236.9
13	5.2	340.2	342.6	294.9	136.0	218.2	206.8	35.4	19.9	151.4	208.4	201.5	205.9	205.3	204.8	209.7	197.9	186.9	184.2	185.0	193.2	192.6	215.6	299.9
14	313.1	33.1	15.7	25.7	250.2	293.9	6.2	31.5	18.3	209.2	200.9	186.0	206.7	204.5	206.8	191.8	40.0	31.8	31.3	14.9	347.1	19.2	13.5	11.1
15	14.9	10.8	15.9	2.5	16.9	263.7	26.8	148.7	193.9	180.3	194.3	207.4	197.4	209.5	203.2	203.1	218.3	218.1	235.5	225.8	199.5	342.8	347.5	338.3
16	304.3	28.5	43.3	237.6	210.1	205.3	207.6	212.5	204.3	205.7	206.9	206.5	198.8	166.3	233.7	225.3	221.9	226.7	257.2	239.4	33.1	27.8	37.0	35.1
17	37.6	32.8	228.2	235.4	209.7	218.7	214.4	218.0	211.8	211.5	213.5	231.2	251.8	217.7	223.8	224.3	217.4	213.8	215.9	224.1	209.1	20.7	26.2	26.8
18	28.2	16.5	28.8	27.9	18.2	24.5	22.1	13.7	7.2	14.1	15.8	12.3	14.7	11.0	10.7	1.1	350.0	8.2	7.3	17.0	7.7	23.7	25.3	23.1
19	19.1	11.2	7.6	6.4	16.8	17.0	17.3	15.9	19.4	12.8	14.3	23.2	29.4	25.8	28.0	43.2	214.9	217.5	224.9	228.2	216.4	6.7	24.7	27.7
20	22.7	11.5	0.1	216.4	24.9	202.4	41.8	203.4	212.0	210.6	212.6	229.7	146.9	180.9	6.1	335.6	333.7	268.6	224.7	241.6	260.4	250.3	247.5	294.2
21	25.4	26.8	23.4	28.6	21.6	29.8	32.1	30.0	36.9	77.5	191.0	204.9	201.8	207.2	207.3	200.0	205.6	205.4	192.6	206.1	207.6	202.6	196.0	315.8
22	268.9	208.6	234.8	268.1	10.7	22.2	7.2	291.1	133.6	325.8	358.0	4.0	40.0	332.0	266.2	64.4	302.7	278.7	278.3	265.4	265.7	284.6	289.4	24.9
23	28.4	26.9	28.0	22.2	234.0	220.3	214.8	29.2	38.9	41.4	63.6	193.9	184.4	207.0	212.0	212.9	212.3	214.4	212.6	217.0	214.3	224.5	225.7	263.6
24	248.0	324.8	21.3	26.1	25.2	36.5	33.4	41.7	70.0	165.5	192.1	196.9	211.1	220.0	212.6	217.8	219.5	211.4	207.8	211.7	201.4	176.4	356.2	26.0
25	29.1	16.2	14.1	325.4	34.4	27.0	45.6	205.5	209.9	223.2	217.3	205.6	210.8	211.0	210.8	215.8	211.1	215.0	204.3	198.8	235.1	241.5	255.2	275.7
26	253.2	264.9	273.1	284.2	340.6	30.0	28.1	52.4	108.0	172.7	137.1	138.1	116.8	149.5	148.0	77.8	140.2	147.2	197.1	155.8	301.2	258.7	354.1	7.0
27	356.3	16.0	247.6	349.9	195.0	37.8	45.6	155.2	190.4	166.4	174.7	178.7	181.8	193.5	205.5	208.9	214.2	208.7	211.4	230.5	333.8	309.9	299.7	308.8
28	305.4	305.6	295.8	308.9	309.2	314.8	319.4	317.8	323.9	332.1	326.1	338.0	325.4	176.8	178.4	141.2	175.1	130.8	162.5	156.9	125.5	142.8	72.2	97.6
29	70.4	106.3	11.8	31.7	38.5	324.1	331.9	344.0	64.2	153.8	199.7	167.5	206.5	184.0	246.0	317.0	358.7	90.1	2.0	33.5	311.2	216.8	332.8	332.3
30	350.5	15.2	19.9	22.2	359.9	18.0	13.6	20.7	27.7	33.1	131.7	165.1	182.5	184.8	188.6	187.6	200.5	204.3	195.9	253.0	293.7	314.1	323.8	322.8

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	0.4	12.9	6.0	30.5	1.9	7.7	52.1	63.0	84.0	158.2	167.6	185.6	181.7	179.7	176.6	191.3	200.0	209.9	216.2	236.8	57.1	40.9	56.2	304.0
2	303.1	314.2	302.4	348.7	14.2	20.2	35.2	41.7	56.4	63.3	133.9	134.0	186.3	188.5	195.8	255.3	358.4	72.2	77.5	104.0	14.7	1.4	217.9	216.5
3	225.7	213.6	194.6	240.1	358.6	123.3	132.2	118.2	126.4	113.8	130.2	150.3	174.6	180.1	182.6	188.7	190.5	186.4	211.5	227.2	216.3	237.2	251.6	246.8
4	279.8	320.5	318.4	347.6	338.5	36.4	58.0	89.7	159.2	173.4	202.6	188.6	178.2	194.4	192.9	199.9	211.1	215.0	209.6	194.1	195.9	204.9	243.2	252.8
5	353.7	35.5	137.5	153.4	145.1	327.7	114.7	136.2	145.7	127.9	126.3	143.8	166.5	175.5	168.8	188.3	193.1	189.8	192.6	152.0	212.3	163.6	158.6	155.9
6	208.7	0.9	312.7	243.4	171.6	193.4	153.1	139.9	133.9	131.6	157.6	171.8	184.1	189.9	195.2	201.0	214.3	202.8	211.1	236.1	164.3	273.9	322.1	336.0
7	340.6	334.1	346.8	316.0	335.4	268.4	238.8	223.4	179.1	152.8	158.4	133.7	27.9	41.4	122.4	105.0	359.3	294.2	156.0	208.5	4.1	232.3	22.4	29.2
8	23.0	21.2	6.0	15.2	322.0	7.2	26.5	150.3	53.1	320.3	319.0	316.5	318.9	319.0	316.4	221.9	168.9	186.8	310.3	312.9	311.3	315.4	355.9	354.3
9	355.5	2.0	357.2	9.3	17.2	17.5	28.0	53.0	180.6	188.6	202.5	206.0	208.7	209.9	210.8	210.9	343.7	169.6	223.3	221.6	280.5	261.0	329.3	315.7
10	324.0	354.0	331.4	342.5	351.4	337.1	315.0	102.8	196.3	223.1	212.4	192.8	188.7	237.4	244.5	263.4	289.3	240.2	172.4	23.2	17.6	354.9	11.9	218.5
11	262.3	217.3	166.0	277.8	287.1	242.7	236.2	228.5	215.1	46.5	19.1	17.6	8.5	216.8	214.0	223.4	216.0	206.7	194.2	192.1	218.2	213.3	332.1	274.6
12	264.5	8.0	14.2	20.0	30.8	26.9	32.9	39.3	49.4	50.5	141.6	191.4	180.6	199.2	206.8	197.3	172.9	335.5	318.5	327.2	107.9	299.2	11.4	21.3
13	8.0	304.6	326.5	37.4	330.9	294.4	281.6	17.0	302.8	312.9	304.2	315.0	320.1	318.7	315.1	307.0	309.2	306.8	310.6	314.3	313.1	307.1	281.8	292.8
14	304.5	310.0	297.3	294.3	301.7	335.7	17.3	294.7	293.4	293.3	309.7	314.9	322.4	319.2	319.2	304.8	54.9	119.4	164.4	117.5	184.3	189.1	199.0	195.3
15	193.3	211.8	206.2	205.1	203.8	198.1	197.0	192.2	145.1	169.7	137.3	121.3	253.8	199.4	211.1	208.7	216.6	204.5	280.3	242.3	158.8	332.8	315.0	5.8
16	342.5	348.7	10.2	28.9	38.2	23.6	15.9	351.7	342.6	353.9	295.8	357.2	28.5	100.1	100.8	119.8	82.5	87.5	43.8	25.0	87.1	32.9	4.5	355.8
17	346.6	338.0	347.5	357.3	344.8	335.0	358.4	359.3	300.5	336.4	15.4	323.8	7.8	15.4	9.1	20.6	0.8	356.9	16.1	22.5	17.1	1.7	21.7	10.7
18	351.0	11.7	18.1	13.8	10.0	23.3	7.6	13.8	53.3	135.7	107.5	80.8	50.0	79.6	52.2	351.0	119.1	172.6	171.0	326.5	348.6	310.1	261.7	339.5
19	334.9	354.7	326.1	350.2	357.2	1.7	5.4	6.3	12.6	24.2	27.7	29.2	23.7	25.5	25.5	29.0	20.1	17.0	18.7	7.6	334.7	233.0	321.8	7.0
20	21.8	3.5	20.0	17.5	23.7	20.3	26.3	22.0	24.6	21.7	21.2	25.9	23.1	19.1	22.8	24.6	15.9	7.3	15.5	13.8	245.8	221.9	221.7	27.6
21	32.2	19.0	24.3	283.3	237.2	19.0	11.5	23.4	24.6	22.2	19.3	24.1	25.6	20.9	19.0	44.9	217.5	212.6	207.5	36.7	4.2	228.6	229.2	242.4
22	217.2	214.9	215.2	218.3	23.5	21.1	20.6	16.6	16.2	9.7	14.8	11.8	8.3	14.1	204.4	215.7	197.6	303.9	335.2	6.1	5.1	5.7	0.6	16.0
23	10.4	19.6	1.8	112.6	139.4	30.9	358.6	5.2	356.7	2.4	13.1	9.8	14.0	14.2	10.3	4.8	113.2	60.4	7.2	8.0	9.3	9.8	6.8	0.1
24	349.2	1.6	8.0	15.2	10.7	15.8	16.0	21.8	15.2	10.5	6.6	14.1	359.1	292.2	223.5	223.1	264.9	316.0	309.8	296.9	333.6	38.1	355.2	354.9
25	8.0	18.7	11.6	8.9	40.2	14.9	327.6	177.1	158.7	202.4	190.7	176.0	170.3	41.7	31.7	32.7	13.4	215.3	212.4	215.4	309.6	5.4	8.3	3.2
26	20.4	27.0	29.8	359.1	8.3	19.3	23.7	322.4	16.4	359.0	318.7	294.4	296.9	301.9	305.1	297.5	305.7	307.4	300.7	306.5	307.4	309.6	310.8	317.8
27	320.1	317.9	320.8	320.1	319.5	342.0	46.6	57.9	57.0	47.5	63.4	56.9	115.9	174.1	181.0	184.0	195.6	200.3	214.7	213.7	213.5	253.5	29.1	30.5
28	40.0	224.8	253.2	27.2	28.9	35.1	32.7	36.9	43.2	52.3	178.9	183.2	191.7	210.0	210.3	209.4	197.2	197.0	199.0	176.5	78.7	63.2	137.9	169.1
29	50.7	164.6	202.3	203.1	198.2	200.4	199.1	195.7	193.2	193.2	190.0	192.4	187.2	196.6	189.5	56.0	58.7	73.8	181.9	178.6	168.4	169.9	138.0	62.5
30	141.3	99.7	116.8	181.0	189.3	184.6	163.7	153.5	160.0	176.8	309.3	53.4	301.4	8.1	306.6	339.6	140.8	138.6	128.9	173.4	148.3	186.4	145.3	120.5
31	287.6	311.8	311.0	309.0	312.4	324.6	344.8	317.0	310.8	311.5	241.7	154.1	119.5	76.3	39.1	42.4	289.0	326.8	299.5	290.1	312.9	315.7	316.0	302.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

August 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.5	21.7	17.9	50.6	45.0	43.5	55.1	34.1	30.1	26.9	14.0	23.7	7.7	9.3	18.5	9.0	17.5	33.7	14.5	27.1	24.3	34.1	44.7	21.5	55.1	5.5	26.2
2	32.0	31.2	24.1	19.4	7.6	8.4	8.3	10.9	9.1	9.3	10.1	11.9	10.3	9.4	10.0	10.1	9.1	9.3	9.2	9.7	9.6	10.5	10.0	9.1	32.0	7.6	12.4
3	9.5	9.7	9.9	8.8	8.3	12.7	10.7	18.4	51.6	34.3	36.5	84.4	46.4	32.0	17.1	42.3	27.5	16.8	41.7	40.3	13.2	27.6	39.3	37.3	84.4	8.3	28.2
4	43.4	70.4	23.4	60.0	20.8	7.6	6.2	48.5	6.7	5.5	8.4	22.3	6.5	5.3	4.0	6.3	4.2	24.3	38.9	61.8	44.7	70.2	38.3	47.8	70.4	4.0	28.1
5	26.1	27.7	27.9	20.6	13.7	18.6	19.3	16.0	17.1	16.2	18.9	40.1	52.4	30.5	67.8	32.2	43.4	13.4	12.9	12.7	18.0	23.4	15.5	14.6	67.8	12.7	25.0
6	14.9	15.2	14.3	13.9	13.3	13.2	15.0	14.9	16.4	46.2	29.6	31.5	45.2	28.5	40.5	26.5	10.4	43.8	68.5	76.7	60.2	68.2	70.2	43.6	76.7	10.4	34.2
7	66.8	71.8	49.1	56.2	68.3	75.7	58.3	62.3	35.1	31.5	44.7	33.7	24.0	22.8	30.3	18.2	21.5	26.1	23.1	15.6	27.3	28.8	20.2	15.0	75.7	15.0	38.6
8	15.0	13.5	10.5	12.1	10.3	8.5	9.1	6.0	6.3	16.1	5.2	6.9	5.7	5.6	4.8	4.2	4.2	10.6	11.8	51.3	26.5	48.1	10.4	9.2	51.3	4.2	13.0
9	18.1	15.4	11.5	15.8	40.6	38.7	5.0	4.6	21.4	5.8	12.8	6.2	6.6	6.3	21.6	13.6	6.3	10.5	12.8	13.8	10.7	25.0	48.9	44.1	48.9	4.6	17.3
10	41.3	6.5	50.5	40.0	52.7	42.5	6.8	4.8	36.9	5.7	10.5	13.9	9.2	9.3	9.4	5.8	6.3	5.6	10.0	11.8	13.4	18.7	22.1	22.2	52.7	4.8	19.0
11	35.7	17.9	60.0	70.1	44.0	60.1	35.4	8.0	9.8	8.3	6.0	4.3	4.2	4.8	4.5	4.3	6.4	9.8	10.4	49.4	15.6	8.6	10.3	15.9	70.1	4.2	21.0
12	51.2	42.6	52.4	17.9	10.5	11.2	44.5	28.1	24.2	5.2	4.9	5.6	4.1	4.1	5.1	4.0	6.7	9.2	10.1	10.4	10.9	11.8	7.9	12.6	52.4	4.0	16.5
13	32.6	22.8	26.7	17.8	17.6	27.3	25.7	38.8	11.5	15.1	29.7	14.8	9.1	10.2	12.5	12.3	9.0	8.5	9.0	10.5	16.6	11.7	9.4	12.9	38.8	8.5	17.2
14	27.4	20.4	25.0	19.6	20.4	15.7	17.4	23.5	18.0	14.3	10.3	9.4	12.3	11.7	7.5	8.4	8.1	7.7	9.8	11.4	21.1	15.9	11.8	15.6	27.4	7.5	15.1
15	24.9	29.2	27.4	36.4	15.4	44.6	16.1	12.5	19.3	11.7	50.4	27.9	52.1	43.9	9.4	9.9	7.0	10.3	12.2	21.8	16.2	13.5	11.1	47.8	52.1	7.0	23.8
16	23.5	8.5	9.9	14.8	56.7	7.6	11.8	7.3	8.1	9.7	32.0	41.4	27.3	35.9	40.6	29.6	71.4	59.9	66.5	49.8	32.2	51.9	54.3	55.8	71.4	7.3	33.6
17	54.8	11.7	9.8	9.4	9.2	10.7	13.4	11.1	11.7	11.6	10.9	13.0	9.8	10.2	8.9	10.3	10.0	10.0	10.1	9.8	11.4	9.9	9.2	9.5	54.8	8.9	12.3
18	9.6	11.3	11.1	11.6	10.1	8.2	9.2	9.0	6.9	34.2	21.8	13.3	4.8	5.3	6.0	5.7	6.9	5.6	13.1	20.3	37.2	35.8	54.9	49.4	54.9	4.8	16.7
19	19.2	32.1	63.5	23.1	56.7	23.2	10.3	9.0	11.6	27.3	18.0	13.6	15.4	18.5	30.9	37.8	26.4	36.6	62.5	71.6	48.4	21.8	57.9	44.3	71.6	9.0	32.5
20	41.2	59.3	19.3	20.0	63.8	70.2	70.1	38.4	44.0	28.4	52.1	43.3	55.2	46.1	51.9	54.2	61.3	52.8	62.0	60.5	19.0	16.0	11.7	18.4	70.2	11.7	44.1
21	21.1	35.1	22.1	21.3	13.3	24.8	19.4	10.2	15.9	55.4	40.1	46.8	64.7	56.7	56.0	42.8	56.9	68.0	77.1	26.3	56.1	44.1	53.6	63.3	77.1	10.2	41.3
22	79.1	28.0	39.7	43.2	12.2	7.3	12.9	11.5	9.2	21.0	42.2	49.2	37.4	61.3	57.3	16.2	33.0	30.2	29.4	37.5	24.2	32.0	33.9	34.5	79.1	7.3	32.6
23	39.9	21.7	11.5	17.2	27.1	29.1	65.2	76.1	34.6	14.3	38.2	54.7	39.8	47.7	11.6	22.3	30.4	35.7	61.2	25.5	19.1	41.3	48.3	24.3	76.1	11.5	34.9
24	8.9	21.1	31.7	7.7	6.2	7.1	29.8	11.8	40.7	13.9	17.9	9.7	11.5	18.4	38.2	29.1	41.6	26.9	30.1	23.6	35.8	44.1	60.8	58.0	60.8	6.2	26.0
25	68.3	71.0	41.6	34.2	66.3	72.2	45.1	22.8	42.4	33.9	13.1	20.5	22.8	10.0	5.1	5.4	7.0	8.4	10.6	24.3	31.1	46.2	53.7	8.4	72.2	5.1	31.8
26	6.5	35.4	34.1	19.3	21.0	23.4	25.0	13.3	7.7	11.4	23.2	34.0	29.6	27.9	13.2	19.0	24.9	48.7	58.2	63.6	44.2	50.6	30.7	23.2	63.6	6.5	28.7
27	15.3	15.9	13.6	18.7	22.3	20.9	28.9	20.1	18.6	30.5	28.2	56.9	48.3	35.6	48.7	45.8	50.1	56.8	66.3	55.4	17.2	16.4	15.4	22.0	66.3	13.6	32.0
28	26.2	50.2	53.9	66.0	30.8	38.4	11.1	28.6	11.5	49.7	30.0	26.2	9.5	8.6	13.4	31.3	6.3	17.2	38.5	20.7	14.7	22.1	21.8	21.9	66.0	6.3	27.0
29	19.3	15.9	15.4	22.7	23.5	18.2	15.9	23.4	19.3	16.2	19.3	19.9	17.5	16.6	22.3	19.5	20.2	26.4	19.6	25.5	35.1	29.1	39.2	59.4	59.4	15.4	23.3
30	45.5	30.5	61.3	54.6	17.2	18.6	16.1	30.2	27.2	27.0	34.7	42.7	58.2	37.0	58.5	65.9	23.8	18.5	31.4	54.1	16.7	12.3	13.9	18.7	65.9	12.3	33.9
31	22.8	18.6	18.0	18.8	19.9	22.6	43.3	43.3	22.6	37.8	59.3	62.3	65.3	55.0	36.7	33.9	58.7	57.2	57.3	56.7	29.0	13.4	12.0	15.5	65.3	12.0	36.7
Max.	**79.1**	**71.8**	**63.5**	**70.1**	**68.3**	**75.7**	**70.1**	**76.1**	**51.6**	**55.4**	**59.3**	**84.4**	**65.3**	**61.3**	**67.8**	**65.9**	**71.4**	**68.0**	**77.1**	**76.7**	**60.2**	**70.2**	**70.2**	**63.3**	**84.4**		
Min.	**5.5**	**6.5**	**9.8**	**7.7**	**6.2**	**7.1**	**5.0**	**4.6**	**6.3**	**5.2**	**4.9**	**4.3**	**4.1**	**4.1**	**4.0**	**4.0**	**4.2**	**5.6**	**9.0**	**9.7**	**9.6**	**8.6**	**7.9**	**8.4**		**4.0**	
Avg.	**30.5**	**28.5**	**28.6**	**27.8**	**27.2**	**26.8**	**24.5**	**22.5**	**20.8**	**21.7**	**24.9**	**28.5**	**26.2**	**23.4**	**24.6**	**21.8**	**23.1**	**25.8**	**31.9**	**33.8**	**25.8**	**29.1**	**30.4**	**28.9**			**26.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

September 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.6	15.4	31.2	21.6	16.7	19.2	17.0	11.1	7.1	9.0	12.0	39.6	33.3	23.8	54.3	48.9	16.3	16.4	15.1	30.3	71.7	44.3	13.5	16.8	71.7	7.1	24.9
2	7.1	9.9	6.5	7.3	6.6	8.1	23.0	6.9	4.7	4.1	30.6	11.3	23.3	20.0	29.5	35.4	19.6	31.0	52.0	39.5	31.9	47.0	63.3	48.9	63.3	4.1	23.6
3	42.1	65.3	62.0	33.8	25.6	24.1	15.4	10.4	9.9	10.0	11.3	13.4	14.9	13.7	20.3	10.2	10.3	9.5	9.4	9.8	9.9	8.9	9.7	8.9	65.3	8.9	19.1
4	9.3	10.3	11.7	11.0	12.5	12.4	10.8	10.4	9.9	8.5	8.0	6.0	6.5	7.6	6.9	7.4	12.6	18.5	6.8	5.3	10.7	41.1	46.6	12.1	46.6	5.3	12.6
5	14.4	32.0	20.3	31.5	5.9	7.0	21.2	6.2	9.2	8.3	8.2	33.0	48.0	46.1	57.2	72.0	82.3	52.9	27.4	7.6	8.9	6.9	7.6	7.6	82.3	5.9	25.9
6	5.3	5.9	6.3	6.3	8.6	45.0	63.9	34.6	47.4	19.4	12.8	17.6	23.0	16.7	18.7	28.8	67.0	37.1	65.0	18.5	18.8	19.1	22.4	53.7	67.0	5.3	27.6
7	21.1	25.2	15.9	9.7	27.4	22.0	19.7	14.8	13.1	23.3	36.7	54.0	55.9	28.1	78.9	49.0	61.0	41.7	39.0	39.3	32.2	51.1	52.4	37.5	78.9	9.7	35.4
8	54.5	38.5	28.5	25.2	17.3	18.9	17.5	32.0	7.5	8.9	5.2	19.6	15.8	33.8	14.8	24.2	26.6	13.2	27.8	47.8	69.9	54.1	15.6	32.3	69.9	5.2	27.1
9	22.1	9.1	10.3	10.9	16.8	16.8	22.9	31.7	36.8	51.4	28.3	35.9	50.8	44.1	58.4	37.1	25.9	32.3	7.2	17.1	56.0	60.8	64.6	51.8	64.6	7.2	33.3
10	35.1	51.4	44.6	35.0	16.4	18.1	10.6	10.3	23.2	36.7	61.0	49.2	46.4	57.1	43.8	42.6	42.5	33.0	27.1	16.1	23.8	48.2	15.6	15.7	61.0	10.3	33.5
11	30.6	8.3	16.6	14.8	8.7	7.5	7.0	8.8	29.2	32.0	13.4	11.6	11.0	8.9	9.1	13.3	18.1	31.1	29.0	32.5	54.3	70.2	55.7	58.4	70.2	7.0	24.2
12	41.8	65.3	34.8	13.3	27.8	61.8	51.7	43.9	55.4	43.9	19.4	17.2	17.2	27.2	17.1	12.6	22.3	31.0	26.9	17.7	24.7	17.2	23.4	19.9	65.3	12.6	30.6
13	22.3	21.9	16.0	42.3	60.5	35.5	59.8	33.8	53.5	49.6	38.9	59.3	62.4	47.1	26.6	23.4	27.1	25.8	18.0	18.9	16.3	60.6	28.3	48.4	62.4	16.0	37.3
14	56.9	21.4	51.0	68.9	42.6	64.4	31.4	33.9	5.3	4.5	32.5	12.9	20.1	10.1	36.0	13.9	18.3	17.7	41.0	54.8	57.9	46.9	73.9	57.3	73.9	4.5	36.4
15	45.9	62.4	69.3	38.9	71.4	67.1	57.2	52.1	69.1	27.3	28.4	23.1	53.3	56.6	57.5	72.3	75.9	74.6	69.1	67.0	23.2	9.1	7.8	9.7	75.9	7.8	49.5
16	9.0	9.2	18.1	27.9	45.2	64.3	56.0	71.8	47.9	32.0	26.3	60.8	78.0	61.5	49.6	45.3	37.0	36.9	59.8	64.5	63.3	61.9	57.8	75.8	78.0	9.0	48.3
17	53.5	22.8	29.2	10.4	8.2	6.7	7.4	8.7	8.5	9.8	8.2	6.6	11.3	22.4	43.7	59.8	40.2	16.6	12.5	49.5	11.5	26.8	47.8	19.5	59.8	6.6	22.6
18	16.1	21.6	15.7	15.0	24.2	25.8	25.1	55.0	58.1	65.6	47.4	54.0	46.3	63.2	41.4	33.9	43.2	59.9	45.7	58.5	43.3	48.3	73.1	51.6	73.1	15.0	43.0
19	77.2	46.1	55.2	65.7	61.4	54.3	46.2	55.2	51.0	61.6	79.7	64.3	49.6	36.5	42.0	42.1	40.6	55.0	52.8	32.0	40.6	24.2	17.7	20.0	79.7	17.7	48.8
20	16.4	14.4	14.8	17.3	18.7	21.2	45.2	45.6	43.7	38.5	34.6	40.2	57.9	37.6	34.5	59.6	47.9	42.5	47.5	45.9	45.7	42.1	52.4	67.0	67.0	14.4	38.8
21	60.8	56.5	34.4	31.1	25.6	35.8	25.5	43.6	31.1	19.6	18.0	8.2	42.6	37.5	39.5	18.0	8.1	7.8	10.1	8.6	10.4	29.7	50.4	9.4	60.8	7.8	27.6
22	8.0	22.8	7.0	6.4	6.8	11.0	9.9	15.9	28.3	32.1	29.1	49.4	74.4	60.6	68.8	76.1	29.2	12.4	8.9	7.2	29.0	45.0	51.6	77.6	77.6	6.4	32.0
23	56.6	69.3	40.8	45.1	26.5	52.1	53.2	55.3	37.8	29.5	28.1	9.8	28.5	56.4	51.8	64.9	62.3	52.3	49.6	21.7	8.8	19.2	23.9	14.5	69.3	8.8	39.9
24	14.5	13.8	23.6	21.4	27.2	35.0	24.0	17.9	23.6	28.7	23.1	13.9	12.3	18.4	31.7	35.5	32.5	27.4	15.0	20.4	18.0	12.4	24.8	26.8	35.5	12.3	22.6
25	18.6	18.9	10.8	10.7	17.3	15.4	14.8	11.6	17.5	15.8	22.4	20.4	16.4	16.9	14.9	28.4	19.5	30.0	20.5	19.7	28.6	66.3	45.3	58.2	66.3	10.7	23.3
26	45.5	29.8	31.4	33.6	27.0	7.5	6.5	8.1	31.1	27.6	21.2	39.5	55.1	62.2	15.9	19.1	15.3	14.6	11.3	10.5	12.9	13.5	11.9	10.9	62.2	6.5	23.4
27	10.5	10.4	10.4	9.8	10.4	11.3	10.7	11.5	10.9	9.5	9.0	8.9	9.2	9.3	9.8	9.9	9.2	9.4	8.9	9.5	9.2	9.4	8.6	8.4	11.5	8.4	9.7
28	7.9	6.4	6.6	7.7	9.1	35.3	28.4	19.2	82.8	41.2	51.8	34.0	25.4	10.4	32.6	6.4	5.4	46.2	38.5	13.5	21.3	17.6	26.0	23.0	82.8	5.4	24.9
29	16.2	39.8	44.4	43.3	73.1	50.0	51.7	41.6	39.2	38.7	51.3	55.6	64.6	30.0	34.8	30.1	32.6	28.1	31.6	25.9	26.9	22.2	24.9	19.7	73.1	16.2	38.2
30	26.0	26.1	22.1	28.6	36.0	34.1	28.9	36.6	46.8	52.9	62.2	58.4	41.5	49.1	32.3	45.2	35.1	24.0	13.4	14.9	13.9	16.2	14.7	15.6	62.2	13.4	32.3
Max.	**77.2**	**69.3**	**69.3**	**68.9**	**73.1**	**67.1**	**63.9**	**71.8**	**82.8**	**65.6**	**79.7**	**64.3**	**78.0**	**63.2**	**78.9**	**76.1**	**82.3**	**74.6**	**69.1**	**67.0**	**71.7**	**70.2**	**73.9**	**77.6**	**82.8**		
Min.	**5.3**	**5.9**	**6.3**	**6.3**	**5.9**	**6.7**	**6.5**	**6.2**	**4.7**	**4.1**	**5.2**	**6.0**	**6.5**	**7.6**	**6.9**	**6.4**	**5.4**	**7.8**	**6.8**	**5.3**	**8.8**	**6.9**	**7.6**	**7.6**		**4.1**	
Avg.	**28.6**	**28.3**	**26.3**	**24.8**	**26.0**	**29.6**	**28.7**	**27.9**	**31.3**	**28.0**	**28.6**	**30.9**	**36.5**	**33.8**	**35.7**	**35.5**	**32.8**	**31.0**	**29.6**	**27.5**	**29.8**	**34.7**	**34.4**	**32.6**			**30.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

October 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.7	13.8	17.6	18.8	16.8	25.2	35.1	40.6	34.9	30.7	32.0	38.4	67.3	47.8	58.5	35.9	38.8	38.9	44.0	53.5	45.2	58.4	55.9	71.8	71.8	13.8	38.9
2	39.5	63.3	47.7	68.6	65.8	59.5	67.9	36.7	53.7	41.5	65.2	33.2	63.4	46.6	55.9	36.5	37.2	43.0	61.8	43.9	23.4	15.2	23.6	9.5	68.6	9.5	45.9
3	9.4	11.3	8.1	9.9	9.7	8.5	23.5	45.9	9.8	6.4	11.1	12.1	11.5	10.3	10.3	8.6	10.6	11.5	11.4	10.9	14.2	13.0	21.5	11.5	45.9	6.4	13.0
4	11.7	12.9	12.2	11.0	10.3	9.2	9.8	9.8	10.7	11.0	10.4	10.3	9.8	10.3	9.8	10.3	10.2	9.5	9.8	9.5	9.4	8.8	9.0	9.0	12.9	8.8	10.2
5	8.3	9.3	9.5	9.2	8.6	8.6	9.6	10.7	8.9	11.3	9.9	10.9	11.3	47.1	50.6	19.4	11.8	10.0	8.7	7.9	7.2	7.9	6.3	7.4	50.6	6.3	12.9
6	13.3	8.3	10.3	10.0	9.1	7.8	9.7	13.8	9.4	7.8	6.4	17.0	17.0	26.0	40.1	61.3	33.3	34.5	13.3	12.4	13.1	6.8	6.7	8.1	61.3	6.4	16.5
7	8.2	13.0	28.3	20.0	36.6	32.6	11.3	16.0	17.4	18.4	13.6	9.9	10.1	12.9	13.4	11.9	9.6	9.9	9.9	17.1	14.4	10.7	9.6	7.8	36.6	7.8	15.1
8	7.9	9.5	11.9	37.9	41.1	52.7	49.4	28.8	22.3	19.5	15.3	36.2	13.0	21.0	10.1	16.8	16.0	10.7	17.3	11.9	7.7	6.9	8.1	7.0	52.7	6.9	20.0
9	26.5	12.7	33.5	50.6	42.8	42.0	10.9	10.7	13.6	12.4	12.3	23.4	18.1	31.3	18.6	15.9	14.7	19.2	18.8	23.8	23.0	14.9	22.5	22.4	50.6	10.7	22.3
10	19.1	16.0	15.7	15.1	34.3	28.3	38.6	43.2	44.5	19.6	8.6	13.4	7.1	7.3	5.9	7.7	34.7	25.5	9.7	9.9	10.2	13.1	18.9	43.9	44.5	5.9	20.4
11	47.9	27.9	12.3	11.3	12.2	9.5	12.2	10.8	8.8	51.0	4.6	10.3	42.6	41.2	49.8	48.9	61.5	67.7	59.1	58.2	54.6	51.1	58.4	43.7	67.7	4.6	35.6
12	40.8	53.8	50.4	51.1	50.1	55.6	51.8	48.5	42.2	54.6	33.2	51.3	52.7	56.7	68.8	45.2	47.1	40.8	46.4	37.6	32.4	47.6	18.1	18.4	68.8	18.1	45.6
13	15.5	19.8	39.9	40.1	48.0	30.7	14.4	13.9	10.4	8.2	11.6	38.6	54.3	44.9	62.5	54.6	52.2	27.2	48.7	57.0	55.7	49.6	56.3	28.6	62.5	8.2	36.8
14	13.1	15.8	15.5	16.2	20.0	16.4	18.9	9.8	7.1	6.3	9.7	7.2	5.4	9.6	29.5	50.2	51.0	43.7	26.1	71.1	57.7	35.1	12.6	12.4	71.1	5.4	23.3
15	13.9	12.2	11.8	11.4	11.0	9.4	10.0	10.3	8.1	9.7	7.5	7.5	5.6	6.0	22.3	4.2	5.8	20.4	63.8	58.6	68.1	35.6	50.6	68.9	68.9	4.2	22.2
16	26.1	18.1	38.9	66.3	29.6	23.0	35.5	65.7	61.1	36.3	45.5	31.4	37.5	30.9	24.4	40.6	61.0	53.1	57.6	42.8	19.6	33.2	48.1	12.3	66.3	12.3	39.1
17	7.7	9.1	10.7	8.9	9.4	34.9	23.5	17.5	50.5	27.5	10.5	10.3	7.7	48.4	33.8	21.5	27.4	33.0	21.5	24.0	11.0	10.9	11.6	10.5	50.5	7.7	20.1
18	8.4	12.0	10.7	11.2	18.8	17.4	14.3	14.0	13.5	17.4	22.7	35.9	35.8	43.8	64.4	55.1	35.0	33.7	43.2	13.9	47.7	17.1	15.5	18.4	64.4	8.4	25.8
19	8.3	7.6	7.6	7.4	8.3	8.7	37.8	12.2	11.9	14.2	16.5	17.7	18.6	17.0	25.3	50.0	74.2	71.8	72.7	73.9	76.5	58.6	45.4	20.0	76.5	7.4	31.8
20	45.3	21.1	21.1	19.9	18.7	17.0	13.0	10.3	10.8	10.7	10.0	11.3	10.4	11.3	11.0	11.0	9.9	10.1	9.3	9.3	10.1	10.0	11.5	10.2	45.3	9.3	13.9
21	7.6	11.0	12.4	15.4	11.8	10.8	17.6	24.4	40.1	37.0	25.6	12.6	15.4	6.9	8.9	9.0	25.7	74.2	59.1	23.2	17.1	57.4	56.2	38.4	74.2	6.9	25.7
22	63.6	35.4	53.3	82.4	57.1	22.1	20.6	16.5	16.3	31.3	32.8	59.5	53.6	51.9	28.9	27.6	26.2	37.4	45.3	37.6	32.9	42.7	29.0	40.9	82.4	16.3	39.4
23	30.0	30.0	42.1	37.4	38.8	34.8	54.6	54.5	51.7	63.2	55.4	63.7	39.7	30.3	26.8	35.4	28.3	16.8	14.0	9.4	15.7	7.8	7.0	7.3	63.7	7.0	33.1
24	9.1	6.4	40.0	72.0	6.6	10.6	22.4	25.5	23.6	24.2	15.8	15.5	14.2	33.1	16.0	14.3	14.6	24.3	20.0	15.1	16.2	17.8	18.5	21.6	72.0	6.4	20.7
25	24.3	20.7	20.3	28.3	45.4	27.2	14.9	14.9	16.5	24.8	10.5	9.7	8.1	8.9	14.0	10.2	22.6	23.7	21.1	20.3	25.9	27.6	18.1	27.3	45.4	8.1	20.2
26	25.7	23.6	20.8	22.0	28.5	27.3	24.1	26.6	23.2	12.6	7.7	11.9	7.8	9.4	8.8	27.0	39.7	41.2	22.7	32.2	35.1	36.9	19.0	25.0	41.2	7.7	23.3
27	31.6	20.2	14.3	17.5	24.2	12.6	10.4	7.9	6.7	5.8	3.9	3.1	2.9	4.9	22.3	18.7	50.9	27.9	10.8	6.6	5.6	7.0	8.6	16.3	50.9	2.9	14.2
28	11.7	13.7	9.7	14.5	16.4	23.8	15.6	8.9	10.3	29.1	6.4	9.2	12.9	25.5	32.6	18.6	13.9	17.1	17.8	23.3	46.5	23.5	23.4	13.0	46.5	6.4	18.2
29	7.2	8.1	9.2	7.0	5.2	5.1	6.5	6.3	6.3	6.6	7.3	7.8	8.3	8.6	11.1	8.4	9.2	9.3	8.6	8.3	10.5	9.2	8.6	11.8	11.8	5.1	8.1
30	12.3	14.2	12.6	10.3	10.3	9.8	12.5	8.2	14.5	12.9	20.5	41.1	60.7	43.3	31.3	15.1	15.1	16.2	15.3	14.0	15.6	15.6	17.2	20.3	60.7	8.2	19.1
31	19.6	17.6	15.9	16.3	15.1	14.8	14.8	15.3	15.0	25.9	25.3	15.6	17.3	18.7	16.4	18.5	18.3	14.9	14.9	15.6	34.8	34.7	18.2	27.9	34.8	14.8	19.2
Max.	**63.6**	**63.3**	**53.3**	**82.4**	**65.8**	**59.5**	**67.9**	**65.7**	**61.1**	**63.2**	**65.2**	**63.7**	**67.3**	**56.7**	**68.8**	**61.3**	**74.2**	**74.2**	**72.7**	**73.9**	**76.5**	**58.6**	**58.4**	**71.8**	**82.4**		
Min.	**7.2**	**6.4**	**7.6**	**7.0**	**5.2**	**5.1**	**6.5**	**6.3**	**6.3**	**5.8**	**3.9**	**3.1**	**2.9**	**4.9**	**5.9**	**4.2**	**5.8**	**9.3**	**8.6**	**6.6**	**5.6**	**6.8**	**6.3**	**7.0**		**2.9**	
Avg.	**20.3**	**18.3**	**21.4**	**26.4**	**24.5**	**22.4**	**22.9**	**21.9**	**21.7**	**22.2**	**18.3**	**21.8**	**23.9**	**26.2**	**28.5**	**26.1**	**29.2**	**29.6**	**29.1**	**27.5**	**27.6**	**25.3**	**23.7**	**22.3**			**24.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

November 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	29.4	39.9	23.9	26.8	38.1	19.5	24.4	43.6	9.2	18.0	18.0	8.5	16.5	21.3	16.0	22.5	18.8	20.2	17.0	16.5	25.4	31.9	51.1	27.7	51.1	8.5	24.3
2	20.4	21.8	52.7	65.7	48.6	28.4	21.2	29.2	39.6	17.8	12.2	10.1	13.1	49.9	27.7	25.8	34.7	33.6	35.2	34.3	49.1	58.9	54.5	51.1	65.7	10.1	34.8
3	37.2	56.9	35.8	56.8	56.0	36.2	46.4	25.4	25.7	45.6	50.8	63.0	32.0	26.7	18.2	15.8	17.2	17.9	14.8	16.0	27.6	37.7	18.9	17.3	63.0	14.8	33.1
4	18.7	14.9	15.6	17.2	16.6	24.2	18.3	36.4	17.3	15.7	14.0	14.5	15.8	19.8	20.2	30.9	21.7	18.3	19.8	17.6	15.5	14.7	30.3	20.1	36.4	14.0	19.5
5	41.3	27.0	35.8	15.7	15.5	16.3	17.2	31.1	33.6	47.1	44.7	14.5	55.2	47.9	67.5	58.8	81.5	64.4	57.0	52.3	41.5	34.9	54.6	53.4	81.5	14.5	42.0
6	22.2	64.6	40.9	23.3	31.4	47.7	45.1	52.2	74.6	69.7	39.6	49.3	21.5	38.2	32.0	37.6	39.2	43.1	32.2	44.4	43.3	66.8	57.0	35.7	74.6	21.5	43.8
7	33.0	45.4	18.5	30.8	49.3	17.2	17.6	30.1	21.2	19.8	14.1	11.0	8.7	7.7	9.8	11.6	11.7	9.5	10.5	10.5	10.7	10.6	10.0	9.0	49.3	7.7	17.8
8	9.1	8.6	9.7	9.3	9.1	10.4	9.4	10.6	11.6	12.0	12.1	11.8	11.3	12.5	16.6	14.0	11.4	20.3	10.5	14.0	17.6	10.4	7.9	8.8	20.3	7.9	11.6
9	9.5	8.1	7.7	6.7	9.1	8.6	8.5	8.1	8.8	10.7	27.1	25.6	14.2	15.6	32.9	15.3	52.4	20.4	27.8	29.2	51.5	44.5	41.9	34.8	52.4	6.7	21.6
10	31.3	49.9	35.8	19.7	15.3	14.8	21.4	41.1	15.9	15.7	15.2	14.7	15.2	14.7	16.6	15.3	15.0	14.5	14.9	15.8	16.4	24.4	25.4	61.5	61.5	14.5	22.5
11	21.7	11.1	19.9	27.7	37.8	50.6	18.1	49.7	41.0	39.5	20.4	16.6	12.3	13.7	17.8	14.3	21.7	31.6	18.0	36.7	30.6	36.8	23.4	27.0	50.6	11.1	26.6
12	26.4	24.2	16.3	58.4	41.3	67.3	60.8	69.9	30.9	20.0	44.1	8.6	7.8	12.7	9.5	13.8	14.9	12.9	12.8	7.6	11.6	15.5	22.2	32.1	69.9	7.6	26.7
13	31.2	37.7	18.0	21.0	12.0	19.0	25.3	14.1	18.9	18.3	15.5	16.0	11.3	11.0	10.2	14.1	14.8	15.1	11.7	10.4	8.2	6.3	5.9	7.3	37.7	5.9	15.6
14	5.9	7.1	7.2	8.3	8.1	8.1	9.3	7.3	9.6	8.8	9.4	11.2	10.0	5.6	7.1	7.1	8.4	8.3	8.0	8.0	7.8	6.8	7.4	8.4	11.2	5.6	8.0
15	8.1	8.5	9.8	10.5	23.4	33.3	13.6	53.0	17.3	10.2	56.6	10.0	53.4	24.0	39.2	68.3	55.5	76.2	45.4	44.9	20.4	12.7	12.0	5.6	76.2	5.6	29.7
16	4.6	10.2	9.1	9.8	10.0	11.2	12.0	12.9	12.5	9.9	10.2	10.8	9.3	7.4	9.7	10.6	8.8	8.3	8.5	10.0	7.5	7.7	8.9	6.4	12.9	4.6	9.4
17	6.1	5.4	5.9	5.5	5.1	4.9	6.4	6.7	10.7	53.6	27.9	40.4	44.1	50.9	43.4	30.9	23.2	14.7	13.4	23.5	17.6	11.9	8.5	11.6	53.6	4.9	19.7
18	20.0	17.4	22.7	20.4	10.7	9.5	10.0	9.3	9.7	11.6	10.4	11.6	9.6	9.5	8.8	9.1	8.4	8.7	30.5	67.9	28.0	25.4	30.6	48.7	67.9	8.4	18.7
19	42.8	70.3	43.6	32.7	56.8	57.8	56.3	19.3	14.1	13.6	25.2	36.2	43.9	21.3	24.8	26.5	24.1	26.4	22.1	16.3	20.0	43.5	30.7	24.7	70.3	13.6	33.0
20	9.6	6.1	6.5	7.3	8.0	6.9	6.9	6.8	7.4	7.5	9.4	9.3	9.0	9.5	8.8	7.7	7.8	7.1	10.8	9.1	8.4	11.4	9.6	12.4	12.4	6.1	8.5
21	8.2	10.3	12.4	12.3	26.1	17.7	16.3	15.6	15.1	17.6	14.6	14.9	21.9	55.5	68.3	49.4	18.6	33.8	38.7	25.3	23.8	26.3	60.5	45.6	68.3	8.2	27.0
22	30.3	31.4	39.5	50.2	64.9	53.4	56.7	63.8	65.8	18.7	16.0	28.4	15.6	7.5	7.1	15.6	24.2	17.6	25.5	26.7	13.3	15.9	16.6	17.5	65.8	7.1	30.1
23	18.9	20.3	17.8	17.4	19.0	17.8	17.8	18.6	28.8	26.5	30.0	37.1	29.7	31.6	50.6	37.9	48.0	60.2	42.3	22.1	20.1	34.7	24.8	32.5	60.2	17.4	29.4
24	27.2	33.6	46.1	33.5	16.5	13.1	16.6	15.2	19.3	23.6	47.2	48.0	59.2	37.8	28.1	32.1	42.3	48.7	54.4	42.1	28.4	23.0	20.7	15.9	59.2	13.1	32.2
25	14.6	14.4	15.5	15.6	15.4	15.7	14.6	16.4	19.4	19.7	17.1	15.5	16.3	14.5	13.7	17.1	14.1	16.1	14.9	14.3	13.6	13.4	13.3	15.5	19.7	13.3	15.4
26	14.6	15.3	14.0	15.0	18.1	15.1	14.5	13.9	14.1	15.8	15.7	14.3	14.8	13.9	14.0	14.4	13.3	33.6	37.6	34.5	13.3	20.5	43.2	37.9	43.2	13.3	19.6
27	13.9	14.9	17.0	29.0	47.6	68.7	75.7	20.7	19.4	17.0	10.2	11.1	11.9	9.8	23.3	29.8	18.8	12.4	8.1	4.2	5.5	6.9	9.4	9.9	75.7	4.2	20.6
28	10.9	14.9	15.8	15.2	15.7	15.7	11.9	8.7	5.5	7.4	6.5	6.1	7.1	7.7	7.5	7.7	7.9	8.8	8.5	7.0	9.8	7.9	9.2	7.5	15.8	5.5	9.6
29	20.2	10.5	12.7	10.6	8.8	44.0	14.0	12.3	11.2	15.1	35.5	46.9	50.0	62.6	56.8	44.4	40.0	44.2	48.8	55.7	54.5	51.4	49.3	59.3	62.6	8.8	35.8
30	54.8	46.1	44.8	38.1	43.8	57.1	65.8	78.9	47.4	45.1	17.7	31.6	25.8	24.0	54.0	40.7	23.4	18.4	19.5	19.3	12.3	14.4	39.1	19.1	78.9	12.3	36.7
Max.	**54.8**	**70.3**	**52.7**	**65.7**	**64.9**	**68.7**	**75.7**	**78.9**	**74.6**	**69.7**	**56.6**	**63.0**	**59.2**	**62.6**	**68.3**	**68.3**	**81.5**	**76.2**	**57.0**	**67.9**	**54.5**	**66.8**	**60.5**	**61.5**	**81.5**		
Min.	**4.6**	**5.4**	**5.9**	**5.5**	**5.1**	**4.9**	**6.4**	**6.7**	**5.5**	**7.4**	**6.5**	**6.1**	**7.1**	**5.6**	**7.1**	**7.1**	**7.8**	**7.1**	**8.0**	**4.2**	**5.5**	**6.3**	**5.9**	**5.6**		**4.2**	
Avg.	**21.4**	**24.9**	**22.4**	**23.7**	**25.9**	**27.0**	**25.1**	**27.4**	**22.5**	**22.4**	**22.9**	**21.6**	**22.2**	**22.8**	**25.3**	**24.6**	**24.7**	**25.5**	**24.0**	**24.5**	**21.8**	**24.2**	**26.6**	**25.5**			**24.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

December 2005

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	25.3	14.5	26.6	22.0	20.5	16.2	22.6	18.0	23.9	31.2	20.7	19.9	16.1	15.0	15.8	23.6	24.0	18.2	25.3	28.8	27.4	13.9	12.2	18.7	31.2	12.2	20.8
2	29.3	25.8	20.5	16.1	20.2	26.8	44.1	58.2	49.8	16.1	18.4	43.3	57.3	60.0	44.4	58.9	69.0	61.4	37.2	22.9	25.9	36.8	52.6	57.0	69.0	16.1	39.7
3	36.6	49.5	49.9	35.1	19.9	18.5	16.7	14.1	16.4	14.3	14.6	14.5	16.1	14.3	14.8	16.2	16.3	29.7	20.5	28.4	33.2	27.1	19.4	41.0	49.9	14.1	24.0
4	45.7	23.6	36.8	13.1	9.7	9.4	6.1	5.2	9.0	7.9	7.7	8.0	11.8	10.6	8.9	6.6	6.4	8.5	9.3	5.8	8.0	5.9	8.5	7.1	45.7	5.2	11.6
5	6.7	7.3	6.3	6.3	9.0	6.0	6.3	10.9	10.6	11.5	12.5	11.8	11.2	10.9	9.9	11.1	11.1	8.2	10.2	10.4	10.7	11.4	8.9	9.1	12.5	6.0	9.5
6	11.8	9.9	9.4	10.3	9.7	10.4	9.7	11.0	9.4	8.5	11.9	9.5	11.6	13.8	10.9	3.7	5.4	6.4	8.1	22.2	26.8	23.6	18.8	16.4	26.8	3.7	12.0
7	15.6	12.5	11.7	13.0	9.9	10.2	12.6	12.7	9.8	9.7	9.5	9.3	9.6	9.3	10.7	10.8	9.4	14.4	14.4	11.6	11.6	10.6	11.6	13.0	15.6	9.3	11.4
8	13.0	23.7	15.5	8.0	7.8	6.8	5.3	4.6	6.5	12.0	11.5	59.1	63.6	66.7	47.5	47.9	56.3	74.9	39.1	40.7	65.7	43.7	61.7	68.0	74.9	4.6	35.4
9	51.1	52.1	55.7	50.9	66.9	60.2	41.7	42.5	38.7	10.3	10.5	8.9	10.5	12.3	10.6	9.6	10.6	25.2	67.9	77.2	11.3	54.3	45.1	32.8	77.2	8.9	35.7
10	65.5	50.2	18.5	10.1	21.7	8.1	11.5	11.4	6.1	8.6	8.4	9.1	14.7	31.1	28.8	22.0	11.6	19.8	45.7	25.2	14.0	9.7	9.7	11.2	65.5	6.1	19.7
11	12.5	8.2	7.4	8.4	46.3	19.8	58.1	16.4	17.6	16.2	17.9	16.0	18.0	18.3	28.4	42.9	42.5	77.0	59.2	37.9	54.3	75.8	48.6	42.8	77.0	7.4	32.9
12	38.3	43.4	43.6	47.0	40.7	31.4	43.8	44.6	42.5	72.4	45.1	41.2	43.6	60.1	59.0	42.8	42.1	56.3	38.0	31.9	37.9	37.7	32.6	22.9	72.4	22.9	43.3
13	14.3	31.0	24.2	9.8	7.6	9.3	9.3	8.4	8.1	9.1	10.5	9.6	8.3	8.7	9.3	9.3	11.0	11.6	10.1	9.2	9.3	9.8	9.5	9.9	31.0	7.6	11.1
14	10.3	9.8	9.7	9.7	9.3	9.7	9.2	9.3	9.4	9.1	9.1	9.4	10.1	9.1	10.1	10.2	9.2	9.3	8.6	9.5	11.0	12.0	12.1	12.5	12.5	8.6	9.9
15	13.0	13.4	13.7	12.4	11.0	10.3	9.9	9.1	9.7	9.9	8.9	10.5	9.0	8.6	8.4	8.2	8.9	9.6	9.6	10.6	12.0	20.1	25.5	31.8	31.8	8.2	12.2
16	50.5	47.7	45.8	64.4	59.4	55.1	51.6	54.1	48.7	67.5	47.8	33.2	16.7	28.5	27.7	14.9	14.0	42.1	54.2	18.7	19.8	27.6	17.4	15.9	67.5	14.0	38.5
17	22.9	17.0	13.3	15.5	11.8	12.3	16.8	19.0	19.6	36.9	7.9	7.9	12.6	10.5	14.3	12.3	17.8	19.0	12.2	13.1	11.8	13.4	13.3	10.9	36.9	7.9	15.1
18	11.6	11.7	13.0	11.2	10.8	10.8	11.3	12.1	12.5	11.5	11.4	13.4	16.6	12.5	12.6	10.8	13.5	12.5	8.9	10.0	10.8	9.8	11.0	10.7	16.6	8.9	11.7
19	9.6	11.2	10.0	10.6	9.9	9.5	14.0	10.2	10.4	11.1	10.0	12.2	11.5	12.8	13.0	25.9	27.3	39.7	10.9	16.5	18.7	36.2	8.2	10.3	39.7	8.2	15.0
20	9.6	7.2	12.3	11.0	9.2	10.8	9.3	50.8	72.0	44.8	14.9	35.1	27.8	56.9	35.6	30.5	41.5	16.5	29.9	16.3	61.1	26.0	43.8	21.8	72.0	7.2	28.9
21	34.4	6.4	33.9	26.5	48.0	38.1	10.0	17.5	51.6	13.3	19.2	11.8	16.0	21.0	21.2	10.1	20.2	15.8	9.8	14.6	25.4	23.0	29.7	18.9	51.6	6.4	22.3
22	20.3	29.3	20.3	13.8	13.8	45.9	32.3	23.8	18.3	9.5	10.2	7.0	6.1	6.2	7.8	46.9	34.5	6.1	8.7	9.5	7.5	7.2	5.2	8.8	46.9	5.2	16.6
23	10.8	29.8	55.5	26.8	15.3	16.8	30.6	11.8	16.3	7.8	7.0	6.9	9.1	18.2	30.7	14.9	6.4	6.9	7.2	5.6	9.1	10.2	9.7	8.8	55.5	5.6	15.5
24	11.8	12.4	8.8	10.7	7.6	7.7	7.5	7.0	8.6	9.6	7.3	7.1	7.3	9.2	7.5	7.2	7.2	9.7	8.7	11.4	11.6	9.1	9.5	9.1	12.4	7.0	8.9
25	10.0	11.6	10.5	11.6	11.8	13.4	12.0	12.1	12.4	12.8	11.5	12.8	10.0	10.6	9.9	9.5	10.2	9.9	9.9	9.6	9.5	8.8	10.5	10.2	13.4	8.8	10.9
26	10.6	10.4	12.8	11.6	12.4	12.7	9.6	9.1	9.0	9.4	9.2	9.2	9.4	9.8	9.7	8.9	9.9	9.7	9.2	7.8	9.6	9.0	9.1	9.5	12.8	7.8	9.9
27	9.1	9.5	9.8	9.9	9.9	10.3	11.3	13.1	12.0	10.4	9.9	10.5	11.3	8.8	7.2	12.3	11.2	10.3	9.5	9.6	9.6	9.7	9.8	10.2	13.1	7.2	10.2
28	9.2	9.3	10.4	10.1	10.4	9.5	9.5	9.8	9.8	9.7	9.4	9.6	8.7	9.9	10.0	9.5	10.0	9.6	9.7	10.2	9.4	10.3	9.2	9.2	10.4	8.7	9.7
29	9.2	8.7	8.7	9.8	9.6	12.4	12.6	16.4	21.3	30.3	23.0	12.5	12.1	10.3	10.0	9.8	9.7	9.8	10.3	9.7	10.0	10.2	9.8	10.4	30.3	8.7	12.4
30	9.5	9.4	9.1	9.8	10.1	9.5	10.5	11.4	15.8	17.3	44.9	54.9	45.6	9.9	10.1	10.5	9.8	9.9	9.0	9.6	9.9	9.4	11.0	10.1	54.9	9.0	15.3
31	9.0	10.3	9.2	10.4	9.4	10.1	9.4	11.0	9.1	9.4	9.2	9.9	12.5	11.1	9.7	11.5	10.8	8.6	8.1	9.3	9.1	8.8	9.9	9.8	12.5	8.1	9.8
Max.	**65.5**	**52.1**	**55.7**	**64.4**	**66.9**	**60.2**	**58.1**	**58.2**	**72.0**	**72.4**	**47.8**	**59.1**	**63.6**	**66.7**	**59.0**	**58.9**	**69.0**	**77.0**	**67.9**	**77.2**	**65.7**	**75.8**	**61.7**	**68.0**	**77.2**		
Min.	**6.7**	**6.4**	**6.3**	**6.3**	**7.6**	**6.0**	**5.3**	**4.6**	**6.1**	**7.8**	**7.0**	**6.9**	**6.1**	**6.2**	**7.2**	**3.7**	**5.4**	**6.1**	**7.2**	**5.6**	**7.5**	**5.9**	**5.2**	**7.1**		**3.7**	
Avg.	**20.5**	**19.9**	**20.4**	**17.3**	**18.4**	**17.4**	**18.2**	**18.2**	**19.8**	**18.0**	**15.2**	**17.2**	**17.6**	**19.2**	**17.9**	**18.4**	**18.9**	**21.5**	**20.0**	**17.9**	**19.4**	**20.0**	**19.1**	**18.7**			**18.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.0	9.4	7.1	7.8	8.7	9.9	11.5	11.1	12.3	12.5	11.9	10.1	10.0	10.5	8.7	9.1	10.0	10.4	10.4	10.2	9.8	12.7	12.7	10.8	12.7	7.1	10.3
2	13.0	10.1	10.0	8.1	10.8	8.6	9.5	9.7	9.6	9.9	10.9	10.6	11.1	9.9	11.5	11.0	10.6	10.3	15.1	11.7	12.1	9.1	14.3	16.3	16.3	8.1	11.0
3	14.2	16.6	15.1	17.7	12.6	13.0	16.6	11.7	8.9	9.3	8.8	8.2	7.9	7.4	7.7	10.5	8.5	7.9	7.4	6.4	10.8	10.0	9.1	7.4	17.7	6.4	10.6
4	7.5	8.8	50.0	22.1	9.6	10.0	45.1	51.2	45.6	45.2	17.3	8.7	5.4	5.5	4.3	13.7	9.4	28.0	51.2	9.1	28.4	31.2	58.5	15.3	58.5	4.3	24.2
5	16.2	9.0	9.4	10.1	9.7	8.8	8.7	35.5	52.9	38.1	11.9	66.4	36.4	9.4	9.0	38.1	36.9	25.7	6.6	6.7	11.9	6.3	67.8	37.9	67.8	6.3	23.7
6	16.8	31.1	19.9	6.2	7.4	12.8	7.4	5.5	9.0	11.1	51.9	17.7	21.7	11.1	6.3	22.1	43.2	6.3	23.0	30.8	23.0	8.7	9.5	65.7	65.7	5.5	19.5
7	30.8	31.6	8.2	10.5	23.1	19.1	36.8	29.5	18.3	8.5	9.9	9.3	9.6	9.3	8.4	9.7	9.3	9.6	8.9	10.2	9.6	8.7	9.1	8.6	36.8	8.2	14.4
8	8.3	9.2	9.5	10.0	8.9	8.4	9.1	8.8	9.4	10.1	11.3	9.3	8.8	9.1	71.3	34.8	15.0	53.5	32.8	35.9	18.9	13.0	10.4	11.9	71.3	8.3	17.8
9	14.2	10.2	7.6	7.7	8.4	12.1	12.0	15.2	15.3	17.5	30.9	37.3	62.3	25.8	11.4	14.6	23.7	7.6	11.5	18.0	8.7	31.7	39.7	26.0	62.3	7.6	19.5
10	64.4	18.7	26.9	16.2	5.5	8.1	13.8	60.0	70.3	61.4	62.2	44.2	10.0	72.0	51.4	38.1	15.8	12.4	10.5	16.4	32.0	11.0	13.5	46.0	72.0	5.5	32.5
11	49.7	27.4	45.5	66.8	51.9	9.8	13.2	52.8	29.7	33.1	43.7	41.0	18.2	16.3	10.1	12.9	37.1	54.3	22.6	23.5	19.5	20.5	33.3	37.0	66.8	9.8	32.1
12	53.2	44.8	11.9	38.3	28.0	14.3	12.8	9.5	27.0	50.2	15.2	21.2	14.5	13.5	17.7	15.7	13.5	15.2	39.2	33.5	29.6	23.8	56.8	28.2	56.8	9.5	26.1
13	53.0	26.3	21.8	32.2	27.5	26.8	20.6	33.6	36.7	29.4	51.8	42.7	30.6	18.6	22.3	18.3	25.9	26.0	23.7	35.4	48.0	26.5	15.3	31.9	53.0	15.3	30.2
14	14.5	10.9	14.8	11.9	9.6	6.4	6.6	10.7	13.9	8.4	12.7	9.4	7.1	7.8	8.0	8.3	7.2	8.2	7.6	7.9	7.9	6.8	7.0	7.9	14.8	6.4	9.2
15	9.7	7.8	7.3	8.2	8.3	7.6	7.3	9.2	9.1	8.1	9.5	6.9	8.1	6.9	7.5	9.2	11.7	9.1	8.8	8.6	8.3	9.6	8.7	9.2	11.7	6.9	8.5
16	9.0	8.6	8.8	8.6	7.7	9.1	9.4	9.2	9.5	9.7	10.7					7.4	11.9	12.7	22.9	18.3	61.0	24.5	7.9	7.4	61.0	7.4	13.7
17	28.4	14.1	10.4	11.7	12.5	17.4	19.3	22.1	26.8	19.5	31.6	26.7	13.1	64.4	64.7	81.9	44.3	41.7	21.0	29.6	34.8	14.0	10.0	8.9	81.9	8.9	27.9
18	13.1	9.5	10.7	22.4	19.0	12.4	21.7	23.0	20.6	38.7	22.2	12.6	13.5	16.6	17.8	14.1	21.5	36.4	26.3	21.9	43.0	41.8	44.0	64.3	64.3	9.5	24.5
19	47.2	51.4	17.0	23.5	25.9	23.6	33.5	28.1	25.0	27.3	27.8	14.1	14.2	15.7	15.1	18.4	25.0	22.1	26.4	31.0	43.9	43.8	14.8	17.6	51.4	14.1	26.3
20	18.0	11.2	19.7	7.8	10.0	7.7	7.9	6.8	6.7	7.5	6.0	7.3	8.8	8.1	9.3	10.3	7.8	8.4	10.9	11.3	10.4	9.9	9.5	8.1	19.7	6.0	9.6
21	8.6	7.7	6.8	6.3	8.2	5.3	6.5	7.7	9.8	8.8	7.8	6.2	11.2	12.1	8.8	6.7	14.3	11.5	12.4	30.6	13.4	15.3	14.9	21.3	30.6	5.3	10.9
22	34.1	59.6	60.8	50.5	56.5	60.3	61.1	29.6	28.5	26.2	28.2	30.5	28.7	23.5	19.4	15.9	18.9	17.2	14.9	15.4	15.7	16.4	16.8	15.3	61.1	14.9	31.0
23	15.4	15.2	30.1	16.0	13.3	18.1	23.8	19.6	39.8	13.8	12.5	22.2	24.9	15.7	14.1	24.0	15.4	32.0	47.4	44.2	28.5	49.3	18.5	21.0	49.3	12.5	23.9
24	20.6	23.7	37.9	32.2	18.8	18.5	19.1	17.9	16.1	17.5	15.9	11.4	12.3	13.2	11.5	10.8	29.5	9.9	12.0	13.5	17.4	18.9	20.8	19.7	37.9	9.9	18.3
25	22.9	20.1	24.8	19.1	26.0	25.7	20.0	19.4	13.7	12.4	9.7	5.5	5.4	6.6	8.6	10.5	18.2	18.0	13.4	13.7	11.7	10.0	13.0	12.3	26.0	5.4	15.0
26	10.5	11.3	9.8	8.9	9.5	9.9	11.5	9.2	12.0	7.3	8.3	8.4	6.9	8.0	8.3	7.8	8.0	10.6	10.3	13.2	28.9	21.6	13.5	18.4	28.9	6.9	11.3
27	20.5	62.3	31.6	49.6	52.0	48.5	72.8	29.8	55.9	49.2	33.8	22.4	20.8	14.3	15.0	15.2	14.7	15.4	14.1	14.0	16.4	16.8	16.9	15.1	72.8	14.0	29.9
28	13.7	15.0	14.2	14.3	14.4	13.8	13.5	14.6	14.8	15.8	16.6	18.2	16.7	29.2	23.4	15.6	11.1	28.8	11.7	18.3	42.4	19.7	26.6	11.9	42.4	11.1	18.1
29	9.5	10.8	9.2	9.8	9.5	12.2	12.6	12.8	12.0	11.7	9.2	9.6	10.9	10.4	13.0	35.4	20.3	34.1	22.9	26.2	11.7	13.1	28.8	11.5	35.4	9.2	15.3
30	9.1	8.9	9.2	9.8	13.7	13.7	11.0	12.7	14.5	14.8	18.4	17.2	10.5	13.3	12.9	11.9	14.3	20.0	23.1	57.4	7.1	7.5	6.0	8.5	57.4	6.0	14.4
31	7.4	7.6	8.1	9.2	8.2	8.4	8.8	8.5	12.5	8.0	7.7	8.1	9.4	11.0	8.1	6.5	17.5	19.8	23.2	34.2	12.7	13.4	9.0	13.4	34.2	6.5	11.7
Max.	**64.4**	**62.3**	**60.8**	**66.8**	**56.5**	**60.3**	**72.8**	**60.0**	**70.3**	**61.4**	**62.2**	**66.4**	**62.3**	**72.0**	**71.3**	**81.9**	**44.3**	**54.3**	**51.2**	**57.4**	**61.0**	**49.3**	**67.8**	**65.7**	**81.9**		
Min.	**7.4**	**7.6**	**6.8**	**6.2**	**5.5**	**5.3**	**6.5**	**5.5**	**6.7**	**7.3**	**6.0**	**5.5**	**5.4**	**5.5**	**4.3**	**6.5**	**7.2**	**6.3**	**6.6**	**6.4**	**7.1**	**6.3**	**6.0**	**7.4**		**4.3**	
Avg.	**21.4**	**19.6**	**18.5**	**18.5**	**17.3**	**15.5**	**18.8**	**20.2**	**22.1**	**20.7**	**20.2**	**18.8**	**15.6**	**16.5**	**16.8**	**18.0**	**18.4**	**20.1**	**19.1**	**21.2**	**21.9**	**18.3**	**20.5**	**20.5**			**19.1**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.2	9.7	13.0	11.8	24.4	28.0	17.7	16.2	21.4	14.1	15.6	15.0	15.6	15.1	13.7	20.2	27.6	80.1	73.4	38.7	42.0	66.5	31.7	30.6	80.1	9.7	27.3
2	27.7	16.0	21.0	21.9	24.6	19.3	15.3	17.9	11.7	15.8	30.2	47.3	21.3	11.1	12.5	19.2	14.5	13.1	17.8	17.1	7.9	5.1	7.1	6.6	47.3	5.1	17.6
3	6.1	7.3	8.0	9.5	8.0	8.8	9.6	10.6	10.5	9.6	8.1	7.5	9.3	8.2	8.4	9.9	11.1	11.5	10.3	10.0	9.8	10.0	8.7	9.5	11.5	6.1	9.2
4	11.0	12.8	10.4	11.0	12.2	11.9	10.7	10.5	10.8	10.2	12.0	10.4	9.8	10.0	9.5	9.7	10.0	9.9	9.7	9.1	8.9	9.0	9.7	9.5	12.8	8.9	10.4
5	9.3	9.6	9.8	8.9	9.1	8.8	8.8	8.5	8.4	8.8	9.1	10.1	14.0	9.5	12.1	9.3	9.3	8.4	8.9	9.1	8.9	9.4	9.4	10.1	14.0	8.4	9.5
6	9.9	11.5	11.2	12.2	11.6	10.5	8.6	9.5	12.6	20.2	32.9	40.7	60.8	48.3	29.7	60.4	37.1	11.5	14.7	17.7	16.3	23.4	12.5	10.5	60.8	8.6	22.2
7	7.3	5.1	6.6	6.5	42.6	46.0	74.2	65.6	23.8	28.2	30.5	18.8	21.0	24.6	21.7	32.2	51.1	39.8	31.2	25.6	22.4	19.8	44.2	72.4	74.2	5.1	31.7
8	72.7	54.7	42.6	50.5	36.6	10.4	13.7	14.4	7.4	9.9	8.1	11.4	9.3	9.1	12.4	11.9	11.0	12.1	9.9	11.0	11.3	10.7	11.5	10.6	72.7	7.4	19.3
9	9.8	10.3	8.8	9.5	10.2	9.6	9.2	9.0	9.0	8.8	8.2	8.4	8.6	9.2	9.6	9.4	10.5	9.8	9.7	10.0	11.7	12.3	16.4	23.4	23.4	8.2	10.5
10	14.4	13.9	10.7	10.2	10.7	12.5	11.5	10.4	11.7	11.7	12.5	13.1	29.5	43.1			61.3	44.1	35.5	37.9	62.8	52.0	68.8	35.5	68.8	10.2	27.9
11	40.0	18.7	11.0	6.5	9.9	9.3	7.8	7.7	8.2	10.4	9.1	9.6	9.0	8.6	10.8	10.8	12.4	11.6	11.8	11.2	12.0	12.1	11.7	11.7	40.0	6.5	11.7
12	11.0	11.9	27.1	42.2	6.5	14.8	24.1	17.6	16.8	43.9	43.9	28.1	26.3	38.2	40.4	43.0	36.0	30.4	44.7	33.5	21.9	16.1	27.2	29.3	44.7	6.5	28.1
13	61.6	36.0	18.9	42.8	30.9	25.0	66.0	9.8	7.3	30.9	53.2	6.2	5.4	10.5	10.7	20.4	18.2	14.1	13.6	21.3	20.6	14.3	25.9	24.1	66.0	5.4	24.5
14	31.6	33.1	33.8	19.6	15.1	15.5	16.9	18.7	21.0	22.5	13.7	12.0	13.1	13.2	11.3	9.5	11.6	11.5	12.1	18.8	10.4	9.4	10.8	11.2	33.8	9.4	16.5
15	12.5	12.8	13.6	12.7	12.8	13.1	12.3	12.6	15.3	30.9	21.2	54.5	30.7	58.3	14.9	38.0	38.3	42.2	31.9	30.5	38.4	35.3	55.8	32.3	58.3	12.3	27.9
16	9.1	15.8	13.0	4.1	3.4	3.9	53.9	17.5	16.8	36.4	41.8	44.5	56.4	11.1	14.0	49.5	9.3	9.3	9.3	9.0	9.0	7.9	6.4	6.8	56.4	3.4	19.1
17	9.6	8.8	7.7	8.5	9.9	10.4	10.7	11.8	14.1	11.7	12.9	12.3	16.4	18.1	18.9	13.1	10.8	11.5	15.6	24.0	21.3	18.9	18.0	31.6	31.6	7.7	14.4
18	39.0	23.2	13.5	18.3	11.6	10.4	31.9	13.5	21.3	20.8	31.9	54.5	46.5	41.5	65.6	28.6	35.0	49.5	54.6	27.3	9.8	5.5	5.3	7.2	65.6	5.3	27.8
19	47.9	49.9	17.9	17.5	22.3	50.5	48.3	51.6	37.7	37.2	30.2	62.7	50.3	61.4	22.6	29.6	43.7	16.2	18.0	23.2	21.5	19.7	18.7	20.2	62.7	16.2	34.1
20	20.9	21.7	19.5	62.6	71.7	55.6	40.1	39.2	41.2	44.0	50.0	36.9	47.1	25.1	37.0	48.9	15.9	18.7	22.8	15.3	22.9	14.5	15.3	18.6	71.7	14.5	33.6
21	14.6	35.3	38.3	55.9	34.4	61.7	44.3	48.5	32.6	31.9	42.4	32.2	29.6	45.7	43.3	46.1	40.4	43.6	36.1	44.1	36.0	55.9	62.9	43.3	62.9	14.6	41.6
22	45.3	43.0	57.5	49.7	54.5	55.2	21.7	29.7	26.1	43.9	46.4	35.4	59.9	42.4	36.7	51.6	32.5	46.9	52.1	57.3	54.4	40.6	52.4	43.3	59.9	21.7	44.9
23	68.3	21.1	44.7	11.9	36.1	7.0	35.0	52.8	45.9	39.8	39.3	20.8	37.9	38.7	39.4	38.0	36.8	44.0	52.5	72.4	31.6	22.3	20.1	30.4	72.4	7.0	36.9
24	20.5	23.5	19.2	22.2	28.7	17.6	22.1	17.3	8.8	7.5	6.4	9.5	7.5	7.7	8.5	11.1	24.5	24.6	24.7	22.6	18.1	16.1	12.3	11.4	28.7	6.4	16.3
25	7.1	8.4	7.6	8.0	9.8	12.1	8.4	16.2	48.7	7.2	25.0	50.6	14.9	41.9	52.0	35.1	35.3	39.2	23.7	26.7	22.9	30.3	41.9	31.2	52.0	7.1	25.2
26	40.7	50.6	38.3	70.8	58.7	59.3	65.5	59.4	65.7	22.2	35.6	47.3	31.7	52.7	60.8	56.2	56.6	34.4	28.8	17.5	16.8	6.7	6.7	5.7	70.8	5.7	41.2
27	7.1	6.4	6.6	8.3	8.0	9.6	18.7	38.0	7.4	10.5	21.3	28.5	53.5	23.3	14.8	15.1	20.0	26.7	13.6	19.5	36.4	47.0	33.2	34.6	53.5	6.4	21.2
28	29.4	16.1	17.9	23.4	23.2	15.7	13.3	14.6	39.5	31.6	34.6	24.4	16.6	17.9	15.0	28.7	32.5	29.6	30.5	53.9	42.7	14.6	15.1	14.6	53.9	13.3	24.8
Max.	**72.7**	**54.7**	**57.5**	**70.8**	**71.7**	**61.7**	**74.2**	**65.6**	**65.7**	**44.0**	**53.2**	**62.7**	**60.8**	**61.4**	**65.6**	**60.4**	**61.3**	**80.1**	**73.4**	**72.4**	**62.8**	**66.5**	**68.8**	**72.4**	**80.1**		
Min.	**6.1**	**5.1**	**6.6**	**4.1**	**3.4**	**3.9**	**7.8**	**7.7**	**7.3**	**7.2**	**6.4**	**6.2**	**5.4**	**7.7**	**8.4**	**9.3**	**9.3**	**8.4**	**8.9**	**9.0**	**7.9**	**5.1**	**5.3**	**5.7**		**3.4**	
Avg.	**24.9**	**21.0**	**19.6**	**22.7**	**22.8**	**21.9**	**25.7**	**23.2**	**21.5**	**22.2**	**25.9**	**26.9**	**26.8**	**26.6**	**23.9**	**28.0**	**26.9**	**26.6**	**25.6**	**25.5**	**23.2**	**21.6**	**23.6**	**22.4**			**24.1**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	15.1	30.7	23.1	23.7	17.1	13.5	16.5	21.3	29.2	14.8	7.0	6.6	4.4	6.1	7.2	8.4	8.9	9.2	7.1	7.9	7.8	6.3	6.5	9.8	30.7	4.4	12.8
2	13.0	7.0	7.4	8.8	9.5	9.3	10.0	7.2	6.4	7.3	6.4	7.6	7.0	6.7	6.5	8.9	8.9	10.3	10.0	9.5	10.0	9.4	10.0	8.4	13.0	6.4	8.6
3	9.7	7.9	8.9	8.7	8.8	7.1	6.5	8.3	8.1	9.7	9.1	8.7	8.4	5.3	4.9	5.1	5.1	6.8	5.3	5.9	6.0	7.3	5.6	6.0	9.7	4.9	7.2
4	6.2	6.7	6.2	7.2	7.2	6.4	7.5	7.6	7.4	7.1	7.6	7.1	13.6	28.3	21.2	18.7	14.8	8.5	9.7	10.4	13.6	8.2	8.1	7.6	28.3	6.2	10.3
5	8.5	7.5	12.1	10.5	10.0	8.4	10.7	26.3	50.3	73.5	61.4	30.7	51.6	46.6	31.8	64.6	52.4	52.8	34.0	25.6	39.8	46.1	36.9	37.3	73.5	7.5	34.6
6	31.7	21.1	42.5	39.4	23.6	25.0	42.1	53.0	28.8	21.9	14.1	14.0	12.9	19.8	15.3	25.1	18.4	22.9	34.9	41.0	28.4	20.6	20.9	10.3	53.0	10.3	26.1
7	8.7	10.9	25.3	25.5	43.0	25.5	15.1	27.8	15.2	13.1	12.4	11.4	13.8	14.3	15.3	25.6	31.6	60.5	63.9	61.5	62.1	65.1	73.8	32.7	73.8	8.7	31.4
8	29.4	24.1	27.9	27.1	30.8	56.7	42.0	29.5	60.8	62.1	63.8	47.1	50.9	48.8	53.3	43.6	34.7	47.2	46.4	48.8	65.6	58.7	83.3	72.2	83.3	24.1	48.1
9	54.7	79.0	70.9	71.6	69.7	66.7	69.7	46.7	79.0	57.2	51.8	61.7	70.7	50.2	64.0	72.0	47.4	28.7	27.2	23.7	19.7	15.0	17.9	25.0	79.0	15.0	51.7
10	14.9	23.5	30.8	27.3	28.5	14.1	17.1	17.8	14.9	18.2	20.8	20.9	15.0	10.3	7.9	16.0	70.3	14.6	10.5	8.1	7.1	11.7	11.4	10.1	70.3	7.1	18.4
11	8.2	9.7	11.4	10.6	9.4	9.4	8.7	10.8	11.3	14.2	12.7	9.5	11.2	21.1	14.2	6.1	5.1	7.2	8.7	7.3	8.9	9.0	9.8	9.1	21.1	5.1	10.1
12	20.0	14.8	15.3	15.7	18.4	15.1	11.2	11.0	11.1	10.3	10.7	11.6	13.5	10.1	9.0	8.9	8.3	5.8	6.7	6.4	7.0	8.1	43.0	41.8	43.0	5.8	13.9
13	10.7	23.8	35.8	49.6	43.9	14.2	39.9	42.3	41.3	16.4	33.2	33.7	24.8	16.2	12.8	12.5	8.8	11.8	15.2	8.2	9.2	35.1	14.1	30.9	49.6	8.2	24.3
14	44.4	9.2	13.1	8.2	6.2	7.4	8.5	10.1	16.0	21.0	22.9	22.7	21.4	20.5	17.6	16.8	22.4	49.9	31.7	19.8	18.8	21.3	24.2	23.3	49.9	6.2	19.9
15	23.8	17.7	18.5	17.9	21.0	15.8	22.6	18.3	18.0	21.5	22.4	37.5	44.1	18.9	31.5	43.5	23.2	33.1	44.9	36.1	13.2	10.8	10.4	10.0	44.9	10.0	23.9
16	8.9	11.0	9.0	8.1	6.7	8.8	9.1	9.3	9.4	8.7	7.6	6.8	6.8	9.7	11.6	11.6	9.6	10.6	12.1	11.1	10.9	11.8	12.6	11.1	12.6	6.7	9.7
17	9.7	9.4	5.5	4.5	6.1	6.8	7.4	7.8	8.0	7.4	7.4	9.2	8.0	9.3	8.5	8.3	10.4	12.6	12.0	10.0	8.4	9.2	9.2	8.6	12.6	4.5	8.5
18	8.9	8.4	9.4	9.2	8.7	9.1	8.2	10.8	9.9	8.5	8.5	8.1	7.8	8.4	8.5	9.1	9.1	9.7	40.8	44.7	31.9	16.0	47.0	18.8	47.0	7.8	15.0
19	15.7	20.8	11.7	13.4	10.6	8.3	7.6	7.7	49.9	10.4	8.8	36.0	6.5	5.1	10.7	7.0	16.0	25.1	25.3	23.4	57.6	9.4	6.0	6.1	57.6	5.1	16.6
20	7.2	4.6	6.7	6.0	6.1	5.4	5.9	9.2	52.9	32.6	21.5	28.4	66.8	10.1	5.1	7.0	33.4	20.4	19.0	20.2	24.3	17.5	13.4	15.7	66.8	4.6	18.3
21	24.7	31.7	30.4	18.7	22.6	27.5	48.1	30.0	48.4	60.0	29.9	19.3	52.0	27.0	63.1	47.6	34.4	27.4	68.1	33.9	25.9	46.9	54.4	26.8	68.1	18.7	37.5
22	25.8	19.1	16.8	16.8	18.8	15.9	11.4	13.4	26.3	30.2	9.6	10.0	8.8	7.6	9.1	8.1	17.1	54.8	36.5	71.9	38.3	18.1	21.8	17.2	71.9	7.6	21.8
23	18.6	22.4	16.8	43.1	71.9	56.9	11.2	19.4	11.7	10.7	16.7	25.7	53.8	22.8	58.9	36.7	49.2	29.3	16.0	33.0	26.0	28.0	33.6	33.6	71.9	10.7	31.1
24	16.6	12.7	11.4	9.7	8.4	10.0	8.7	20.3	16.3	11.0	14.6	12.7	27.7	47.7	26.6	7.6	23.1	69.5	56.3	17.9	13.3	16.6	14.9	16.0	69.5	7.6	20.4
25	16.1	14.9	16.1	62.1	16.2	31.2	26.4	13.5	10.6	11.4	10.0	11.3	38.3	27.0	19.6	32.8	50.3	56.7	34.3	19.3	32.5	26.6	18.5	17.3	62.1	10.0	25.5
26	46.7	25.6	14.5	16.4	16.3	17.5	19.9	29.8	12.3	12.3	34.1	18.4	9.5	7.3	7.5	5.7	12.6	11.2	61.7	40.2	24.8	34.9	20.3	23.4	61.7	5.7	21.8
27	23.2	10.9	40.4	22.7	11.3	34.0	51.8	13.4	7.3	24.8	34.1	5.7	4.7	4.8	3.0	4.5	7.9	9.7	9.0	14.9	25.7	22.3	8.8	54.4	54.4	3.0	18.7
28	10.9	29.2	45.6	7.7	7.6	5.3	4.2	4.1	49.7	49.6	52.9	13.5	4.7	5.8	5.4	4.9	6.2	8.1	6.6	10.5	52.4	21.3	15.7	77.5	77.5	4.1	20.8
29	40.6	30.5	29.7	14.1	15.5	18.1	14.1	15.6	12.3	7.2	5.2	6.7	14.7	16.9	4.3	5.4	14.8	46.4	34.4	61.5	45.0	48.7	12.9	6.1	61.5	4.3	21.7
30	4.9	7.1	10.9	10.1	11.0	12.0	12.6	15.8	10.7	21.7	26.7	25.0	17.0	24.2	18.0	14.9	15.3	18.7	20.0	26.8	42.9	25.8	27.2	22.5	42.9	4.9	18.4
31	21.9	25.6	26.3	30.4	22.9	19.2	18.0	30.5	17.0	14.3	11.4	10.6	11.4	11.3	12.1	10.8	12.6	9.6	9.2	65.9	58.8	17.1	15.1	30.1	65.9	9.2	21.3
Max.	**54.7**	**79.0**	**70.9**	**71.6**	**71.9**	**66.7**	**69.7**	**53.0**	**79.0**	**73.5**	**63.8**	**61.7**	**70.7**	**50.2**	**64.0**	**72.0**	**70.3**	**69.5**	**68.1**	**71.9**	**65.6**	**65.1**	**83.3**	**77.5**	**83.3**		
Min.	**4.9**	**4.6**	**5.5**	**4.5**	**6.1**	**5.3**	**4.2**	**4.1**	**6.4**	**7.1**	**5.2**	**5.7**	**4.4**	**4.8**	**3.0**	**4.5**	**5.1**	**5.8**	**5.3**	**5.9**	**6.0**	**6.3**	**5.6**	**6.0**		**3.0**	
Avg.	**19.3**	**18.6**	**21.0**	**20.8**	**19.6**	**18.7**	**19.1**	**19.0**	**24.2**	**22.2**	**21.1**	**18.7**	**22.6**	**18.3**	**18.9**	**19.3**	**22.0**	**25.4**	**26.4**	**26.6**	**27.0**	**22.7**	**22.8**	**23.2**			**21.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

April 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	21.0	11.8	18.2	34.1	42.8	42.4	33.6	18.2	20.1	23.4	22.9	65.8	72.4	54.9	41.6	61.5	64.0	46.3	47.6	37.7	49.2	42.8	58.7	52.1	72.4	11.8	41.0
2	48.4	25.5	23.2	27.5	20.6	30.7	47.6	57.7	44.6	38.5	38.2	21.2	27.1	20.6	24.4	8.2	9.4	7.1	8.3	7.6	9.7	6.6	7.0	8.9	57.7	6.6	23.7
3	6.1	6.5	7.9	8.4	8.2	8.7	8.2	8.6	8.1	10.7	9.0	9.4	8.7	8.9	11.8	12.0	8.7	7.5	7.4	8.3	7.4	12.5	8.9	10.3	12.5	6.1	8.8
4	12.8	12.3	8.0	5.8	4.5	5.5	6.4	5.2	5.6	5.9	7.8	39.6	14.7	44.4	47.7	28.5	47.0	19.2	22.4	55.0	71.4	72.7	72.6	57.8	72.7	4.5	28.0
5	65.2	41.5	42.6	50.6	48.1	54.5	38.5	61.7	18.3	28.7	34.5	24.8	24.5	45.5	59.5	34.6	47.7	38.4	46.8	54.6	45.7	33.5	27.8	18.9	65.2	18.3	41.1
6	15.8	13.9	13.3	25.9	35.6	40.8	17.7	19.5	15.0	10.5	16.4	8.8	8.8	8.3	6.2	8.2	8.4	10.6	10.4	22.2	52.2	49.6	49.6	50.4	52.2	6.2	21.6
7	51.1	37.0	42.5	44.5	67.3	10.3	7.5	6.6	4.7	12.7	35.8	29.3	25.9	68.5	26.4	46.0	50.5	54.3	51.6	49.1	46.7	34.4	22.5	31.3	68.5	4.7	35.7
8	40.3	41.2	38.1	39.2	48.1	53.7	34.6	12.5	17.4	21.7	21.1	15.8	15.7	30.2	31.6	33.3	25.0	19.5	8.6	7.3	4.0	10.0	21.1	42.4	53.7	4.0	26.3
9	39.7	65.4	54.1	8.7	15.3	23.4	18.4	21.3	8.2	4.8	3.5	41.8	18.8	4.9	5.5	5.6	12.6	15.7	57.7	52.5	62.3	56.2	89.5	53.0	89.5	3.5	30.8
10	45.7	37.5	48.1	47.4	31.0	51.2	15.8	12.9	16.7	18.0	19.8	23.1	32.5	21.0	13.7	16.6	17.7	30.2	55.8	73.5	38.7	24.2	23.5	33.1	73.5	12.9	31.2
11	35.1	26.8	45.0	42.5	72.1	61.1	28.0	18.4	22.2	12.3	11.9	8.3	9.0	12.9	11.6	8.3	7.8	8.1	7.8	8.9	10.7	11.0	11.6	11.0	72.1	7.8	20.9
12	11.3	11.2	10.1	8.8	9.7	10.1	10.8	8.0	9.0	9.9	11.1	12.1	8.2	6.3	5.7	9.1	10.4	23.5	40.7	39.8	33.3	56.3	63.0	84.7	84.7	5.7	21.0
13	54.9	20.1	20.7	18.6	22.6	18.8	19.0	29.4	60.5	52.1	27.2	54.9	41.8	21.6	24.3	32.4	36.7	28.8	45.8	64.6	35.0	27.4	15.2	14.2	64.6	14.2	32.8
14	13.8	13.6	13.7	14.3	13.6	13.2	13.8	14.4	14.3	13.8	14.1	14.3	17.0	20.4	22.2	29.9	31.7	57.9	53.8	56.3	52.9	28.9	26.3	27.9	57.9	13.2	24.7
15	21.7	28.2	31.4	24.3	27.1	46.7	58.8	47.9	67.3	35.0	52.9	49.5	22.9	22.6	28.3	20.9	17.4	16.1	16.1	13.2	16.6	42.7	23.6	11.2	67.3	11.2	30.9
16	13.1	6.3	7.5	9.9	13.8	12.0	10.8	11.7	9.8	8.3	10.2	10.4	10.0	10.4	10.6	9.5	9.7	9.3	9.6	9.2	11.3	9.9	10.1	10.2	13.8	6.3	10.1
17	8.9	8.7	9.3	8.6	9.6	9.0	10.4	9.4	15.0	10.0	14.5	13.7	17.7	16.2	12.3	10.2	8.4	11.4	11.8	10.4	11.4	10.5	7.8	37.2	37.2	7.8	12.2
18	51.7	8.1	32.4	15.0	53.9	62.2	48.1	9.2	5.3	5.6	14.8	4.5	3.7	6.1	5.0	6.5	8.6	27.8	73.7	48.3	16.0	32.1	38.6	66.5	73.7	3.7	26.8
19	45.0	13.0	12.8	13.2	13.7	13.1	14.2	23.7	33.7	26.9	21.1	35.1	10.0	8.3	23.3	23.6	14.2	53.4	50.2	54.8	54.7	26.8	42.4	22.9	54.8	8.3	27.1
20	41.3	21.1	13.5	13.9	8.8	7.7	6.8	11.1	12.3	7.7	16.0	48.9	38.5	36.0	32.7	13.5	28.7	37.9	16.2	27.9	37.2	18.0	13.3	13.1	48.9	6.8	21.8
21	12.4	11.7	11.8	9.9	8.6	9.3	9.6	10.0	10.5	10.4	10.9	11.0	11.9	12.8	13.4	46.2	44.3	13.6	52.2	9.5	20.6	24.1	38.9	28.8	52.2	8.6	18.4
22	16.2	15.2	11.6	9.8	9.9	8.7	6.8	9.1	7.5	16.2	49.4	29.1	30.6	25.9	6.4	7.3	6.2	5.9	9.3	12.0	14.3	21.1	13.8	15.3	49.4	5.9	14.9
23	10.7	8.7	11.1	8.2	11.3	9.2	7.7	7.1	11.1	9.4	11.2	7.4	4.4	11.3	22.4	5.6	6.6	34.9	50.6	20.2	13.2	16.4	15.1	15.0	50.6	4.4	13.7
24	25.7	21.4	48.7	37.4	54.7	16.0	59.6	44.6	66.7	64.0	60.3	48.1	39.3	28.6	27.7	30.2	40.1	50.7	23.7	23.7	58.0	56.4	21.6	15.0	66.7	15.0	40.1
25	14.4	36.8	36.6	45.2	30.0	11.8	7.5	6.6	5.0	4.6	13.1	12.2	7.7	8.6	9.4	11.8	12.2	12.1	14.8	12.1	14.0	16.4	12.9	14.9	45.2	4.6	15.4
26	11.9	12.3	11.1	9.8	10.9	11.5	10.0	10.3	9.6	8.6	8.8	9.4	9.6	9.8	10.8	11.1	10.1	10.3	9.5	9.4	9.4	10.7	10.5	9.8	12.3	8.6	10.2
27	10.2	11.0	8.5	10.6	9.9	9.7	10.5	9.4	10.6	11.7	11.7	9.5	11.9	14.8	60.4	24.4	21.4	40.0	36.3	65.9	33.9	27.6	35.6	42.9	65.9	8.5	22.4
28	21.1	31.9	22.7	13.7	13.6	16.9	20.0	28.6	32.6	22.9	10.7	32.2	12.9	15.3	32.1	5.0	5.7	3.2	28.9	48.2	27.2	32.0	16.4	12.9	48.2	3.2	21.1
29	17.6	25.5	16.1	14.6	14.7	14.4	18.1	11.8	14.0	17.5	18.2	25.9	29.1	6.7	32.9	15.3	14.7	17.4	32.5	33.7	17.8	22.7	26.0	25.4	33.7	6.7	20.1
30	8.3	9.8	11.7	18.2	23.7	21.1	14.1	20.4	5.4	4.0	4.8	56.2	35.7	49.5	10.4	11.7	19.2	39.8	45.4	47.8	64.4	63.2	67.3	57.6	67.3	4.0	29.6
Max.	**65.2**	**65.4**	**54.1**	**50.6**	**72.1**	**62.2**	**59.6**	**61.7**	**67.3**	**64.0**	**60.3**	**65.8**	**72.4**	**68.5**	**60.4**	**61.5**	**64.0**	**57.9**	**73.7**	**73.5**	**71.4**	**72.7**	**89.5**	**84.7**	**89.5**		
Min.	**6.1**	**6.3**	**7.5**	**5.8**	**4.5**	**5.5**	**6.4**	**5.2**	**4.7**	**4.0**	**3.5**	**4.5**	**3.7**	**4.9**	**5.0**	**5.0**	**5.7**	**3.2**	**7.4**	**7.3**	**4.0**	**6.6**	**7.0**	**8.9**		**3.2**	
Avg.	**26.4**	**21.1**	**22.7**	**21.3**	**25.1**	**23.4**	**20.4**	**18.8**	**19.4**	**17.5**	**20.1**	**25.7**	**20.7**	**21.7**	**22.3**	**19.6**	**21.5**	**25.0**	**31.5**	**32.8**	**31.3**	**29.9**	**29.7**	**29.8**			**24.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	28.2	18.4	12.4	12.4	13.3	16.0	13.0	9.5	11.5	11.0	10.3	10.4	10.4	9.7	9.8	11.2	10.0	11.0	11.6	11.6	10.7	10.1	10.9	10.1	28.2	9.5	12.2
2	10.1	10.7	9.8	9.3	9.6	8.6	9.5	8.8	9.5	10.2	8.8	9.0	9.7	11.7	11.5	10.8	11.4	10.9	8.3	9.9	9.5	32.2	39.2	19.1	39.2	8.3	12.4
3	11.5	12.8	12.1	10.8	11.8	11.6	9.9	10.7	10.0	8.6	9.1	9.5	9.0	8.9	10.3	13.6	13.4	16.5	13.4	11.2	12.7	13.0	11.6	11.2	16.5	8.6	11.4
4	9.3	11.7	13.5	11.7	15.9	34.4	64.1	39.0	50.3	47.0	27.3	47.0	58.6	66.4	37.8	46.1	66.4	30.9	41.2	44.2	74.0	34.2	16.0	17.4	74.0	9.3	37.7
5	13.4	14.0	20.7	14.9	12.7	11.5	11.0	10.4	8.7	11.2	10.3	11.7	12.5	11.4	57.0	43.2	55.1	76.5	42.5	37.7	25.9	42.1	41.6	10.6	76.5	8.7	25.3
6	13.4	43.8	37.7	22.2	17.0	17.6	19.0	10.8	7.2	25.8	15.7	16.7	16.8	18.0	33.8	15.4	16.2	15.1	20.9	29.5	30.1	32.0	32.9	29.0	43.8	7.2	22.4
7	20.9	26.5	31.6	28.4	34.1	39.9	34.5	28.8	29.0	26.6	24.6	30.0	50.1	70.0	57.9	49.0	31.6	42.6	47.4	42.4	50.0	58.1	20.1	17.4	70.0	17.4	37.1
8	15.7	28.3	36.3	17.2	12.5	9.1	8.2	6.0	8.8	11.9	8.6	9.2	9.6	9.4	10.7	10.5	11.2	9.9	9.9	10.3	10.2	10.4	10.4	10.4	36.3	6.0	12.3
9	9.8	9.7	10.4	9.5	9.7	10.0	9.8	10.9	9.4	10.2	10.3	10.3	9.8	9.4	9.2	9.8	10.0	9.0	9.1	10.0	10.1	10.0	10.0	10.3	10.9	9.0	9.9
10	10.7	9.9	10.7	10.6	9.1	8.7	11.6	13.1	14.0	22.6	22.5	15.6	32.7	37.0	35.6	42.8	50.3	60.3	37.6	59.7	15.4	33.4	9.8	22.8	60.3	8.7	24.8
11	24.2	5.5	8.6	23.1	48.3	12.4	11.4	6.1	5.2	5.8	6.6	24.3	23.6	33.6	37.4	18.7	10.2	25.7	44.7	11.5	32.5	14.1	14.8	21.8	48.3	5.2	19.6
12	12.6	13.7	14.2	10.0	16.6	14.0	40.1	13.3	11.1	17.0	19.1	39.4	39.9	27.5	14.9	25.4	60.2	65.5	65.1	57.7	67.3	12.6	17.8	9.1	67.3	9.1	28.5
13	9.9	7.9	14.4	12.2	12.1	12.0	13.0	13.5	13.0	15.0	7.2	10.2	27.3	42.6	38.3	25.2	38.9	40.2	64.9	56.6	19.0	12.9	28.3	61.0	64.9	7.2	24.8
14	52.2	20.4	23.0	17.6	33.8	12.2	8.7	5.1	36.6	30.1	11.9	15.3	20.2	25.4	19.8	18.4	17.6	25.1	17.3	20.0	16.3	38.4	54.8	12.6	54.8	5.1	23.0
15	20.4	35.3	8.6	20.0	38.0	16.9	43.1	13.3	12.0	20.8	17.8	12.6	6.0	8.4	5.8	5.0	5.3	5.7	10.4	14.0	29.0	24.9	19.7	63.1	63.1	5.0	19.0
16	65.5	38.7	14.4	13.8	18.1	15.2	21.6	28.6	13.3	5.4	10.9	13.4	11.5	15.6	9.1	7.1	5.6	7.5	5.6	19.9	9.1	7.6	9.6	18.2	65.5	5.4	16.1
17	36.5	10.1	5.6	5.9	5.4	6.5	7.5	7.2	8.9	8.8	10.0	13.4	11.4	15.6	13.7	11.5	13.9	21.4	26.1	30.1	32.8	43.3	55.6	17.1	55.6	5.4	17.4
18	8.1	9.2	10.7	6.2	6.7	19.2	3.5	13.9	41.4	28.0	23.9	35.0	34.1	28.1	44.8	63.8	57.7	36.5	37.7	41.0	36.5	62.5	66.2	30.8	66.2	3.5	31.1
19	23.9	27.1	18.0	15.7	18.6	29.1	12.9	7.4	4.4	34.4	14.7	27.9	18.2	31.7	28.3	53.4	57.0	38.1	15.3	15.6	41.7	38.2	24.9	13.6	57.0	4.4	25.4
20	9.5	10.9	9.8	11.9	10.7	9.7	9.7	11.3	11.6	10.0	11.0	11.8	9.6	8.4	8.0	10.5	11.4	12.8	8.0	14.9	29.9	33.3	18.6	56.0	56.0	8.0	14.6
21	36.2	31.7	62.4	50.0	62.8	39.8	15.7	14.7	31.9	16.9	15.6	16.4	21.4	52.1	46.9	29.2	56.0	58.9	41.2	26.5	21.4	14.5	13.4	15.6	62.8	13.4	33.0
22	18.9	19.5	15.4	17.9	18.6	15.7	13.5	11.2	12.6	11.5	50.3	19.0	36.4	38.2	18.3	16.9	15.6	14.6	14.0	27.7	55.8	12.4	16.9	15.6	55.8	11.2	21.1
23	7.0	22.0	51.0	61.0	49.8	56.3	32.4	34.2	41.3	17.1	20.4	27.2	10.1	6.5	7.6	11.0	21.1	14.0	21.0	54.8	64.1	21.3	9.6	10.3	64.1	6.5	28.0
24	7.4	7.7	10.3	56.3	56.9	12.2	33.5	10.1	23.4	7.7	7.9	13.6	2.1	63.7	19.5	15.7	13.7	17.1	49.9	43.6	51.3	24.9	10.7	10.9	63.7	2.1	23.7
25	14.7	9.9	57.7	52.8	35.5	12.0	50.8	57.4	50.6	33.3	8.8	11.9	7.8	18.1	23.8	13.5	31.5	36.4	49.9	75.0	22.7	12.8	10.7	9.6	75.0	7.8	29.5
26	8.8	10.1	11.4	8.7	10.4	13.4	10.1	8.1	8.3	40.8	19.8	9.9	7.0	14.9	45.1	13.1	16.2	22.6	27.2	55.3	40.5	14.2	10.4	24.6	55.3	7.0	18.8
27	11.8	9.4	71.5	55.6	11.8	15.0	15.9	13.7	18.8	15.7	30.7	12.5	60.3	53.7	9.8	21.2	17.1	25.5	19.3	30.5	58.2	15.0	7.7	18.1	71.5	7.7	25.8
28	9.1	13.5	38.7	17.2	13.7	10.9	42.6	52.1	23.5	5.2	5.3	4.6	4.4	4.4	3.3	3.9	3.6	7.8	11.8	14.6	31.1	18.7	17.5	15.8	52.1	3.3	15.6
29	46.1	44.1	47.0	37.0	56.3	31.6	12.4	49.6	28.1	14.9	48.1	17.8	29.5	29.2	27.9	43.3	68.3	50.2	52.2	39.9	64.7	32.3	45.5	44.0	68.3	12.4	40.0
30	38.2	20.0	39.4	19.8	34.6	8.5	9.5	10.0	17.6	11.9	40.7	40.4	46.4	41.1	36.4	48.5	21.5	65.8	45.4	40.1	61.7	65.2	46.5	32.1	65.8	8.5	35.0
31	63.8	8.6	10.2	11.3	11.4	14.9	16.1	37.9	18.6	14.2	10.4	7.9	5.6	6.3	8.8	8.7	7.8	7.8	17.3	18.8	11.0	18.1	24.4	46.0	63.8	5.6	16.9
Max.	**65.5**	**44.1**	**71.5**	**61.0**	**62.8**	**56.3**	**64.1**	**57.4**	**50.6**	**47.0**	**50.3**	**47.0**	**60.3**	**70.0**	**57.9**	**63.8**	**68.3**	**76.5**	**65.1**	**75.0**	**74.0**	**65.2**	**66.2**	**63.1**	**76.5**		
Min.	**7.0**	**5.5**	**5.6**	**5.9**	**5.4**	**6.5**	**3.5**	**5.1**	**4.4**	**5.2**	**5.3**	**4.6**	**2.1**	**4.4**	**3.3**	**3.9**	**3.6**	**5.7**	**5.6**	**9.9**	**9.1**	**7.6**	**7.7**	**9.1**		**2.1**	
Avg.	**21.5**	**18.1**	**23.8**	**21.6**	**23.1**	**17.6**	**19.8**	**18.3**	**19.0**	**17.7**	**17.4**	**17.9**	**21.0**	**26.3**	**23.9**	**23.1**	**26.6**	**28.4**	**28.6**	**31.4**	**33.7**	**26.2**	**23.4**	**22.7**			**23.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.9	60.7	63.4	26.9	33.9	21.7	15.1	11.4	18.6	13.4	11.0	8.6	12.4	7.2	5.7	7.5	5.9	13.9	27.9	18.0	36.2	31.9	19.8	8.2	64.9	5.7	22.7
2	14.3	17.2	9.3	6.6	9.6	20.3	12.4	10.5	7.4	5.2	5.2	4.9	9.5	70.1	39.9	34.7	33.1	39.3	49.6	75.6	69.0	22.4	45.8	40.1	75.6	4.9	27.2
3	48.8	65.7	66.4	35.3	43.3	59.0	25.6	22.2	39.2	48.8	69.3	31.6	38.9	52.6	49.8	34.0	30.9	63.9	37.5	57.6	36.9	33.3	74.3	30.9	74.3	22.2	45.7
4	24.2	15.5	23.2	28.7	15.0	14.4	10.6	7.3	16.3	19.9	29.9	10.6	12.3	6.5	6.1	8.4	9.9	11.1	9.8	11.5	13.3	11.2	39.2	8.1	39.2	6.1	15.1
5	6.6	7.5	13.9	55.2	72.4	51.3	4.7	5.6	24.1	31.6	10.7	5.4	4.9	5.2	4.8	4.8	6.1	7.0	10.2	7.7	6.4	14.5	20.3	17.2	72.4	4.7	16.6
6	6.7	7.9	8.7	60.6	7.6	21.5	7.3	19.9	18.2	19.9	17.9	11.8	10.3	12.2	12.0	17.5	22.3	46.2	49.2	48.0	48.7	32.5	61.4	20.5	61.4	6.7	24.5
7	19.7	9.7	20.7	37.3	48.6	59.2	47.4	78.3	61.4	37.0	75.5	52.7	83.8	75.0	71.5	57.6	57.7	49.5	42.8	65.5	51.1	24.5	43.3	38.4	83.8	9.7	50.3
8	43.1	29.0	32.0	17.8	18.9	12.6	15.5	12.5	12.3	10.9	10.1	11.9	10.7	11.2	12.8	11.6	13.0	12.3	12.6	10.5	12.4	11.2	9.5	10.3	43.1	9.5	15.2
9	11.5	12.0	11.0	10.9	10.0	11.5	10.3	11.2	11.1	10.3	11.0	11.2	11.2	10.7	11.3	11.4	11.8	51.1	46.8	46.7	32.6	60.2	28.8	46.6	60.2	10.0	20.9
10	52.3	56.9	73.8	42.2	53.5	58.8	78.7	66.6	73.9	64.6	61.5	72.7	74.3	69.7	54.1	67.2	50.1	65.4	59.7	62.2	54.0	30.0	38.9	64.4	78.7	30.0	60.2
11	69.5	43.0	56.3	27.1	23.4	14.9	34.5	15.2	15.6	18.9	15.3	11.0	11.5	10.5	10.8	11.7	10.9	12.3	11.7	12.1	14.0	11.6	11.5	11.3	69.5	10.5	20.2
12	11.6	11.0	12.4	10.8	11.4	11.4	10.5	10.4	8.7	12.8	33.7	25.8	40.0	49.5	26.0	65.2	28.4	22.1	22.0	11.4	18.4	14.4	39.7	56.9	65.2	8.7	23.5
13	29.1	31.4	22.5	40.3	26.1	67.3	25.8	25.9	34.2	49.3	15.0	7.4	4.6	4.8	5.8	6.8	3.4	5.4	7.1	10.3	8.6	8.2	29.7	51.4	67.3	3.4	21.7
14	27.9	21.8	60.2	35.3	30.1	54.9	52.6	16.8	79.3	8.5	12.8	11.2	7.1	10.9	37.9	41.8	27.1	6.1	7.2	38.9	27.3	21.6	10.3	8.7	79.3	6.1	27.3
15	9.5	10.3	10.5	11.1	15.4	38.1	28.1	19.5	18.5	17.8	11.1	7.8	7.9	14.5	8.6	10.4	33.9	39.3	26.6	16.6	49.1	55.0	26.7	50.0	55.0	7.8	22.3
16	32.6	26.3	35.8	46.6	15.4	12.9	25.7	7.8	12.6	8.2	8.2	38.1	29.8	13.3	48.1	50.3	33.2	26.3	33.2	51.6	27.6	7.4	5.5	9.5	51.6	5.5	25.2
17	6.4	39.3	17.9	69.9	21.5	9.6	5.3	8.1	4.1	4.7	8.1	23.6	27.9	13.2	11.0	11.6	8.2	5.9	7.8	10.8	31.7	37.2	14.5	13.8	69.9	4.1	17.2
18	13.0	54.7	9.4	9.3	10.1	10.3	11.3	11.1	12.1	11.3	9.7	10.8	10.6	11.5	10.3	12.3	10.9	10.7	10.7	8.5	12.0	14.3	10.0	8.7	54.7	8.5	12.6
19	10.4	9.6	12.0	10.1	10.0	9.4	9.4	9.6	12.0	12.7	13.4	11.6	8.3	9.9	11.0	22.7	42.7	23.4	18.2	11.2	10.3	26.9	10.6	6.2	42.7	6.2	13.8
20	13.6	12.0	47.6	13.3	49.0	52.4	7.5	26.5	3.6	4.4	5.9	13.4	19.9	43.4	43.0	19.8	61.4	55.2	20.3	29.9	8.9	9.5	16.5	17.2	61.4	3.6	24.8
21	15.2	8.5	18.2	10.5	12.3	13.3	10.2	8.4	8.5	21.1	12.4	6.8	7.5	3.6	4.8	7.2	4.1	6.2	6.8	12.0	13.8	44.0	63.9	55.0	63.9	3.6	15.6
22	69.2	16.9	15.0	39.5	17.3	12.3	40.4	54.5	52.5	21.8	20.7	29.0	8.6	25.0	41.0	39.7	53.4	18.1	19.9	21.6	21.8	15.5	41.4	6.9	69.2	6.9	29.3
23	9.3	10.5	19.4	15.4	44.7	59.4	6.5	32.4	7.1	4.6	19.0	10.5	12.3	9.0	6.8	4.0	3.4	7.0	3.8	5.7	13.4	7.8	21.0	22.8	59.4	3.4	14.8
24	23.9	25.5	24.8	10.2	16.5	8.2	8.6	6.9	18.2	24.8	5.7	3.8	8.5	11.5	7.9	16.1	12.2	8.0	8.8	8.2	24.6	37.2	21.3	19.3	37.2	3.8	15.0
25	12.7	15.0	32.3	78.0	46.8	27.3	17.2	46.0	10.4	11.2	16.1	13.4	6.6	6.0	14.5	6.7	12.1	6.3	11.2	21.9	18.2	22.5	24.7	30.7	78.0	6.0	21.2
26	26.5	18.2	27.5	45.5	50.8	47.4	9.0	11.4	34.9	26.3	45.7	19.7	16.1	23.0	33.4	58.6	19.0	9.8	36.3	55.8	26.6	47.7	14.1	18.6	58.6	9.0	30.1
27	30.8	33.9	62.7	39.5	60.1	11.4	6.7	26.7	9.8	11.6	5.7	5.5	6.2	5.4	6.1	5.3	5.7	4.7	16.4	69.5	63.3	23.0	41.6	25.9	69.5	4.7	24.1
28	24.5	38.2	59.1	42.4	32.4	18.9	16.5	15.3	15.8	15.0	16.0	42.7	43.1	48.8	40.6	47.7	43.4	32.3	52.2	45.7	44.0	47.4	40.9	56.3	59.1	15.0	36.6
29	43.6	48.1	52.2	41.8	45.7	40.9	33.8	57.3	25.6	39.0	35.3	13.2	19.0	11.4	40.0	35.7	41.4	44.4	34.9	58.6	73.8	75.0	76.5	77.2	77.2	11.4	44.3
30	62.7	17.8	53.7	39.2	19.8	9.2	9.8	8.9	8.2	9.2	47.5	12.0	8.2	8.4	7.3	7.4	9.5	12.7	14.1	46.3	47.9	24.0	14.7	19.8	62.7	7.3	21.6
Max.	**69.5**	**65.7**	**73.8**	**78.0**	**72.4**	**67.3**	**78.7**	**78.3**	**79.3**	**64.6**	**75.5**	**72.7**	**83.8**	**75.0**	**71.5**	**67.2**	**61.4**	**65.4**	**59.7**	**75.6**	**73.8**	**75.0**	**76.5**	**77.2**	**83.8**		
Min.	**6.4**	**7.5**	**8.7**	**6.6**	**7.6**	**8.2**	**4.7**	**5.6**	**3.6**	**4.4**	**5.2**	**3.8**	**4.6**	**3.6**	**4.8**	**4.0**	**3.4**	**4.7**	**3.8**	**5.7**	**6.4**	**7.4**	**5.5**	**6.2**		**3.4**	
Avg.	**27.8**	**25.8**	**32.4**	**31.9**	**29.0**	**28.7**	**19.9**	**22.1**	**22.5**	**19.8**	**22.0**	**18.0**	**19.1**	**21.8**	**22.8**	**24.5**	**23.5**	**23.9**	**23.8**	**31.7**	**30.5**	**27.4**	**30.6**	**28.4**			**25.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Port Meterological Station - Wind Sigma (RM Young)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	23.1	16.6	25.5	20.1	15.3	19.2	17.9	22.4	24.1	19.1	10.6	9.7	12.1	11.6	10.6	8.6	7.0	10.2	24.4	55.8	53.7	39.8	70.9	31.7	70.9	7.0	23.3
2	21.2	11.6	25.0	40.9	23.6	22.7	19.9	13.0	11.6	12.0	26.7	47.7	17.0	26.1	13.3	39.9	32.4	32.5	55.2	78.5	74.4	32.3	42.1	17.6	78.5	11.6	30.7
3	17.8	33.3	25.2	26.4	15.4	35.0	13.3	22.7	10.4	15.9	11.4	17.2	9.2	6.5	6.6	6.0	11.5	40.3	26.3	16.4	19.1	18.2	22.5	46.4	46.4	6.0	19.7
4	36.6	20.1	32.8	43.6	41.3	16.0	14.3	14.5	11.7	9.8	8.3	7.3	6.6	6.9	5.5	5.3	6.5	13.6	9.5	10.5	19.7	18.9	10.9	30.5	43.6	5.3	16.7
5	26.8	49.9	20.1	12.2	22.6	21.0	29.4	21.0	35.2	11.7	10.4	14.1	11.2	10.1	9.2	9.6	10.1	8.6	9.1	11.3	19.2	16.0	19.7	11.2	49.9	8.6	17.5
6	24.6	62.2	32.9	23.2	12.3	21.9	15.6	13.5	9.9	10.1	6.9	7.1	8.2	8.7	7.1	7.7	9.9	8.6	10.2	29.3	23.2	47.3	55.1	36.1	62.2	6.9	20.5
7	62.6	32.0	72.8	66.5	54.0	53.9	39.5	42.6	42.5	19.2	28.1	12.7	28.7	30.6	14.0	33.0	50.7	38.8	20.8	33.5	41.2	53.9	12.1	7.1	72.8	7.1	37.1
8	7.3	9.4	48.1	27.4	48.0	18.3	40.6	40.0	64.9	22.1	25.5	23.4	16.3	15.4	16.2	41.1	16.8	27.8	38.9	16.6	18.0	29.6	39.8	17.3	64.9	7.3	27.9
9	16.3	18.7	18.4	11.9	13.4	11.4	13.3	11.6	25.2	22.4	12.3	8.3	6.0	7.0	5.8	17.3	57.0	32.9	23.7	29.6	26.9	45.9	46.4	25.8	57.0	5.8	21.1
10	35.4	40.2	38.3	20.1	31.0	39.3	50.0	42.0	24.4	37.8	22.2	21.8	27.9	34.8	27.5	43.9	43.7	66.4	17.7	52.1	29.9	22.2	43.0	45.5	66.4	17.7	35.7
11	51.2	35.0	31.0	26.5	37.2	33.9	23.0	20.3	10.4	31.1	11.3	10.4	32.8	33.5	4.7	12.0	8.9	26.9	32.1	24.4	8.7	13.8	44.0	40.3	51.2	4.7	25.1
12	62.4	16.9	15.9	15.2	8.4	9.7	10.1	8.3	16.2	9.1	27.9	14.6	9.9	7.6	6.6	25.4	49.6	57.2	13.8	37.9	58.3	59.5	42.9	15.8	62.4	6.6	25.0
13	61.7	37.7	50.5	72.9	75.1	29.7	62.8	84.7	52.2	47.4	29.2	15.5	14.9	15.6	19.6	23.8	26.7	28.8	22.4	20.9	18.4	27.3	31.6	40.6	84.7	14.9	37.9
14	32.6	33.6	35.0	37.3	30.8	52.3	73.2	70.0	56.0	36.9	27.8	22.0	19.8	20.9	22.1	39.8	65.5	61.9	45.6	66.9	27.6	33.3	32.0	30.5	73.2	19.8	40.6
15	31.6	33.9	13.4	15.9	24.5	16.7	16.1	20.5	38.3	33.0	55.0	81.6	66.3	37.2	7.4	15.9	28.5	42.2	24.9	28.8	59.2	82.3	66.0	16.2	82.3	7.4	35.6
16	11.1	41.9	18.8	32.1	58.3	17.4	15.2	21.4	47.9	68.0	77.2	43.2	72.9	46.1	29.1	39.2	59.0	37.5	50.4	58.2	35.0	67.2	52.0	39.3	77.2	11.1	43.3
17	56.7	63.5	21.9	26.2	41.4	27.6	44.8	62.1	69.8	58.0	64.6	54.0	38.6	14.1	9.7	10.9	30.9	28.4	16.0	13.5	12.8	28.2	12.2	16.0	69.8	9.7	34.2
18	20.8	17.4	12.8	14.6	18.2	14.2	10.6	16.3	52.9	18.1	55.8	38.1	55.9	51.3	62.2	21.8	58.9	37.2	30.1	38.8	18.1	43.1	57.9	40.3	62.2	10.6	33.6
19	49.5	60.9	39.5	20.1	14.2	12.8	11.6	11.3	11.5	10.0	9.8	9.4	9.0	10.1	9.5	10.0	10.8	12.8	10.4	11.3	46.4	50.2	25.3	11.4	60.9	9.0	19.9
20	13.0	12.8	13.5	14.2	9.7	10.7	9.7	10.9	10.4	11.0	9.6	8.9	9.4	10.4	10.2	10.1	9.5	11.5	10.5	10.0	54.4	12.4	36.3	47.4	54.4	8.9	15.3
21	6.6	13.4	12.1	58.4	42.8	26.2	13.0	13.0	11.5	9.5	11.2	10.6	10.4	10.5	11.8	35.0	25.5	11.9	27.1	15.3	36.8	15.8	14.5	22.3	58.4	6.6	19.4
22	9.8	16.1	15.9	12.5	29.3	8.9	9.9	9.7	10.5	11.0	9.8	9.8	10.8	32.1	31.1	17.2	34.4	64.6	21.3	12.4	9.9	10.7	10.0	11.6	64.6	8.9	17.5
23	13.6	10.2	16.6	58.4	16.9	23.3	16.4	16.0	12.5	13.6	10.8	11.3	10.6	10.3	10.1	12.3	43.5	42.5	12.5	11.4	10.3	9.9	10.1	12.3	58.4	9.9	17.3
24	13.1	13.4	12.5	10.0	10.5	9.0	10.5	10.0	13.1	14.5	12.8	10.6	12.8	55.0	32.7	33.7	60.8	53.9	34.1	44.9	34.4	54.6	37.3	18.7	60.8	9.0	25.5
25	14.1	9.3	9.4	10.4	36.1	43.6	59.4	47.3	33.9	20.1	38.3	49.6	24.3	7.3	6.5	9.0	14.1	55.4	33.9	15.0	23.9	34.7	20.8	27.1	59.4	6.5	26.8
26	25.0	11.1	16.4	45.1	50.3	50.1	61.8	52.5	73.4	74.3	60.9	33.9	30.6	40.1	36.6	31.0	32.8	31.4	28.6	26.3	20.0	17.0	14.2	14.4	74.3	11.1	36.6
27	13.7	14.3	14.7	15.2	16.5	29.9	18.5	7.8	9.1	11.5	23.3	29.8	17.2	14.2	10.8	6.1	5.5	8.0	11.0	7.7	7.6	39.3	15.9	8.3	39.3	5.5	14.8
28	32.3	14.2	30.6	14.1	63.2	4.9	6.1	6.4	10.5	36.7	10.5	11.4	10.7	6.8	5.8	6.3	5.6	5.9	7.8	46.7	72.5	38.8	54.1	43.0	72.5	4.9	22.7
29	49.9	58.6	25.9	38.7	22.6	23.1	21.8	19.5	16.8	24.6	23.1	43.1	45.0	28.3	34.3	28.8	33.6	29.1	44.5	40.1	48.9	37.8	47.8	38.3	58.6	16.8	34.4
30	46.7	51.2	55.8	38.6	47.9	38.4	43.2	46.2	57.3	41.2	57.4	60.9	74.6	71.4	34.0	42.1	37.9	45.1	44.4	38.1	62.8	58.3	58.8	66.5	74.6	34.0	50.8
31	39.9	21.9	19.2	18.8	15.4	32.5	33.9	18.5	23.6	26.3	55.5	41.3	76.7	61.8	64.0	66.9	33.2	69.1	59.4	49.7	21.0	13.2	13.5	25.6	76.7	13.2	37.5
Max.	**62.6**	**63.5**	**72.8**	**72.9**	**75.1**	**53.9**	**73.2**	**84.7**	**73.4**	**74.3**	**77.2**	**81.6**	**76.7**	**71.4**	**64.0**	**66.9**	**65.5**	**69.1**	**59.4**	**78.5**	**74.4**	**82.3**	**70.9**	**66.5**	**84.7**		
Min.	**6.6**	**9.3**	**9.4**	**10.0**	**8.4**	**4.9**	**6.1**	**6.4**	**9.1**	**9.1**	**6.9**	**7.1**	**6.0**	**6.5**	**4.7**	**5.3**	**5.5**	**5.9**	**7.8**	**7.7**	**7.6**	**9.9**	**10.0**	**7.1**		**4.7**	
Avg.	**29.9**	**28.4**	**26.5**	**28.6**	**30.5**	**25.0**	**26.6**	**26.3**	**29.0**	**25.4**	**27.2**	**25.1**	**25.7**	**23.9**	**18.5**	**22.9**	**29.7**	**33.6**	**26.3**	**30.7**	**32.7**	**34.6**	**34.2**	**27.6**			**27.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Appendix E

Validated Manual Particulate Data

Not Applicable.

APPENDIX 26D

Pebble Port Station 2006 Annual Data Report, January 2006–December 2006, for the Pebble Project Meteorological Monitoring Program

(Please also note: Pebble Port Station is also called Port Site 1 in the text of this document.)

Pebble Port Station
2006 Annual Data Report
January 2006 – December 2006

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

prepared for

The Pebble Partnership

March 2008

2006 Annual Data Report
Pebble Port Station
January – December, 2006

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

March, 2008

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CONTENTS

Executive Summary **1**

1.0 Introduction **4**

1.1 Project Summary 4
1.2 Measurements Method Table 5
1.3 Variations from the Quality Assurance Project Plan 5

2.0 Station Performance Summary **10**

2.1 Significant Project Events 10
2.2 Missing, Invalid, and Adjusted Data 11
2.3 Network Data Completeness 13
2.4 Precision Statistics 14
2.4.1 Monitoring Network Precision Statistics 15
2.4.2 Analytical Laboratory Precision Statistics 15
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 15
2.5 Accuracy Statistics 15
2.5.1 Instrument Calibration Statistics 15
2.5.2 Independent Quality Assurance Audits 15

3.0 Monitoring Data Network Summary **21**

3.1 Air Quality Data Summary 21
3.2 Meteorological Data Summary 21
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 21
3.2.2 Temperature Climatology 33
3.3.3 Other Meteorological Parameters 38

4.0 References **43**

List of Figures

1-1 Map of the Pebble Project Area 7
1-2 Map of the Pebble Port Station 8
1-3 Pebble Port Meteorological Monitoring Station 9
3-1 2006 Pebble Port Wind Roses 23
3-2 Quarterly Pebble Port Wind Roses (Climatronics) 24
3-3 Quarterly Pebble Port Wind Roses (RM Young) 25
3-4 Annual Wind Rose Superimposed on Site Map 32
3-5 Hourly Average 2-Meter and 10-Meter Temperatures 36
3-6 Hourly Average Vertical Temperature Difference 37

3-7 Hourly Average Relative Humidity 40
3-8 Barometric Pressure 41
3-9 Hourly Average Solar Radiation 42

List of Tables

E-1 Meteorological Data Capture – Valid Hours per Month 2
E-2 Meteorological Data Capture – Percent Data Capture 3
1-1 Meteorological Measurement Methods 6
2-1 Chronology of Significant Events 10
2-2 Percentage of Final Data Flagged 12
2-3 Pebble Port Station Percent Data Capture 14
2-4 June 25, 2005 Initial Performance Audit Summary 16
2-5 January 16, 2006 Annual Performance Audit Summary 17
2-6 August 21, 2006 Semi-Annual Performance and Systems Audit Summary 18
2-7 January 16, 2007 Audit Performance Audit Summary 20
3-1 Average and Maximum Wind Speeds 22
3-2 Average and Maximum Wind Speeds at Iliamna Airport 22
3-3 2006 Wind Rose Analysis Table (Climatronics) 26
3-4 Quarter A Wind Rose Analysis Table (Climatronics) 27
3-5 Quarter B Wind Rose Analysis Table (Climatronics) 27
3-6 Quarter C Wind Rose Analysis Table (Climatronics) 28
3-7 Quarter D Wind Rose Analysis Table (Climatronics) 28
3-8 2006 Wind Rose Analysis Table (RM Young) 29
3-9 Quarter A Wind Rose Analysis Table (RM Young) 30
3-10 Quarter B Wind Rose Analysis Table (RM Young) 30
3-11 Quarter C Wind Rose Analysis Table (RM Young) 31
3-12 Quarter D Wind Rose Analysis Table (RM Young) 31
3-13 2-Meter Temperature Summary 34
3-14 10-Meter Temperature Summary 35
3-15 Relative Humidity, Barometric Pressure, and Solar Radiation Summary 39

List of Appendices

A Data Processing Specifications and Statistical Formulae
B Precision Data
C Accuracy Data
D Validated Continuous Hourly/Daily/Monthly Data Summaries
E Validated Manual Particulate (Field and Laboratory) Data

Executive Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc, dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration (PSD) quality meteorological monitoring for the Pebble Project began on August 1, 2005 and will be ongoing. This report provides details of the 2006 calendar year of meteorological measurements collected from January 1, 2006 through December 31, 2006 at the proposed port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble Port meteorological monitoring station. The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the secondary wind speed sensor, which did not meet the minimum PSD monitoring requirement of 90% data capture or better as a result of sensor failure during Monitoring Quarter C (July 1, 2006 through September 30, 2006) and Quarter D (October 1, 2006 through December 31, 2006). However, the collocated primary PSD-quality wind speed sensor (Climatronics, model F460 (P/N 100075)) had greater than 90% data capture during this same period. Therefore, measurements from the primary PSD-quality instrument will be used to fulfill PSD data capture requirements for Monitoring Quarters C and D.

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2006	740	740	740	740	739	739	740	740	740	744	744	744
February 2006	649	649	649	670	670	670	670	670	670	672	672	672
March 2006	744	744	744	740	659	659	744	744	744	744	744	744
April 2006	720	720	720	716	720	720	720	720	720	720	720	720
May 2006	744	744	744	744	744	744	744	744	744	744	744	744
June 2006	720	720	720	720	720	720	720	720	720	720	720	720
July 2006	744	744	744	744	744	744	744	744	744	744	744	744
August 2006	738	738	738	738	738	738	489	489	489	744	744	744
September 2006	720	720	720	720	720	720	0	0	0	720	720	720
October 2006	743	743	743	744	744	744	0	0	0	744	744	744
November 2006	720	720	720	714	720	720	0	0	0	720	720	720
December 2006	744	744	744	744	744	744	0	0	0	744	744	744
Monitoring Year	8,726	8,726	8,726	8,734	8,662	8,662	5,571	5,571	5,571	8,760	8,760	8,760

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes.

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2006	99.5%	99.5%	99.5%	99.5%	99.3%	99.3%	99.5%	99.5%	99.5%	100.0%	100.0%	100.0%
February 2006	96.6%	96.6%	96.6%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100.0%	100.0%	100.0%
March 2006	100.0%	100.0%	100.0%	99.5%	88.6%	88.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter A	**98.8%**	**98.8%**	**98.8%**	**99.5%**	**95.7%**	**95.7%**	**99.7%**	**99.7%**	**99.7%**	**100.0%**	**100.0%**	**100.0%**
April 2006	100.0%	100.0%	100.0%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
May 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
June 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter B	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
July 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
August 2006	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%	65.7%	65.7%	65.7%	100.0%	100.0%	100.0%
September 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter C	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**55.8%**	**55.8%**	**55.8%**	**100.0%**	**100.0%**	**100.0%**
October 2006	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
November 2006	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
December 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter D	**100.0%**	**100.0%**	**100.0%**	**99.7%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**100.0%**	**100.0%**	**100.0%**
Monitoring Year	**99.6%**	**99.6%**	**99.6%**	**99.7%**	**98.9%**	**98.9%**	**63.6%**	**63.6%**	**63.6%**	**100.0%**	**100.0%**	**100.0%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes

1.0 Introduction

1.1 Project Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc., dba Hoefler Consulting Group, is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring program currently consists of three PSD-quality meteorological monitoring stations located at the proposed mill site (Pebble 1), the tailings storage facility (Pebble 4), and port site (Pebble Port). An additional, non-PSD meteorological monitoring station (Pebble 3) is located near the tailings storage facility and is collecting data for engineering and mine design purposes. Of the three PSD-quality meteorological monitoring stations, continuous measurements were made at the Pebble 1 and Pebble Port stations beginning on August 1, 2005. This data report reflects data collected from January 1, 2006 through December 31, 2006 at the Pebble Port station.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble Port station.

The Pebble Port station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C])
- Air temperature, ten meters above ground level (degrees Celsius [°C])
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]))
- Wind speed (meters per second [m/s])
- Wind direction (degrees [°])
- Wind direction standard deviation (wind sigma [σ_θ])
- Relative humidity (percent [%])
- Solar radiation (Watts per square meter [W/m^2])
- Barometric Pressure (millibar [mb]).

Measurements of these parameters will provide at least two years of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble Port station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble Port PSD station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble Port station.

1.3 Variations from the Quality Assurance Project Plan

During the first monitoring year, there were no variations from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]

[1]Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.

[2]Instantaneous barometric pressure measurements are collected for 1 second during every hour.

Figure 1-1. Map of the Pebble Project Area

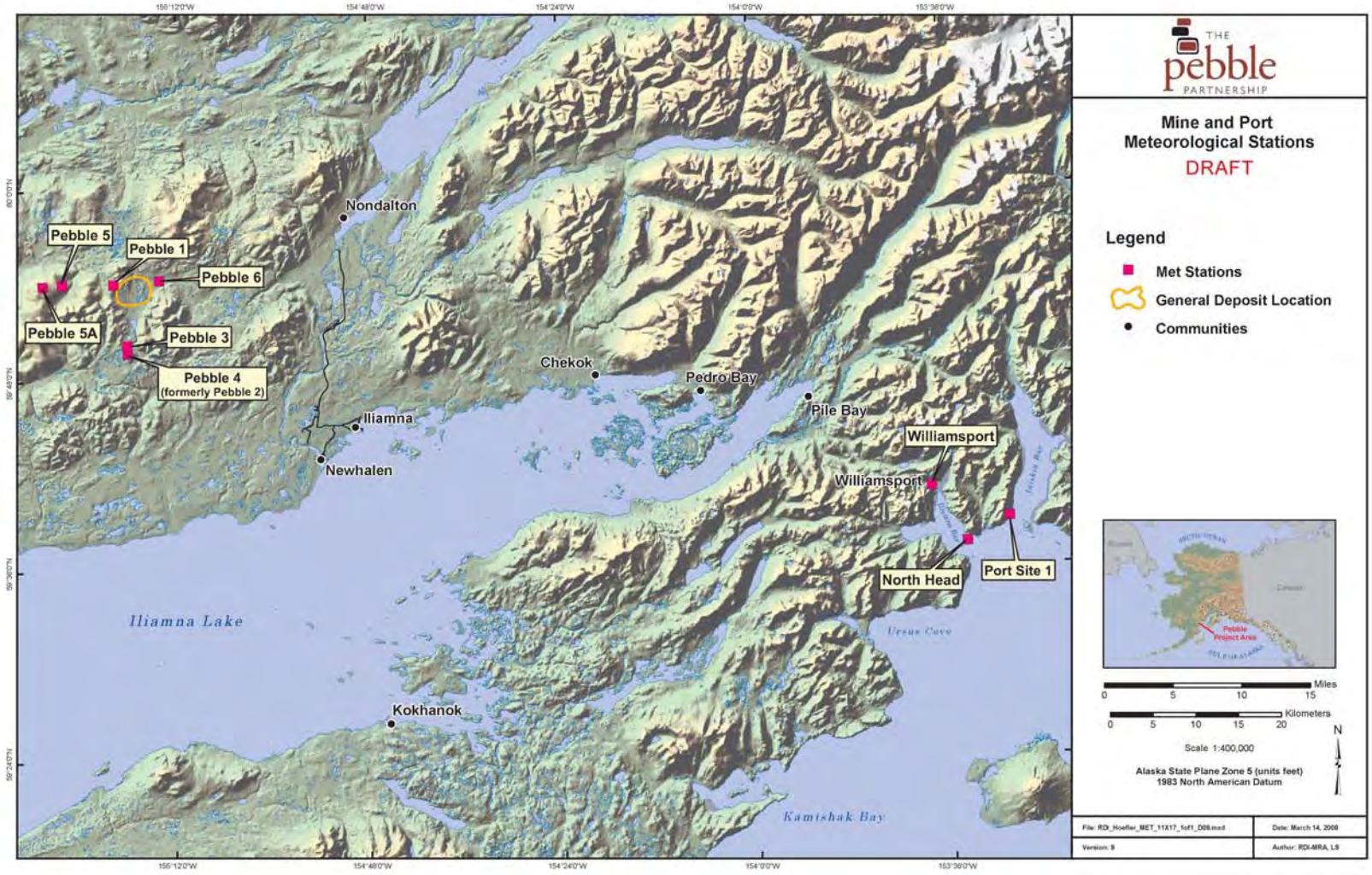


Figure 1-2. Map of the Pebble Port PSD Station

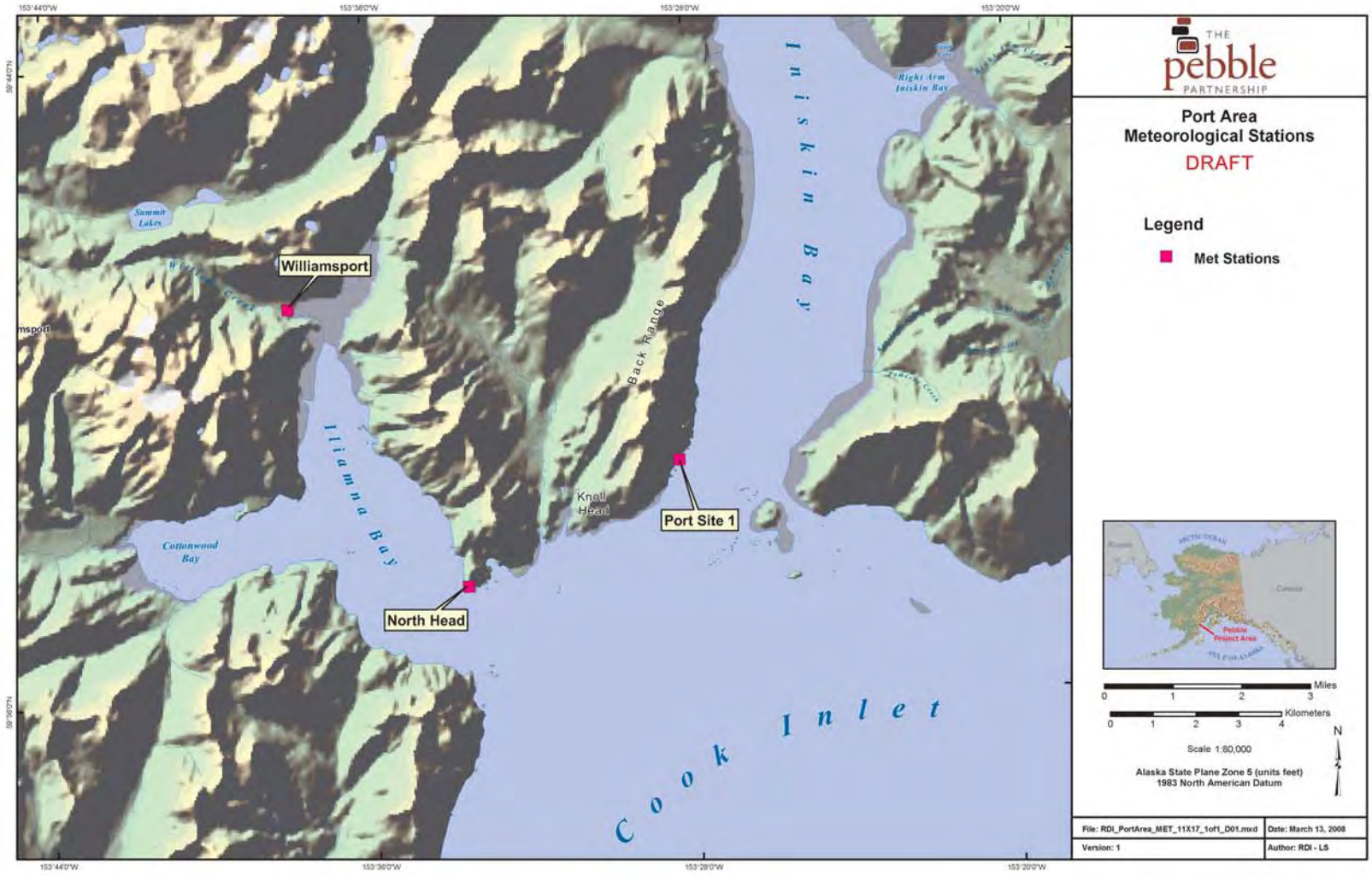


Figure 1-3. Pebble Port Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble Port station relevant to the 2006 year of meteorological monitoring.

Table 2-1. Chronology of Significant Events

Date	Event
June 21-25, 2005	Initial site installation and setup.
June 25, 2005	Initial Performance Audit.
January 1, 2006	Beginning of 2006 monitoring year.
January 16, 2006	Semi-annual performance audit.
January 22, 2006	Storm up-ends station shelter and altered the alignment of the Climatronics wind direction sensor.
January 29, 2006	First visual confirmation that station shelter had been up-ended during storm on January 22, 2006.
February 8, 2006	Port shelter righted and visually inspected for damages.
February 10, 2006	Calibration and audit of wind sensors. Climatronics wind direction sensor was found to be out of alignment from the January 22, 2006 storm, was recalibrated, and passed a second audit. Data correction applied to account for sensor misalignment.
August 21, 2006	Second annual systems performance audit and calibration.
August 7, 2006	Attempted flight to station.
August 21, 2006	Audit and calibration, replaced Climatronics Wind Direction and R.M. Young Wind Direction bearings and the 2 meter lower aspirator housing
October 11, 2006	Tested Wind Direction sensor
November 2, 2006	Thermo-Electric Generator turned on at about 1100 hrs.
December 31, 2006	End of 2006 monitoring year.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble Port station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	1.0%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	1.3%
	< 10° variation over 18 consecutive hours	0.5%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	0.6%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	0.9%
	< 10° variation over 18 consecutive hours	0.5%
Temperature (2 meters)	> 5°C variation from previous hour	0.0%
	< 0.5°C variation for 12 consecutive hours	0.9%
	Value is > record high, < record low	0.0%
Temperature (10 meters)	> 5°C variation from previous hour	0.0%
	< 0.5°C variation for 12 consecutive hours	0.9%
	Value is > record high, < record low	0.0%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	1.8%
	Value is < -0.8°C during the night	0.0%
	Value is > 5°C, < -3°C	0.0%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.0%
	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.3%
	Equals ambient temperature for 12 consecutive hours	0.0%
Solar Radiation	> 0 W/m^2 at night	0.0%
	Greater than the maximum possible value for date and latitude	0.0%
Barometric Pressure	> 1060 mb (sea level)	0.0%
	< 940 mb (sea level)	0.0%
	> 6 mb variation for 3 consecutive hours	0.0%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the first monitoring year at the Pebble Port station.

The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the secondary wind speed sensor, which did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarter C (July 1, 2006 through September 31, 2006) and Quarter D (October 1, 2006 through December 31, 2006) as a result of an unknown sensor failure. However, the collocated primary PSD-quality wind speed sensor (Climatronics, model F460, P/N 100075) had greater than 90 percent data capture during this same period. Therefore, measurements from the primary PSD-quality instrument will be used to fulfill PSD data capture requirements for Monitoring Quarters C and D.

Table 2-3. Pebble Port Station Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2006	99.5%	99.5%	99.5%	99.5%	99.3%	99.3%	99.5%	99.5%	99.5%	100.0%	100.0%	100.0%
February 2006	96.6%	96.6%	96.6%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100.0%	100.0%	100.0%
March 2006	100.0%	100.0%	100.0%	99.5%	88.6%	88.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter A	**98.8%**	**98.8%**	**98.8%**	**99.5%**	**95.7%**	**95.7%**	**99.7%**	**99.7%**	**99.7%**	**100.0%**	**100.0%**	**100.0%**
April 2006	100.0%	100.0%	100.0%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
May 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
June 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter B	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
July 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
August 2006	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%	65.7%	65.7%	65.7%	100.0%	100.0%	100.0%
September 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter C	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**55.8%**	**55.8%**	**55.8%**	**100.0%**	**100.0%**	**100.0%**
October 2006	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
November 2006	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
December 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter D	**100.0%**	**100.0%**	**100.0%**	**99.7%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**100.0%**	**100.0%**	**100.0%**
Monitoring Year	**99.6%**	**99.6%**	**99.6%**	**99.7%**	**98.9%**	**98.9%**	**63.6%**	**63.6%**	**63.6%**	**100.0%**	**100.0%**	**100.0%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A technical systems audit was performed at the Pebble Port station on June 25, 2005. The power supply, data acquisition system (DAS), communications system, and sensors all worked properly. The systems audit indicated that the station is well-planned, equipped with PSD-quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

An initial performance audit of the station was conducted on June 25, 2005. The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. The results of the initial performance audit are presented in Table 2-4. The complete performance audit report is available in Appendix C.

Table 2-4. June 25, 2005 Initial Performance Audit Summary

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:02	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.35	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.30	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.05	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	1.1	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.9	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.060	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.006	Pass
Wind Direction[2] Alignment	≤ ±3	°	0.7	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.5	Pass
Wind Direction[2] Torque	≤ 0.153	oz-in	0.069	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.4	Pass
Barometric Pressure	≤ ±3	mb	1.9	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	NC[3]	N/A

[1]Parameters audited for Climatronics wind sensor.
[2]Parameters audited for RM Young wind sensor.
[3]NC = Not completed.

Subsequently, a performance audit was conducted on January 16, 2006 and a performance and systems audit was conducted on August 21, 2006. Each sensor was challenged with certified audit equipment and tested for compliance with PSD performance accuracy requirements. A summary of the results of these audits are presented in Tables 2-5 and 2-6. The complete performance audit reports are available in Appendix C.

Table 2-5. January 16, 2006 Annual Performance Audit Summary

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:20	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.14	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.14	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.00	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	1.9	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.5	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.070	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.007	Pass
Wind Direction[2] Alignment	≤ ±3	°	2.1	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.0	Pass
Wind Direction[2] Torque	≤ 0.152	oz-in	0.097	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	mb	1.5	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	NC[3]	N/A

[1]Parameters audited for Climatronics wind sensor.

[2]Parameters audited for RM Young wind sensor.

[3]NC = Not completed.

Table 2-6. August 21, 2006 Semi-Annual Performance and Systems Audit Summary

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	00:07	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.21	Pass
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.21	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.00	Pass
Wind Speed[1] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[1] Torque	≤ ±0.005	oz-in	< 0.003	Pass
Wind Direction[1] Alignment	≤ ±3	°	0.5	Pass
Wind Direction[1] Linearity	≤ ±3	°	0.5	Pass
Wind Direction[1] Torque	≤ 0.104	oz-in	0.100	Pass
Wind Speed[2] Accuracy	≤ ±0.2 + 5%	m/s	0.0	Pass
Wind Speed[2] Torque	≤ ±0.014	oz-in	0.008	Pass
Wind Direction[2] Alignment	≤ ±3	°	1.6	Pass
Wind Direction[2] Linearity	≤ ±3	°	2.6	Pass
Wind Direction[2] Torque	≤ 0.152	oz-in	0.125	Pass
Relative Humidity (Dew Point Temperature)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	mb	1.0	Pass
Solar Radiation	≤ (±5 + 10 W/m^2)	% obs	5.8	Pass

[1]Parameters audited for Climatronics wind sensor.

[2]Parameters audited for RM Young wind sensor.

[3]NC = Not completed.

A performance audit was conducted on January 16, 2007. On January 16, 2007 the RM Young wind instrument failed the audit for an unknown reason. A summary of the results of these audits are presented in Table 2-7.

A technical systems audit was performed during both the August 21, 2006 performance audits. During this audit, the power supply, DAS, communications system, and audited sensors all worked properly. The systems audit found that the station is well-planned, equipped with PSD quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

Table 2-7. January 16, 2007 Audit Performance Audit Summary

Parameter	EPA Limit	Units	Maximum Absolute Error	Pass/Fail
Datalogger Time (AST)	≤ ±5:00	Min:Sec	-0:13	Pass
Temperature Accuracy (2-m)	≤ ±0.5	°C	0.14	Pass[1]
Temperature Accuracy (10-m)	≤ ±0.5	°C	0.14	Pass
Temperature Difference (ΔT)	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	Oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	2.0	Pass
Wind Direction Torque	≤ 0.104	Oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	°	3.5	Pass
Wind Direction Accuracy	≤ ±5	°	2.5	Pass
Wind Direction Linearity	≤ 3	°	1.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	°	2.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	.03	Fail
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	°	10.4	Fail
Wind Direction Accuracy	≤ ±5	°	5.9	Fail
Wind Direction Linearity	≤ 3	°	3.1	Fail
Wind Dir. Azim. Align. (as-left)	≤ ±5	°	10.5	Fail
Barometric Pressure	≤ ±3	Mbar	-1.9	Pass
Solar Radiation	≤ ±5+Res	% input	-1.9	Pass

[1]Two-meter temperature aspirator fan not operating upon arrival.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a statistical summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the first year of meteorological monitoring at the Pebble Port station. The mean hourly average wind speed during the monitoring year was 4.77 m/s and 4.40 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 20.42 m/s and 17.30 m/s were measured by the CLM and RMY sensors, respectively, at 7:00 PM on January 22, 2006. Table 3-2 provides the mean and maximum daily wind speeds at the Seldovia Airport, located approximately 100 km from the Port Station. During the monitoring year the mean daily average wind speed at the Seldovia airport was 1.45 m/s, while the maximum daily average wind speed was 13.36 m/s, recorded on November 13, 2006.

Table 3-1 indicates that the RMY statistical values are generally 95% of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (>95%) when wind sigma values were less than 30 degrees and when winds were blowing from the northern end of Iniskin Bay. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Figure 3-1 shows first year wind roses for the CLM and RMY wind instruments collocated at the Pebble Port station. During the monitoring year, winds were predominantly from the north and northeast with infrequent winds from the south and northwest. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by predominant wind component from the north and northeast. In addition, the Quarters B and C wind roses display wind components from the south and southwest.

Table 3-1. Average and Maximum Wind Speeds

Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speeds (m/s) (RMY)
Quarter A	5.63	5.40	20.42	17.30
Quarter B	4.06	3.86	14.80	14.12
Quarter C	3.98	3.60	16.01	15.15
Quarter D	5.42	--[1]	18.36	--[1]
Monitoring Year	4.77	4.40	20.42	17.30

[1] RM Young wind instrument data invalidated for Quarter D due to failed audit

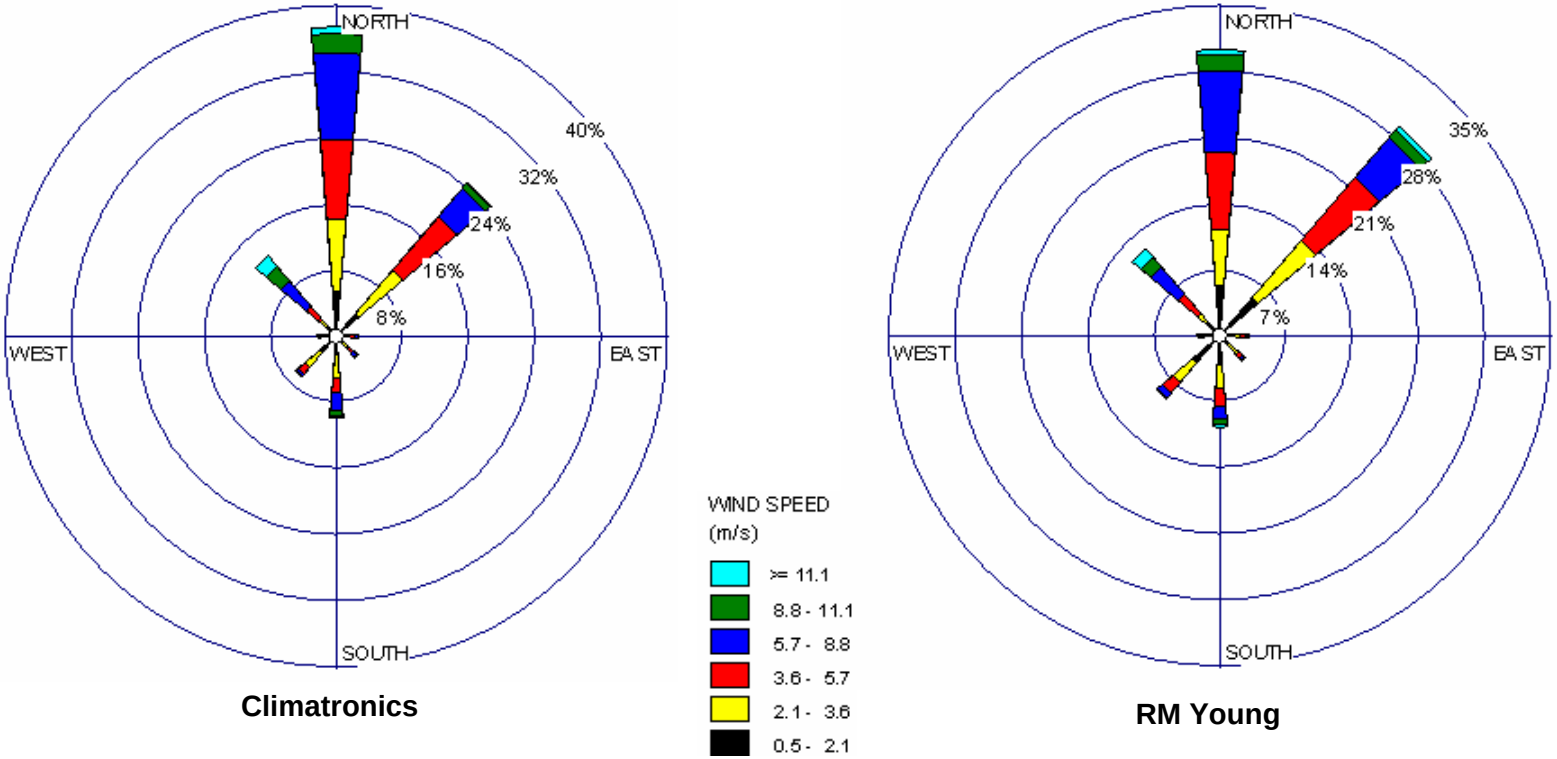
Table 3-2. Average and Maximum Wind Speeds at Seldovia Meteorological Station

Monitoring Period	Mean Daily Average Wind Speed (m/s)	Maximum Daily Average Wind Speed (m/s)
Quarter A	1.43	10.02
Quarter B	1.30	10.02
Quarter C	1.20	10.02
Quarter D	1.86	13.36
Monitoring Year	1.45	13.36

Tables 3-3 through 3-7 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-8 through 3-12 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the 2006 year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble Port site and vicinity. The wind rose is centered over the Pebble Port station and shows that, on an annual basis, winds at the site predominantly blow parallel to the shoreline and from the north.

Figure 3-1. 2006 Pebble Port Wind Roses

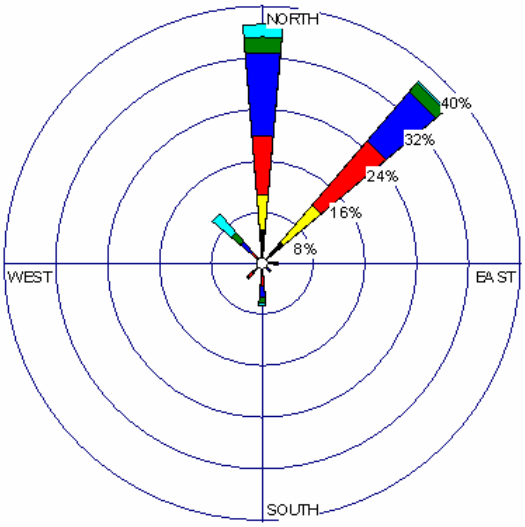


Climatronics

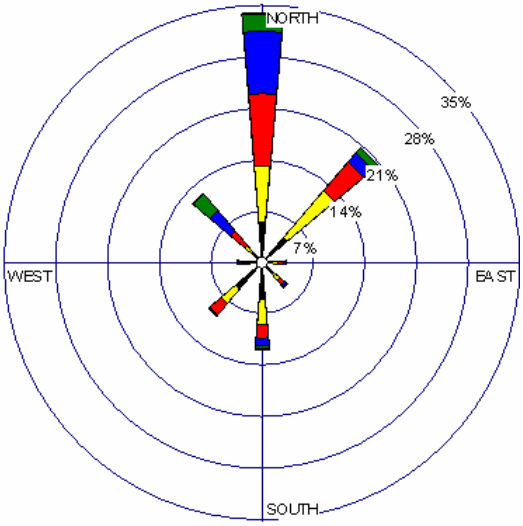
RM Young

Figure 3-2. Quarterly Pebble Port Wind Roses (Climatronics)

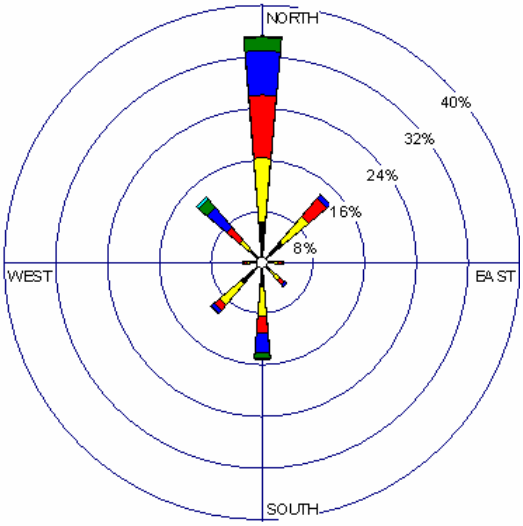
Quarter A (1/1/2006 – 3/31/2006)



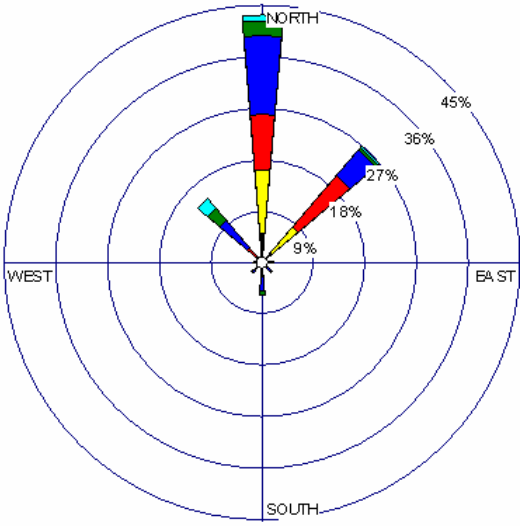
Quarter B (4/1/2006 – 6/30/2006)



Quarter C (7/1/2006 – 9/30/2006)



Quarter D (10/1/2006 – 12/31/2006)



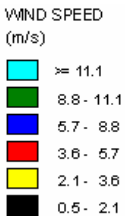
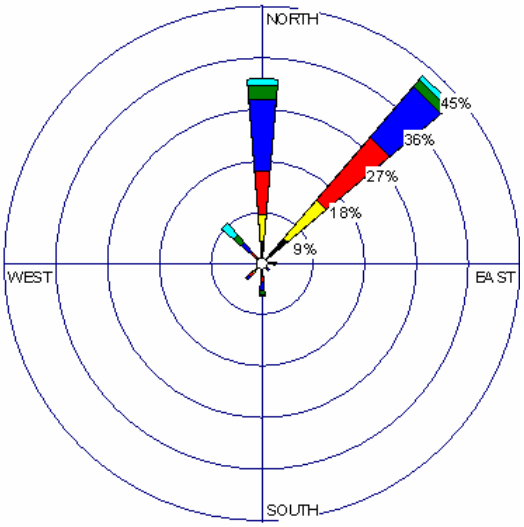
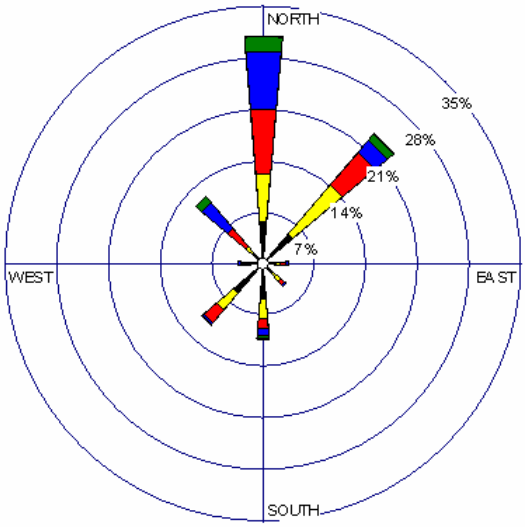


Figure 3-3. Quarterly Pebble Port Wind Roses (RM Young)

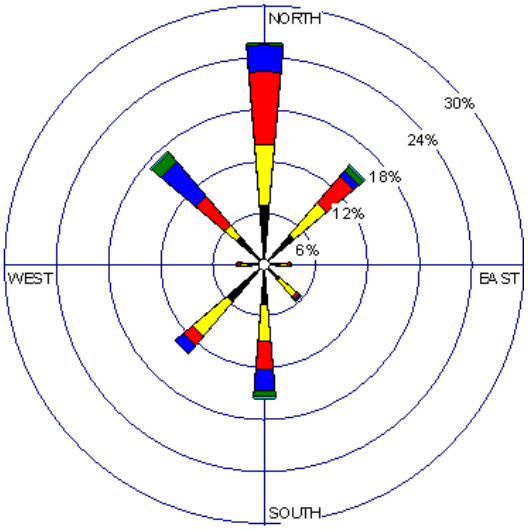
Quarter A (1/1/2006 – 3/31/2006)



Quarter B (4/1/2006 – 6/30/2006)



Quarter C (7/1/2006 – 9/30/2006)[1]



Quarter D (10/1/2006 – 12/31/2006)

DATA INVALIDATED

[1]Data invalidated due to wind sensor failure beginning August 21, 2006

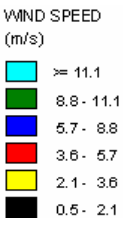


Table 3-3. 2006 Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: 2006
Start Date: January 1, 2006 End Date: December 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.57%	8.60%	9.56%	10.43%	2.36%	0.83%	37.35%
NE	3.59%	7.03%	8.41%	4.40%	0.82%	0.18%	24.44%
E	0.90%	0.75%	0.74%	0.43%	0.06%	0.00%	2.88%
SE	1.05%	0.98%	0.76%	0.60%	0.08%	0.05%	3.52%
S	2.40%	2.68%	1.90%	2.05%	0.66%	0.30%	9.98%
SW	2.70%	2.26%	1.09%	0.38%	0.08%	0.01%	6.53%
W	1.34%	0.42%	0.18%	0.22%	0.10%	0.08%	2.35%
NW	1.51%	1.14%	2.08%	4.01%	2.33%	1.70%	12.78%
Sub-Total:	19.08%	23.86%	24.72%	22.52%	6.49%	3.15%	99.83%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-4. Quarter A Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter A
Start Date: January 1, 2006 End Date: March 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.18%	5.47%	9.11%	12.94%	2.42%	1.99%	37.11%
NE	4.36%	7.56%	13.18%	9.93%	1.84%	0.24%	37.11%
E	0.63%	0.73%	0.82%	0.19%	0.15%	0.00%	2.52%
SE	0.24%	0.39%	0.48%	0.68%	0.10%	0.00%	1.89%
S	0.39%	1.65%	1.65%	1.79%	0.73%	0.53%	6.73%
SW	1.16%	1.11%	0.73%	0.24%	0.05%	0.00%	3.29%
W	0.39%	0.19%	0.05%	0.05%	0.05%	0.29%	1.02%
NW	0.97%	0.53%	0.87%	2.13%	1.79%	3.97%	10.27%
Sub-Total:	13.32%	17.64%	26.89%	27.96%	7.12%	7.03%	99.95%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-5. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter B
Start Date: April 1, 2006 End Date: June 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.60%	7.66%	9.72%	8.39%	2.34%	0.18%	33.90%
NE	4.59%	8.35%	5.09%	1.61%	0.87%	0.09%	20.60%
E	1.51%	0.83%	0.60%	0.46%	0.00%	0.00%	3.39%
SE	2.02%	1.28%	0.83%	0.41%	0.00%	0.05%	4.59%
S	5.09%	3.49%	1.74%	1.01%	0.37%	0.28%	11.97%
SW	4.77%	2.61%	1.97%	0.18%	0.00%	0.05%	9.59%
W	2.43%	0.32%	0.14%	0.46%	0.18%	0.00%	3.53%
NW	1.93%	1.24%	2.57%	3.62%	2.94%	0.09%	12.39%
Sub-Total:	27.94%	25.78%	22.66%	16.15%	6.70%	0.73%	99.95%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-6. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter C
Start Date: July 1, 2006 End Date: September 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.36%	9.94%	9.71%	6.81%	2.13%	0.18%	35.13%
NE	4.22%	5.22%	3.81%	0.64%	0.09%	0.05%	14.03%
E	1.32%	1.18%	0.82%	0.18%	0.00%	0.00%	3.50%
SE	1.72%	2.00%	0.95%	0.41%	0.05%	0.00%	5.13%
S	3.81%	4.68%	2.54%	3.00%	0.86%	0.23%	15.12%
SW	4.40%	4.27%	1.09%	0.73%	0.05%	0.00%	10.53%
W	1.86%	0.64%	0.36%	0.18%	0.05%	0.00%	3.09%
NW	2.45%	2.18%	2.59%	3.99%	1.68%	0.54%	13.44%
Sub-Total:	26.15%	30.10%	21.88%	15.93%	4.90%	1.00%	99.95%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-7. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter D
Start Date: October 1, 2006 End Date: December 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.12%	11.10%	9.65%	13.73%	2.54%	1.04%	43.18%
NE	1.27%	7.02%	11.83%	5.75%	0.54%	0.36%	26.78%
E	0.14%	0.27%	0.73%	0.86%	0.09%	0.00%	2.08%
SE	0.18%	0.23%	0.77%	0.91%	0.18%	0.14%	2.40%
S	0.23%	0.86%	1.63%	2.36%	0.68%	0.18%	5.94%
SW	0.41%	1.00%	0.54%	0.36%	0.23%	0.00%	2.54%
W	0.63%	0.50%	0.18%	0.18%	0.14%	0.05%	1.68%
NW	0.68%	0.59%	2.22%	6.16%	2.90%	2.31%	14.86%
Sub-Total:	8.65%	21.57%	27.55%	30.31%	7.30%	4.08%	99.46%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-8. 2006 Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: 2006
Start Date: January 1, 2006 End Date: December 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.35%	5.91%	8.15%	8.58%	1.81%	0.47%	30.26%
NE	5.35%	7.95%	8.71%	5.53%	1.15%	0.43%	29.12%
E	1.38%	0.81%	0.61%	0.29%	0.02%	0.00%	3.11%
SE	1.40%	1.27%	0.52%	0.36%	0.04%	0.02%	3.61%
S	3.11%	2.51%	1.94%	1.40%	0.57%	0.23%	9.76%
SW	3.86%	2.71%	1.53%	0.61%	0.04%	0.05%	8.80%
W	1.62%	0.32%	0.16%	0.25%	0.04%	0.04%	2.42%
NW	2.05%	1.04%	2.69%	3.84%	1.36%	1.18%	12.17%
Sub-Total:	24.11%	22.53%	24.30%	20.86%	5.03%	2.42%	99.25%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-9. Quarter A Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter A
Start Date: January 1, 2006 End Date: March 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.09%	4.60%	7.47%	12.53%	2.46%	1.11%	32.27%
NE	5.80%	8.82%	14.39%	11.61%	1.53%	0.88%	43.04%
E	0.60%	0.97%	0.65%	0.28%	0.05%	0.00%	2.55%
SE	0.23%	0.60%	0.33%	0.56%	0.05%	0.00%	1.76%
S	0.46%	1.30%	1.72%	1.35%	0.74%	0.28%	5.85%
SW	1.21%	1.16%	0.84%	0.51%	0.09%	0.05%	3.85%
W	0.33%	0.19%	0.05%	0.09%	0.09%	0.09%	0.84%
NW	0.79%	0.56%	1.21%	2.32%	1.67%	2.92%	9.47%
Sub-Total:	13.51%	18.20%	26.65%	29.25%	6.69%	5.34%	99.63%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-10. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter B
Start Date: April 1, 2006 End Date: June 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.72%	6.55%	8.70%	7.78%	2.06%	0.09%	30.91%
NE	5.36%	8.79%	5.77%	2.20%	1.01%	0.14%	23.26%
E	1.88%	0.64%	0.69%	0.41%	0.00%	0.00%	3.62%
SE	1.97%	1.24%	0.78%	0.23%	0.00%	0.05%	4.26%
S	4.85%	2.70%	1.42%	0.82%	0.37%	0.18%	10.35%
SW	5.40%	2.88%	2.24%	0.37%	0.00%	0.09%	10.99%
W	2.70%	0.18%	0.18%	0.46%	0.00%	0.00%	3.53%
NW	2.01%	1.10%	3.21%	4.62%	1.05%	0.00%	12.00%
Sub-Total:	29.90%	24.08%	22.99%	16.90%	4.49%	0.55%	98.90%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-11. Quarter C Wind Rose Analysis Table (RM Young)[1]

Station ID: Pebble Port (RM Young) Run ID: Quarter C
Start Date: July 1, 2006 End Date: September 30, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.89%	7.06%	8.35%	3.08%	0.24%	0.00%	25.63%
NE	4.54%	4.95%	3.97%	0.81%	0.73%	0.16%	15.17%
E	1.87%	0.81%	0.41%	0.08%	0.00%	0.00%	3.16%
SE	2.43%	2.51%	0.41%	0.24%	0.08%	0.00%	5.68%
S	4.62%	4.30%	3.24%	2.51%	0.65%	0.24%	15.57%
SW	5.76%	5.11%	1.46%	1.22%	0.00%	0.00%	13.54%
W	1.95%	0.81%	0.32%	0.16%	0.00%	0.00%	3.24%
NW	4.30%	1.78%	4.38%	5.11%	1.38%	0.24%	17.19%
Sub-Total:	32.36%	27.33%	22.55%	13.22%	3.08%	0.65%	99.19%
Calms (<0.5m/s):							0.04%
Total:							100.00%

[1]Data invalidated due to wind sensor failure beginning August 21, 2006

Table 3-12. Quarter D Wind Rose Analysis Table (RM Young)

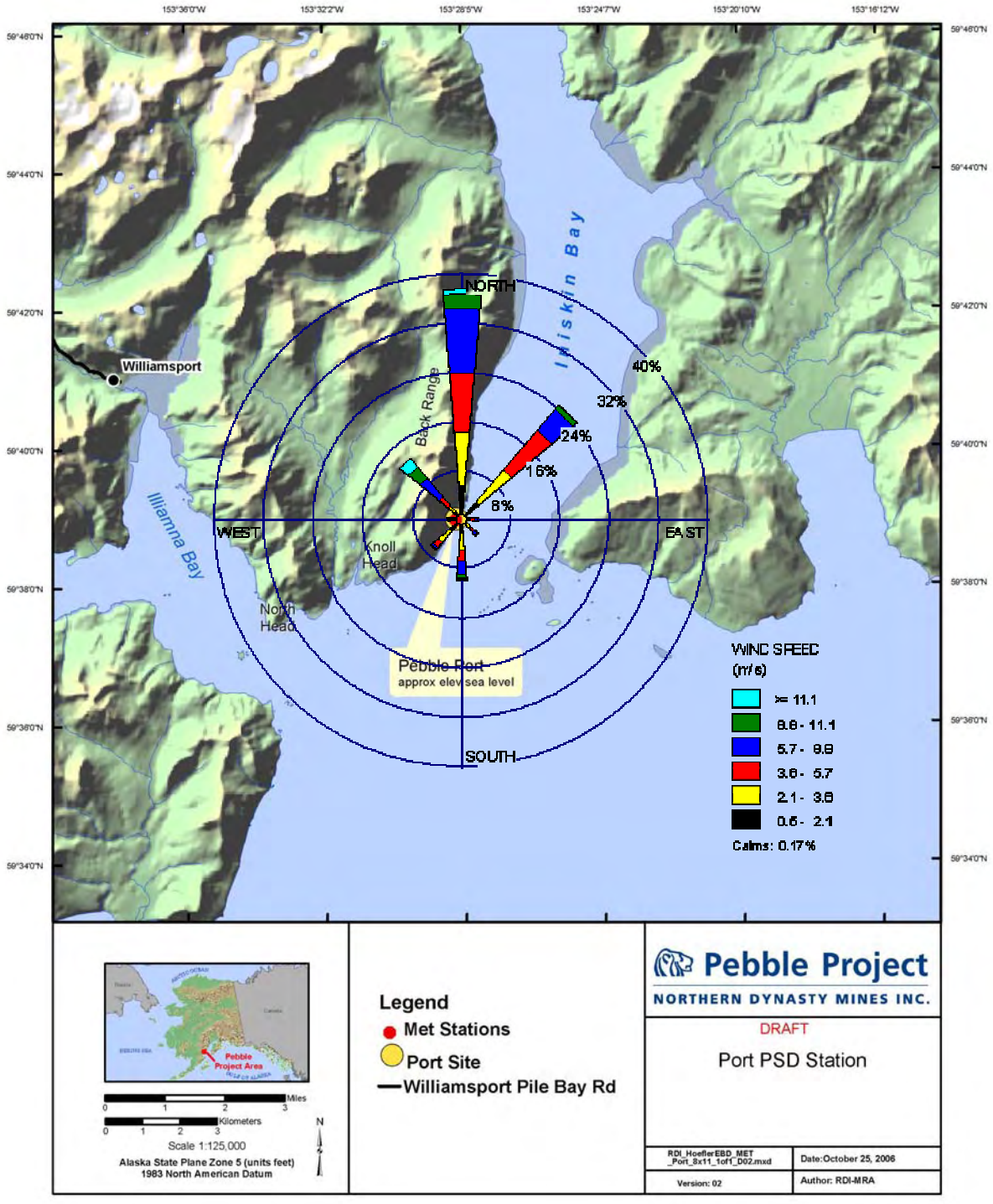
Station ID: Pebble Port (RM Young) Run ID: Quarter D
Start Date: October 1, 2006 End Date: December 31, 2006

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N							
NE							
E							
SE	**DATA INVALIDATED**						
S							
SW							
W							
NW							
Sub-Total:							0.00%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Figure 3-4. Annual[1] Wind Rose Superimposed on Site Map



[1] 2006 monitoring year: January 1, 2006 to December 31, 2006.

3.2.2 Temperature Climatology

Tables 3-12 and 3-13 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The 2006 annual mean temperature was 3.25°C at the 2-meter height. This annual mean temperature is slightly higher in comparison to the annual mean temperature of 3.21°C observed at the Seldovia meteorological station from January 1, 2006 through December 31, 2006. Hourly average temperatures at the Pebble Port station varied from a maximum of 21.9°C on July 12, 2006 to a minimum of -24.1°C on January 27, 2006.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months. Figure 3-5 also includes a plot of average daily temperatures recorded at the meteorological monitoring station in Seldovia, Alaska.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 3.7°C measured on May 27, 2006. The greatest negative temperature difference was -2.6°C measured on August 8, 2006.

Table 3-13. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
Jan 2006	3.6	-22.3	-7.3	5.2	-24.1
Feb 2006	4.1	-17.9	-3.2	6.3	-19.5
Mar 2006	1.0	-9.0	-2.7	2.3	-12.3
Quarter A	**4.1**	**-22.3**	**-4.4**	**6.3**	**-24.1**
Apr 2006	5.4	-3.0	1.4	7.6	-5.6
May 2006	14.7	0.9	7.5	17.7	-1.5
June 2006	14.5	8.0	10.2	19.3	4.5
Quarter B	**14.7**	**-3.0**	**6.5**	**19.3**	**-5.6**
July 2006	16.0	10.3	12.5	21.9	8.0
Aug 2006	16.5	10.5	12.6	20.3	7.2
Sept 2006	12.2	6.8	10.1	17.0	4.7
Quarter C	**16.5**	**6.8**	**11.7**	**21.9**	**4.7**
Oct 2006	10.8	-0.8	5.7	12.5	-1.9
Nov 2006	0.0	-12.2	-4.7	2.9	-13.0
Dec 2006	4.1	-10.2	-3.3	5.1	-13.3
Quarter D	**10.8**	**-12.2**	**-0.8**	**12.5**	**-13.3**
Monitoring Year	**16.5**	**-22.3**	**3.2**	**21.9**	**-24.1**

Table 3-14. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
Jan 2006	3.7	-22.2	-7.3	5.4	-24.1
Feb 2006	4.3	-18.0	-3.1	6.7	-19.6
Mar 2006	1.1	-9.0	-2.6	3.3	-11.7
Quarter A	**4.3**	**-22.2**	**-4.3**	**6.7**	**-24.1**
Apr 2006	5.8	-2.8	1.5	8.5	-5.2
May 2006	15.6	0.8	7.7	18.4	-0.7
June 2006	14.4	8.0	10.2	18.2	5.8
Quarter B	**15.6**	**-2.8**	**6.6**	**18.4**	**-5.2**
July 2006	16.1	10.4	12.5	22.0	8.8
Aug 2006	16.3	10.5	12.6	18.7	8.9
Sept 2006	12.3	7.1	10.4	16.4	5.7
Quarter C	**16.3**	**7.1**	**11.8**	**22.0**	**5.7**
Oct 2006	11.2	-0.7	5.9	12.6	-1.8
Nov 2006	0.4	-12.0	-4.5	3.3	-12.6
Dec 2006	4.3	-9.9	-3.1	5.3	-13.0
Quarter D	**11.2**	**-12.0**	**-0.5**	**12.6**	**-13.0**
Monitoring Year	**16.3**	**-22.2**	**3.4**	**22.0**	**-24.1**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

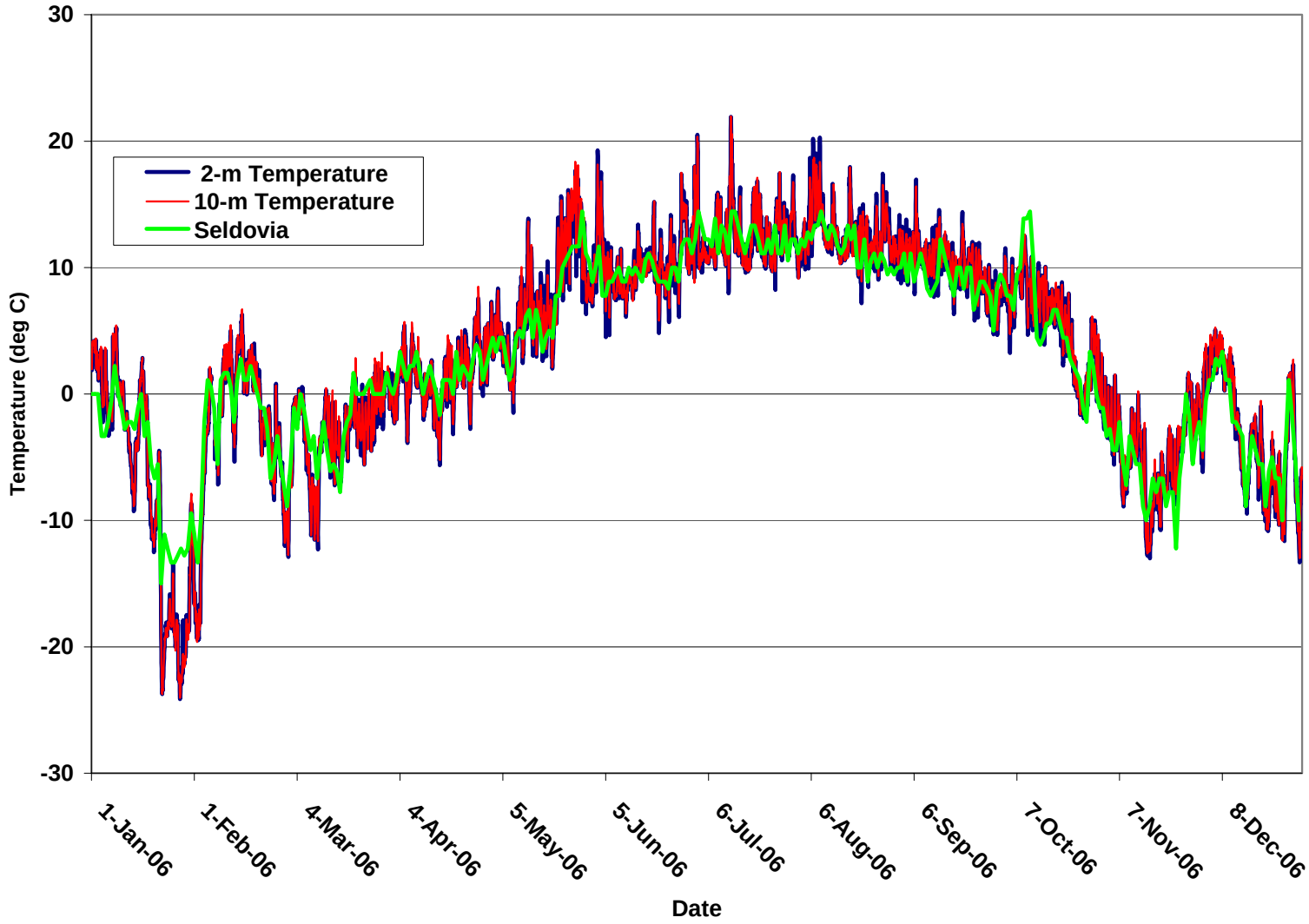
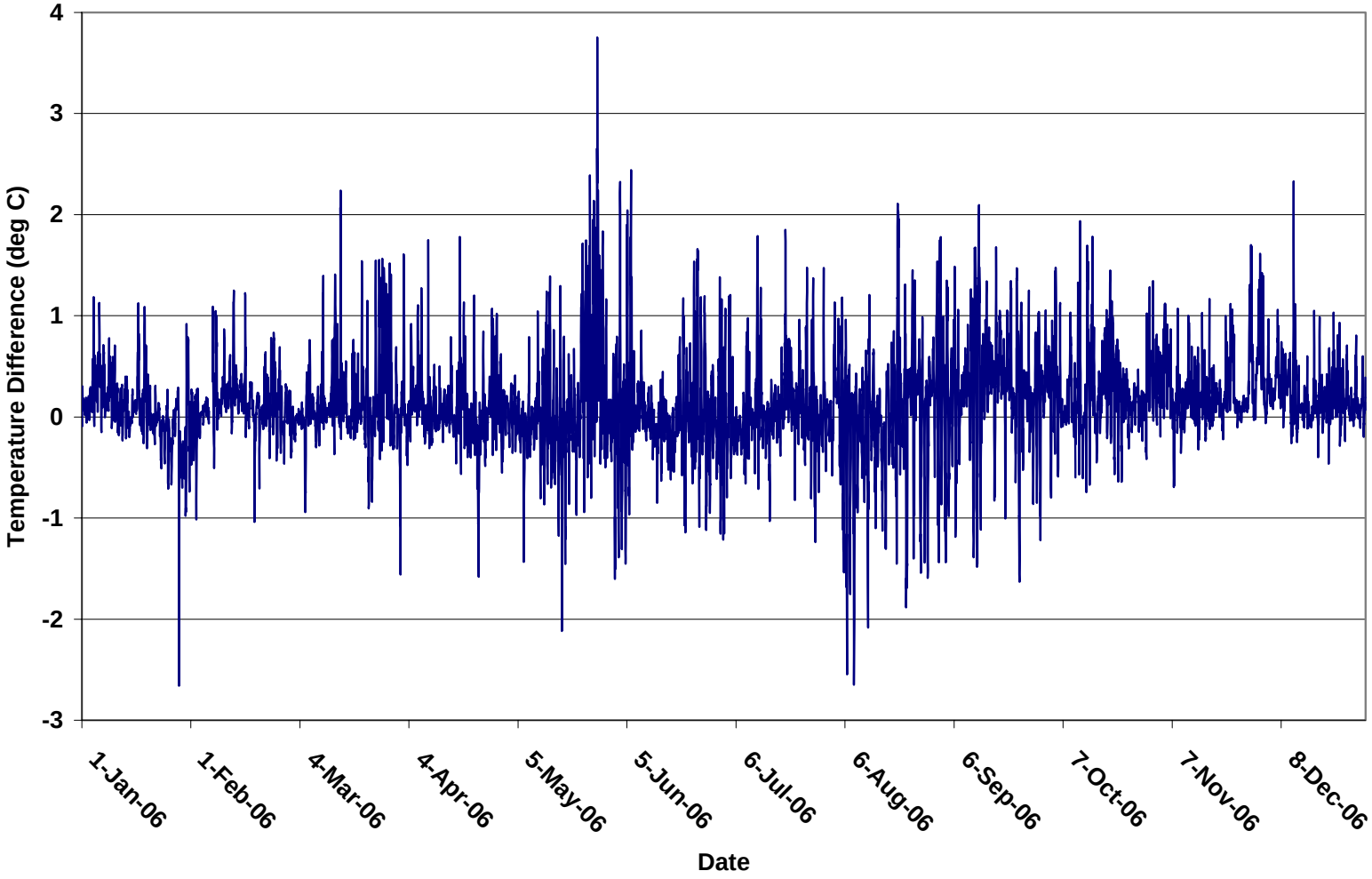


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble Port station include relative humidity, barometric pressure, and solar radiation.

Table 3-15 provides a summary of the relative humidity, barometric pressure, and solar radiation at the Pebble Port station during the 2006 monitoring year.

Figure 3-7 is a plot of the annual hourly average relative humidity. Relative humidity at the Pebble Port site varied from a low of 23.6 percent on March 11, 2006 to a high of 100 percent. The mean relative humidity during the monitoring year was 75.8 percent. The mean relative humidity at the Seldovia Airport meteorological station for the monitoring period was 80 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 960 mb during a period of night between December 19 and 20, 2006, to a maximum of 1,040 mb observed on February 16, 2006. The mean barometric pressure during the monitoring year was 1,006 mbar. The mean barometric pressure at the Seldovia Airport meteorological station for the monitoring period was 1007 mb.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 818 W/m^2 recorded on June 4, 2006 at 2:00 PM. The mean hourly average solar radiation for the monitoring year was 86 W/m^2.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Table 3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary

Period	Mean Relative Humidity (%)	Minimum Relative Humidity (%)	Maximum Relative Humidity (%)	Mean Barometric Pressure (mbar)	Minimum Barometric Pressure (mbar)	Maximum Barometric Pressure (mbar)	Mean Solar Radiation (W/m^2)	Maximum Solar Radiation (W/m^2)
Jan 2006	76.9	38.2	96.8	995	974	1,019	16.4	222.0
Feb 2006	74.0	28.9	100.0	1,011	963	1,040	36.8	413.7
Mar 2006	69.9	23.6	99.6	1,008	987	1,027	88.6	579.2
Quarter A	**73.6**	**23.6**	**100.0**	**1,004**	**963**	**1,040**	**47.6**	**579.2**
Apr 2006	72.3	32.1	99.7	1,002	977	1,015	135.0	734.0
May 2006	69.9	36.2	97.6	1,010	985	1,029	185.3	804.0
June 2006	80.0	28.1	98.9	1,014	999	1,024	155.3	818.0
Quarter B	**74.0**	**28.1**	**99.7**	**1,009**	**977**	**1,029**	**158.8**	**818.0**
July 2006	80.9	47.5	97.8	1,012	997	1,024	140.5	798.0
Aug 2006	81.4	51.5	98.8	1,008	992	1,015	110.5	764.0
Sept 2006	83.5	43.7	97.8	1,006	984	1,029	78.0	587.6
Quarter C	**81.9**	**43.7**	**98.8**	**1,009**	**984**	**1,029**	**110.0**	**798.0**
Oct 2006	79.5	31.5	99.9	1,006	982	1,028	44.8	481.7
Nov 2006	65.4	26.0	98.3	1,008	987	1,027	30.0	246.1
Dec 2006	75.3	25.0	99.9	988	960	1,024	8.9	140.5
Quarter D	**73.5**	**25.0**	**99.9**	**1,000**	**960**	**1,028**	**27.9**	**481.7**
Monitoring Year	**75.8**	**23.6**	**100.0**	**1,006**	**960**	**1,040**	**86.1**	**818.0**

Figure 3-7. Hourly Average Relative Humidity

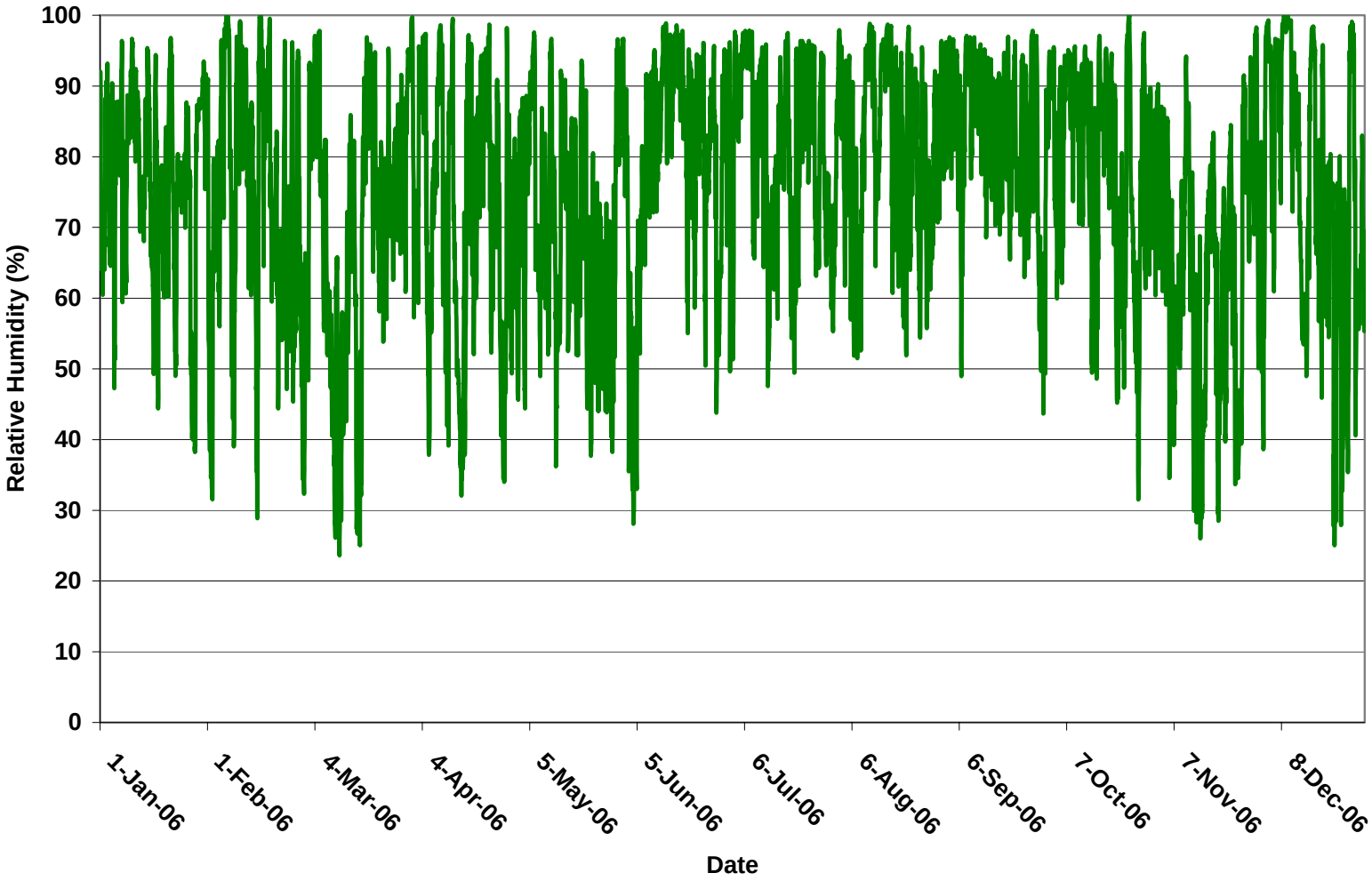


Figure 3-8. Barometric Pressure

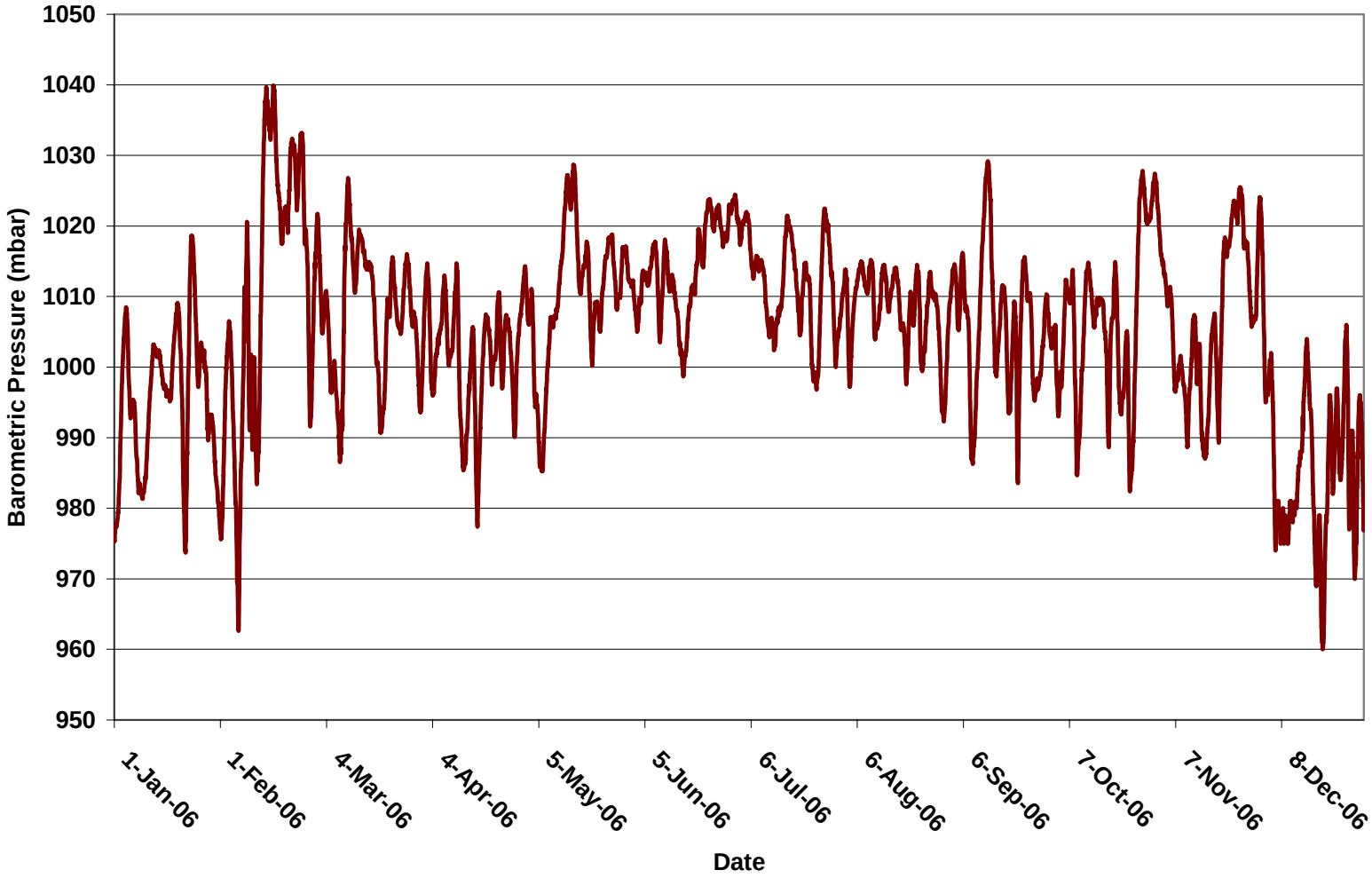
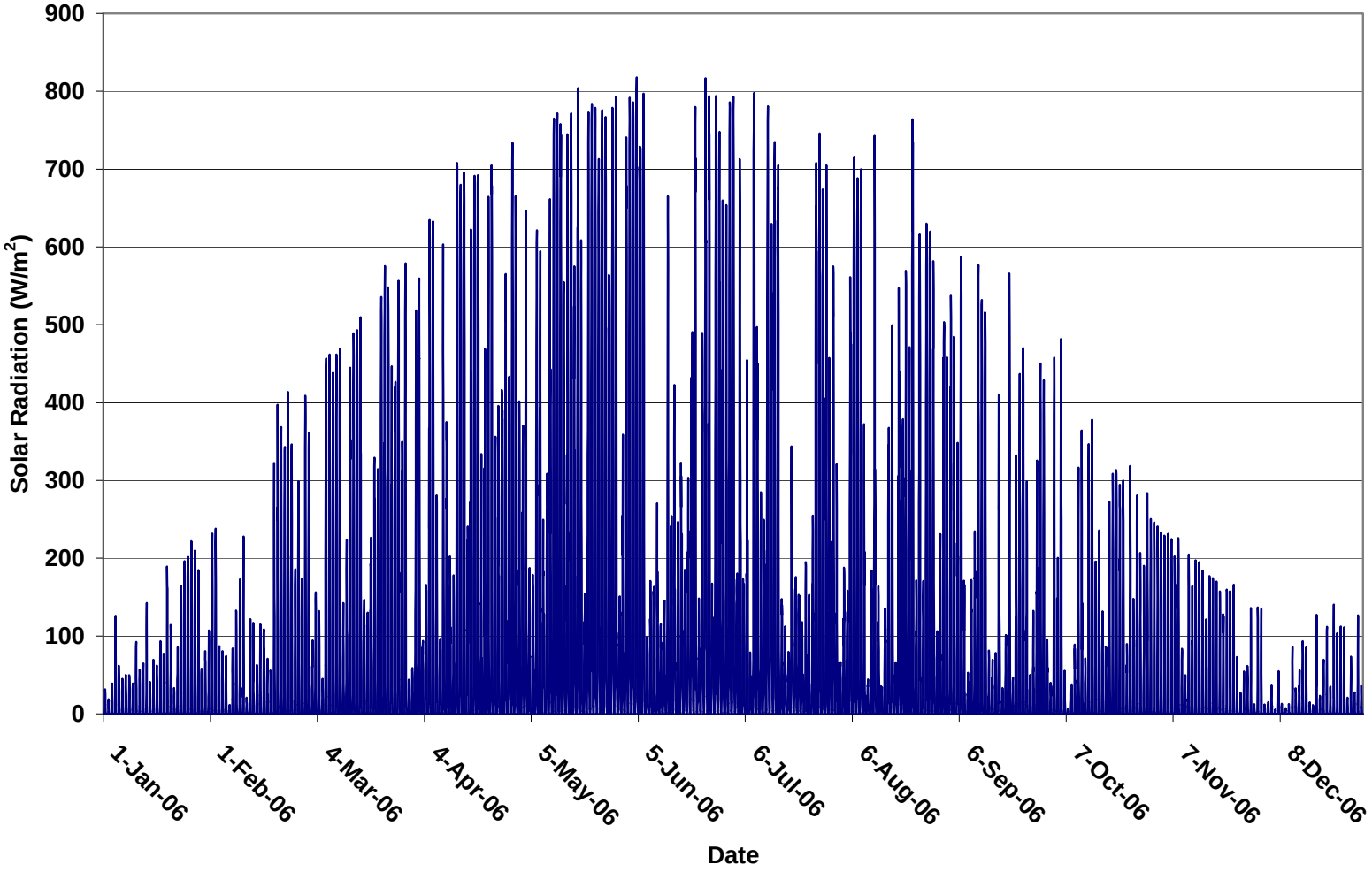


Figure 3-9. Hourly Average Solar Radiation



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U.S. Environmental Protection Agency (EPA), *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, EPA-450/4-87-007, 1987.

U.S. Environmental Protection Agency (EPA), *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, EPA-454/R-99-005, 2000.

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Appendix A

Data Processing Specifications and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Table A-1. Station Performance Summary – Data Recovery 2006-2007

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2006	99.5%	99.5%	99.5%	99.5%	99.3%	99.3%	99.5%	99.5%	99.5%	100.0%	100.0%	100.0%
February 2006	96.6%	96.6%	96.6%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100.0%	100.0%	100.0%
March 2006	100.0%	100.0%	100.0%	99.5%	88.6%	88.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter A	**98.8%**	**98.8%**	**98.8%**	**99.5%**	**95.7%**	**95.7%**	**99.7%**	**99.7%**	**99.7%**	**100.0%**	**100.0%**	**100.0%**
April 2006	100.0%	100.0%	100.0%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
May 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
June 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Quarter B	**100.0%**	**100.0%**	**100.0%**	**99.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
July 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
August 2006	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%	65.7%	65.7%	65.7%	100.0%	100.0%	100.0%
September	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter C	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**99.7%**	**55.8%**	**55.8%**	**55.8%**	**100.0%**	**100.0%**	**100.0%**
October 2006	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
November 2006	100.0%	100.0%	100.0%	99.2%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
December 2006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	100.0%
Quarter D	**100.0%**	**100.0%**	**100.0%**	**99.7%**	**100.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**100.0%**	**100.0%**	**100.0%**
Monitoring Year	**99.6%**	**99.6%**	**99.6%**	**99.7%**	**98.9%**	**98.9%**	**63.6%**	**63.6%**	**63.6%**	**100.0%**	**100.0%**	**100.0%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purpose

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

Pebble Port PSD Station

Third Quarter 2005

Quality Assurance Systems Audit and Performance Audit

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

September 2006

Northern Dynasty Mines
Pebble Port PSD Meteorological Monitoring Station
Annual Systems and Performance Audits
(Third Quarter 2005)

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

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September 2006

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station On-Site Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Wind Speed 7
3.1.4 Wind Direction 8
3.1.5 Relative Humidity 9
3.1.6 Barometric Pressure 9
3.1.7 Solar Radiation 9

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port Station June 25, 2005 & July 2005 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port Station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of this document, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question-answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

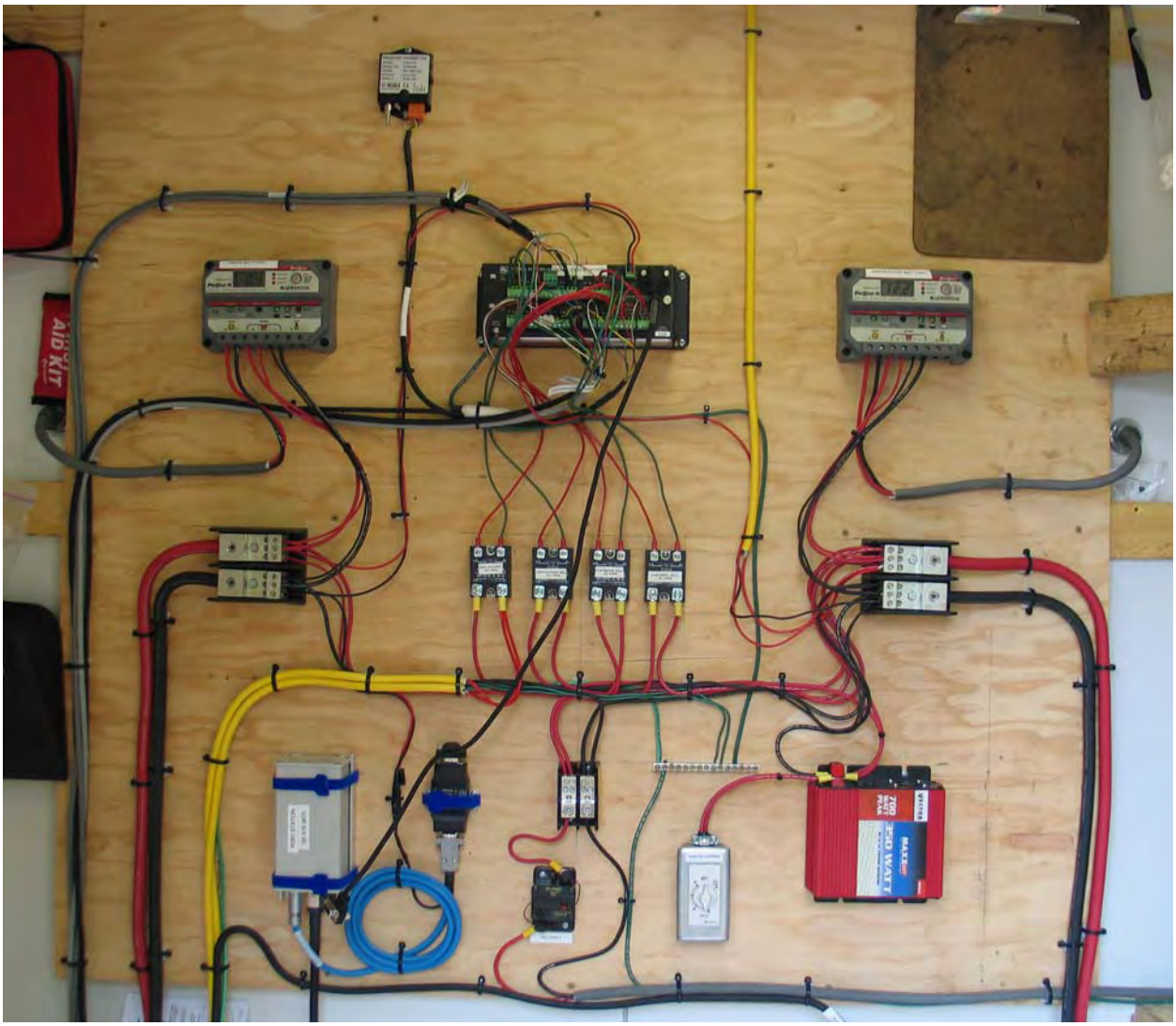
2.2 Meteorological Station On-Site Systems Audit

The on-site systems audit of the Pebble Port Station was conducted on June 25, 2005. Eric Brudie of HCG completed the systems audit with Steve Mackey and Jared Cockman of HCG and Robert Parks of NDM assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires from animals; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar

controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port Station DAS Wiring Panel



The Campbell Scientific CR10X DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. A Campbell Scientific SC932A interface converts the DAS signal to a RS-232 DCE modem signal. Three FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid near Seldovia, Alaska. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 35-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a 21-Watt Global Thermoelectric Model 5030 Thermo-Electric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three panels are dedicated to the aspirator fans, Climatronics heaters, shelter lighting and 120VAC power; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the aspirator/heater power system. Aspirator fans and heaters are controlled through relays connected to the DAS control ports. Logic programmed into the DAS reduces power consumption by limiting heater use to weather conditions conducive to icing and turns fans off at night when voltage is low, considered an upset condition. Also the TEG power is routed through relays which shunt power to the critical DAS/sensor system during upset conditions.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port Station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately

identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Pebble Port Station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port Station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit checklists
- Keep a file on site containing copies of previous checklists.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation[1]	Collocated NIST sensor	≤ ±5% of input+resolutuion[2]

1. Solar radiation not audited.
2. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of water baths; hot water (35°C to 45°C), warm water (15°C to 25°C), and a water/ice bath (0°C). Each water bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments. The difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded

during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS

programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly

average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The initial performance audit was conducted at the Pebble Port Station on June 25, 2005, shortly after startup. Steve Mackey and Jared Cockman of HCG and Robert Parks of NDM assisted. The relative humidity sensor and barometric pressure sensor were audited on July 19, 2005 because the transfer standards were not available in June. All sensors, except the solar radiation sensor, were challenged with certified audit equipment and yielded errors below the PSD limits. The solar radiation audit was not completed because adequate audit equipment was not available at the time of the audit. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Port Station June 25, 2005 & July 2005 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:02	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.35	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.30	Pass
Air Temperature Difference	≤ ±0.1	°C	-0.05	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.060	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-1.8	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[2]	N/A
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.006	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	1.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	-3.5	Pass
Wind Direction Linearity	≤ 3	Degree	2.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[2]	N/A
Relative Humidity (dew point) [1]	≤ ±1.5	°C	0.4	Pass
Barometric Pressure[1]	≤ ±3	Mbar	1.9	Pass
Solar Radiation	≤ ±5+Res	% input	No Test	N/A

1. Relative humidity and barometric pressure tested on 07/19/05.
2. Initial installation audit, azimuth audited after all other tests.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble Port PSD Meteorological Station Systems Audit

Owner: NDM **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Audit Date:** 25-Jun-05
Witnesses: S. Mackey, Jared Cockman, Robert Parks **Auditor:** Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 3
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 4
3.2.1 Data Acquisition System (DAS) and Communications System 4
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 5
3.3 Station Location and Siting 6
3.3.1 Tower 6
3.3.2 Temperature and Relative Humidity Sensors 6
3.3.3 Wind Speed and Wind Direction Sensors 7
3.3.4 Relative Humidity and Barometric Pressure 7
3.3.5 Solar Radiation 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 12

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port tower is located near the middle of a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

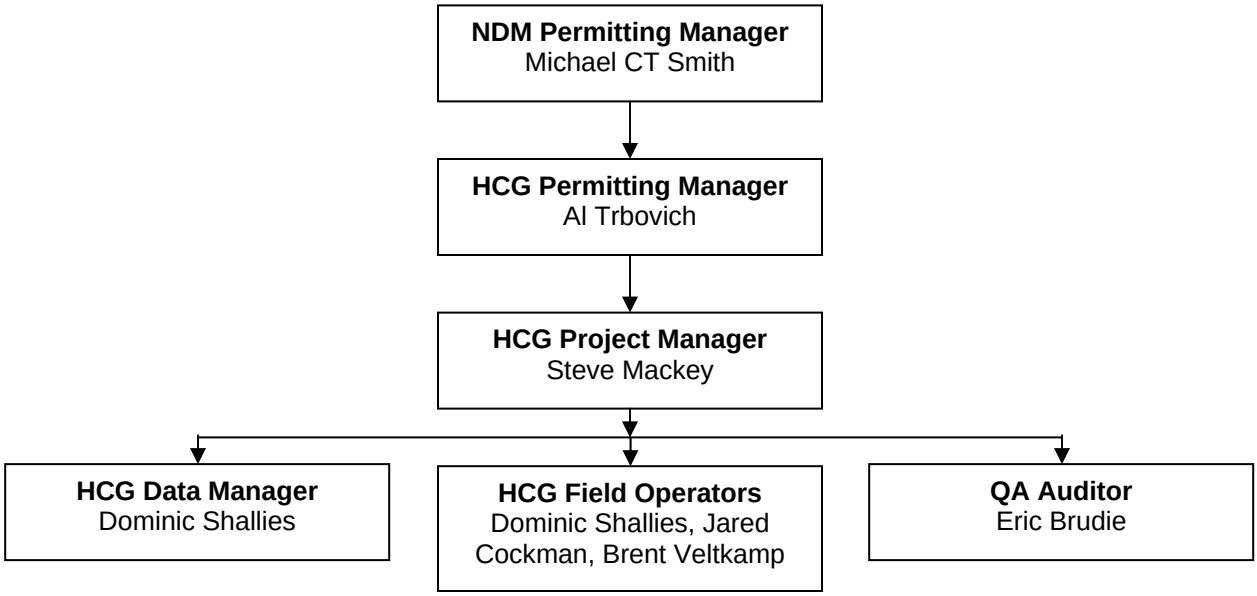
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles:



3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR10X	X41611
DAS Wiring Panel	Campbell Scientific	CR10X	31375
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Temperature Aspirators	Met One	076B-4	Unknown
Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	67055
Backup Wind Speed Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	67055
Relative Humidity	Vaisala	HMP45AC	A2120081
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY50763

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS to SC932A interface to FreeWave RF network to SixNet modem.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power?	■ Yes □ No	Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a 21-Watt propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can shunt the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not required.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained?	■ Yes □ No	Comments: None.
Are all sensors operational, online and reporting data?	■ Yes □ No	Comments: None.
Do all sensors meet EPA criteria for PSD quality sensors?	■ Yes □ No	Comments: See table below.
Are spare parts stocked for items which are frequently worn out or broken?	■ Yes □ No	Comments: Spare props, cups and vanes onsite and spare bearings at HCG office.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resol. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A

EPA Recommended Meteorological Instrument Standards (Continued)

Parameter	Instrument Specifications	EPA Standard	Pass?
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Siting

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature and Relative Humidity Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Is the ambient temperature sensor protected from the influence of solar radiation? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.

Are the temperature difference sensors located in identical aspirated shields? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.4 Relative Humidity and Barometric Pressure

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.
Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on wiring panel.

3.3.5 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	□ Yes ■ No	Comments: All operators have one to two years onsite experience.

Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

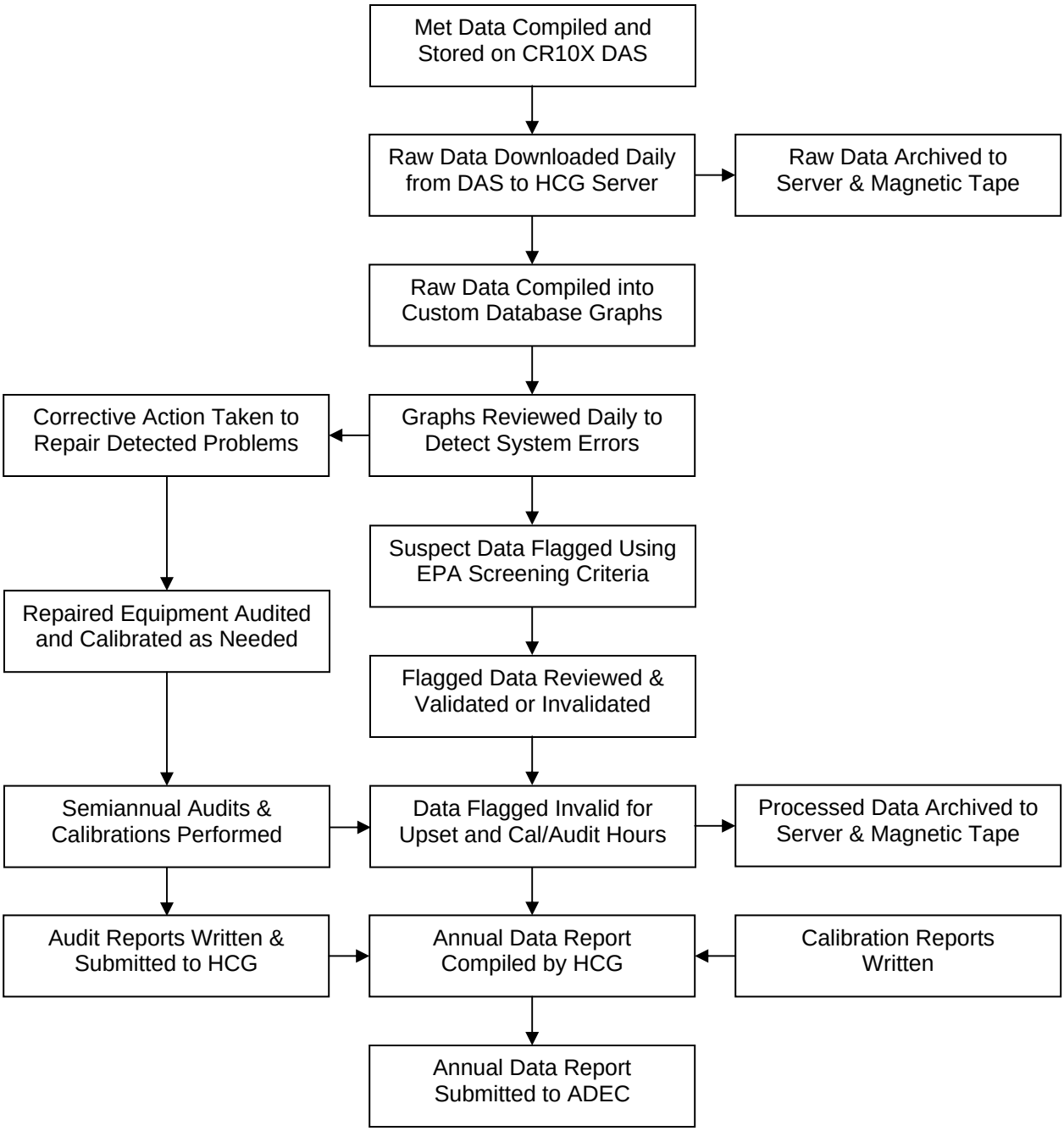
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.

Does the station have an adequate Calibration Report Form and copies of previous calibrations and audits?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Isaac Bertschi
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
15:05:00	15:05:02	**00:02**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor:	**Make:** Met One	**Model:** 062MP	**S.N.#:** E3381 # 1/2	**Range:** -50 to 50 **°C**
10-M Thermistor:	**Make:** Met One	**Model:** 062MP	**S.N.#:** E3381 # 2/2	**Range:** -50 to 50 **°C**
Audit Digital Thermometer:	**Make:** Van Waters & Rogers	**Model:** 61220-601	**S.N.#:** 51091749	**Range:** -40 to 150 **°C**
Audit Probe:	**Make:** Van Waters & Rogers	**Model:** 61220-604	**S.N.#:** 51091789	**Range:** -40 to 150 **°C**

Begin: 1400
End: 1420

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Ice Bath	0	0.07	0.42	0.35	Pass	0.37	0.30	Pass	-0.05	Pass
Warm	15 to 25	20.89	21.09	0.20	Pass	21.09	0.20	Pass	0.00	Pass
Hot	35 to 45	40.15	40.25	0.10	Pass	40.20	0.05	Pass	-0.05	Pass
		Max Abs. Error		0.35	**PASS**		0.30	**PASS**	0.05	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor:	**Make:** Vaisala	**Model:** HMP45AC	**S.N.#:** A2120081	**Range:** 0.8 to 100 **% RH**
Audit Equipment:	**Make:** Vaisala	**Model:** HMI 41	**S.N.#:** X0650080	**Range:** 0 to 100 **% RH**
Audit Equipment:	**Probe#** HMI41 X07450015			

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1130	70.1	15.2	9.8	71.8	15.2	10.1	0.4	Pass
					Max Abs. Error		0.4	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: Relative humidity audited on 07/19/05.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1143	29.99	29.87	1011.5	1013.4	1.9	Pass
			Max Abs. Error		1.9	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/23/05	
Audit Inst	Offset Amount
24.13	-0.13
26.18	-0.13
28.12	-0.12
30.12	-0.12
Intercept	**-0.18**
Slope	**0.0020**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: Barometric pressure audited on 07/19/05.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1450
End: 1455

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1440
End: 1450

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.006	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.6 **E of N**

TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.060	**PASS**
New	0.104	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.7	-0.5	Pass
Mt Augustine - Peak	356.1	355.4	-0.7	Pass
Mt Eleanor	202.6	201.4	-1.2	Pass
Compass	133.5	131.7	-1.8	Pass
		Max Abs. Error	**1.8**	**PASS**
		Mean Abs. Error	**1.1**	**GOOD**

Time: Begin: 1700 End: 1730

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	179.0	-1.0	Pass
West	270.0	269.8	-0.2	Pass
North	360.0	358.9	-1.1	Pass
East	90.0	88.7	-1.3	Pass
North	360.0	0.1	0.1	Pass
West	270.0	269.5	-0.5	Pass
South	180.0	179.0	-1.0	Pass
East	90.0	88.3	-1.7	Pass
	Max Abs. Error		**1.7**	**PASS**
	Mean Abs. Error		**0.9**	**PASS**

Time: Begin: 1525 End: 1530

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.2	0.2	Pass	330.0	331.9	1.9	Pass
60.0	60.7	0.7	Pass	360.0	0.5	0.5	Pass
90.0	90.7	0.7	Pass	30.0	30.5	0.5	Pass
120.0	120.7	0.7	Pass	60.0	60.7	0.7	Pass
150.0	150.9	0.9	Pass	90.0	90.8	0.8	Pass
180.0	181.0	1.0	Pass	120.0	121.0	1.0	Pass
210.0	211.2	1.2	Pass	150.0	151.0	1.0	Pass
240.0	241.3	1.3	Pass	180.0	181.0	1.0	Pass
270.0	271.5	1.5	Pass	**Max Abs. Error**		**1.9**	**PASS**
300.0	301.4	1.4	Pass	**Mean Abs. Error**		**0.9**	**PASS**

Time: Begin: 1515 End: 1520

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
		Max Abs. Error		
		Mean Abs. Error		

Time: Begin: End:

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment).
Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: Initial installation audit, no post-audit azimuth check.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Steve Mackey, Jared Cockman, Robert Park **Audit Date:** 25-Jun-05

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.6 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	5.0	**PASS**
New	11.0	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	263.1	-0.1	Pass
Mt Augustine - East shore	347.1	348.4	1.3	Pass
Mt Eleanor	202.6	203.8	1.2	Pass
Compass	133.5	133.6	0.1	Pass
Compass	335.0	334.2	-0.8	Pass
		Max Abs. Error	**1.3**	**PASS**
Time: Begin: 1700 End: 1730		**Mean Abs. Error**	**0.7**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.2	-1.8	Pass	150.0	148.6	-1.4	Pass	270.0	266.5	-3.5	Pass
60.0	58.4	-1.6	Pass	180.0	177.4	-2.6	Pass	300.0	296.5	-3.5	Pass
90.0	88.4	-1.6	Pass	210.0	207.1	-2.9	Pass	330.0	327.2	-2.8	Pass
120.0	118.2	-1.8	Pass	240.0	236.5	-3.5	Pass	355.0	352.6	-2.4	Pass
								Max Abs. Error		**3.5**	**PASS**
			Time:	Begin: 1503		End: 1508		**Mean Abs. Error**		**2.5**	**PASS**

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
		Max Abs. Error		
Time: Begin: End:		**Mean Abs. Error**		

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: Initial installation audit, no post-audit azimuth check.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate No. 1750.01

ACCREDITED

Calibration complies with ISO 17025

Cert. No.:4000-1103531

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 51091789

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	10/18/05	A4A12029
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	A42238		
Temperature Probe	149	7/20/05	A4715024
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	93139		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 4/27/05 **Cal Due: 4/27/07**

Test Conditions: 24.0°C 41.0 %RH 1016 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C		N.A.		0.001	0.003	Y	-0.049	0.051	0.013	3.8:1
°C		N.A.		25.001	25.002	Y	24.951	25.051	0.013	3.8:1
°C		N.A.		59.999	59.999	Y	59.949	60.049	0.013	3.8:1
°C		N.A.		100.001	100.007	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full.

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.

Traceable® is a registered trademark of Control Company © 2005 Control Company

VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052305.01

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 5/23/2005 Lab temperature 73.6 °F
Lab pressure 661.65 mm Hg

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)
24.00	24.13	0.13	-0.13
26.05	26.18	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.12	0.12	-0.12

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)

Reviewed: [signature] Date: 5-23-05

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 Rpm - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 3 May 2005

Tested By EJC

Meteorological Instruments

YOUNG

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 Rpm - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 29 October 2004

Tested By EJC

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City, Michigan 49686 USA
Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: Houston Precision

P.O.#:6632

Product Identification

Product Type: Torque Watch
Serial Number: 4864

Model Number: 366-3
Part Number: 060-SQF41199-01
Order Code: TQ3663

Product Specifications

Full Scale Range: 0.003-0.03 OZ IN
Calibrated At: 0.003-0.03 OZ IN

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 09/02/04

Certificate Number: 086-6000-01
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 5% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480. Calibration procedures are in compliance with ANSI/NCSL Z540-1-1994.

This is a quality record.

Approved and Certified By: Michael A Stanley
Factory Supervisor

Printed: 09/02/2004

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3 SERIAL NUMBER: 4864 Units = oz in Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
.000	-.0002	.0000	.0000	.0002
.003	-.0000	.0036	.0031	.0060
.006	.0030	.0058	.0062	.0090
.009	.0060	.0086	.0092	.0120
.012	.0090	.0128	.0127	.0150
.015	.0120	.0162	.0161	.0180
.018	.0150	.0195	.0197	.0210
.021	.0180	.0225	.0219	.0240
.024	.0210	.0257	.0246	.0270
.027	.0240	.0296	.0288	.0300
.030	.0270	.0320	.0322	.0330

Max pos error (% FS) = 8.7 % at .027
Max neg error (% FS) = -1.2 % at .009

Torque Watch is a: PASS

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: Houston Precision

P.O.#:6743

Product Identification

Product Type: Torque Watch
Serial Number: 5042

Model Number: 366-0
Part Number: 060-SQF41201-01
Order Code: TQ3660

Product Specifications

Full Scale Range: 0.06-0.6 IN OZ
Calibrated At: 0.06-0.6 IN OZ

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 12/01/04

Certificate Number: 086-6000-01
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 5% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480. Calibration procedures are in compliance with ANSI/NCSL Z540-1-1994.

This is a quality record.

Approved and Certified By: Joe Belcher Jr., Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-0 SERIAL NUMBER: 5042 Units = oz in Accuracy = 5 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
.00	-.003	0.000	0.000	.003
.06	.030	.056	.060	.090
.12	.090	.121	.121	.150
.18	.150	.168	.180	.210
.24	.210	.223	.255	.270
.30	.270	.299	.319	.330
.36	.330	.359	.373	.390
.42	.390	.407	.424	.450
.48	.450	.481	.494	.510
.54	.510	.531	.537	.570
.60	.570	.592	.610	.630

Max pos error (% FS) = 3.1 % at .300
Max neg error (% FS) = -2.9 % at .240

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

Pebble Port PSD Station

First Quarter 2006

Quality Assurance Performance Audit

for the

Pebble Project
NORTHERN DYNASTY MINES INC.

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

September 2006

Northern Dynasty Mines
Pebble Port PSD Meteorological Monitoring Station
Semiannual Performance Audit
(First Quarter 2006)

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

September 2006

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Wind Speed 3
2.1.4 Wind Direction 4
2.1.5 Relative Humidity 5
2.1.6 Barometric Pressure 5
2.1.7 Solar Radiation 5

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 9

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Port Station January 16, 2006 Performance Audit Summary 7
Table 2-3 Port Station February 10, 2006 Supplemental Audit Summary 8

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as a quantitative review of the Pebble Port Station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation[1]	Collocated NIST sensor	≤ ±5% of input+resolutuion[2]

1. Solar radiation not audited.
2. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of water baths; hot water (35°C to 45°C), warm water (15°C to 25°C), and a water/ice bath (0°C). Each water bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments. The difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded

during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS

programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly

average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Pebble Port Station on January 16, 2006, with Dominic Shallies of HCG assisting. The wind sensors were also audited on February 10, 2006, after a severe storm.

On January 16, 2006 all sensors, except the solar radiation sensor, were challenged with certified audit equipment and yielded errors below the PSD limits. The solar radiation audit was not completed because adequate audit equipment was not available at the time of the audit. On February 10, 2006 the Climatronics sensor was found out of alignment due to a severe winter storm event which occurred on January 22, 2006. The operator compared Climatronics and RM Young alignment data prior to and after this storm event and corroborated this conclusion. The sensor was realigned and then re-audited. Table 2-2 contains summary data from the January 2006 audit and Table 2-3 summarizes the supplemental February 2006 tests. Complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- None.

Table 2-2 Port Station January 16, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:20	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	-0.1	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.070	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-3.1	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.7	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.007	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.9	Pass
Wind Direction Accuracy	≤ ±5	Degree	-3.6	Pass
Wind Direction Linearity	≤ 3	Degree	2.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.0	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.6	Pass
Barometric Pressure	≤ ±3	Mbar	1.5	Pass
Weighing Precipitation	≤ ±10	% input	9.5	Pass
Solar Radiation	≤ ±5+Res	% input	No Test	N/A

Table 2-3 Port Station February 10, 2006 Supplemental Audit Summary

Parameter	Limit	Units	Max Err	Status
Climatronics Wind Direction System				
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	16.0	Fail[1]
Wind Direction Accuracy	≤ ±5	Degree	-2.1	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.4	Pass
RM Young Wind System				
Wind Dir. Azim. Align. (as-found/as-left)	≤ ±5	Degree	2.4	Pass

1. Climatronics wind sensor knocked out of alignment during severe storm on January 22, 2006.

3.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
13:06:30	13:06:10	**-00:20**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 51091789 **Range:** -40 to 150 **°C**

Begin: 1145
End: 1200

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Ice Bath	0	-0.02	0.12	0.14	Pass	0.12	0.14	Pass	0.00	Pass
Warm	15 to 25	18.07	18.13	0.06	Pass	18.13	0.06	Pass	0.00	Pass
Hot	35 to 45	37.80	37.94	0.14	Pass	37.94	0.14	Pass	0.00	Pass
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1330	52.9	2.8	-5.8	54.2	2.6	-5.7	0.1	Pass
1400	53.2	2.8	-5.8	56.6	2.6	-5.1	0.6	Pass
						Max Abs. Error	0.6	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1240	29.50	29.38	994.9	996.4	1.5	Pass
			Max Abs. Error		1.5	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/23/05	
Audit Inst	Offset Amount
24.13	-0.13
26.18	-0.13
28.12	-0.12
30.12	-0.12
Intercept	**-0.18**
Slope	**0.0020**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1215
End: 1230

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.70	N/A	-0.1	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.1**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1230
End: 1240

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.007	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.070	**PASS**
New	0.104	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	260.1	-3.1	Pass
Mt Eleanor	202.6	200.0	-2.6	Pass
Compass	347.0	347.9	0.9	Pass
Compass	102.5	103.7	1.2	Pass
		Max Abs. Error	**3.1**	**PASS**
		Mean Abs. Error	**1.9**	**GOOD**

Time: Begin: 1100 End: 1145

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0			
West	270.0			
North	360.0			
East	90.0			
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: End:

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.2	-0.8	Pass	330.0	331.3	1.3	Pass
60.0	58.8	-1.2	Pass	355.0	354.9	-0.1	Pass
90.0	89.8	-0.2	Pass	30.0	29.2	-0.8	Pass
120.0	119.9	-0.1	Pass	60.0	58.8	-1.2	Pass
150.0	149.6	-0.4	Pass	90.0	89.6	-0.4	Pass
180.0	179.2	-0.8	Pass	120.0	119.8	-0.2	Pass
210.0	210.1	0.1	Pass	150.0	149.1	-0.9	Pass
240.0	240.0	0.0	Pass	180.0	179.3	-0.7	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	300.1	0.1	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1245 End: 1250

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.5	-1.7	Pass
Mt Eleanor	202.6	201.0	-1.6	Pass
		Max Abs. Error	**1.7**	**PASS**
		Mean Abs. Error	**1.6**	**GOOD**

Time: Begin: 1425 End: 1435

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 16-Jan-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	7.0	**PASS**
New	11.0	N/A	N/A

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.3	-0.9	Pass
Mt Eleanor	202.6	202.4	-0.2	Pass
Compass	347.0	350.3	3.3	Pass
Compass	102.5	106.4	3.9	Pass
		Max Abs. Error	**3.9**	**PASS**
Time: Begin: 1100 End: 1145		**Mean Abs. Error**	**2.1**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	27.9	-2.1	Pass	150.0	148.9	-1.1	Pass	270.0	267.5	-2.5	Pass
60.0	58.4	-1.6	Pass	180.0	178.9	-1.1	Pass	300.0	296.4	-3.6	Pass
90.0	88.3	-1.7	Pass	210.0	208.2	-1.8	Pass	330.0	327.5	-2.5	Pass
120.0	119.2	-0.8	Pass	240.0	238.3	-1.7	Pass	355.0	352.0	-3.0	Pass
								Max Abs. Error		**3.6**	**PASS**
								Mean Abs. Error		**2.0**	**PASS**

Time: Begin: 1255 End: 1300

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.2	-2.0	Pass
Mt Eleanor	202.6	202.1	-0.5	Pass
		Max Abs. Error	**2.0**	**PASS**
Time: Begin: 1425 End: 1435		**Mean Abs. Error**	**1.3**	**GOOD**

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 10-Feb-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	342.0	357.6	15.6	Fail
Compass	180.0	196.0	16.0	Fail
		Max Abs. Error	**16.0**	**FAIL**
		Mean Abs. Error	**15.8**	**ALERT**

Time: Begin: 1200 End: 1300

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.6	-1.4	Pass
West	270.0	269.6	-0.4	Pass
North	360.0	0.2	0.2	Pass
East	90.0	89.8	-0.2	Pass
North	360.0			
West	270.0			
South	180.0			
East	90.0			
	Max Abs. Error		**1.4**	**PASS**
	Mean Abs. Error		**0.5**	**PASS**

Time: Begin: 1600 End: 1605

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.4	-1.6	Pass	330.0	329.5	-0.5	Pass
60.0	57.9	-2.1	Pass	355.0	354.6	-0.4	Pass
90.0	88.7	-1.3	Pass	30.0	28.7	-1.3	Pass
120.0	119.1	-0.9	Pass	60.0	58.2	-1.8	Pass
150.0	148.8	-1.2	Pass	90.0	88.8	-1.2	Pass
180.0	178.6	-1.4	Pass	120.0	118.8	-1.2	Pass
210.0	209.0	-1.0	Pass	150.0	148.7	-1.3	Pass
240.0	239.1	-0.9	Pass	180.0	178.6	-1.4	Pass
270.0	269.6	-0.4	Pass	**Max Abs. Error**		**2.1**	**PASS**
300.0	299.7	-0.3	Pass	**Mean Abs. Error**		**1.1**	**PASS**

Time: Begin: 1550 End: 1600

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	342.5	341.6	-0.9	Pass
Compass	182.0	180.6	-1.4	Pass
Compass	103.0	101.8	-1.2	Pass
		Max Abs. Error	**1.4**	**PASS**
		Mean Abs. Error	**1.2**	**GOOD**

Time: Begin: 1630 End: 1645

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: On 01/22/06 a severe winter storm knocked the Climatronics crossarm out of alignment. The sensor was audited, realigned and then re-audited.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 10-Feb-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.4 **E of N**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	343.0	343.6	0.6	Pass
Compass	182.0	183.5	1.5	Pass
Compass	103.0	105.4	2.4	Pass
	Max Abs. Error		**2.4**	**PASS**
Time: Begin: 1500 End: 1530	**Mean Abs. Error**		**1.5**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0				150.0				270.0			
60.0				180.0				300.0			
90.0				210.0				330.0			
120.0				240.0				355.0			
								Max Abs. Error			
								Mean Abs. Error			

Time: Begin: End:

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
	Max Abs. Error			
Time: Begin: End:	**Mean Abs. Error**			

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: RM Young sensor azimuth direction checked after winter storm.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate No. 1750.01

ACCREDITED

Calibration complies with ISO 17025

Cert. No.:4000-1103531

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 51091789

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	10/18/05	A4A12029
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	A42238		
Temperature Probe	149	7/20/05	A4715024
Thermistor Module	A27129	6/24/05	1000171514
Temperature Calibration Bath	93139		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 4/27/05 **Cal Due: 4/27/07**

Test Conditions: 24.0°C 41.0 %RH 1016 mBar

Calibration Data: (New Instrument)

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C		N.A.		0.001	0.003	Y	-0.049	0.051	0.013	3.8:1
°C		N.A.		25.001	25.002	Y	24.951	25.051	0.013	3.8:1
°C		N.A.		59.999	59.999	Y	59.949	60.049	0.013	3.8:1
°C		N.A.		100.001	100.007	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full.

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.

Traceable® is a registered trademark of Control Company © 2005 Control Company

VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052305.01

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 5/23/2005 Lab temperature 73.6 °F
Lab pressure 661.65 mm Hg

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)
24.00	24.13	0.13	-0.13
26.05	26.18	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.12	0.12	-0.12

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer (in. Hg)	Transfer Standard (in. Hg)	Difference from Reference (in. Hg)	Transfer Standard Correction* (in. Hg)

Reviewed: [signature] Date: 5-23-05

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 Rpm - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 3 May 2005

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 17 November 2005

Tested By EC

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: www.youngusa.com

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 8884 **TRACEABILITY CERTIFICATE NO.** 05090203

ISSUED TO: Hoefler Consulting Group

INSTRUMENT: 366-3, .003-.03 Inch Ounces Torque Watch, Waters Manufacturing, Inc, S/N 4864

DATE DONE: September 02, 2005 **DATE DUE:** September 01, 2006

CERTIFIED BY METROLOGIST: E.P. Young E.P. Young **TEMPERATURE:** 72 °F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

PROCEDURE/LIMITATIONS/ACCURACY STATEMENT: T.O. 33k6-4-2630-1. Accuracy: +/- 10 % of Full Scale.

COMPLIANCE

Alaska Calibration, Inc.'s calibration practices and procedures comply with the requirements of ANSI/SO/Z540-1 and ANS/ ISO/IEC17025: 2000 and relevant requirements of ISO 9002: 1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. This Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	33479
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	12/20/2005
		PO#:	Verbal
Contact:	Chris Lindsey	**Page:**	1
Dept:			
Gage:	.06-.60 oz Torque Watch	**Control:**	5042
Mfg:	Honeywell	**Model:**	.06-.60 oz Torque Watch
Location:		**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Cal-Tech Calibration, INC
Original Certificate (attached) # 1768

Reference HPI S/O # 13385

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
:

Last / Next Cal Dates: -->

Gage Status: PASS

Next Calibration Due: 12/20/2006

Certified By: Jorge Ashook Signature: Jorge A. Ashook

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 21C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994, ISO10012-1, and Houston Precision's Quality manual.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Gary Deterling Lab Manager.
*This Report shall not be reproduced except in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 1768
Instrument Make: Honeywell
Model: .06-.60" oz Torque Watch
S/N: None
ID: 5042

Date: 12-20-05
Temp: 74 Deg f
Humidity: 40%
Rec. In Tol.
Due Date: 12-20-06

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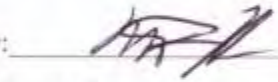
Certification by: 

Accuracy: +\- 5% of full scale.

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner	**1g-100g**	**822/265036-01**	**3-22-06**

Inch Oz. Range	As Found	After Adjust	Final Reading
.06	.05	none	.05
.18	.17	none	.17
.36	.35	none	.35
.48	.47	none	.47
.60	.59	none	.59

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

Pebble Port PSD Station

Third Quarter 2006

Quality Assurance Systems Audit and Performance Audit

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

September 2006

Northern Dynasty Mines
Pebble Port PSD Meteorological Monitoring Station
Annual Systems and Performance Audits
(Third Quarter 2006)

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

September 2006

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station On-Site Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Wind Speed 7
3.1.4 Wind Direction 8
3.1.5 Relative Humidity 9
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port Station August 21, 2006 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port Station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of this document, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question-answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

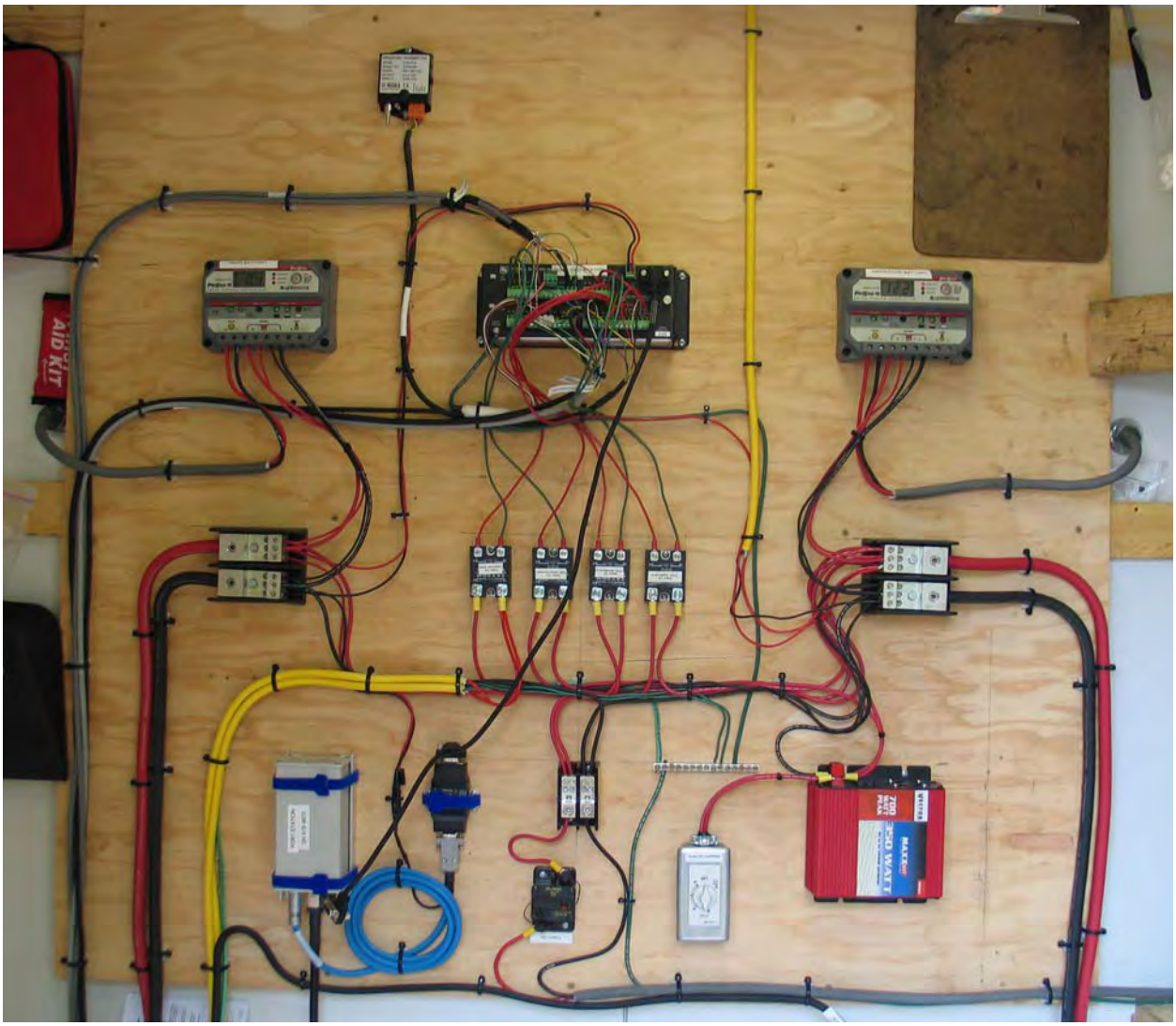
2.2 Meteorological Station On-Site Systems Audit

The on-site systems audit of the Pebble Port Station was conducted on August 21, 2006. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires from animals; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar

controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port Station DAS Wiring Panel



The Campbell Scientific CR10X DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. A Campbell Scientific SC932A interface converts the DAS signal to a RS-232 DCE modem signal. Three FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid near Seldovia, Alaska. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 35-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a 21-Watt Global Thermoelectric Model 5030 Thermo-Electric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three panels are dedicated to the aspirator fans, Climatronics heaters, shelter lighting and 120VAC power; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the aspirator/heater power system. Aspirator fans and heaters are controlled through relays connected to the DAS control ports. Logic programmed into the DAS reduces power consumption by limiting heater use to weather conditions conducive to icing and turns fans off at night when voltage is low, considered an upset condition. Also the TEG power is routed through relays which shunt power to the critical DAS/sensor system during upset conditions.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port Station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately

identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Pebble Port Station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port Station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit checklists
- Keep a file on site containing copies of previous checklists.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor’s threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The

instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital

raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audit was conducted at the Pebble Port Station on August 21, 2006 with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. The thermistor aspirator fans had failed and were replaced during the audit. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- Set up DAS to read aspirator fan amperage in order to monitor fan status.

Table 3-2 Port Station August 21, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 0.104	oz-in	0.100	Pass
Wind Direction Torque (new bearings)	≤ 0.104	oz-in	0.070	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-0.6	Pass
Wind Direction Accuracy	≤ ±5	Degree	-1.3	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass
RM Young Wind System				
Wind Speed Torque[1]	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 11	g-cm	9.0	Pass
Wind Direction Torque (new bearings)	≤ 11	g-cm	6.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	-4.5	Pass
Wind Direction Linearity	≤ 3	Degree	2.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.7	Pass
Barometric Pressure	≤ ±3	Mbar	1.0	Pass
Solar Radiation	≤ ±5+Res	% input	-5.8	Pass

1. Could not replace RM Young speed bearing due to stripped set screw.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

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"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 3
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 4
3.2.1 Data Acquisition System (DAS) and Communications System 4
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 5
3.3 Station Location and Siting 6
3.3.1 Tower 6
3.3.2 Temperature and Relative Humidity Sensors 6
3.3.3 Wind Speed and Wind Direction Sensors 7
3.3.4 Relative Humidity and Barometric Pressure 7
3.3.5 Solar Radiation 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 12

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port tower is located near the middle of a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

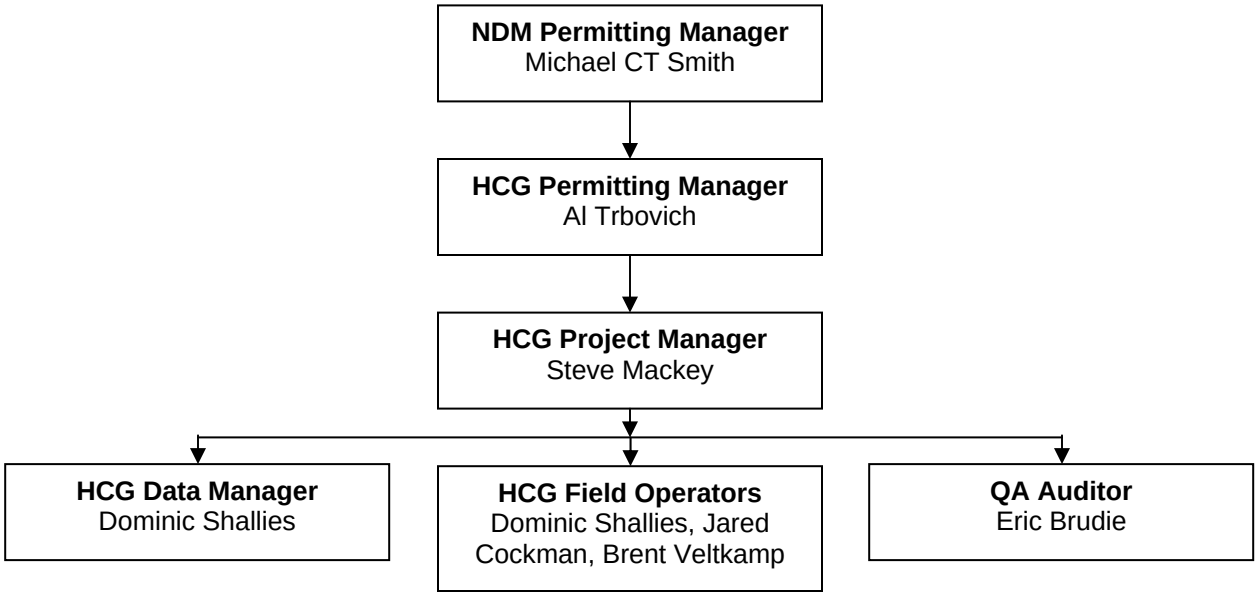
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles:



3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR10X	X41611
DAS Wiring Panel	Campbell Scientific	CR10X	31375
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Temperature Aspirators	Met One	076B-4	Unknown
Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	67055
Backup Wind Speed Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	67055
Relative Humidity	Vaisala	HMP45AC	A2120081
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY50763

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS to SC932A interface to FreeWave RF network to SixNet modem.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power?	■ Yes □ No	Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a 21-Watt propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can shunt the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not required.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained?	■ Yes □ No	Comments: None.
Are all sensors operational, online and reporting data?	■ Yes □ No	Comments: None.
Do all sensors meet EPA criteria for PSD quality sensors?	■ Yes □ No	Comments: See table below.
Are spare parts stocked for items which are frequently worn out or broken?	■ Yes □ No	Comments: Spare props, cups and vanes onsite and spare bearings at HCG office.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resol. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A

EPA Recommended Meteorological Instrument Standards (Continued)

Parameter	Instrument Specifications	EPA Standard	Pass?
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Siting

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature and Relative Humidity Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Is the ambient temperature sensor protected from the influence of solar radiation? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.

Are the temperature difference sensors located in identical aspirated shields? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.4 Relative Humidity and Barometric Pressure

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.
Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on wiring panel.

3.3.5 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	□ Yes ■ No	Comments: All operators have one to two years onsite experience.

Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

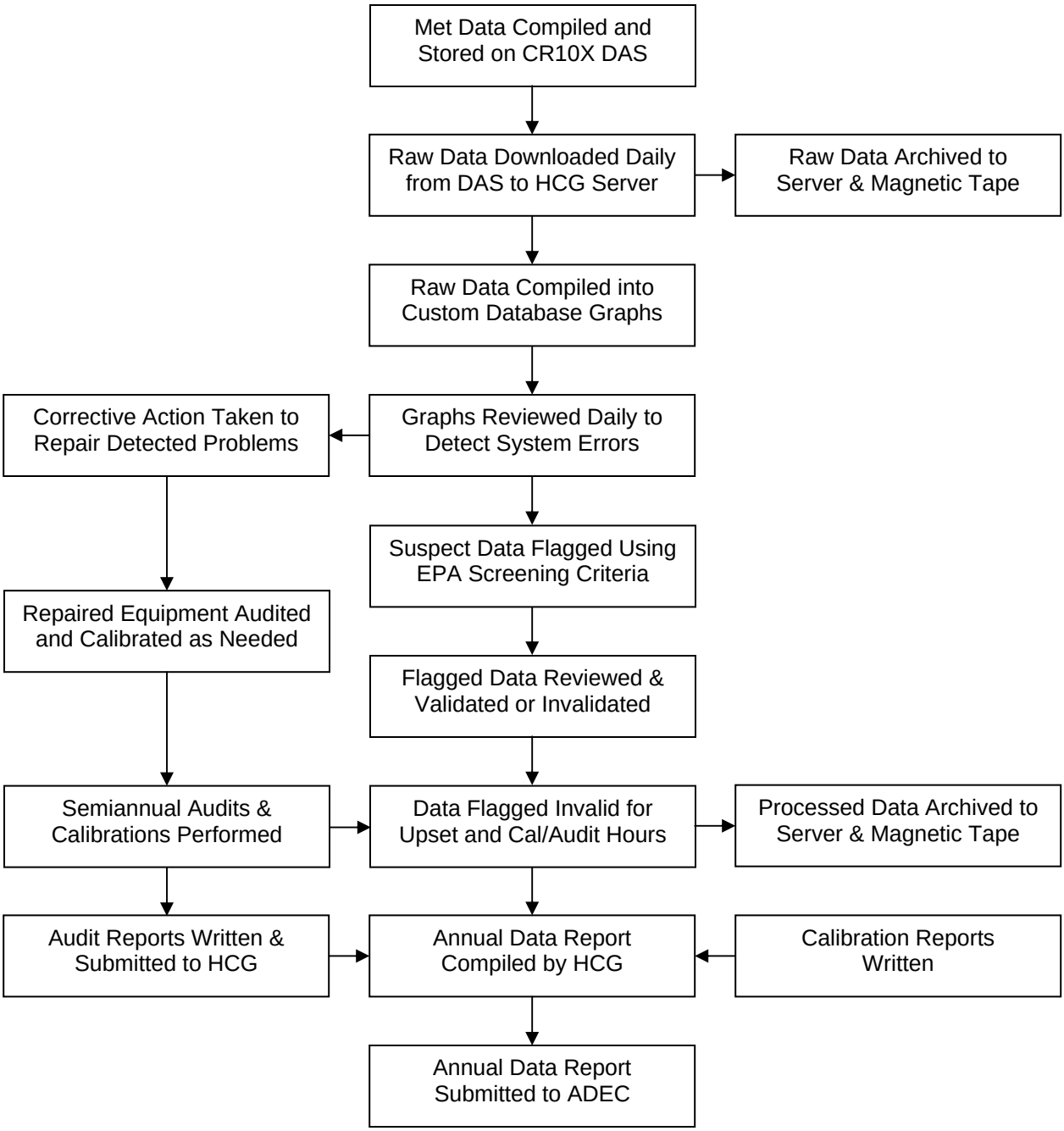
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.

Does the station have an adequate Calibration Report Form and copies of previous calibrations and audits?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Isaac Bertschi
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
16:54:30	16:54:37	**00:07**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Begin: 1444
End: 1505

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Very Cold	-35 to -45	-36.44	-36.25	0.19	Pass	-36.25	0.19	Pass	0.00	Pass
Cold	-15 to -25	-16.37	-16.16	0.21	Pass	-16.16	0.21	Pass	0.00	Pass
Ice Bath	0	-0.12	0.03	0.15	Pass	0.03	0.15	Pass	0.00	Pass
Warm	15 to 25	20.49	20.60	0.11	Pass	20.60	0.11	Pass	0.00	Pass
Hot	35 to 45	38.79	38.89	0.10	Pass	38.89	0.10	Pass	0.00	Pass
		Max Abs. Error		0.21	**PASS**		0.21	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1049	55.0	14.2	5.3	58.1	14.1	6.0	0.7	Pass
1139	52.1	14.8	5.1	54.7	14.6	5.6	0.5	Pass
					Max Abs. Error		0.7	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1530	29.91	29.80	1009.0	1010.0	1.0	Pass
			Max Abs. Error		1.0	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/24/06	
Audit Inst	Offset Amount
24.13	-0.13
26.24	-0.13
28.12	-0.12
30.11	-0.11
Intercept	**-0.22**
Slope	**0.0035**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1351
End: 1354

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1150
End: 1155

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: Could not replace speed bearings because allen set screw on nose cone speed magnet worn.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.100	**PASS**
New	0.104	0.070	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.9	-0.3	Pass
Mt Augustine - Peak	356.1	355.5	-0.6	Pass
Mt Eleanor	202.6	202.0	-0.6	Pass
Compass	145.5	145.1	-0.4	Pass
		Max Abs. Error	**0.6**	**PASS**
		Mean Abs. Error	**0.5**	**GOOD**

Time: Begin: 1100 End: 1125

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.9	-1.1	Pass
West	270.0	269.9	-0.1	Pass
North	360.0	0.1	0.1	Pass
East	90.0	90.2	0.2	Pass
North	360.0	0.1	0.1	Pass
West	270.0	270.1	0.1	Pass
South	180.0	178.9	-1.1	Pass
East	90.0	89.7	-0.3	Pass
	Max Abs. Error		**1.1**	**PASS**
	Mean Abs. Error		**0.4**	**PASS**

Time: Begin: 1320 End: 1324

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.9	-0.1	Pass	330.0	330.5	0.5	Pass
60.0	58.7	-1.3	Pass	355.0	354.9	-0.1	Pass
90.0	89.5	-0.5	Pass	30.0	29.5	-0.5	Pass
120.0	119.9	-0.1	Pass	60.0	58.9	-1.1	Pass
150.0	149.2	-0.8	Pass	90.0	89.7	-0.3	Pass
180.0	179.0	-1.0	Pass	120.0	119.9	-0.1	Pass
210.0	209.7	-0.3	Pass	150.0	149.0	-1.0	Pass
240.0	240.0	0.0	Pass	180.0	179.2	-0.8	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	299.7	-0.3	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1328 End: 1331

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	354.3	-1.8	Pass
Mt Augustine - East shore	347.1	345.4	-1.7	Pass
Mt Eleanor	202.6	199.8	-2.8	Pass
Compass	129.5	126.8	-2.7	Pass
		Max Abs. Error	**2.8**	**PASS**
		Mean Abs. Error	**2.1**	**GOOD**

Time: Begin: 1530 End: 1555

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	9.0	**PASS**
New	11.0	6.0	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	353.8	-2.3	Pass
Mt Eleanor	202.6	202.6	0.0	Pass
Compass	145.5	148.0	2.5	Pass
		Max Abs. Error	**2.5**	**PASS**
Time: Begin: 1100 End: 1125		**Mean Abs. Error**	**1.6**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.9	-1.1	Pass	150.0	148.3	-1.7	Pass	270.0	265.5	-4.5	Pass
60.0	59.0	-1.0	Pass	180.0	177.5	-2.5	Pass	300.0	295.7	-4.3	Pass
90.0	89.3	-0.7	Pass	210.0	207.1	-2.9	Pass	330.0	326.3	-3.7	Pass
120.0	118.9	-1.1	Pass	240.0	236.1	-3.9	Pass	355.0	351.7	-3.3	Pass
								Max Abs. Error		**4.5**	**PASS**
								Mean Abs. Error		**2.6**	**PASS**

Time: Begin: 1140 End: 1144

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	263.2	0.0	Pass
Mt Augustine - East shore	347.1	348.5	1.4	Pass
Mt Eleanor	202.6	203.4	0.8	Pass
Compass	129.5	132.3	2.8	Pass
		Max Abs. Error	**2.8**	**PASS**
Time: Begin: 1530 End: 1555		**Mean Abs. Error**	**1.3**	**GOOD**

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

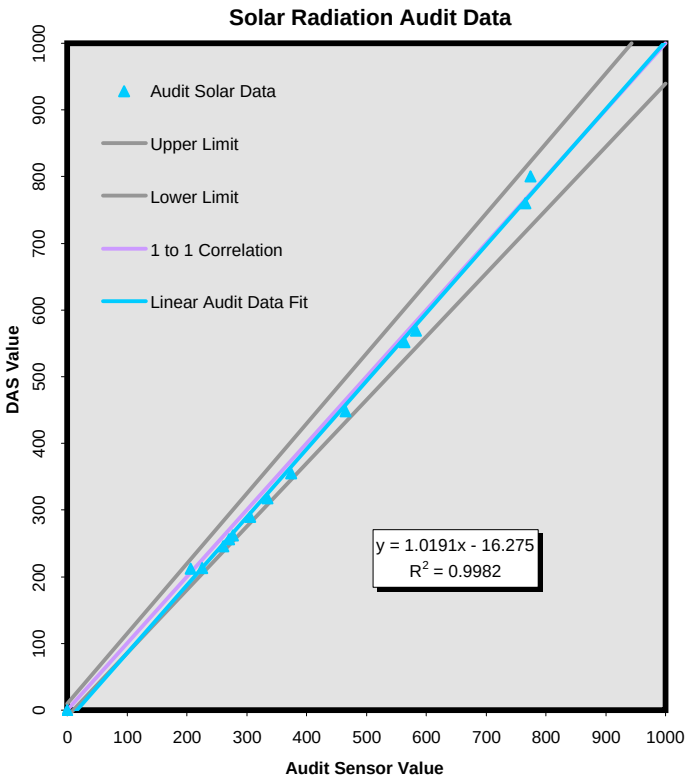
Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.0 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION SENSOR TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
Instantaneous Readings						
1047	276.7	262.3	-14.4	±23.8	-5.2%	Pass
1050	260.6	245.4	-15.2	±23.0	-5.8%	Pass
1310	774.0	800.6	26.6	±48.7	3.4%	Pass
1318	766.0	760.4	-5.6	±48.3	-0.7%	Pass
1402	1025.0	1030.4	5.4	±61.3	0.5%	Pass
1410	374.0	354.7	-19.3	±28.7	-5.2%	Pass
1518	225.4	212.9	-12.5	±21.3	-5.5%	Pass
1623	0.0	0.0	0.0	±10.0	n/a	Pass
1648	306.3	289.9	-16.4	±25.3	-5.4%	Pass
Hourly Averages						
1200	334.8	317.3	-17.5	±26.7	-5.2%	Pass
1300	465.6	447.9	-17.7	±33.3	-3.8%	Pass
1400	583.3	569.3	-14.0	±39.2	-2.4%	Pass
1500	563.3	552.2	-11.1	±38.2	-2.0%	Pass
1600	271.1	256.3	-14.8	±23.6	-5.5%	Pass
1700	206.4	211.9	5.5	±20.3	2.7%	Pass
Corr. Val	**0.9991**	**Max Abs. Percent Error**			**5.8%**	**PASS**
R² Value	**0.9982**	**Intercept**	**-16.3**	**Slope**	**1.0191**	**PASS**



Begin Date: 08/21/06 **End Date:** 08/21/06

PSD Limits: Max Absolute Error <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Comments: Instantaneous data point at 1623 taken with sensors covered.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate 1750.01

Calibration complies with ISO/IEC 17025 AND ANSI/NCSL Z540-1

Cert. No.: 4000-1338226

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Dominic Shallies, Anchorage, AK 99503 U.S.A. (RMA:933478)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	12/08/06	A5B28010-1
Thermistor Module	A17118	8/12/06	A5819038
Temperature Calibration Bath TC179	A45240		
Temperature Calibration Bath TC191	A42238		
Temperature Probe	157	9/01/06	A5815063
Thermistor Module	A27129	7/05/06	1000189003

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 6/07/06 **Cal Due: 6/07/07**

Test Conditions: 25.5°C 39.0 %RH 1013 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.000	0.072	N	0.000	-0.004	Y	-0.050	0.050	0.013	3.8:1
°C	25.000	25.020	Y	25.000	24.999	Y	24.950	25.050	0.013	3.8:1
°C	60.002	59.999	Y	60.001	59.999	Y	59.951	60.051	0.013	3.8:1
°C	100.002	100.001	Y	100.002	100.004	Y	99.952	100.052	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

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VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052406. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 05/24/06 Lab temperature 72.8 °F
Lab pressure 663.1 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.13	0.13	-0.13
26.11	26.24	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.11	0.11	-0.11

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R Sanders Date: 5-24-06

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 RPM - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 24 May 2006

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 17 November 2005

Tested By EC

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: www.youngusa.com

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 8884 **TRACEABILITY CERTIFICATE NO.** 05090203

ISSUED TO: Hoefler Consulting Group

INSTRUMENT: 366-3, .003-.03 Inch Ounces Torque Watch, Waters Manufacturing, Inc, S/N 4864

DATE DONE: September 02, 2005 **DATE DUE:** September 01, 2006

CERTIFIED BY METROLOGIST: E.P. Young E.P. Young **TEMPERATURE:** 72 °F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

PROCEDURE/LIMITATIONS/ACCURACY STATEMENT: T.O. 33k6-4-2630-1. Accuracy: +/- 10 % of Full Scale.

COMPLIANCE

Alaska Calibration, Inc.'s calibration practices and procedures comply with the requirements of ANSI/SO/Z540-1 and ANS/ ISO/IEC17025: 2000 and relevant requirements of ISO 9002: 1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. This Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	33479
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	12/20/2005
		PO#:	Verbal
Contact:	Chris Lindsey	**Page:**	1
Dept:			
Gage:	.06-.60 oz Torque Watch	**Control:**	5042
Mfg:	Honeywell	**Model:**	.06-.60 oz Torque Watch
Location:		**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Cal-Tech Calibration, INC
Original Certificate (attached) # 1768

Reference HPI S/O # 13385

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
:

Last / Next Cal Dates: -->

Gage Status: PASS

Next Calibration Due: 12/20/2006

Certified By: Jorge Ashook Signature: Jorge A. Ashook

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 21C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994, ISO10012-1, and Houston Precision's Quality manual.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Gary Deterling Lab Manager.
*This Report shall not be reproduced except in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

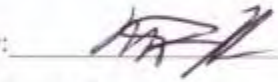
Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 1768
Instrument Make: Honeywell
Model: .06-.60" oz Torque Watch
S/N: None
ID: 5042

Date: 12-20-05
Temp: 74 Deg f
Humidity: 40%
Rec. In Tol.
Due Date: 12-20-06

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: 

Accuracy: +\- 5% of full scale.

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner	**1g-100g**	**822/265036-01**	**3-22-06**

Inch Oz. Range	As Found	After Adjust	Final Reading
.06	.05	none	.05
.18	.17	none	.17
.36	.35	none	.35
.48	.47	none	.47
.60	.59	none	.59

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: info@eppleylab.com Internet: www.eppleylab.com

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Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.33×10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}.

Shipped to:
Hoefler Consulting Group
Anchorage, AK

Date of Test: October 20, 2005

In Charge of Test: R. T. Eppley

S.O. Number: 60557
Date: January 11, 2006

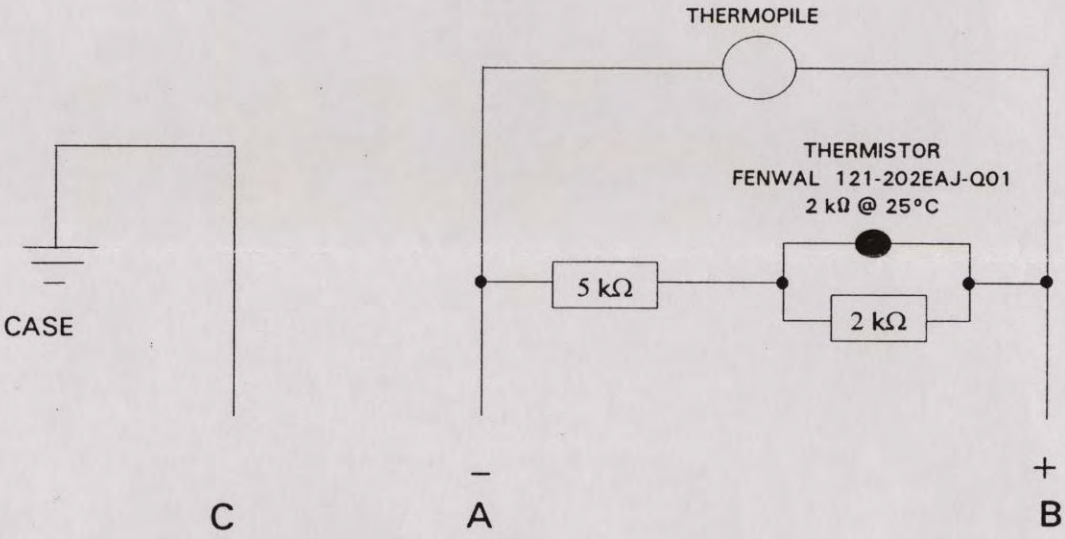
Reviewed by: George L. Eppley

Remarks:

PRECISION SPECTRAL PYRANOMETER
MODEL PSP

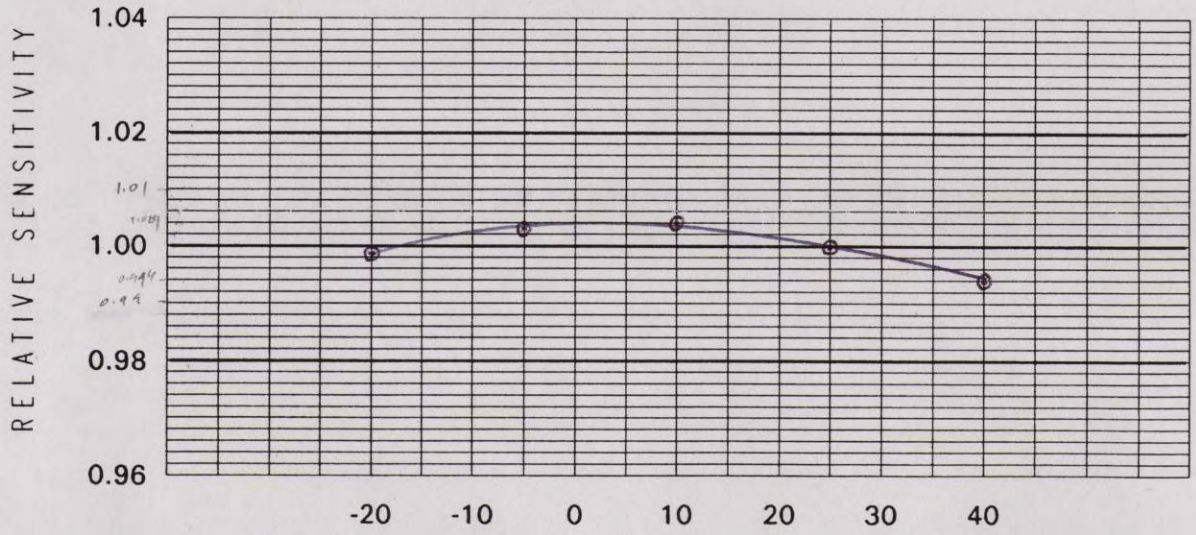
INSTRUMENT SERIAL NUMBER: 34377F3

INTERNAL WIRING



PIN CONNECTIONS ON PLUG

TEMPERATURE DEPENDENCE



EPLAB

TESTED BY: R. Eppeman

DATE: Oct 18, 2005

Pebble Port 1
PSD Meteorological Monitoring Station

January 2007

Quality Assurance Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port 1 PSD Meteorological Monitoring Station
January 2007
Quality Assurance Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Relative Humidity 3
2.1.4 Wind Speed 4
2.1.5 Wind Direction 4
2.1.6 Barometric Pressure 6
2.1.7 Solar Radiation 6

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 9

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Port 1 January 16, 2007 Performance Audit Summary 7
Table 2-3 Port 1 February 7, 2007 Supplemental Performance Audit Summary 8

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential mine port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as a quantitative review of the Pebble Port 1 station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit; instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Port 1 station on January 16, 2007, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and all except the RM Young wind sensor yielded errors below the PSD limits. The 2-meter aspirator fan also was not operating upon arrival at the site, but was repaired during the audit. On February 7, 2007 the RM Young sensor and the aspirators were replaced and a supplemental audit was conducted.

Table 2-2 contains summary data from the January 2007 audit and Table 2-3 summarizes the February 2007 supplemental performance audit. Complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- Set up DAS to monitor aspirator fan amperage.

Table 2-2 Port 1 January 16, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:13	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass[1]
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	Oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	2.0	Pass
Wind Direction Torque	≤ 0.104	Oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.5	Pass
Wind Direction Linearity	≤ 3	Degree	1.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.03	Fail
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	10.4	Fail
Wind Direction Accuracy	≤ ±5	Degree	5.9	Fail
Wind Direction Linearity	≤ 3	Degree	3.1	Fail
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	10.5	Fail
Barometric Pressure	≤ ±3	Mbar	-1.9	Pass
Solar Radiation	≤ ±5+Res	% input	-1.9	Pass

1. Two-meter temperature aspirator fan not operating upon arrival.

Table 2-3 Port 1 February 7, 2007 Supplemental Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:16	Pass
2-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
10-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
Air Temperature Difference (Pre-wire)	≤ ±0.1	°C	0.00	Pass
2-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
10-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
Air Temperature Difference (Post-wire)	≤ ±0.1	°C	0.00	Pass
Relative Humidity –Dew Pt (Pre-wire)[1]	≤ ±1.5	°C	0.3	Pass
Relative Humidity –Dew Pt (Post-wire)	≤ ±1.5	°C	-0.1	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.007	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass

1. Instruments audited before and after wiring new aspirators.
2. New RM Young sensor, no in-situ test conducted.

3.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
12:14:00	12:13:47	**-00:13**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1405
End: 1445

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	45.40	45.53	0.13	Pass	45.53	0.13	Pass	0.00	Pass
Warm	15 to 25	19.48	19.55	0.07	Pass	19.55	0.07	Pass	0.00	Pass
Ice Bath	0	0.00	0.11	0.11	Pass	0.11	0.11	Pass	0.00	Pass
Cold	-15 to -25	-22.85	-22.78	0.07	Pass	-22.78	0.07	Pass	0.00	Pass
Very Cold	-35 to -45	-38.73	-38.59	0.14	Pass	-38.59	0.14	Pass	0.00	Pass
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: 2-meter aspirator fan not operating.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	A2120081	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1545	63.0	-3.7	-9.0	67.1	-3.7	-8.9	0.1	Pass
1600	63.3	-3.6	-8.9	67.5	-3.6	-8.7	0.2	Pass
						Max Abs. Error	0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.2 **E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.76	N/A	0.2	Pass
2000	47.22	48.15	N/A	2.0	Pass
	Max Abs. Error		**0.00**	**2.0**	**PASS**

Time: Begin: 1445 End: 1450

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.2	-2.7	Pass
Compass	4.0	3.1	-0.9	Pass
Compass	99.0	98.1	-0.9	Pass
East Flank Augustine	347.0	344.4	-2.6	Pass
Compass	162.0	162.3	0.3	Pass
Mt Eleanor	202.6	199.1	-3.5	Pass
Max Abs. Error			**3.5**	**PASS**
Mean Abs. Error			**1.8**	**GOOD**

Time: Begin: 1200 End: 1300

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.2	-1.8	Pass
West	270.0	269.3	-0.7	Pass
North	360.0	358.8	-1.2	Pass
East	90.0	88.1	-1.9	Pass
North	360.0	359.0	-1.0	Pass
West	270.0	268.6	-1.4	Pass
South	180.0	177.7	-2.3	Pass
East	90.0	88.9	-1.1	Pass
Max Abs. Error			**2.3**	**PASS**
Mean Abs. Error			**1.4**	**PASS**

Time: Begin: 1400 End: 1402

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	27.5	-2.5	Pass	330.0	329.0	-1.0	Pass
60.0	58.0	-2.0	Pass	355.0	353.6	-1.4	Pass
90.0	89.4	-0.6	Pass	30.0	27.8	-2.2	Pass
120.0	118.7	-1.3	Pass	60.0	58.0	-2.0	Pass
150.0	148.4	-1.6	Pass	90.0	88.5	-1.5	Pass
180.0	178.4	-1.6	Pass	120.0	118.8	-1.2	Pass
210.0	208.6	-1.4	Pass	150.0	148.4	-1.6	Pass
240.0	238.9	-1.1	Pass	180.0	178.3	-1.7	Pass
270.0	268.6	-1.4	Pass	**Max Abs. Error**		**2.5**	**PASS**
300.0	299.1	-0.9	Pass	**Mean Abs. Error**		**1.5**	**PASS**

Time: Begin: 1406 End: 1410

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.080	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	261.9	-1.0	Pass
Compass	5.0	7.8	2.8	Pass
Max Abs. Error			**2.8**	**PASS**
Mean Abs. Error			**1.9**	**GOOD**

Time: Begin: 1530 End: 1545

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 67055	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.2	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1518 End: 1522

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.4	-2.5	Pass
Compass	4.0	13.6	9.6	Fail
Compass	99.0	109.4	10.4	Fail
East Flank Augustine	347.0	349.6	2.6	Pass
Compass	161.0	167.4	6.4	Fail
Pomeroy Repeater	262.9	261.0	-1.9	Pass
Pomeroy Repeater (180°)	82.9	90.2	7.3	Fail
Mt Eleanor	202.6	202.1	-0.5	Pass
Time: Begin: 1200	**Max Abs. Error**		**10.4**	**FAIL**
End: 1300	**Mean Abs. Error**		**5.2**	**ALERT**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.7	-0.3	Pass	150.0	149.2	-0.8	Pass	270.0	264.1	-5.9	Fail
60.0	61.2	1.2	Pass	180.0	177.8	-2.2	Pass	300.0	294.7	-5.3	Fail
90.0	91.8	1.8	Pass	210.0	205.9	-4.1	Pass	330.0	325.4	-4.6	Pass
120.0	120.2	0.2	Pass	240.0	234.1	-5.9	Fail	355.0	350.3	-4.7	Pass
				Time: Begin: 1500				**Max Abs. Error**		**5.9**	**FAIL**
				End: 1505				**Mean Abs. Error**		**3.1**	**FAIL**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.03	**FAIL**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	7.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	261.0	-1.9	Pass
Compass	5.0	15.5	10.5	Fail
Time: Begin: 1530	**Max Abs. Error**		**10.5**	**FAIL**
End: 1545	**Mean Abs. Error**		**6.2**	**ALERT**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Direction sensor failed for unknown reason.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1547	29.91	29.80	1009.0	1007.1	-1.9	Pass
			Max Abs. Error		1.9	**PASS**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

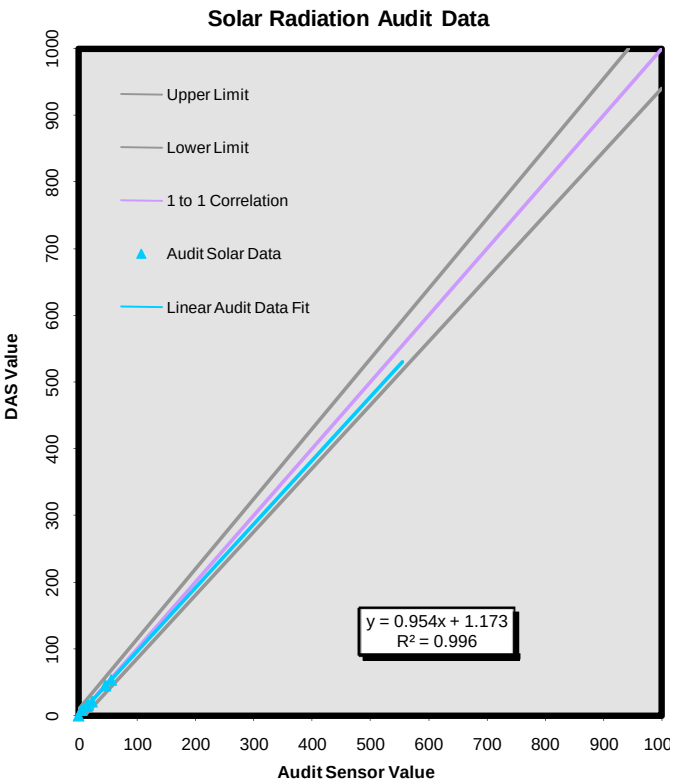
Audit Inst Cal Data	
Cal. Date: 05/24/06	
Audit Inst	Offset Amount
24.13	-0.13
26.24	-0.13
28.12	-0.12
30.11	-0.11
Intercept	**-0.22**
Slope	**0.0035**

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1606	16.4	16.2	-0.2	±10.8	n/a	Pass
1200	4.8	8.4	3.6	±10.2	n/a	Pass
1300	14.2	14.2	0.0	±10.7	n/a	Pass
1400	22.1	21.6	-0.5	±11.1	n/a	Pass
1500	55.2	54.1	-1.1	±12.8	-1.9%	Pass
1600	45.6	44.7	-0.9	±12.3	n/a	Pass
2000	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9980**	**Max Abs. Percent Error**			**1.9%**	**PASS**
R² Value	**0.9960**	**Intercept**	**1.2**	**Slope**	**0.9541**	**PASS**



Begin Date: 01/16/07 **End Date:** 01/16/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Feb 7, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
15:07:00	15:06:44	**-00:16**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

THERMISTOR COLLOCATED STANDARD TEST												
			Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
			Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Time:	Begin:	1110	Warm	15 to 25	30.64	30.79	0.15	Pass	30.79	0.15	Pass	0.00	Pass
	End:	1115	Ice Bath	0	0.05	0.20	0.15	Pass	0.20	0.15	Pass	0.00	Pass
Time:	Begin:	1515	Warm	15 to 25	25.70	25.72	0.02	Pass	25.72	0.02	Pass	0.00	Pass
	End:	1520	Ice Bath	0	0.04	0.17	0.13	Pass	0.17	0.13	Pass	0.00	Pass
					Max Abs. Error	0.15	**PASS**			0.15	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: Thermistors tested before and after wiring into new aspirators.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45ASP **S.N.#:** B4850068 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1120	72.7	1.8	-2.6	74.7	1.7	-2.3	0.3	Pass
1520	90.7	0.2	-1.5	92.4	-0.5	-1.6	-0.1	Pass
					Max Abs. Error		0.3	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: $Td = b*\gamma/(a-\gamma)$, where $\gamma = a*Ta/(b + Ta) + \ln(RH)$, and a = 17.27, b=237.7°C.
Comments: RH sensor tested before and after wiring into new aspirator.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Feb 7, 2007

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 76266	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.2	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
9000	46.08	46.08	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1102 End: 1105

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.5	-0.5	Pass	150.0	149.4	-0.6	Pass	270.0	268.9	-1.1	Pass
60.0	59.9	-0.1	Pass	180.0	178.8	-1.2	Pass	300.0	299.0	-1.0	Pass
90.0	89.9	-0.1	Pass	210.0	209.3	-0.7	Pass	330.0	328.4	-1.6	Pass
120.0	119.7	-0.3	Pass	240.0	239.0	-1.0	Pass	355.0	353.1	-1.9	Pass
				Time: Begin:	1055	**Max Abs. Error**			**1.9**		**PASS**
				End:	1100	**Mean Abs. Error**			**0.8**		**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.007	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

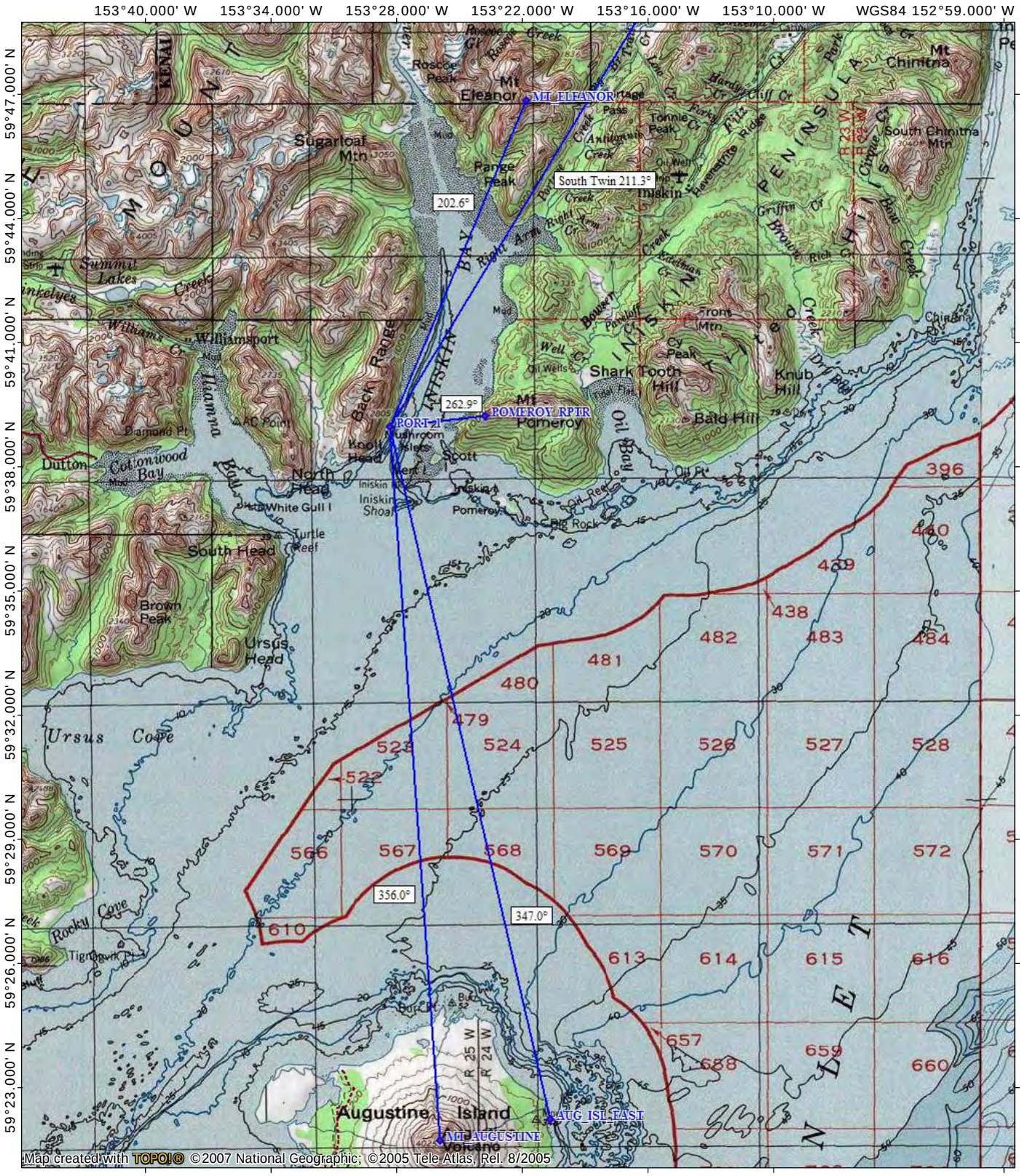
Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	5.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Compass	100.0	99.8	-0.2	Pass
Compass	177.0	176.8	-0.2	Pass
Compass	257.5	254.7	-2.8	Pass
Compass	341.5	340.9	-0.6	Pass
Pomeroy Repeater	262.9	261.4	-1.5	Pass
Time: Begin: 1130	**Max Abs. Error**		**2.8**	**PASS**
End: 1215	**Mean Abs. Error**		**1.1**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: New RM Young sensor SN 76266 replacing SN 67055 which failed the Jan 16, 2007 audit.

Port 1 TOPO Alignment Map - 58°38.949' N, 153°28.294' W WGS84



APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate 1750.01

Calibration complies with ISO/IEC 17025 AND ANSI/NCSL Z540-1

Cert. No.: 4000-1338226

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Dominic Shallies, Anchorage, AK 99503 U.S.A. (RMA:933478)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	12/08/06	A5B28010-1
Thermistor Module	A17118	8/12/06	A5819038
Temperature Calibration Bath TC179	A45240		
Temperature Calibration Bath TC191	A42238		
Temperature Probe	157	9/01/06	A5815063
Thermistor Module	A27129	7/05/06	1000189003

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 6/07/06 **Cal Due: 6/07/07**

Test Conditions: 25.5°C 39.0 %RH 1013 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.000	0.072	N	0.000	-0.004	Y	-0.050	0.050	0.013	3.8:1
°C	25.000	25.020	Y	25.000	24.999	Y	24.950	25.050	0.013	3.8:1
°C	60.002	59.999	Y	60.001	59.999	Y	59.951	60.051	0.013	3.8:1
°C	100.002	100.001	Y	100.002	100.004	Y	99.952	100.052	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company © 2005 Control Company

VAISALA

Certificate of Calibration

Report #: 112006-X0740015-RH **RMA #:** 95-56707 **Calibration Date:** Nov-20-2006
Model #: HMI41/HMP45 **Serial #:** X0650080/X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH, -20 to 60°C, Temp. Recommended Calibration Due Date: Nov-20-2007

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK USA

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% RH against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11% and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U S Guide to the Expression of Uncertainty in Measurement *Note: the 0% and 97% RH points are not ISO17025 Accredited

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.12	21.20	0.08	0.21	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.30	-0.33	2.00	0.50 *
11.55	11.30	-0.25	2.00	0.92
75.10	74.60	-0.50	2.00	1.02
97.60	96.40	-1.20	3.00	1.50 *
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.57	21.60	0.03	0.21	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.43	11.60	0.17	2.00	0.92
75.10	75.10	0.00	2.00	1.02
97.60	96.70	-0.90	3.00	1.50 *

Problem Noted: None
Action Taken: The Unit Was Calibrated

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number TN 274176, dated Oct. 2006. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994 This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001.2000 certified.

Calibration Equipment Used: Workstation 3A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	21609085	Nov. 24, 2004	Nov 24, 2006
Fluke 45	7781003	Jan. 12, 2006	Jan. 12, 2007
HMK13B	V324	Oct 13, 2006	Apr. 13, 2007
HMP233	671210	Nov 10, 2006	Feb. 10, 2007
HMT333	B0920004	Sep 27, 2006	Dec 27, 2006
HMI41/HMP45	S1130071	Sep 1, 2006	Dec 1, 2006

Ambient Conditions	
Temperature:	21 80 °C
Humidity:	49 10 %RH

Approved By

Technical Operator
Johnson François

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone: 781 933 4500 • Fax 781 933 8029
www.vaisala.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 RPM - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 24 May 2006

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

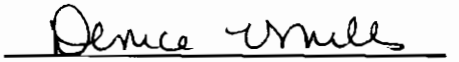
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052406. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 05/24/06 Lab temperature 72.8 °F
Lab pressure 663.1 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.13	0.13	-0.13
26.11	26.24	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.11	0.11	-0.11

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R Sanders Date: 5-24-06

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: eplab@mail.bbsnet.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments for Precision Measurements Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Appendix D

Validated Continuous Data Summaries

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.5	2.5	1.9	2.3	3.2	3.3	3.8	3.8	3.7	3.9	4.0	3.7	3.8	4.2	3.9	3.9	3.9	4.1	4.0	4.0	4.0	3.5	3.3	3.3	4.2	1.9	3.6
2	3.9	3.7	3.5	3.1	3.3	3.8	4.0	4.3	3.4	2.5	2.0	2.3	3.0	2.7	3.1	3.3	3.1	2.6	1.9	1.8	1.8	1.9	1.8	2.2	4.3	1.8	2.9
3	1.8	2.0	1.3	1.0	1.4	1.7	1.8	2.3	2.0	2.4	2.1	2.9	2.9	2.9	3.0	3.3	3.0	3.2	3.3	3.0	3.5	3.5	3.0	2.5	3.5	1.0	2.5
4	2.8	3.1	2.2	0.8	0.5	0.1	-0.4	-1.3	-2.0	-2.2	-0.8	-0.4	-0.5	-0.4	-0.5	-0.5	-0.6	-1.1	-1.5	-1.5	-0.6	-0.5	-0.4	-0.3	3.1	-2.2	-0.2
5	0.6	2.4	3.3	3.4	3.1	3.3	3.4	2.8	2.1	0.6	0.0	0.8	1.0	0.4	0.1	0.1	-0.4	-1.4	-1.5	-1.6	-2.1	-2.2	-2.8	-3.2	3.4	-3.2	0.5
6	-3.1	-3.1	-2.2	-2.9	-3.3	-3.2	-2.7	-2.7	-2.9	-2.8	-2.2	-0.8	-1.1	-0.9	-0.7	-0.6	-0.8	-1.1	-0.9	-0.7	-1.0	-1.3	-1.2	-1.4	-0.6	-3.3	-1.8
7	-0.3	-1.4	-2.3	-2.1	-2.6	-2.8	-2.6	-2.3	-1.4	-0.8	2.7	4.5	4.5	3.7	2.6	2.7	3.0	2.6	2.7	3.7	3.8	3.7	3.5	3.4	4.5	-2.8	1.2
8	4.1	4.6	4.6	4.5	4.7	4.4	4.0	4.0	4.3	4.6	5.2	4.9	5.1	5.2	3.7	3.2	2.6	2.0	1.2	1.4	0.9	0.4	0.5	0.1	5.2	0.1	3.3
9	-0.2	0.2	0.5	0.4	0.1	0.2	0.2	0.1	0.4	0.3	0.3	0.5	0.9	1.0	0.9	0.7	0.3	0.0	-0.3	-1.0	-0.8	-0.6	-0.5	-0.1	1.0	-1.0	0.1
10	0.1	0.0	0.1	0.0	0.0	0.2	0.3	-0.1	-0.4	-0.2	0.6	0.7	0.9	0.9	0.7	0.3	-0.6	-1.2	-1.5	-1.8	-2.0	-2.1	-2.2	-2.2	0.9	-2.2	-0.4
11	-2.6	-2.8	-2.3	-2.4	-2.2	-2.3	-2.6	-2.7	-2.8	-2.8	-2.4	-1.9	-1.6	-1.5	-1.4	-1.5	-1.6	-1.7	-2.0	-2.2	-2.7	-2.7	-2.8	-2.7	-1.4	-2.8	-2.3
12	-2.9	-2.7	-2.9	-2.9	-2.9	-3.2	-3.8	-4.0	-4.0	-4.3	-4.6	-4.0	-3.9	-3.9	-4.1	-4.4	-4.6	-5.0	-5.4	-5.5	-5.5	-5.6	-5.7	-5.7	-2.7	-5.7	-4.2
13	-5.7	-5.8	-6.0	-6.5	-6.6	-6.6	-6.9	-7.3	-7.7	-7.9	-7.9	-7.3	-7.0	-6.9	-7.2	-7.5	-8.0	-8.7	-9.3	-9.2	-9.2	-8.7	-9.0	-8.8	-5.7	-9.3	-7.6
14	-8.3	-7.9	-7.7	-7.3	-6.4	-5.1	-4.1	-3.8	-4.0	-3.9	-4.0	-3.8	-3.8	-3.6	-3.5	-4.2	-4.3	-4.3	-4.3	-4.4	-4.5	-4.3	-4.4	-4.4	-3.5	-8.3	-4.8
15	-4.3	-4.0	-3.9	-3.5	-3.2	-3.1	-3.1	-2.2	-1.4	-1.4	-0.4	-0.7	0.0	0.2	0.4	0.7	1.1	0.6	0.6	0.6	0.7	1.0	0.9	1.2	1.2	-4.3	-1.0
16	1.3	1.4	1.7	2.0	2.2	2.5	2.4	2.5	2.5	2.7	2.9					1.8	1.0	0.3	-0.5	-0.7	-1.2	-1.7	-1.7	-2.1	2.9	-2.1	1.0
17	-2.7	-2.5	-1.9	-1.8	-1.7	-1.9	-1.3	-1.1	-1.3	-1.4	-1.6	-1.4	-1.4	-1.3	-0.2	-0.2	-0.4	-1.2	-1.3	-2.3	-4.2	-5.8	-6.7	-7.1	-0.2	-7.1	-2.2
18	-7.2	-7.1	-6.9	-6.8	-7.0	-7.2	-7.3	-7.9	-7.9	-8.3	-8.3	-7.7	-7.5	-7.5	-7.3	-7.2	-7.7	-8.6	-9.1	-10.0	-10.3	-10.2	-10.0	-9.8	-6.8	-10.3	-8.1
19	-10.5	-10.6	-10.0	-9.9	-10.3	-11.4	-11.5	-11.5	-11.3	-11.4	-11.1	-10.8	-11.3	-11.2	-11.1	-11.2	-11.4	-11.3	-11.4	-11.6	-12.5	-11.8	-11.1	-11.0	-9.9	-12.5	-11.1
20	-11.5	-11.3	-10.7	-10.5	-10.2	-10.0	-10.2	-10.5	-10.4	-10.7	-10.7	-10.2	-9.6	-9.2	-8.7	-8.6	-8.5	-8.4	-8.6	-8.7	-8.7	-8.7	-8.7	-8.6	-8.4	-11.5	-9.7
21	-8.6	-8.4	-7.9	-7.2	-6.7	-6.5	-5.7	-5.3	-4.7	-4.5	-4.8	-5.2	-5.1	-5.3	-6.0	-6.9	-7.2	-8.7	-9.3	-10.0	-13.1	-14.6	-16.0	-17.4	-4.5	-17.4	-8.1
22	-19.2	-20.4	-21.3	-21.7	-22.4	-23.3	-23.5	-23.8	-23.4	-23.5	-23.4	-23.5	-23.4	-22.7	-22.6	-22.6	-22.4	-22.3	-21.9	-21.7	-21.2	-20.9	-20.5	-20.2	-19.2	-23.8	-22.1
23	-20.1	-20.1	-19.3	-19.4	-19.3	-19.0	-19.1	-19.1	-18.8	-18.4	-18.2	-18.5	-18.1	-18.4	-18.3	-18.4	-19.0	-19.1	-19.0	-19.2	-18.8	-18.6	-18.4	-18.5	-18.1	-20.1	-18.9
24	-18.1	-18.1	-18.0	-18.2	-18.2	-18.4	-18.5	-18.1	-18.0	-18.2	-17.8	-17.4	-16.6	-16.1	-15.9	-15.9	-16.5	-17.0	-17.2	-17.3	-17.6	-17.8	-17.8	-17.8	-15.9	-18.5	-17.5
25	-18.0	-17.9	-18.2	-18.5	-18.5	-18.5	-18.4	-18.6	-18.5	-18.1	-17.1	-15.8	-14.7	-13.9	-13.5	-13.7	-15.3	-16.4	-17.0	-17.7	-18.0	-18.6	-18.8	-18.8	-13.5	-18.8	-17.2
26	-18.8	-18.7	-18.8	-19.0	-19.2	-19.4	-19.5	-19.8	-20.0	-19.7	-19.1	-18.9	-18.7	-18.0	-18.0	-17.4	-17.6	-18.0	-18.1	-18.1	-17.9	-18.1	-18.6	-18.2	-17.4	-20.0	-18.6
27	-19.1	-18.2	-19.4	-20.8	-21.3	-22.1	-22.3	-22.7	-22.6	-22.0	-22.2	-22.2	-22.7	-22.7	-23.0	-23.5	-24.1	-23.9	-23.7	-24.0	-23.6	-22.7	-23.0	-22.6	-18.2	-24.1	-22.3
28	-22.7	-22.5	-22.6	-22.6	-23.0	-22.7	-22.8	-22.2	-22.0	-22.0	-21.5	-22.2	-21.5	-20.4	-17.9	-19.8	-20.5	-20.8	-21.2	-21.1	-20.8	-20.7	-21.1	-21.4	-17.9	-23.0	-21.5
29	-21.1	-21.2	-20.8	-20.8	-20.7	-20.5	-20.4	-20.4	-20.6	-20.8	-20.5	-19.8	-19.4	-18.6	-18.0	-17.5	-17.5	-18.5	-18.6	-18.4	-18.7	-19.0	-19.1	-18.8	-17.5	-21.2	-19.6
30	-18.4	-18.6	-18.7	-18.9	-18.7	-18.5	-18.1	-17.8	-18.4	-18.6	-18.8	-18.2	-16.8	-15.7	-14.7	-13.7	-13.8	-14.5	-14.6	-14.4	-12.0	-10.8	-10.1	-9.2	-9.2	-18.9	-15.9
31	-8.8	-8.7	-8.7	-8.7	-8.9	-9.2	-9.2	-9.4	-9.6	-10.7	-11.4	-11.5	-11.2	-10.8	-11.3	-11.2	-11.6	-12.0	-13.3	-14.7	-15.1	-15.7	-16.3	-16.6	-8.7	-16.6	-11.4
Max.	**4.1**	**4.6**	**4.6**	**4.5**	**4.7**	**4.4**	**4.0**	**4.3**	**4.3**	**4.6**	**5.2**	**4.9**	**5.1**	**5.2**	**3.9**	**3.9**	**3.9**	**4.1**	**4.0**	**4.0**	**4.0**	**3.7**	**3.5**	**3.4**	**5.2**		
Min.	**-22.7**	**-22.5**	**-22.6**	**-22.6**	**-23.0**	**-23.3**	**-23.5**	**-23.8**	**-23.4**	**-23.5**	**-23.4**	**-23.5**	**-23.4**	**-22.7**	**-23.0**	**-23.5**	**-24.1**	**-23.9**	**-23.7**	**-24.0**	**-23.6**	**-22.7**	**-23.0**	**-22.6**		**-24.1**	
Avg.	**-7.5**	**-7.5**	**-7.5**	**-7.6**	**-7.6**	**-7.6**	**-7.5**	**-7.6**	**-7.6**	**-7.7**	**-7.4**	**-7.4**	**-7.1**	**-6.9**	**-6.8**	**-6.7**	**-7.0**	**-7.4**	**-7.7**	**-7.8**	**-8.0**	**-8.0**	**-8.2**	**-8.2**			**-7.5**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-16.6	-16.6	-16.2	-16.1	-15.7	-16.0	-15.9	-16.3	-16.7	-18.1	-18.1	-17.5	-17.0	-17.3	-18.0	-18.0	-17.3	-18.8	-18.8	-19.0	-19.4	-19.3	-19.0	-18.0	-15.7	-19.4	-17.5
2	-18.3	-19.2	-19.3	-19.4	-19.5	-18.7	-19.0	-19.1	-19.4	-18.9	-17.9	-16.7	-17.6	-17.8	-17.5	-16.9	-17.3	-18.1	-17.8	-18.1	-17.8	-16.6	-15.1	-13.6	-13.6	-19.5	-17.9
3	-13.1	-12.1	-12.0	-11.8	-11.4	-10.9	-10.6	-10.4	-10.2	-9.8	-9.6	-9.5	-9.5	-9.2	-8.6	-7.9	-7.8	-7.6	-7.3	-7.1	-7.0	-7.0	-6.6	-6.2	-6.2	-13.1	-9.3
4	-6.0	-6.0	-5.9	-6.2	-6.3	-5.3	-4.9	-4.8	-4.5	-4.2	-3.7	-3.2	-3.1	-3.1	-3.3	-3.3	-3.0	-2.9	-3.0	-3.2	-3.1	-2.9	-2.9	-3.1	-2.9	-6.3	-4.1
5	-3.1	-2.9	-2.6	-2.6	-2.8	-2.9	-2.6	-2.3	-2.3	-1.4	-1.2	-1.5	-1.0	-0.2	0.1	1.2	1.6	2.0	0.9	0.6	0.7	0.2	0.4	0.8	2.0	-3.1	-0.9
6	1.1	1.3	1.1	1.1	1.4																				1.4	1.1	1.2
7					-3.7	-4.3	-5.2	-3.7	-2.4	-2.6	-3.0	-2.8	-3.2	-3.6	-3.8	-3.7	-4.2	-4.3	-4.7	-4.5	-4.3	-4.3	-4.3	-3.7	-2.4	-5.2	-3.8
8	-3.3	-3.2	-5.9	-5.5	-7.2	-7.1	-7.1	-6.9	-5.8	-2.8	-2.2	-2.3	-1.7	-1.8	-1.0	-0.7	-1.1	-1.7	-1.1	-1.3	-0.6	-0.3	0.0	0.3	0.3	-7.2	-2.9
9	0.4	0.3	0.1	-0.3	-0.9	-0.8	-1.8	-1.5	-1.6	-1.7	-1.5	-1.0	-0.3	0.3	0.9	1.1	1.9	2.4	2.5	2.6	2.8	1.9	2.4	2.4	2.8	-1.8	0.4
10	2.1	2.3	2.7	3.5	2.4	2.1	1.3	1.1	0.9	0.9	1.2	2.1	1.7	1.6	2.7	3.8	3.5	3.3	3.2	3.3	3.4	3.4	3.1	1.3	3.8	0.9	2.4
11	1.3	2.3	2.7	2.0	3.1	2.4	2.1	2.6	3.3	3.7	2.8	2.2	2.0	2.4	3.0	3.2	3.3	3.1	3.5	3.7	4.2	4.6	4.7	5.0	5.0	1.3	3.1
12	4.7	4.6	4.1	1.9	1.8	2.7	2.5	1.7	1.4	1.6	1.2	0.3	-0.1	-0.7	-1.1	-1.4	-1.7	-2.2	-2.9	-3.0	-2.6	-1.8	-1.5	-2.2	4.7	-3.0	0.3
13	-3.5	-5.2	-5.4	-5.4	-5.0	-4.2	-3.8	-3.9	-3.6	-2.8	-1.8	-1.8	-1.3	0.6	0.3	1.4	0.9	2.0	2.1	2.6	3.0	3.4	3.3	3.5	3.5	-5.4	-1.0
14	3.5	4.1	4.1	4.4	4.3	4.2	4.2	4.3	3.7	3.3	3.4	3.2	3.5	3.7	4.0	3.9	3.8	3.8	3.7	3.6	3.6	3.5	3.6	3.6	4.4	3.2	3.8
15	4.1	4.7	4.5	5.4	5.8	5.7	5.6	5.6	6.1	6.3	6.2	4.6	2.0	4.6	4.6	4.6	4.4	4.0	2.3	1.5	2.1	2.0	1.5	0.3	6.3	0.3	4.1
16	0.1	0.2	0.3	0.3	0.6	0.9	1.3	1.4	0.8	0.4	0.8	0.9	0.5	1.1	0.8	1.6	2.7	2.2	1.9	1.0	0.2	-0.1	0.1	0.2	2.7	-0.1	0.8
17	0.2	0.8	1.1	1.3	1.4	1.9	2.5	2.1	1.7	1.8	2.3	2.7	3.4	3.4	3.3	3.0	2.7	2.3	2.3	2.2	2.1	2.3	3.0	2.9	3.4	0.2	2.2
18	3.0	2.3	2.0	2.3	2.4	2.3	2.8	2.2	3.6	3.8	3.8	3.4	3.0	2.8	3.0	2.6	2.4	1.9	0.9	0.5	0.6	0.2	0.2	0.5	3.8	0.2	2.2
19	0.6	1.2	4.0	3.3	2.7	2.2	1.8	1.6	1.1	0.6	0.7	1.1	1.8	2.1	2.1	2.1	2.1	2.3	2.4	2.3	1.8	1.4	1.2	1.0	4.0	0.6	1.8
20	0.7	0.5	0.4	0.2	0.3	0.4	0.4	0.4	0.1	0.4	1.1	1.5	1.9	1.4	0.9	0.9	0.8	0.8	0.8	0.2	-0.4	-1.0	-1.5	-2.2	1.9	-2.2	0.4
21	-2.1	-2.6	-3.0	-3.6	-3.9	-4.1	-4.4	-4.8	-4.9	-4.0	-3.4	-2.7	-2.5	-2.4	-2.3	-2.4	-2.3	-2.3	-2.4	-2.5	-2.5	-2.4	-2.3	-2.3	-2.1	-4.9	-3.0
22	-2.4	-2.6	-3.0	-3.1	-3.5	-4.1	-3.5	-3.6	-3.6	-3.4	-2.8	-2.2	-1.7	-1.6	-1.6	-1.5	-1.7	-2.2	-3.3	-3.9	-3.4	-3.2	-2.9	-3.0	-1.5	-4.1	-2.8
23	-3.1	-3.5	-3.4	-3.7	-3.6	-3.7	-3.8	-3.5	-3.4	-2.4	-1.6	-1.6	-1.3	-1.0	-1.5	-1.5	-1.5	-2.0	-2.5	-3.8	-4.1	-3.5	-3.4	-4.1	-1.0	-4.1	-2.8
24	-4.9	-5.4	-5.6	-5.8	-5.9	-6.4	-7.1	-7.1	-6.8	-6.6	-6.7	-5.9	-5.4	-5.2	-5.0	-4.7	-4.9	-5.7	-6.3	-7.0	-7.3	-7.4	-7.9	-8.1	-4.7	-8.1	-6.2
25	-8.4	-8.4	-7.7	-7.1	-6.8	-6.5	-6.7	-7.0	-6.5	-5.5	-4.9	-4.7	-4.0	-3.5	-0.9	0.8	0.3	-1.3	-2.4	-3.0	-3.0	-3.1	-3.3	-3.7	0.8	-8.4	-4.5
26	-3.9	-3.8	-3.9	-3.6	-3.5	-4.3	-5.0	-4.4	-4.3	-4.0	-3.6	-3.5	-3.3	-2.8	-2.4	-2.3	-2.5	-2.7	-3.4	-4.1	-4.4	-4.8	-5.2	-5.3	-2.3	-5.3	-3.8
27	-5.4	-5.6	-5.9	-6.2	-6.2	-6.4	-6.5	-6.5	-6.1	-5.9	-5.5	-5.7	-5.4	-5.8	-7.0	-7.6	-7.7	-8.0	-8.4	-8.4	-8.4	-8.8	-9.3	-9.5	-5.4	-9.5	-6.9
28	-9.5	-10.2	-10.2	-10.7	-11.0	-11.6	-11.9	-12.0	-11.7	-11.5	-10.7	-10.5	-9.8	-9.4	-9.5	-9.8	-9.8	-9.7	-9.8	-9.9	-9.7	-9.5	-10.1	-11.0	-9.4	-12.0	-10.4
Max.	**4.7**	**4.7**	**4.5**	**5.4**	**5.8**	**5.7**	**5.6**	**5.6**	**6.1**	**6.3**	**6.2**	**4.6**	**3.5**	**4.6**	**4.6**	**4.6**	**4.4**	**4.0**	**3.7**	**3.7**	**4.2**	**4.6**	**4.7**	**5.0**	**6.3**		
Min.	**-18.3**	**-19.2**	**-19.3**	**-19.4**	**-19.5**	**-18.7**	**-19.0**	**-19.1**	**-19.4**	**-18.9**	**-18.1**	**-17.5**	**-17.6**	**-17.8**	**-18.0**	**-18.0**	**-17.3**	**-18.8**	**-18.8**	**-19.0**	**-19.4**	**-19.3**	**-19.0**	**-18.0**		**-19.5**	
Avg.	**-3.0**	**-3.1**	**-3.1**	**-3.1**	**-3.2**	**-3.4**	**-3.5**	**-3.5**	**-3.4**	**-3.1**	**-2.8**	**-2.6**	**-2.5**	**-2.3**	**-2.1**	**-1.9**	**-1.9**	**-2.2**	**-2.5**	**-2.8**	**-2.7**	**-2.7**	**-2.7**	**-2.8**			**-2.7**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-11.6	-11.3	-11.7	-11.9	-12.0	-12.0	-12.4	-12.6	-12.9	-12.0	-11.6	-10.9	-9.8	-8.3	-7.3	-6.9	-6.6	-6.7	-6.5	-6.8	-6.9	-6.8	-6.7	-6.8	-6.5	-12.9	-9.5
2	-6.8	-6.5	-6.3	-6.3	-6.4	-6.7	-6.9	-6.8	-7.2	-7.0	-6.6	-6.2	-5.8	-5.3	-4.3	-3.1	-2.4	-2.0	-1.5	-1.3	-1.0	-0.9	-1.1	-1.3	-0.9	-7.2	-4.6
3	-1.3	-1.3	-1.1	-0.7	-0.8	-0.9	-1.1	-0.6	-0.4	-0.3	-0.3	-0.5	-0.4	-0.4	-0.4	-0.2	-0.5	-0.3	-0.5	-0.7	-0.8	-1.0	-1.4	-1.5	-0.2	-1.5	-0.7
4	-1.4	-1.6	-1.6	-1.8	-2.1	-2.0	-1.8	-1.7	-1.7	-2.0	-1.6	-1.2	-0.3	0.4	0.0	-0.3	-0.4	-1.0	-1.2	-1.3	-1.2	-1.3	-1.4	-1.4	0.4	-2.1	-1.2
5	-1.3	-1.6	-1.1	-1.4	-1.3	-0.9	-0.6	-0.7	-1.0	-0.9	-0.1	0.6	0.5	0.3	0.2	0.5	0.4	0.3	0.0	-0.2	-0.5	-0.8	-1.0	-1.0	0.6	-1.6	-0.5
6	-1.1	-1.9	-2.1	-2.6	-2.9	-3.2	-3.6	-3.8	-3.5	-3.6	-3.4	-3.1	-3.1	-2.4	-2.7	-2.5	-2.8	-3.4	-4.5	-5.8	-6.0	-6.0	-5.8	-5.3	-1.1	-6.0	-3.5
7	-5.3	-5.3	-5.3	-5.4	-5.5	-5.4	-5.6	-5.7	-6.1	-6.4	-6.2	-5.3	-4.8	-5.1	-5.3	-5.4	-6.4	-6.9	-7.1	-7.4	-7.5	-7.7	-8.5	-8.8	-4.8	-8.8	-6.2
8	-9.3	-9.2	-9.4	-9.4	-10.8	-11.2	-11.0	-10.1	-10.1	-9.3	-8.8	-8.0	-7.1	-6.4	-6.7	-6.9	-7.7	-8.1	-8.1	-8.2	-8.0	-7.7	-7.7	-7.3	-6.4	-11.2	-8.6
9	-8.8	-8.6	-8.1	-7.7	-9.6	-11.5	-11.2	-10.5	-11.1	-10.8	-10.1	-9.8	-8.9	-9.1	-8.7	-8.4	-8.4	-8.2	-7.5	-7.7	-7.6	-7.6	-8.1	-8.4	-7.5	-11.5	-9.0
10	-9.2	-10.0	-10.3	-11.0	-11.1	-11.3	-11.6	-12.3	-10.9	-10.0	-8.7	-7.8	-6.7	-5.9	-5.5	-5.0	-4.3	-4.3	-4.2	-4.6	-4.7	-4.0	-3.9	-3.6	-3.6	-12.3	-7.5
11	-3.7	-3.7	-3.4	-3.5	-3.6	-4.0	-4.4	-4.5	-4.6	-3.8	-3.8	-3.8	-3.6	-3.0	-2.4	-2.2	-2.4	-2.8	-3.3	-3.5	-3.5	-3.7	-3.5	-3.2	-2.2	-4.6	-3.5
12	-3.0	-3.2	-3.0	-2.8	-2.6	-2.1	-2.3	-1.8	-1.6	-1.3	-1.0	-1.1	-0.6	-0.2	-0.4	-0.5	-0.1	0.3	0.3	0.0	0.0	-0.5	-0.7	-1.1	0.3	-3.2	-1.2
13	-1.3	-1.6	-1.9	-2.1	-3.2	-3.3	-3.7	-3.7	-2.7	-2.7	-1.9	-1.5	-1.2	-1.0	-1.1	-0.9	-1.0	-1.8	-2.1	-2.6	-3.5	-4.2	-5.3	-5.9	-0.9	-5.9	-2.5
14	-6.6	-5.4	-5.3	-5.3	-5.1	-5.3	-5.8	-5.8	-5.0	-4.4	-3.9	-2.9	-2.4	-1.8	-1.5	-1.1	-0.6	-1.4	-2.4	-3.7	-4.8	-5.5	-6.2	-6.5	-0.6	-6.6	-4.1
15	-6.1	-6.1	-6.0	-6.0	-6.1	-6.5	-6.9	-7.2	-7.1	-6.3	-5.5	-4.4	-3.8	-3.4	-3.0	-2.4	-2.2	-2.7	-3.0	-4.4	-4.7	-4.9	-4.6	-4.4	-2.2	-7.2	-4.9
16	-4.8	-4.8	-4.5	-4.6	-4.6	-4.5	-4.7	-5.0	-4.9	-4.4	-4.1	-3.6	-3.2	-2.9	-2.7	-2.2	-2.7	-2.9	-3.4	-4.6	-5.0	-4.9	-5.0	-5.5	-2.2	-5.5	-4.1
17	-5.7	-5.9	-6.5	-6.5	-7.0	-6.4	-6.7	-6.6	-5.9	-5.4	-5.1	-4.8	-4.8	-4.9	-5.0	-4.8	-4.6	-4.3	-4.2	-4.1	-4.4	-4.4	-4.1	-4.1	-4.1	-7.0	-5.3
18	-4.4	-4.3	-4.0	-4.2	-4.4	-4.1	-4.0	-3.9	-3.7	-3.4	-2.9	-2.3	-1.6	-1.8	-1.2	-0.8	-1.1	-1.4	-1.4	-1.6	-2.0	-2.2	-3.2	-3.5	-0.8	-4.4	-2.8
19	-3.1	-3.9	-4.0	-4.0	-4.7	-5.1	-5.3	-5.3	-4.3	-3.5	-3.3	-2.4	-1.6	-1.6	-1.1	-1.4	-1.4	-1.2	-1.1	-1.6	-2.8	-2.7	-2.4	-2.7	-1.1	-5.3	-2.9
20	-2.4	-2.2	-2.2	-2.1	-2.0	-2.2	-2.0	-1.7	-1.3	-1.0	-1.1	-0.6	-0.2	-0.2	-0.7	-0.6	0.5	0.5	0.4	0.6	0.2	0.3	0.3	-0.1	0.6	-2.4	-0.8
21	-0.3	-0.5	-1.3	-2.1	-1.9	-2.0	-2.1	-2.5	-2.7	-2.5	-2.2	-1.5	-0.8	-0.1	0.6	1.3	0.9	0.5	0.4	-0.6	-1.4	-2.0	-2.0	-2.0	1.3	-2.7	-1.1
22	-1.7	-2.1	-2.5	-2.8	-3.1	-3.1	-3.5	-4.2	-2.7	-3.1	-3.3	-1.5	-1.5	-1.2	-1.1	-0.6	-0.5	-1.1	-1.4	-1.8	-2.5	-2.7	-3.0	-3.3	-0.5	-4.2	-2.3
23	-3.5	-3.9	-4.0	-4.6	-4.9	-4.6	-4.4	-3.7	-3.0	-2.8	-2.4	-1.8	-1.0	-1.1	0.7	0.8	0.7	0.1	-0.9	-1.4	-3.2	-3.5	-3.6	-3.8	0.8	-4.9	-2.5
24	-3.9	-4.2	-4.7	-5.1	-5.1	-5.3	-5.6	-5.2	-4.8	-4.7	-3.5	-2.5	-1.7	-1.1	-0.5	-0.4	-0.3	-0.9	-1.6	-2.5	-2.9	-2.9	-2.8	-2.7	-0.3	-5.6	-3.1
25	-2.4	-2.2	-2.2	-2.6	-3.3	-3.9	-4.0	-4.3	-4.1	-3.7	-3.1	-2.0	-1.3	-0.9	-1.0	-0.7	-0.5	-0.9	-1.4	-2.1	-2.6	-2.6	-2.2	-2.1	-0.5	-4.3	-2.3
26	-2.3	-2.4	-2.4	-2.5	-2.5	-2.9	-3.7	-4.3	-4.5	-4.3	-3.0	-2.0	-1.5	-1.0	-0.6	-0.3	0.0	-1.0	-1.4	-2.3	-3.3	-3.6	-3.9	-4.0	0.0	-4.5	-2.5
27	-4.0	-3.8	-3.2	-3.4	-3.1	-3.3	-3.8	-2.4	-1.0	-0.7	0.7	1.4	1.7	1.6	1.8	1.9	2.3	1.5	1.1	0.9	-0.9	-2.5	-2.6	-2.1	2.3	-4.0	-0.9
28	-2.6	-2.0	-1.5	-1.0	-1.7	-1.0	-0.8	0.2	0.1	-0.5	0.8	1.2	1.5	1.5	1.4	1.9	2.0	1.3	1.1	0.4	-0.7	-1.5	-2.2	-2.4	2.0	-2.6	-0.2
29	-0.9	-0.5	-1.0	-0.7	-1.0	-1.3	-1.9	-1.8	-1.4	-0.8	0.2	0.8	1.5	1.8	1.3	1.6	1.8	1.0	0.5	0.0	-1.4	-2.8	-2.5	-1.8	1.8	-2.8	-0.4
30	-1.7	-1.8	-0.4	0.9	0.8	0.6	-0.1	-0.3	-0.3	1.0	1.0	1.7	0.9	1.3	1.2	0.8	0.8	0.8	0.9	1.1	0.9	0.7	1.0	0.9	1.7	-1.8	0.5
31	1.0	1.0	1.2	1.2	1.2	1.1	1.3	1.4	1.4	1.5	1.4	1.2	1.5	1.6	1.7	1.8	1.9	1.6	1.5	0.1	-0.4	-1.0	-1.2	-1.2	1.9	-1.2	1.0
Max.	**1.0**	**1.0**	**1.2**	**1.2**	**1.2**	**1.1**	**1.3**	**1.4**	**1.4**	**1.5**	**1.4**	**1.7**	**1.7**	**1.8**	**1.8**	**1.9**	**2.3**	**1.6**	**1.5**	**1.1**	**0.9**	**0.7**	**1.0**	**0.9**	**2.3**		
Min.	**-11.6**	**-11.3**	**-11.7**	**-11.9**	**-12.0**	**-12.0**	**-12.4**	**-12.6**	**-12.9**	**-12.0**	**-11.6**	**-10.9**	**-9.8**	**-9.1**	**-8.7**	**-8.4**	**-8.4**	**-8.2**	**-8.1**	**-8.2**	**-8.0**	**-7.7**	**-8.5**	**-8.8**		**-12.9**	
Avg.	**-3.9**	**-3.9**	**-3.9**	**-3.9**	**-4.2**	**-4.3**	**-4.5**	**-4.4**	**-4.2**	**-3.8**	**-3.3**	**-2.7**	**-2.3**	**-1.9**	**-1.7**	**-1.5**	**-1.5**	**-1.8**	**-2.0**	**-2.5**	**-3.0**	**-3.3**	**-3.4**	**-3.4**			**-3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.2	-1.2	-1.0	-0.8	-0.5	-0.4	-0.4	-0.3	0.0	0.2	0.4	0.5	1.4	1.0	1.6	0.4	0.0	-0.6	-0.7	-0.7	-1.0	-1.2	-1.3	-1.4	1.6	-1.4	-0.3
2	-1.8	-1.5	-1.2	-1.3	-1.3	-1.7	-2.1	-2.2	-2.3	-1.9	-1.4	-0.7	-0.4	-0.1	0.1	-0.3	-0.4	-0.5	-0.7	-1.0	-1.1	-1.1	-1.3	-1.2	0.1	-2.3	-1.1
3	-2.0	-1.9	-1.1	-0.4	0.0	-0.1	0.2	0.5	0.5	1.2	1.5	1.1	1.0	0.9	1.3	1.9	1.8	1.6	1.7	1.7	1.6	2.0	2.2	2.1	2.2	-2.0	0.8
4	3.0	2.9	2.6	1.4	1.4	1.4	1.5	1.9	2.2	2.1	3.4	3.1	2.2	2.2	2.5	2.5	2.0	1.4	1.6	1.5	1.5	1.4	1.3	1.0	3.4	1.0	2.0
5	1.2	3.6	4.4	4.9	3.0	2.5	5.1	4.6	5.4	5.4	4.4	3.7	3.3	3.4	3.8	3.7	3.7	2.3	1.6	0.8	0.5	0.1	-0.5	-1.1	5.4	-1.1	2.9
6	-1.4	-1.7	-1.9	-2.2	-3.0	-3.8	-3.9	-3.4	-3.2	-2.1	-1.3	-0.9	-0.2	0.5	0.8	1.1	1.3	1.2	0.8	0.2	-0.6	-0.7	-0.5	-0.4	1.3	-3.9	-1.0
7	-0.1	0.1	0.2	0.5	0.8	1.7	1.9	2.0	1.8	1.7	2.0	3.4	3.6	4.0	4.4	4.4	4.8	4.5	3.9	4.2	3.7	3.6	3.8	3.8	4.8	-0.1	2.7
8	3.8	3.8	3.7	3.5	3.4	3.1	2.1	1.9	2.2	2.0	2.3	2.1	1.9	2.2	2.3	2.1	2.2	1.8	1.6	1.7	1.0	0.8	0.9	0.8	3.8	0.8	2.2
9	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.7	0.9	1.2	1.6	2.2	2.8	2.3	1.9	1.5	1.4	1.5	1.3	1.4	1.1	2.0	2.4	2.6	2.8	0.5	1.4
10	2.3	2.0	1.6	0.9	1.3	1.3	1.1	1.2	1.0	0.7	0.4	0.3	0.1	0.1	0.2	0.5	0.4	0.3	0.1	-0.1	-0.2	-0.4	-0.7	-0.9	2.3	-0.9	0.6
11	-1.2	-1.4	-1.9	-2.1	-1.5	-1.0	-1.8	-1.5	-1.2	-0.7	0.2	0.7	1.5	1.6	-0.2	-1.3	-1.1	-0.8	-0.9	-0.9	-0.7	-1.0	-1.0	-0.8	1.6	-2.1	-0.8
12	-0.6	-0.4	-0.3	-0.2	-0.3	-0.4	-0.4	0.0	0.2	0.2	0.5	0.7	0.6	0.5	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.6	1.0	1.0	1.0	-0.6	0.2
13	0.8	0.6	0.0	-0.1	-0.3	0.0	0.4	0.8	1.0	1.6	2.2	2.5	2.5	2.5	2.7	2.3	1.6	1.0	0.7	0.6	0.2	-0.1	0.0	0.2	2.7	-0.3	1.0
14	0.2	-0.1	-0.5	-0.9	-1.4	-2.2	-2.6	-2.7	-2.8	-2.7	-2.3	-2.1	-1.9	-1.6	-1.1	-0.6	-0.1	0.1	0.3	0.4	0.3	-0.3	-0.4	-0.6	0.4	-2.8	-1.1
15	-1.1	-1.9	-1.9	-2.4	-3.1	-3.2	-2.5	-2.4	-2.8	-3.4	-2.9	-3.3	-3.4	-2.6	-2.8	-2.4	-2.3	-2.7	-2.6	-2.9	-3.4	-4.3	-5.3	-5.1	-1.1	-5.3	-3.0
16	-5.6	-5.5	-5.3	-4.8	-3.8	-3.0	-2.8	-2.1	-1.6	-1.3	-1.0	-0.7	-0.6	0.0	0.3	0.4	-1.1	-1.3	-0.8	-0.4	-0.1	1.0	-0.1	-0.2	1.0	-5.6	-1.7
17	-0.5	-0.2	-0.1	0.2	0.2	0.2	0.4	-0.1	-0.2	0.6	0.8	1.3	2.7	2.0	2.1	2.0	1.9	2.4	2.9	2.5	1.8	1.3	0.8	1.0	2.9	-0.5	1.1
18	0.6	0.5	-0.2	-0.5	-1.0	-0.9	-0.4	0.6	1.3	1.9	2.7	2.9	3.2	3.5	3.6	3.7	3.7	3.1	2.5	4.0	4.0	3.7	3.1	2.5	4.0	-1.0	2.0
19	2.7	1.7	0.7	0.1	-0.4	-0.7	-0.5	0.3	1.1	1.5	1.5	1.7	1.8	2.2	2.7	2.7	2.2	1.5	0.8	0.3	-0.4	-1.3	-2.5	-1.9	2.7	-2.5	0.7
20	-2.9	-3.2	-2.4	-1.9	-1.5	-1.2	-0.7	-0.4	0.0	0.3	0.6	1.4	2.3	2.1	1.8	1.0	1.5	2.0	1.4	0.8	0.7	0.8	0.8	0.6	2.3	-3.2	0.2
21	0.6	0.5	0.7	0.6	0.7	0.9	1.1	1.1	1.1	1.4	2.2	1.9	1.9	2.3	3.7	4.5	4.0	3.3	2.3	1.6	2.2	2.8	2.8	2.9	4.5	0.5	2.0
22	2.7	2.5	1.6	1.8	1.5	1.2	1.3	1.7	1.7	2.1	1.5	2.1	2.9	3.8	4.2	4.4	3.7	3.3	3.1	3.0	2.7	2.2	2.0	1.7	4.4	1.2	2.4
23	0.7	0.8	1.0	1.1	0.9	0.5	0.7	0.6	0.5	0.7	2.2	3.4	3.1	4.5	5.1	4.4	4.5	4.7	4.2	4.8	4.6	4.4	4.4	4.5	5.1	0.5	2.8
24	4.2	3.3	2.6	2.1	2.3	1.8	2.2	2.0	2.2	3.2	3.6	3.3	2.9	3.1	3.2	3.0	2.9	2.5	1.9	1.1	0.5	0.2	-0.2	-0.7	4.2	-0.7	2.2
25	-1.2	-1.4	-2.0	-2.6	-2.5	-2.8	-2.0	-1.7	-1.3	-0.5	1.0	1.8	2.0	0.8	1.0	1.3	1.4	1.5	1.2	1.7	1.9	1.5	1.9	2.0	2.0	-2.8	0.1
26	1.8	2.0	2.8	2.7	2.6	2.3	2.6	3.1	3.9	4.3	4.6	5.0	5.2	5.3	5.6	5.9	6.0	5.9	5.8	5.7	5.4	5.0	4.3	4.4	6.0	1.8	4.3
27	5.1	4.9	4.5	4.5	4.5	4.6	4.7	5.0	5.4	6.0	6.5	6.1	6.4	6.4	6.7	7.6	7.5	6.9	5.9	5.2	4.8	3.5	3.5	3.9	7.6	3.5	5.4
28	3.8	4.2	4.2	3.6	3.0	3.1	3.1	2.9	3.0	1.8	0.4	1.5	2.1	2.2	2.7	2.7	2.7	2.8	3.1	2.6	2.2	0.9	0.5	0.1	4.2	0.1	2.5
29	-0.2	0.1	2.0	2.0	1.8	1.8	2.6	1.9	2.0	3.0	3.5	4.2	4.5	4.5	5.0	5.0	5.2	5.0	5.1	5.3	5.3	4.8	3.4	2.5	5.3	-0.2	3.3
30	1.9	1.4	1.6	1.1	0.8	0.7	0.9	1.4	2.6	2.8	3.7	4.4	5.1	5.6	5.6	5.3	4.1	4.3	4.1	4.4	4.2	3.7	3.6	3.3	5.6	0.7	3.2
Max.	**5.1**	**4.9**	**4.5**	**4.9**	**4.5**	**4.6**	**5.1**	**5.0**	**5.4**	**6.0**	**6.5**	**6.1**	**6.4**	**6.4**	**6.7**	**7.6**	**7.5**	**6.9**	**5.9**	**5.7**	**5.4**	**5.0**	**4.4**	**4.5**	**7.6**		
Min.	**-5.6**	**-5.5**	**-5.3**	**-4.8**	**-3.8**	**-3.8**	**-3.9**	**-3.4**	**-3.2**	**-3.4**	**-2.9**	**-3.3**	**-3.4**	**-2.6**	**-2.8**	**-2.4**	**-2.3**	**-2.7**	**-2.6**	**-2.9**	**-3.4**	**-4.3**	**-5.3**	**-5.1**		**-5.6**	
Avg.	**0.5**	**0.5**	**0.5**	**0.4**	**0.3**	**0.2**	**0.4**	**0.6**	**0.8**	**1.1**	**1.5**	**1.8**	**2.0**	**2.2**	**2.4**	**2.3**	**2.2**	**2.0**	**1.7**	**1.7**	**1.4**	**1.2**	**1.0**	**0.9**			**1.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.2	3.0	3.3	3.6	3.8	3.7	3.9	4.5	5.3	5.5	6.0	6.9	7.2	7.3	7.3	6.8	6.5	6.3	5.7	5.3	4.4	4.4	4.0	7.3	3.0	5.0
2	3.3	2.7	2.8	2.8	2.7	3.1	3.1	3.0	3.0	3.4	3.8	3.5	3.6	4.2	5.2	6.0	6.2	6.3	6.1	5.8	5.7	5.1	3.8	4.0	6.3	2.7	4.1
3	4.6	4.7	4.6	4.4	4.8	5.0	4.8	5.6	6.8	7.3	7.6	7.9	8.2	8.4	8.3	8.1	7.8	6.8	6.5	5.5	5.0	4.8	4.5	4.2	8.4	4.2	6.1
4	4.0	3.7	4.3	4.6	4.4	4.3	3.5	4.0	4.7	5.0	5.4	5.6	5.5	5.2	4.7	5.0	5.1	5.0	4.8	4.8	4.9	4.6	3.7	3.5	5.6	3.5	4.6
5	2.9	2.7	2.5	2.4	2.2	2.4	2.5	2.7	3.2	3.6	3.8	3.9	4.3	4.5	4.2	4.1	4.1	4.1	4.2	4.0	3.7	3.4	3.3	2.4	4.5	2.2	3.4
6	2.2	2.0	2.0	1.9	1.8	1.6	1.9	2.0	1.9	2.1	2.4	3.1	3.9	5.1	5.6	5.6	5.3	4.8	4.2	4.0	3.5	3.2	2.9	2.3	5.6	1.6	3.1
7	1.8	1.4	1.1	1.0	0.8	0.4	0.3	0.4	0.4	0.5	0.8	0.9	1.0	1.3	1.3	1.4	1.3	1.5	1.0	0.7	0.4	0.3	0.3	0.6	1.8	0.3	0.9
8	0.8	1.0	0.7	-0.4	-1.5	-0.5	0.1	0.5	1.2	1.4	0.9	1.4	1.5	2.3	3.1	3.5	3.8	4.0	4.3	4.2	4.3	4.9	4.6	4.2	4.9	-1.5	2.1
9	3.9	4.6	4.7	4.8	4.8	4.8	4.6	4.6	4.4	3.7	3.7	4.8	5.7	5.9	6.3	7.1	7.1	7.0	7.2	7.3	6.8	6.4	6.6	6.4	7.3	3.7	5.5
10	6.0	6.4	6.3	5.2	5.5	5.7	6.6	8.1	8.5	8.3	7.3	8.1	7.8	8.8	9.3	9.0	8.1	6.9	6.2	5.6	4.8	4.3	3.9	3.7	9.3	3.7	6.7
11	2.8	2.4	3.2	3.3	3.1	3.3	3.6	3.9	4.4	5.0	6.2	7.2	7.8	8.0	8.6	8.2	8.3	7.6	6.9	6.7	7.1	6.4	6.0	5.7	8.6	2.4	5.7
12	5.1	5.8	5.7	5.4	5.1	5.7	6.6	7.3	7.9	9.0	9.5	11.0	11.1	12.7	13.4	13.5	13.9	12.9	11.5	11.1	10.4	9.0	8.9	8.0	13.9	5.1	9.2
13	8.1	7.6	6.6	5.9	5.6	6.5	7.2	7.2	7.9	9.3	10.3	10.7	10.7	10.7	11.6	11.2	11.0	10.4	9.7	8.8	8.5	7.5	6.1	4.5	11.6	4.5	8.5
14	3.5	3.4	3.1	3.0	3.3	3.9	4.8	6.1	6.9	7.9	7.9	7.7	7.3	7.3	6.9	6.7	7.1	6.9	6.8	6.7	6.2	5.8	5.5	5.2	7.9	3.0	5.8
15	5.3	5.1	4.7	4.0	2.9	3.2	3.9	4.8	5.8	6.2	6.9	8.1	8.0	7.5	7.4	7.3	7.0	7.0	7.1	6.7	6.4	6.0	5.7	5.8	8.1	2.9	5.9
16	5.3	6.4	7.2	6.9	6.7	6.5	6.4	6.2	7.1	7.4	8.2	9.1	9.6	9.3	8.7	8.2	7.8	7.1	6.3	5.9	5.8	5.3	3.9	2.6	9.6	2.6	6.8
17	2.6	2.8	3.0	2.7	3.0	4.0	4.9	5.6	6.2	7.0	7.5	7.8	8.6	7.4	7.4	7.0	6.2	6.2	6.5	6.0	5.7	5.3	3.7	4.0	8.6	2.6	5.5
18	4.2	3.9	3.1	3.0	3.4	3.9	4.1	4.6	5.8	8.2	9.6	9.8	10.5	10.4	9.3	7.3	6.6	7.2	7.2	7.0	6.7	6.4	6.2	5.9	10.5	3.0	6.4
19	5.6	5.4	5.4	5.3	5.1	5.2	5.5	5.8	6.0	6.7	6.9	7.3	7.9	7.9	6.9	7.1	6.0	4.1	2.9	2.9	3.1	2.9	2.0	2.0	7.9	2.0	5.2
20	2.3	2.6	2.9	3.0	3.2	3.4	3.7	4.3	4.7	4.7	5.0	5.5	5.5	5.7	6.3	6.8	7.4	7.9	7.3	7.4	7.2	7.1	6.6	5.9	7.9	2.3	5.3
21	6.4	5.7	6.3	6.5	5.6	5.6	6.1	6.8	8.5	9.2	9.8	10.4	11.2	12.2	13.7	13.8	14.0	13.5	12.9	12.6	12.4	12.2	11.9	11.7	14.0	5.6	9.9
22	11.6	10.1	8.6	7.8	7.9	8.3	8.5	9.1	9.9	10.7	11.4	12.2	13.1	15.1	15.3	15.7	15.5	15.3	15.1	14.9	13.5	11.9	10.0	9.3	15.7	7.8	11.7
23	9.1	9.2	7.9	7.7	7.4	8.1	8.2	9.6	10.9	10.0	10.7	11.3	11.3	12.6	13.5	13.2	13.9	13.1	11.4	11.8	11.8	13.8	12.9	12.7	13.9	7.4	10.9
24	12.5	11.9	12.0	11.2	8.8	12.0	11.5	11.8	10.8	10.2	10.8	10.6	11.4	13.2	14.0	14.9	15.5	15.7	16.1	15.5	14.2	15.6	13.4	12.8	16.1	8.8	12.8
25	11.5	11.7	11.4	8.4	8.2	11.1	11.8	11.1	12.6	12.6	11.1	11.5	12.1	13.1	14.8	14.9	15.5	15.2	14.6	15.3	15.0	14.9	13.9	13.5	15.5	8.2	12.7
26	13.5	12.8	13.0	13.8	14.3	14.6	14.6	14.9	16.0	15.1	12.4	13.8	13.8	13.9	14.8	15.7	14.3	14.8	14.0	15.6	16.5	17.7	16.1	16.0	17.7	12.4	14.7
27	15.1	14.6	11.9	9.3	12.3	14.4	15.1	15.1	15.8	16.6	17.2	12.5	12.9	12.4	14.3	15.0	17.0	15.4	14.2	14.4	15.1	15.6	15.6	13.9	17.2	9.3	14.4
28	12.2	10.9	12.0	13.1	11.3	12.3	12.5	12.7	13.3	13.3	14.9	14.3	14.1	14.1	15.1	15.1	14.8	12.4	12.7	13.9	13.9	13.5	13.2	11.2	15.1	10.9	13.2
29	10.7	8.5	7.3	9.6	10.6	9.8	8.9	10.3	11.1	12.1	12.9	12.9	13.6	13.6	13.5	13.5	12.8	12.1	10.6	10.4	9.2	9.9	8.4	7.9	13.6	7.3	10.8
30	7.8	7.2	6.3	6.7	7.2	7.7	8.1	7.8	7.6	7.7	7.5	8.0	7.9	7.9	8.5	8.8	9.0	9.2	9.2	9.6	9.0	8.9	8.9	8.3	9.6	6.3	8.1
31	8.0	8.1	8.0	7.7	7.4	7.3	7.4	7.6	8.3	8.3	8.4	8.6	8.1	8.7	8.5	8.0	7.9	7.8	7.5	7.5	7.5	7.5	7.4	7.2	8.7	7.2	7.9
Max.	**15.1**	**14.6**	**13.0**	**13.8**	**14.3**	**14.6**	**15.1**	**15.1**	**16.0**	**16.6**	**17.2**	**14.3**	**14.1**	**15.1**	**15.3**	**15.7**	**17.0**	**15.7**	**16.1**	**15.6**	**16.5**	**17.7**	**16.1**	**16.0**	**17.7**		
Min.	**0.8**	**1.0**	**0.7**	**-0.4**	**-1.5**	**-0.5**	**0.1**	**0.4**	**0.4**	**0.5**	**0.8**	**0.9**	**1.0**	**1.3**	**1.3**	**1.4**	**1.3**	**1.5**	**1.0**	**0.7**	**0.4**	**0.3**	**0.3**	**0.6**		**-1.5**	
Avg.	**6.3**	**6.1**	**5.9**	**5.6**	**5.5**	**6.0**	**6.3**	**6.7**	**7.3**	**7.7**	**7.9**	**8.2**	**8.5**	**8.9**	**9.3**	**9.3**	**9.3**	**8.9**	**8.4**	**8.3**	**8.1**	**7.9**	**7.2**	**6.7**			**7.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.9	7.0	7.0	8.3	8.1	7.7	8.3	8.7	8.8	9.3	9.8	10.4	11.8	10.8	10.4	10.9	11.3	11.3	10.0	10.0	9.2	8.5	8.4	9.0	11.8	6.9	9.2
2	9.0	8.5	8.3	8.0	8.4	9.2	9.7	10.4	11.7	12.7	13.4	14.7	15.6	17.1	19.3	19.1	18.8	17.9	16.2	15.8	15.2	14.8	13.5	11.0	19.3	8.0	13.3
3	10.7	10.4	10.7	12.3	12.6	12.1	11.8	11.5	12.0	12.8	13.2	13.9	15.2	16.9	17.2	17.6	17.5	16.5	14.9	14.3	14.4	13.9	13.3	13.1	17.6	10.4	13.7
4	12.7	12.5	11.7	10.2	8.7	9.2	9.6	10.0	10.9	11.7	11.7	10.8	11.1	12.2	12.1	12.1	11.9	11.0	10.0	10.3	10.5	10.5	8.1	6.4	12.7	6.4	10.7
5	6.3	5.8	5.4	4.5	6.5	7.7	7.9	8.8	9.3	10.3	10.6	11.0	11.1	11.4	11.2	11.7	11.8	12.0	10.9	10.7	10.2	9.7	8.4	7.7	12.0	4.5	9.2
6	6.7	5.9	5.4	4.6	5.4	7.0	8.3	9.0	9.3	10.0	9.7	10.4	11.2	11.2	11.5	11.6	11.4	10.3	9.7	9.8	9.7	9.5	8.8	8.4	11.6	4.6	8.9
7	8.6	9.0	9.5	9.4	9.0	8.8	8.8	9.1	8.4	8.1	8.7	9.0	9.0	8.7	8.4	8.2	7.7	7.5	7.8	8.0	7.9	7.8	7.7	7.5	9.5	7.5	8.4
8	7.5	7.5	7.4	7.5	7.4	7.4	7.7	7.6	7.9	8.2	8.1	8.9	9.6	10.3	10.5	10.9	10.5	10.2	9.7	9.3	9.4	8.9	8.4	8.1	10.9	7.4	8.7
9	8.0	8.1	8.0	8.0	7.7	7.6	7.6	8.0	7.9	8.0	8.6	9.2	9.8	10.0	10.1	10.9	11.5	10.1	8.8	8.4	8.2	8.1	8.0	7.7	11.5	7.6	8.7
10	7.6	7.6	7.6	7.6	7.6	7.8	7.7	7.7	7.9	8.0	8.3	9.1	9.0	8.6	8.8	8.7	8.6	8.3	8.2	8.2	8.1	8.0	8.1	8.1	9.1	7.6	8.1
11	8.1	7.4	7.0	6.4	6.1	6.6	7.1	7.4	7.8	7.5	7.5	7.5	8.0	8.4	8.2	8.3	8.4	9.1	9.1	9.2	9.4	8.9	9.0	9.0	9.4	6.1	8.0
12	8.9	8.8	8.6	8.7	8.7	8.9	9.1	9.0	9.1	9.6	9.6	9.2	9.2	9.3	9.4	9.5	9.2	9.0	9.0	8.6	8.7	8.9	8.7	8.4	9.6	8.4	9.0
13	8.2	8.2	8.1	8.0	7.7	7.6	7.5	7.8	8.0	8.2	8.5	9.0	9.3	10.2	10.9	11.4	10.1	9.4	9.4	9.4	9.3	9.0	8.6	8.4	11.4	7.5	8.8
14	8.3	8.3	8.2	8.3	8.5	9.2	9.4	9.5	9.9	10.3	10.3	10.0	9.7	9.7	9.9	10.1	11.4	12.4	12.8	13.4	13.3	12.7	12.7	12.7	13.4	8.2	10.5
15	12.4	11.9	11.6	11.2	10.9	11.2	11.4	10.1	10.2	10.4	10.9	11.6	11.4	10.4	9.8	9.9	10.6	10.5	10.7	10.5	10.1	10.3	10.2	10.2	12.4	9.8	10.8
16	10.1	10.0	9.9	9.7	9.5	9.4	9.6	9.8	9.4	9.6	10.1	9.9	10.1	10.8	11.1	11.0	10.2	10.4	10.7	11.0	10.7	10.6	10.4	10.3	11.1	9.4	10.2
17	10.1	9.9	9.9	9.5	9.3	9.4	9.5	9.6	9.6	10.0	10.6	11.5	10.9	10.6	10.6	10.7	11.0	11.3	10.7	10.8	10.4	9.8	9.7	9.8	11.5	9.3	10.2
18	9.8	9.7	9.7	9.7	10.1	10.7	10.5	11.3	11.6	11.5	10.9	10.9	11.3	11.5	11.4	11.3	11.3	11.0	10.8	10.7	10.7	10.3	10.0	10.1	11.6	9.7	10.7
19	10.1	9.8	9.8	10.0	10.4	10.4	10.5	10.7	11.9	12.4	13.1	13.9	14.1	13.9	14.8	15.2	13.0	11.6	9.7	9.3	9.2	8.9	8.9	8.9	15.2	8.9	11.3
20	9.0	10.1	9.4	9.1	8.8	9.1	9.1	9.7	10.1	10.3	10.4	10.1	9.2	8.5	8.0	9.1	10.3	10.4	9.5	9.0	8.6	8.2	7.6	6.7	10.4	6.7	9.2
21	5.8	5.8	5.5	4.8	5.5	6.6	7.1	8.2	10.0	11.2	10.3	10.6	11.4	11.6	13.0	13.0	12.8	12.8	11.5	11.5	11.7	10.6	10.1	9.6	13.0	4.8	9.6
22	9.3	10.1	10.2	10.2	9.5	9.2	9.5	9.4	9.0	8.9	8.7	8.8	8.8	8.8	9.4	9.5	9.5	9.5	9.8	9.8	9.8	9.2	9.1	7.7	10.2	7.7	9.3
23	7.6	7.6	7.7	7.7	7.8	8.3	8.8	9.2	9.2	9.1	9.5	9.9	10.0	10.0	10.4	10.5	10.6	10.8	10.2	10.0	9.3	9.5	8.6	7.3	10.8	7.3	9.1
24	7.2	6.2	5.8	5.7	6.1	7.8	8.7	10.2	11.0	11.0	10.9	11.1	11.9	13.0	13.3	13.7	14.2	14.0	12.8	11.9	11.8	11.4	10.4	9.6	14.2	5.7	10.4
25	9.2	9.4	9.7	9.0	8.6	9.5	10.8	11.3	11.1	11.5	11.6	11.3	12.0	12.5	12.0	12.5	12.4	12.1	10.8	10.8	10.5	9.6	9.4	8.3	12.5	8.3	10.7
26	8.1	8.0	8.3	8.5	9.1	9.2	9.3	9.8	10.3	9.8	10.3	10.0	10.0	9.6	9.8	9.9	9.8	9.5	9.4	9.9	9.8	9.6	8.7	8.4	10.3	8.0	9.4
27	7.4	7.1	6.3	6.1	6.9	8.7	9.8	9.6	9.7	10.5	11.2	11.5	11.8	11.6	11.8	12.4	12.9	12.4	11.2	11.0	14.7	17.4	16.7	16.6	17.4	6.1	11.0
28	16.0	15.0	14.3	14.1	14.2	13.7	13.8	14.7	14.6	14.3	14.6	14.4	14.8	16.1	15.9	14.8	14.9	14.8	14.1	14.1	14.0	13.7	13.9	14.2	16.1	13.7	14.5
29	14.7	14.5	14.4	14.4	14.4	14.5	14.8	14.1	15.3	14.2	13.2	13.7	12.9	11.5	10.2	11.1	11.6	11.5	11.4	11.3	11.2	11.1	10.9	10.8	15.3	10.2	12.8
30	10.8	10.4	10.0	9.8	9.5	9.5	9.6	9.9	10.4	10.9	11.4	11.4	12.0	12.1	11.6	11.4	11.3	10.7	10.6	11.0	13.1	12.9	12.8	12.3	13.1	9.5	11.1
Max.	**16.0**	**15.0**	**14.4**	**14.4**	**14.4**	**14.5**	**14.8**	**14.7**	**15.3**	**14.3**	**14.6**	**14.7**	**15.6**	**17.1**	**19.3**	**19.1**	**18.8**	**17.9**	**16.2**	**15.8**	**15.2**	**17.4**	**16.7**	**16.6**	**19.3**		
Min.	**5.8**	**5.8**	**5.4**	**4.5**	**5.4**	**6.6**	**7.1**	**7.4**	**7.8**	**7.5**	**7.5**	**7.5**	**8.0**	**8.4**	**8.0**	**8.2**	**7.7**	**7.5**	**7.8**	**8.0**	**7.9**	**7.8**	**7.6**	**6.4**		**4.5**	
Avg.	**9.2**	**9.0**	**8.8**	**8.7**	**8.8**	**9.1**	**9.4**	**9.7**	**10.1**	**10.3**	**10.5**	**10.8**	**11.1**	**11.2**	**11.4**	**11.6**	**11.5**	**11.3**	**10.7**	**10.6**	**10.6**	**10.4**	**10.0**	**9.5**			**10.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.5	10.6	10.7	10.3	9.9	10.6	11.8	12.5	13.5	12.7	11.2	11.1	11.4	11.7	11.6	11.4	10.5	10.2	9.2	12.5	18.0	15.5	15.5	16.9	18.0	9.2	12.1
2	17.0	16.4	16.1	14.0	13.4	13.6	13.4	14.0	14.3	15.2	15.9	16.5	14.0	14.4	14.7	17.6	20.5	20.2	19.7	19.6	19.2	17.6	14.8	12.5	20.5	12.5	16.0
3	11.7	11.0	10.6	10.1	10.0	10.4	10.1	10.2	10.3	11.0	11.0	10.8	10.6	10.7	10.7	10.6	10.6	11.4	11.1	10.9	10.9	10.9	10.4	9.6	11.7	9.6	10.6
4	9.8	10.2	10.1	9.6	9.8	10.4	11.5	12.1	11.4	11.8	11.9	12.2	12.4	12.2	12.0	11.9	12.0	11.6	11.2	11.1	11.0	11.0	10.8	10.7	12.4	9.6	11.2
5	10.9	10.9	11.0	10.7	10.6	11.0	10.9	10.7	11.0	11.6	11.1	10.7	10.6	10.6	10.7	10.9	10.8	10.9	11.2	11.2	10.9	10.9	10.8	10.7	11.6	10.6	10.9
6	10.6	10.3	10.3	10.3	10.5	10.7	10.8	10.9	11.3	11.6	11.2	11.5	12.0	11.9	11.5	11.5	11.7	11.8	11.7	11.6	11.6	11.5	11.3	11.2	12.0	10.3	11.2
7	11.1	11.0	11.0	11.0	11.0	10.9	10.9	11.0	11.0	11.1	11.2	11.2	11.6	11.7	11.3	11.4	11.6	11.4	10.9	10.8	10.6	10.4	10.2	10.1	11.7	10.1	11.0
8	10.1	10.1	10.0	9.9	9.9	10.5	11.5	12.7	13.2	14.3	14.8	15.2	15.1	15.3	15.8	15.0	14.8	14.5	15.3	15.9	15.9	15.6	13.8	12.5	15.9	9.9	13.4
9	12.1	12.0	11.6	11.6	11.4	12.7	13.5	14.4	13.4	13.6	13.4	13.2	13.4	13.5	13.5	13.9	15.6	14.8	13.0	12.2	11.8	11.8	12.0	11.9	15.6	11.4	12.9
10	11.9	11.7	11.6	11.3	11.3	11.5	11.7	11.9	11.5	11.2	11.2	11.6	11.9	12.8	12.4	12.2	11.8	11.5	11.0	10.9	10.9	11.0	11.0	10.8	12.8	10.8	11.5
11	10.6	10.5	10.4	10.2	10.2	10.3	10.5	10.8	11.2	12.8	14.2	14.1	14.4	13.4	12.3	12.2	12.9	13.1	12.5	12.5	12.1	11.2	10.4	9.8	14.4	9.8	11.8
12	9.3	8.9	8.3	8.0	8.1	9.2	10.9	12.5	14.6	16.2	16.4	14.6	14.8	14.8	15.4	17.2	18.3	20.9	21.9	21.8	21.1	21.7	20.1	18.5	21.9	8.0	15.1
13	17.6	20.1	19.5	15.4	17.8	18.2	16.8	15.9	15.3	15.0	15.1	15.2	15.5	15.5	15.0	14.9	14.3	14.0	13.7	13.5	13.0	12.6	12.3	12.2	20.1	12.2	15.3
14	12.2	11.8	11.2	11.4	11.4	11.4	11.7	12.1	12.5	12.7	13.2	13.6	14.3	13.7	13.8	13.0	12.8	12.5	12.0	11.6	12.0	12.0	11.7	11.2	14.3	11.2	12.3
15	11.1	10.9	11.3	11.4	11.1	11.1	11.3	11.6	12.7	13.6	14.8	15.1	16.0	16.3	15.1	14.0	13.4	12.7	11.8	11.7	11.4	11.3	11.3	11.2	16.3	10.9	12.6
16	11.2	11.3	11.3	11.2	10.8	10.9	10.3	10.3	10.4	10.6	10.7	10.9	11.4	11.7	11.7	11.7	11.9	11.5	11.4	11.1	11.0	10.9	10.7	10.6	11.9	10.3	11.1
17	10.4	9.9	9.9	9.9	9.7	9.6	10.3	10.7	10.7	10.9	11.1	11.5	11.4	10.5	10.6	10.4	10.5	10.4	10.1	9.8	10.0	10.1	9.7	10.0	11.5	9.6	10.3
18	10.4	10.4	10.2	10.1	10.1	10.0	10.3	10.4	10.6	10.6	10.3	10.2	10.0	10.3	10.6	11.3	11.8	11.7	11.6	11.4	12.0	11.4	10.8	11.0	12.0	10.0	10.7
19	11.4	11.3	11.1	11.2	11.9	12.2	12.5	12.9	13.7	14.9	15.0	14.9	15.1	15.7	15.9	15.9	15.6	16.0	16.3	16.2	15.1	13.3	13.5	14.4	16.3	11.1	14.0
20	14.2	12.6	12.4	11.8	12.3	13.8	13.4	14.9	15.6	16.2	16.0	16.1	15.8	15.7	16.3	15.7	16.3	16.0	16.9	16.3	13.0	11.5	11.3	11.5	16.9	11.3	14.4
21	11.4	12.4	12.3	12.3	11.8	13.5	14.4	14.8	14.9	15.3	15.5	15.5	15.5	15.5	15.8	14.8	12.6	12.4	12.2	12.5	14.1	12.8	12.1	11.9	15.8	11.4	13.6
22	11.6	11.4	11.1	10.9	10.8	12.0	12.6	12.5	12.3	12.6	12.8	12.8	13.1	12.8	11.0	10.5	10.6	11.0	11.5	11.0	10.7	10.5	10.3	10.0	13.1	10.0	11.5
23	10.4	10.4	10.8	10.8	10.3	9.9	10.0	10.9	11.2	11.7	12.3	12.2	12.7	13.5	14.0	13.9	12.0	11.6	13.2	13.2	12.9	12.5	12.1	11.9	14.0	9.9	11.8
24	11.6	11.7	11.5	11.1	11.1	11.4	12.2	12.1	12.4	12.7	13.5	13.3	13.1	12.3	10.7	10.3	10.3	10.2	10.2	10.3	10.2	10.2	10.0	10.3	13.5	10.0	11.4
25	10.3	10.3	10.3	10.4	10.3	9.7	9.8	10.2	10.3	10.4	10.5	10.8	11.2	11.1	11.8	12.1	12.7	11.9	12.2	12.4	12.0	11.2	10.9	10.7	12.7	9.7	11.0
26	10.9	10.4	9.1	8.5	8.2	9.9	10.7	13.3	13.5	13.8	14.4	14.8	14.7	14.7	15.4	15.1	15.5	14.9	14.5	14.2	14.1	14.1	14.0	13.7	15.5	8.2	13.0
27	13.4	13.2	13.0	12.8	12.9	13.0	12.8	13.2	14.3	15.6	16.5	16.9	17.5	16.6	15.4	15.0	15.2	14.6	13.4	13.0	13.0	11.4	10.9	11.6	17.5	10.9	14.0
28	11.8	11.3	10.9	11.4	10.6	11.2	11.3	12.0	13.2	14.2	13.6	13.6	13.4	13.3	13.0	11.9	11.8	11.5	11.4	11.8	15.1	14.6	13.4	12.4	15.1	10.6	12.4
29	12.1	12.2	12.4	12.1	11.7	11.9	11.8	11.5	12.1	12.3	12.7	13.0	14.1	14.6	14.4	14.0	13.6	13.2	12.8	12.6	12.0	11.6	11.3	11.0	14.6	11.0	12.5
30	11.1	10.9	10.9	11.2	11.1	11.1	11.0	10.8	11.4	12.0	11.9	11.7	11.9	12.3	12.0	12.3	13.3	13.7	13.9	14.1	13.9	12.9	12.1	13.2	14.1	10.8	12.1
31	14.2	14.1	13.9	13.7	13.8	13.6	13.5	14.1	14.4	14.9	15.9	16.6	16.7	17.3	16.9	16.6	15.5	15.1	14.5	14.4	14.4	14.4	13.9	13.3	17.3	13.3	14.8
Max.	**17.6**	**20.1**	**19.5**	**15.4**	**17.8**	**18.2**	**16.8**	**15.9**	**15.6**	**16.2**	**16.5**	**16.9**	**17.5**	**17.3**	**16.9**	**17.6**	**20.5**	**20.9**	**21.9**	**21.8**	**21.1**	**21.7**	**20.1**	**18.5**	**21.9**		
Min.	**9.3**	**8.9**	**8.3**	**8.0**	**8.1**	**9.2**	**9.8**	**10.2**	**10.3**	**10.4**	**10.3**	**10.2**	**10.0**	**10.3**	**10.6**	**10.3**	**10.3**	**10.2**	**9.2**	**9.8**	**10.0**	**10.1**	**9.7**	**9.6**		**8.0**	
Avg.	**11.7**	**11.6**	**11.4**	**11.1**	**11.1**	**11.5**	**11.7**	**12.2**	**12.5**	**13.0**	**13.2**	**13.3**	**13.4**	**13.4**	**13.3**	**13.2**	**13.2**	**13.1**	**13.0**	**13.0**	**13.0**	**12.5**	**12.0**	**11.8**			**12.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.9	12.4	12.1	12.0	11.8	12.0	11.8	11.8	11.9	12.2	12.1	12.1	12.4	11.9	11.5	11.6	11.2	11.2	11.3	10.8	10.7	10.4	10.0	9.9	12.9	9.9	11.6
2	10.0	9.8	9.5	9.2	9.2	9.3	9.6	10.0	10.1	10.5	10.7	10.8	10.9	11.2	11.3	11.2	11.2	11.1	11.1	11.3	11.3	11.5	11.2	10.4	11.5	9.2	10.5
3	10.2	10.6	11.1	11.4	11.3	11.0	11.2	11.0	11.2	11.2	11.2	11.5	11.4	11.4	11.3	11.7	12.2	12.8	12.7	12.6	13.0	13.2	13.5	13.6	13.6	10.2	11.7
4	12.9	11.8	11.8	10.8	10.3	9.8	10.0	10.5	12.2	12.6	12.7	12.8	12.8	12.8	12.9	12.7	13.3	13.2	13.0	12.9	12.4	11.4	11.3	11.1	13.3	9.8	12.0
5	10.8	10.7	10.6	10.0	9.9	10.1	10.7	12.8	14.0	14.8	14.5	14.0	15.3	15.8	16.2	16.4	18.7	17.1	16.1	15.9	15.3	14.8	14.8	14.5	18.7	9.9	13.9
6	13.5	12.6	12.0	12.3	11.5	10.9	11.9	13.6	14.8	16.1	16.8	17.4	18.3	19.5	20.2	19.2	19.2	18.5	18.2	18.4	18.4	18.4	18.1	17.9	20.2	10.9	16.2
7	17.7	17.0	16.3	15.2	14.6	13.2	13.7	14.6	15.7	16.5	17.3	18.3	19.0	18.9	18.5	18.6	18.1	17.6	17.0	16.2	16.6	15.8	15.0	14.5	19.0	13.2	16.5
8	14.1	13.9	13.7	13.6	13.5	13.4	13.6	14.4	15.2	16.6	17.2	17.9	18.8	19.5	20.2	20.3	19.6	17.9	16.2	15.8	15.7	15.8	15.5	14.6	20.3	13.4	16.1
9	13.9	13.9	13.7	14.3	14.1	13.6	13.5	13.4	13.6	13.7	15.4	15.8	14.3	14.8	15.5	13.4	13.3	13.3	13.2	12.9	12.7	12.4	12.3	12.2	15.8	12.2	13.7
10	12.4	12.4	12.4	12.3	12.2	12.1	12.1	12.3	12.4	12.0	11.8	12.0	12.1	12.1	12.1	12.0	12.0	12.2	12.1	12.0	12.3	11.6	11.4	11.4	12.4	11.4	12.1
11	11.3	11.3	11.5	11.5	11.3	11.2	12.2	12.4	12.3	12.7	13.3	13.0	12.2	12.1	12.3	12.3	12.4	12.4	12.0	11.9	12.0	12.3	12.8	12.8	13.3	11.2	12.1
12	12.7	11.9	11.4	11.4	11.2	11.0	11.3	11.7	12.7	13.9	14.6	16.6	16.1	14.2	13.1	13.7	14.0	15.5	15.5	16.0	15.2	14.4	13.8	14.2	16.6	11.0	13.6
13	13.6	13.0	12.5	12.2	12.0	11.9	12.3	11.9	11.8	12.1	12.4	12.0	12.1	12.4	13.0	13.2	13.0	12.9	12.9	13.0	12.8	12.8	12.4	12.1	13.6	11.8	12.5
14	12.2	11.9	11.5	11.4	11.5	11.1	11.1	11.2	11.3	11.1	11.0	11.2	11.5	11.5	10.7	11.1	11.4	11.7	11.4	11.1	10.7	10.6	10.7	10.5	12.2	10.5	11.2
15	10.3	10.4	10.6	10.6	10.6	10.8	10.8	11.3	11.5	11.7	11.5	11.6	11.9	12.0	12.1	12.4	12.2	12.3	12.2	11.7	11.4	11.2	11.1	10.9	12.4	10.3	11.4
16	10.8	10.7	10.6	10.6	10.6	10.6	10.7	11.1	11.6	11.9	12.2	12.5	13.0	12.8	12.8	13.0	12.8	12.3	11.8	11.5	11.2	10.9	10.9	11.1	13.0	10.6	11.6
17	11.1	11.2	11.3	11.4	11.4	11.4	11.4	11.5	11.9	12.4	13.1	14.0	16.0	17.1	16.5	16.8	18.0	17.7	16.9	16.4	16.2	15.9	15.4	15.1	18.0	11.1	14.2
18	14.8	14.6	14.6	14.1	13.7	12.9	13.0	12.6	12.5	11.7	11.2	11.3	11.4	11.4	11.2	11.2	11.5	11.1	11.9	12.6	11.6	11.6	11.2	11.3	14.8	11.1	12.3
19	11.9	12.0	11.8	11.4	11.0	11.9	12.1	12.3	13.3	13.6	12.1	11.9	13.6	12.5	13.5	12.9	13.3	13.3	12.4	11.7	11.1	10.8	10.9	10.9	13.6	10.8	12.2
20	10.5	10.0	10.2	9.8	9.5	9.4	9.3	9.4	10.0	11.3	12.1	14.1	13.1	12.2	12.4	13.1	14.7	14.2	12.2	13.0	12.9	12.9	10.3	8.8	14.7	8.8	11.5
21	11.3	11.5	9.6	7.9	7.2	7.2	8.1	10.1	11.6							11.5	15.0	13.0	12.9	12.8	12.1	11.4	10.7	10.9	15.0	7.2	10.8
22	11.0	11.0	10.9	11.1	11.2	11.1	11.0	11.1	11.3	11.6	12.1	13.0	14.0	13.6	13.5	13.0	13.8	13.7	13.8	13.6	13.7	13.0	12.9	13.1	14.0	10.9	12.4
23	10.9	9.6	10.2	9.9	9.6	8.4	9.1	9.9	10.8	12.4	13.1	13.0	12.7	12.9	13.1	12.8	12.8	12.1	11.6	11.3	11.4	11.6	11.6	11.4	13.1	8.4	11.3
24	11.4	11.4	11.7	11.8	11.5	10.8	10.4	10.1	10.1	10.2	10.0	10.4	10.6	10.5	11.1	11.6	11.8	11.8	11.2	11.8	11.8	11.7	12.1	11.8	12.1	10.0	11.1
25	11.1	11.2	10.6	9.8	10.2	9.7	11.1	12.2	12.4	12.9	14.0	14.1	14.5	14.8	14.9	15.3	15.9	14.6	14.1	13.9	12.8	11.4	10.7	11.4	15.9	9.7	12.6
26	11.2	11.0	10.5	10.2	9.6	9.2	9.0	9.7	10.0	10.1	10.1	10.3	10.5	10.7	11.2	11.4	12.1	12.5	12.4	12.2	11.6	11.4	11.1	10.7	12.5	9.0	10.8
27	10.5	10.2	10.1	9.9	9.8	9.9	10.4	11.5	12.3	13.1	13.9	14.8	16.2	17.1	17.4	17.0	16.8	15.9	15.6	15.5	15.0	14.5	14.2	13.0	17.4	9.8	13.5
28	13.2	13.5	13.4	12.7	12.3	12.1	12.0	12.2	12.7	13.2	13.9	14.4	15.0	15.6	16.0	15.8	15.3	14.6	14.5	14.6	14.4	14.2	14.1	14.0	16.0	12.0	13.9
29	13.8	13.4	13.1	13.0	13.1	13.1	12.8	12.2	12.7	13.7	14.7	14.5	14.0	13.9	13.4	13.0	12.9	12.7	12.0	11.5	10.9	10.4	10.1	10.2	14.7	10.1	12.7
30	10.4	11.0	10.8	11.3	11.5	10.8	10.3	10.1	10.2	10.3	10.5	10.6	10.9	10.9	10.9	11.0	11.1	11.5	12.1	12.1	12.0	11.7	11.4	11.0	12.1	10.1	11.0
31	10.7	10.4	9.7	9.5	10.3	10.9	11.6	12.0	11.7	11.7	12.1	12.5	12.4	12.2	11.9	11.7	11.2	11.0	10.9	10.8	10.7	10.5	10.4	10.3	12.5	9.5	11.1
Max.	**17.7**	**17.0**	**16.3**	**15.2**	**14.6**	**13.6**	**13.7**	**14.6**	**15.7**	**16.6**	**17.3**	**18.3**	**19.0**	**19.5**	**20.2**	**20.3**	**19.6**	**18.5**	**18.2**	**18.4**	**18.4**	**18.4**	**18.1**	**17.9**	**20.3**		
Min.	**10.0**	**9.6**	**9.5**	**7.9**	**7.2**	**7.2**	**8.1**	**9.4**	**10.0**	**10.1**	**10.0**	**10.3**	**10.5**	**10.5**	**10.7**	**11.0**	**11.1**	**11.0**	**10.9**	**10.8**	**10.7**	**10.4**	**10.0**	**8.8**		**7.2**	
Avg.	**12.0**	**11.8**	**11.6**	**11.4**	**11.2**	**11.0**	**11.2**	**11.6**	**12.1**	**12.6**	**12.9**	**13.3**	**13.6**	**13.6**	**13.7**	**13.6**	**13.9**	**13.6**	**13.3**	**13.1**	**12.9**	**12.6**	**12.3**	**12.1**			**12.5**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.1	10.3	10.3	9.9	9.3	9.1	9.5	10.9	11.8	11.9	12.6	13.3	13.4	13.5	14.0	14.0	14.2	12.9	12.8	12.4	11.9	10.6	10.3	9.7	14.2	9.1	11.6
2	9.5	9.0	8.8	8.8	8.9	9.3	10.1	11.3	12.6	13.2	12.6	12.7	12.7	12.7	13.2	12.4	11.8	11.8	11.7	11.4	11.2	10.9	9.9	10.4	13.2	8.8	11.1
3	10.1	9.6	9.5	9.4	9.2	9.1	9.0	10.1	10.7	12.5	11.9	12.5	12.7	12.8	13.4	13.7	13.8	12.7	12.3	11.7	10.9	10.2	9.8	9.8	13.8	9.0	11.1
4	9.6	9.5	8.7	8.7	8.6	8.6	8.8	9.6	10.5	11.5	11.8	12.7	12.9	13.0	12.6	12.8	12.6	12.5	12.3	12.0	11.8	11.5	11.3	11.3	13.0	8.6	11.1
5	11.3	10.9	10.7	10.6	10.3	10.4	10.4	10.6	10.7	11.1	11.5	12.3	12.3	12.7	12.6	12.5	12.8	12.6	12.3	12.1	11.8	11.2	10.6	10.4	12.8	10.3	11.4
6	10.1	10.0	8.9	8.1	7.9	8.1	8.1	9.1	10.5	11.8	13.1	14.1	15.0	15.9	16.7	17.0	14.7	13.1	13.1	13.8	13.9	13.6	13.4	13.1	17.0	7.9	12.2
7	12.7	12.3	11.3	10.5	10.5	10.3	10.2	10.5	11.6	12.8	12.9	12.3	12.2	12.0	11.5	11.4	11.5	11.2	11.0	10.8	10.6	10.3	10.3	10.3	12.9	10.2	11.3
8	10.3	10.3	10.4	10.5	10.3	10.4	10.3	10.2	10.7	10.6	10.8	11.2	11.2	11.2	11.2	11.1	11.2	11.2	11.1	10.7	10.1	9.9	10.0	9.9	11.2	9.9	10.6
9	9.9	10.0	9.9	9.9	10.0	10.1	10.1	10.2	11.0	11.7	11.0	10.8	11.1	11.8	11.8	12.0	11.8	11.0	10.5	9.7	9.3	9.3	8.6	8.9	12.0	8.6	10.4
10	9.0	9.0	9.0	9.0	9.0	9.0	9.1	9.2	9.5	10.1	10.6	11.1	11.4	11.8	11.6	11.8	11.9	11.7	10.3	10.9	10.3	9.6	9.8	9.6	11.9	9.0	10.2
11	9.2	8.8	8.7	9.1	8.9	8.5	8.3	8.8	10.4	10.8	11.8	12.2	12.6	13.0	13.0	13.1	13.2	12.1	11.6	10.6	9.9	9.2	8.5	8.1	13.2	8.1	10.4
12	8.0	7.7	8.1	8.8	9.0	8.9	8.9	9.9	11.3	12.3	13.2	13.3	13.1	12.9	13.2	13.3	13.3	11.5	11.2	11.4	11.2	12.1	11.8	11.2	13.3	7.7	11.1
13	10.8	10.4	10.4	9.3	8.2	8.0	7.8	9.0	10.9	11.5	12.0	12.3	14.1	14.5	14.6	14.3	13.7	12.7	13.5	12.7	11.3	10.5	10.3	10.5	14.6	7.8	11.4
14	10.1	10.2	10.9	11.2	10.1	9.5	9.9	9.8	9.8	10.2	10.6	11.0	10.9	10.8	11.0	11.3	11.4	11.0	10.9	10.7	10.9	11.1	11.4	10.8	11.4	9.5	10.6
15	10.3	9.9	9.8	9.8	9.9	10.6	11.3	12.0	12.4	12.6	11.9	11.7	11.9	11.3	10.8	11.1	11.8	11.6	11.4	11.2	10.9	10.9	10.8	10.6	12.6	9.8	11.1
16	10.5	10.1	10.0	10.2	10.2	10.7	10.6	10.1	11.2	11.6	11.6	11.2	11.5	11.2	11.7	11.6	11.0	10.5	10.4	10.3	10.2	10.1	9.8	9.3	11.7	9.3	10.6
17	9.0	8.9	8.6	8.6	8.6	8.5	8.3	8.5	8.8	9.2	9.5	10.3	10.8	11.4	12.0	12.0	11.5	11.4	11.0	10.1	9.5	8.4	7.4	6.7	12.0	6.7	9.5
18	6.6	6.3	6.6	7.6	7.8	8.2	8.7	9.5	9.8	9.9	9.1	8.8	9.9	10.7	10.6	10.5	10.2	9.6	9.4	9.1	8.5	8.4	8.5	8.7	10.7	6.3	8.9
19	8.7	8.7	8.8	8.8	9.3	9.3	8.8	8.6	9.1	9.2	9.1	9.4	9.4	9.7	9.6	9.8	10.4	10.1	9.5	8.9	8.7	8.5	8.4	8.3	10.4	8.3	9.1
20	8.3	8.5	8.8	9.4	9.7	10.1	10.3	10.8	10.9	11.2	11.6	12.1	12.6	13.7	14.4	13.9	13.4	12.7	12.8	12.3	12.2	11.9	11.9	12.0	14.4	8.3	11.5
21	11.8	10.8	9.2	9.1	8.8	9.0	10.0	10.3	10.6	10.3	10.2	10.2	9.9	9.6	9.6	9.3	9.3	9.0	8.7	8.3	8.1	8.1	8.1	8.1	11.8	8.1	9.4
22	7.8	7.7	7.9	8.7	8.7	8.7	8.9	9.5	10.3	10.5	10.6	11.2	11.5	11.5	11.4	10.9	11.0	10.8	10.9	10.8	10.9	10.6	10.5	10.4	11.5	7.7	10.1
23	10.6	10.6	10.5	10.4	10.5	10.4	10.4	10.3	10.4	11.1	11.4	11.6	11.9	11.9	12.0	11.8	12.0	10.8	10.6	8.9	8.0	7.7	7.2	7.2	12.0	7.2	10.3
24	7.2	7.7	7.5	7.1	7.3	6.5	5.8	6.0	7.7	8.5	9.5	10.8	11.9	11.8	11.8	11.9	11.3	10.9	11.2	11.1	10.6	8.8	7.6	7.0	11.9	5.8	9.1
25	6.7	6.4	6.3	6.2	6.2	6.2	6.0	6.2	7.4	7.6	8.4	9.4	10.6	11.3	12.0	11.8	11.0	10.4	10.1	10.3	10.4	10.5	10.5	10.5	12.0	6.0	8.8
26	9.9	9.3	9.2	8.6	8.5	9.0	9.3	9.2	8.6	8.0	7.9	8.6	8.7	8.9	8.9	8.6	8.6	8.5	8.2	8.1	8.1	8.0	8.1	8.1	9.9	7.9	8.6
27	8.0	8.0	8.0	8.1	8.1	8.3	8.1	9.5	9.7	9.4	9.3	9.7	9.7	9.6	9.7	9.8	9.5	8.3	7.5	7.1	6.8	6.6	6.5	6.5	9.8	6.5	8.4
28	6.5	6.4	6.4	6.4	6.4	6.3	6.2	6.4	7.0	7.5	8.1	8.7	9.5	9.5	9.7	10.2	10.1	9.5	9.0	8.7	8.2	7.7	7.2	6.5	10.2	6.2	7.8
29	6.3	5.9	5.7	6.3	6.4	6.0	5.4	6.0	6.7	7.2	7.7	8.4	9.0	8.8	8.8	8.7	7.6	7.5	7.0	6.5	5.6	5.5	5.6	5.4	9.0	5.4	6.8
30	4.7	6.0	5.3	6.0	5.6	5.9	6.8	6.4	6.1	6.4	7.2	7.9	9.5	9.7	9.7	9.4	9.0	8.3	7.8	7.4	6.9	6.0	5.9	5.6	9.7	4.7	7.1
Max.	**12.7**	**12.3**	**11.3**	**11.2**	**10.5**	**10.7**	**11.3**	**12.0**	**12.6**	**13.2**	**13.2**	**14.1**	**15.0**	**15.9**	**16.7**	**17.0**	**14.7**	**13.1**	**13.5**	**13.8**	**13.9**	**13.6**	**13.4**	**13.1**	**17.0**		
Min.	**4.7**	**5.9**	**5.3**	**6.0**	**5.6**	**5.9**	**5.4**	**6.0**	**6.1**	**6.4**	**7.2**	**7.9**	**8.7**	**8.8**	**8.8**	**8.6**	**7.6**	**7.5**	**7.0**	**6.5**	**5.6**	**5.5**	**5.6**	**5.4**		**4.7**	
Avg.	**9.1**	**9.0**	**8.8**	**8.8**	**8.7**	**8.8**	**8.8**	**9.3**	**10.0**	**10.4**	**10.7**	**11.1**	**11.5**	**11.6**	**11.8**	**11.7**	**11.5**	**10.9**	**10.7**	**10.3**	**10.0**	**9.6**	**9.3**	**9.2**			**10.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.1	4.7	4.7	4.7	4.9	5.2	5.5	5.6	5.7	6.1	6.5	6.9	7.2	7.2	7.0	7.0	7.4	7.7	8.0	7.9	7.1	7.1	7.1	7.2	8.0	4.7	6.4
2	7.1	7.4	7.5	7.3	7.3	7.1	7.2	7.1	7.0	7.5	7.7	7.9	7.9	8.1	8.3	8.2	8.5	8.7	8.9	8.8	8.7	8.8	8.6	8.5	8.9	7.0	7.9
3	8.4	8.4	8.1	7.8	7.4	7.3	7.6	8.1	8.6	9.7	11.1	11.2	11.4	11.5	11.4	11.1	10.3	10.1	10.0	9.3	8.6	7.9	8.3	8.5	11.5	7.3	9.3
4	7.9	7.1	7.4	8.4	8.2	8.1	7.3	7.6	6.5	7.9	7.7	7.4	7.1	6.8	8.1	8.6	7.0	5.9	5.3	4.3	4.4	3.8	3.2	4.1	8.6	3.2	6.7
5	4.8	6.3	5.7	5.2	5.2	5.0	6.0	7.6	8.1	8.5	9.0	9.4	10.1	10.4	10.7	10.7	10.3	9.6	8.8	8.3	8.0	7.6	7.5	7.4	10.7	4.8	7.9
6	7.3	6.6	5.4	5.2	5.7	6.0	6.4	6.0	6.4	7.0	8.7	8.9	9.2	9.3	9.4	9.3	9.4	9.3	9.1	8.8	8.7	8.8	8.9	9.0	9.4	5.2	7.9
7	9.1	9.3	9.3	9.4	9.4	9.4	9.2	9.3	9.0	9.1	9.5	9.7	9.9	9.8	9.9	10.0	9.9	9.8	9.8	9.7	9.4	9.3	9.3	9.1	10.0	9.0	9.5
8	9.2	9.5	9.6	8.5	8.3	8.2	7.9	7.8	7.6	7.7	7.6	7.7	7.6	7.8	7.6	7.7	8.6	8.9	9.7	10.2	10.8	10.5	9.7	9.4	10.8	7.6	8.7
9	9.3	9.5	9.6	9.8	10.5	10.6	10.9	11.9	12.0	11.8	12.5	12.3	11.9	11.5	11.2	11.2	11.0	10.8	10.7	10.5	10.3	10.3	10.1	10.1	12.5	9.3	10.8
10	9.8	9.4	8.7	7.8	6.9	6.1	5.6	5.3	4.7	5.5	6.0	6.9	7.4		8.9	8.7	8.8	8.8	8.8	8.9	9.0	8.9	8.9	8.8	9.8	4.7	7.8
11	8.5	8.3	7.7	7.3	6.7	5.7	5.6	5.5	5.6	6.1	7.2	10.3	10.9	10.4	9.7	8.0	8.2	7.2	6.0	5.0	5.3	5.4	5.5	5.4	10.9	5.0	7.1
12	5.7	5.6	5.5	5.5	5.6	5.7	5.8	5.9	6.1	6.5	7.2	7.6	8.0	8.5	8.2	7.9	7.5	6.8	6.5	6.4	6.4	6.5	6.6	6.7	8.5	5.5	6.6
13	6.7	7.2	7.1	7.3	7.1	7.1	7.2	6.8	6.6	6.8	7.5	8.5	9.8	10.4	10.0	10.2	9.4	8.3	7.2	5.7	5.1	4.9	4.3	4.3	10.4	4.3	7.3
14	4.6	6.8	6.9	6.5	8.1	8.5	8.0	8.5	8.5	8.2	8.3	8.6	8.6	9.4	8.8	8.6	8.6	8.7	8.7	8.4	8.8	8.1	6.2	5.7	9.4	4.6	7.9
15	5.5	5.4	4.9	4.6	4.5	4.7	4.9	3.9	4.2	7.4	8.4	9.3	9.2	9.7	10.1	9.8	9.4	8.0	7.4	7.2	7.4	7.9	8.1	8.5	10.1	3.9	7.1
16	8.8	8.3	8.0	6.6	5.9	5.4	5.6	5.9	6.0	6.2	6.5	7.3	7.5	7.9	7.9	8.1	7.9	7.5	7.3	7.3	7.5	7.5	7.2	7.4	8.8	5.4	7.1
17	7.3	7.0	7.0	6.7	7.1	7.3	7.0	6.4	5.8	5.9	6.4	7.1	7.1	7.6	8.2	8.3	8.1	7.4	7.2	7.3	7.5	7.4	7.2	7.4	8.3	5.8	7.1
18	7.4	7.2	6.5	6.0	5.8	5.6	5.7	5.6	5.5	5.2	5.3	5.6	6.1	6.5	7.1	7.4	7.7	7.7	8.0	7.8	7.3	7.2	7.4	7.6	8.0	5.2	6.6
19	7.6	7.1	7.0	7.0	7.3	7.2	7.2	6.3	5.8	6.1	6.7	7.1	8.3	8.3	8.4	8.2	7.9	7.2	6.8	6.7	6.4	5.5	5.1	6.6	8.4	5.1	7.0
20	6.5	5.1	5.0	5.7	5.9	5.3	4.7	4.3	3.8	4.8	6.2	7.2	8.2	8.0	8.2	8.8	8.4	6.3	5.2	4.1	3.4	2.5	2.3	2.2	8.8	2.2	5.5
21	2.5	2.5	3.0	4.2	3.7	5.1	4.6	4.9	4.7	4.9	5.7	6.5	7.4	7.4	7.4	7.6	6.5	5.5	5.3	5.3	5.8	5.3	3.7	3.0	7.6	2.5	5.1
22	3.0	3.1	3.2	3.4	4.2	4.0	4.0	4.1	3.6	3.4	4.4	5.4	6.5	7.6	7.7	8.0	7.3	5.7	4.5	3.5	3.4	3.2	3.0	3.4	8.0	3.0	4.6
23	4.0	4.0	4.1	4.2	4.0	3.7	3.9	3.6	3.2	3.5	4.0	4.6	5.6	5.9	5.7	5.4	4.5	3.6	3.0	3.0	2.5	2.2	2.4	3.1	5.9	2.2	3.9
24	2.4	1.8	1.7	2.3	2.1	0.9	0.9	0.7	0.6	0.6	0.7	0.7	0.8	1.6	2.1	2.6	2.5	1.9	1.0	0.5	0.3	0.3	0.3	0.3	2.6	0.3	1.2
25	0.5	0.5	0.8	1.2	1.2	1.0	1.1	0.5	0.1	-0.2	-0.3	-0.1	0.1	0.0	0.5	1.0	0.5	0.3	0.2	0.2	0.1	-0.1	-0.3	-0.4	1.2	-0.4	0.4
26	-0.6	-0.9	-1.2	-1.4	-1.7	-1.5	-1.2	-1.3	-1.3	-1.1	-0.7	-0.4	0.1	0.0	0.1	0.1	-0.3	-0.6	-0.6	-0.8	-0.9	-0.8	-0.7	-0.8	0.1	-1.7	-0.8
27	-1.0	-1.5	-1.9	-1.8	-1.5	-1.7	-1.9	-1.8	-1.9	-1.9	-1.4	-0.7	-0.1	-0.2	0.0	0.0	0.7	0.4	0.5	0.6	0.7	0.5	0.7	0.5	0.7	-1.9	-0.6
28	0.8	1.4	1.4	1.3	1.1	0.8	-0.2	-0.8	-1.0	-0.2	0.2	0.6	1.0	1.9	2.4	2.2	2.0	1.8	1.8	1.8	1.7	1.3	1.3	0.7	2.4	-1.0	1.1
29	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.7	2.7	2.2	3.2	5.2	5.9	6.0	5.6	5.6	5.9	5.7	5.8	5.6	5.0	4.8	4.9	6.0	0.3	3.2
30	4.8	4.5	4.4	4.4	4.5	4.2	3.6	2.9	3.3	4.1	4.5	4.7	5.8	5.3	5.1	5.5	4.8	4.1	3.4	2.9	4.2	3.6	1.9	1.0	5.8	1.0	4.1
31	0.9	0.9	0.5	-0.3	-0.6	-0.6	-0.4	-0.2	-0.5	0.1	0.9	1.7	2.2	2.4	2.9	4.3	3.2	1.5	0.8	0.7	0.6	0.4	0.2	0.2	4.3	-0.6	0.9
Max.	**9.8**	**9.5**	**9.6**	**9.8**	**10.5**	**10.6**	**10.9**	**11.9**	**12.0**	**11.8**	**12.5**	**12.3**	**11.9**	**11.5**	**11.4**	**11.2**	**11.0**	**10.8**	**10.7**	**10.5**	**10.8**	**10.5**	**10.1**	**10.1**	**12.5**		
Min.	**-1.0**	**-1.5**	**-1.9**	**-1.8**	**-1.7**	**-1.7**	**-1.9**	**-1.8**	**-1.9**	**-1.9**	**-1.4**	**-0.7**	**-0.1**	**-0.2**	**0.0**	**0.0**	**-0.3**	**-0.6**	**-0.6**	**-0.8**	**-0.9**	**-0.8**	**-0.7**	**-0.8**		**-1.9**	
Avg.	**5.3**	**5.3**	**5.1**	**5.0**	**5.0**	**4.9**	**4.8**	**4.8**	**4.7**	**5.2**	**5.7**	**6.2**	**6.7**	**6.9**	**7.1**	**7.1**	**6.8**	**6.3**	**6.0**	**5.7**	**5.6**	**5.4**	**5.1**	**5.1**			**5.7**

Total Hours in Month 744 **Hours Data Available** 743 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.0	-0.3	-0.5	-0.6	-0.8	-0.9	-1.0	-1.2	-1.4	-0.7	0.2	1.1	1.7	1.9	2.0	2.9	1.4	0.2	-0.1	-0.4	-0.6	-0.8	-1.2	-0.9	2.9	-1.4	0.0
2	-1.2	-1.9	-1.5	-1.6	-2.3	-2.3	-2.5	-2.7	-2.8	-2.4	-1.3	-0.2	0.6	0.4	0.6	1.3	0.4	-1.0	-1.3	-1.7	-1.9	-2.0	-2.1	-2.3	1.3	-2.8	-1.3
3	-2.6	-2.2	-2.5	-2.4	-2.5	-2.8	-3.3	-3.5	-3.1	-2.4	-1.7	-0.6	0.3	0.0	0.0	0.6	-0.4	-1.8	-2.1	-2.3	-2.5	-2.5	-2.7	-3.2	0.6	-3.5	-1.9
4	-2.8	-2.3	-2.3	-2.7	-2.9	-2.8	-3.1	-3.7	-3.5	-3.0	-2.2	-0.9	-0.2	-0.5	-0.3	0.5	-0.7	-2.7	-3.0	-3.5	-3.7	-4.5	-4.8	-4.4	0.5	-4.8	-2.5
5	-4.6	-4.3	-4.1	-4.2	-4.3	-4.6	-4.8	-4.9	-5.6	-4.7	-3.2	-1.6	-0.2	0.0	0.4	1.5	0.0	-1.2	-2.5	-3.2	-4.0	-4.1	-4.2	-4.2	1.5	-5.6	-3.0
6	-4.1	-3.8	-3.6	-3.6	-3.2	-3.5	-3.9	-4.2	-4.5	-3.9	-2.8	-1.8	-1.5	-1.4	-1.1	-0.1	-1.2	-1.5	-0.9	-1.5	-1.2	-1.1	-1.4	-1.4	-0.1	-4.5	-2.4
7	-1.8	-2.2	-2.3	-2.7	-2.8	-3.7	-4.3	-4.8	-5.4	-5.4	-5.0	-4.7	-4.8	-4.8	-4.7	-4.5	-6.0	-6.8	-7.3	-7.7	-8.0	-8.0	-8.0	-8.2	-1.8	-8.2	-5.2
8	-8.4	-8.5	-8.4	-8.5	-8.8	-8.9	-8.5	-8.3	-8.2	-7.9	-6.9	-6.0	-5.7	-5.9	-5.9	-5.0	-6.3	-7.0	-7.2	-7.4	-7.6	-7.7	-7.8	-7.7	-5.0	-8.9	-7.4
9	-7.7	-7.8	-7.7	-7.9	-7.2	-6.9	-6.9	-6.4	-6.5	-6.7	-6.5	-5.8	-5.3	-5.1	-5.0	-5.1	-5.2	-5.3	-5.1	-5.2	-5.6	-5.6	-5.8	-5.7	-5.0	-7.9	-6.2
10	-5.7	-5.8	-5.3	-5.6	-5.9	-5.8	-5.7	-5.8	-5.7	-5.5	-5.1	-4.7	-3.9	-3.2	-2.2	-1.7	-1.1	-1.2	-1.7	-2.1	-2.6	-2.9	-3.2	-3.9	-1.1	-5.9	-4.0
11	-4.2	-4.6	-4.6	-4.3	-4.0	-3.6	-3.6	-3.4	-3.3	-3.1	-3.1	-2.3	-2.0	-2.4	-2.5	-1.6	-3.4	-4.5	-4.8	-4.8	-4.5	-4.3	-4.4	-4.6	-1.6	-4.8	-3.7
12	-5.0	-5.3	-5.4	-5.3	-5.4	-5.1	-4.9	-4.5	-4.1	-3.7	-3.3	-3.1	-2.0	-0.6	0.0	-0.6	-1.0	-1.2	-1.5	-2.7	-2.5	-2.8	-3.0	-3.0	0.0	-5.4	-3.2
13	-2.8	-3.1	-3.1	-3.2	-3.2	-3.5	-3.4	-4.0	-4.4	-4.3	-3.9	-3.1	-3.9	-5.4	-5.8	-5.8	-6.2	-6.8	-7.6	-7.9	-7.9	-8.3	-8.1	-7.5	-2.8	-8.3	-5.1
14	-7.9	-7.4	-7.2	-6.6	-6.3	-6.7	-6.5	-5.2	-4.5	-5.9	-5.6	-4.7	-3.6	-2.8	-3.5	-4.8	-7.1	-7.9	-8.9	-9.7	-10.5	-11.0	-11.4	-11.3	-2.8	-11.4	-6.9
15	-11.6	-12.0	-12.1	-12.2	-12.3	-12.5	-12.5	-12.4	-12.6	-12.8	-12.7	-11.4	-10.5	-11.2	-11.9	-12.0	-12.7	-12.7	-12.5	-12.6	-12.7	-12.6	-12.3	-12.3	-10.5	-12.8	-12.2
16	-12.3	-12.3	-12.4	-13.0	-13.0	-12.2	-12.1	-11.9	-11.9	-11.4	-10.9	-10.2	-9.4	-9.0	-9.2	-8.6	-9.2	-10.0	-10.8	-10.9	-10.5	-10.5	-10.5	-10.1	-8.6	-13.0	-10.9
17	-9.3	-9.0	-8.6	-8.6	-9.0	-9.2	-9.2	-9.2	-8.9	-8.8	-8.2	-6.9	-6.7	-6.8	-6.3	-6.3	-7.2	-7.4	-7.6	-7.8	-7.9	-7.8	-7.7	-7.6	-6.3	-9.3	-8.0
18	-7.6	-7.8	-7.9	-8.0	-8.1	-8.2	-8.5	-9.1	-8.8	-8.9	-8.1	-7.2	-7.0	-7.1	-7.1	-6.3	-7.3	-7.9	-8.5	-8.7	-9.4	-9.3	-9.2	-9.4	-6.3	-9.4	-8.1
19	-9.1	-9.4	-10.2	-10.7	-10.7	-10.5	-10.0	-10.2	-10.6	-10.8	-9.6	-8.2	-7.3	-6.8	-5.8	-4.7	-5.0	-5.0	-4.9	-4.8	-5.4	-5.8	-6.4	-5.9	-4.7	-10.8	-7.8
20	-5.6	-5.8	-6.5	-6.4	-7.2	-7.2	-7.6	-7.6	-7.2	-7.3	-7.1	-6.5	-6.5	-7.3	-7.4	-7.2	-7.7	-7.7	-7.6	-7.6	-7.8	-7.7	-7.8	-7.9	-5.6	-7.9	-7.2
21	-7.8	-7.8	-7.8	-7.9	-7.9	-8.1	-8.1	-8.1	-8.1	-8.1	-7.9	-7.1	-6.6	-6.2	-5.5	-5.1	-4.5	-4.3	-3.9	-3.9	-3.5	-4.2	-3.3	-3.2	-3.2	-8.1	-6.2
22	-2.8	-2.7	-4.4	-5.5	-6.0	-5.9	-6.8	-6.8	-6.5	-5.4	-4.5	-3.8	-3.5	-3.9	-3.8	-3.3	-4.2	-4.7	-5.4	-6.7	-7.2	-7.5	-7.6	-7.8	-2.7	-7.8	-5.3
23	-7.9	-7.8	-7.6	-7.4	-7.5	-7.5	-7.5	-7.6	-7.8	-8.1	-7.4	-6.3	-5.8	-5.7	-5.1	-3.9	-5.3	-6.4	-7.0	-7.0	-6.7	-6.8	-7.8	-8.4	-3.9	-8.4	-6.9
24	-8.8	-8.7	-7.8	-7.5	-7.2	-7.9	-7.5	-7.5	-7.5	-8.2	-7.2	-5.8	-3.9	-4.1	-3.8	-2.8	-3.9	-4.5	-4.6	-4.3	-4.1	-4.1	-4.1	-4.1	-2.8	-8.8	-5.8
25	-4.2	-3.8	-3.4	-3.1	-2.7	-2.8	-3.4	-3.8	-3.7	-3.9	-3.4	-3.1	-2.9	-2.8	-2.8	-3.1	-3.5	-3.7	-3.8	-3.9	-4.0	-4.4	-4.3	-4.3	-2.7	-4.4	-3.5
26	-4.5	-4.6	-4.5	-4.0	-3.8	-3.4	-3.0	-2.5	-2.1	-2.0	-1.7	-1.8	-1.7	-1.6	-1.9	-1.9	-2.3	-2.8	-3.3	-2.7	-2.3	-2.2	-2.1	-2.3	-1.6	-4.6	-2.7
27	-1.8	-2.2	-2.0	-1.6	-1.6	-1.5	-1.1	-0.9	-0.5	-0.7	-0.2	0.3	0.2	0.8	1.1	1.3	1.2	1.6	1.2	1.5	1.5	1.1	1.0	1.1	1.6	-2.2	0.0
28	1.0	0.8	0.5	0.6	0.6	0.9	0.9	0.5	0.5	0.3	0.3	0.6	0.9	0.8	0.8	0.2	0.5	-0.3	-0.6	-1.1	-1.6	-2.8	-4.1	-5.0	1.0	-5.0	-0.2
29	-5.3	-5.2	-2.9	-3.7	-3.3	-3.1	-3.6	-3.9	-3.9	-4.3	-4.2	-2.3	-1.7	-2.1	-2.2	-2.0	-3.1	-3.3	-3.0	-3.5	-3.7	-3.0	-3.6	-2.4	-1.7	-5.3	-3.3
30	-2.5	-2.1	-1.9	-0.9	-1.9	-2.1	-2.5	-2.8	-2.1	-1.6	-0.9	-0.2	0.5	0.7	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	-0.5	0.7	-2.8	-0.8
Max.	**1.0**	**0.8**	**0.5**	**0.6**	**0.6**	**0.9**	**0.9**	**0.5**	**0.5**	**0.3**	**0.3**	**1.1**	**1.7**	**1.9**	**2.0**	**2.9**	**1.4**	**1.6**	**1.2**	**1.5**	**1.5**	**1.1**	**1.0**	**1.1**	**2.9**		
Min.	**-12.3**	**-12.3**	**-12.4**	**-13.0**	**-13.0**	**-12.5**	**-12.5**	**-12.4**	**-12.6**	**-12.8**	**-12.7**	**-11.4**	**-10.5**	**-11.2**	**-11.9**	**-12.0**	**-12.7**	**-12.7**	**-12.5**	**-12.6**	**-12.7**	**-12.6**	**-12.3**	**-12.3**		**-13.0**	
Avg.	**-5.3**	**-5.3**	**-5.3**	**-5.3**	**-5.4**	**-5.4**	**-5.5**	**-5.6**	**-5.5**	**-5.4**	**-4.8**	**-3.9**	**-3.4**	**-3.4**	**-3.3**	**-2.9**	**-3.7**	**-4.2**	**-4.5**	**-4.8**	**-4.9**	**-5.1**	**-5.3**	**-5.3**			**-4.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 2 meters (deg. C)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.6	-1.1	-1.5	-1.5	-1.5	-1.4	-1.1	-1.1	-1.1	-1.6	-1.9	-2.4	-2.0	-2.9	-3.6	-3.5	-4.9	-5.3	-5.4	-5.2	-5.6	-5.4	-5.6	-5.7	-0.6	-5.7	-3.0
2	-5.8	-5.7	-6.2	-5.6	-5.1	-2.8	0.0	1.2	1.2	1.8	1.7	2.0	1.8	1.9	1.8	2.1	2.3	2.5	2.4	2.5	1.4	1.9	2.6	3.3	3.3	-6.2	0.1
3	2.9	2.8	3.4	3.6	2.8	2.5	2.7	2.2	1.1	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	3.6	0.2	1.2
4	0.4	0.5	0.5	0.5	1.1	2.4	2.9	2.9	3.3	3.7	3.8	3.5	3.4	3.3	3.2	3.4	3.3	2.8	2.5	2.6	2.7	2.2	2.4	2.6	3.8	0.4	2.5
5	2.8	2.7	3.0	3.5	3.8	3.4	4.2	4.2	4.1	4.0	4.3	4.3	4.5	4.3	4.2	4.4	3.9	4.2	5.0	5.1	5.1	5.0	4.7	4.2	5.1	2.7	4.1
6	3.4	2.6	1.9	1.6	1.7	1.7	1.9	2.1	2.0	2.3	2.4	2.3	3.1	3.7	3.6	3.3	3.3	3.0	2.7	2.7	3.1	2.9	3.2	3.2	3.7	1.6	2.6
7	3.6	3.7	3.4	3.3	3.5	3.8	3.8	4.3	3.6	3.0	2.5	2.9	3.0	2.8	3.1	3.8	4.3	4.1	4.4	3.9	3.1	3.5	3.3	3.2	4.4	2.5	3.5
8	3.1	3.4	3.5	2.2	1.6	1.7	1.6	1.6	2.1	2.7	2.5	2.2	2.3	1.8	0.6	0.3	0.9	1.6	2.7	2.6	1.9	1.2	1.1	1.0	3.5	0.3	1.9
9	1.3	1.1	1.0	0.8	1.7	2.1	1.8	1.5	1.3	1.2	1.0	1.0	0.9	0.8	1.0	1.0	0.9	0.8	0.9	1.0	1.0	1.2	1.8	2.5	2.5	0.8	1.2
10	2.7	2.8	2.9	3.1	3.1	3.1	3.2	3.1	3.2	2.9	2.6	2.5	2.4	3.0	2.1	0.9	1.0	1.7	1.8	1.9	2.2	2.5	2.3	1.7	3.2	0.9	2.5
11	1.7	1.7	1.7	1.6	2.0	1.6	0.9	0.4	-0.7	-1.6	-2.0	-2.1	-1.4	-1.2	-0.4	0.4	-0.5	-2.0	-2.3	-2.4	-2.6	-3.1	-3.2	-3.1	2.0	-3.2	-0.7
12	-3.6	-3.3	-3.4	-3.1	-3.3	-3.0	-2.6	-1.8	-2.0	-1.7	-1.5	-1.4	-1.2	-1.3	-1.3	-1.6	-1.7	-1.6	-2.0	-2.4	-2.6	-2.8	-2.9	-3.6	-1.2	-3.6	-2.3
13	-3.0	-3.1	-2.8	-2.5	-2.6	-3.1	-3.7	-3.8	-4.0	-4.3	-4.4	-4.7	-4.9	-5.1	-5.3	-5.6	-5.9	-6.0	-5.9	-5.7	-5.8	-5.8	-5.9	-5.6	-2.5	-6.0	-4.6
14	-5.9	-5.5	-6.2	-7.1	-7.2	-7.3	-7.0	-6.7	-6.7	-7.1	-7.3	-7.5	-7.3	-7.2	-6.8	-6.7	-7.6	-8.0	-8.0	-8.0	-8.4	-8.9	-8.8	-8.9	-5.5	-8.9	-7.3
15	-8.9	-8.9	-8.9	-8.9	-8.9	-8.7	-8.8	-8.9	-8.9	-9.0	-9.5	-8.1	-8.1	-8.3	-8.3	-7.9	-6.8	-6.7	-6.5	-6.7	-7.1	-6.7	-6.2	-6.0	-6.0	-9.5	-8.0
16	-5.6	-5.8	-5.9	-5.5	-5.2	-5.0	-5.0	-4.6	-4.4	-4.1	-3.9	-3.6	-3.1	-3.1	-3.1	-3.2	-3.1	-2.9	-2.8	-2.5	-2.4	-2.4	-2.5	-2.6	-2.4	-5.9	-3.8
17	-2.6	-2.6	-2.6	-2.9	-2.9	-2.6	-2.7	-2.8	-3.2	-3.6	-3.3	-3.1	-2.7	-2.4	-2.3	-2.5	-2.8	-2.7	-2.0	-1.9	-1.8	-1.8	-2.3	-2.7	-1.8	-3.6	-2.6
18	-2.9	-3.2	-3.6	-4.0	-4.7	-4.7	-4.9	-5.1	-5.1	-5.3	-5.4	-5.0	-4.7	-5.1	-5.3	-5.2	-5.6	-5.9	-5.4	-5.4	-7.3	-8.2	-8.4	-8.1	-2.9	-8.4	-5.3
19	-7.6	-7.4	-6.8	-5.6	-4.6	-3.4	-3.1	-3.4	-3.3	-3.6	-2.9	-2.0	-2.0	-1.2	-1.0	-1.2	-2.1	-2.8	-3.3	-3.7	-3.6	-3.7	-3.9	-4.3	-1.0	-7.6	-3.6
20	-4.4	-4.5	-4.8	-5.1	-5.1	-6.3	-7.7	-8.5	-8.9	-9.2	-9.5	-9.4	-9.4	-9.0	-8.1	-8.1	-8.1	-7.6	-7.5	-8.0	-8.5	-9.0	-9.6	-10.1	-4.4	-10.1	-7.8
21	-9.6	-9.2	-9.0	-8.9	-9.4	-8.8	-9.2	-9.6	-9.7	-10.1	-10.7	-10.5	-10.2	-10.6	-10.5	-9.9	-10.1	-10.6	-10.9	-10.7	-10.0	-10.5	-10.4	-9.9	-8.8	-10.9	-9.9
22	-9.6	-9.4	-9.2	-8.9	-8.0	-8.1	-7.7	-7.3	-7.9	-7.8	-7.7	-7.3	-6.4	-6.2	-5.9	-5.7	-6.3	-7.3	-7.3	-7.0	-7.3	-7.7	-7.9	-7.0	-5.7	-9.6	-7.5
23	-6.5	-3.6	-4.2	-4.5	-4.4	-5.0	-5.4	-4.6	-5.0	-6.6	-7.3	-7.2	-6.6	-6.9	-7.6	-7.2	-7.0	-6.8	-7.3	-7.9	-9.0	-9.0	-8.8	-9.3	-3.6	-9.3	-6.6
24	-9.8	-9.4	-9.6	-9.0	-8.7	-8.4	-8.6	-8.7	-8.9	-8.8	-8.7	-8.3	-7.4	-6.9	-6.6	-6.6	-7.6	-8.7	-9.4	-9.7	-9.3	-9.4	-10.1	-10.0	-6.6	-10.1	-8.7
25	-10.1	-10.4	-8.3	-5.1	-4.7	-5.9	-7.0	-7.5	-7.7	-7.6	-8.2	-7.6	-7.0	-6.9	-6.8	-8.0	-8.0	-7.9	-7.7	-7.8	-8.8	-9.7	-9.9	-10.2	-4.7	-10.4	-7.9
26	-10.8	-11.0	-11.5	-11.3	-11.0	-11.2	-10.6	-10.4	-10.0	-11.1	-10.6	-9.7	-9.4	-10.5	-11.3	-11.2	-11.7	-11.3	-10.4	-9.4	-8.6	-7.5	-7.2	-6.7	-6.7	-11.7	-10.2
27	-6.3	-5.9	-5.1	-5.1	-4.2	-4.0	-4.5	-4.3	-3.6	-3.3	-3.2	-3.1	-2.6	-3.2	-3.8	-3.7	-3.2	-2.9	-2.5	-2.5	-1.9	-0.3	0.7	1.0	1.0	-6.3	-3.2
28	1.4	0.6	0.6	0.2	0.1	0.1	0.2	0.3	0.5	0.6	0.7	0.9	1.7	0.7	0.7	0.9	0.3	0.2	0.5	-0.3	-1.5	-1.2	-1.4	-1.2	1.7	-1.5	0.2
29	-0.8	-0.4	-0.8	-0.8	-1.3	-1.8	-0.6	1.2	2.3	1.6	1.1	0.7	0.0	-0.9	-1.7	-2.6	-3.0	-3.7	-5.2	-5.0	-4.5	-4.9	-5.1	-5.9	2.3	-5.9	-1.8
30	-6.9	-6.8	-7.7	-8.0	-8.4	-8.5	-8.6	-8.4	-8.5	-8.4	-8.3	-8.3	-8.2	-8.5	-9.1	-9.7	-10.0	-10.4	-10.7	-10.8	-11.0	-11.0	-10.8	-11.1	-6.8	-11.1	-9.1
31	-11.2	-11.3	-12.1	-12.2	-12.7	-13.2	-13.3	-13.2	-13.2	-12.4	-10.9	-10.8	-9.1	-8.7	-7.8	-7.4	-6.7	-6.6	-6.7	-7.0	-6.7	-6.6	-6.0	-6.8	-6.0	-13.3	-9.7
Max.	**3.6**	**3.7**	**3.5**	**3.6**	**3.8**	**3.8**	**4.2**	**4.3**	**4.1**	**4.0**	**4.3**	**4.3**	**4.5**	**4.3**	**4.2**	**4.4**	**4.3**	**4.2**	**5.0**	**5.1**	**5.1**	**5.0**	**4.7**	**4.2**	**5.1**		
Min.	**-11.2**	**-11.3**	**-12.1**	**-12.2**	**-12.7**	**-13.2**	**-13.3**	**-13.2**	**-13.2**	**-12.4**	**-10.9**	**-10.8**	**-10.2**	**-10.6**	**-11.3**	**-11.2**	**-11.7**	**-11.3**	**-10.9**	**-10.8**	**-11.0**	**-11.0**	**-10.8**	**-11.1**		**-13.3**	
Avg.	**-3.5**	**-3.4**	**-3.5**	**-3.4**	**-3.3**	**-3.2**	**-3.2**	**-3.1**	**-3.2**	**-3.3**	**-3.4**	**-3.2**	**-2.9**	**-3.0**	**-3.1**	**-3.1**	**-3.3**	**-3.4**	**-3.4**	**-3.5**	**-3.7**	**-3.7**	**-3.7**	**-3.7**			**-3.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.5	2.4	2.0	2.5	3.5	3.6	4.0	3.9	3.8	4.1	4.2	3.8	3.9	4.2	4.0	3.9	4.0	4.2	4.2	4.1	4.2	3.5	3.3	3.5	4.2	2.0	3.7
2	4.0	3.7	3.5	3.2	3.5	3.9	4.2	4.4	3.5	2.4	2.0	2.4	3.2	2.8	3.2	3.4	3.2	2.7	2.0	1.8	1.9	2.1	2.0	2.4	4.4	1.8	3.0
3	1.9	2.0	1.3	1.1	1.5	1.7	2.0	2.5	2.3	2.7	2.3	3.2	3.1	3.1	3.2	3.4	3.3	3.3	3.5	3.2	3.7	3.7	3.0	2.8	3.7	1.1	2.7
4	3.2	3.5	2.6	1.4	0.9	0.4	0.0	-0.5	-1.0	-1.1	-0.4	-0.5	-0.5	-0.5	-0.5	-0.3	-0.4	-0.8	-0.9	-0.9	-0.5	-0.3	-0.2	0.0	3.5	-1.1	0.1
5	1.0	2.9	3.7	3.6	3.3	3.6	3.6	3.0	2.3	1.0	0.4	1.0	1.0	0.5	0.3	0.6	0.2	-0.8	-1.1	-1.3	-1.5	-1.6	-2.2	-2.1	3.7	-2.2	0.9
6	-2.1	-2.3	-1.6	-2.4	-2.7	-2.7	-2.4	-2.3	-2.4	-2.3	-1.8	-0.7	-1.3	-1.0	-0.8	-0.7	-0.6	-0.8	-0.7	-0.6	-0.8	-0.8	-0.9	-1.2	-0.6	-2.7	-1.5
7	-0.1	-1.2	-1.6	-1.7	-2.0	-2.2	-2.0	-1.6	-1.2	-0.5	3.2	4.8	4.7	3.7	2.6	2.8	3.1	2.8	2.9	3.9	4.0	3.8	3.6	3.5	4.8	-2.2	1.5
8	4.2	4.7	4.7	4.6	4.8	4.4	4.1	4.2	4.6	4.9	5.4	5.0	5.2	5.3	3.8	3.6	2.8	2.4	2.0	1.8	1.2	0.7	0.8	0.4	5.4	0.4	3.6
9	0.4	0.8	0.9	0.7	0.5	0.5	0.6	0.7	0.6	0.5	0.6	0.7	0.8	0.9	0.8	0.7	0.8	0.5	0.0	-0.4	-0.2	-0.2	0.1	0.2	0.9	-0.4	0.5
10	0.2	0.2	0.1	0.0	-0.1	0.4	0.6	0.4	0.3	0.5	0.9	0.9	0.8	1.0	0.8	0.4	-0.5	-1.2	-1.5	-1.8	-1.8	-2.1	-2.1	-2.1	1.0	-2.1	-0.2
11	-2.3	-2.5	-2.1	-2.2	-2.0	-2.4	-2.8	-2.8	-2.8	-2.7	-2.3	-2.0	-1.8	-1.7	-1.6	-1.5	-1.5	-1.6	-1.8	-2.2	-2.7	-2.6	-2.7	-2.6	-1.5	-2.8	-2.2
12	-2.6	-2.4	-2.9	-2.9	-2.9	-3.2	-3.9	-4.0	-3.9	-4.0	-4.3	-4.1	-4.1	-4.1	-4.3	-4.6	-4.8	-5.1	-5.3	-5.3	-5.4	-5.5	-5.6	-5.6	-2.4	-5.6	-4.2
13	-5.5	-5.7	-5.9	-6.3	-6.4	-6.4	-6.7	-7.1	-7.3	-7.5	-7.5	-7.3	-7.1	-7.2	-7.4	-7.6	-7.9	-8.5	-8.9	-8.8	-8.8	-8.6	-8.7	-8.6	-5.5	-8.9	-7.4
14	-8.3	-8.0	-7.7	-7.3	-6.5	-5.1	-4.1	-3.8	-3.9	-3.9	-4.1	-3.9	-4.0	-3.8	-3.7	-4.3	-4.4	-4.3	-4.3	-4.4	-4.5	-4.4	-4.4	-4.4	-3.7	-8.3	-4.9
15	-4.3	-4.1	-3.9	-3.5	-3.2	-3.1	-3.2	-2.0	-1.2	-1.2	-0.2	-0.6	0.0	0.2	0.4	0.8	1.2	0.6	0.7	0.7	0.8	1.1	1.0	1.3	1.3	-4.3	-0.9
16	1.4	1.5	1.8	2.2	2.4	2.6	2.6	2.6	2.6	2.8	2.9					1.9	1.1	0.5	-0.1	-0.3	-0.7	-1.0	-1.2	-1.7	2.9	-1.7	1.2
17	-2.1	-1.3	-1.3	-1.3	-1.0	-1.1	-0.7	-0.8	-1.1	-1.3	-1.6	-1.4	-1.4	-1.4	-0.1	-0.2	-0.4	-1.0	-1.1	-2.1	-4.2	-5.9	-6.9	-7.2	-0.1	-7.2	-2.0
18	-7.3	-7.2	-7.0	-6.8	-7.0	-7.3	-7.3	-7.7	-7.9	-8.2	-8.0	-7.8	-7.7	-7.7	-7.5	-7.3	-7.7	-8.4	-8.6	-9.1	-9.2	-9.2	-9.3	-9.5	-6.8	-9.5	-7.9
19	-9.9	-10.1	-9.9	-9.7	-10.0	-10.7	-10.8	-11.0	-11.2	-11.3	-11.2	-11.1	-11.6	-11.5	-11.3	-11.5	-11.6	-11.5	-11.5	-11.6	-12.1	-11.5	-11.1	-11.1	-9.7	-12.1	-11.0
20	-11.4	-11.2	-10.7	-10.5	-10.0	-10.0	-10.1	-10.2	-10.2	-10.5	-10.4	-10.1	-9.7	-9.3	-8.8	-8.6	-8.5	-8.4	-8.7	-8.8	-8.8	-8.8	-8.8	-8.7	-8.4	-11.4	-9.6
21	-8.7	-8.5	-8.0	-7.2	-6.7	-6.7	-5.7	-5.4	-4.7	-4.6	-5.0	-5.4	-5.3	-5.5	-6.2	-7.1	-7.4	-9.0	-9.5	-10.0	-12.9	-14.3	-15.7	-17.2	-4.6	-17.2	-8.2
22	-19.1	-20.4	-21.4	-21.8	-22.5	-23.3	-23.6	-23.8	-23.4	-23.4	-23.4	-23.5	-23.4	-22.7	-22.6	-22.6	-22.3	-22.2	-21.7	-21.6	-21.1	-20.8	-20.4	-20.1	-19.1	-23.8	-22.1
23	-20.1	-20.0	-19.3	-19.5	-19.5	-19.2	-19.2	-19.3	-19.0	-18.6	-18.6	-18.9	-18.5	-18.8	-18.8	-18.7	-19.1	-19.2	-19.0	-19.2	-18.9	-18.6	-18.5	-18.6	-18.5	-20.1	-19.0
24	-18.1	-18.2	-18.0	-18.2	-18.2	-18.4	-18.6	-18.2	-18.1	-18.3	-18.0	-17.8	-17.0	-16.6	-16.2	-16.2	-16.6	-17.1	-17.3	-17.4	-17.6	-17.8	-17.9	-17.8	-16.2	-18.6	-17.6
25	-18.0	-17.9	-18.2	-18.4	-18.4	-18.4	-18.3	-18.3	-18.3	-17.9	-17.1	-16.3	-15.3	-14.6	-14.2	-14.3	-15.5	-16.4	-17.1	-17.8	-18.2	-18.8	-19.1	-19.1	-14.2	-19.1	-17.3
26	-19.1	-19.0	-19.1	-19.2	-19.4	-19.6	-19.7	-20.0	-20.3	-20.1	-19.6	-19.5	-19.3	-18.6	-18.4	-17.9	-17.9	-18.3	-18.4	-18.4	-18.0	-18.1	-18.7	-18.3	-17.9	-20.3	-19.0
27	-19.1	-18.3	-19.3	-20.7	-21.3	-22.1	-22.3	-22.7	-22.6	-22.1	-22.3	-22.2	-22.9	-22.9	-23.1	-23.5	-24.1	-23.8	-23.5	-23.8	-23.5	-22.6	-22.9	-22.5	-18.3	-24.1	-22.2
28	-22.5	-22.4	-22.4	-22.5	-22.8	-22.6	-22.5	-22.1	-21.9	-21.8	-21.2	-22.0	-21.5	-20.8	-20.6	-20.6	-21.0	-21.1	-21.5	-21.4	-21.0	-20.9	-21.3	-21.7	-20.6	-22.8	-21.7
29	-21.4	-21.5	-21.4	-21.4	-21.3	-21.0	-20.7	-20.7	-20.9	-21.1	-20.8	-20.4	-20.1	-19.3	-18.6	-18.1	-17.9	-18.8	-18.9	-18.7	-19.0	-19.3	-19.4	-19.2	-17.9	-21.5	-20.0
30	-18.8	-19.0	-19.2	-19.5	-19.2	-18.9	-18.6	-18.2	-18.6	-18.7	-18.9	-18.3	-17.8	-16.6	-15.6	-14.7	-14.3	-14.4	-14.2	-13.5	-11.9	-10.6	-9.9	-8.6	-8.6	-19.5	-16.2
31	-8.1	-8.0	-8.1	-7.9	-8.3	-8.7	-8.5	-8.6	-9.4	-10.7	-11.7	-11.8	-11.5	-11.4	-12.0	-11.9	-11.9	-12.1	-13.2	-14.6	-15.4	-15.8	-16.4	-16.7	-7.9	-16.7	-11.4
Max.	**4.2**	**4.7**	**4.7**	**4.6**	**4.8**	**4.4**	**4.2**	**4.4**	**4.6**	**4.9**	**5.4**	**5.0**	**5.2**	**5.3**	**4.0**	**3.9**	**4.0**	**4.2**	**4.2**	**4.1**	**4.2**	**3.8**	**3.6**	**3.5**	**5.4**		
Min.	**-22.5**	**-22.4**	**-22.4**	**-22.5**	**-22.8**	**-23.3**	**-23.6**	**-23.8**	**-23.4**	**-23.4**	**-23.4**	**-23.5**	**-23.4**	**-22.9**	**-23.1**	**-23.5**	**-24.1**	**-23.8**	**-23.5**	**-23.8**	**-23.5**	**-22.6**	**-22.9**	**-22.5**		**-24.1**	
Avg.	**-7.4**	**-7.3**	**-7.4**	**-7.5**	**-7.4**	**-7.5**	**-7.4**	**-7.4**	**-7.5**	**-7.5**	**-7.3**	**-7.5**	**-7.3**	**-7.1**	**-7.1**	**-6.8**	**-7.0**	**-7.3**	**-7.5**	**-7.7**	**-7.8**	**-7.9**	**-8.1**	**-8.1**			**-7.4**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-16.6	-16.8	-16.5	-16.6	-16.2	-15.7	-15.7	-16.1	-16.5	-17.9	-18.0	-17.5	-17.2	-17.4	-18.0	-18.1	-17.4	-18.9	-18.9	-19.4	-19.6	-19.3	-18.9	-17.9	-15.7	-19.6	-17.5
2	-18.2	-19.0	-19.2	-19.2	-19.4	-18.6	-18.8	-18.9	-19.2	-18.7	-17.7	-17.0	-18.6	-18.7	-18.2	-17.6	-17.7	-18.4	-18.0	-17.8	-17.8	-16.8	-15.0	-13.3	-13.3	-19.4	-18.0
3	-12.9	-12.0	-12.0	-11.7	-11.4	-10.9	-10.7	-10.4	-10.2	-9.8	-9.7	-9.7	-9.6	-9.4	-8.8	-8.0	-7.9	-7.6	-7.3	-7.1	-7.0	-7.0	-6.6	-6.2	-6.2	-12.9	-9.3
4	-5.9	-6.0	-5.9	-6.1	-6.2	-5.3	-4.8	-4.8	-4.5	-4.1	-3.6	-3.2	-3.1	-3.2	-3.3	-3.3	-3.0	-2.9	-2.9	-3.1	-3.0	-2.8	-2.7	-3.0	-2.7	-6.2	-4.0
5	-3.0	-2.8	-2.5	-2.4	-2.6	-2.8	-2.5	-2.1	-2.2	-1.2	-1.0	-1.4	-0.9	-0.2	0.3	1.4	1.7	2.1	1.0	0.7	0.7	0.2	0.4	0.8	2.1	-3.0	-0.8
6	1.2	1.3	1.0	1.1	1.5																				1.5	1.0	1.2
7					-3.4	-3.4	-4.1	-2.9	-2.0	-2.5	-2.9	-3.0	-3.5	-3.9	-4.1	-4.2	-4.3	-4.0	-4.5	-4.4	-4.2	-4.1	-3.8	-3.6	-2.0	-4.5	-3.6
8	-3.0	-2.8	-4.9	-4.9	-6.3	-6.4	-6.2	-5.9	-5.1	-2.0	-2.0	-2.0	-1.9	-1.7	-0.9	-0.7	-1.1	-1.5	-1.1	-1.2	-0.5	-0.2	0.1	0.5	0.5	-6.4	-2.6
9	0.6	0.5	0.3	-0.2	-0.9	-0.8	-1.7	-1.4	-1.5	-1.7	-1.4	-1.0	-0.1	0.5	0.9	1.4	2.1	2.7	2.6	2.7	3.0	2.0	2.6	2.6	3.0	-1.7	0.6
10	2.3	2.7	3.1	3.9	2.7	2.2	1.5	1.3	1.2	1.1	1.8	2.9	2.5	2.4	3.4	3.9	3.6	3.6	3.5	3.6	3.8	3.6	3.3	1.4	3.9	1.1	2.7
11	1.3	2.5	3.0	2.2	3.3	2.5	2.2	2.8	3.6	4.1	3.1	2.3	2.2	2.5	3.2	3.4	3.4	3.3	3.8	3.9	4.5	5.0	5.0	5.4	5.4	1.3	3.3
12	5.3	5.1	4.6	2.5	2.2	3.1	2.8	2.0	1.7	1.8	1.3	0.4	0.0	-0.7	-1.2	-1.6	-1.8	-2.2	-3.0	-3.0	-2.5	-1.6	-1.2	-1.9	5.3	-3.0	0.5
13	-3.0	-4.1	-4.2	-4.2	-3.7	-3.1	-3.0	-3.1	-3.2	-2.4	-1.7	-1.7	-1.2	0.8	0.6	1.7	1.1	2.2	2.3	2.9	3.5	3.9	3.8	3.8	3.9	-4.2	-0.5
14	3.9	4.4	4.4	4.7	4.6	4.5	4.5	4.5	3.9	3.6	3.5	3.2	3.5	3.7	4.0	4.0	4.0	4.0	3.9	3.8	3.8	3.6	3.8	3.8	4.7	3.2	4.0
15	4.3	4.9	4.8	5.7	6.0	6.0	5.9	5.9	6.4	6.7	6.5	4.7	2.0	4.7	4.7	4.7	4.5	4.2	2.5	1.6	2.1	2.1	1.7	0.4	6.7	0.4	4.3
16	0.1	0.3	0.4	0.5	0.9	1.2	1.6	1.8	1.2	1.0	2.1	2.1	1.4	1.6	1.5	2.2	2.5	2.2	1.8	1.1	0.3	0.0	0.2	0.3	2.5	0.0	1.2
17	0.3	0.9	1.2	1.4	1.5	1.9	2.6	2.2	1.8	1.8	2.2	2.7	3.3	3.5	3.3	3.1	2.8	2.4	2.5	2.4	2.4	2.6	3.4	3.2	3.5	0.3	2.3
18	3.3	2.6	2.2	2.6	2.7	2.5	3.2	2.4	3.7	3.9	3.9	3.5	3.1	2.8	3.0	2.7	2.5	2.0	1.0	0.6	0.6	0.2	0.2	0.5	3.9	0.2	2.3
19	0.6	1.3	3.0	2.7	2.2	1.8	1.6	1.4	1.0	0.4	0.5	1.0	1.7	2.1	2.2	2.2	2.3	2.4	2.6	2.5	2.1	1.6	1.4	1.2	3.0	0.4	1.7
20	0.9	0.6	0.5	0.4	0.6	0.6	0.6	0.6	0.3	0.5	0.8	1.1	1.2	1.1	0.7	0.8	0.8	0.8	0.9	0.3	-0.4	-0.9	-1.5	-2.2	1.2	-2.2	0.4
21	-2.1	-2.6	-2.9	-3.6	-3.9	-4.1	-4.4	-4.8	-4.9	-4.1	-3.4	-2.6	-2.6	-2.5	-2.4	-2.5	-2.5	-2.3	-2.3	-2.3	-2.1	-2.0	-1.8	-1.8	-1.8	-4.9	-2.9
22	-2.0	-2.4	-2.3	-2.5	-3.0	-3.4	-3.5	-3.6	-3.5	-3.5	-2.9	-2.2	-1.6	-1.6	-1.2	-1.1	-1.6	-2.2	-3.0	-3.5	-3.2	-3.0	-2.6	-2.7	-1.1	-3.6	-2.6
23	-2.7	-3.4	-3.2	-3.5	-3.5	-3.7	-3.9	-3.6	-3.4	-2.8	-1.5	-1.4	-1.4	-1.1	-1.4	-1.5	-1.4	-2.0	-2.4	-3.0	-3.5	-3.1	-3.1	-3.7	-1.1	-3.9	-2.7
24	-4.4	-4.9	-5.1	-5.5	-5.5	-6.1	-6.7	-6.9	-6.8	-6.8	-6.8	-5.8	-4.8	-4.4	-4.3	-3.9	-4.2	-5.6	-6.3	-6.7	-7.1	-7.2	-7.5	-7.6	-3.9	-7.6	-5.9
25	-7.9	-7.9	-7.6	-6.9	-6.6	-6.4	-6.8	-7.1	-6.7	-5.9	-5.1	-4.7	-4.4	-3.7	-1.2	0.7	0.4	-1.0	-2.2	-2.7	-2.8	-2.8	-3.0	-3.5	0.7	-7.9	-4.4
26	-3.8	-3.7	-3.7	-3.2	-3.1	-3.9	-4.3	-4.0	-3.9	-4.0	-3.7	-3.7	-3.6	-3.1	-2.7	-2.6	-2.7	-2.7	-3.2	-3.8	-4.3	-4.8	-5.3	-5.4	-2.6	-5.4	-3.7
27	-5.4	-5.7	-6.0	-6.3	-6.4	-6.5	-6.5	-6.5	-6.3	-6.1	-5.7	-5.9	-5.7	-6.3	-7.0	-7.6	-7.7	-8.0	-8.3	-8.3	-8.2	-8.5	-9.1	-9.4	-5.4	-9.4	-7.0
28	-9.2	-9.9	-9.9	-10.4	-10.7	-11.3	-11.6	-11.8	-11.6	-11.5	-10.7	-10.6	-9.8	-9.4	-9.4	-9.8	-9.8	-9.7	-9.8	-9.8	-9.6	-9.3	-9.9	-10.7	-9.2	-11.8	-10.3
Max.	**5.3**	**5.1**	**4.8**	**5.7**	**6.0**	**6.0**	**5.9**	**5.9**	**6.4**	**6.7**	**6.5**	**4.7**	**3.5**	**4.7**	**4.7**	**4.7**	**4.5**	**4.2**	**3.9**	**3.9**	**4.5**	**5.0**	**5.0**	**5.4**	**6.7**		
Min.	**-18.2**	**-19.0**	**-19.2**	**-19.2**	**-19.4**	**-18.6**	**-18.8**	**-18.9**	**-19.2**	**-18.7**	**-18.0**	**-17.5**	**-18.6**	**-18.7**	**-18.2**	**-18.1**	**-17.7**	**-18.9**	**-18.9**	**-19.4**	**-19.6**	**-19.3**	**-18.9**	**-17.9**		**-19.6**	
Avg.	**-2.8**	**-2.9**	**-2.9**	**-2.9**	**-3.0**	**-3.2**	**-3.3**	**-3.3**	**-3.2**	**-3.0**	**-2.7**	**-2.6**	**-2.6**	**-2.3**	**-2.1**	**-1.9**	**-1.9**	**-2.1**	**-2.4**	**-2.6**	**-2.5**	**-2.5**	**-2.5**	**-2.5**			**-2.5**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-11.3	-11.1	-11.4	-11.9	-12.1	-12.2	-12.5	-12.7	-12.6	-12.2	-12.0	-11.3	-10.2	-8.6	-7.6	-7.2	-6.8	-6.8	-6.6	-6.9	-6.9	-6.8	-6.7	-6.7	-6.6	-12.7	-9.6
2	-6.7	-6.5	-6.3	-6.3	-6.4	-6.8	-7.0	-7.0	-7.4	-7.3	-6.7	-6.3	-5.9	-5.5	-4.6	-3.3	-2.5	-2.2	-1.6	-1.3	-1.0	-0.9	-1.1	-1.3	-0.9	-7.4	-4.7
3	-1.3	-1.3	-1.1	-0.7	-0.8	-0.9	-1.1	-0.6	-0.4	-0.4	-0.4	-0.5	-0.5	-0.4	-0.4	-0.2	-0.5	-0.4	-0.5	-0.7	-0.7	-1.0	-1.5	-1.5	-0.2	-1.5	-0.7
4	-1.4	-1.6	-1.7	-1.8	-2.2	-2.1	-1.8	-1.7	-1.7	-2.1	-1.6	-1.3	-0.3	0.3	0.1	-0.3	-0.3	-0.9	-1.3	-1.3	-1.2	-1.3	-1.4	-1.5	0.3	-2.2	-1.3
5	-1.3	-1.6	-1.1	-1.4	-1.3	-1.0	-0.7	-0.8	-1.1	-1.1	-0.9	-0.4	-0.3	-0.3	-0.5	-0.2	-0.2	0.0	0.0	0.0	-0.3	-0.5	-0.6	-0.5	0.0	-1.6	-0.7
6	-0.9	-1.7	-1.9	-2.5	-2.7	-3.1	-3.4	-3.6	-3.5	-3.7	-3.4	-2.9	-2.9	-1.9	-2.3	-2.1	-2.2	-3.4	-4.3	-5.0	-5.3	-5.6	-5.6	-5.3	-0.9	-5.6	-3.3
7	-5.3	-5.3	-5.2	-5.4	-5.4	-5.3	-5.6	-5.7	-6.0	-6.3	-6.1	-5.2	-4.7	-5.0	-5.1	-5.3	-6.3	-6.9	-7.1	-7.3	-7.3	-7.5	-8.4	-8.8	-4.7	-8.8	-6.1
8	-9.2	-9.2	-9.4	-9.4	-10.8	-11.2	-11.0	-10.1	-10.2	-9.4	-8.9	-8.2	-7.4	-6.6	-7.0	-7.2	-8.0	-8.3	-8.3	-8.1	-8.0	-7.6	-7.5	-7.2	-6.6	-11.2	-8.7
9	-8.7	-8.5	-8.0	-7.4	-9.5	-11.6	-11.2	-10.4	-11.1	-10.9	-10.3	-10.1	-9.2	-9.2	-9.0	-8.6	-8.4	-8.2	-7.4	-7.5	-7.4	-7.3	-7.8	-8.1	-7.3	-11.6	-9.0
10	-9.0	-9.9	-10.2	-10.8	-11.0	-11.3	-11.4	-11.7	-11.0	-10.0	-8.7	-7.3	-5.9	-4.7	-4.5	-3.6	-3.6	-4.4	-4.1	-4.5	-4.5	-3.7	-3.7	-3.4	-3.4	-11.7	-7.2
11	-3.5	-3.5	-3.2	-3.3	-3.5	-3.8	-4.4	-4.4	-4.6	-3.8	-3.7	-3.8	-3.6	-3.0	-2.5	-2.2	-2.3	-2.7	-3.3	-3.5	-3.5	-3.7	-3.4	-3.1	-2.2	-4.6	-3.4
12	-3.0	-3.2	-3.0	-2.8	-2.6	-2.1	-2.1	-1.7	-1.5	-1.2	-0.9	-1.0	-0.5	-0.2	-0.3	-0.5	-0.1	0.4	0.5	0.2	0.2	-0.4	-0.5	-0.8	0.5	-3.2	-1.1
13	-1.1	-1.3	-1.4	-1.6	-2.4	-2.6	-3.2	-3.5	-2.8	-2.5	-1.5	-1.2	-0.8	-0.3	-0.6	-0.1	-0.6	-2.0	-2.5	-2.7	-2.9	-3.3	-4.4	-4.9	-0.1	-4.9	-2.1
14	-5.2	-4.3	-4.2	-4.3	-4.4	-4.6	-5.1	-5.3	-4.9	-4.3	-3.9	-2.4	-1.5	-1.0	-0.7	-0.4	0.3	-1.2	-2.3	-3.5	-4.6	-5.3	-5.9	-6.2	0.3	-6.2	-3.6
15	-5.8	-6.0	-6.0	-6.0	-6.1	-6.4	-6.8	-6.9	-7.2	-6.3	-5.5	-3.5	-1.7	-1.6	-0.7	-0.5	-1.5	-3.0	-3.2	-4.2	-4.2	-4.4	-4.2	-4.1	-0.5	-7.2	-4.4
16	-4.4	-4.4	-4.2	-4.3	-4.4	-4.3	-4.5	-4.8	-4.9	-4.4	-4.1	-3.5	-3.1	-2.6	-2.3	-1.8	-2.5	-2.9	-3.4	-4.4	-4.6	-4.6	-4.7	-5.1	-1.8	-5.1	-3.9
17	-5.2	-5.4	-5.9	-6.3	-6.9	-6.4	-6.5	-6.4	-5.9	-5.6	-5.2	-4.8	-4.8	-5.0	-5.2	-5.0	-4.7	-4.4	-4.3	-4.1	-4.4	-4.4	-4.1	-4.1	-4.1	-6.9	-5.2
18	-4.4	-4.3	-4.1	-4.2	-4.4	-4.1	-4.1	-3.9	-3.8	-3.6	-3.1	-2.5	-1.7	-1.9	-1.3	-0.9	-1.0	-1.4	-1.5	-1.6	-1.9	-2.0	-2.7	-2.9	-0.9	-4.4	-2.8
19	-2.8	-3.4	-3.5	-3.6	-4.0	-4.3	-4.6	-5.1	-4.6	-3.3	-2.9	-1.9	-1.0	-1.3	-1.2	-1.3	-1.5	-1.4	-1.4	-1.6	-2.4	-2.3	-2.3	-2.6	-1.0	-5.1	-2.7
20	-2.4	-2.2	-2.3	-2.2	-2.0	-2.2	-2.0	-1.8	-1.2	-1.0	-0.9	0.0	0.4	0.4	-0.7	-0.6	0.6	0.6	0.4	0.6	0.3	0.4	0.4	0.0	0.6	-2.4	-0.7
21	-0.3	-0.5	-1.2	-2.1	-1.8	-1.9	-2.1	-2.5	-2.7	-2.5	-2.2	-1.4	-0.2	0.6	1.9	2.8	1.5	0.6	0.5	-0.4	-1.1	-1.6	-1.6	-1.7	2.8	-2.7	-0.8
22	-1.5	-1.9	-2.3	-2.6	-2.9	-2.9	-3.5	-4.3	-2.8	-3.0	-3.5	-1.6	-1.8	-1.5	-1.4	-0.9	-0.8	-1.0	-1.1	-1.4	-2.1	-2.5	-2.7	-3.1	-0.8	-4.3	-2.2
23	-3.2	-3.4	-3.5	-3.6	-3.7	-3.4	-3.6	-3.6	-3.1	-3.0	-2.6	-2.2	-1.7	-1.5	-0.2	-0.1	0.2	0.2	-0.7	-1.2	-3.0	-3.4	-3.4	-3.6	0.2	-3.7	-2.4
24	-3.8	-4.2	-4.7	-5.1	-5.1	-5.3	-5.6	-5.2	-5.0	-4.9	-3.9	-3.1	-2.5	-1.7	-1.1	-0.8	-0.7	-0.9	-1.5	-2.4	-2.7	-2.8	-2.8	-2.7	-0.7	-5.6	-3.3
25	-2.5	-2.2	-2.2	-2.7	-3.4	-4.0	-4.1	-4.4	-4.3	-3.8	-3.1	-1.3	-0.3	0.7	0.3	0.1	0.1	-0.7	-1.4	-2.1	-2.4	-2.4	-2.1	-2.1	0.7	-4.4	-2.1
26	-2.1	-2.4	-2.4	-2.5	-2.4	-2.9	-3.7	-4.4	-4.6	-4.4	-3.1	-1.4	-0.3	0.6	0.3	0.8	1.3	-0.7	-1.8	-2.2	-3.0	-3.4	-3.7	-3.7	1.3	-4.6	-2.2
27	-3.6	-3.5	-3.0	-3.1	-2.9	-2.9	-3.2	-2.7	-0.6	0.3	2.2	2.8	2.7	2.6	2.6	2.4	2.6	1.6	1.0	0.6	-0.1	-1.1	-1.2	-1.2	2.8	-3.6	-0.3
28	-1.6	-1.0	-1.1	-0.5	-1.1	-0.4	-0.3	0.5	0.9	-0.1	1.2	2.5	1.9	2.1	1.7	2.3	2.5	1.4	1.1	0.6	-0.4	-0.5	-1.0	-1.4	2.5	-1.6	0.4
29	-0.1	0.3	-0.2	-0.3	-0.6	-1.0	-1.5	-1.8	-1.2	-0.7	0.3	1.4	3.0	3.3	1.7	1.7	1.8	1.1	0.2	-0.2	-0.9	-1.4	-1.1	-1.2	3.3	-1.8	0.1
30	-1.3	-1.3	0.0	1.1	1.0	0.8	-0.1	-0.3	-0.4	0.9	0.8	1.3	0.9	1.0	1.0	0.7	0.5	0.5	0.6	0.9	0.8	0.7	1.1	1.0	1.3	-1.3	0.5
31	1.1	1.1	1.3	1.3	1.3	1.2	1.3	1.5	1.9	2.2	1.9	1.6	1.7	1.9	1.6	1.5	1.7	1.5	1.5	0.2	-0.4	-0.9	-1.2	-1.2	2.2	-1.2	1.1
Max.	**1.1**	**1.1**	**1.3**	**1.3**	**1.3**	**1.2**	**1.3**	**1.5**	**1.9**	**2.2**	**2.2**	**2.8**	**3.0**	**3.3**	**2.6**	**2.8**	**2.6**	**1.6**	**1.5**	**0.9**	**0.8**	**0.7**	**1.1**	**1.0**	**3.3**		
Min.	**-11.3**	**-11.1**	**-11.4**	**-11.9**	**-12.1**	**-12.2**	**-12.5**	**-12.7**	**-12.6**	**-12.2**	**-12.0**	**-11.3**	**-10.2**	**-9.2**	**-9.0**	**-8.6**	**-8.4**	**-8.3**	**-8.3**	**-8.1**	**-8.0**	**-7.6**	**-8.4**	**-8.8**		**-12.7**	
Avg.	**-3.6**	**-3.7**	**-3.7**	**-3.8**	**-4.0**	**-4.2**	**-4.4**	**-4.4**	**-4.1**	**-3.8**	**-3.3**	**-2.6**	**-2.0**	**-1.6**	**-1.5**	**-1.3**	**-1.3**	**-1.8**	**-2.1**	**-2.4**	**-2.8**	**-3.0**	**-3.1**	**-3.2**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.2	-1.2	-1.0	-0.7	-0.5	-0.5	-0.5	-0.4	-0.3	-0.2	-0.1	-0.1	0.4	-0.1	0.1	0.2	0.1	-0.6	-0.9	-0.9	-0.9	-0.9	-1.1	-1.2	0.4	-1.2	-0.5
2	-1.5	-1.2	-1.1	-1.3	-1.2	-1.6	-2.1	-2.2	-2.3	-1.6	-1.2	0.4	1.2	1.4	1.6	1.1	0.1	-0.4	-0.7	-1.1	-0.9	-1.1	-1.3	-1.2	1.6	-2.3	-0.8
3	-2.1	-1.9	-1.1	-0.4	0.0	-0.1	0.2	0.4	0.3	0.8	1.3	0.8	0.7	0.7	0.8	1.5	1.5	1.4	1.6	1.5	1.7	2.0	2.1	2.2	2.2	-2.1	0.7
4	3.0	3.0	2.7	1.5	1.5	1.5	1.6	2.0	2.1	2.2	3.2	3.7	3.0	3.1	3.2	3.2	2.9	2.2	2.0	1.7	1.6	1.6	1.5	1.3	3.7	1.3	2.3
5	1.7	3.9	4.6	5.1	3.5	3.0	5.3	4.9	5.5	5.7	4.6	3.8	3.4	3.4	3.9	3.8	3.8	2.6	1.7	0.9	0.6	0.3	-0.3	-0.9	5.7	-0.9	3.1
6	-1.1	-1.4	-1.6	-2.0	-2.7	-3.5	-3.8	-3.5	-3.1	-2.1	-0.7	0.1	0.9	1.6	1.4	1.9	1.9	1.4	0.8	0.2	-0.2	-0.3	-0.3	-0.2	1.9	-3.8	-0.7
7	0.0	0.2	0.3	0.5	1.0	2.0	2.2	2.0	2.1	2.3	2.5	3.8	4.1	5.0	5.7	5.2	5.2	4.8	4.1	4.1	3.9	3.9	4.1	4.0	5.7	0.0	3.0
8	4.0	4.0	3.8	3.6	3.5	3.3	2.3	1.7	2.1	1.8	2.1	2.1	1.9	2.0	2.0	2.0	2.0	1.9	1.4	1.6	1.0	0.8	1.0	0.9	4.0	0.8	2.2
9	0.8	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.8	1.2	1.9	3.6	4.5	3.0	2.1	1.5	1.3	1.3	1.2	1.1	1.2	2.4	2.8	2.8	4.5	0.5	1.6
10	2.5	2.0	1.6	1.1	1.5	1.5	1.1	1.2	0.9	0.7	0.2	0.0	-0.1	-0.1	0.0	0.3	0.3	0.3	0.1	-0.2	-0.2	-0.2	-0.6	-0.8	2.5	-0.8	0.5
11	-1.0	-1.3	-1.5	-1.8	-1.1	-0.5	-1.8	-1.5	-1.3	-0.8	0.1	0.6	1.5	1.6	0.1	-1.4	-1.2	-0.8	-0.9	-0.9	-0.8	-1.0	-1.0	-0.7	1.6	-1.8	-0.7
12	-0.6	-0.4	-0.4	-0.2	-0.3	-0.4	-0.4	-0.1	0.2	0.1	0.4	0.6	0.6	0.4	0.3	0.4	0.5	1.0	0.6	0.4	0.4	0.9	1.2	1.1	1.2	-0.6	0.2
13	0.8	0.7	0.1	0.0	-0.2	0.1	0.5	0.8	1.0	1.6	2.2	2.6	2.5	2.4	2.6	2.1	1.4	1.0	0.7	0.6	0.3	0.1	0.2	0.4	2.6	-0.2	1.0
14	0.5	0.2	-0.3	-0.7	-1.2	-2.0	-2.5	-2.6	-2.7	-2.7	-2.3	-2.1	-2.0	-1.6	-1.2	-0.7	-0.2	0.1	0.3	0.4	0.3	-0.1	-0.3	-0.4	0.5	-2.7	-1.0
15	-0.9	-1.7	-1.7	-2.2	-3.0	-2.9	-2.5	-2.3	-2.6	-3.4	-2.9	-3.3	-3.5	-2.5	-2.8	-2.3	-2.2	-2.6	-2.6	-2.9	-3.4	-3.8	-4.5	-4.8	-0.9	-4.8	-2.8
16	-5.2	-5.2	-4.8	-4.3	-3.3	-2.8	-2.7	-2.1	-1.6	-1.4	-1.0	-0.7	-0.7	-0.2	0.2	0.4	-1.1	-1.5	-0.9	-0.5	-0.1	1.0	0.0	-0.2	1.0	-5.2	-1.6
17	-0.5	-0.3	-0.1	0.2	0.2	0.2	0.4	-0.1	-0.3	0.2	0.6	1.1	2.6	2.1	2.1	2.1	2.3	2.4	2.8	2.5	2.0	1.6	1.0	1.2	2.8	-0.5	1.1
18	0.8	0.6	0.1	-0.1	-0.5	-0.4	-0.5	0.6	1.8	2.9	4.4	4.6	4.6	4.1	4.1	3.8	4.3	3.6	2.2	3.4	4.0	4.0	3.6	3.1	4.6	-0.5	2.5
19	2.9	1.9	0.9	0.4	-0.2	-0.4	-0.4	0.4	1.4	1.8	1.6	2.2	2.1	2.3	3.7	3.8	2.9	1.9	0.6	0.0	-0.7	-1.0	-1.7	-1.6	3.8	-1.7	1.0
20	-2.1	-2.4	-2.2	-1.9	-1.6	-1.3	-0.9	-0.5	0.1	0.3	0.3	1.6	2.5	2.1	1.8	1.2	1.1	1.6	1.3	0.6	0.6	0.8	0.8	0.6	2.5	-2.4	0.2
21	0.6	0.5	0.7	0.7	0.7	0.9	1.0	0.8	0.8	1.0	1.9	1.6	1.6	1.9	3.3	4.2	4.1	3.3	2.4	1.5	2.0	2.8	2.8	2.9	4.2	0.5	1.8
22	2.7	2.4	1.6	1.7	1.5	1.2	1.1	1.5	1.6	1.9	1.6	2.5	3.4	5.0	4.6	4.3	3.7	3.1	2.7	2.7	2.5	2.2	2.2	1.7	5.0	1.1	2.5
23	0.6	0.7	1.0	1.1	0.9	0.5	0.6	0.5	0.4	0.5	1.5	2.9	3.0	3.9	4.6	3.8	3.5	3.7	3.1	3.3	3.4	3.6	3.6	3.8	4.6	0.4	2.3
24	3.9	3.4	2.6	2.3	2.2	1.8	1.9	2.0	1.9	2.9	3.5	3.3	2.8	2.9	3.0	2.8	2.8	2.5	1.7	0.9	0.4	0.1	-0.2	-0.6	3.9	-0.6	2.1
25	-1.0	-1.1	-1.4	-1.7	-1.9	-2.4	-2.1	-1.8	-1.4	-0.6	0.8	1.8	2.2	0.8	0.6	0.9	0.9	1.1	0.9	1.4	1.5	1.5	2.0	2.1	2.2	-2.4	0.1
26	1.8	2.1	2.8	2.8	2.6	2.3	2.5	2.9	3.8	4.2	4.5	4.9	5.3	5.4	5.7	6.0	6.1	6.1	5.9	5.7	5.5	5.3	4.7	4.8	6.1	1.8	4.3
27	5.4	5.2	4.9	4.9	4.8	4.8	4.7	5.1	5.4	6.0	6.6	6.3	6.8	7.4	7.8	8.5	8.5	7.6	5.7	5.1	4.5	4.5	4.4	4.6	8.5	4.4	5.8
28	4.4	4.8	4.7	4.0	3.4	3.4	3.1	2.8	3.1	2.2	0.7	1.3	2.3	2.7	3.0	3.5	3.1	3.2	3.0	2.3	2.1	1.7	1.5	1.1	4.8	0.7	2.8
29	0.8	0.9	2.3	2.3	2.0	2.0	2.7	2.1	2.0	2.9	3.5	4.4	4.9	4.8	5.3	5.2	5.3	5.2	5.0	5.1	5.2	5.1	3.8	3.1	5.3	0.8	3.6
30	2.4	2.0	2.1	1.8	1.4	0.8	0.8	1.2	2.5	2.5	3.1	4.4	5.4	5.6	5.2	4.9	4.2	4.3	3.8	4.2	4.2	3.9	3.8	3.5	5.6	0.8	3.2
Max.	**5.4**	**5.2**	**4.9**	**5.1**	**4.8**	**4.8**	**5.3**	**5.1**	**5.5**	**6.0**	**6.6**	**6.3**	**6.8**	**7.4**	**7.8**	**8.5**	**8.5**	**7.6**	**5.9**	**5.7**	**5.5**	**5.3**	**4.7**	**4.8**	**8.5**		
Min.	**-5.2**	**-5.2**	**-4.8**	**-4.3**	**-3.3**	**-3.5**	**-3.8**	**-3.5**	**-3.1**	**-3.4**	**-2.9**	**-3.3**	**-3.5**	**-2.5**	**-2.8**	**-2.3**	**-2.2**	**-2.6**	**-2.6**	**-2.9**	**-3.4**	**-3.8**	**-4.5**	**-4.8**		**-5.2**	
Avg.	**0.7**	**0.7**	**0.7**	**0.6**	**0.5**	**0.4**	**0.4**	**0.5**	**0.8**	**1.1**	**1.5**	**2.0**	**2.3**	**2.4**	**2.5**	**2.5**	**2.3**	**2.0**	**1.6**	**1.5**	**1.4**	**1.4**	**1.2**	**1.1**			**1.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.4	3.4	3.3	3.5	3.8	3.9	3.7	3.9	4.4	5.2	5.5	5.9	6.7	7.1	7.2	7.2	6.9	6.6	6.5	5.8	5.5	4.6	4.5	4.1	7.2	3.3	5.1
2	3.5	2.8	2.9	2.9	2.8	3.1	3.1	3.0	2.9	3.2	3.7	3.4	3.4	3.9	5.1	5.9	6.2	6.2	6.2	5.9	5.7	5.2	4.0	4.3	6.2	2.8	4.1
3	4.9	5.0	4.9	4.7	5.1	5.2	4.8	5.5	6.7	7.1	7.3	7.5	7.9	8.1	8.2	8.1	7.9	6.8	6.4	5.6	5.1	5.1	4.8	4.4	8.2	4.4	6.1
4	4.2	3.9	4.5	4.9	4.8	4.4	3.6	3.6	4.6	4.9	5.2	5.6	5.5	5.2	4.7	4.8	5.0	4.9	4.7	4.7	4.8	4.8	3.9	3.7	5.6	3.6	4.6
5	3.2	2.8	2.7	2.5	2.4	2.7	2.6	2.9	3.1	3.5	3.7	3.7	4.1	4.4	4.1	3.8	3.9	3.9	3.8	3.8	3.6	3.4	3.3	2.4	4.4	2.4	3.3
6	2.1	1.9	2.0	1.9	1.8	1.6	1.8	1.9	1.8	2.0	2.2	3.3	3.9	4.6	4.6	4.1	4.0	3.8	3.4	3.3	3.0	2.8	2.6	2.1	4.6	1.6	2.8
7	1.7	1.4	1.2	1.0	0.8	0.4	0.3	0.3	0.4	0.3	0.6	0.7	0.8	1.0	1.2	1.1	0.9	1.0	0.8	0.6	0.3	0.3	0.3	0.7	1.7	0.3	0.8
8	1.0	1.2	1.0	0.0	-0.7	-0.6	0.0	0.3	0.9	1.2	0.8	1.0	1.1	2.1	2.8	3.4	3.6	3.9	4.2	4.2	4.2	4.9	4.7	4.2	4.9	-0.7	2.1
9	3.9	4.7	4.8	4.8	4.9	4.8	4.7	4.5	4.4	3.7	3.6	4.6	5.5	5.7	6.0	6.9	6.8	6.8	7.0	7.3	6.9	6.5	6.7	6.5	7.3	3.6	5.5
10	6.2	6.6	6.5	5.4	5.7	5.8	6.5	7.8	8.5	8.5	7.5	8.5	7.7	8.7	9.8	10.0	8.6	6.9	6.5	5.7	4.9	4.4	4.1	3.8	10.0	3.8	6.8
11	3.2	2.9	3.2	3.3	3.2	3.3	3.4	3.6	4.1	4.5	5.4	6.6	7.7	8.1	8.4	8.2	8.1	7.6	6.5	6.4	6.9	6.4	6.1	6.1	8.4	2.9	5.5
12	5.7	6.1	6.3	6.1	5.7	5.6	6.4	7.3	7.7	8.6	9.0	10.1	11.2	12.1	12.9	13.2	13.6	13.5	11.3	11.1	10.4	9.4	9.8	8.8	13.6	5.6	9.2
13	8.7	8.3	7.6	7.1	6.5	6.6	7.3	7.2	7.5	8.6	9.7	10.4	10.4	10.9	11.8	11.8	11.6	11.3	9.8	8.6	8.6	8.1	7.3	5.5	11.8	5.5	8.8
14	4.5	4.4	4.5	4.0	4.1	3.8	4.7	5.9	6.9	7.4	7.2	7.2	7.1	6.9	6.5	6.3	6.5	6.7	6.4	6.6	6.1	5.8	5.5	5.4	7.4	3.8	5.8
15	5.5	5.3	5.0	4.6	3.8	3.1	3.3	4.3	5.7	6.2	6.8	8.1	7.3	7.1	7.0	7.0	6.8	6.8	6.8	6.7	6.3	6.0	6.0	6.2	8.1	3.1	5.9
16	5.8	6.7	7.4	7.1	6.8	6.5	6.4	6.1	6.9	7.1	7.7	8.5	8.6	8.2	7.6	7.6	7.2	6.9	6.1	5.8	5.4	5.1	4.8	3.7	8.6	3.7	6.7
17	3.9	3.8	3.7	3.3	3.5	3.9	4.7	5.4	5.8	6.4	7.0	6.6	6.5	6.4	6.3	6.3	5.8	5.9	6.5	6.1	5.6	5.3	4.3	4.8	7.0	3.3	5.3
18	4.9	4.4	3.9	3.5	3.7	3.8	4.2	4.2	5.8	7.3	8.1	8.7	9.4	9.2	8.2	7.1	6.3	6.9	7.0	6.9	6.7	6.5	6.3	6.0	9.4	3.5	6.2
19	5.7	5.5	5.5	5.5	5.3	5.2	5.5	5.8	5.9	6.4	7.5	7.1	7.4	7.0	6.6	6.8	6.0	4.2	2.9	2.8	3.0	3.0	2.1	2.1	7.5	2.1	5.2
20	2.3	2.6	3.0	3.3	3.6	3.7	3.9	4.2	4.5	4.6	4.8	5.3	5.3	5.4	5.9	6.5	7.0	7.8	7.4	7.4	7.1	7.3	7.2	6.3	7.8	2.3	5.3
21	6.7	6.0	6.5	6.7	5.8	5.5	5.9	6.7	8.1	9.0	9.5	10.1	10.8	11.9	12.8	12.8	13.2	13.2	12.8	12.5	12.4	12.2	12.1	11.9	13.2	5.5	9.8
22	11.8	10.3	8.9	8.2	8.1	8.3	8.5	9.0	9.7	10.4	11.1	12.4	13.2	14.7	14.9	15.3	15.3	15.3	15.1	14.9	13.9	12.5	10.7	10.3	15.3	8.1	11.8
23	9.8	9.8	8.9	8.9	8.1	8.8	8.8	9.9	11.9	11.7	10.9	11.7	11.5	12.6	13.7	13.4	13.5	13.5	11.3	10.9	11.6	13.9	13.6	13.5	13.9	8.1	11.3
24	13.3	12.6	12.7	12.1	10.1	12.2	13.2	13.0	12.5	11.8	12.5	11.7	12.6	13.8	15.0	15.7	15.9	15.9	15.5	15.8	14.9	15.7	14.3	13.9	15.9	10.1	13.6
25	13.0	12.7	12.6	9.6	8.7	10.6	13.4	12.7	14.3	13.9	11.7	13.9	13.8	13.6	15.3	15.5	16.2	16.3	14.4	14.5	14.9	15.2	14.7	14.1	16.3	8.7	13.6
26	14.3	13.7	14.0	14.8	15.1	14.7	14.8	15.0	15.8	16.1	14.4	14.9	14.9	16.1	16.4	17.2	15.4	15.9	14.3	15.2	16.7	18.4	17.1	17.1	18.4	13.7	15.5
27	16.3	15.8	13.6	11.2	13.7	14.4	15.2	15.1	15.7	16.6	17.5	15.2	15.2	16.2	15.7	16.7	18.1	17.0	15.8	16.7	16.4	15.8	16.4	14.9	18.1	11.2	15.6
28	13.1	11.8	13.4	14.7	12.3	12.6	13.6	13.7	14.8	13.7	15.4	13.8	14.1	14.1	15.0	15.2	15.5	13.7	12.6	13.5	13.7	13.7	13.7	11.8	15.5	11.8	13.7
29	11.6	10.2	9.1	11.1	11.2	10.7	9.0	10.2	11.6	12.1	13.4	13.1	13.7	14.0	13.8	13.1	13.3	12.3	10.7	10.2	9.4	9.4	9.0	8.7	14.0	8.7	11.3
30	8.7	8.4	7.5	7.3	7.5	7.5	7.9	7.6	7.2	7.3	7.4	7.7	7.9	8.0	8.3	8.8	9.2	9.3	9.1	9.5	9.2	8.8	8.8	8.3	9.5	7.2	8.2
31	8.1	8.2	8.0	7.8	7.5	7.4	7.4	7.5	8.1	8.4	8.1	8.4	7.8	8.2	8.2	7.8	7.6	7.8	7.5	7.4	7.4	7.4	7.4	7.3	8.4	7.3	7.8
Max.	**16.3**	**15.8**	**14.0**	**14.8**	**15.1**	**14.7**	**15.2**	**15.1**	**15.8**	**16.6**	**17.5**	**15.2**	**15.2**	**16.2**	**16.4**	**17.2**	**18.1**	**17.0**	**15.8**	**16.7**	**16.7**	**18.4**	**17.1**	**17.1**	**18.4**		
Min.	**1.0**	**1.2**	**1.0**	**0.0**	**-0.7**	**-0.6**	**0.0**	**0.3**	**0.4**	**0.3**	**0.6**	**0.7**	**0.8**	**1.0**	**1.2**	**1.1**	**0.9**	**1.0**	**0.8**	**0.6**	**0.3**	**0.3**	**0.3**	**0.7**		**-0.7**	
Avg.	**6.8**	**6.6**	**6.4**	**6.2**	**6.0**	**6.1**	**6.4**	**6.7**	**7.4**	**7.7**	**7.9**	**8.2**	**8.5**	**8.9**	**9.2**	**9.3**	**9.2**	**9.0**	**8.4**	**8.3**	**8.1**	**8.0**	**7.6**	**7.2**			**7.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.2	7.3	7.7	8.7	8.3	7.8	8.1	8.6	9.0	9.4	10.4	10.0	10.2	9.8	9.1	9.4	10.3	11.1	9.9	9.6	9.3	8.8	8.9	9.8	11.1	7.2	9.1
2	9.4	8.9	8.9	8.8	8.9	9.3	9.7	10.1	11.2	12.2	12.7	13.8	14.9	16.8	18.2	17.7	17.7	17.4	16.4	16.0	15.7	15.5	14.6	13.2	18.2	8.8	13.2
3	13.0	12.6	12.7	13.4	13.1	12.3	11.8	11.5	11.5	11.9	12.7	13.6	14.5	15.6	16.2	16.7	16.8	16.3	15.1	14.6	14.7	14.2	13.6	13.4	16.8	11.5	13.8
4	13.0	12.8	12.1	10.7	8.9	9.2	9.4	9.6	10.4	12.0	11.8	10.1	10.4	10.9	10.7	10.7	10.6	10.4	9.8	10.0	10.3	10.7	9.9	8.2	13.0	8.2	10.5
5	7.3	6.8	6.7	6.5	7.7	8.6	7.8	8.4	9.5	10.9	10.5	10.6	10.6	10.7	10.5	10.8	10.9	11.2	10.8	10.5	10.1	9.9	9.3	9.5	11.2	6.5	9.4
6	8.0	7.3	7.3	7.1	6.0	7.1	8.2	9.5	10.7	9.9	9.8	10.1	10.9	11.1	11.4	11.4	11.1	10.1	9.4	9.7	9.6	9.5	9.1	9.1	11.4	6.0	9.3
7	9.1	9.2	9.6	9.5	9.1	8.8	8.8	9.0	8.5	8.1	8.6	8.9	8.9	8.7	8.3	8.2	7.7	7.5	7.7	7.9	7.9	7.7	7.7	7.6	9.6	7.5	8.5
8	7.7	7.8	7.7	7.8	7.7	7.8	7.8	7.7	7.9	8.2	8.1	8.9	9.6	10.1	10.4	10.9	10.6	10.4	10.0	9.5	9.6	9.2	8.6	8.7	10.9	7.7	8.9
9	8.8	8.9	8.8	8.4	8.1	8.0	7.9	8.0	7.9	8.0	8.5	9.2	9.7	10.0	10.0	10.8	11.5	10.4	8.8	8.3	8.1	8.2	8.1	7.8	11.5	7.8	8.8
10	7.8	7.7	7.6	7.6	7.7	7.8	7.7	7.6	7.8	7.9	8.1	8.9	9.0	8.6	8.7	8.6	8.5	8.4	8.1	8.1	8.0	8.0	8.1	8.1	9.0	7.6	8.1
11	8.2	7.7	7.1	6.7	6.4	6.6	7.0	7.3	7.7	7.6	7.5	7.4	7.9	8.4	8.0	8.1	8.2	8.9	9.0	9.1	9.4	9.2	9.3	9.2	9.4	6.4	8.0
12	9.0	8.9	8.7	8.8	8.8	8.9	9.1	8.9	8.9	9.2	9.4	9.1	9.1	9.2	9.4	9.6	9.2	8.8	8.9	8.5	8.5	8.6	8.4	8.2	9.6	8.2	8.9
13	8.1	8.1	8.0	7.9	7.5	7.4	7.4	7.6	7.8	8.1	8.3	8.6	8.8	9.4	10.1	10.6	9.8	9.1	9.1	9.0	9.0	8.8	8.6	8.4	10.6	7.4	8.5
14	8.4	8.4	8.3	8.4	8.6	9.0	9.3	9.3	9.7	10.2	10.3	10.0	9.7	9.5	9.8	10.4	11.1	11.8	12.6	12.8	12.9	12.6	12.5	12.5	12.9	8.3	10.3
15	12.3	11.8	11.5	11.5	11.4	11.4	11.6	10.3	10.1	10.5	10.9	11.5	11.3	10.2	9.6	9.8	10.4	10.6	10.5	10.7	10.3	10.2	10.2	10.3	12.3	9.6	10.8
16	10.1	10.0	10.0	9.9	9.6	9.4	9.5	9.7	9.4	9.6	10.0	9.9	9.9	10.4	10.6	10.8	10.2	10.2	10.4	10.5	10.5	10.3	10.3	10.3	10.8	9.4	10.1
17	10.0	9.9	9.8	9.4	9.3	9.3	9.3	9.4	9.3	9.6	10.0	10.9	10.5	10.3	10.2	10.3	10.5	11.0	10.4	10.5	10.3	9.8	9.7	9.8	11.0	9.3	10.0
18	9.7	9.8	9.8	9.8	10.1	10.4	10.2	10.7	11.1	11.1	10.8	10.7	11.0	11.3	11.2	11.0	10.9	10.7	10.6	10.5	10.5	10.4	10.1	10.2	11.3	9.7	10.5
19	10.2	9.9	9.9	10.2	10.3	10.3	10.4	10.5	11.8	12.4	13.2	13.7	14.1	14.0	14.6	15.3	13.6	11.8	9.9	9.3	9.1	9.0	9.1	9.1	15.3	9.0	11.3
20	9.7	10.9	9.9	9.4	9.1	9.4	9.3	9.6	10.1	10.2	10.2	10.1	9.2	8.5	7.8	8.7	9.7	10.0	9.3	8.6	8.4	8.1	7.9	7.6	10.9	7.6	9.2
21	7.0	6.6	6.1	5.8	5.9	6.5	6.6	7.4	9.0	10.5	10.3	10.1	10.8	10.9	11.8	12.0	12.1	12.3	11.6	11.3	11.7	11.1	10.2	10.1	12.3	5.8	9.5
22	10.0	10.2	10.2	10.4	9.9	9.5	9.5	9.5	9.1	8.8	8.7	8.8	8.9	8.6	9.2	9.4	9.5	9.4	9.6	9.7	9.6	9.2	9.2	8.5	10.4	8.5	9.4
23	8.0	7.8	7.9	7.8	8.1	8.3	8.6	8.8	9.1	8.9	9.1	9.9	10.1	9.7	9.8	9.9	9.9	10.3	9.9	9.9	9.6	9.4	9.0	8.4	10.3	7.8	9.1
24	8.5	7.8	7.3	6.9	6.8	7.9	8.6	9.7	10.9	12.0	10.9	10.7	11.5	13.0	13.0	13.3	13.8	13.9	13.1	11.9	12.0	11.9	11.4	11.2	13.9	6.8	10.7
25	10.4	11.0	11.1	10.6	9.4	9.6	10.8	11.1	11.0	11.5	11.3	11.2	11.4	11.4	11.5	11.8	11.9	11.6	10.7	10.6	10.5	9.9	9.5	9.5	11.9	9.4	10.8
26	9.3	8.9	9.1	9.2	9.3	9.2	9.2	9.5	10.1	9.7	10.0	9.6	9.6	9.4	9.5	9.9	9.7	9.5	9.5	9.7	9.8	9.7	9.4	9.2	10.1	8.9	9.5
27	8.5	8.3	7.4	7.1	7.3	8.9	9.8	10.4	10.3	11.1	10.6	10.5	10.6	10.7	11.0	11.5	12.3	12.1	11.1	11.0	14.2	17.5	16.9	16.8	17.5	7.1	11.1
28	16.2	15.2	14.5	14.3	14.3	13.9	13.9	14.6	14.5	13.9	14.1	14.2	14.3	15.1	15.1	14.1	14.2	14.5	14.1	14.2	14.2	13.9	14.1	14.6	16.2	13.9	14.4
29	15.0	14.9	14.7	14.6	14.5	14.6	14.8	14.2	14.9	14.7	13.6	13.3	13.0	11.3	9.9	10.9	11.5	11.5	11.3	11.3	11.2	11.1	10.9	10.9	15.0	9.9	12.8
30	10.9	10.5	10.2	9.9	9.6	9.5	9.6	9.8	10.2	10.7	11.3	11.2	11.3	11.7	11.1	10.9	11.0	10.5	10.3	10.6	13.0	13.0	13.0	12.7	13.0	9.5	10.9
Max.	**16.2**	**15.2**	**14.7**	**14.6**	**14.5**	**14.6**	**14.8**	**14.6**	**14.9**	**14.7**	**14.1**	**14.2**	**14.9**	**16.8**	**18.2**	**17.7**	**17.7**	**17.4**	**16.4**	**16.0**	**15.7**	**17.5**	**16.9**	**16.8**	**18.2**		
Min.	**7.0**	**6.6**	**6.1**	**5.8**	**5.9**	**6.5**	**6.6**	**7.3**	**7.7**	**7.6**	**7.5**	**7.4**	**7.9**	**8.4**	**7.8**	**8.1**	**7.7**	**7.5**	**7.7**	**7.9**	**7.9**	**7.7**	**7.7**	**7.6**		**5.8**	
Avg.	**9.7**	**9.5**	**9.4**	**9.2**	**9.1**	**9.2**	**9.4**	**9.6**	**10.0**	**10.3**	**10.4**	**10.5**	**10.7**	**10.8**	**10.9**	**11.1**	**11.2**	**11.1**	**10.6**	**10.5**	**10.6**	**10.5**	**10.3**	**10.1**			**10.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.9	11.2	11.2	10.8	10.3	10.7	11.9	12.2	13.0	14.1	11.8	10.6	10.6	10.6	10.4	10.3	9.5	9.4	8.8	11.8	18.1	16.7	16.1	17.3	18.1	8.8	12.0
2	17.3	16.7	16.5	14.5	13.9	13.8	13.5	13.7	13.6	13.9	15.6	16.8	14.7	14.8	14.6	16.5	20.4	20.1	19.9	19.9	19.8	18.3	15.9	12.5	20.4	12.5	16.1
3	11.7	11.1	10.5	10.2	10.2	10.3	9.9	9.8	9.9	10.2	10.4	10.5	10.3	10.2	10.2	10.2	10.3	11.1	11.0	10.9	10.7	11.0	10.6	10.6	11.7	9.8	10.5
4	11.0	11.4	11.2	10.8	10.5	10.9	11.5	12.5	12.6	11.8	11.9	11.9	11.8	11.8	11.6	11.4	11.6	11.5	11.0	10.9	10.9	10.8	10.8	11.1	12.6	10.5	11.4
5	11.5	11.3	11.0	10.4	10.4	10.8	10.9	10.5	10.7	11.2	10.8	10.4	10.3	10.3	10.4	10.5	10.5	10.6	10.8	10.9	10.8	10.8	10.6	10.5	11.5	10.3	10.7
6	10.5	10.4	10.4	10.4	10.4	10.5	10.6	10.7	11.0	11.2	11.2	11.4	12.0	11.8	11.3	11.3	11.4	11.5	11.6	11.5	11.5	11.3	11.3	11.1	12.0	10.4	11.1
7	11.0	11.0	11.0	11.0	11.0	10.9	10.8	10.8	10.9	10.9	10.9	10.9	11.3	11.6	11.1	11.1	11.3	11.1	10.8	10.5	10.5	10.3	10.1	10.0	11.6	10.0	10.9
8	10.0	10.2	10.1	10.1	10.1	10.4	11.2	12.4	12.9	13.8	14.3	14.7	14.7	14.8	15.4	15.1	14.2	14.3	15.0	15.8	15.9	15.7	14.5	13.2	15.9	10.0	13.3
9	13.0	12.7	12.5	12.4	12.2	12.9	13.4	14.0	14.4	14.6	13.8	13.1	13.2	13.2	13.3	14.0	15.2	15.4	13.3	12.2	11.7	11.8	11.9	11.9	15.4	11.7	13.2
10	11.8	11.7	11.6	11.4	11.5	11.6	11.6	11.9	11.5	11.3	11.2	11.5	11.7	12.8	12.5	12.2	11.8	11.6	11.0	10.8	10.8	10.9	10.9	10.7	12.8	10.7	11.5
11	10.5	10.4	10.3	10.2	10.2	10.3	10.4	10.6	11.0	12.3	14.4	14.4	14.7	13.7	12.3	12.1	12.8	13.5	12.8	12.5	12.2	11.7	11.2	10.9	14.7	10.2	11.9
12	10.5	10.4	10.0	9.7	9.1	9.3	10.9	12.1	13.9	15.7	17.2	15.2	14.5	14.6	15.2	17.3	18.9	21.0	22.0	21.9	21.4	21.7	20.8	19.4	22.0	9.1	15.5
13	18.9	20.6	20.0	16.3	18.6	18.5	17.0	16.2	15.3	14.9	14.9	15.1	15.3	15.3	14.9	14.6	14.1	13.9	13.7	13.6	13.1	12.6	12.3	12.3	20.6	12.3	15.5
14	12.2	11.8	11.2	11.5	11.4	11.5	11.7	12.1	12.3	12.6	12.9	13.2	13.9	13.6	13.6	12.8	12.6	12.3	11.9	11.7	12.1	12.0	11.8	11.4	13.9	11.2	12.3
15	11.2	11.1	11.4	11.6	11.2	11.0	11.3	11.5	12.5	13.2	14.2	14.6	15.4	15.7	14.1	13.4	13.1	12.7	11.9	11.6	11.4	11.3	11.3	11.4	15.7	11.0	12.4
16	11.5	11.6	11.7	11.5	11.0	11.1	10.1	10.2	10.3	10.4	10.7	10.9	11.3	11.6	11.5	11.6	11.9	11.5	11.3	11.2	11.2	11.0	10.9	10.8	11.9	10.1	11.1
17	10.6	10.0	10.1	10.2	10.0	9.9	10.4	10.9	10.6	10.9	11.1	11.5	11.6	10.6	10.3	10.2	10.3	10.2	10.0	9.8	9.9	10.0	9.7	10.1	11.6	9.7	10.4
18	10.7	10.7	10.3	10.3	10.3	10.0	10.2	10.3	10.5	10.4	10.2	10.0	9.8	10.0	10.3	10.9	11.5	11.6	11.8	11.4	12.2	11.9	11.2	11.7	12.2	9.8	10.8
19	12.0	11.8	11.5	11.6	12.2	12.5	12.7	13.0	13.8	14.7	15.0	15.0	15.1	15.6	15.9	16.0	15.7	16.0	16.4	16.4	15.9	13.9	14.5	15.3	16.4	11.5	14.3
20	15.1	14.5	14.1	13.1	12.9	14.6	13.5	15.1	15.8	16.4	16.2	16.3	16.1	15.8	16.5	15.9	16.5	16.4	17.1	16.8	13.8	11.4	11.4	11.6	17.1	11.4	14.9
21	11.6	13.1	13.0	13.1	12.3	13.7	14.8	15.3	15.2	15.5	15.7	15.7	15.7	15.6	15.9	15.5	12.7	12.5	12.2	12.3	14.5	13.1	12.1	12.2	15.9	11.6	13.9
22	11.8	11.4	11.1	11.1	11.0	12.2	12.8	12.6	12.4	12.6	12.8	12.8	13.0	12.8	11.1	10.4	10.3	10.4	10.7	10.7	10.5	10.4	10.3	10.2	13.0	10.2	11.5
23	10.7	10.7	11.1	11.1	10.3	10.1	10.2	10.8	11.1	11.6	12.3	12.3	12.7	13.4	14.0	14.1	12.3	11.3	12.9	13.2	13.1	12.8	12.6	12.7	14.1	10.1	12.0
24	12.6	12.5	12.1	11.7	11.7	12.1	12.5	12.4	12.6	12.9	13.5	13.6	13.2	12.6	10.8	10.2	10.1	10.1	10.0	10.1	10.1	10.1	10.0	10.7	13.6	10.0	11.6
25	10.6	10.6	10.6	10.7	10.5	9.7	9.6	9.9	9.9	10.1	10.4	10.8	11.1	10.8	11.4	11.7	12.3	12.0	12.1	12.4	12.3	12.1	11.6	11.6	12.4	9.6	11.0
26	11.6	11.1	10.2	9.7	9.7	10.2	10.6	13.1	13.6	13.8	14.2	14.6	14.5	14.6	15.1	15.1	15.4	15.0	14.5	14.2	14.2	14.2	14.2	13.9	15.4	9.7	13.2
27	13.7	13.5	13.3	13.1	13.2	13.3	13.0	12.9	13.6	14.8	15.9	17.1	17.2	17.6	15.4	15.3	15.0	14.3	13.2	13.0	13.1	12.6	12.3	12.7	17.6	12.3	14.1
28	12.3	11.7	11.0	11.8	10.9	11.3	11.2	11.8	12.5	13.3	13.7	13.2	12.8	12.1	12.0	11.4	11.5	11.3	11.2	11.4	14.8	14.9	13.6	12.4	14.9	10.9	12.3
29	12.3	12.3	12.5	12.2	11.6	11.8	11.8	11.2	11.8	12.2	12.5	12.6	13.4	13.8	13.9	13.7	13.4	13.2	12.6	12.5	12.0	11.5	11.3	11.2	13.9	11.2	12.4
30	11.3	11.1	11.1	11.2	11.2	11.2	11.0	10.7	11.3	11.7	11.7	11.6	11.7	12.2	12.0	12.2	12.9	13.6	14.0	14.2	14.3	13.7	13.6	14.1	14.3	10.7	12.2
31	14.4	14.3	14.1	14.0	14.1	14.0	13.8	14.3	14.5	14.8	15.7	16.2	16.2	16.8	16.7	16.4	15.6	15.1	14.6	14.4	14.5	14.5	14.1	13.4	16.8	13.4	14.8
Max.	**18.9**	**20.6**	**20.0**	**16.3**	**18.6**	**18.5**	**17.0**	**16.2**	**15.8**	**16.4**	**17.2**	**17.1**	**17.2**	**17.6**	**16.7**	**17.3**	**20.4**	**21.0**	**22.0**	**21.9**	**21.4**	**21.7**	**20.8**	**19.4**	**22.0**		
Min.	**10.0**	**10.0**	**10.0**	**9.7**	**9.1**	**9.3**	**9.6**	**9.8**	**9.9**	**10.1**	**10.2**	**10.0**	**9.8**	**10.0**	**10.2**	**10.2**	**9.5**	**9.4**	**8.8**	**9.8**	**9.9**	**10.0**	**9.7**	**10.0**		**8.8**	
Avg.	**12.1**	**12.0**	**11.8**	**11.5**	**11.4**	**11.6**	**11.8**	**12.1**	**12.4**	**12.8**	**13.1**	**13.2**	**13.2**	**13.2**	**13.0**	**13.0**	**13.1**	**13.0**	**12.9**	**12.9**	**13.1**	**12.7**	**12.4**	**12.2**			**12.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.0	12.4	12.2	12.1	11.9	12.0	11.9	11.8	11.9	12.1	12.0	12.1	12.3	11.7	11.3	11.3	11.0	11.2	11.2	11.0	10.7	10.5	10.1	10.0	13.0	10.0	11.6
2	10.1	9.8	9.4	9.2	9.1	9.2	9.3	9.4	9.7	10.2	10.4	10.6	10.7	11.2	11.0	11.1	11.0	11.2	11.3	11.8	11.9	12.2	11.4	10.6	12.2	9.1	10.5
3	10.9	11.7	12.1	12.3	12.0	11.5	11.6	11.5	11.3	11.4	11.5	11.8	11.7	11.7	11.6	12.0	12.3	12.9	12.8	12.7	13.2	13.5	13.8	13.9	13.9	10.9	12.2
4	13.4	12.6	12.7	11.5	10.8	10.4	10.3	10.6	12.4	12.8	12.7	12.3	12.5	12.5	12.5	12.5	12.7	12.8	12.6	12.7	12.5	11.9	12.2	11.7	13.4	10.3	12.1
5	11.4	11.3	11.4	11.0	11.1	11.0	11.1	12.2	12.9	13.7	13.7	13.1	13.9	14.6	15.2	15.5	17.1	16.6	16.3	16.2	15.7	15.1	15.1	14.9	17.1	11.0	13.8
6	14.0	13.2	12.6	12.9	12.2	11.9	12.5	13.2	13.7	14.4	15.3	16.2	16.6	17.0	18.2	18.4	18.5	18.4	18.5	18.7	18.7	18.7	18.5	18.3	18.7	11.9	15.9
7	18.1	17.3	16.7	15.6	15.1	13.7	14.1	14.4	14.8	15.4	15.9	16.5	18.1	18.1	17.9	18.1	17.7	17.4	17.1	16.4	16.8	16.0	15.2	14.7	18.1	13.7	16.3
8	14.3	14.1	13.9	13.8	13.7	13.6	13.8	14.4	14.5	15.5	16.0	16.9	16.6	16.9	18.0	18.4	18.1	17.0	15.7	15.9	15.9	16.0	15.7	14.9	18.4	13.6	15.6
9	14.2	14.2	14.0	14.7	14.4	13.9	13.7	13.5	13.5	13.5	14.5	15.0	13.6	14.1	14.5	12.8	13.0	13.1	13.1	12.9	12.8	12.3	12.1	12.1	15.0	12.1	13.6
10	12.5	12.5	12.6	12.5	12.3	12.2	12.3	12.5	12.5	11.8	11.5	12.0	12.0	12.0	12.0	11.8	11.7	11.8	11.7	11.6	11.7	11.7	11.7	11.8	12.6	11.5	12.0
11	11.7	11.6	11.8	11.7	11.4	11.5	11.7	11.9	11.9	12.4	13.0	12.2	11.7	11.6	11.7	11.8	11.9	11.9	11.7	11.7	11.8	12.8	13.4	13.4	13.4	11.4	12.0
12	13.1	12.4	11.8	11.7	11.6	11.4	11.5	11.6	12.1	13.2	13.6	15.0	14.0	13.1	12.5	12.8	13.1	14.7	16.2	16.6	16.0	15.6	15.0	14.7	16.6	11.4	13.5
13	13.8	13.2	12.7	12.4	12.2	12.1	12.4	12.0	11.8	12.0	12.1	11.6	11.7	12.0	12.8	13.0	12.9	12.6	12.8	13.0	12.9	13.2	12.8	12.6	13.8	11.6	12.5
14	12.8	12.6	12.2	12.0	12.2	11.6	11.3	11.1	11.0	11.0	10.9	10.8	10.7	10.8	10.3	10.3	10.5	10.6	10.5	10.4	10.6	10.6	10.7	10.6	12.8	10.3	11.1
15	10.3	10.4	10.8	10.7	10.8	11.0	10.9	11.1	11.0	11.2	11.4	11.5	11.8	11.9	12.2	12.4	12.2	12.2	12.2	11.8	11.7	11.5	11.2	10.9	12.4	10.3	11.4
16	10.7	10.6	10.6	10.6	10.6	10.6	10.7	10.9	11.2	11.6	11.8	11.9	12.3	12.2	12.0	11.9	11.9	11.7	11.3	11.1	10.9	10.7	10.8	10.9	12.3	10.6	11.2
17	11.0	11.1	11.2	11.3	11.3	11.3	11.3	11.3	11.6	12.0	12.4	13.2	14.7	15.9	15.4	15.4	17.9	17.7	17.2	16.8	16.7	16.3	15.8	15.5	17.9	11.0	13.9
18	15.2	15.0	14.9	14.4	14.0	13.5	13.4	12.9	12.6	11.7	10.9	10.9	11.0	11.0	10.9	11.0	11.1	11.0	11.7	12.4	11.5	11.6	11.2	11.3	15.2	10.9	12.3
19	11.9	12.3	12.1	11.8	11.7	12.3	12.3	12.6	13.3	13.6	12.2	11.7	13.1	12.4	13.1	12.6	12.8	12.9	12.7	12.3	12.0	11.4	11.3	11.2	13.6	11.2	12.3
20	10.9	10.3	10.7	10.2	9.6	9.4	9.4	9.5	9.9	10.7	11.6	13.3	12.7	11.7	11.8	12.3	13.2	13.4	13.0	14.1	14.0	14.1	12.1	10.9	14.1	9.4	11.6
21	13.0	12.7	11.5	9.9	9.1	8.9	10.0	11.3	11.3							12.3	14.4	12.9	13.2	13.3	12.5	11.7	11.0	11.2	14.4	8.9	11.7
22	11.1	11.2	11.1	11.3	11.3	11.2	11.1	11.2	11.4	11.5	11.8	12.9	13.8	13.8	13.3	12.9	13.3	13.8	14.1	13.9	14.1	13.5	13.4	13.5	14.1	11.1	12.5
23	11.7	10.9	10.8	10.6	10.5	9.3	9.3	9.4	9.8	10.5	11.5	11.3	11.4	11.4	11.4	11.4	11.4	11.6	11.9	11.7	11.9	11.8	11.8	11.7	11.9	9.3	11.0
24	11.7	11.7	11.9	12.0	11.8	11.0	10.8	10.6	10.5	10.6	10.3	10.7	10.9	10.7	11.4	11.7	11.8	11.9	11.3	12.1	12.3	12.1	12.5	12.3	12.5	10.3	11.4
25	11.7	12.0	11.6	11.1	11.6	11.2	12.0	12.4	12.3	12.5	12.9	12.7	13.1	13.8	14.2	14.4	14.9	14.7	14.8	14.7	14.1	12.7	11.8	12.0	14.9	11.1	12.9
26	11.7	11.4	10.8	10.1	9.8	9.6	9.3	10.0	10.4	10.5	10.4	10.6	10.8	10.9	11.4	11.8	12.4	12.8	12.9	12.6	11.9	11.7	11.4	11.2	12.9	9.3	11.1
27	11.1	10.8	10.8	10.6	10.4	10.5	10.8	11.1	11.6	12.0	12.7	13.6	14.7	16.0	16.5	16.6	16.3	16.0	15.9	15.8	15.4	15.1	14.9	13.9	16.6	10.4	13.5
28	14.2	14.3	13.6	12.9	12.4	12.2	12.1	12.2	12.6	12.9	13.5	13.8	14.3	14.6	14.5	15.0	15.1	14.8	14.6	14.8	14.6	14.4	14.4	14.3	15.1	12.1	13.8
29	14.0	13.6	13.3	13.3	13.4	13.5	13.0	12.0	11.9	12.7	13.4	13.0	12.4	12.4	12.2	12.3	12.3	12.5	11.7	11.7	11.3	10.8	10.6	10.5	14.0	10.5	12.4
30	11.0	11.4	11.1	11.7	11.7	11.0	10.4	10.4	10.6	10.6	10.9	10.9	11.2	11.2	11.1	11.3	11.3	11.9	12.5	12.4	12.4	12.1	11.8	11.6	12.5	10.4	11.3
31	11.4	11.0	10.3	10.3	10.8	11.3	11.9	12.3	12.0	11.6	11.9	11.9	11.8	11.8	11.8	11.6	11.3	11.3	11.1	11.0	10.9	10.8	10.9	11.0	12.3	10.3	11.3
Max.	**18.1**	**17.3**	**16.7**	**15.6**	**15.1**	**13.9**	**14.1**	**14.4**	**14.8**	**15.5**	**16.0**	**16.9**	**18.1**	**18.1**	**18.2**	**18.4**	**18.5**	**18.4**	**18.5**	**18.7**	**18.7**	**18.7**	**18.5**	**18.3**	**18.7**		
Min.	**10.1**	**9.8**	**9.4**	**9.2**	**9.1**	**8.9**	**9.3**	**9.4**	**9.7**	**10.2**	**10.3**	**10.6**	**10.7**	**10.7**	**10.3**	**10.3**	**10.5**	**10.6**	**10.5**	**10.4**	**10.6**	**10.5**	**10.1**	**10.0**		**8.9**	
Avg.	**12.4**	**12.2**	**12.0**	**11.8**	**11.6**	**11.4**	**11.5**	**11.6**	**11.9**	**12.2**	**12.4**	**12.7**	**12.9**	**13.0**	**13.1**	**13.1**	**13.4**	**13.4**	**13.3**	**13.3**	**13.2**	**13.0**	**12.7**	**12.5**			**12.5**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.1	11.2	10.8	10.6	10.4	10.6	10.2	10.8	11.3	11.1	11.5	13.0	12.9	12.7	12.6	12.6	12.7	12.8	13.0	12.9	13.1	12.0	11.7	11.4	13.1	10.2	11.8
2	11.0	10.2	10.3	10.4	10.7	10.6	10.9	11.5	11.9	12.4	11.8	11.9	12.1	12.2	12.9	12.3	11.8	12.0	12.0	11.7	11.7	11.3	10.9	11.1	12.9	10.2	11.5
3	10.4	10.0	9.9	9.8	9.7	9.5	9.5	10.1	10.6	11.4	11.5	11.9	12.2	12.2	12.3	12.3	12.6	12.7	12.4	12.2	11.9	11.3	11.1	10.7	12.7	9.5	11.2
4	10.8	10.5	9.7	10.0	9.3	9.2	9.3	9.8	10.3	10.9	11.2	11.8	11.9	12.3	12.1	12.2	12.3	12.4	12.3	12.0	11.8	11.5	11.4	11.5	12.4	9.2	11.1
5	11.4	11.1	11.0	11.0	10.9	11.0	11.1	11.2	10.9	11.2	11.4	11.8	11.8	12.2	12.5	12.5	12.8	12.9	12.7	12.6	12.3	11.8	11.6	11.2	12.9	10.9	11.7
6	10.5	10.9	9.6	9.2	9.4	9.2	9.1	9.5	10.1	11.0	12.0	13.1	14.1	15.4	16.3	16.4	14.0	13.2	13.3	14.2	14.3	13.9	13.6	13.4	16.4	9.1	12.3
7	12.9	12.7	12.0	11.6	11.2	10.9	10.6	10.6	11.7	12.7	12.7	11.9	11.7	11.7	11.4	11.4	11.5	11.4	11.1	10.9	10.7	10.6	10.6	10.5	12.9	10.5	11.4
8	10.4	10.4	10.5	10.5	10.6	10.8	10.6	10.6	10.9	10.8	11.0	11.4	11.5	11.4	11.3	11.3	11.3	11.5	11.4	11.1	10.2	10.1	10.2	10.4	11.5	10.1	10.8
9	10.4	10.2	10.1	10.5	10.6	10.7	10.6	10.6	11.2	11.9	11.5	11.2	11.4	11.9	11.9	12.2	12.3	11.4	10.8	10.3	9.6	9.9	9.6	9.5	12.3	9.5	10.8
10	9.3	9.3	9.4	9.3	9.3	9.3	9.3	9.5	9.7	9.9	10.2	10.8	11.0	11.4	11.4	11.5	11.7	11.8	11.6	11.5	11.0	10.7	10.4	10.2	11.8	9.3	10.4
11	9.7	9.4	9.7	10.2	10.1	9.7	9.3	9.7	10.0	10.3	11.1	11.1	11.4	11.6	11.8	12.1	12.3	12.1	12.2	12.2	11.6	10.9	10.0	9.3	12.3	9.3	10.7
12	9.3	9.2	9.7	10.3	10.3	10.3	10.2	10.5	10.9	11.4	12.3	12.1	11.6	11.6	11.7	11.9	12.1	12.2	12.0	12.2	12.5	13.1	12.8	12.3	13.1	9.2	11.4
13	12.2	12.4	12.5	10.7	9.3	9.5	9.1	9.5	10.8	10.9	11.5	11.7	13.3	13.5	13.4	13.9	13.6	12.8	14.0	13.1	11.1	10.5	10.5	10.6	14.0	9.1	11.7
14	10.3	10.9	11.4	11.6	10.8	10.0	10.8	10.5	10.4	10.7	11.0	11.2	11.0	10.8	11.1	11.3	11.4	11.0	11.0	11.1	11.7	12.0	12.3	11.6	12.3	10.0	11.1
15	11.1	10.6	10.5	10.4	10.7	11.8	12.6	12.7	12.7	12.9	12.1	11.9	12.0	11.4	10.8	11.1	11.9	11.8	11.6	11.4	11.4	11.6	11.6	11.5	12.9	10.4	11.6
16	11.2	10.7	10.6	10.9	10.9	11.5	11.0	10.8	11.7	12.1	11.9	11.6	11.9	11.6	11.9	11.8	11.6	11.2	11.1	10.8	10.7	10.5	10.2	9.7	12.1	9.7	11.2
17	9.5	9.4	9.0	9.0	8.9	8.8	8.8	9.0	9.2	9.0	9.1	9.5	10.3	10.8	11.2	11.2	11.2	11.3	11.2	10.6	10.3	9.5	8.8	8.4	11.3	8.4	9.7
18	7.6	7.1	7.5	8.2	8.1	8.8	9.3	9.9	10.3	10.1	9.2	9.0	10.2	10.9	10.8	10.8	10.5	10.0	9.8	9.6	9.5	9.4	9.5	9.7	10.9	7.1	9.4
19	9.8	9.7	9.8	9.7	10.2	10.1	9.7	9.5	9.4	9.4	9.3	9.6	9.7	10.0	9.9	10.0	10.7	10.5	10.1	9.3	8.9	8.8	8.8	8.6	10.7	8.6	9.6
20	8.6	8.8	9.4	10.1	10.5	10.8	10.8	11.1	11.1	11.4	11.7	12.0	12.3	12.7	13.4	13.5	13.2	13.2	13.2	12.7	12.5	12.3	12.1	12.3	13.5	8.6	11.7
21	12.0	11.2	10.2	10.0	9.2	9.9	10.6	10.8	10.9	10.8	10.6	10.6	10.3	9.9	10.0	9.6	9.5	9.2	8.9	8.8	8.6	8.7	8.9	9.1	12.0	8.6	9.9
22	8.9	8.4	9.1	10.1	10.0	10.0	10.2	10.2	10.5	10.5	10.7	11.1	11.5	11.5	11.4	10.9	11.2	11.0	11.2	10.9	11.1	10.7	10.5	10.6	11.5	8.4	10.5
23	10.8	10.7	10.6	10.5	10.7	10.6	10.5	10.3	10.5	10.9	11.1	11.2	11.3	11.6	11.7	11.7	11.9	11.5	11.3	10.2	9.3	9.1	8.1	7.9	11.9	7.9	10.6
24	7.8	8.1	7.7	7.5	7.6	7.2	6.7	6.8	7.6	8.0	8.6	9.8	10.5	10.2	10.2	10.5	10.7	11.4	11.6	11.4	10.9	9.1	8.3	8.0	11.6	6.7	9.0
25	7.7	7.5	7.4	7.3	7.2	7.2	7.0	7.0	7.2	7.3	8.0	9.1	10.5	11.2	11.4	11.3	11.1	10.6	10.5	10.7	10.9	10.9	11.0	10.9	11.4	7.0	9.2
26	10.2	9.6	9.5	9.0	8.9	9.4	9.7	9.3	8.9	8.3	8.3	8.9	9.1	9.3	9.3	9.0	9.0	8.9	8.2	8.1	8.0	8.1	8.2	8.1	10.2	8.0	8.9
27	8.0	8.0	8.1	8.1	8.3	9.1	9.4	10.0	10.0	9.5	9.2	9.4	9.4	9.6	9.5	9.8	9.5	8.6	7.8	7.3	6.8	6.5	6.5	6.6	10.0	6.5	8.5
28	6.4	6.3	6.4	6.4	6.4	6.4	6.4	6.6	7.0	7.3	7.6	8.1	8.6	9.1	9.3	10.1	10.0	9.6	9.1	8.8	8.4	7.9	7.3	6.8	10.1	6.3	7.8
29	6.7	6.4	6.4	7.1	6.9	6.7	6.3	6.5	6.7	7.0	7.4	7.9	8.1	7.9	8.2	8.2	7.7	7.8	7.4	7.0	6.4	6.4	6.3	6.0	8.2	6.0	7.1
30	5.7	6.4	5.9	7.0	6.4	6.5	7.2	6.7	5.9	5.8	6.5	6.9	8.7	8.6	8.5	8.8	8.7	8.6	8.3	7.8	7.2	6.3	6.3	6.0	8.8	5.7	7.1
Max.	**12.9**	**12.7**	**12.5**	**11.6**	**11.2**	**11.8**	**12.6**	**12.7**	**12.7**	**12.9**	**12.7**	**13.1**	**14.1**	**15.4**	**16.3**	**16.4**	**14.0**	**13.2**	**14.0**	**14.2**	**14.3**	**13.9**	**13.6**	**13.4**	**16.4**		
Min.	**5.7**	**6.3**	**5.9**	**6.4**	**6.4**	**6.4**	**6.3**	**6.5**	**5.9**	**5.8**	**6.5**	**6.9**	**8.1**	**7.9**	**8.2**	**8.2**	**7.7**	**7.8**	**7.4**	**7.0**	**6.4**	**6.3**	**6.3**	**6.0**		**5.7**	
Avg.	**9.7**	**9.6**	**9.5**	**9.6**	**9.4**	**9.5**	**9.6**	**9.7**	**10.0**	**10.2**	**10.4**	**10.7**	**11.1**	**11.2**	**11.3**	**11.4**	**11.4**	**11.2**	**11.0**	**10.8**	**10.5**	**10.2**	**10.0**	**9.8**			**10.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.5	5.1	5.2	5.1	5.3	5.6	5.8	5.9	5.9	6.2	6.5	6.9	7.1	7.3	7.1	7.1	7.6	8.0	8.2	8.1	7.8	7.8	7.9	8.0	8.2	5.1	6.7
2	7.9	8.4	8.4	8.1	8.0	7.7	7.8	7.6	7.7	7.9	8.0	8.2	8.2	8.3	8.6	8.4	8.8	9.0	9.2	9.1	9.2	9.5	9.1	8.8	9.5	7.6	8.4
3	8.6	8.7	8.3	8.0	7.8	7.8	8.1	8.7	9.3	10.4	10.9	10.9	10.7	10.7	10.6	10.6	10.3	10.3	10.3	9.6	9.1	8.8	8.9	8.8	10.9	7.8	9.4
4	8.3	7.4	7.8	8.7	8.5	8.5	7.9	8.3	7.3	7.7	7.8	7.7	7.4	7.1	8.1	8.2	7.0	6.6	6.4	5.7	5.1	4.9	4.7	5.3	8.7	4.7	7.2
5	5.7	6.9	6.0	5.5	5.4	5.3	6.5	7.8	8.3	8.5	8.6	8.9	9.5	9.8	10.1	10.2	10.1	9.7	9.0	8.3	8.2	7.9	7.9	7.7	10.2	5.3	8.0
6	7.7	7.0	6.5	6.4	6.3	6.4	6.7	6.0	6.5	7.1	8.6	8.8	9.2	9.3	9.4	9.4	9.5	9.5	9.1	8.8	8.6	8.7	8.8	9.0	9.5	6.0	8.1
7	9.1	9.2	9.3	9.4	9.4	9.4	9.3	9.3	9.0	9.1	9.6	9.8	10.0	9.9	10.0	10.1	9.9	9.8	9.9	9.8	9.3	9.3	9.3	9.0	10.1	9.0	9.5
8	9.2	9.5	9.5	8.5	8.6	8.4	8.1	8.0	7.9	7.8	7.7	7.7	7.6	7.7	7.6	7.7	8.6	9.0	10.0	10.6	11.2	10.8	10.3	10.2	11.2	7.6	8.8
9	10.3	10.5	10.4	10.5	11.2	11.4	11.6	12.5	12.4	12.4	12.6	12.3	11.9	11.4	11.2	11.2	11.1	10.9	10.8	10.6	10.3	10.3	10.2	10.2	12.6	10.2	11.2
10	9.9	9.3	8.6	7.6	6.9	6.5	5.9	5.8	5.2	5.6	5.8	6.4	6.8		8.6	8.5	8.7	8.7	8.8	9.0	9.1	9.0	8.9	8.8	9.9	5.2	7.8
11	8.6	8.5	8.1	7.6	7.2	6.8	6.9	6.5	6.4	6.6	7.5	10.8	10.6	9.8	9.3	7.9	8.3	7.8	7.4	7.0	6.3	6.1	6.0	5.8	10.8	5.8	7.7
12	5.8	5.7	5.4	5.4	5.4	5.5	5.7	5.8	6.1	6.4	7.0	7.4	7.7	8.0	7.6	7.5	7.1	6.6	6.4	6.4	6.4	6.5	6.6	6.6	8.0	5.4	6.5
13	6.7	7.2	7.0	7.3	7.2	7.1	7.3	7.1	7.0	7.0	7.6	8.3	9.5	9.7	9.4	9.5	8.9	8.3	7.6	6.8	6.8	6.2	5.7	5.8	9.7	5.7	7.5
14	5.8	8.4	7.3	7.4	8.7	9.1	8.7	9.2	8.8	8.4	8.3	8.5	8.3	8.7	8.4	8.4	8.6	8.9	9.0	8.7	9.3	8.3	6.9	6.6	9.3	5.8	8.3
15	6.3	5.9	5.5	5.2	5.4	5.8	5.6	5.0	6.0	8.3	8.8	9.4	9.3	9.8	10.1	9.8	9.7	8.5	8.3	7.8	7.9	8.1	8.4	8.8	10.1	5.0	7.7
16	9.0	8.4	8.1	6.5	5.8	5.4	5.6	5.9	6.0	6.1	6.4	7.1	7.2	7.5	7.4	7.7	7.6	7.3	7.2	7.3	7.7	7.7	7.3	7.6	9.0	5.4	7.1
17	7.4	7.0	7.3	6.9	7.6	7.8	7.4	6.6	6.0	6.3	6.6	7.2	6.9	7.5	8.2	8.3	8.1	7.8	7.6	7.6	7.8	7.5	7.3	7.5	8.3	6.0	7.3
18	7.6	7.4	7.3	6.5	6.2	5.9	6.0	5.9	5.7	5.5	5.6	5.9	6.5	7.0	7.7	7.9	8.4	8.3	8.8	8.6	8.2	8.1	8.3	8.3	8.8	5.5	7.1
19	7.9	7.3	7.3	7.8	7.8	7.5	7.6	7.3	6.9	6.5	6.8	7.0	8.1	8.1	8.3	8.1	8.0	7.4	7.1	6.9	6.6	6.1	6.0	7.4	8.3	6.0	7.3
20	6.7	5.9	5.8	6.4	6.5	6.3	5.8	5.6	5.1	6.3	6.6	7.7	8.0	7.8	8.0	8.6	8.2	6.5	5.9	4.9	4.5	3.5	3.0	3.1	8.6	3.0	6.1
21	3.3	3.2	4.0	5.1	4.6	5.3	5.2	5.7	5.4	5.6	6.3	6.7	6.9	7.0	7.0	7.0	6.3	5.7	5.6	5.5	6.3	5.7	4.2	3.5	7.0	3.2	5.5
22	3.6	3.5	3.3	4.1	4.6	4.0	4.3	4.5	4.1	3.9	5.2	5.7	6.6	8.0	7.2	7.3	7.1	5.9	4.9	4.1	3.7	3.4	3.3	3.9	8.0	3.3	4.8
23	4.4	4.2	4.3	4.4	4.2	4.0	4.5	4.1	3.6	3.8	4.3	4.6	5.2	5.6	5.3	4.8	4.1	3.8	3.2	2.9	2.8	2.6	2.7	3.4	5.6	2.6	4.0
24	2.8	2.2	2.1	2.5	2.1	0.9	1.0	0.8	0.8	0.8	0.9	0.9	1.0	2.0	2.5	3.0	2.9	1.9	1.0	0.5	0.5	0.4	0.4	0.5	3.0	0.4	1.4
25	0.8	1.0	1.2	1.5	1.4	1.3	1.4	0.9	0.4	-0.1	-0.2	0.0	-0.1	-0.2	0.4	0.7	0.3	0.3	0.5	0.4	0.3	0.1	-0.1	-0.3	1.5	-0.3	0.5
26	-0.5	-0.9	-1.2	-1.4	-1.6	-1.4	-1.1	-1.2	-1.2	-1.0	-0.7	-0.4	-0.1	-0.1	0.0	0.0	-0.3	-0.6	-0.5	-0.7	-0.8	-0.6	-0.6	-0.7	0.0	-1.6	-0.7
27	-0.9	-1.3	-1.6	-1.6	-1.2	-1.5	-1.7	-1.5	-1.7	-1.8	-1.1	-0.7	-0.1	-0.1	0.1	0.1	0.8	0.6	0.7	0.8	0.9	0.7	1.0	0.7	1.0	-1.8	-0.4
28	1.1	1.7	1.6	1.5	1.4	1.0	0.0	-0.4	-0.5	0.1	0.2	0.5	0.9	2.0	2.4	2.3	2.2	2.0	2.0	2.0	1.8	1.3	1.4	0.6	2.4	-0.5	1.2
29	0.3	0.4	0.4	0.2	0.3	0.4	0.4	0.5	1.0	2.7	2.1	3.4	5.0	5.7	5.9	5.7	5.8	6.1	6.0	5.9	5.8	4.9	4.8	4.8	6.1	0.2	3.3
30	4.8	4.6	4.5	4.6	4.6	4.2	3.7	3.1	3.6	4.1	4.5	4.9	5.6	5.0	4.8	5.1	4.3	4.1	3.8	4.0	4.6	3.8	2.5	1.9	5.6	1.9	4.2
31	1.7	1.6	1.2	0.4	0.2	0.1	0.3	0.3	0.3	0.8	1.5	1.9	2.3	2.9	4.2	4.7	3.3	2.0	1.5	1.4	1.2	1.0	0.8	0.8	4.7	0.1	1.5
Max.	**10.3**	**10.5**	**10.4**	**10.5**	**11.2**	**11.4**	**11.6**	**12.5**	**12.4**	**12.4**	**12.6**	**12.3**	**11.9**	**11.4**	**11.2**	**11.2**	**11.1**	**10.9**	**10.8**	**10.6**	**11.2**	**10.8**	**10.3**	**10.2**	**12.6**		
Min.	**-0.9**	**-1.3**	**-1.6**	**-1.6**	**-1.6**	**-1.5**	**-1.7**	**-1.5**	**-1.7**	**-1.8**	**-1.1**	**-0.7**	**-0.1**	**-0.2**	**0.0**	**0.0**	**-0.3**	**-0.6**	**-0.5**	**-0.7**	**-0.8**	**-0.6**	**-0.6**	**-0.7**		**-1.8**	
Avg.	**5.7**	**5.6**	**5.4**	**5.3**	**5.3**	**5.3**	**5.2**	**5.2**	**5.1**	**5.4**	**5.8**	**6.3**	**6.6**	**6.8**	**6.9**	**7.0**	**6.8**	**6.5**	**6.3**	**6.1**	**6.0**	**5.8**	**5.5**	**5.6**			**5.9**

Total Hours in Month 744 **Hours Data Available** 743 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.6	0.3	0.1	-0.1	-0.3	-0.4	-0.6	-0.8	-0.9	-0.3	0.4	1.1	1.8	3.3	3.2	3.0	1.3	0.4	0.1	-0.1	-0.2	-0.4	-0.7	-0.5	3.3	-0.9	0.4
2	-0.9	-1.4	-1.2	-1.4	-1.8	-1.9	-2.1	-2.3	-2.3	-1.7	-0.9	-0.2	0.6	1.0	1.4	1.3	0.3	-0.8	-1.1	-1.4	-1.5	-1.6	-1.7	-1.7	1.4	-2.3	-1.0
3	-1.9	-1.7	-2.1	-2.1	-2.2	-2.6	-3.0	-3.1	-2.8	-2.1	-1.4	-0.5	0.4	0.6	0.6	0.4	-0.4	-1.5	-1.8	-2.1	-2.3	-2.3	-2.4	-2.6	0.6	-3.1	-1.6
4	-2.3	-2.1	-2.3	-2.3	-2.5	-2.6	-3.0	-3.3	-3.2	-2.7	-1.6	-0.6	-0.1	0.3	0.5	0.5	-0.7	-2.1	-2.5	-2.9	-3.2	-3.7	-3.7	-3.6	0.5	-3.7	-2.1
5	-3.4	-3.3	-3.5	-3.6	-3.7	-4.1	-4.2	-4.4	-4.9	-4.1	-2.7	-1.5	0.0	0.6	1.3	1.5	0.3	-0.8	-1.8	-2.5	-3.3	-3.5	-3.5	-3.8	1.5	-4.9	-2.4
6	-3.7	-3.4	-3.1	-3.1	-2.9	-3.2	-3.6	-3.8	-3.9	-3.4	-2.4	-1.9	-1.4	-1.0	-0.3	-0.1	-1.1	-1.2	-0.7	-1.3	-1.0	-0.9	-1.3	-1.3	-0.1	-3.9	-2.1
7	-1.6	-1.9	-2.2	-2.5	-2.9	-3.6	-4.2	-4.9	-5.2	-5.6	-5.4	-5.4	-5.3	-5.1	-4.7	-5.1	-6.1	-6.9	-7.3	-7.7	-7.9	-8.0	-8.0	-8.1	-1.6	-8.1	-5.2
8	-8.3	-8.3	-8.2	-8.3	-8.6	-8.7	-8.3	-8.1	-7.7	-7.4	-6.6	-6.2	-5.8	-5.4	-4.8	-5.0	-6.2	-6.8	-7.0	-7.2	-7.5	-7.5	-7.5	-7.5	-4.8	-8.7	-7.2
9	-7.6	-7.6	-7.4	-7.5	-7.0	-6.9	-6.8	-6.5	-6.5	-6.8	-6.6	-6.0	-5.6	-5.4	-5.3	-5.3	-5.2	-5.3	-5.1	-5.3	-5.5	-5.4	-5.5	-5.7	-5.1	-7.6	-6.2
10	-5.7	-5.9	-5.4	-5.7	-5.8	-5.7	-5.5	-5.5	-5.5	-5.3	-5.1	-4.9	-4.1	-3.3	-2.2	-1.7	-1.1	-1.2	-1.7	-2.0	-2.3	-2.6	-3.0	-3.6	-1.1	-5.9	-3.9
11	-3.9	-4.4	-4.3	-4.1	-3.8	-3.5	-3.5	-3.3	-3.2	-2.9	-2.8	-2.3	-1.8	-1.6	-1.5	-1.5	-3.1	-3.8	-3.9	-3.9	-3.8	-3.9	-4.3	-4.5	-1.5	-4.5	-3.3
12	-4.8	-5.0	-5.0	-4.9	-5.0	-4.8	-4.7	-4.4	-4.1	-3.6	-3.3	-3.0	-1.7	0.1	0.2	-0.5	-0.8	-1.0	-1.5	-2.5	-2.3	-2.7	-3.0	-2.9	0.2	-5.0	-3.0
13	-2.8	-2.8	-2.8	-2.9	-3.0	-3.2	-3.5	-3.9	-4.2	-4.0	-3.3	-3.0	-4.0	-4.8	-5.3	-5.9	-6.0	-6.7	-7.5	-7.8	-7.7	-8.2	-7.8	-7.2	-2.8	-8.2	-4.9
14	-7.7	-7.2	-7.0	-6.3	-6.4	-6.2	-6.2	-4.6	-4.5	-6.1	-5.8	-5.0	-3.6	-2.3	-3.0	-5.0	-7.1	-7.9	-9.0	-9.5	-10.4	-10.8	-11.3	-11.1	-2.3	-11.3	-6.8
15	-11.5	-11.8	-11.9	-12.0	-12.1	-12.3	-12.3	-12.2	-12.4	-12.6	-12.5	-11.2	-10.2	-10.2	-11.6	-12.0	-12.5	-12.5	-12.3	-12.4	-12.5	-12.4	-11.8	-11.8	-10.2	-12.6	-12.0
16	-11.9	-12.0	-12.0	-12.4	-12.3	-11.9	-11.9	-11.9	-11.7	-11.3	-11.0	-10.4	-9.6	-9.3	-9.4	-8.7	-9.3	-9.8	-10.4	-10.5	-10.5	-10.2	-10.1	-9.7	-8.7	-12.4	-10.8
17	-9.3	-8.8	-8.6	-8.6	-8.7	-8.9	-9.0	-9.0	-8.8	-8.6	-7.9	-6.9	-6.7	-6.3	-5.2	-6.3	-7.3	-7.3	-7.5	-7.7	-7.7	-7.6	-7.5	-7.6	-5.2	-9.3	-7.8
18	-7.7	-7.8	-7.9	-7.9	-7.9	-8.0	-8.3	-8.7	-8.6	-8.7	-7.9	-7.3	-7.0	-6.6	-6.6	-6.3	-7.2	-7.7	-8.1	-8.5	-8.9	-9.0	-8.9	-9.2	-6.3	-9.2	-7.9
19	-8.9	-9.3	-10.0	-10.5	-10.5	-10.2	-9.9	-10.1	-10.5	-10.5	-9.3	-8.2	-7.1	-6.5	-5.5	-4.5	-4.7	-4.7	-4.6	-4.6	-5.2	-5.7	-6.2	-5.7	-4.5	-10.5	-7.6
20	-5.4	-5.6	-6.3	-6.2	-7.1	-7.0	-7.4	-7.4	-7.0	-7.2	-7.0	-6.5	-6.4	-7.0	-7.0	-7.2	-7.5	-7.4	-7.4	-7.5	-7.8	-7.6	-7.7	-7.8	-5.4	-7.8	-7.0
21	-7.7	-7.8	-7.7	-7.9	-7.9	-8.1	-8.3	-8.3	-8.2	-8.2	-7.9	-7.3	-6.8	-6.1	-5.4	-5.0	-4.3	-4.1	-3.8	-3.7	-3.4	-4.0	-3.1	-2.9	-2.9	-8.3	-6.2
22	-2.6	-2.5	-4.3	-5.1	-5.0	-5.4	-5.9	-6.1	-5.7	-4.7	-4.1	-3.7	-3.3	-3.2	-3.1	-3.2	-4.1	-4.7	-5.4	-6.4	-6.8	-7.1	-7.3	-7.4	-2.5	-7.4	-4.9
23	-7.3	-7.3	-7.1	-6.9	-7.0	-7.0	-7.1	-7.2	-7.3	-7.7	-6.9	-6.2	-5.5	-4.7	-4.0	-3.5	-4.9	-5.7	-6.2	-6.5	-5.8	-6.1	-7.2	-7.7	-3.5	-7.7	-6.4
24	-7.9	-7.9	-6.8	-6.5	-6.4	-7.2	-6.9	-6.9	-6.6	-7.5	-6.6	-5.7	-3.6	-3.6	-3.0	-2.5	-3.8	-4.4	-4.4	-4.1	-4.0	-4.0	-4.0	-4.1	-2.5	-7.9	-5.3
25	-4.1	-3.7	-3.3	-3.0	-2.6	-2.8	-3.3	-3.6	-3.6	-3.7	-3.3	-3.0	-2.9	-2.9	-2.9	-3.2	-3.6	-3.7	-3.8	-3.9	-4.0	-4.3	-4.2	-4.2	-2.6	-4.3	-3.5
26	-4.4	-4.5	-4.4	-4.0	-3.7	-3.3	-2.9	-2.4	-2.0	-1.9	-1.6	-1.8	-1.7	-1.6	-1.9	-1.9	-2.4	-2.9	-3.3	-2.6	-2.2	-2.1	-2.0	-2.2	-1.6	-4.5	-2.6
27	-1.6	-2.1	-1.8	-1.5	-1.4	-1.4	-0.9	-0.7	-0.3	-0.6	0.0	0.3	0.2	0.9	1.2	1.4	1.3	1.8	1.3	1.6	1.6	1.2	1.2	1.2	1.8	-2.1	0.1
28	1.1	1.0	0.7	0.8	0.8	0.9	1.0	0.5	0.6	0.3	0.3	0.7	1.0	0.9	0.9	0.4	0.8	0.1	-0.3	-0.8	-1.2	-2.0	-3.1	-3.7	1.1	-3.7	0.1
29	-4.2	-3.9	-1.7	-3.2	-2.3	-2.4	-2.7	-3.0	-3.0	-2.9	-2.5	-1.3	-1.1	-0.4	-0.9	-1.4	-2.5	-2.7	-2.4	-2.8	-3.2	-2.8	-3.4	-1.9	-0.4	-4.2	-2.4
30	-2.3	-1.9	-1.7	-0.8	-1.9	-2.1	-2.5	-2.7	-2.0	-1.5	-0.6	0.1	0.8	0.9	0.2	0.1	0.1	0.1	0.3	0.5	0.6	0.6	0.4	-0.1	0.9	-2.7	-0.6
Max.	**1.1**	**1.0**	**0.7**	**0.8**	**0.8**	**0.9**	**1.0**	**0.5**	**0.6**	**0.3**	**0.4**	**1.1**	**1.8**	**3.3**	**3.2**	**3.0**	**1.3**	**1.8**	**1.3**	**1.6**	**1.6**	**1.2**	**1.2**	**1.2**	**3.3**		
Min.	**-11.9**	**-12.0**	**-12.0**	**-12.4**	**-12.3**	**-12.3**	**-12.3**	**-12.2**	**-12.4**	**-12.6**	**-12.5**	**-11.2**	**-10.2**	**-10.2**	**-11.6**	**-12.0**	**-12.5**	**-12.5**	**-12.3**	**-12.4**	**-12.5**	**-12.4**	**-11.8**	**-11.8**		**-12.6**	
Avg.	**-5.0**	**-5.0**	**-5.0**	**-5.0**	**-5.1**	**-5.1**	**-5.2**	**-5.3**	**-5.2**	**-5.1**	**-4.5**	**-3.9**	**-3.3**	**-3.0**	**-2.8**	**-2.9**	**-3.6**	**-4.0**	**-4.3**	**-4.5**	**-4.7**	**-4.8**	**-5.0**	**-5.0**			**-4.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature at 10 meters (deg. C)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.1	-0.6	-1.0	-1.0	-1.0	-0.8	-0.5	-0.4	-0.4	-0.9	-1.3	-1.8	-1.2	-1.7	-2.3	-3.0	-4.1	-4.4	-4.5	-4.2	-4.2	-4.3	-4.6	-4.5	-0.1	-4.6	-2.2
2	-4.2	-4.1	-5.1	-4.4	-3.9	-1.5	1.3	2.0	1.7	2.2	1.9	2.3	2.9	3.3	2.9	3.0	3.0	3.0	2.9	2.9	2.8	3.2	3.6	4.0	4.0	-5.1	1.1
3	3.3	3.2	3.7	3.9	2.9	2.8	3.0	2.5	1.3	0.7	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.6	3.9	0.2	1.4
4	0.6	0.9	0.9	0.8	1.5	3.1	3.6	3.6	4.2	4.7	4.5	4.1	3.8	3.7	3.6	3.8	3.6	3.0	2.8	2.9	3.0	2.3	2.6	2.7	4.7	0.6	2.9
5	2.9	2.9	3.3	3.9	4.1	3.8	4.5	4.5	4.3	4.2	4.4	4.4	4.7	4.5	4.5	4.6	3.9	4.5	5.3	5.2	5.3	5.2	4.9	4.4	5.3	2.9	4.3
6	3.6	2.8	2.2	1.8	1.9	1.9	2.1	2.3	2.3	2.7	2.8	2.7	3.6	4.3	4.1	3.8	3.7	3.4	3.1	3.1	3.6	3.5	3.9	4.0	4.3	1.8	3.0
7	4.7	4.7	4.1	3.9	4.3	4.7	4.6	5.0	3.9	3.3	2.7	3.2	3.3	3.1	3.5	4.3	4.6	4.3	4.7	4.0	3.2	3.7	3.4	3.4	5.0	2.7	3.9
8	3.5	3.9	4.3	2.5	1.9	1.9	1.9	1.9	2.4	3.3	3.1	2.5	2.6	2.0	0.5	0.2	1.1	1.8	3.1	2.8	2.1	1.3	1.3	1.1	4.3	0.2	2.2
9	1.7	1.3	1.2	1.1	2.3	2.7	2.3	1.9	1.6	1.5	1.2	1.2	1.1	1.1	1.4	1.2	1.1	1.0	1.1	1.3	1.4	1.5	2.2	3.0	3.0	1.0	1.6
10	3.2	3.3	3.4	3.6	3.6	3.6	3.7	3.7	3.7	3.4	2.9	2.8	2.8	3.7	2.4	1.0	1.1	1.7	1.7	1.8	2.1	2.3	2.0	1.7	3.7	1.0	2.7
11	1.6	1.6	1.7	1.6	2.2	1.4	0.9	0.5	-0.3	-0.9	-1.4	-1.2	-0.4	1.1	1.4	1.2	-0.6	-1.9	-2.1	-2.1	-2.0	-2.3	-2.6	-2.5	2.2	-2.6	-0.2
12	-2.5	-2.5	-2.9	-2.8	-2.7	-2.6	-2.3	-1.8	-2.1	-1.8	-1.6	-1.6	-1.4	-1.6	-1.5	-1.8	-1.7	-1.6	-2.2	-2.4	-2.5	-2.6	-2.7	-3.2	-1.4	-3.2	-2.2
13	-2.7	-2.6	-2.7	-2.3	-2.6	-3.0	-3.6	-3.7	-3.9	-4.2	-4.3	-4.6	-4.9	-5.0	-5.2	-5.5	-5.9	-5.9	-5.8	-5.6	-5.7	-5.7	-5.8	-5.6	-2.3	-5.9	-4.5
14	-5.8	-5.5	-6.2	-7.2	-7.2	-7.3	-7.0	-6.7	-6.7	-7.1	-7.3	-7.5	-7.4	-7.3	-6.5	-6.7	-7.5	-7.9	-7.7	-7.8	-8.2	-8.8	-8.8	-8.8	-5.5	-8.8	-7.3
15	-8.8	-8.8	-8.8	-8.8	-8.8	-8.6	-8.6	-8.7	-8.7	-8.7	-8.9	-8.3	-8.1	-8.1	-8.3	-8.0	-6.8	-6.6	-6.5	-6.7	-7.0	-6.6	-6.2	-6.0	-6.0	-8.9	-7.9
16	-5.6	-5.9	-5.9	-5.5	-5.2	-5.0	-5.1	-4.6	-4.3	-4.1	-3.9	-3.6	-3.1	-3.2	-3.2	-3.2	-3.1	-2.9	-2.7	-2.4	-2.3	-2.4	-2.5	-2.7	-2.3	-5.9	-3.9
17	-2.7	-2.6	-2.5	-2.6	-2.5	-2.3	-2.4	-2.4	-2.6	-2.6	-2.6	-2.8	-2.6	-2.3	-2.3	-2.5	-2.7	-2.5	-1.7	-1.6	-1.6	-1.5	-2.1	-2.4	-1.5	-2.8	-2.4
18	-2.7	-3.1	-3.5	-3.9	-4.7	-4.6	-4.9	-5.0	-5.0	-5.3	-5.4	-5.2	-5.1	-5.4	-5.3	-5.0	-5.7	-5.7	-5.0	-5.2	-6.9	-7.4	-7.4	-7.2	-2.7	-7.4	-5.2
19	-7.3	-7.3	-6.7	-5.6	-4.3	-3.2	-2.9	-3.2	-3.1	-3.4	-2.6	-1.9	-1.8	-0.8	-0.6	-1.1	-2.1	-2.9	-3.5	-3.8	-3.8	-3.8	-4.0	-4.1	-0.6	-7.3	-3.5
20	-4.1	-4.4	-4.8	-5.1	-5.1	-6.3	-7.4	-8.3	-8.7	-8.9	-9.3	-9.2	-9.2	-8.9	-7.9	-8.0	-7.9	-7.4	-7.3	-7.8	-8.4	-8.9	-9.6	-9.7	-4.1	-9.7	-7.6
21	-9.4	-9.2	-9.0	-8.9	-9.2	-8.6	-9.1	-9.4	-9.7	-10.1	-10.7	-10.6	-10.7	-10.3	-9.9	-9.2	-9.7	-10.2	-10.7	-10.4	-10.1	-10.2	-10.1	-10.0	-8.6	-10.7	-9.8
22	-9.6	-9.4	-9.0	-8.8	-8.0	-7.9	-7.6	-7.2	-7.6	-7.3	-7.2	-6.8	-6.1	-5.9	-5.6	-5.7	-6.2	-6.6	-6.7	-6.9	-7.2	-7.1	-6.8	-6.5	-5.6	-9.6	-7.2
23	-6.0	-3.0	-3.9	-4.1	-4.2	-4.7	-5.0	-4.2	-4.8	-6.4	-6.8	-7.2	-6.6	-6.4	-7.3	-7.0	-6.7	-6.5	-7.2	-7.8	-8.9	-8.9	-8.8	-9.0	-3.0	-9.0	-6.3
24	-9.0	-9.1	-9.3	-8.8	-8.7	-8.3	-8.4	-8.2	-8.2	-8.1	-8.0	-7.8	-6.8	-6.0	-5.6	-6.4	-7.5	-9.0	-9.6	-9.9	-9.4	-9.6	-10.2	-10.0	-5.6	-10.2	-8.4
25	-10.2	-10.4	-7.8	-4.7	-4.5	-5.7	-6.7	-7.2	-7.4	-7.3	-7.9	-7.4	-6.8	-6.3	-6.4	-8.0	-7.7	-7.7	-7.5	-7.7	-8.8	-9.5	-9.9	-10.1	-4.5	-10.4	-7.7
26	-10.7	-11.1	-11.6	-11.4	-11.2	-11.2	-10.5	-10.2	-9.9	-11.0	-10.5	-9.4	-9.3	-9.9	-10.7	-10.6	-11.1	-10.6	-10.1	-9.0	-8.2	-7.1	-6.9	-6.5	-6.5	-11.6	-9.9
27	-6.2	-5.7	-4.9	-5.0	-4.0	-3.9	-4.4	-4.2	-3.6	-3.3	-3.2	-3.1	-2.6	-3.3	-3.8	-3.6	-3.2	-2.9	-2.5	-2.5	-1.9	0.0	1.0	1.2	1.2	-6.2	-3.1
28	1.5	0.6	0.7	0.2	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.1	1.7	0.6	0.7	1.0	0.3	0.4	0.6	-0.3	-1.4	-1.1	-1.4	-1.1	1.7	-1.4	0.3
29	-0.6	-0.2	-0.2	-0.4	-1.0	-1.3	0.0	2.0	2.7	1.8	1.6	0.8	0.2	-0.9	-1.6	-2.4	-2.9	-3.6	-5.1	-4.8	-4.4	-4.9	-5.0	-5.9	2.7	-5.9	-1.5
30	-6.8	-6.7	-7.7	-8.0	-8.4	-8.5	-8.6	-8.3	-8.5	-8.3	-8.3	-8.3	-8.4	-8.5	-9.1	-9.6	-9.9	-10.2	-10.6	-10.7	-10.8	-10.9	-10.6	-11.0	-6.7	-11.0	-9.0
31	-11.0	-11.1	-11.6	-11.8	-12.1	-12.6	-12.9	-12.9	-13.0	-12.3	-10.9	-11.0	-9.3	-8.8	-7.9	-7.4	-6.7	-6.5	-6.6	-6.8	-6.7	-6.5	-5.8	-6.4	-5.8	-13.0	-9.5
Max.	**4.7**	**4.7**	**4.3**	**3.9**	**4.3**	**4.7**	**4.6**	**5.0**	**4.3**	**4.7**	**4.5**	**4.4**	**4.7**	**4.5**	**4.5**	**4.6**	**4.6**	**4.5**	**5.3**	**5.2**	**5.3**	**5.2**	**4.9**	**4.4**	**5.3**		
Min.	**-11.0**	**-11.1**	**-11.6**	**-11.8**	**-12.1**	**-12.6**	**-12.9**	**-12.9**	**-13.0**	**-12.3**	**-10.9**	**-11.0**	**-10.7**	**-10.3**	**-10.7**	**-10.6**	**-11.1**	**-10.6**	**-10.7**	**-10.7**	**-10.8**	**-10.9**	**-10.6**	**-11.0**		**-13.0**	
Avg.	**-3.2**	**-3.2**	**-3.2**	**-3.2**	**-3.0**	**-3.0**	**-2.9**	**-2.8**	**-2.9**	**-3.0**	**-3.1**	**-3.0**	**-2.7**	**-2.7**	**-2.8**	**-2.9**	**-3.1**	**-3.2**	**-3.2**	**-3.3**	**-3.4**	**-3.5**	**-3.4**	**-3.5**			**-3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.02	-0.09	0.09	0.24	0.30	0.21	0.18	0.13	0.13	0.18	0.14	0.12	0.06	0.06	0.06	0.06	0.10	0.16	0.16	0.15	0.13	0.05	0.02	0.14	0.30	-0.09	0.11
2	0.11	0.05	0.04	0.09	0.19	0.12	0.14	0.10	0.01	-0.06	0.01	0.12	0.15	0.08	0.07	0.10	0.08	0.01	0.06	0.05	0.12	0.19	0.15	0.21	0.21	-0.06	0.09
3	0.09	0.03	-0.03	0.10	0.12	-0.01	0.13	0.21	0.22	0.28	0.17	0.30	0.14	0.16	0.13	0.17	0.22	0.18	0.21	0.21	0.27	0.20	0.05	0.23	0.30	-0.03	0.16
4	0.35	0.38	0.33	0.57	0.41	0.34	0.41	0.81	1.02	1.19	0.43	-0.03	-0.09	-0.09	-0.01	0.20	0.25	0.21	0.61	0.58	0.19	0.19	0.19	0.23	1.19	-0.09	0.36
5	0.45	0.51	0.35	0.19	0.24	0.25	0.16	0.19	0.14	0.40	0.41	0.19	0.05	0.06	0.20	0.51	0.64	0.61	0.38	0.30	0.61	0.61	0.63	1.13	1.13	0.05	0.38
6	0.93	0.80	0.61	0.50	0.62	0.58	0.30	0.39	0.48	0.51	0.44	0.11	-0.13	-0.13	-0.15	-0.06	0.12	0.23	0.19	0.09	0.20	0.46	0.26	0.20	0.93	-0.15	0.31
7	0.16	0.25	0.71	0.43	0.59	0.66	0.62	0.65	0.21	0.25	0.52	0.24	0.12	0.06	-0.01	0.06	0.07	0.17	0.24	0.22	0.12	0.10	0.07	0.10	0.71	-0.01	0.28
8	0.18	0.16	0.13	0.13	0.12	0.06	0.09	0.16	0.30	0.24	0.23	0.13	0.11	0.08	0.06	0.33	0.16	0.35	0.78	0.35	0.28	0.34	0.27	0.30	0.78	0.06	0.22
9	0.56	0.60	0.36	0.31	0.44	0.26	0.39	0.54	0.20	0.20	0.29	0.27	-0.04	-0.11	-0.06	0.05	0.51	0.43	0.28	0.60	0.58	0.41	0.56	0.24	0.60	-0.11	0.33
10	0.17	0.13	0.05	-0.02	-0.04	0.19	0.33	0.46	0.68	0.71	0.35	0.21	-0.05	0.07	0.14	0.09	0.07	-0.01	-0.03	0.03	0.11	0.01	0.14	0.14	0.71	-0.05	0.16
11	0.33	0.33	0.24	0.29	0.23	-0.11	-0.16	-0.09	-0.01	0.04	0.03	-0.10	-0.18	-0.17	-0.17	0.00	0.07	0.14	0.15	-0.04	0.00	0.08	0.17	0.15	0.33	-0.18	0.05
12	0.23	0.28	-0.09	0.00	0.02	-0.07	-0.08	-0.02	0.03	0.27	0.32	-0.06	-0.17	-0.24	-0.21	-0.17	-0.13	-0.05	0.05	0.12	0.07	0.06	0.13	0.12	0.32	-0.24	0.02
13	0.17	0.13	0.10	0.19	0.27	0.19	0.18	0.20	0.33	0.33	0.40	0.02	-0.17	-0.22	-0.20	-0.08	0.08	0.21	0.40	0.41	0.36	0.14	0.28	0.17	0.41	-0.22	0.16
14	0.02	-0.11	-0.04	0.01	-0.09	0.01	0.01	0.00	0.05	-0.04	-0.09	-0.14	-0.17	-0.20	-0.17	-0.12	-0.09	-0.06	-0.03	-0.01	-0.08	-0.07	-0.02	-0.01	0.05	-0.20	-0.06
15	0.00	-0.03	-0.06	-0.05	-0.04	-0.06	-0.05	0.20	0.22	0.21	0.27	0.05	0.04	0.00	0.06	0.08	0.08	0.04	0.13	0.09	0.14	0.12	0.11	0.14	0.27	-0.06	0.07
16	0.13	0.14	0.16	0.16	0.15	0.15	0.16	0.15	0.17	0.16	0.03					0.06	0.08	0.18	0.39	0.41	0.45	0.64	0.53	0.31	0.64	0.03	0.23
17	0.56	1.13	0.65	0.56	0.71	0.83	0.58	0.23	0.26	0.07	0.03	-0.01	-0.08	-0.07	0.09	0.07	0.06	0.18	0.16	0.18	-0.01	-0.11	-0.14	-0.11	1.13	-0.14	0.24
18	-0.09	-0.12	-0.09	0.02	-0.01	-0.18	0.04	0.23	-0.01	0.15	0.28	-0.11	-0.15	-0.26	-0.20	-0.13	0.04	0.25	0.55	0.88	1.09	0.96	0.69	0.33	1.09	-0.26	0.17
19	0.61	0.46	0.17	0.15	0.20	0.71	0.70	0.49	0.11	0.04	-0.08	-0.29	-0.31	-0.31	-0.26	-0.22	-0.16	-0.14	-0.09	0.03	0.42	0.30	-0.04	-0.08	0.71	-0.31	0.10
20	0.14	0.10	0.00	0.08	0.23	0.02	0.12	0.29	0.28	0.27	0.31	0.08	-0.03	-0.11	-0.13	-0.08	-0.04	0.03	-0.04	-0.08	-0.10	-0.10	-0.11	-0.08	0.31	-0.13	0.04
21	-0.10	-0.07	-0.09	-0.01	-0.08	-0.16	-0.02	-0.04	0.03	-0.08	-0.13	-0.15	-0.14	-0.16	-0.18	-0.17	-0.20	-0.27	-0.21	-0.05	0.19	0.31	0.27	0.20	0.31	-0.27	-0.05
22	0.06	0.00	-0.07	-0.10	-0.08	-0.05	-0.06	0.00	0.01	0.05	0.01	-0.05	-0.03	0.03	0.01	0.03	0.05	0.09	0.13	0.11	0.13	0.12	0.13	0.10	0.13	-0.10	0.03
23	0.07	0.09	0.03	-0.09	-0.19	-0.19	-0.13	-0.16	-0.17	-0.26	-0.31	-0.43	-0.41	-0.41	-0.50	-0.34	-0.13	-0.07	-0.04	-0.08	-0.11	-0.04	-0.10	-0.09	0.09	-0.50	-0.17
24	-0.07	-0.09	0.01	0.00	0.00	-0.04	-0.12	-0.13	-0.14	-0.10	-0.22	-0.35	-0.44	-0.46	-0.38	-0.31	-0.08	-0.11	-0.10	-0.14	-0.09	-0.05	-0.04	-0.03	0.01	-0.46	-0.14
25	0.02	-0.04	0.06	0.10	0.07	0.08	0.10	0.27	0.18	0.21	0.08	-0.52	-0.65	-0.69	-0.71	-0.59	-0.22	-0.02	-0.06	-0.09	-0.12	-0.26	-0.25	-0.34	0.27	-0.71	-0.14
26	-0.32	-0.26	-0.26	-0.24	-0.25	-0.22	-0.22	-0.24	-0.30	-0.42	-0.49	-0.68	-0.65	-0.58	-0.49	-0.43	-0.30	-0.23	-0.28	-0.28	-0.16	-0.02	-0.11	-0.09	-0.02	-0.68	-0.31
27	-0.06	-0.12	0.08	0.02	-0.02	-0.01	-0.08	-0.01	0.02	-0.12	-0.11	-0.06	-0.19	-0.12	-0.04	0.03	0.09	0.08	0.13	0.18	0.07	0.10	0.13	0.14	0.18	-0.19	0.00
28	0.13	0.13	0.16	0.16	0.16	0.17	0.27	0.12	0.13	0.14	0.29	0.14	0.03	-0.44	-2.66	-0.87	-0.52	-0.23	-0.23	-0.28	-0.22	-0.14	-0.15	-0.24	0.29	-2.66	-0.17
29	-0.31	-0.33	-0.60	-0.56	-0.56	-0.51	-0.36	-0.33	-0.27	-0.27	-0.38	-0.57	-0.70	-0.70	-0.58	-0.57	-0.36	-0.24	-0.34	-0.30	-0.34	-0.31	-0.33	-0.32	-0.24	-0.70	-0.42
30	-0.35	-0.40	-0.49	-0.61	-0.53	-0.39	-0.44	-0.37	-0.26	-0.17	-0.16	-0.11	-0.97	-0.91	-0.91	-0.94	-0.54	0.14	0.39	0.92	0.12	0.24	0.25	0.65	0.92	-0.97	-0.24
31	0.68	0.79	0.68	0.77	0.57	0.47	0.64	0.76	0.20	-0.03	-0.29	-0.34	-0.29	-0.59	-0.72	-0.74	-0.31	-0.10	0.15	0.02	-0.26	-0.18	-0.14	-0.10	0.79	-0.74	0.07
Max.	**0.93**	**1.13**	**0.71**	**0.77**	**0.71**	**0.83**	**0.70**	**0.81**	**1.02**	**1.19**	**0.52**	**0.30**	**0.15**	**0.16**	**0.20**	**0.51**	**0.64**	**0.61**	**0.78**	**0.92**	**1.09**	**0.96**	**0.69**	**1.13**	**1.19**		
Min.	**-0.35**	**-0.40**	**-0.60**	**-0.61**	**-0.56**	**-0.51**	**-0.44**	**-0.37**	**-0.30**	**-0.42**	**-0.49**	**-0.68**	**-0.97**	**-0.91**	**-2.66**	**-0.94**	**-0.54**	**-0.27**	**-0.34**	**-0.30**	**-0.34**	**-0.31**	**-0.33**	**-0.34**		**-2.66**	
Avg.	**0.16**	**0.16**	**0.10**	**0.11**	**0.12**	**0.11**	**0.12**	**0.17**	**0.14**	**0.14**	**0.09**	**-0.07**	**-0.18**	**-0.21**	**-0.26**	**-0.13**	**-0.01**	**0.07**	**0.13**	**0.15**	**0.13**	**0.14**	**0.12**	**0.12**			**0.06**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.07	-0.24	-0.35	-0.47	-0.45	0.27	0.25	0.22	0.24	0.24	0.14	-0.01	-0.16	-0.16	-0.06	-0.03	-0.05	-0.10	-0.15	-0.43	-0.24	-0.06	0.03	0.10	0.27	-0.47	-0.06
2	0.08	0.15	0.11	0.13	0.08	0.17	0.21	0.17	0.22	0.21	0.16	-0.36	-1.01	-0.83	-0.68	-0.68	-0.40	-0.33	-0.20	0.28	-0.03	-0.20	0.05	0.28	0.28	-1.01	-0.10
3	0.19	0.13	0.05	0.02	0.03	0.00	-0.02	0.00	0.01	0.00	-0.03	-0.19	-0.12	-0.15	-0.21	-0.13	-0.09	0.04	0.01	0.02	0.03	0.05	0.02	0.03	0.19	-0.21	-0.01
4	0.04	0.05	0.02	0.04	0.05	0.02	0.05	0.04	0.05	0.07	0.11	-0.03	-0.08	-0.06	-0.05	-0.02	0.00	0.03	0.07	0.09	0.10	0.12	0.13	0.12	0.13	-0.08	0.04
5	0.05	0.07	0.11	0.14	0.15	0.09	0.09	0.15	0.10	0.19	0.19	0.12	0.16	0.01	0.16	0.11	0.18	0.15	0.10	0.08	0.05	-0.02	0.05	0.02	0.19	-0.02	0.10
6	0.09	-0.02	-0.07	-0.04	0.06																				0.09	-0.07	0.01
7					0.35	0.94	1.09	0.74	0.40	0.19	0.11	-0.15	-0.26	-0.26	-0.31	-0.51	-0.09	0.26	0.25	0.11	0.11	0.23	0.43	0.19	1.09	-0.51	0.19
8	0.29	0.38	1.05	0.63	0.91	0.72	0.81	1.00	0.70	0.74	0.16	0.24	-0.13	0.08	0.01	-0.02	0.09	0.17	-0.02	0.15	0.12	0.13	0.11	0.14	1.05	-0.13	0.35
9	0.17	0.16	0.15	0.10	0.07	0.06	0.04	0.07	0.08	0.05	0.07	0.08	0.15	0.17	0.01	0.23	0.27	0.28	0.17	0.17	0.17	0.13	0.23	0.25	0.28	0.01	0.14
10	0.19	0.40	0.39	0.35	0.22	0.18	0.21	0.21	0.24	0.25	0.58	0.87	0.76	0.78	0.67	0.17	0.10	0.30	0.28	0.28	0.32	0.26	0.25	0.12	0.87	0.10	0.35
11	0.05	0.25	0.31	0.24	0.23	0.19	0.19	0.24	0.24	0.33	0.22	0.14	0.14	0.11	0.19	0.12	0.09	0.15	0.23	0.19	0.25	0.35	0.34	0.43	0.43	0.05	0.22
12	0.55	0.54	0.57	0.61	0.42	0.40	0.26	0.29	0.26	0.17	0.10	0.09	0.07	0.00	-0.11	-0.17	-0.10	-0.04	-0.05	0.04	0.12	0.23	0.28	0.29	0.61	-0.17	0.20
13	0.52	1.05	1.13	1.13	1.25	1.08	0.88	0.77	0.42	0.32	0.13	0.13	0.11	0.22	0.31	0.27	0.21	0.23	0.19	0.32	0.49	0.51	0.45	0.37	1.25	0.11	0.52
14	0.38	0.28	0.28	0.28	0.24	0.23	0.32	0.21	0.27	0.23	0.07	0.07	0.03	0.04	0.07	0.09	0.15	0.15	0.25	0.20	0.21	0.16	0.22	0.21	0.38	0.03	0.19
15	0.21	0.25	0.37	0.29	0.29	0.30	0.30	0.29	0.32	0.43	0.35	0.15	0.06	0.08	0.11	0.12	0.17	0.22	0.27	0.12	0.07	0.13	0.17	0.08	0.43	0.06	0.21
16	0.03	0.06	0.14	0.20	0.33	0.29	0.33	0.32	0.39	0.58	1.23	1.20	0.90	0.51	0.69	0.62	-0.20	0.00	-0.04	0.04	0.10	0.10	0.10	0.10	1.23	-0.20	0.33
17	0.12	0.13	0.06	0.10	0.10	0.07	0.08	0.09	0.04	-0.02	-0.10	-0.09	-0.12	0.10	0.00	0.12	0.14	0.11	0.25	0.26	0.35	0.30	0.33	0.31	0.35	-0.12	0.11
18	0.31	0.34	0.26	0.28	0.29	0.20	0.34	0.25	0.18	0.09	0.08	0.09	0.07	0.02	0.04	0.07	0.08	0.16	0.09	0.02	-0.01	-0.04	-0.05	-0.01	0.34	-0.05	0.13
19	0.01	0.02	-1.04	-0.64	-0.46	-0.33	-0.23	-0.19	-0.18	-0.17	-0.23	-0.18	-0.11	0.04	0.02	0.10	0.12	0.12	0.15	0.17	0.21	0.16	0.23	0.24	0.24	-1.04	-0.09
20	0.20	0.16	0.09	0.16	0.21	0.23	0.15	0.14	0.21	0.05	-0.38	-0.41	-0.71	-0.32	-0.25	-0.13	0.04	0.01	0.04	0.07	0.04	0.07	0.05	0.05	0.23	-0.71	-0.01
21	0.03	0.07	0.10	0.00	-0.03	0.02	0.05	0.06	-0.07	-0.06	0.00	0.12	-0.09	-0.12	-0.05	-0.02	-0.11	-0.06	0.08	0.17	0.38	0.39	0.50	0.44	0.50	-0.12	0.08
22	0.33	0.22	0.61	0.61	0.54	0.64	0.04	0.01	0.04	-0.09	-0.07	-0.02	0.13	-0.01	0.42	0.35	0.11	-0.02	0.23	0.38	0.24	0.20	0.22	0.30	0.64	-0.09	0.23
23	0.39	0.09	0.24	0.17	0.11	-0.01	-0.10	-0.15	-0.02	-0.41	0.03	0.22	-0.05	-0.11	0.11	0.01	0.10	0.04	0.19	0.78	0.65	0.34	0.31	0.40	0.78	-0.41	0.14
24	0.50	0.50	0.41	0.29	0.37	0.31	0.36	0.21	-0.01	-0.18	-0.15	0.10	0.57	0.83	0.76	0.78	0.71	0.10	0.01	0.28	0.23	0.22	0.40	0.54	0.83	-0.18	0.34
25	0.49	0.49	0.19	0.22	0.15	0.05	-0.10	-0.11	-0.14	-0.43	-0.25	0.03	-0.36	-0.18	-0.31	-0.13	0.14	0.24	0.21	0.24	0.23	0.28	0.38	0.21	0.49	-0.43	0.06
26	0.08	0.11	0.19	0.41	0.44	0.40	0.69	0.33	0.46	0.03	-0.10	-0.21	-0.29	-0.33	-0.36	-0.25	-0.15	-0.02	0.12	0.30	0.09	-0.07	-0.10	-0.10	0.69	-0.36	0.07
27	-0.10	-0.11	-0.10	-0.12	-0.15	-0.09	-0.05	-0.05	-0.18	-0.16	-0.19	-0.21	-0.28	-0.46	-0.07	-0.04	-0.05	-0.01	0.09	0.13	0.14	0.24	0.18	0.14	0.24	-0.46	-0.06
28	0.32	0.29	0.30	0.30	0.27	0.27	0.29	0.23	0.09	0.01	-0.05	-0.05	-0.07	0.02	0.07	0.02	-0.03	0.01	0.03	0.12	0.06	0.22	0.22	0.24	0.32	-0.07	0.13
Max.	**0.55**	**1.05**	**1.13**	**1.13**	**1.25**	**1.08**	**1.09**	**1.00**	**0.70**	**0.74**	**1.23**	**1.20**	**0.90**	**0.83**	**0.76**	**0.78**	**0.71**	**0.30**	**0.28**	**0.78**	**0.65**	**0.51**	**0.50**	**0.54**	**1.25**		
Min.	**-0.10**	**-0.24**	**-1.04**	**-0.64**	**-0.46**	**-0.33**	**-0.23**	**-0.19**	**-0.18**	**-0.43**	**-0.38**	**-0.41**	**-1.01**	**-0.83**	**-0.68**	**-0.68**	**-0.40**	**-0.33**	**-0.20**	**-0.43**	**-0.24**	**-0.20**	**-0.10**	**-0.10**		**-1.04**	
Avg.	**0.20**	**0.21**	**0.21**	**0.20**	**0.22**	**0.25**	**0.24**	**0.21**	**0.16**	**0.10**	**0.08**	**0.06**	**-0.03**	**0.00**	**0.04**	**0.04**	**0.05**	**0.08**	**0.10**	**0.17**	**0.17**	**0.16**	**0.20**	**0.20**			**0.14**

Total Hours in Month 672 **Hours Data Available** 649 **Data Recovery** 96.6%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.26	0.24	0.25	-0.01	-0.14	-0.19	-0.12	-0.11	0.25	-0.23	-0.37	-0.40	-0.39	-0.31	-0.35	-0.35	-0.20	-0.06	-0.15	-0.08	-0.04	-0.05	-0.01	0.03	0.26	-0.40	-0.10
2	0.10	-0.02	-0.07	-0.03	-0.02	-0.05	-0.06	-0.17	-0.18	-0.22	-0.18	-0.15	-0.13	-0.17	-0.22	-0.24	-0.16	-0.18	-0.13	0.00	0.01	0.00	-0.01	0.00	0.10	-0.24	-0.09
3	-0.03	0.00	-0.01	0.03	0.01	-0.01	-0.01	0.00	-0.02	-0.04	-0.04	-0.04	-0.06	-0.04	-0.03	0.08	0.05	-0.08	0.06	0.02	0.04	0.00	-0.06	-0.03	0.08	-0.08	-0.01
4	-0.01	-0.02	-0.03	-0.01	-0.05	-0.03	0.01	0.03	0.05	-0.08	-0.08	-0.12	-0.04	-0.08	0.15	-0.01	0.07	0.09	-0.11	-0.02	0.01	0.01	-0.01	-0.01	0.15	-0.12	-0.01
5	-0.03	-0.05	-0.01	-0.02	-0.05	-0.08	-0.11	-0.06	-0.06	-0.18	-0.79	-0.94	-0.77	-0.65	-0.71	-0.75	-0.67	-0.38	-0.03	0.20	0.23	0.32	0.42	0.44	0.44	-0.94	-0.20
6	0.25	0.15	0.18	0.16	0.18	0.11	0.25	0.18	0.08	-0.09	0.00	0.13	0.20	0.51	0.35	0.33	0.53	0.06	0.19	0.76	0.69	0.44	0.23	-0.03	0.76	-0.09	0.24
7	-0.07	-0.02	0.07	-0.01	0.07	0.05	0.03	0.05	0.11	0.10	0.10	0.08	0.11	0.11	0.23	0.19	0.10	-0.03	0.01	0.11	0.20	0.13	0.08	0.03	0.23	-0.07	0.08
8	0.02	0.06	0.04	0.01	0.04	-0.01	0.00	0.03	-0.09	-0.08	-0.10	-0.23	-0.23	-0.22	-0.30	-0.30	-0.24	-0.20	-0.14	0.04	0.06	0.15	0.13	0.16	0.16	-0.30	-0.06
9	0.09	0.13	0.16	0.30	0.10	-0.02	0.08	0.12	0.04	-0.12	-0.18	-0.23	-0.28	-0.15	-0.24	-0.12	-0.05	-0.04	0.04	0.15	0.20	0.23	0.27	0.32	0.32	-0.28	0.03
10	0.17	0.15	0.15	0.16	0.12	0.08	0.14	0.65	-0.06	0.03	0.04	0.46	0.72	1.22	1.03	1.40	0.80	-0.12	0.04	0.13	0.18	0.20	0.18	0.19	1.40	-0.12	0.33
11	0.18	0.19	0.15	0.13	0.14	0.13	0.07	0.07	-0.01	-0.04	0.05	0.02	-0.05	-0.06	-0.04	0.06	0.08	0.09	0.03	0.04	0.05	0.04	0.06	0.07	0.19	-0.06	0.06
12	0.05	0.06	0.05	0.06	0.06	0.04	0.14	0.12	0.07	0.02	0.14	0.02	0.06	0.03	0.10	0.06	0.00	0.14	0.14	0.16	0.23	0.15	0.23	0.30	0.30	0.00	0.10
13	0.27	0.35	0.45	0.54	0.76	0.71	0.58	0.25	-0.09	0.22	0.50	0.28	0.41	0.66	0.46	0.78	0.46	-0.14	-0.37	-0.11	0.54	0.88	0.94	1.02	1.02	-0.37	0.43
14	1.41	1.18	1.12	1.02	0.69	0.67	0.72	0.51	0.02	0.08	0.01	0.51	0.82	0.77	0.82	0.67	0.92	0.23	0.03	0.13	0.26	0.19	0.26	0.30	1.41	0.01	0.56
15	0.37	0.11	0.07	-0.04	-0.07	0.08	0.17	0.29	-0.10	0.00	0.00	0.87	2.07	1.77	2.24	1.86	0.68	-0.22	-0.17	0.27	0.54	0.53	0.38	0.36	2.24	-0.22	0.50
16	0.46	0.35	0.29	0.30	0.22	0.25	0.22	0.21	0.04	0.05	-0.04	0.08	0.12	0.30	0.33	0.44	0.15	0.03	0.05	0.24	0.34	0.37	0.36	0.40	0.46	-0.04	0.23
17	0.41	0.49	0.55	0.21	0.07	0.05	0.13	0.14	-0.04	-0.11	-0.08	-0.01	-0.06	-0.06	-0.13	-0.17	-0.10	-0.12	-0.07	-0.04	-0.06	0.01	-0.02	0.00	0.55	-0.17	0.04
18	0.00	-0.02	-0.03	0.00	-0.05	-0.04	-0.04	-0.04	-0.17	-0.16	-0.20	-0.21	-0.13	-0.09	-0.13	-0.08	0.08	0.01	-0.04	0.02	0.12	0.17	0.57	0.63	0.63	-0.21	0.01
19	0.27	0.55	0.50	0.43	0.68	0.77	0.68	0.20	-0.22	0.20	0.38	0.54	0.64	0.25	-0.12	0.11	-0.02	-0.16	-0.21	-0.04	0.43	0.33	0.08	0.09	0.77	-0.22	0.26
20	-0.03	-0.03	-0.03	-0.04	-0.03	0.00	0.00	-0.15	0.04	-0.06	0.14	0.62	0.63	0.63	-0.01	0.04	0.03	0.06	-0.03	-0.01	0.13	0.13	0.11	0.13	0.63	-0.15	0.09
21	0.10	0.08	0.06	0.02	0.08	0.08	0.04	-0.03	-0.07	0.01	-0.05	0.08	0.51	0.64	1.24	1.54	0.63	0.15	0.07	0.18	0.27	0.50	0.44	0.35	1.54	-0.07	0.29
22	0.24	0.17	0.19	0.20	0.15	0.17	0.07	-0.13	-0.06	0.08	-0.22	-0.17	-0.27	-0.27	-0.26	-0.30	-0.30	0.06	0.21	0.42	0.46	0.29	0.27	0.26	0.46	-0.30	0.05
23	0.29	0.49	0.46	1.00	1.15	1.14	0.76	0.13	-0.18	-0.22	-0.27	-0.35	-0.64	-0.40	-0.91	-0.87	-0.53	0.09	0.16	0.17	0.13	0.12	0.19	0.17	1.15	-0.91	0.09
24	0.11	0.04	0.00	-0.02	-0.02	0.00	-0.02	0.01	-0.16	-0.26	-0.43	-0.62	-0.84	-0.66	-0.61	-0.41	-0.38	0.08	0.10	0.10	0.20	0.09	0.03	-0.01	0.20	-0.84	-0.15
25	0.00	0.00	-0.03	-0.10	-0.09	-0.12	-0.05	-0.13	-0.19	-0.17	-0.03	0.74	1.05	1.55	1.24	0.79	0.66	0.23	0.03	0.01	0.22	0.20	0.07	0.05	1.55	-0.19	0.25
26	0.15	0.08	0.04	0.04	0.04	0.08	0.04	-0.13	-0.04	-0.11	-0.14	0.58	1.16	1.55	0.89	1.14	1.38	0.32	-0.42	0.07	0.27	0.22	0.25	0.35	1.55	-0.42	0.32
27	0.41	0.29	0.24	0.24	0.14	0.34	0.62	-0.33	0.41	1.01	1.57	1.45	1.03	0.97	0.77	0.47	0.29	0.05	-0.14	-0.25	0.76	1.47	1.36	0.82	1.57	-0.33	0.58
28	1.03	1.08	0.49	0.46	0.65	0.58	0.46	0.24	0.74	0.39	0.46	1.32	0.43	0.65	0.36	0.43	0.57	0.09	-0.02	0.20	0.26	1.00	1.22	0.94	1.32	-0.02	0.58
29	0.73	0.79	0.83	0.46	0.37	0.34	0.35	-0.03	0.14	0.08	0.11	0.67	1.50	1.52	0.39	0.12	0.01	0.10	-0.29	-0.11	0.53	1.37	1.41	0.65	1.52	-0.29	0.50
30	0.39	0.53	0.37	0.17	0.16	0.12	0.05	-0.04	-0.13	-0.18	-0.20	-0.32	-0.08	-0.30	-0.15	-0.19	-0.30	-0.29	-0.31	-0.19	-0.01	0.03	0.12	0.08	0.53	-0.32	-0.03
31	0.12	0.08	0.04	0.06	0.06	0.07	0.08	0.08	0.52	0.69	0.47	0.40	0.21	0.32	-0.04	-0.31	-0.29	-0.08	0.01	0.09	0.06	0.03	0.00	-0.01	0.69	-0.31	0.11
Max.	**1.41**	**1.18**	**1.12**	**1.02**	**1.15**	**1.14**	**0.76**	**0.65**	**0.74**	**1.01**	**1.57**	**1.45**	**2.07**	**1.77**	**2.24**	**1.86**	**1.38**	**0.32**	**0.21**	**0.76**	**0.76**	**1.47**	**1.41**	**1.02**	**2.24**		
Min.	**-0.07**	**-0.05**	**-0.07**	**-0.10**	**-0.14**	**-0.19**	**-0.12**	**-0.33**	**-0.22**	**-0.26**	**-0.79**	**-0.94**	**-0.84**	**-0.66**	**-0.91**	**-0.87**	**-0.67**	**-0.38**	**-0.42**	**-0.25**	**-0.06**	**-0.05**	**-0.06**	**-0.03**		**-0.94**	
Avg.	**0.25**	**0.24**	**0.21**	**0.18**	**0.17**	**0.17**	**0.17**	**0.06**	**0.02**	**0.02**	**0.02**	**0.16**	**0.25**	**0.32**	**0.21**	**0.21**	**0.14**	**-0.01**	**-0.05**	**0.09**	**0.24**	**0.31**	**0.31**	**0.26**			**0.16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.03	-0.02	-0.02	0.02	-0.02	-0.11	-0.10	-0.13	-0.34	-0.44	-0.50	-0.60	-1.03	-1.10	-1.56	-0.13	0.08	-0.01	-0.16	-0.15	0.05	0.25	0.21	0.21	0.25	-1.56	-0.23
2	0.35	0.22	0.13	0.08	0.02	0.08	0.05	0.06	0.03	0.29	0.28	1.07	1.61	1.54	1.48	1.38	0.55	0.13	-0.06	-0.08	0.13	0.04	-0.02	-0.01	1.61	-0.08	0.39
3	-0.04	-0.04	0.03	0.00	0.01	0.00	-0.01	-0.09	-0.22	-0.39	-0.19	-0.25	-0.26	-0.24	-0.48	-0.37	-0.29	-0.15	-0.07	-0.19	0.13	0.02	-0.03	0.04	0.13	-0.48	-0.13
4	0.04	0.15	0.12	0.13	0.16	0.09	0.11	0.07	-0.05	0.13	-0.24	0.59	0.71	0.87	0.72	0.74	0.92	0.76	0.42	0.12	0.02	0.21	0.22	0.29	0.92	-0.24	0.31
5	0.49	0.34	0.18	0.14	0.44	0.50	0.18	0.24	0.17	0.28	0.23	0.12	0.09	0.07	0.10	0.09	0.05	0.23	0.13	0.14	0.10	0.19	0.19	0.21	0.50	0.05	0.20
6	0.26	0.29	0.31	0.19	0.29	0.30	0.13	-0.08	0.07	0.00	0.58	1.00	1.06	1.11	0.60	0.75	0.61	0.22	0.04	0.00	0.37	0.39	0.18	0.19	1.11	-0.08	0.37
7	0.10	0.15	0.11	0.07	0.19	0.32	0.22	0.08	0.28	0.62	0.52	0.35	0.52	1.02	1.28	0.81	0.42	0.35	0.21	-0.07	0.20	0.25	0.23	0.19	1.28	-0.07	0.35
8	0.19	0.18	0.16	0.18	0.16	0.17	0.16	-0.17	-0.16	-0.16	-0.20	0.00	-0.02	-0.27	-0.24	-0.12	-0.20	0.11	-0.17	-0.03	0.01	-0.04	0.06	0.03	0.19	-0.27	-0.02
9	0.08	0.07	0.12	0.11	0.04	0.03	0.02	-0.13	-0.02	0.01	0.22	1.36	1.75	0.63	0.15	0.02	-0.09	-0.17	-0.10	-0.31	0.13	0.39	0.40	0.21	1.75	-0.31	0.20
10	0.18	0.00	0.03	0.18	0.20	0.15	-0.05	0.02	-0.09	-0.08	-0.19	-0.28	-0.21	-0.21	-0.26	-0.16	-0.08	-0.01	-0.02	-0.04	0.06	0.13	0.14	0.18	0.20	-0.28	-0.02
11	0.27	0.15	0.39	0.29	0.44	0.52	0.06	0.00	-0.05	-0.08	-0.09	-0.12	-0.02	0.06	0.30	-0.14	-0.15	-0.06	-0.07	-0.07	-0.03	0.01	0.00	0.02	0.52	-0.15	0.07
12	-0.01	0.01	-0.01	0.01	-0.02	-0.02	-0.04	-0.13	-0.09	-0.04	-0.09	-0.09	-0.04	-0.08	-0.12	-0.03	0.14	0.50	0.21	-0.06	-0.03	0.29	0.22	0.09	0.50	-0.13	0.02
13	0.06	0.09	0.11	0.12	0.13	0.13	0.08	-0.02	0.01	0.01	0.07	0.13	0.00	-0.10	-0.11	-0.13	-0.25	-0.04	0.03	0.02	0.06	0.12	0.17	0.23	0.23	-0.25	0.04
14	0.25	0.27	0.27	0.24	0.26	0.25	0.14	0.10	0.10	-0.01	-0.05	0.05	-0.08	-0.06	-0.04	-0.08	-0.09	0.02	0.02	-0.03	0.05	0.18	0.18	0.22	0.27	-0.09	0.09
15	0.20	0.18	0.22	0.18	0.19	0.31	-0.05	0.08	0.24	0.01	-0.03	0.04	-0.15	0.03	-0.08	0.10	0.13	0.10	0.00	-0.02	-0.03	0.56	0.79	0.32	0.79	-0.15	0.14
16	0.47	0.23	0.44	0.51	0.47	0.24	0.04	-0.01	-0.04	-0.02	-0.05	-0.05	-0.10	-0.15	-0.08	-0.03	-0.03	-0.20	-0.07	-0.14	-0.03	0.02	0.01	-0.04	0.51	-0.20	0.06
17	-0.05	-0.04	-0.05	-0.01	-0.03	-0.01	-0.07	0.01	-0.11	-0.46	-0.23	-0.24	-0.06	0.10	0.03	0.15	0.46	0.01	-0.13	-0.02	0.24	0.30	0.20	0.19	0.46	-0.46	0.01
18	0.18	0.12	0.28	0.33	0.51	0.54	-0.17	-0.01	0.48	1.02	1.68	1.78	1.35	0.60	0.50	0.15	0.59	0.55	-0.28	-0.57	0.03	0.31	0.46	0.53	1.78	-0.57	0.46
19	0.23	0.27	0.25	0.25	0.27	0.24	0.10	0.07	0.37	0.35	0.14	0.51	0.36	0.10	0.98	1.13	0.68	0.43	-0.26	-0.31	-0.29	0.34	0.76	0.36	1.13	-0.31	0.31
20	0.77	0.80	0.30	0.00	-0.07	-0.07	-0.18	-0.11	0.02	-0.05	-0.28	0.18	0.23	0.04	0.02	0.22	-0.40	-0.36	-0.09	-0.21	-0.09	-0.02	0.00	0.00	0.80	-0.40	0.03
21	0.01	-0.01	0.06	0.08	0.04	0.01	-0.06	-0.24	-0.26	-0.35	-0.33	-0.30	-0.35	-0.40	-0.38	-0.24	0.05	-0.01	0.13	-0.14	-0.18	0.06	0.00	-0.02	0.13	-0.40	-0.12
22	-0.01	-0.11	-0.04	-0.03	-0.07	-0.04	-0.16	-0.26	-0.06	-0.19	0.17	0.36	0.50	1.20	0.38	-0.11	0.02	-0.28	-0.38	-0.30	-0.25	0.04	0.25	-0.01	1.20	-0.38	0.03
23	-0.09	-0.09	-0.01	-0.02	-0.02	-0.04	-0.14	-0.12	-0.08	-0.15	-0.71	-0.53	-0.09	-0.58	-0.42	-0.60	-1.06	-1.02	-1.10	-1.58	-1.20	-0.73	-0.76	-0.72	-0.01	-1.58	-0.49
24	-0.28	0.01	0.03	0.15	-0.04	0.07	-0.26	-0.03	-0.37	-0.30	-0.08	0.04	-0.08	-0.22	-0.16	-0.18	-0.14	-0.01	-0.22	-0.18	-0.10	-0.05	0.04	0.12	0.15	-0.37	-0.09
25	0.16	0.22	0.59	0.84	0.60	0.37	-0.08	-0.14	-0.15	-0.11	-0.25	0.02	0.22	0.07	-0.42	-0.43	-0.49	-0.37	-0.38	-0.32	-0.40	0.03	0.10	0.07	0.84	-0.49	-0.01
26	0.03	0.08	0.05	0.03	0.02	-0.05	-0.08	-0.23	-0.09	-0.11	-0.05	-0.06	0.07	0.08	0.09	0.08	0.10	0.16	0.05	0.03	0.08	0.31	0.40	0.37	0.40	-0.23	0.06
27	0.35	0.35	0.37	0.35	0.31	0.20	0.04	0.05	0.00	0.00	0.05	0.13	0.41	0.96	1.07	0.91	0.96	0.71	-0.21	-0.06	-0.38	0.98	0.92	0.71	1.07	-0.38	0.38
28	0.60	0.55	0.52	0.43	0.38	0.31	0.05	-0.02	0.07	0.33	0.25	-0.22	0.18	0.51	0.24	0.80	0.40	0.39	-0.10	-0.33	-0.04	0.83	0.95	1.02	1.02	-0.33	0.34
29	1.00	0.76	0.32	0.30	0.28	0.14	0.06	0.17	-0.05	-0.07	-0.03	0.23	0.41	0.35	0.30	0.24	0.13	0.17	-0.10	-0.15	-0.04	0.31	0.47	0.55	1.00	-0.15	0.24
30	0.50	0.58	0.47	0.62	0.61	0.15	-0.06	-0.23	-0.14	-0.33	-0.55	0.06	0.26	0.03	-0.39	-0.44	0.14	0.01	-0.32	-0.13	-0.08	0.14	0.27	0.19	0.62	-0.55	0.06
Max.	**1.00**	**0.80**	**0.59**	**0.84**	**0.61**	**0.54**	**0.22**	**0.24**	**0.48**	**1.02**	**1.68**	**1.78**	**1.75**	**1.54**	**1.48**	**1.38**	**0.96**	**0.76**	**0.42**	**0.14**	**0.37**	**0.98**	**0.95**	**1.02**	**1.78**		
Min.	**-0.28**	**-0.11**	**-0.05**	**-0.03**	**-0.07**	**-0.11**	**-0.26**	**-0.26**	**-0.37**	**-0.46**	**-0.71**	**-0.60**	**-1.03**	**-1.10**	**-1.56**	**-0.60**	**-1.06**	**-1.02**	**-1.10**	**-1.58**	**-1.20**	**-0.73**	**-0.76**	**-0.72**		**-1.58**	
Avg.	**0.21**	**0.19**	**0.19**	**0.19**	**0.19**	**0.16**	**0.00**	**-0.04**	**-0.02**	**-0.01**	**0.00**	**0.18**	**0.24**	**0.20**	**0.12**	**0.15**	**0.11**	**0.07**	**-0.10**	**-0.17**	**-0.05**	**0.19**	**0.23**	**0.19**			**0.10**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.23	0.26	0.26	0.17	0.20	0.13	0.07	-0.05	-0.04	-0.09	-0.01	-0.11	-0.18	-0.15	-0.13	-0.04	0.09	0.12	0.16	0.11	0.21	0.15	0.14	0.12	0.26	-0.18	0.07
2	0.12	0.11	0.13	0.14	0.12	0.08	-0.02	-0.03	-0.03	-0.17	-0.16	-0.16	-0.16	-0.30	-0.13	-0.11	-0.04	-0.03	0.05	0.05	0.03	0.14	0.17	0.29	0.29	-0.30	0.00
3	0.32	0.33	0.30	0.32	0.30	0.19	0.03	-0.11	-0.10	-0.22	-0.30	-0.36	-0.29	-0.23	-0.07	0.01	0.05	-0.01	-0.07	0.15	0.11	0.32	0.28	0.23	0.33	-0.36	0.05
4	0.21	0.16	0.22	0.27	0.41	0.16	0.10	-0.34	-0.18	-0.06	-0.18	0.01	0.10	-0.05	0.03	-0.17	-0.12	-0.06	-0.09	-0.10	-0.04	0.14	0.20	0.18	0.41	-0.34	0.03
5	0.21	0.15	0.15	0.08	0.22	0.25	0.16	0.18	-0.11	-0.17	-0.17	-0.21	-0.23	-0.14	-0.05	-0.24	-0.25	-0.24	-0.36	-0.16	-0.08	-0.03	0.02	-0.05	0.25	-0.36	-0.04
6	-0.19	-0.05	0.04	0.08	-0.02	-0.06	-0.14	-0.12	-0.09	-0.09	-0.19	0.15	-0.04	-0.43	-0.91	-1.43	-1.27	-0.96	-0.80	-0.63	-0.51	-0.44	-0.31	-0.15	0.15	-1.43	-0.36
7	-0.04	0.03	0.04	0.02	0.02	-0.01	-0.05	-0.05	-0.07	-0.13	-0.17	-0.19	-0.15	-0.24	-0.08	-0.32	-0.39	-0.41	-0.15	-0.06	-0.07	-0.03	0.08	0.15	0.15	-0.41	-0.10
8	0.22	0.24	0.30	0.42	0.79	-0.03	-0.09	-0.22	-0.31	-0.16	-0.14	-0.40	-0.37	-0.24	-0.28	-0.10	-0.17	-0.12	-0.11	0.00	-0.13	0.04	0.10	0.07	0.79	-0.40	-0.03
9	0.07	0.10	0.08	0.08	0.09	0.05	0.02	-0.06	0.01	0.02	-0.09	-0.17	-0.21	-0.23	-0.33	-0.26	-0.24	-0.19	-0.15	-0.01	0.07	0.09	0.16	0.15	0.16	-0.33	-0.04
10	0.12	0.12	0.19	0.12	0.19	0.07	-0.16	-0.22	-0.07	0.19	0.25	0.33	-0.03	-0.07	0.49	1.04	0.43	0.00	0.32	0.09	0.06	0.03	0.20	0.10	1.04	-0.22	0.16
11	0.39	0.45	-0.03	-0.04	0.10	-0.01	-0.19	-0.24	-0.35	-0.53	-0.81	-0.57	-0.11	0.09	-0.28	0.02	-0.26	0.01	-0.47	-0.24	-0.25	-0.03	0.08	0.41	0.45	-0.81	-0.12
12	0.59	0.32	0.57	0.67	0.55	-0.10	-0.23	-0.07	-0.25	-0.43	-0.50	-0.87	0.13	-0.54	-0.48	-0.30	-0.23	0.61	-0.19	0.01	-0.08	0.31	0.93	0.83	0.93	-0.87	0.05
13	0.60	0.74	0.97	1.24	0.96	0.05	0.10	0.03	-0.37	-0.63	-0.66	-0.31	-0.31	0.19	0.20	0.63	0.62	0.91	0.09	-0.27	0.09	0.60	1.23	0.96	1.24	-0.66	0.32
14	0.95	0.98	1.39	0.96	0.81	-0.03	-0.12	-0.21	-0.01	-0.51	-0.70	-0.55	-0.17	-0.45	-0.43	-0.40	-0.61	-0.28	-0.39	-0.12	-0.09	-0.03	0.09	0.17	1.39	-0.70	0.01
15	0.17	0.27	0.33	0.54	0.86	-0.11	-0.55	-0.44	-0.13	0.00	-0.06	0.01	-0.67	-0.38	-0.44	-0.28	-0.18	-0.20	-0.23	0.02	-0.09	-0.02	0.30	0.43	0.86	-0.67	-0.04
16	0.48	0.35	0.21	0.19	0.13	0.03	-0.05	-0.09	-0.17	-0.33	-0.51	-0.70	-0.97	-1.18	-1.12	-0.63	-0.55	-0.23	-0.21	-0.13	-0.44	-0.16	0.97	1.15	1.15	-1.18	-0.16
17	1.30	0.96	0.75	0.58	0.56	-0.06	-0.14	-0.21	-0.40	-0.58	-0.43	-1.21	-2.12	-1.06	-1.17	-0.74	-0.39	-0.28	-0.02	0.08	-0.12	-0.02	0.60	0.78	1.30	-2.12	-0.14
18	0.64	0.49	0.80	0.56	0.22	-0.07	0.05	-0.40	0.02	-0.99	-1.45	-1.12	-1.09	-1.21	-1.09	-0.22	-0.26	-0.35	-0.18	-0.04	0.02	0.04	0.15	0.13	0.80	-1.45	-0.22
19	0.10	0.10	0.12	0.18	0.16	0.00	-0.01	0.03	-0.03	-0.26	0.62	-0.24	-0.44	-0.86	-0.22	-0.28	-0.01	0.05	-0.03	-0.16	-0.14	0.10	0.15	0.08	0.62	-0.86	-0.04
20	0.02	0.09	0.16	0.35	0.42	0.25	0.21	-0.13	-0.23	-0.18	-0.23	-0.21	-0.20	-0.27	-0.35	-0.34	-0.34	-0.13	0.08	-0.08	-0.10	0.20	0.67	0.48	0.67	-0.35	0.01
21	0.28	0.24	0.28	0.22	0.16	-0.12	-0.14	-0.15	-0.35	-0.16	-0.25	-0.29	-0.42	-0.29	-0.91	-0.97	-0.79	-0.35	-0.08	-0.08	-0.02	0.00	0.23	0.21	0.28	-0.97	-0.16
22	0.23	0.28	0.25	0.34	0.20	0.03	-0.04	-0.15	-0.21	-0.29	-0.29	0.16	0.06	-0.40	-0.39	-0.38	-0.20	0.02	-0.01	-0.02	0.42	0.51	0.72	1.09	1.09	-0.40	0.08
23	0.74	0.67	1.06	1.22	0.66	0.72	0.68	0.26	1.03	1.72	0.14	0.38	0.19	0.05	0.18	0.25	-0.41	0.44	-0.07	-0.94	-0.27	0.13	0.72	0.80	1.72	-0.94	0.43
24	0.78	0.65	0.78	0.98	1.25	0.16	1.73	1.24	1.75	1.52	1.71	1.17	1.21	0.54	0.97	0.81	0.33	0.25	-0.60	0.24	0.65	0.11	0.94	1.13	1.75	-0.60	0.84
25	1.50	1.07	1.19	1.13	0.47	-0.46	1.53	1.53	1.69	1.33	0.67	2.39	1.73	0.51	0.54	0.58	0.64	1.01	-0.22	-0.80	-0.14	0.28	0.73	0.57	2.39	-0.80	0.81
26	0.75	0.94	0.96	1.01	0.77	0.17	0.22	0.11	-0.22	0.99	1.95	1.12	1.11	2.14	1.67	1.51	1.04	1.14	0.26	-0.39	0.20	0.72	0.95	1.11	2.14	-0.39	0.84
27	1.13	1.19	1.67	1.87	1.38	-0.01	0.13	-0.03	-0.05	-0.02	0.30	2.66	2.31	3.75	1.37	1.65	1.07	1.61	1.61	2.24	1.36	0.16	0.73	0.99	3.75	-0.05	1.21
28	0.86	0.88	1.46	1.60	0.92	0.31	1.15	0.97	1.46	0.47	0.53	-0.46	-0.01	-0.03	-0.13	0.14	0.71	1.33	-0.15	-0.32	-0.24	0.19	0.46	0.55	1.60	-0.46	0.53
29	0.97	1.68	1.84	1.53	0.53	0.93	0.13	-0.17	0.51	0.03	0.50	0.15	0.09	0.36	0.34	-0.41	0.51	0.17	0.10	-0.15	0.17	-0.50	0.57	0.87	1.84	-0.50	0.45
30	0.91	1.12	1.17	0.66	0.27	-0.17	-0.19	-0.16	-0.40	-0.41	-0.05	-0.27	-0.02	0.01	-0.17	0.02	0.15	0.01	-0.06	-0.09	0.17	-0.09	-0.10	0.05	1.17	-0.41	0.10
31	0.08	0.09	0.03	0.11	0.10	0.08	0.02	-0.17	-0.25	0.17	-0.34	-0.23	-0.35	-0.44	-0.32	-0.18	-0.25	-0.05	-0.04	-0.13	-0.12	-0.12	0.00	0.09	0.17	-0.44	-0.09
Max.	**1.50**	**1.68**	**1.84**	**1.87**	**1.38**	**0.93**	**1.73**	**1.53**	**1.75**	**1.72**	**1.95**	**2.66**	**2.31**	**3.75**	**1.67**	**1.65**	**1.07**	**1.61**	**1.61**	**2.24**	**1.36**	**0.72**	**1.23**	**1.15**	**3.75**		
Min.	**-0.19**	**-0.05**	**-0.03**	**-0.04**	**-0.02**	**-0.46**	**-0.55**	**-0.44**	**-0.40**	**-0.99**	**-1.45**	**-1.21**	**-2.12**	**-1.21**	**-1.17**	**-1.43**	**-1.27**	**-0.96**	**-0.80**	**-0.94**	**-0.51**	**-0.50**	**-0.31**	**-0.15**		**-2.12**	
Avg.	**0.48**	**0.48**	**0.57**	**0.57**	**0.44**	**0.08**	**0.14**	**0.02**	**0.07**	**0.00**	**-0.03**	**0.00**	**-0.05**	**-0.05**	**-0.12**	**-0.04**	**-0.04**	**0.12**	**-0.06**	**-0.06**	**0.02**	**0.09**	**0.39**	**0.45**			**0.14**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.25	0.36	0.63	0.43	0.21	0.03	-0.21	-0.14	0.21	0.04	0.58	-0.46	-1.60	-0.99	-1.28	-1.51	-0.97	-0.25	-0.16	-0.36	0.16	0.32	0.57	0.72	0.72	-1.60	-0.14
2	0.46	0.39	0.59	0.80	0.47	0.12	-0.07	-0.27	-0.46	-0.49	-0.71	-0.90	-0.63	-0.31	-1.13	-1.39	-1.08	-0.42	0.18	0.26	0.50	0.69	1.08	2.22	2.22	-1.39	0.00
3	2.33	2.16	2.01	1.05	0.46	0.26	0.04	-0.07	-0.51	-0.93	-0.46	-0.32	-0.73	-1.31	-0.99	-0.81	-0.72	-0.23	0.17	0.28	0.25	0.23	0.35	0.27	2.33	-1.31	0.12
4	0.32	0.26	0.37	0.52	0.25	-0.03	-0.21	-0.38	-0.45	0.37	0.05	-0.73	-0.73	-1.31	-1.40	-1.45	-1.25	-0.61	-0.27	-0.28	-0.17	0.19	1.90	1.84	1.90	-1.45	-0.13
5	1.05	1.00	1.26	2.04	1.18	0.90	-0.07	-0.48	0.18	0.54	-0.14	-0.35	-0.52	-0.78	-0.69	-0.97	-0.93	-0.72	-0.16	-0.19	-0.06	0.17	0.92	1.77	2.04	-0.97	0.21
6	1.31	1.39	1.96	2.44	0.63	0.11	-0.12	0.48	1.38	-0.06	0.08	-0.29	-0.33	-0.08	-0.06	-0.26	-0.25	-0.15	-0.24	-0.14	-0.10	-0.06	0.33	0.65	2.44	-0.33	0.36
7	0.52	0.23	0.12	0.13	0.09	0.03	-0.08	-0.10	0.11	0.01	-0.15	-0.10	-0.07	0.01	-0.06	0.00	0.01	-0.04	-0.12	-0.05	0.08	-0.09	0.03	0.12	0.52	-0.15	0.03
8	0.13	0.33	0.25	0.31	0.29	0.35	0.12	0.13	0.05	0.04	0.00	-0.08	0.05	-0.14	-0.04	0.02	0.10	0.18	0.33	0.21	0.22	0.28	0.20	0.59	0.59	-0.14	0.16
9	0.81	0.86	0.74	0.49	0.43	0.38	0.29	-0.01	0.01	-0.04	-0.07	-0.06	-0.12	-0.03	-0.09	-0.10	-0.01	0.34	-0.06	-0.10	-0.05	0.06	0.03	0.03	0.86	-0.12	0.16
10	0.15	0.06	0.03	0.06	0.12	0.06	-0.03	-0.15	-0.11	-0.08	-0.22	-0.23	-0.03	-0.05	-0.14	-0.06	-0.11	0.04	-0.04	-0.06	-0.04	-0.03	0.06	0.06	0.15	-0.23	-0.03
11	0.10	0.24	0.16	0.30	0.26	-0.01	-0.06	-0.11	-0.07	0.08	0.02	-0.11	-0.14	-0.02	-0.18	-0.21	-0.22	-0.19	-0.08	-0.16	0.03	0.31	0.31	0.20	0.31	-0.22	0.02
12	0.11	0.14	0.10	0.13	0.13	0.00	-0.02	-0.10	-0.16	-0.42	-0.19	-0.16	-0.06	-0.10	-0.08	0.07	0.00	-0.23	-0.13	-0.07	-0.17	-0.29	-0.24	-0.15	0.14	-0.42	-0.08
13	-0.08	-0.09	-0.10	-0.11	-0.17	-0.22	-0.09	-0.15	-0.19	-0.07	-0.14	-0.41	-0.57	-0.85	-0.82	-0.79	-0.39	-0.34	-0.30	-0.36	-0.34	-0.15	0.04	0.03	0.04	-0.85	-0.28
14	0.13	0.14	0.11	0.04	0.01	-0.20	-0.12	-0.13	-0.18	-0.07	-0.05	0.06	-0.08	-0.18	-0.10	0.37	-0.34	-0.63	-0.27	-0.55	-0.44	-0.08	-0.22	-0.17	0.37	-0.63	-0.12
15	-0.19	-0.09	-0.02	0.23	0.45	0.20	0.13	0.21	-0.14	0.15	0.00	-0.07	-0.16	-0.19	-0.24	-0.12	-0.15	0.09	-0.23	0.18	0.17	-0.14	-0.04	0.07	0.45	-0.24	0.00
16	0.06	0.04	0.12	0.16	0.09	-0.06	-0.10	-0.09	-0.01	-0.09	-0.08	0.04	-0.19	-0.39	-0.45	-0.26	-0.09	-0.20	-0.33	-0.52	-0.21	-0.30	-0.11	0.00	0.16	-0.52	-0.12
17	-0.04	0.01	-0.06	-0.04	-0.06	-0.13	-0.19	-0.22	-0.33	-0.46	-0.62	-0.58	-0.39	-0.33	-0.43	-0.41	-0.53	-0.30	-0.30	-0.28	-0.09	-0.01	0.04	-0.01	0.04	-0.62	-0.24
18	-0.04	0.09	0.09	0.08	-0.05	-0.30	-0.27	-0.55	-0.49	-0.37	-0.16	-0.17	-0.30	-0.20	-0.17	-0.31	-0.35	-0.24	-0.25	-0.15	-0.16	0.04	0.14	0.10	0.14	-0.55	-0.17
19	0.06	0.10	0.12	0.20	-0.06	-0.12	-0.09	-0.19	-0.11	0.04	0.01	-0.17	0.04	0.10	-0.16	0.06	0.61	0.19	0.18	-0.07	-0.14	0.08	0.20	0.18	0.61	-0.19	0.04
20	0.70	0.79	0.53	0.28	0.36	0.35	0.12	-0.05	-0.04	-0.12	-0.12	0.00	-0.02	-0.01	-0.15	-0.37	-0.58	-0.36	-0.15	-0.44	-0.27	-0.04	0.31	0.91	0.91	-0.58	0.07
21	1.18	0.78	0.63	1.00	0.45	-0.09	-0.47	-0.79	-1.07	-0.65	0.05	-0.53	-0.66	-0.74	-1.14	-0.94	-0.74	-0.48	0.14	-0.15	-0.01	0.46	0.12	0.45	1.18	-1.14	-0.13
22	0.68	0.12	0.04	0.19	0.45	0.27	-0.01	0.13	0.14	-0.02	-0.04	0.01	0.09	-0.25	-0.24	-0.20	-0.03	-0.13	-0.21	-0.18	-0.17	-0.01	0.08	0.73	0.73	-0.25	0.06
23	0.37	0.23	0.22	0.12	0.34	-0.03	-0.19	-0.36	-0.08	-0.27	-0.39	-0.03	0.10	-0.30	-0.56	-0.66	-0.65	-0.55	-0.28	-0.15	0.34	-0.14	0.34	1.10	1.10	-0.66	-0.06
24	1.28	1.54	1.50	1.22	0.66	0.18	-0.18	-0.51	-0.09	1.04	0.01	-0.37	-0.44	0.01	-0.27	-0.35	-0.34	-0.13	0.35	0.03	0.12	0.46	1.04	1.56	1.56	-0.51	0.35
25	1.20	1.66	1.45	1.65	0.81	0.02	0.00	-0.22	-0.17	-0.07	-0.21	-0.08	-0.58	-1.09	-0.50	-0.61	-0.48	-0.55	-0.17	-0.12	-0.05	0.28	0.15	1.18	1.66	-1.09	0.15
26	1.19	0.95	0.80	0.64	0.23	0.07	-0.14	-0.24	-0.23	-0.07	-0.26	-0.37	-0.35	-0.19	-0.25	0.07	-0.07	0.00	0.07	-0.17	0.07	0.09	0.65	0.78	1.19	-0.37	0.13
27	1.07	1.20	1.03	1.03	0.38	0.18	-0.04	0.72	0.58	0.58	-0.59	-1.03	-1.12	-0.92	-0.88	-0.88	-0.60	-0.29	-0.09	0.02	-0.54	0.11	0.21	0.25	1.20	-1.12	0.02
28	0.22	0.20	0.22	0.22	0.14	0.18	0.08	-0.06	-0.12	-0.40	-0.57	-0.19	-0.49	-0.95	-0.77	-0.66	-0.67	-0.35	0.01	0.07	0.18	0.17	0.22	0.41	0.41	-0.95	-0.12
29	0.37	0.45	0.32	0.29	0.10	0.10	0.09	0.14	-0.34	0.52	0.39	-0.41	0.05	-0.18	-0.26	-0.25	-0.11	-0.02	-0.04	0.00	-0.01	-0.07	0.00	0.03	0.52	-0.41	0.05
30	0.05	0.10	0.18	0.20	0.06	0.00	-0.06	-0.10	-0.16	-0.20	-0.03	-0.12	-0.62	-0.34	-0.45	-0.55	-0.28	-0.21	-0.28	-0.43	-0.09	0.07	0.26	0.40	0.40	-0.62	-0.11
Max.	**2.33**	**2.16**	**2.01**	**2.44**	**1.18**	**0.90**	**0.29**	**0.72**	**1.38**	**1.04**	**0.58**	**0.06**	**0.10**	**0.10**	**-0.04**	**0.37**	**0.61**	**0.34**	**0.35**	**0.28**	**0.50**	**0.69**	**1.90**	**2.22**	**2.44**		
Min.	**-0.19**	**-0.09**	**-0.10**	**-0.11**	**-0.17**	**-0.30**	**-0.47**	**-0.79**	**-1.07**	**-0.93**	**-0.71**	**-1.03**	**-1.60**	**-1.31**	**-1.40**	**-1.51**	**-1.25**	**-0.72**	**-0.33**	**-0.55**	**-0.54**	**-0.30**	**-0.24**	**-0.17**		**-1.60**	
Avg.	**0.53**	**0.52**	**0.51**	**0.54**	**0.29**	**0.09**	**-0.06**	**-0.12**	**-0.10**	**-0.05**	**-0.13**	**-0.27**	**-0.35**	**-0.40**	**-0.47**	**-0.45**	**-0.37**	**-0.23**	**-0.09**	**-0.13**	**-0.03**	**0.09**	**0.30**	**0.54**			**0.01**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.39	0.57	0.45	0.52	0.39	0.05	0.04	-0.28	-0.47	1.38	0.58	-0.42	-0.77	-1.12	-1.16	-1.04	-1.01	-0.84	-0.38	-0.67	0.05	1.17	0.60	0.42	1.38	-1.16	-0.06
2	0.30	0.35	0.49	0.50	0.46	0.27	0.05	-0.29	-0.65	-1.22	-0.27	0.36	0.69	0.39	-0.10	-1.15	-0.16	-0.15	0.10	0.34	0.65	0.66	1.07	0.08	1.07	-1.22	0.12
3	0.08	0.06	-0.09	0.10	0.24	-0.11	-0.23	-0.34	-0.38	-0.80	-0.55	-0.31	-0.32	-0.51	-0.51	-0.38	-0.33	-0.24	-0.09	-0.07	-0.20	0.08	0.19	0.99	0.99	-0.80	-0.15
4	1.16	1.19	1.11	1.20	0.73	0.45	-0.05	0.45	1.21	-0.04	-0.03	-0.36	-0.61	-0.36	-0.39	-0.42	-0.40	-0.12	-0.24	-0.20	-0.16	-0.18	0.06	0.45	1.21	-0.61	0.19
5	0.60	0.42	0.01	-0.28	-0.17	-0.17	0.00	-0.23	-0.30	-0.37	-0.32	-0.27	-0.23	-0.24	-0.32	-0.34	-0.29	-0.28	-0.33	-0.22	-0.11	-0.16	-0.17	-0.16	0.60	-0.37	-0.16
6	-0.11	0.03	0.10	0.06	-0.08	-0.17	-0.16	-0.24	-0.37	-0.38	-0.03	-0.09	-0.03	-0.07	-0.22	-0.24	-0.23	-0.24	-0.15	-0.05	-0.05	-0.12	-0.09	-0.07	0.10	-0.38	-0.12
7	-0.06	-0.05	0.01	0.00	0.00	-0.02	-0.12	-0.17	-0.14	-0.20	-0.28	-0.32	-0.37	-0.18	-0.19	-0.31	-0.29	-0.26	-0.12	-0.25	-0.15	-0.16	-0.11	-0.08	0.01	-0.37	-0.16
8	-0.04	0.06	0.14	0.24	0.22	-0.10	-0.31	-0.23	-0.37	-0.57	-0.55	-0.42	-0.43	-0.51	-0.41	0.13	-0.66	-0.21	-0.28	-0.02	-0.05	0.08	0.70	0.71	0.71	-0.66	-0.12
9	0.84	0.69	0.83	0.78	0.72	0.18	-0.05	-0.41	0.98	0.95	0.42	-0.13	-0.25	-0.31	-0.16	0.09	-0.42	0.64	0.28	-0.03	-0.09	-0.05	-0.05	-0.07	0.98	-0.42	0.23
10	-0.06	-0.06	-0.02	0.07	0.19	0.10	-0.06	0.08	0.02	0.08	-0.05	-0.07	-0.23	-0.03	0.08	-0.05	-0.01	0.04	0.03	-0.09	-0.07	-0.10	-0.05	-0.11	0.19	-0.23	-0.01
11	-0.11	-0.12	-0.06	0.03	0.04	-0.05	-0.11	-0.17	-0.20	-0.56	0.24	0.28	0.28	0.33	-0.02	-0.10	-0.11	0.38	0.25	0.03	0.07	0.57	0.74	1.05	1.05	-0.56	0.11
12	1.26	1.51	1.68	1.79	1.03	0.16	-0.01	-0.37	-0.71	-0.58	0.80	0.64	-0.24	-0.14	-0.22	0.12	0.58	0.09	0.04	0.15	0.35	-0.01	0.77	0.90	1.79	-0.71	0.40
13	1.28	0.46	0.49	0.97	0.75	0.29	0.22	0.25	0.01	-0.11	-0.20	-0.10	-0.14	-0.23	-0.08	-0.31	-0.19	-0.09	0.02	0.05	0.12	0.04	0.00	0.07	1.28	-0.31	0.15
14	0.06	0.03	-0.02	0.03	0.03	0.06	-0.03	0.02	-0.13	-0.19	-0.33	-0.41	-0.39	-0.12	-0.27	-0.13	-0.20	-0.13	-0.09	0.07	0.09	0.10	0.12	0.15	0.15	-0.41	-0.07
15	0.11	0.12	0.10	0.14	0.08	-0.10	0.01	-0.10	-0.23	-0.46	-0.63	-0.47	-0.52	-0.68	-1.03	-0.54	-0.24	0.02	0.09	-0.07	-0.05	-0.04	0.02	0.19	0.19	-1.03	-0.18
16	0.37	0.37	0.33	0.26	0.24	0.14	-0.15	-0.05	-0.18	-0.14	-0.08	-0.03	-0.05	-0.07	-0.22	-0.17	-0.01	-0.09	-0.03	0.09	0.13	0.08	0.18	0.24	0.37	-0.22	0.05
17	0.20	0.06	0.26	0.32	0.25	0.26	0.13	0.15	-0.05	0.05	0.01	0.02	0.16	0.08	-0.21	-0.16	-0.26	-0.21	-0.03	-0.09	-0.08	-0.11	0.02	0.18	0.32	-0.26	0.04
18	0.30	0.23	0.15	0.18	0.23	-0.01	-0.07	-0.07	-0.12	-0.20	-0.12	-0.14	-0.15	-0.31	-0.38	-0.39	-0.26	-0.07	0.14	-0.01	0.21	0.55	0.37	0.69	0.69	-0.39	0.03
19	0.52	0.53	0.41	0.44	0.33	0.37	0.12	0.17	0.12	-0.12	-0.01	0.05	0.07	-0.05	0.03	0.05	0.07	-0.02	0.08	0.18	0.73	0.51	1.01	0.99	1.01	-0.12	0.27
20	0.92	1.85	1.74	1.24	0.57	0.80	0.07	0.21	0.22	0.23	0.22	0.15	0.31	0.13	0.22	0.15	0.27	0.39	0.24	0.50	0.77	-0.05	0.02	0.15	1.85	-0.05	0.47
21	0.20	0.77	0.68	0.76	0.57	0.24	0.36	0.47	0.32	0.19	0.17	0.20	0.15	0.16	0.09	0.69	0.12	0.07	0.02	-0.14	0.45	0.34	0.09	0.22	0.77	-0.14	0.30
22	0.13	-0.01	0.05	0.14	0.23	0.28	0.26	0.19	0.15	-0.08	-0.03	-0.04	-0.05	0.06	0.09	-0.15	-0.32	-0.62	-0.82	-0.28	-0.18	-0.14	0.04	0.19	0.28	-0.82	-0.04
23	0.27	0.26	0.26	0.33	-0.03	0.18	0.20	-0.11	-0.09	-0.11	0.00	0.12	0.05	-0.02	-0.03	0.13	0.30	-0.26	-0.27	0.05	0.17	0.27	0.55	0.81	0.81	-0.27	0.13
24	0.96	0.78	0.61	0.54	0.54	0.66	0.26	0.28	0.21	0.23	0.03	0.25	0.06	0.37	0.11	-0.08	-0.14	-0.11	-0.21	-0.19	-0.07	-0.16	0.03	0.47	0.96	-0.21	0.23
25	0.29	0.25	0.27	0.28	0.18	0.02	-0.20	-0.33	-0.31	-0.26	-0.14	-0.07	-0.14	-0.33	-0.44	-0.48	-0.41	0.12	-0.06	-0.01	0.23	0.89	0.75	0.90	0.90	-0.48	0.04
26	0.68	0.75	1.12	1.23	1.48	0.32	-0.15	-0.19	0.09	0.01	-0.21	-0.15	-0.20	-0.14	-0.23	-0.09	-0.13	0.05	0.07	0.06	0.10	0.11	0.24	0.25	1.48	-0.23	0.21
27	0.29	0.26	0.27	0.27	0.30	0.23	0.19	-0.22	-0.66	-0.81	-0.52	0.16	-0.24	0.96	-0.02	0.29	-0.19	-0.23	-0.19	0.01	0.05	1.20	1.37	1.14	1.37	-0.81	0.16
28	0.48	0.32	0.17	0.43	0.38	0.14	-0.02	-0.27	-0.65	-0.89	0.12	-0.45	-0.64	-1.24	-0.92	-0.52	-0.28	-0.26	-0.26	-0.34	-0.30	0.30	0.13	0.03	0.48	-1.24	-0.19
29	0.17	0.15	0.12	0.11	-0.06	-0.07	0.03	-0.34	-0.34	-0.15	-0.20	-0.37	-0.74	-0.72	-0.54	-0.31	-0.20	-0.07	-0.16	-0.13	0.01	-0.05	0.03	0.15	0.17	-0.74	-0.15
30	0.19	0.18	0.22	0.03	0.04	0.07	-0.02	-0.14	-0.19	-0.29	-0.18	-0.10	-0.13	-0.10	0.00	-0.13	-0.35	-0.18	0.05	0.10	0.38	0.83	1.48	0.87	1.48	-0.35	0.11
31	0.28	0.27	0.27	0.31	0.34	0.34	0.28	0.21	0.10	-0.10	-0.24	-0.36	-0.43	-0.54	-0.19	-0.16	0.04	-0.02	0.03	0.01	0.06	0.07	0.18	0.10	0.34	-0.54	0.03
Max.	**1.28**	**1.85**	**1.74**	**1.79**	**1.48**	**0.80**	**0.36**	**0.47**	**1.21**	**1.38**	**0.80**	**0.64**	**0.69**	**0.96**	**0.22**	**0.69**	**0.58**	**0.64**	**0.28**	**0.50**	**0.77**	**1.20**	**1.48**	**1.14**	**1.85**		
Min.	**-0.11**	**-0.12**	**-0.09**	**-0.28**	**-0.17**	**-0.17**	**-0.31**	**-0.41**	**-0.71**	**-1.22**	**-0.63**	**-0.47**	**-0.77**	**-1.24**	**-1.16**	**-1.15**	**-1.01**	**-0.84**	**-0.82**	**-0.67**	**-0.30**	**-0.18**	**-0.17**	**-0.16**		**-1.24**	
Avg.	**0.39**	**0.40**	**0.39**	**0.42**	**0.33**	**0.16**	**0.02**	**-0.07**	**-0.10**	**-0.18**	**-0.08**	**-0.09**	**-0.18**	**-0.18**	**-0.25**	**-0.19**	**-0.18**	**-0.09**	**-0.07**	**-0.04**	**0.10**	**0.21**	**0.33**	**0.38**			**0.06**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.11	0.09	0.07	0.10	0.12	0.08	0.10	0.06	0.03	-0.19	-0.11	-0.05	-0.14	-0.20	-0.24	-0.23	-0.21	-0.08	-0.06	0.16	0.03	0.13	0.14	0.16	0.16	-0.24	-0.01
2	0.15	-0.01	-0.10	-0.07	-0.10	-0.08	-0.36	-0.58	-0.39	-0.31	-0.37	-0.20	-0.24	-0.03	-0.22	-0.09	-0.17	0.10	0.19	0.45	0.56	0.72	0.24	0.20	0.72	-0.58	-0.03
3	0.79	1.13	1.08	0.98	0.71	0.53	0.46	0.49	0.20	0.22	0.29	0.26	0.25	0.28	0.32	0.27	0.13	0.14	0.16	0.15	0.23	0.28	0.35	0.34	1.13	0.13	0.42
4	0.41	0.79	0.97	0.64	0.57	0.60	0.28	0.09	0.19	0.16	-0.01	-0.49	-0.28	-0.35	-0.34	-0.24	-0.67	-0.45	-0.33	-0.23	0.11	0.49	0.90	0.64	0.97	-0.67	0.14
5	0.60	0.57	0.83	1.05	1.18	0.96	0.35	-0.60	-1.08	-1.12	-0.76	-0.90	-1.32	-1.20	-1.06	-0.85	-1.54	-0.50	0.17	0.25	0.35	0.36	0.35	0.40	1.18	-1.54	-0.15
6	0.47	0.59	0.60	0.64	0.68	0.96	0.66	-0.43	-1.10	-1.68	-1.47	-1.16	-1.70	-2.55	-2.03	-0.83	-0.65	-0.14	0.29	0.28	0.27	0.29	0.41	0.41	0.96	-2.55	-0.30
7	0.38	0.38	0.38	0.47	0.47	0.52	0.32	-0.20	-0.87	-1.08	-1.48	-1.75	-0.92	-0.78	-0.60	-0.56	-0.41	-0.12	0.15	0.19	0.22	0.24	0.20	0.19	0.52	-1.75	-0.19
8	0.20	0.20	0.23	0.21	0.20	0.21	0.19	0.01	-0.63	-1.09	-1.15	-1.00	-2.18	-2.65	-2.22	-1.94	-1.57	-0.91	-0.44	0.09	0.23	0.24	0.21	0.24	0.24	-2.65	-0.56
9	0.31	0.29	0.37	0.43	0.29	0.29	0.21	0.11	-0.05	-0.18	-0.90	-0.84	-0.67	-0.72	-0.94	-0.54	-0.32	-0.24	-0.11	-0.03	0.01	-0.12	-0.14	-0.09	0.43	-0.94	-0.15
10	0.11	0.15	0.14	0.27	0.09	0.05	0.21	0.23	0.13	-0.20	-0.25	-0.02	-0.05	-0.07	-0.07	-0.12	-0.32	-0.35	-0.36	-0.42	-0.60	0.03	0.25	0.49	0.49	-0.60	-0.03
11	0.36	0.26	0.36	0.21	0.08	0.29	-0.49	-0.48	-0.40	-0.31	-0.29	-0.84	-0.50	-0.55	-0.58	-0.55	-0.57	-0.47	-0.26	-0.21	-0.17	0.53	0.66	0.56	0.66	-0.84	-0.14
12	0.45	0.46	0.41	0.36	0.37	0.39	0.15	-0.16	-0.62	-0.76	-0.97	-1.66	-2.09	-1.04	-0.64	-0.91	-0.88	-0.83	0.77	0.62	0.78	1.20	1.21	0.47	1.21	-2.09	-0.12
13	0.25	0.17	0.14	0.16	0.14	0.11	0.12	0.07	0.00	-0.09	-0.26	-0.32	-0.33	-0.43	-0.19	-0.21	-0.16	-0.23	-0.14	-0.02	0.13	0.37	0.40	0.52	0.52	-0.43	0.01
14	0.64	0.61	0.64	0.67	0.63	0.55	0.20	-0.13	-0.30	-0.17	-0.11	-0.42	-0.74	-0.65	-0.40	-0.79	-0.90	-1.10	-0.83	-0.70	-0.11	0.03	0.04	0.09	0.67	-1.10	-0.14
15	0.01	0.05	0.15	0.12	0.16	0.21	0.15	-0.22	-0.49	-0.45	-0.13	-0.08	-0.15	-0.08	0.07	-0.03	-0.01	-0.05	0.07	0.09	0.28	0.25	0.10	-0.06	0.28	-0.49	0.00
16	-0.09	-0.06	-0.02	0.02	0.00	0.01	-0.05	-0.28	-0.44	-0.31	-0.41	-0.65	-0.73	-0.63	-0.88	-1.13	-0.88	-0.66	-0.51	-0.42	-0.32	-0.13	-0.10	-0.11	0.02	-1.13	-0.37
17	-0.07	-0.07	-0.08	-0.05	-0.06	-0.08	-0.11	-0.20	-0.30	-0.43	-0.67	-0.77	-1.30	-1.23	-1.02	-1.31	-0.04	0.02	0.30	0.42	0.45	0.38	0.43	0.40	0.45	-1.31	-0.22
18	0.40	0.37	0.33	0.30	0.36	0.52	0.37	0.36	0.12	-0.04	-0.24	-0.47	-0.43	-0.35	-0.23	-0.22	-0.40	-0.15	-0.25	-0.19	-0.12	-0.02	0.00	0.03	0.52	-0.47	0.00
19	-0.01	0.27	0.32	0.38	0.74	0.39	0.26	0.24	-0.01	-0.04	0.12	-0.21	-0.47	-0.13	-0.41	-0.30	-0.50	-0.35	0.28	0.65	0.85	0.64	0.35	0.27	0.85	-0.50	0.14
20	0.39	0.32	0.52	0.45	0.16	0.08	0.10	0.04	-0.15	-0.63	-0.49	-0.78	-0.38	-0.42	-0.67	-0.79	-1.45	-0.73	0.77	1.11	1.18	1.17	1.88	2.11	2.11	-1.45	0.16
21	1.67	1.19	1.84	2.03	1.93	1.68	1.96	1.12	-0.27							0.78	-0.57	-0.15	0.26	0.43	0.36	0.32	0.34	0.26	2.03	-0.57	0.84
22	0.09	0.18	0.16	0.12	0.15	0.10	0.09	0.06	0.05	-0.03	-0.30	-0.06	-0.15	0.15	-0.19	-0.01	-0.52	0.11	0.27	0.32	0.39	0.48	0.47	0.38	0.48	-0.52	0.10
23	0.74	1.31	0.61	0.71	0.83	0.82	0.18	-0.50	-1.00	-1.88	-1.60	-1.70	-1.21	-1.51	-1.69	-1.45	-1.47	-0.51	0.27	0.38	0.47	0.22	0.19	0.27	1.31	-1.88	-0.31
24	0.33	0.29	0.22	0.26	0.25	0.23	0.38	0.48	0.43	0.41	0.32	0.30	0.33	0.24	0.29	0.14	0.02	0.05	0.11	0.37	0.49	0.37	0.42	0.47	0.49	0.02	0.30
25	0.65	0.85	0.98	1.27	1.39	1.45	0.89	0.28	-0.04	-0.39	-1.14	-1.40	-1.40	-1.03	-0.72	-0.81	-0.97	0.12	0.68	0.86	1.35	1.26	1.11	0.65	1.45	-1.40	0.25
26	0.51	0.38	0.23	-0.04	0.19	0.41	0.29	0.31	0.40	0.42	0.36	0.28	0.27	0.22	0.25	0.39	0.31	0.29	0.46	0.46	0.29	0.34	0.39	0.49	0.51	-0.04	0.33
27	0.62	0.65	0.77	0.68	0.60	0.56	0.38	-0.37	-0.75	-1.11	-1.23	-1.16	-1.54	-1.07	-0.92	-0.47	-0.58	0.07	0.27	0.31	0.48	0.57	0.74	0.89	0.89	-1.54	-0.07
28	0.99	0.72	0.19	0.17	0.13	0.10	0.08	0.01	-0.12	-0.25	-0.39	-0.58	-0.62	-0.94	-1.44	-0.79	-0.23	0.15	0.16	0.18	0.15	0.18	0.23	0.30	0.99	-1.44	-0.07
29	0.20	0.18	0.21	0.24	0.30	0.36	0.29	-0.19	-0.73	-1.03	-1.35	-1.51	-1.59	-1.52	-1.17	-0.70	-0.52	-0.22	-0.29	0.15	0.38	0.43	0.59	0.40	0.59	-1.59	-0.30
30	0.55	0.32	0.30	0.41	0.26	0.11	0.16	0.28	0.35	0.32	0.36	0.32	0.31	0.28	0.28	0.25	0.20	0.31	0.36	0.33	0.35	0.39	0.49	0.62	0.62	0.11	0.33
31	0.68	0.57	0.63	0.79	0.53	0.47	0.34	0.25	0.23	-0.03	-0.28	-0.55	-0.60	-0.36	-0.14	-0.10	0.08	0.28	0.22	0.20	0.19	0.33	0.53	0.74	0.79	-0.60	0.21
Max.	**1.67**	**1.31**	**1.84**	**2.03**	**1.93**	**1.68**	**1.96**	**1.12**	**0.43**	**0.42**	**0.36**	**0.32**	**0.33**	**0.28**	**0.32**	**0.78**	**0.31**	**0.31**	**0.77**	**1.11**	**1.35**	**1.26**	**1.88**	**2.11**	**2.11**		
Min.	**-0.09**	**-0.07**	**-0.10**	**-0.07**	**-0.10**	**-0.08**	**-0.49**	**-0.60**	**-1.10**	**-1.88**	**-1.60**	**-1.75**	**-2.18**	**-2.65**	**-2.22**	**-1.94**	**-1.57**	**-1.10**	**-0.83**	**-0.70**	**-0.60**	**-0.13**	**-0.14**	**-0.11**		**-2.65**	
Avg.	**0.42**	**0.43**	**0.43**	**0.45**	**0.43**	**0.42**	**0.26**	**0.00**	**-0.25**	**-0.41**	**-0.50**	**-0.61**	**-0.69**	**-0.64**	**-0.59**	**-0.46**	**-0.51**	**-0.21**	**0.08**	**0.20**	**0.30**	**0.39**	**0.43**	**0.41**			**0.00**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.00	0.84	0.58	0.70	1.09	1.54	0.70	-0.06	-0.48	-0.78	-1.07	-0.33	-0.49	-0.87	-1.40	-1.41	-1.44	-0.10	0.23	0.53	1.17	1.44	1.44	1.75	1.75	-1.44	0.19
2	1.49	1.22	1.57	1.60	1.78	1.35	0.85	0.17	-0.71	-0.87	-0.81	-0.77	-0.61	-0.47	-0.27	-0.05	0.01	0.26	0.28	0.29	0.49	0.44	0.99	0.67	1.78	-0.87	0.37
3	0.27	0.44	0.44	0.40	0.48	0.46	0.52	0.06	-0.07	-1.13	-0.45	-0.66	-0.58	-0.55	-1.15	-1.44	-1.20	-0.06	0.11	0.45	0.96	1.13	1.35	0.97	1.35	-1.44	0.03
4	1.20	0.96	0.95	1.28	0.69	0.54	0.53	0.22	-0.20	-0.60	-0.62	-0.85	-0.98	-0.72	-0.56	-0.62	-0.28	-0.18	-0.08	-0.02	-0.07	0.01	0.09	0.19	1.28	-0.98	0.04
5	0.11	0.24	0.31	0.42	0.57	0.55	0.68	0.51	0.22	0.10	-0.06	-0.46	-0.47	-0.49	-0.10	-0.09	-0.05	0.22	0.42	0.44	0.52	0.63	0.96	0.81	0.96	-0.49	0.25
6	0.45	0.89	0.71	1.16	1.49	1.15	0.97	0.36	-0.38	-0.81	-1.19	-1.06	-0.94	-0.50	-0.43	-0.53	-0.66	0.05	0.23	0.46	0.41	0.24	0.20	0.24	1.49	-1.19	0.10
7	0.26	0.41	0.72	1.06	0.69	0.58	0.49	0.12	0.18	-0.08	-0.16	-0.39	-0.47	-0.34	-0.10	-0.04	0.04	0.10	0.05	0.01	0.08	0.25	0.26	0.27	1.06	-0.47	0.17
8	0.15	0.08	0.02	0.03	0.26	0.42	0.34	0.33	0.25	0.16	0.19	0.26	0.31	0.21	0.13	0.12	0.11	0.28	0.37	0.44	0.10	0.18	0.20	0.49	0.49	0.02	0.23
9	0.51	0.22	0.24	0.68	0.59	0.62	0.53	0.43	0.26	0.21	0.44	0.39	0.21	0.14	0.10	0.18	0.46	0.46	0.34	0.59	0.30	0.61	0.91	0.56	0.91	0.10	0.41
10	0.27	0.34	0.44	0.36	0.31	0.30	0.21	0.29	0.14	-0.24	-0.35	-0.34	-0.43	-0.36	-0.24	-0.26	-0.15	0.05	1.26	0.66	0.66	1.13	0.60	0.63	1.26	-0.43	0.22
11	0.53	0.55	0.94	1.16	1.17	1.16	0.99	0.91	-0.38	-0.48	-0.70	-1.13	-1.22	-1.39	-1.20	-1.01	-0.91	0.02	0.55	1.53	1.67	1.66	1.54	1.27	1.67	-1.39	0.30
12	1.27	1.48	1.68	1.55	1.38	1.37	1.37	0.57	-0.42	-0.90	-0.96	-1.18	-1.48	-1.35	-1.46	-1.45	-1.14	0.67	0.79	0.81	1.30	1.04	0.98	1.07	1.68	-1.48	0.29
13	1.35	1.97	2.10	1.44	1.13	1.48	1.33	0.52	-0.13	-0.60	-0.56	-0.66	-0.83	-1.00	-1.12	-0.44	-0.16	0.07	0.50	0.39	-0.26	-0.08	0.12	0.13	2.10	-1.12	0.28
14	0.21	0.71	0.50	0.37	0.65	0.56	0.82	0.71	0.57	0.49	0.34	0.15	0.11	0.06	0.10	-0.03	-0.01	0.03	0.07	0.41	0.78	0.88	0.96	0.80	0.96	-0.03	0.43
15	0.85	0.71	0.67	0.60	0.79	1.20	1.34	0.76	0.31	0.29	0.22	0.22	0.19	0.09	0.05	0.05	0.11	0.24	0.25	0.22	0.50	0.73	0.86	0.89	1.34	0.05	0.50
16	0.73	0.59	0.62	0.71	0.69	0.73	0.47	0.73	0.56	0.49	0.32	0.37	0.38	0.48	0.23	0.26	0.52	0.69	0.71	0.53	0.51	0.42	0.38	0.43	0.73	0.23	0.52
17	0.56	0.52	0.41	0.47	0.29	0.38	0.47	0.55	0.33	-0.11	-0.42	-0.83	-0.48	-0.66	-0.79	-0.75	-0.35	-0.11	0.20	0.51	0.81	1.16	1.41	1.68	1.68	-0.83	0.22
18	1.01	0.80	0.93	0.62	0.33	0.62	0.58	0.46	0.50	0.27	0.14	0.18	0.31	0.25	0.26	0.28	0.32	0.40	0.41	0.59	1.00	0.97	0.96	1.01	1.01	0.14	0.55
19	1.05	0.99	1.00	0.92	0.93	0.81	0.84	0.86	0.34	0.25	0.18	0.22	0.27	0.31	0.30	0.22	0.32	0.46	0.60	0.40	0.23	0.25	0.43	0.38	1.05	0.18	0.52
20	0.26	0.30	0.67	0.77	0.77	0.71	0.53	0.33	0.24	0.17	0.06	-0.09	-0.31	-1.01	-0.99	-0.48	-0.20	0.48	0.38	0.45	0.29	0.34	0.26	0.25	0.77	-1.01	0.17
21	0.27	0.43	1.05	0.88	0.41	0.83	0.61	0.47	0.29	0.52	0.39	0.40	0.33	0.30	0.36	0.25	0.22	0.16	0.22	0.47	0.51	0.59	0.76	1.03	1.05	0.16	0.49
22	1.04	0.76	1.12	1.34	1.26	1.27	1.26	0.71	0.22	0.08	0.09	-0.16	0.01	0.00	0.02	-0.02	0.19	0.17	0.29	0.05	0.14	0.11	0.02	0.17	1.34	-0.16	0.42
23	0.24	0.17	0.15	0.17	0.20	0.17	0.15	0.07	0.10	-0.14	-0.32	-0.39	-0.65	-0.37	-0.36	-0.11	-0.10	0.68	0.69	1.37	1.35	1.47	0.95	0.70	1.47	-0.65	0.26
24	0.57	0.47	0.25	0.42	0.32	0.75	0.85	0.80	-0.14	-0.54	-0.94	-0.98	-1.39	-1.56	-1.63	-1.35	-0.60	0.50	0.38	0.27	0.35	0.33	0.69	0.99	0.99	-1.63	-0.05
25	1.06	1.10	1.13	1.01	1.01	0.98	0.91	0.78	-0.14	-0.28	-0.35	-0.22	-0.17	-0.12	-0.53	-0.43	0.06	0.25	0.38	0.40	0.46	0.40	0.42	0.42	1.13	-0.53	0.36
26	0.28	0.29	0.27	0.38	0.45	0.38	0.36	0.18	0.27	0.33	0.33	0.33	0.34	0.41	0.34	0.40	0.44	0.36	0.01	0.01	-0.05	0.06	0.07	0.03	0.45	-0.05	0.26
27	0.01	0.05	0.06	0.09	0.17	0.87	1.25	0.58	0.21	0.11	-0.07	-0.35	-0.32	-0.03	-0.15	0.03	-0.02	0.23	0.30	0.23	0.06	-0.02	-0.01	0.01	1.25	-0.35	0.14
28	-0.04	-0.01	0.00	0.07	0.06	0.12	0.24	0.16	-0.04	-0.19	-0.45	-0.61	-0.86	-0.41	-0.34	-0.16	-0.08	0.07	0.14	0.15	0.25	0.27	0.15	0.25	0.27	-0.86	-0.05
29	0.43	0.53	0.76	0.83	0.53	0.75	0.84	0.42	-0.07	-0.27	-0.32	-0.50	-0.83	-0.85	-0.63	-0.45	0.11	0.34	0.37	0.46	0.80	0.88	0.77	0.62	0.88	-0.85	0.23
30	1.03	0.41	0.61	1.04	0.84	0.56	0.42	0.28	-0.21	-0.60	-0.73	-0.98	-0.76	-1.19	-1.22	-0.56	-0.30	0.32	0.51	0.40	0.30	0.22	0.40	0.37	1.04	-1.22	0.05
Max.	**1.49**	**1.97**	**2.10**	**1.60**	**1.78**	**1.54**	**1.37**	**0.91**	**0.57**	**0.52**	**0.44**	**0.40**	**0.38**	**0.48**	**0.36**	**0.40**	**0.52**	**0.69**	**1.26**	**1.53**	**1.67**	**1.66**	**1.54**	**1.75**	**2.10**		
Min.	**-0.04**	**-0.01**	**0.00**	**0.03**	**0.06**	**0.12**	**0.15**	**-0.06**	**-0.71**	**-1.13**	**-1.19**	**-1.18**	**-1.48**	**-1.56**	**-1.63**	**-1.45**	**-1.44**	**-0.18**	**-0.08**	**-0.02**	**-0.26**	**-0.08**	**-0.01**	**0.01**		**-1.63**	
Avg.	**0.61**	**0.61**	**0.70**	**0.75**	**0.71**	**0.77**	**0.71**	**0.44**	**0.05**	**-0.17**	**-0.26**	**-0.35**	**-0.39**	**-0.40**	**-0.43**	**-0.33**	**-0.16**	**0.24**	**0.37**	**0.45**	**0.52**	**0.59**	**0.64**	**0.64**			**0.26**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.44	0.41	0.46	0.39	0.40	0.41	0.32	0.28	0.17	0.12	0.05	0.07	-0.01	0.01	0.03	0.12	0.16	0.24	0.21	0.15	0.69	0.77	0.85	0.85	0.85	-0.01	0.32
2	0.79	1.06	0.95	0.72	0.71	0.62	0.65	0.49	0.65	0.42	0.31	0.31	0.32	0.24	0.35	0.29	0.31	0.24	0.26	0.34	0.50	0.70	0.48	0.30	1.06	0.24	0.50
3	0.20	0.24	0.19	0.24	0.40	0.45	0.56	0.59	0.64	0.63	-0.19	-0.37	-0.70	-0.80	-0.80	-0.56	-0.04	0.24	0.28	0.28	0.57	0.95	0.61	0.30	0.95	-0.80	0.16
4	0.40	0.31	0.42	0.28	0.35	0.38	0.66	0.68	0.80	-0.15	0.12	0.35	0.34	0.35	-0.04	-0.36	0.00	0.62	1.10	1.45	0.75	1.07	1.48	1.27	1.48	-0.36	0.53
5	0.87	0.58	0.28	0.23	0.20	0.36	0.50	0.20	0.19	-0.02	-0.33	-0.53	-0.57	-0.58	-0.59	-0.51	-0.15	0.12	0.13	0.05	0.18	0.33	0.40	0.31	0.87	-0.59	0.07
6	0.41	0.44	1.10	1.13	0.57	0.39	0.29	0.04	0.13	0.05	-0.10	-0.10	0.06	0.06	0.07	0.09	0.15	0.18	0.03	0.03	-0.04	-0.04	-0.10	-0.06	1.13	-0.10	0.20
7	-0.05	-0.03	0.00	-0.02	0.00	0.05	0.05	-0.01	-0.05	0.04	0.07	0.10	0.11	0.08	0.09	0.10	0.06	0.06	0.09	0.04	-0.08	0.06	0.04	-0.05	0.11	-0.08	0.03
8	-0.01	0.04	-0.03	0.05	0.37	0.28	0.18	0.24	0.24	0.17	0.08	0.06	0.01	-0.02	-0.07	-0.06	0.01	0.08	0.33	0.41	0.38	0.31	0.52	0.79	0.79	-0.07	0.18
9	0.97	1.03	0.80	0.71	0.73	0.80	0.72	0.57	0.48	0.61	0.15	0.04	0.01	-0.05	-0.02	0.01	0.07	0.07	0.10	0.04	-0.02	0.05	0.04	0.14	1.03	-0.05	0.33
10	0.08	-0.09	-0.16	-0.20	0.01	0.39	0.31	0.51	0.54	0.09	-0.14	-0.49	-0.60		-0.27	-0.17	-0.09	-0.04	0.03	0.06	0.14	0.10	0.05	0.04	0.54	-0.60	0.00
11	0.14	0.24	0.39	0.28	0.50	1.16	1.33	1.04	0.77	0.53	0.32	0.52	-0.29	-0.57	-0.37	-0.07	0.15	0.56	1.41	1.94	1.02	0.64	0.56	0.43	1.94	-0.57	0.53
12	0.12	0.12	-0.12	-0.16	-0.13	-0.13	-0.10	-0.08	-0.09	-0.15	-0.13	-0.23	-0.32	-0.50	-0.61	-0.43	-0.36	-0.20	-0.16	-0.09	0.01	-0.05	0.00	-0.10	0.12	-0.61	-0.16
13	0.04	-0.07	-0.11	-0.05	0.04	0.06	0.10	0.25	0.32	0.18	0.05	-0.16	-0.31	-0.64	-0.69	-0.74	-0.47	0.01	0.36	1.12	1.69	1.34	1.40	1.53	1.69	-0.74	0.22
14	1.26	1.53	0.45	0.87	0.56	0.59	0.74	0.70	0.23	0.17	0.05	-0.08	-0.30	-0.67	-0.37	-0.17	0.00	0.17	0.24	0.34	0.51	0.16	0.68	0.91	1.53	-0.67	0.36
15	0.83	0.58	0.64	0.61	0.83	1.12	0.73	1.07	1.78	0.97	0.37	0.11	0.10	0.17	0.02	0.08	0.29	0.50	0.89	0.59	0.51	0.24	0.30	0.29	1.78	0.02	0.57
16	0.17	0.11	0.06	-0.16	-0.06	0.03	0.01	0.00	-0.02	-0.03	-0.06	-0.22	-0.29	-0.45	-0.42	-0.37	-0.30	-0.21	-0.13	-0.04	0.15	0.13	0.07	0.21	0.21	-0.45	-0.08
17	0.10	0.08	0.28	0.25	0.44	0.45	0.33	0.27	0.26	0.41	0.23	0.09	-0.16	-0.03	0.06	-0.01	0.08	0.41	0.43	0.36	0.26	0.10	0.04	0.12	0.45	-0.16	0.20
18	0.11	0.22	0.75	0.52	0.43	0.34	0.28	0.22	0.24	0.22	0.24	0.30	0.41	0.49	0.57	0.53	0.66	0.59	0.83	0.80	0.88	0.88	0.85	0.70	0.88	0.11	0.50
19	0.38	0.18	0.30	0.71	0.51	0.32	0.49	0.96	1.06	0.35	0.08	-0.15	-0.18	-0.21	-0.15	-0.05	0.17	0.18	0.23	0.12	0.27	0.66	0.96	0.71	1.06	-0.21	0.33
20	0.21	0.73	0.76	0.72	0.64	0.96	1.05	1.32	1.32	1.45	0.42	0.52	-0.17	-0.19	-0.26	-0.20	-0.18	0.20	0.69	0.84	1.15	1.00	0.71	0.91	1.45	-0.26	0.61
21	0.76	0.61	0.99	0.89	0.92	0.26	0.61	0.76	0.68	0.64	0.62	0.16	-0.42	-0.40	-0.46	-0.57	-0.17	0.14	0.32	0.25	0.43	0.41	0.52	0.49	0.99	-0.57	0.35
22	0.57	0.40	0.14	0.71	0.43	0.05	0.29	0.39	0.42	0.49	0.77	0.28	0.11	0.42	-0.51	-0.64	-0.21	0.26	0.44	0.66	0.36	0.16	0.27	0.53	0.77	-0.64	0.28
23	0.43	0.19	0.24	0.20	0.16	0.34	0.54	0.45	0.33	0.27	0.25	-0.08	-0.34	-0.29	-0.38	-0.64	-0.45	0.19	0.13	-0.03	0.31	0.37	0.32	0.38	0.54	-0.64	0.12
24	0.40	0.45	0.48	0.23	-0.05	0.01	0.13	0.10	0.18	0.16	0.20	0.13	0.11	0.36	0.42	0.33	0.37	-0.02	0.00	0.03	0.16	0.11	0.13	0.22	0.48	-0.05	0.19
25	0.32	0.48	0.42	0.27	0.20	0.35	0.31	0.37	0.29	0.09	0.06	0.05	-0.21	-0.20	-0.07	-0.31	-0.20	0.02	0.28	0.23	0.21	0.17	0.20	0.14	0.48	-0.31	0.14
26	0.06	0.03	0.02	0.02	0.04	0.15	0.14	0.11	0.13	0.11	0.02	-0.05	-0.15	-0.12	-0.09	-0.06	-0.01	0.04	0.13	0.09	0.11	0.16	0.14	0.12	0.16	-0.15	0.05
27	0.12	0.15	0.25	0.28	0.32	0.24	0.26	0.34	0.23	0.06	0.30	0.01	-0.08	0.06	0.11	0.16	0.14	0.18	0.23	0.20	0.27	0.24	0.22	0.20	0.34	-0.08	0.19
28	0.29	0.28	0.21	0.24	0.30	0.27	0.24	0.36	0.47	0.27	0.00	-0.11	-0.15	0.05	0.02	0.12	0.18	0.18	0.21	0.12	0.09	0.03	0.05	-0.06	0.47	-0.15	0.15
29	-0.06	-0.05	-0.07	-0.09	-0.03	0.00	0.04	0.10	0.26	-0.05	-0.07	0.15	-0.24	-0.20	-0.07	0.06	0.20	0.25	0.20	0.16	0.13	-0.04	0.05	-0.03	0.26	-0.24	0.02
30	0.01	0.15	0.07	0.15	0.11	0.06	0.05	0.19	0.22	-0.02	0.00	0.16	-0.22	-0.34	-0.30	-0.38	-0.42	0.04	0.42	1.02	0.40	0.15	0.61	0.85	1.02	-0.42	0.12
31	0.84	0.72	0.65	0.68	0.77	0.66	0.68	0.50	0.82	0.67	0.53	0.21	0.06	0.52	1.28	0.45	0.09	0.47	0.66	0.62	0.58	0.58	0.65	0.62	1.28	0.06	0.60
Max.	**1.26**	**1.53**	**1.10**	**1.13**	**0.92**	**1.16**	**1.33**	**1.32**	**1.78**	**1.45**	**0.77**	**0.52**	**0.41**	**0.52**	**1.28**	**0.53**	**0.66**	**0.62**	**1.41**	**1.94**	**1.69**	**1.34**	**1.48**	**1.53**	**1.94**		
Min.	**-0.06**	**-0.09**	**-0.16**	**-0.20**	**-0.13**	**-0.13**	**-0.10**	**-0.08**	**-0.09**	**-0.15**	**-0.33**	**-0.53**	**-0.70**	**-0.80**	**-0.80**	**-0.74**	**-0.47**	**-0.21**	**-0.16**	**-0.09**	**-0.08**	**-0.05**	**-0.10**	**-0.10**		**-0.80**	
Avg.	**0.36**	**0.36**	**0.35**	**0.34**	**0.34**	**0.37**	**0.40**	**0.42**	**0.44**	**0.28**	**0.14**	**0.03**	**-0.13**	**-0.11**	**-0.11**	**-0.13**	**0.00**	**0.19**	**0.33**	**0.39**	**0.41**	**0.38**	**0.42**	**0.42**			**0.25**

Total Hours in Month 744 **Hours Data Available** 743 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.62	0.63	0.56	0.53	0.58	0.56	0.42	0.41	0.46	0.43	0.25	0.04	0.14	1.34	1.23	0.11	-0.04	0.16	0.19	0.22	0.32	0.40	0.53	0.37	1.34	-0.04	0.43
2	0.29	0.49	0.28	0.19	0.45	0.36	0.32	0.37	0.49	0.77	0.37	0.00	0.09	0.57	0.82	-0.03	-0.08	0.20	0.14	0.25	0.35	0.42	0.39	0.59	0.82	-0.08	0.34
3	0.70	0.57	0.40	0.35	0.26	0.23	0.37	0.39	0.32	0.32	0.30	0.10	0.11	0.64	0.55	-0.20	0.02	0.29	0.27	0.12	0.24	0.16	0.30	0.61	0.70	-0.20	0.31
4	0.53	0.19	0.09	0.34	0.38	0.17	0.13	0.38	0.38	0.33	0.58	0.27	0.13	0.79	0.87	-0.02	-0.01	0.56	0.43	0.53	0.50	0.81	1.12	0.81	1.12	-0.02	0.43
5	1.12	1.02	0.61	0.66	0.67	0.49	0.60	0.49	0.75	0.62	0.57	0.10	0.21	0.62	0.91	0.08	0.34	0.48	0.63	0.68	0.69	0.68	0.72	0.42	1.12	0.08	0.59
6	0.40	0.38	0.47	0.57	0.38	0.30	0.36	0.43	0.53	0.52	0.43	-0.02	0.04	0.46	0.87	0.05	0.06	0.22	0.20	0.14	0.20	0.15	0.08	0.11	0.87	-0.02	0.31
7	0.26	0.28	0.09	0.17	-0.12	0.07	0.05	-0.07	0.15	-0.17	-0.40	-0.70	-0.56	-0.26	-0.01	-0.68	-0.13	-0.02	-0.04	0.00	0.04	0.05	0.07	0.08	0.28	-0.70	-0.08
8	0.12	0.16	0.24	0.20	0.17	0.17	0.19	0.25	0.50	0.45	0.22	-0.16	-0.11	0.49	1.07	0.02	0.10	0.21	0.20	0.18	0.15	0.19	0.25	0.16	1.07	-0.16	0.23
9	0.14	0.22	0.26	0.42	0.16	0.04	0.04	-0.07	0.01	-0.11	-0.08	-0.15	-0.36	-0.27	-0.25	-0.13	0.02	0.01	-0.02	-0.02	0.07	0.17	0.28	0.06	0.42	-0.36	0.02
10	0.03	-0.10	-0.07	-0.12	0.07	0.16	0.25	0.27	0.27	0.27	-0.01	-0.15	-0.14	-0.06	-0.01	0.03	-0.02	-0.01	0.00	0.04	0.23	0.35	0.19	0.26	0.35	-0.15	0.07
11	0.29	0.29	0.28	0.20	0.16	0.12	0.08	0.16	0.17	0.16	0.38	0.09	0.27	0.80	1.00	0.14	0.28	0.65	0.81	0.93	0.70	0.31	0.13	0.16	1.00	0.08	0.36
12	0.23	0.29	0.44	0.45	0.45	0.29	0.20	0.08	0.01	0.11	-0.01	0.09	0.27	0.70	0.26	0.06	0.15	0.13	0.07	0.15	0.22	0.11	-0.02	0.05	0.70	-0.02	0.20
13	0.06	0.24	0.30	0.36	0.25	0.35	-0.04	0.08	0.19	0.27	0.60	0.16	-0.07	0.57	0.47	-0.09	0.14	0.15	0.14	0.17	0.16	0.13	0.24	0.26	0.60	-0.09	0.21
14	0.19	0.26	0.19	0.31	-0.08	0.51	0.31	0.69	-0.06	-0.24	-0.27	-0.32	0.05	0.47	0.52	-0.23	-0.01	0.03	-0.07	0.16	0.13	0.14	0.09	0.13	0.69	-0.32	0.12
15	0.15	0.23	0.22	0.19	0.24	0.20	0.17	0.22	0.18	0.16	0.25	0.15	0.29	1.03	0.33	-0.03	0.13	0.20	0.20	0.18	0.19	0.24	0.46	0.47	1.03	-0.03	0.25
16	0.43	0.39	0.35	0.58	0.66	0.23	0.28	0.02	0.16	0.11	-0.17	-0.20	-0.24	-0.21	-0.23	-0.07	-0.09	0.12	0.40	0.40	0.01	0.23	0.36	0.39	0.66	-0.24	0.16
17	-0.01	0.17	-0.02	0.02	0.26	0.28	0.20	0.22	0.16	0.20	0.35	-0.04	0.01	0.53	1.17	-0.07	-0.12	0.06	0.11	0.12	0.19	0.18	0.12	0.05	1.17	-0.12	0.17
18	-0.02	-0.05	0.01	0.07	0.19	0.16	0.20	0.48	0.23	0.26	0.22	-0.09	0.00	0.46	0.43	-0.04	0.10	0.20	0.37	0.26	0.51	0.35	0.25	0.19	0.51	-0.09	0.20
19	0.19	0.15	0.17	0.21	0.25	0.24	0.19	0.05	0.12	0.28	0.34	0.05	0.13	0.30	0.33	0.18	0.28	0.28	0.29	0.20	0.25	0.14	0.21	0.23	0.34	0.05	0.21
20	0.22	0.24	0.19	0.20	0.12	0.20	0.15	0.17	0.19	0.13	0.10	0.00	0.08	0.33	0.37	0.02	0.18	0.28	0.23	0.11	0.04	0.13	0.11	0.06	0.37	0.00	0.16
21	0.02	-0.01	0.02	-0.02	-0.01	-0.03	-0.11	-0.14	-0.09	-0.06	0.03	-0.19	-0.22	0.14	0.13	0.06	0.17	0.18	0.12	0.15	0.12	0.21	0.24	0.25	0.25	-0.22	0.04
22	0.21	0.25	0.09	0.40	1.00	0.49	0.84	0.76	0.75	0.64	0.42	0.05	0.17	0.74	0.71	0.07	0.05	0.05	0.06	0.25	0.42	0.42	0.39	0.45	1.00	0.05	0.40
23	0.54	0.52	0.58	0.53	0.55	0.45	0.42	0.43	0.45	0.46	0.44	0.06	0.29	1.04	1.12	0.35	0.44	0.69	0.77	0.54	0.93	0.73	0.67	0.69	1.12	0.06	0.57
24	0.89	0.75	1.06	0.95	0.84	0.71	0.59	0.62	0.90	0.65	0.60	0.14	0.29	0.49	0.82	0.25	0.14	0.16	0.18	0.19	0.07	0.06	0.06	0.04	1.06	0.04	0.48
25	0.06	0.07	0.11	0.07	0.14	0.06	0.08	0.17	0.08	0.11	0.12	0.09	0.03	-0.11	-0.10	-0.08	-0.06	0.00	-0.04	0.00	0.03	0.15	0.09	0.05	0.17	-0.11	0.05
26	0.15	0.15	0.14	0.08	0.07	0.11	0.10	0.10	0.08	0.06	0.08	-0.01	0.02	-0.04	-0.01	0.00	-0.05	-0.05	-0.02	0.11	0.05	0.07	0.11	0.09	0.15	-0.05	0.06
27	0.15	0.10	0.14	0.15	0.16	0.17	0.20	0.16	0.21	0.11	0.21	0.08	0.05	0.09	0.09	0.13	0.09	0.14	0.13	0.10	0.14	0.12	0.16	0.13	0.21	0.05	0.13
28	0.12	0.16	0.18	0.14	0.19	0.09	0.09	0.06	0.08	0.05	0.07	0.13	0.10	0.08	0.09	0.16	0.29	0.35	0.26	0.23	0.40	0.82	1.04	1.27	1.27	0.05	0.27
29	1.15	1.30	1.21	0.55	1.00	0.69	0.89	0.92	0.88	1.40	1.70	1.00	0.62	1.69	1.27	0.57	0.53	0.65	0.56	0.72	0.43	0.28	0.13	0.56	1.70	0.13	0.86
30	0.13	0.15	0.21	0.14	0.00	0.01	-0.03	0.02	0.07	0.09	0.21	0.25	0.27	0.16	-0.03	-0.03	-0.02	0.00	0.12	0.26	0.40	0.36	0.42	0.41	0.42	-0.03	0.15
Max.	**1.15**	**1.30**	**1.21**	**0.95**	**1.00**	**0.71**	**0.89**	**0.92**	**0.90**	**1.40**	**1.70**	**1.00**	**0.62**	**1.69**	**1.27**	**0.57**	**0.53**	**0.69**	**0.81**	**0.93**	**0.93**	**0.82**	**1.12**	**1.27**	**1.70**		
Min.	**-0.02**	**-0.10**	**-0.07**	**-0.12**	**-0.12**	**-0.03**	**-0.11**	**-0.14**	**-0.09**	**-0.24**	**-0.40**	**-0.70**	**-0.56**	**-0.27**	**-0.25**	**-0.68**	**-0.13**	**-0.05**	**-0.07**	**-0.02**	**0.01**	**0.05**	**-0.02**	**0.04**		**-0.70**	
Avg.	**0.31**	**0.32**	**0.29**	**0.30**	**0.31**	**0.26**	**0.25**	**0.27**	**0.29**	**0.28**	**0.26**	**0.03**	**0.06**	**0.45**	**0.49**	**0.02**	**0.10**	**0.21**	**0.22**	**0.25**	**0.27**	**0.28**	**0.31**	**0.31**			**0.26**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Temperature Difference (deg. C)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.50	0.58	0.55	0.43	0.45	0.59	0.59	0.65	0.69	0.66	0.66	0.58	0.76	1.26	1.25	0.52	0.72	0.93	0.90	1.06	1.36	1.11	1.01	1.16	1.36	0.43	0.79
2	1.54	1.61	1.10	1.22	1.20	1.28	1.31	0.78	0.51	0.43	0.27	0.33	1.08	1.42	1.07	0.87	0.68	0.54	0.50	0.43	1.40	1.26	0.99	0.66	1.61	0.27	0.94
3	0.40	0.40	0.32	0.22	0.11	0.33	0.38	0.35	0.26	0.09	0.07	0.07	0.02	-0.01	-0.06	-0.05	-0.04	0.00	-0.01	0.05	0.05	0.03	0.11	0.13	0.40	-0.06	0.13
4	0.18	0.37	0.34	0.23	0.40	0.67	0.71	0.71	0.95	0.97	0.70	0.61	0.44	0.41	0.38	0.43	0.38	0.26	0.21	0.31	0.24	0.13	0.20	0.15	0.97	0.13	0.43
5	0.11	0.14	0.26	0.35	0.26	0.38	0.26	0.25	0.22	0.23	0.16	0.11	0.15	0.18	0.24	0.17	0.08	0.28	0.21	0.19	0.20	0.16	0.17	0.18	0.38	0.08	0.21
6	0.20	0.25	0.25	0.18	0.18	0.17	0.23	0.24	0.27	0.37	0.41	0.40	0.55	0.59	0.43	0.47	0.44	0.39	0.42	0.41	0.55	0.58	0.78	0.74	0.78	0.17	0.40
7	1.06	0.95	0.73	0.62	0.79	0.90	0.79	0.65	0.32	0.28	0.19	0.34	0.30	0.31	0.35	0.41	0.32	0.28	0.23	0.09	0.14	0.23	0.10	0.20	1.06	0.09	0.44
8	0.41	0.60	0.74	0.34	0.30	0.25	0.24	0.29	0.35	0.68	0.67	0.38	0.34	0.19	-0.11	-0.02	0.21	0.26	0.37	0.22	0.18	0.05	0.25	0.19	0.74	-0.11	0.31
9	0.36	0.22	0.23	0.28	0.62	0.63	0.50	0.37	0.31	0.31	0.25	0.26	0.27	0.23	0.34	0.25	0.22	0.21	0.27	0.30	0.31	0.32	0.46	0.47	0.63	0.21	0.33
10	0.47	0.47	0.48	0.52	0.45	0.56	0.57	0.54	0.52	0.49	0.38	0.29	0.42	0.64	0.27	0.05	0.06	0.01	-0.07	-0.06	-0.18	-0.26	-0.23	-0.08	0.64	-0.26	0.26
11	-0.11	-0.09	-0.02	0.01	0.21	-0.19	-0.01	0.14	0.38	0.63	0.59	0.91	1.03	2.33	1.76	0.83	-0.07	0.11	0.20	0.25	0.58	0.81	0.58	0.63	2.33	-0.19	0.48
12	1.12	0.84	0.58	0.36	0.56	0.46	0.31	0.00	-0.13	-0.08	-0.10	-0.17	-0.20	-0.25	-0.14	-0.16	-0.05	-0.06	-0.12	0.00	0.06	0.16	0.14	0.41	1.12	-0.25	0.15
13	0.35	0.51	0.10	0.13	0.05	0.09	0.11	0.07	0.08	0.07	0.08	0.06	0.04	0.06	0.08	0.07	0.07	0.12	0.10	0.13	0.10	0.14	0.11	0.07	0.51	0.04	0.11
14	0.07	0.07	-0.03	-0.02	-0.02	-0.02	0.01	0.03	-0.01	0.02	0.00	-0.06	-0.08	-0.11	0.31	0.00	0.08	0.06	0.29	0.26	0.16	0.05	0.05	0.09	0.31	-0.11	0.05
15	0.10	0.12	0.13	0.13	0.12	0.16	0.18	0.21	0.22	0.31	0.60	-0.12	-0.05	0.22	-0.03	-0.11	0.05	0.11	0.01	0.02	0.15	0.09	0.05	0.02	0.60	-0.12	0.11
16	0.02	-0.08	-0.05	-0.01	-0.03	-0.02	-0.01	0.00	0.02	-0.02	-0.01	-0.03	-0.03	-0.10	-0.09	-0.09	-0.05	-0.01	0.07	0.11	0.07	0.04	0.00	-0.04	0.11	-0.10	-0.01
17	-0.01	0.00	0.04	0.24	0.38	0.29	0.28	0.37	0.60	1.05	0.69	0.31	0.19	0.09	0.03	0.03	0.07	0.16	0.36	0.23	0.21	0.25	0.19	0.22	1.05	-0.01	0.26
18	0.15	0.14	0.10	0.06	0.00	0.10	0.01	0.16	0.05	-0.01	-0.05	-0.27	-0.40	-0.24	-0.05	0.13	-0.08	0.19	0.33	0.18	0.36	0.79	0.99	0.85	0.99	-0.40	0.15
19	0.36	0.12	0.07	0.04	0.22	0.18	0.19	0.19	0.21	0.18	0.24	0.18	0.16	0.31	0.42	0.14	-0.04	-0.11	-0.16	-0.11	-0.14	-0.13	-0.10	0.23	0.42	-0.16	0.11
20	0.25	0.07	-0.01	-0.02	0.04	0.06	0.24	0.21	0.28	0.30	0.21	0.14	0.19	0.19	0.19	0.10	0.22	0.23	0.26	0.16	0.10	0.14	-0.06	0.42	0.42	-0.06	0.16
21	0.18	0.05	-0.04	0.09	0.19	0.20	0.12	0.14	0.03	0.03	0.07	-0.10	-0.46	0.23	0.61	0.68	0.42	0.40	0.14	0.24	-0.07	0.34	0.29	-0.07	0.68	-0.46	0.15
22	-0.02	0.03	0.13	0.01	0.01	0.14	0.13	0.08	0.26	0.42	0.48	0.49	0.27	0.27	0.26	-0.02	0.14	0.65	0.59	0.09	0.08	0.65	1.03	0.48	1.03	-0.02	0.28
23	0.53	0.66	0.27	0.44	0.15	0.27	0.45	0.40	0.26	0.18	0.47	0.00	0.06	0.48	0.36	0.19	0.34	0.27	0.05	0.05	0.09	0.08	0.00	0.25	0.66	0.00	0.26
24	0.81	0.25	0.25	0.14	0.05	0.07	0.22	0.43	0.65	0.71	0.73	0.50	0.58	0.91	0.93	0.16	0.02	-0.29	-0.22	-0.19	-0.08	-0.19	-0.18	0.00	0.93	-0.29	0.26
25	-0.09	-0.02	0.48	0.42	0.24	0.22	0.22	0.31	0.28	0.29	0.28	0.19	0.16	0.57	0.45	0.04	0.29	0.18	0.19	0.04	0.05	0.13	0.09	0.03	0.57	-0.09	0.21
26	0.03	-0.08	-0.14	-0.09	-0.24	0.05	0.16	0.17	0.14	0.08	0.08	0.28	0.08	0.59	0.61	0.60	0.56	0.71	0.29	0.36	0.46	0.42	0.29	0.19	0.71	-0.24	0.23
27	0.12	0.17	0.21	0.12	0.21	0.08	0.06	0.09	0.03	0.02	0.02	0.03	-0.01	-0.04	-0.02	0.05	0.04	0.07	0.04	-0.01	0.06	0.26	0.29	0.21	0.29	-0.04	0.09
28	0.19	-0.01	0.06	-0.02	-0.04	-0.04	-0.01	0.06	0.02	0.07	0.16	0.17	0.05	-0.09	0.07	0.05	0.03	0.18	0.09	-0.02	0.08	0.18	0.06	0.16	0.19	-0.09	0.06
29	0.24	0.21	0.61	0.46	0.30	0.52	0.64	0.81	0.39	0.28	0.50	0.16	0.15	0.04	0.08	0.19	0.15	0.11	0.01	0.18	0.13	-0.01	0.12	-0.02	0.81	-0.02	0.26
30	0.09	0.08	0.03	0.02	0.01	0.04	0.04	0.05	0.00	0.06	-0.01	-0.03	-0.11	0.00	0.05	0.06	0.13	0.13	0.09	0.12	0.13	0.12	0.18	0.14	0.18	-0.11	0.06
31	0.23	0.25	0.58	0.40	0.53	0.60	0.38	0.32	0.26	0.10	0.02	-0.20	-0.13	-0.06	-0.08	0.01	0.06	0.04	0.08	0.14	0.07	0.14	0.19	0.39	0.60	-0.20	0.18
Max.	**1.54**	**1.61**	**1.10**	**1.22**	**1.20**	**1.28**	**1.31**	**0.81**	**0.95**	**1.05**	**0.73**	**0.91**	**1.08**	**2.33**	**1.76**	**0.87**	**0.72**	**0.93**	**0.90**	**1.06**	**1.40**	**1.26**	**1.03**	**1.16**	**2.33**		
Min.	**-0.11**	**-0.09**	**-0.14**	**-0.09**	**-0.24**	**-0.19**	**-0.01**	**0.00**	**-0.13**	**-0.08**	**-0.10**	**-0.27**	**-0.46**	**-0.25**	**-0.14**	**-0.16**	**-0.08**	**-0.29**	**-0.22**	**-0.19**	**-0.18**	**-0.26**	**-0.23**	**-0.08**		**-0.46**	
Avg.	**0.32**	**0.29**	**0.27**	**0.24**	**0.25**	**0.29**	**0.30**	**0.29**	**0.27**	**0.30**	**0.28**	**0.19**	**0.19**	**0.34**	**0.32**	**0.19**	**0.17**	**0.21**	**0.18**	**0.17**	**0.22**	**0.26**	**0.26**	**0.27**			**0.25**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	76.0	86.7	92.0	88.8	78.9	76.3	70.7	69.4	68.7	66.2	64.1	67.6	67.9	64.2	67.9	66.5	65.2	61.2	60.5	61.2	64.8	72.7	74.9	73.0	92.0	60.5	71.1
2	68.9	70.0	73.1	75.5	70.5	66.4	64.6	64.0	75.1	84.6	88.2	86.8	79.9	84.2	79.3	76.4	77.8	82.4	88.9	90.1	90.7	88.2	89.3	85.8	90.7	64.0	79.2
3	89.5	86.2	89.4	93.2	87.7	84.3	84.6	78.4	80.0	75.3	80.5	72.5	73.1	73.6	70.9	67.3	68.7	67.3	66.5	69.5	65.0	64.7	73.7	74.7	93.2	64.7	76.5
4	70.3	64.5	70.5	78.1	81.2	84.0	84.7	86.2	88.7	88.5	87.4	90.2	90.4	89.1	85.7	83.7	82.4	83.6	87.9	87.5	84.8	84.0	83.9	80.3	90.4	64.5	83.2
5	69.3	55.3	47.2	49.1	53.3	51.6	51.3	55.8	67.4	76.0	78.4	76.0	76.5	81.6	79.3	79.0	81.6	85.1	87.5	87.4	83.7	84.9	85.2	87.8	87.8	47.2	72.1
6	86.9	85.2	87.4	87.3	86.9	87.5	87.3	85.0	85.3	84.8	85.0	82.0	83.9	82.7	82.5	78.7	78.7	77.3	78.2	83.3	84.2	82.3	84.6	86.8	87.5	77.3	83.9
7	88.1	87.3	91.1	92.1	91.7	94.0	95.4	96.4	96.0	90.5	70.2	59.4	61.5	70.2	82.3	81.8	79.9	81.8	77.3	68.3	67.7	71.5	74.3	76.7	96.4	59.4	81.1
8	68.9	64.2	65.3	66.0	67.5	72.7	75.7	72.9	66.2	63.0	60.6	65.9	64.1	62.2	72.3	75.5	76.0	75.9	80.1	81.2	84.4	87.9	88.7	88.7	88.7	60.6	72.7
9	88.3	85.9	82.5	83.2	85.0	85.8	81.9	82.3	84.7	84.9	85.0	85.2	83.6	84.5	83.7	82.6	84.3	85.4	86.8	89.4	92.1	91.3	91.5	91.4	92.1	81.9	85.9
10	91.6	92.2	92.7	94.0	95.8	96.7	95.8	95.5	95.9	96.2	94.2	93.6	90.4	86.5	84.8	84.6	85.0	85.8	85.7	85.5	85.2	83.9	83.7	82.1	96.7	82.1	89.9
11	82.2	84.0	82.2	80.3	79.3	82.2	88.3	92.4	92.0	92.2	88.0	84.3	84.3	82.5	83.1	81.2	82.7	82.9	84.4	87.8	89.2	88.9	88.3	87.9	92.4	79.3	85.4
12	86.8	86.6	85.1	85.5	83.9	83.3	83.3	80.8	77.3	74.9	72.6	69.7	69.6	69.4	69.6	70.1	71.0	72.0	72.4	73.9	73.3	72.9	74.4	73.4	86.8	69.4	76.3
13	74.8	73.4	73.1	71.9	73.7	72.6	71.7	72.5	74.5	77.2	74.8	73.4	71.6	70.8	72.4	68.1	70.3	74.5	72.7	72.9	75.2	72.7	75.8	77.5	77.5	68.1	73.3
14	78.7	81.5	84.7	86.8	88.2	86.1	80.1	80.8	79.3	79.4	79.4	79.6	78.5	78.0	77.4	90.1	95.4	94.5	93.2	91.3	95.0	94.5	92.8	90.2	95.4	77.4	85.6
15	90.7	90.7	91.5	89.5	88.3	86.5	86.9	82.7	78.9	79.1	75.2	76.4	74.3	74.1	72.0	70.2	65.8	70.7	68.7	69.8	68.1	65.2	66.9	65.2	91.5	65.2	77.0
16	64.2	65.0	64.1	64.1	64.1	61.9	61.8	60.3	58.8	55.7	55.4	49.3	52.1	54.6	57.8	64.6	71.1	73.5	76.3	81.0	84.0	88.9	89.5	91.4	91.4	49.3	67.1
17	91.6	94.4	89.5	87.8	84.9	85.2	84.5	81.3	82.2	80.1	79.2	75.1	72.1	67.8	57.7	54.9	50.4	50.1	44.4	46.0	55.7	70.8	75.1	76.5	94.4	44.4	72.4
18	77.2	78.4	76.3	74.2	74.8	77.7	70.7	71.2	76.4	75.1	66.6	68.5	69.1	68.6	67.7	71.3	72.7	75.4	76.4	74.5	78.8	77.0	76.2	76.3	78.8	66.6	73.8
19	76.0	76.8	76.4	71.1	67.2	61.1	65.0	62.8	70.2	70.3	64.4	60.6	63.8	62.3	60.1	65.0	67.5	68.3	68.9	72.1	75.7	82.2	83.6	83.2	83.6	60.1	69.8
20	83.1	84.2	82.9	82.0	77.9	79.0	74.2	75.9	77.1	80.5	79.9	78.1	74.9	73.8	71.1	65.7	64.8	60.2	72.4	84.4	87.8	89.8	91.9	92.0	92.0	60.2	78.5
21	91.4	91.5	92.5	91.6	93.1	95.1	96.4	95.4	96.4	96.8	96.6	95.8	95.1	94.8	94.4	94.0	94.4	93.9	93.8	89.1	85.6	83.8	79.9	76.8	96.8	76.8	92.0
22	76.8	75.5	75.1	74.8	72.6	71.8	70.7	68.1	64.2	64.8	59.0	58.7	57.9	56.3	54.8	52.5	52.5	52.0	49.0	49.8	51.7	52.0	51.0	50.5	76.8	49.0	60.9
23	56.8	59.3	65.5	72.4	74.6	76.3	74.8	75.6	75.2	79.3	80.4	78.2	77.1	76.9	73.1	74.4	75.8	78.1	76.8	78.5	77.6	76.5	76.5	76.6	80.4	56.8	74.4
24	76.3	74.8	73.3	73.8	73.5	74.4	75.6	74.9	76.4	79.2	78.3	78.1	74.4	72.8	72.1	72.3	73.6	77.4	76.9	76.7	75.5	74.4	75.3	75.3	79.2	72.1	75.2
25	76.0	77.7	77.0	75.9	76.5	77.8	79.3	79.2	79.0	79.5	80.4	79.5	75.8	71.7	70.0	71.6	75.6	80.3	82.6	84.9	85.8	87.0	87.7	87.6	87.7	70.0	79.1
26	87.1	86.1	86.1	85.3	83.6	83.8	83.5	83.3	82.6	85.9	87.0	86.2	84.2	80.8	76.1	76.1	76.8	77.3	76.6	76.5	74.1	75.3	78.0	75.6	87.1	74.1	81.2
27	77.3	58.0	50.6	53.3	53.4	55.3	53.4	49.7	49.1	55.0	45.7	43.0	41.3	40.2	40.2	41.0	40.6	41.2	40.0	40.4	40.4	40.5	40.7	40.9	77.3	40.0	47.1
28	43.0	43.9	43.3	43.1	43.5	42.4	41.2	38.6	38.3	39.0	38.2	39.9	39.1	39.3	56.6	69.9	77.8	83.2	82.6	80.7	80.8	82.1	83.0	85.8	85.8	38.2	56.5
29	87.3	86.6	86.6	85.9	85.7	85.7	85.7	85.6	85.4	85.1	85.7	86.4	86.6	87.4	88.0	88.2	87.7	87.1	87.1	87.3	86.9	86.8	86.8	87.1	88.2	85.1	86.6
30	87.5	87.3	87.4	87.1	87.1	87.6	87.7	87.9	87.4	87.3	87.0	87.9	88.8	89.8	90.4	91.2	90.7	90.4	90.3	90.9	92.9	93.3	93.5	93.2	93.5	87.0	89.4
31	92.2	90.9	90.2	86.0	84.1	83.0	75.4	76.3	83.4	84.7	87.9	87.8	90.4	91.7	90.7	89.2	89.1	86.6	83.7	87.8	89.9	87.3	86.6	85.2	92.2	75.4	86.7
Max.	**92.2**	**94.4**	**92.7**	**94.0**	**95.8**	**96.7**	**96.4**	**96.4**	**96.4**	**96.8**	**96.6**	**95.8**	**95.1**	**94.8**	**94.4**	**94.0**	**95.4**	**94.5**	**93.8**	**91.3**	**95.0**	**94.5**	**93.5**	**93.2**	**96.8**		
Min.	**43.0**	**43.9**	**43.3**	**43.1**	**43.5**	**42.4**	**41.2**	**38.6**	**38.3**	**39.0**	**38.2**	**39.9**	**39.1**	**39.3**	**40.2**	**41.0**	40.6	41.2	**40.0**	**40.4**	**40.4**	**40.5**	**40.7**	**40.9**		**38.2**	
Avg.	**79.2**	**78.2**	**78.2**	**78.4**	**77.7**	**77.7**	**76.8**	**76.2**	**77.2**	**77.8**	**76.0**	**74.7**	**73.9**	**73.6**	**73.7**	**74.1**	**75.0**	**76.0**	**76.4**	**77.4**	**78.3**	**79.1**	**80.1**	**79.9**			**76.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	83.7	89.0	90.4	91.0	88.8	70.0	59.8	57.0	54.1	53.8	52.8	50.3	46.8	42.7	44.3	42.7	38.5	49.0	58.2	66.5	61.3	52.9	39.1	35.3	91.0	35.3	59.1
2	34.6	35.8	36.3	37.0	37.2	33.6	33.0	33.3	33.1	31.6	31.6	31.7	51.8	63.6	65.0	61.2	70.9	79.0	76.4	73.5	75.1	79.8	69.0	66.2	79.8	31.6	51.7
3	63.7	70.6	68.7	68.8	67.7	69.2	69.4	68.1	66.7	67.0	71.6	78.3	78.7	78.4	76.6	75.3	76.5	76.3	75.3	76.2	77.1	81.5	74.3	74.2	81.5	63.7	72.9
4	71.8	68.1	72.0	81.4	82.3	66.3	60.9	62.2	60.5	57.9	56.4	56.0	56.5	62.9	72.4	76.1	70.7	72.4	79.4	85.7	88.3	87.3	88.7	94.5	94.5	56.0	72.1
5	96.5	95.7	93.0	91.5	91.7	94.7	91.9	88.3	89.6	79.8	84.3	95.6	93.0	86.2	85.0	77.2	74.0	71.3	85.7	88.7	91.5	96.9	98.1	96.9	98.1	71.3	89.0
6	97.1	95.9	95.4	95.9	96.8	96.9	97.4	99.0	98.8	98.7	99.4	99.9	99.7	99.5	98.7	98.8	96.6	98.5	99.3	99.6	99.8	99.8	99.6	99.0	99.9	95.4	98.3
7	98.8	98.7	98.3	97.8	97.8	97.9	97.7	96.9	90.8	90.0	85.0	81.2	78.4	78.7	78.3	79.5	81.0	78.4	78.0	72.9	69.9	65.9	59.1	50.5	98.8	50.5	83.4
8	49.0	51.0	65.6	67.7	75.0	74.7	72.0	70.8	64.0	43.0	54.9	66.7	62.6	50.1	39.0	41.0	47.3	51.0	49.5	56.3	58.1	58.1	60.0	63.2	75.0	39.0	57.9
9	64.3	63.7	65.9	73.5	80.0	80.8	90.3	86.3	90.3	96.2	97.0	96.8	93.8	91.1	88.3	86.9	80.0	79.4	83.2	86.6	84.7	89.7	87.2	88.0	97.0	63.7	84.3
10	90.8	87.6	82.3	76.1	87.2	91.2	95.8	97.5	98.6	99.1	99.2	97.3	98.0	98.8	98.6	97.1	92.0	88.4	89.8	88.8	89.0	90.8	87.6	95.5	99.2	76.1	92.4
11	95.6	90.8	84.9	87.1	78.2	85.2	91.1	88.9	87.0	85.6	90.0	92.4	93.6	93.3	90.7	89.9	89.5	91.0	90.8	92.5	91.3	89.3	90.0	88.5	95.6	78.2	89.5
12	89.1	89.8	90.8	95.2	93.8	91.0	84.6	84.2	85.3	80.0	75.8	76.8	76.1	76.5	77.4	78.3	77.0	76.0	75.0	72.2	67.7	62.8	61.4	64.1	95.2	61.4	79.2
13	77.0	83.7	86.6	85.4	80.5	73.8	78.9	82.8	78.0	73.2	71.4	76.5	69.1	60.4	84.5	85.2	87.3	85.4	87.7	87.1	83.5	79.7	80.8	82.2	87.7	60.4	80.0
14	84.3	81.2	77.8	73.2	72.6	70.9	69.6	70.0	71.0	76.6	74.9	74.1	70.0	71.0	67.8	67.1	66.1	63.4	63.4	64.2	61.5	60.7	59.2	58.1	84.3	58.1	69.5
15	54.0	47.1	47.5	37.4	35.5	35.6	35.8	33.9	29.2	28.9	30.6	46.4	69.4	50.2	59.2	61.0	65.8	70.4	87.5	93.5	91.7	93.7	94.6	98.0	98.0	28.9	58.2
16	99.2	99.7	99.6	99.9	99.9	100.0	99.9	99.8	99.8	100.0	99.8	99.5	99.6	98.1	97.9	94.2	86.6	87.9	89.3	91.3	94.5	95.2	91.0	88.2	100.0	86.6	96.3
17	86.7	80.5	75.8	73.2	71.5	68.0	64.5	78.4	85.0	83.4	81.4	82.3	79.7	79.9	81.2	84.8	86.9	88.5	87.6	88.7	89.2	88.7	83.4	84.3	89.2	64.5	81.4
18	84.8	89.2	92.3	90.3	88.8	89.6	85.0	89.4	82.2	82.2	84.9	90.2	93.6	95.6	91.0	91.7	91.2	92.9	96.1	97.2	98.2	98.7	99.4	99.5	99.5	82.2	91.4
19	99.3	96.6	72.9	77.5	77.7	78.0	79.1	76.3	74.7	73.4	69.8	66.0	62.0	59.5	61.9	67.1	70.0	72.1	71.6	71.2	70.7	70.8	69.3	68.9	99.3	59.5	73.2
20	68.5	70.7	72.7	72.4	71.5	71.5	71.7	70.5	70.7	67.6	63.7	62.6	62.7	66.2	73.8	74.7	78.9	81.2	77.4	71.7	76.2	77.3	78.1	83.6	83.6	62.6	72.3
21	71.9	64.2	60.4	69.7	68.6	65.3	61.5	57.4	53.6	47.7	44.4	46.7	53.1	57.3	59.1	63.2	62.6	61.6	65.5	67.2	66.3	64.9	64.0	65.1	71.9	44.4	60.9
22	66.6	66.7	64.9	63.4	65.2	67.6	69.6	68.4	66.5	63.9	60.5	56.4	54.5	54.1	54.2	54.7	54.4	55.2	60.4	65.1	69.0	69.0	67.8	70.1	70.1	54.1	62.8
23	70.7	77.5	81.2	83.3	87.4	92.3	95.0	96.4	96.0	83.7	71.1	67.0	64.1	62.6	62.4	60.2	58.8	58.5	57.4	68.4	61.1	50.0	47.1	57.9	96.4	47.1	71.3
24	63.5	63.6	67.0	64.4	62.3	70.4	74.2	75.4	75.3	75.3	75.8	67.4	61.6	59.0	58.3	54.4	52.5	56.0	63.6	69.5	75.2	73.6	73.2	72.8	75.8	52.5	66.8
25	69.7	68.4	68.1	62.9	64.8	70.1	83.4	89.8	92.3	94.6	95.5	96.2	96.1	94.2	86.0	71.3	58.0	45.4	53.2	53.3	52.0	51.0	54.3	64.8	96.2	45.4	72.3
26	73.9	70.3	60.6	53.1	54.1	58.7	61.0	59.1	57.9	58.8	55.2	57.2	57.3	56.4	55.5	57.0	59.3	61.1	65.1	68.5	77.6	88.6	93.5	93.4	93.5	53.1	64.7
27	92.2	93.0	94.9	95.0	93.9	93.1	93.4	94.2	94.0	88.5	73.9	67.8	68.0	77.0	66.1	64.5	66.0	67.5	62.7	58.3	58.6	57.4	64.1	65.0	95.0	57.4	77.0
28	54.1	53.0	50.4	49.8	47.5	47.9	47.9	50.7	55.3	48.3	41.1	37.8	34.5	34.4	36.2	42.6	42.6	40.6	37.6	36.2	34.4	32.3	33.7	35.9	55.3	32.3	42.7
Max.	**99.3**	**99.7**	**99.6**	**99.9**	**99.9**	**100.0**	**99.9**	**99.8**	**99.8**	**100.0**	**99.8**	**99.9**	**99.7**	**99.5**	**98.7**	**98.8**	**96.6**	**98.5**	**99.3**	**99.6**	**99.8**	**99.8**	**99.6**	**99.5**	**100.0**		
Min.	**34.6**	**35.8**	**36.3**	**37.0**	**35.5**	**33.6**	**33.0**	**33.3**	**29.2**	**28.9**	**30.6**	**31.7**	**34.5**	**34.4**	**36.2**	**41.0**	**38.5**	**40.6**	**37.6**	**36.2**	**34.4**	**32.3**	**33.7**	**35.3**		**28.9**	
Avg.	**76.8**	**76.5**	**75.6**	**75.5**	**75.7**	**75.2**	**75.5**	**75.9**	**75.0**	**72.5**	**71.1**	**72.0**	**72.3**	**71.3**	**71.8**	**71.3**	**70.7**	**71.4**	**73.8**	**75.4**	**75.5**	**75.2**	**73.8**	**75.1**			**74.0**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	37.8	40.1	48.9	64.0	66.2	66.4	65.8	64.0	52.4	57.4	58.4	60.2	60.6	58.5	53.9	55.7	56.5	54.1	58.3	57.4	59.3	55.9	51.9	50.4	66.4	37.8	56.4
2	54.1	52.1	48.5	48.4	54.7	64.5	71.2	79.8	88.4	93.1	92.2	92.8	93.3	92.8	92.9	84.0	78.3	79.0	78.2	79.0	78.3	79.0	81.1	82.4	93.3	48.4	76.6
3	85.5	85.0	86.6	82.9	83.2	87.8	89.4	81.3	79.5	79.8	82.3	84.3	85.7	87.8	89.3	87.2	92.9	90.8	91.9	92.8	91.9	92.8	96.2	97.1	97.1	79.5	87.7
4	95.7	94.8	96.0	94.3	95.5	94.5	91.8	89.5	89.7	93.0	91.0	89.7	82.8	79.9	83.0	83.5	82.3	88.0	91.9	93.4	93.0	92.2	94.0	95.9	96.0	79.9	90.6
5	95.5	97.6	97.5	96.7	96.9	95.4	93.0	94.9	97.4	97.8	94.7	83.7	79.1	76.3	80.9	78.4	76.5	74.4	77.0	75.2	76.2	78.5	77.0	74.5	97.8	74.4	86.0
6	76.6	80.7	76.9	77.0	77.6	77.9	78.3	77.5	70.9	69.7	64.9	60.4	59.8	55.7	56.6	55.3	56.3	60.3	65.9	75.7	80.9	82.4	81.8	80.8	82.4	55.3	70.8
7	80.4	79.8	82.4	81.8	81.6	77.7	77.6	72.8	65.4	62.2	59.6	54.9	52.2	52.2	52.2	51.9	58.0	62.1	60.7	60.6	61.0	58.1	57.2	57.0	82.4	51.9	65.0
8	56.2	57.4	55.9	55.1	57.6	59.2	61.0	60.9	54.5	52.2	49.6	49.8	48.4	47.3	51.3	53.4	57.3	57.7	54.9	53.1	50.7	48.0	42.0	40.5	61.0	40.5	53.1
9	47.0	42.5	44.1	41.7	46.5	51.3	46.1	40.9	40.5	42.8	43.1	41.2	38.6	36.4	37.8	32.9	31.7	30.8	28.2	28.4	27.5	26.1	27.4	30.1	51.3	26.1	37.6
10	52.9	58.9	59.0	61.6	60.0	62.2	63.8	65.7	64.1	65.5	65.8	61.7	53.5	54.9	54.2	52.2	54.7	49.9	37.4	37.0	42.2	33.8	32.7	27.4	65.8	27.4	53.0
11	28.3	25.7	23.6	25.2	27.6	36.2	42.1	41.9	44.9	34.5	35.0	39.3	38.7	31.2	28.5	31.6	37.5	40.7	49.5	54.5	54.1	58.0	54.3	51.6	58.0	23.6	38.9
12	42.9	44.8	43.6	41.1	42.7	40.7	48.5	46.6	44.4	44.9	46.0	49.2	46.7	43.7	48.8	47.8	48.8	49.1	45.3	49.1	50.4	52.4	55.5	52.6	55.5	40.7	46.9
13	46.8	42.6	46.3	55.5	58.1	60.4	68.7	72.2	60.0	67.5	63.6	52.2	53.6	54.1	53.9	53.8	57.0	57.7	59.4	61.0	66.0	69.2	76.4	79.9	79.9	42.6	59.8
14	81.8	78.6	77.4	79.1	79.4	82.1	84.9	85.9	83.3	82.8	81.0	76.3	73.5	70.5	68.0	66.3	63.7	68.0	68.4	70.4	73.5	78.5	80.8	82.0	85.9	63.7	76.5
15	82.0	82.1	82.0	80.6	80.0	80.4	82.0	82.3	79.2	75.4	71.4	68.1	66.7	66.0	63.8	62.0	59.6	58.9	59.5	60.5	57.1	50.5	38.3	32.8	82.3	32.8	67.5
16	31.1	29.0	27.4	29.3	39.5	27.4	26.7	28.2	32.6	34.3	33.1	31.1	31.8	30.7	27.9	26.7	28.0	26.6	29.7	37.1	33.3	29.9	25.2	25.4	39.5	25.2	30.1
17	25.1	30.2	42.4	51.6	52.5	37.8	43.8	33.2	32.1	40.5	33.7	37.9	44.9	61.2	69.1	71.8	71.6	72.2	73.6	76.9	82.8	78.2	74.9	77.3	82.8	25.1	54.8
18	76.8	74.9	74.5	80.0	88.5	90.1	91.2	90.5	90.4	90.0	89.5	84.1	77.8	83.7	78.8	76.2	81.3	89.4	90.3	93.4	93.4	93.9	94.0	96.4	96.4	74.5	86.2
19	96.9	96.1	96.1	94.6	94.1	95.1	95.9	95.3	91.4	88.6	88.6	81.1	84.3	90.3	88.0	92.7	94.9	91.3	89.4	92.7	93.2	95.6	95.9	95.7	96.9	81.1	92.4
20	93.3	92.1	92.8	93.2	94.1	94.2	92.7	90.8	92.9	86.5	93.3	91.4	89.5	92.4	92.7	90.3	72.6	67.9	65.5	63.7	67.0	67.7	69.2	72.4	94.2	63.7	84.1
21	72.4	73.1	80.0	86.6	82.2	80.0	81.1	88.3	94.8	92.6	87.4	82.8	80.6	76.9	74.1	69.9	70.2	72.5	72.7	74.7	76.3	78.3	77.0	76.9	94.8	69.9	79.2
22	76.2	76.0	76.8	77.0	78.2	76.2	76.4	77.5	66.9	68.2	70.5	62.2	63.2	63.5	62.9	62.6	58.1	62.1	65.7	68.0	71.6	72.0	73.2	74.4	78.2	58.1	70.0
23	75.6	78.3	78.0	82.1	81.4	79.9	79.3	76.3	77.5	73.6	75.0	71.5	68.1	66.7	61.4	61.4	59.6	53.8	53.9	57.6	69.6	69.2	65.8	70.1	82.1	53.8	70.2
24	72.8	74.2	75.8	77.2	78.0	78.5	79.8	77.7	75.0	76.3	70.4	65.1	62.0	59.2	60.9	61.1	57.0	61.8	66.7	69.9	72.6	72.7	73.5	73.9	79.8	57.0	70.5
25	73.9	73.9	78.6	85.2	90.4	94.2	95.3	93.5	91.9	86.7	83.1	81.4	78.4	73.6	71.3	69.1	68.8	70.8	70.9	73.0	74.6	74.1	73.2	73.3	95.3	68.8	79.1
26	73.3	73.2	73.1	73.6	74.0	74.7	76.3	78.1	78.7	77.9	74.2	69.8	66.6	64.3	62.6	64.4	63.7	69.4	69.7	73.2	75.4	77.9	79.0	82.0	82.0	62.6	72.7
27	82.0	81.0	82.2	80.0	78.7	81.2	84.0	78.8	74.3	79.6	73.5	72.3	69.7	73.6	76.6	75.3	69.2	68.9	70.5	68.2	73.6	82.7	87.3	85.5	87.3	68.2	77.0
28	87.4	85.0	83.1	79.4	81.8	74.5	75.1	70.8	76.6	83.7	74.3	78.1	74.3	77.8	72.8	66.3	66.7	69.9	69.7	79.9	81.3	86.7	88.8	91.6	91.6	66.3	78.1
29	86.2	80.0	84.6	85.5	86.5	88.1	88.4	87.6	84.2	82.5	76.9	69.8	67.8	66.5	71.7	72.7	72.3	73.4	75.0	74.8	82.7	81.9	83.5	80.0	88.4	66.5	79.3
30	82.6	79.1	70.2	60.9	61.1	62.0	75.5	81.4	85.8	83.8	87.3	83.2	89.2	86.7	87.8	89.7	90.4	91.2	92.4	92.1	93.5	95.1	94.6	94.8	95.1	60.9	83.8
31	95.2	94.6	94.2	93.9	93.9	94.3	93.7	91.1	91.1	90.7	92.4	93.6	91.8	91.9	91.3	90.9	90.9	93.2	93.4	99.0	99.1	99.4	99.5	99.6	99.6	90.7	94.1
Max.	**96.9**	**97.6**	**97.5**	**96.7**	**96.9**	**95.4**	**95.9**	**95.3**	**97.4**	**97.8**	**94.7**	**93.6**	**93.3**	**92.8**	**92.9**	**92.7**	**94.9**	**93.2**	**93.4**	**99.0**	**99.1**	**99.4**	**99.5**	**99.6**	**99.6**		
Min.	**25.1**	**25.7**	**23.6**	**25.2**	**27.6**	**27.4**	**26.7**	**28.2**	**32.1**	**34.3**	**33.1**	**31.1**	**31.8**	**30.7**	**27.9**	**26.7**	28.0	26.6	**28.2**	**28.4**	**27.5**	**26.1**	**25.2**	**25.4**		**23.6**	
Avg.	**69.8**	**69.5**	**70.3**	**71.5**	**73.0**	**73.1**	**74.8**	**74.0**	**72.6**	**72.7**	**71.0**	**68.4**	**66.9**	**66.7**	**66.6**	**65.7**	**65.4**	**66.3**	**66.9**	**69.1**	**71.0**	**71.3**	**71.0**	**71.1**			**69.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	99.6	99.6	99.7	99.3	96.9	95.5	94.2	91.0	86.2	81.8	78.5	76.6	66.2	66.2	57.3	59.9	62.1	64.0	65.7	66.5	71.0	69.3	68.5	66.6	99.7	57.3	78.4
2	66.9	66.9	69.1	71.7	71.1	71.6	74.4	74.9	75.2	70.8	62.7	62.5	61.0	60.2	59.8	61.5	62.9	64.8	65.0	63.9	59.3	75.2	73.0	75.9	75.9	59.3	67.5
3	90.1	95.6	94.3	88.4	87.0	90.8	90.7	90.9	92.9	88.9	86.2	90.6	92.9	93.8	91.3	87.9	89.9	92.1	92.3	91.8	92.9	91.1	88.6	90.8	95.6	86.2	90.9
4	87.5	87.5	88.5	95.0	96.7	97.0	95.4	91.5	90.0	91.3	83.3	83.7	91.1	93.4	92.8	94.2	94.9	97.3	96.9	96.0	96.0	96.2	96.6	96.9	97.3	83.3	92.9
5	97.4	85.0	75.4	69.8	80.9	83.5	67.5	69.7	60.4	57.9	59.9	60.1	58.7	56.7	54.9	51.4	49.1	49.9	47.5	43.7	39.3	37.9	38.1	38.6	97.4	37.9	59.7
6	38.1	39.8	41.4	54.4	59.2	63.3	66.2	64.7	64.9	61.5	55.2	56.0	56.2	55.1	57.4	55.7	58.1	57.7	65.0	61.6	71.6	75.4	75.9	76.3	76.3	38.1	59.6
7	76.3	75.9	77.7	78.3	76.3	69.9	74.0	75.8	75.2	78.5	79.4	71.9	74.7	76.6	82.0	80.7	76.1	78.4	82.2	74.7	78.8	81.2	78.3	80.2	82.2	69.9	77.2
8	77.6	76.6	77.8	76.1	75.7	79.0	87.4	90.0	87.9	89.6	87.7	89.1	91.1	88.9	87.3	88.9	88.4	92.1	94.6	93.8	96.5	97.6	97.8	97.8	97.8	75.7	87.9
9	97.8	97.9	98.0	98.2	98.3	98.5	98.6	98.6	98.3	97.2	94.4	90.7	89.5	91.4	93.4	95.5	95.8	95.6	95.9	93.6	93.9	81.1	65.2	59.0	98.6	59.0	92.3
10	62.5	68.4	69.4	71.0	69.4	73.6	75.6	75.2	74.7	74.4	76.4	75.9	77.6	74.4	71.5	55.2	51.4	49.4	51.1	54.9	54.7	56.1	56.6	57.4	77.6	49.4	65.7
11	60.4	60.2	61.2	58.2	44.3	41.9	62.8	63.1	62.4	57.9	57.1	54.5	40.9	39.2	76.3	86.3	83.2	83.7	87.7	88.2	84.6	89.2	88.5	86.7	89.2	39.2	67.4
12	86.8	86.4	85.6	86.1	88.4	88.9	89.6	85.6	82.9	85.8	82.0	82.6	87.1	93.3	95.4	96.8	98.4	99.0	99.5	98.7	96.5	88.7	74.4	74.0	99.5	74.0	88.9
13	72.2	71.0	73.1	71.0	70.7	67.6	65.5	65.7	67.8	64.4	60.6	59.4	62.6	62.4	59.9	60.1	60.8	61.7	61.1	58.0	57.1	56.7	53.4	50.6	73.1	50.6	63.1
14	49.0	49.1	49.8	50.1	50.0	51.4	51.1	49.9	49.8	49.7	48.2	47.9	48.0	46.9	45.8	44.9	43.7	43.7	45.6	43.2	41.4	41.7	38.8	36.5	51.4	36.5	46.5
15	36.9	38.3	36.0	36.7	38.3	36.2	32.1	32.1	36.2	35.5	34.4	36.6	37.9	35.7	37.5	36.4	35.8	36.8	36.7	37.7	39.5	52.5	52.3	56.4	56.4	32.1	38.5
16	60.1	58.5	63.3	72.1	54.7	44.2	44.1	37.8	41.7	45.3	48.6	50.3	55.7	56.4	58.1	61.7	84.2	88.0	82.8	83.8	80.9	74.2	87.1	90.4	90.4	37.8	63.5
17	93.1	91.0	92.9	90.6	94.6	93.8	89.8	95.5	97.2	91.2	87.3	87.7	73.4	79.9	81.6	81.6	79.8	75.3	67.6	71.2	79.2	82.3	86.4	84.7	97.2	67.6	85.3
18	88.6	93.0	95.3	96.0	95.6	95.2	84.8	75.6	69.1	66.4	63.3	71.8	76.8	80.3	80.6	78.8	81.5	84.6	85.5	57.5	52.0	53.7	56.6	58.8	96.0	52.0	76.7
19	59.1	65.6	69.3	68.8	70.1	70.1	69.0	63.9	64.4	62.1	60.0	61.3	63.7	64.4	60.1	61.3	62.4	67.2	70.2	73.6	76.5	80.9	86.0	85.4	86.0	59.1	68.1
20	86.3	88.4	87.3	84.1	84.4	84.6	81.5	82.0	82.1	83.8	85.5	76.3	71.4	71.6	71.5	83.3	85.4	81.4	85.3	93.4	93.5	92.5	91.6	93.6	93.6	71.4	84.2
21	94.2	94.1	93.6	94.3	94.2	92.0	90.7	92.7	93.0	92.2	88.2	90.5	90.5	89.5	81.9	73.0	75.6	84.3	91.7	94.6	91.0	87.1	86.6	84.3	94.6	73.0	89.2
22	82.3	83.0	89.7	87.4	90.3	93.6	94.7	92.1	93.6	89.9	95.3	92.5	88.1	85.0	83.1	82.3	84.3	87.6	85.9	87.4	90.2	86.8	87.1	91.1	95.3	82.3	88.5
23	95.2	96.9	96.8	95.4	95.4	96.6	97.0	98.3	98.7	97.5	90.1	81.3	86.0	72.5	73.1	82.1	81.8	70.7	64.6	55.0	54.9	53.5	53.1	52.3	98.7	52.3	80.8
24	55.1	63.3	81.7	81.5	74.4	79.4	75.5	81.5	81.3	61.8	58.4	63.9	70.0	69.6	69.8	70.4	70.8	71.7	72.7	74.3	72.9	70.3	68.2	69.0	81.7	55.1	71.1
25	68.4	67.8	70.2	75.0	75.3	74.8	72.3	74.0	74.3	73.9	67.2	67.6	71.0	88.9	90.9	88.2	88.0	86.6	89.3	83.4	83.2	87.5	86.1	84.6	90.9	67.2	78.7
26	86.6	83.1	72.7	71.9	72.3	76.2	72.6	66.4	60.6	59.1	56.9	54.9	53.2	52.1	50.2	46.4	44.5	44.9	42.7	40.5	42.3	44.8	56.7	51.1	86.6	40.5	58.4
27	44.2	45.0	44.6	41.7	41.7	40.1	39.7	38.7	36.9	35.4	34.5	41.4	40.5	44.5	50.4	34.0	34.4	36.4	45.0	45.1	46.0	50.1	49.3	51.5	51.5	34.0	42.1
28	51.9	46.6	47.0	52.9	56.8	57.3	60.1	60.6	70.2	88.3	98.2	94.8	90.3	87.9	78.9	81.7	82.6	83.6	76.6	72.6	70.9	80.4	83.7	85.4	98.2	46.6	73.3
29	86.0	83.1	64.9	63.6	64.8	64.6	59.5	63.5	63.5	58.4	55.9	57.8	56.6	60.2	54.5	51.6	51.1	52.0	52.2	49.9	49.3	52.7	65.0	69.6	86.0	49.3	60.4
30	75.0	77.5	74.9	74.4	76.2	78.2	79.5	75.0	69.0	70.2	67.4	65.5	65.7	67.5	69.6	74.9	82.6	68.5	59.7	58.7	72.1	79.6	77.3	80.4	82.6	58.7	72.5
Max.	**99.6**	**99.6**	**99.7**	**99.3**	**98.3**	**98.5**	**98.6**	**98.6**	**98.7**	**97.5**	**98.2**	**94.8**	**92.9**	**93.8**	**95.4**	**96.8**	**98.4**	**99.0**	**99.5**	**98.7**	**96.5**	**97.6**	**97.8**	**97.8**	**99.7**		
Min.	**36.9**	**38.3**	**36.0**	**36.7**	**38.3**	**36.2**	**32.1**	**32.1**	**36.2**	**35.4**	**34.4**	**36.6**	**37.9**	**35.7**	**37.5**	**34.0**	34.4	36.4	**36.7**	**37.7**	**39.3**	**37.9**	**38.1**	**36.5**		**32.1**	
Avg.	**74.2**	**74.5**	**74.7**	**75.1**	**74.8**	**75.0**	**74.5**	**73.9**	**73.3**	**72.0**	**70.1**	**69.8**	**69.6**	**70.1**	**70.6**	**70.2**	**71.3**	**71.6**	**72.0**	**70.2**	**70.9**	**72.2**	**72.2**	**72.5**			**72.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	75.2	69.9	70.4	67.4	63.9	63.9	70.5	69.5	63.9	58.6	56.8	52.3	48.0	46.7	45.9	45.6	47.4	47.5	47.8	53.8	57.5	65.5	66.3	70.3	75.2	45.6	59.4
2	78.8	85.5	84.9	84.8	85.7	83.9	83.5	85.2	86.3	85.1	83.6	85.9	86.6	83.0	75.8	69.3	67.1	65.9	64.6	67.1	66.5	75.5	88.3	84.3	88.3	64.6	79.5
3	76.8	74.8	74.6	75.5	70.4	69.7	72.4	66.2	59.3	54.4	51.1	48.5	47.0	47.2	45.5	44.4	50.1	60.4	63.8	74.6	79.2	79.9	81.7	84.4	84.4	44.4	64.7
4	86.8	88.6	85.5	85.9	87.3	86.7	88.3	85.1	80.1	78.4	77.0	74.7	77.6	83.0	86.3	81.1	80.8	81.1	81.7	84.3	82.9	78.9	85.0	85.1	88.6	74.7	83.0
5	88.2	90.5	90.2	89.5	91.3	92.0	90.7	89.5	88.0	87.4	88.0	88.2	86.7	86.9	91.4	89.8	88.5	88.5	90.2	92.8	94.3	94.0	91.9	92.7	94.3	86.7	90.1
6	95.1	95.6	96.0	96.3	96.4	96.7	97.6	97.0	97.2	96.9	96.5	95.9	92.9	86.8	78.5	65.5	64.0	64.5	66.3	67.2	68.3	65.9	65.6	67.5	97.6	64.0	83.8
7	67.4	68.5	68.1	68.3	68.7	69.8	70.3	68.8	69.0	68.5	66.1	63.7	62.2	60.9	62.9	63.8	64.4	62.5	61.5	62.2	58.7	55.4	53.6	51.4	70.3	51.4	64.0
8	50.1	49.0	50.8	64.8	70.2	66.2	67.6	63.6	59.9	66.7	81.8	85.4	86.9	81.6	75.6	72.4	72.2	72.8	70.8	73.0	70.8	65.3	69.8	74.5	86.9	49.0	69.2
9	78.1	69.9	68.4	68.9	68.7	69.2	70.7	71.6	74.2	82.1	83.3	75.3	67.4	67.2	64.2	58.6	60.1	61.6	60.9	59.0	62.0	64.0	60.5	64.7	83.3	58.6	67.9
10	67.6	62.9	66.5	74.9	70.7	67.9	59.8	54.1	52.0	59.1	67.6	60.6	62.2	57.1	53.2	56.2	66.0	74.5	79.4	84.2	91.4	94.8	93.9	93.9	94.8	52.0	69.6
11	93.8	95.0	95.6	96.1	96.2	96.6	96.7	96.2	95.4	92.1	86.1	81.6	79.1	75.1	69.7	69.2	67.9	70.0	69.0	69.6	70.8	75.6	77.9	77.5	96.7	67.9	83.0
12	79.9	75.6	74.1	75.0	78.0	75.4	71.9	69.7	69.1	64.8	62.8	57.0	58.1	40.3	36.2	37.6	37.6	41.2	44.8	44.5	47.1	57.2	53.1	57.9	79.9	36.2	58.7
13	52.5	54.3	58.1	61.7	63.1	61.0	59.8	62.3	61.6	60.4	55.9	54.4	56.2	56.8	53.8	53.6	58.2	54.9	55.1	58.0	60.9	63.8	66.7	76.5	76.5	52.5	59.2
14	88.3	92.2	91.0	91.1	91.6	88.6	85.4	77.6	77.6	80.8	81.5	81.1	82.4	81.1	81.0	80.5	74.6	75.3	73.7	74.2	77.3	78.3	79.4	78.6	92.2	73.7	81.8
15	77.1	78.9	81.8	85.6	88.4	90.9	90.0	86.7	79.6	75.8	74.7	72.6	79.9	79.5	78.7	79.0	79.3	77.0	77.3	79.1	80.6	78.4	78.7	75.0	90.9	72.6	80.2
16	78.9	66.1	52.5	53.1	53.8	55.6	57.0	64.6	62.4	64.0	60.5	58.1	66.9	66.5	71.0	72.2	71.4	72.4	74.5	71.8	69.3	68.3	72.8	77.7	78.9	52.5	65.9
17	77.9	84.1	83.0	85.5	81.4	83.3	77.4	74.7	68.7	63.1	62.1	68.2	67.1	70.9	70.0	69.2	73.1	69.4	59.4	69.3	72.3	78.9	82.7	80.5	85.5	59.4	73.8
18	76.3	79.9	83.6	85.3	84.4	83.4	84.2	82.0	76.1	60.9	56.9	52.8	52.0	54.3	59.8	67.3	67.6	59.6	62.1	62.6	61.4	57.2	51.9	59.8	85.3	51.9	67.6
19	64.3	65.5	67.3	67.4	67.2	68.1	71.0	69.2	69.3	67.2	69.2	68.2	62.6	57.5	57.7	61.9	72.6	87.2	89.8	88.2	89.1	91.0	92.7	93.3	93.3	57.5	73.2
20	93.6	91.9	92.8	93.0	91.2	91.1	90.1	88.9	88.6	88.2	85.4	82.7	87.0	87.8	81.2	77.9	71.8	65.6	75.4	74.7	74.1	69.7	72.9	82.6	93.6	65.6	83.3
21	79.5	84.7	81.5	80.5	87.5	89.4	86.0	82.2	64.5	59.8	56.9	53.7	50.7	47.1	45.4	46.0	44.4	45.8	44.4	45.0	45.3	45.6	47.0	48.2	89.4	44.4	60.9
22	49.4	59.6	67.2	71.5	71.4	69.3	70.5	67.9	64.3	62.0	60.7	55.5	52.5	40.0	38.8	37.7	37.9	38.4	39.2	39.5	48.0	55.3	61.7	64.0	71.5	37.7	55.1
23	64.2	63.3	68.6	70.7	72.5	73.5	80.5	70.4	64.2	73.6	71.3	68.5	70.0	60.7	56.9	61.6	58.6	61.3	69.4	63.6	59.4	49.0	48.0	48.5	80.5	48.0	64.5
24	48.0	49.5	48.1	52.2	66.3	49.8	58.5	61.5	67.4	69.5	68.7	76.3	73.9	63.4	59.3	58.3	53.7	49.6	44.0	47.7	54.5	44.0	51.7	51.7	76.3	44.0	57.0
25	55.7	53.9	58.9	69.7	73.4	61.3	62.8	70.8	60.3	62.9	69.9	71.5	70.1	65.5	57.6	58.3	57.2	57.8	58.2	54.2	55.1	52.4	56.1	55.4	73.4	52.4	61.2
26	53.9	56.6	53.5	49.0	47.1	48.2	50.0	51.9	51.7	58.1	68.0	59.1	58.5	62.2	61.4	58.0	68.0	64.1	65.9	57.2	52.0	44.0	48.6	47.7	68.0	44.0	55.6
27	49.0	46.3	61.6	73.4	53.6	44.9	43.8	46.0	45.9	45.9	47.1	68.7	66.2	69.2	59.1	59.0	50.9	58.0	63.3	59.1	54.3	49.9	47.0	54.3	73.4	43.8	54.8
28	64.9	70.9	61.3	56.4	63.6	59.2	59.6	59.1	55.7	59.1	49.3	47.0	47.0	47.5	40.4	42.1	44.1	66.8	55.8	44.3	38.3	39.4	40.7	48.4	70.9	38.3	52.5
29	48.4	60.0	67.0	50.2	45.4	61.3	76.0	69.0	58.7	62.5	61.2	62.4	56.2	51.7	59.8	62.2	63.4	66.4	74.6	75.2	81.5	77.8	85.0	89.1	89.1	45.4	65.2
30	89.5	90.6	93.1	95.3	94.6	91.6	90.9	93.4	94.6	95.2	96.6	95.2	95.1	92.7	86.8	83.8	81.5	80.9	82.5	78.8	82.9	83.1	83.6	87.2	96.6	78.8	89.1
31	89.1	89.7	90.8	91.9	92.8	93.6	94.9	94.4	90.9	92.5	95.3	93.2	95.4	92.6	92.9	94.9	94.8	95.7	96.6	96.4	96.4	96.2	96.1	96.4	96.6	89.1	93.9
Max.	**95.1**	**95.6**	**96.0**	**96.3**	**96.4**	**96.7**	**97.6**	**97.0**	**97.2**	**96.9**	**96.6**	**95.9**	**95.4**	**92.7**	**92.9**	**94.9**	**94.8**	**95.7**	**96.6**	**96.4**	**96.4**	**96.2**	**96.1**	**96.4**	**97.6**		
Min.	**48.0**	**46.3**	**48.1**	**49.0**	**45.4**	**44.9**	**43.8**	**46.0**	**45.9**	**45.9**	**47.1**	**47.0**	**47.0**	**40.0**	**36.2**	**37.6**	37.6	38.4	**39.2**	**39.5**	**38.3**	**39.4**	**40.7**	**47.7**		**36.2**	
Avg.	**72.2**	**73.0**	**73.8**	**75.2**	**75.4**	**74.3**	**75.1**	**73.8**	**70.9**	**70.8**	**70.7**	**69.6**	**69.2**	**66.5**	**64.4**	**63.8**	**64.2**	**65.7**	**66.5**	**66.8**	**67.8**	**67.6**	**69.4**	**71.6**			**69.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	96.6	96.7	95.1	80.1	82.0	86.2	84.6	81.5	87.1	86.3	82.7	80.5	74.4	79.3	84.3	81.0	75.8	77.0	83.9	84.3	88.2	89.6	86.0	83.9	96.7	74.4	84.5
2	82.4	82.6	82.4	82.9	81.8	81.4	79.8	77.2	70.0	66.1	63.9	58.8	55.5	45.8	35.5	36.0	36.3	40.3	45.5	46.6	46.6	47.2	52.8	62.3	82.9	35.5	60.8
3	63.2	63.6	61.8	57.1	56.3	57.9	57.0	57.5	56.1	54.4	51.0	48.1	44.6	40.4	37.8	34.0	32.9	35.3	38.7	38.7	33.9	32.2	29.6	28.1	63.6	28.1	46.3
4	29.8	29.8	32.9	44.6	55.6	54.0	50.0	48.8	44.3	42.6	47.2	55.8	51.9	48.0	49.6	51.6	51.9	53.6	40.8	36.6	33.3	33.0	45.5	59.7	59.7	29.8	45.5
5	64.4	63.8	59.2	61.7	61.6	67.0	71.0	64.6	60.8	56.5	60.2	61.4	60.3	54.3	54.6	57.2	54.6	55.8	59.8	52.2	59.8	61.8	67.9	64.1	71.0	52.2	60.6
6	71.7	70.6	65.7	67.2	70.0	72.5	71.7	68.8	66.4	78.4	81.5	78.6	75.9	74.3	72.9	73.6	76.5	78.4	80.0	75.3	76.1	78.1	77.0	79.8	81.5	65.7	74.2
7	76.2	73.2	72.2	72.4	73.8	76.9	69.4	64.6	76.5	81.2	74.6	78.2	76.7	81.1	86.0	90.8	91.7	90.0	88.1	88.7	91.6	90.0	89.3	90.0	91.7	64.6	81.0
8	89.2	88.4	88.9	86.4	87.1	87.4	86.6	87.9	86.6	87.5	89.7	83.1	78.4	74.8	75.1	71.4	76.7	78.7	82.5	85.2	84.0	87.5	90.4	89.7	90.4	71.4	84.3
9	89.4	88.1	89.5	90.6	92.0	91.8	91.5	90.7	91.5	90.6	88.2	84.2	81.7	81.5	84.1	78.1	72.1	83.1	93.0	91.7	93.0	94.2	94.7	95.1	95.1	72.1	88.4
10	92.6	93.7	94.5	94.8	93.6	90.5	90.4	92.5	92.3	92.2	87.5	78.2	77.1	79.4	72.2	74.6	74.5	76.3	78.5	77.8	79.1	79.6	77.5	77.8	94.8	72.2	84.1
11	76.6	81.7	87.6	88.7	90.4	88.0	84.9	83.7	80.8	84.4	85.5	86.5	80.7	79.2	84.3	84.9	86.5	80.8	81.8	82.5	82.5	86.9	86.7	88.1	90.4	76.6	84.3
12	88.8	90.1	91.7	92.4	92.4	91.1	90.3	92.4	94.2	91.0	92.6	96.0	96.8	98.4	97.2	96.3	97.1	97.1	97.0	97.8	97.8	96.0	95.8	96.2	98.4	88.8	94.4
13	96.5	96.6	96.6	96.2	96.4	97.0	98.6	98.9	98.8	98.1	97.1	95.3	92.1	87.7	83.7	79.0	89.9	92.5	93.0	92.7	92.7	95.2	97.0	96.8	98.9	79.0	94.1
14	96.7	96.6	96.7	97.0	96.8	95.0	96.1	95.8	95.1	92.6	95.3	96.3	96.8	97.3	97.2	95.8	92.0	89.4	90.0	87.1	84.0	84.1	82.9	79.9	97.3	79.9	92.8
15	81.0	83.9	85.3	85.3	86.2	85.1	85.2	90.3	91.4	91.1	90.5	88.9	89.4	92.5	96.2	96.1	95.1	94.8	94.3	94.7	96.5	97.3	96.8	97.0	97.3	81.0	91.0
16	96.9	97.0	97.2	97.4	97.5	97.4	96.5	96.7	98.1	98.6	98.2	98.1	97.8	95.4	91.3	90.1	94.7	93.9	92.3	89.8	92.5	91.6	91.9	92.6	98.6	89.8	95.1
17	94.7	95.5	95.7	96.2	96.7	97.1	97.2	96.3	96.2	94.6	90.9	85.1	87.7	92.5	91.2	90.6	88.5	86.8	90.9	88.4	91.3	96.0	97.4	97.5	97.5	85.1	93.1
18	97.7	97.7	97.8	97.8	95.8	90.2	91.4	86.3	82.5	83.5	87.7	88.7	87.3	86.1	87.4	87.3	85.5	88.7	88.2	88.8	84.4	86.7	89.4	88.1	97.8	82.5	89.4
19	85.6	86.3	84.4	80.8	77.0	77.1	77.7	78.3	71.2	67.4	62.7	60.1	59.4	60.0	56.1	55.0	67.5	75.8	89.7	91.5	91.1	94.2	95.2	95.0	95.2	55.0	76.6
20	92.7	78.7	87.2	89.4	88.1	88.4	93.4	87.9	84.5	83.9	82.1	82.7	91.5	92.4	92.2	81.7	73.1	71.3	75.5	76.7	75.4	78.3	77.6	83.0	93.4	71.3	83.7
21	87.2	90.2	90.1	90.8	87.0	84.6	81.1	76.6	70.8	68.5	80.1	74.7	72.3	74.8	58.6	67.7	67.6	63.1	76.6	73.4	69.3	78.4	82.6	84.2	90.8	58.6	77.1
22	84.9	86.2	86.0	83.6	88.9	94.5	89.3	86.8	88.4	87.3	90.2	90.0	94.3	92.7	88.2	93.2	92.1	90.3	85.2	84.8	81.8	81.0	77.5	88.7	94.5	77.5	87.7
23	93.5	93.9	93.1	92.7	92.2	90.7	91.4	90.4	93.6	93.7	94.1	91.8	90.5	89.7	87.2	86.9	85.8	82.5	86.7	82.2	84.9	82.5	86.2	91.5	94.1	82.2	89.5
24	93.3	94.1	95.1	96.1	96.1	92.8	87.0	78.9	75.5	79.2	81.0	79.7	72.7	59.6	60.5	56.6	50.6	50.5	59.6	71.3	72.5	70.5	70.2	75.2	96.1	50.5	75.8
25	79.0	76.0	73.7	78.5	83.0	82.4	81.2	77.8	81.5	77.1	76.7	82.4	77.2	75.3	76.7	74.8	75.4	74.9	81.3	82.2	78.0	82.3	80.9	82.6	83.0	73.7	78.8
26	83.1	88.4	86.2	87.5	87.1	88.5	86.5	87.3	85.1	91.0	89.5	90.5	89.2	89.4	85.5	86.0	87.7	88.6	88.0	84.3	82.2	84.5	88.6	87.9	91.0	82.2	87.2
27	89.5	93.2	94.2	95.3	95.7	91.4	85.5	86.5	86.5	85.3	85.9	84.7	82.1	83.5	80.4	75.1	71.2	79.4	84.5	84.2	63.0	43.8	45.4	47.1	95.7	43.8	79.7
28	48.7	50.9	51.7	52.9	55.0	58.8	58.3	54.2	54.3	54.9	52.1	54.4	55.0	52.2	51.9	56.3	55.6	54.9	57.3	59.1	61.5	65.2	64.3	63.5	65.2	48.7	55.9
29	62.8	64.3	65.0	64.6	64.5	64.6	63.4	69.5	67.5	72.0	77.9	79.9	79.6	87.5	91.5	82.4	79.3	80.7	81.2	82.2	82.9	83.3	84.1	83.3	91.5	62.8	75.6
30	83.7	87.3	89.1	90.8	93.1	94.8	95.2	94.2	91.9	90.9	87.9	90.2	89.7	87.7	89.7	90.1	90.7	93.9	94.9	90.4	72.1	69.6	67.5	68.6	95.2	67.5	87.3
Max.	**97.7**	**97.7**	**97.8**	**97.8**	**97.5**	**97.4**	**98.6**	**98.9**	**98.8**	**98.6**	**98.2**	**98.1**	**97.8**	**98.4**	**97.2**	**96.3**	**97.1**	**97.1**	**97.0**	**97.8**	**97.8**	**97.3**	**97.4**	**97.5**	**98.9**		
Min.	**29.8**	**29.8**	**32.9**	**44.6**	**55.0**	**54.0**	**50.0**	**48.8**	**44.3**	**42.6**	**47.2**	**48.1**	**44.6**	**40.4**	**35.5**	**34.0**	32.9	35.3	**38.7**	**36.6**	**33.3**	**32.2**	**29.6**	**28.1**		**28.1**	
Avg.	**82.3**	**82.6**	**82.9**	**83.1**	**83.8**	**83.8**	**82.7**	**81.4**	**80.7**	**80.7**	**80.8**	**80.1**	**78.6**	**77.8**	**76.6**	**75.8**	**75.6**	**76.6**	**79.3**	**78.7**	**77.4**	**78.0**	**79.0**	**80.6**			**80.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	75.4	81.0	79.7	82.9	84.0	82.3	80.3	77.2	73.1	77.4	88.9	88.6	87.6	85.8	85.3	86.3	91.3	90.8	96.2	80.8	49.6	63.9	59.9	51.9	96.2	49.6	79.2
2	58.8	61.6	57.9	71.5	73.7	74.6	77.1	74.2	73.7	70.3	67.6	65.9	80.9	79.4	79.6	66.1	51.4	53.8	55.6	56.8	58.4	65.8	78.2	87.1	87.1	51.4	68.3
3	89.5	92.1	94.3	94.6	95.8	96.5	97.7	97.4	97.1	94.5	93.9	95.2	97.1	95.5	94.3	93.5	93.5	88.3	90.4	89.2	88.9	86.0	86.3	87.9	97.7	86.0	92.9
4	86.1	83.6	82.7	84.8	84.5	86.0	82.9	82.1	85.4	87.0	86.8	85.6	85.7	88.0	89.5	89.5	87.6	89.5	94.3	94.5	92.2	91.0	86.4	85.5	94.5	82.1	87.1
5	85.8	88.4	90.0	93.3	94.6	92.3	94.7	95.8	94.6	92.5	94.9	96.8	96.9	97.5	97.0	96.2	96.6	96.4	95.9	94.6	94.1	96.3	96.5	96.5	97.5	85.8	94.5
6	96.5	96.5	96.6	96.6	96.9	97.7	97.8	97.2	95.6	94.6	95.4	94.8	92.8	93.6	94.5	93.9	92.8	93.1	92.5	93.9	94.2	94.9	94.7	95.3	97.8	92.5	95.1
7	95.8	96.2	96.4	96.5	96.6	96.9	96.8	96.7	97.3	97.8	97.6	97.8	96.2	94.4	96.1	94.9	92.3	93.0	96.6	96.2	95.9	96.6	97.0	97.3	97.8	92.3	96.2
8	97.5	97.6	97.6	97.6	97.7	96.9	93.2	83.7	77.2	71.1	68.7	67.6	68.3	67.7	66.1	73.6	77.5	78.2	70.1	65.6	65.6	66.9	76.8	84.5	97.7	65.6	79.5
9	86.3	87.9	89.6	90.3	90.6	86.6	84.6	81.8	85.8	84.6	84.5	83.8	82.4	81.8	82.0	80.8	71.5	74.9	80.5	85.9	89.5	89.3	88.4	89.2	90.6	71.5	84.7
10	90.0	90.9	90.9	91.8	90.7	88.5	88.1	88.0	90.7	92.6	92.9	91.8	88.9	80.1	81.1	83.0	86.2	89.7	93.9	93.2	92.3	90.2	90.8	92.7	93.9	80.1	89.5
11	94.1	95.0	95.4	95.4	95.5	95.1	94.0	91.9	90.7	84.0	67.4	64.5	64.4	72.7	79.7	78.3	74.3	74.4	81.5	82.0	79.5	83.8	84.3	89.6	95.5	64.4	83.6
12	91.6	92.9	94.1	95.1	95.9	93.5	87.0	82.3	73.9	67.4	70.1	76.5	77.2	77.1	72.1	63.5	61.5	52.0	47.5	49.1	53.1	51.2	57.6	64.3	95.9	47.5	72.8
13	66.0	52.5	54.8	73.2	60.8	55.9	62.4	66.4	68.5	69.1	67.3	64.4	62.9	62.7	64.6	65.5	67.8	68.6	69.0	69.3	71.1	73.0	73.8	72.4	73.8	52.5	65.9
14	71.4	72.1	75.8	73.8	73.1	72.5	70.8	68.6	67.5	66.4	64.6	63.1	61.2	63.5	63.7	66.6	67.7	71.6	75.8	78.3	74.8	74.3	75.6	78.6	78.6	61.2	70.5
15	79.4	80.1	77.0	75.8	78.6	77.9	75.4	75.0	70.1	66.9	61.6	60.1	57.1	57.5	71.5	76.7	76.9	77.5	83.5	82.4	87.3	87.0	85.1	84.8	87.3	57.1	75.2
16	83.1	80.7	80.3	81.0	82.9	83.8	91.6	94.1	91.4	90.0	85.9	84.3	80.4	79.1	84.7	81.6	76.3	82.9	79.5	79.9	80.2	78.5	80.8	81.8	94.1	76.3	83.1
17	83.3	87.4	86.8	85.3	86.9	88.2	86.5	85.0	86.0	82.3	80.9	75.3	77.3	88.1	86.5	90.7	91.1	92.5	94.7	96.4	95.2	93.8	95.6	95.7	96.4	75.3	88.0
18	92.8	92.6	93.9	94.9	95.0	95.8	95.0	95.0	95.0	96.3	97.4	97.5	97.1	95.4	94.9	87.5	81.6	81.4	82.2	80.7	74.9	82.7	85.2	81.1	97.5	74.9	90.2
19	78.0	78.6	79.9	78.8	73.6	71.1	68.1	64.2	60.6	57.6	58.1	58.8	58.5	56.3	54.3	57.1	59.8	58.3	55.8	54.9	61.8	74.2	69.6	60.2	79.9	54.3	64.5
20	61.6	67.1	69.2	74.2	70.9	60.0	63.9	52.5	51.3	49.5	53.9	56.1	61.6	62.4	59.1	66.6	66.8	66.2	59.4	63.8	83.7	93.8	93.4	94.5	94.5	49.5	66.7
21	95.3	91.5	91.4	88.7	91.1	75.5	67.4	65.5	65.5	63.7	63.8	62.8	62.6	62.4	61.8	68.7	84.1	85.8	88.9	88.6	75.7	84.0	89.6	89.9	95.3	61.8	77.7
22	91.9	94.2	95.4	96.0	96.4	89.5	84.5	86.5	90.1	88.4	88.1	89.8	88.6	89.4	96.2	96.4	95.2	89.9	79.2	84.5	87.2	87.1	88.3	91.8	96.4	79.2	90.2
23	89.8	90.8	87.9	90.3	94.8	95.9	92.6	88.4	84.5	81.1	81.0	86.9	86.9	84.8	82.7	83.7	91.9	94.6	86.5	86.3	88.6	91.4	94.5	94.0	95.9	81.0	88.7
24	93.6	92.9	93.4	93.7	92.6	88.3	81.3	84.5	83.3	81.6	76.3	80.5	84.7	90.2	96.4	96.2	94.9	94.7	94.0	93.4	95.4	94.8	95.6	93.8	96.4	76.3	90.3
25	93.9	94.2	94.3	93.4	93.4	94.9	94.6	92.9	93.2	94.9	94.6	94.5	92.3	95.8	89.3	88.8	81.9	89.7	89.7	87.7	88.7	89.4	90.7	90.9	95.8	81.9	91.8
26	91.0	90.7	93.3	94.7	95.6	92.2	88.3	71.4	71.9	72.1	69.7	68.2	69.3	69.2	65.3	66.2	63.2	64.2	65.0	66.2	65.9	66.4	66.8	67.4	95.6	63.2	74.7
27	67.4	67.5	67.9	69.2	69.5	70.6	77.0	76.8	74.0	69.6	65.8	64.3	64.7	68.9	75.3	79.4	81.6	84.4	87.5	88.3	82.2	87.4	90.0	90.5	90.5	64.3	75.8
28	90.4	92.2	94.6	92.8	94.7	92.6	91.6	87.4	82.7	79.2	82.1	81.8	81.7	83.4	84.0	89.9	91.7	93.2	94.3	93.8	79.5	79.7	79.0	80.0	94.7	79.0	87.2
29	77.8	76.5	72.6	74.5	77.3	74.4	74.5	76.1	72.2	70.8	68.6	68.8	66.2	64.6	67.4	71.2	72.9	74.4	76.9	75.9	77.7	76.2	74.7	73.3	77.8	64.6	73.1
30	71.8	72.9	74.6	75.3	75.4	75.9	77.4	77.2	73.9	70.9	70.4	69.9	68.1	66.1	68.7	71.0	70.2	69.0	68.8	68.2	67.5	71.0	73.1	66.6	77.4	66.1	71.4
31	59.0	58.5	59.2	59.6	58.8	60.3	63.4	59.9	59.4	58.6	56.9	56.1	56.0	55.3	56.5	57.8	61.1	61.4	64.6	64.7	64.3	63.1	66.0	70.4	70.4	55.3	60.4
Max.	**97.5**	**97.6**	**97.6**	**97.6**	**97.7**	**97.7**	**97.8**	**97.4**	**97.3**	**97.8**	**97.6**	**97.8**	**97.1**	**97.5**	**97.0**	**96.4**	**96.6**	**96.4**	**96.6**	**96.4**	**95.9**	**96.6**	**97.0**	**97.3**	**97.8**		
Min.	**58.8**	**52.5**	**54.8**	**59.6**	**58.8**	**55.9**	**62.4**	**52.5**	**51.3**	**49.5**	**53.9**	**56.1**	**56.0**	**55.3**	**54.3**	**57.1**	51.4	52.0	**47.5**	**49.1**	**49.6**	**51.2**	**57.6**	**51.9**		**47.5**	
Avg.	**83.4**	**83.8**	**84.1**	**85.7**	**85.7**	**83.9**	**83.2**	**81.2**	**79.9**	**78.1**	**77.3**	**77.2**	**77.3**	**77.7**	**78.7**	**79.4**	**79.1**	**79.8**	**80.3**	**80.2**	**79.2**	**81.4**	**82.7**	**83.2**			**80.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	73.3	72.6	71.0	67.3	69.3	68.4	70.7	71.6	76.4	76.8	77.8	77.1	81.3	84.6	83.2	84.9	88.0	83.8	83.0	84.7	84.6	86.8	90.3	90.5	90.5	67.3	79.1
2	89.9	92.5	94.9	96.1	96.7	97.1	97.4	97.7	97.9	97.9	97.6	97.1	96.7	94.6	94.4	94.9	95.1	94.1	93.5	91.8	91.4	88.5	91.8	95.6	97.9	88.5	94.8
3	94.3	88.9	84.5	82.5	85.3	88.7	88.7	88.8	90.0	89.8	91.4	90.4	90.0	91.5	91.1	86.8	79.6	75.4	77.2	76.3	70.5	67.4	63.1	61.8	94.3	61.8	83.1
4	65.7	74.5	74.3	83.3	87.9	90.7	93.6	93.1	76.0	71.6	74.0	78.0	79.3	82.2	82.0	82.8	82.2	83.1	84.9	85.8	88.1	90.3	90.1	90.8	93.6	65.7	82.7
5	92.6	93.2	92.7	92.9	93.4	93.8	94.3	88.9	79.4	74.7	76.0	82.1	78.8	73.7	71.0	67.5	56.9	61.4	61.0	61.1	66.8	70.4	69.6	70.9	94.3	56.9	77.6
6	77.3	82.8	86.4	84.5	88.4	90.6	89.1	80.3	74.5	69.7	67.2	64.6	60.0	56.0	51.9	52.7	54.5	56.9	58.5	57.1	57.2	56.4	57.3	57.4	90.6	51.9	68.0
7	57.2	59.8	63.4	70.3	72.1	81.2	77.8	73.8	70.1	66.2	63.7	60.1	51.5	51.5	53.2	54.9	59.6	62.6	63.4	65.2	61.8	64.1	66.9	69.0	81.2	51.5	64.1
8	70.0	70.2	70.1	68.9	68.3	69.4	69.6	68.1	69.1	64.9	62.4	57.2	57.1	54.7	52.6	52.8	56.0	64.6	72.5	71.4	69.6	69.3	71.6	77.4	77.4	52.6	65.7
9	82.5	82.1	83.1	77.6	79.8	82.9	83.9	86.3	86.6	88.4	83.3	77.9	83.5	80.8	75.3	85.7	86.2	87.1	88.4	90.0	91.1	93.3	94.8	95.3	95.3	75.3	85.2
10	92.9	92.6	92.4	93.0	93.8	94.3	94.7	94.3	94.7	94.9	95.8	94.2	93.1	92.7	92.2	93.6	95.0	92.4	90.8	93.4	94.0	94.5	97.3	97.9	97.9	90.8	93.9
11	98.0	98.4	98.5	98.7	98.8	98.7	98.5	97.9	98.4	98.3	97.2	97.2	97.8	98.3	98.4	98.3	98.3	98.1	98.1	98.4	98.4	95.3	88.5	87.0	98.8	87.0	97.2
12	88.0	92.5	95.1	96.1	96.5	96.9	97.3	97.6	97.5	92.8	89.0	82.3	80.7	86.7	90.9	88.2	86.2	79.1	69.6	64.5	67.0	69.0	71.5	71.6	97.6	64.5	85.3
13	73.4	74.3	77.2	78.4	78.6	77.5	74.8	75.2	74.8	75.1	75.2	79.8	78.2	77.1	74.0	74.1	77.9	79.6	79.0	78.8	80.0	77.9	81.3	82.3	82.3	73.4	77.3
14	81.5	82.9	86.1	86.9	85.8	89.0	91.8	92.7	93.6	94.2	94.3	95.0	95.1	95.9	95.8	95.2	94.8	95.1	95.1	95.6	95.9	96.0	95.6	95.4	96.0	81.5	92.5
15	96.5	96.6	94.9	95.2	94.5	92.7	93.0	92.2	92.8	92.4	92.7	93.2	93.3	93.5	89.9	89.2	90.0	91.1	91.8	93.9	95.6	96.2	97.1	97.5	97.5	89.2	93.6
16	97.9	98.1	98.2	98.3	98.4	98.5	98.6	98.7	98.7	98.7	98.2	95.3	90.1	90.6	91.7	90.9	91.3	93.1	95.6	96.4	97.0	97.4	97.8	98.1	98.7	90.1	96.2
17	98.2	98.3	98.4	98.4	98.4	98.4	98.4	98.5	98.4	97.6	94.3	88.5	81.1	73.1	76.8	75.6	61.0	60.7	64.6	68.3	69.6	71.2	71.0	67.6	98.5	60.7	83.6
18	67.1	67.1	66.7	69.0	66.9	68.7	69.6	76.4	80.9	89.1	93.5	94.5	93.2	92.6	93.8	94.2	94.7	95.5	86.3	81.1	88.4	87.1	92.5	91.8	95.5	66.7	83.4
19	86.4	85.0	86.3	86.9	87.0	82.4	79.9	77.3	67.7	63.3	74.2	71.2	61.6	72.3	70.3	75.0	73.4	72.5	74.7	78.2	79.2	84.2	83.9	84.5	87.0	61.6	77.4
20	85.5	90.1	89.2	91.6	94.2	94.7	93.7	93.0	93.5	87.3	80.1	73.8	79.6	85.7	83.1	81.4	74.8	73.4	76.5	64.8	59.7	57.3	71.6	80.4	94.7	57.3	81.5
21	58.3	55.8	61.3	74.6	79.6	79.3	77.7	76.0	69.7	64.8	61.4	59.3	64.4	64.2	63.4	52.8	51.9	59.0	64.7	64.1	76.8	84.0	89.6	92.6	92.6	51.9	68.5
22	94.5	94.7	96.0	96.5	96.6	96.7	97.3	97.5	97.8	98.4	98.2	89.5	77.7	67.0	68.1	74.2	74.1	73.8	68.0	68.6	64.0	67.7	66.8	65.9	98.4	64.0	82.9
23	79.1	90.7	93.9	94.4	88.4	90.9	90.5	87.3	83.8	79.3	74.6	78.5	81.7	82.9	83.5	85.9	84.8	82.8	79.9	82.0	84.8	87.2	88.3	88.6	94.4	74.6	85.2
24	86.8	85.0	82.8	81.0	81.8	87.2	90.8	92.2	92.5	88.8	88.9	86.5	86.7	90.7	84.7	82.5	82.8	84.1	90.5	78.0	75.6	73.6	69.6	71.9	92.5	69.6	84.0
25	74.7	72.1	73.8	74.9	72.8	74.1	67.6	64.1	64.2	64.7	61.2	61.6	59.6	58.3	57.4	55.6	54.6	54.4	56.0	57.6	66.1	72.4	81.2	78.1	81.2	54.4	65.7
26	79.0	83.9	86.3	90.4	91.4	93.5	95.5	94.7	92.3	89.3	88.2	86.0	85.3	88.9	87.1	83.8	76.7	71.1	70.0	73.4	83.3	84.4	86.1	86.2	95.5	70.0	85.3
27	88.3	89.6	90.3	90.3	90.2	88.7	85.9	82.5	78.4	75.2	72.8	68.7	64.0	56.2	55.7	57.5	60.0	62.2	60.2	59.5	63.7	66.6	67.9	74.5	90.3	55.7	72.9
28	72.7	69.8	73.4	78.4	79.5	78.4	77.8	75.7	72.4	70.2	66.1	65.1	63.2	62.0	64.1	62.1	61.2	63.4	65.4	64.7	65.1	65.7	67.0	69.4	79.5	61.2	68.9
29	69.2	71.1	71.8	70.3	67.7	65.6	68.2	78.5	76.7	72.9	67.5	73.4	81.9	81.8	81.7	80.5	80.6	77.4	88.9	87.1	89.8	91.0	91.9	92.1	92.1	65.6	78.2
30	87.5	82.1	83.8	80.0	79.3	85.6	89.8	90.2	88.1	90.1	89.7	89.6	87.7	87.5	86.6	86.1	85.8	78.3	70.9	70.7	73.2	73.5	76.6	77.2	90.2	70.7	82.9
31	80.0	85.8	90.5	91.5	86.4	80.3	73.8	71.2	76.4	83.5	82.3	82.4	81.8	83.3	85.1	87.5	91.8	95.7	96.1	96.4	96.1	95.7	95.2	95.1	96.4	71.2	86.8
Max.	**98.2**	**98.4**	**98.5**	**98.7**	**98.8**	**98.7**	**98.6**	**98.7**	**98.7**	**98.7**	**98.2**	**97.2**	**97.8**	**98.3**	**98.4**	**98.3**	**98.3**	**98.1**	**98.1**	**98.4**	**98.4**	**97.4**	**97.8**	**98.1**	**98.8**		
Min.	**57.2**	**55.8**	**61.3**	**67.3**	**66.9**	**65.6**	**67.6**	**64.1**	**64.2**	**63.3**	**61.2**	**57.2**	**51.5**	**51.5**	**51.9**	**52.7**	51.9	54.4	**56.0**	**57.1**	**57.2**	**56.4**	**57.3**	**57.4**		**51.5**	
Avg.	**81.9**	**83.0**	**84.1**	**85.1**	**85.4**	**86.3**	**86.1**	**85.6**	**84.0**	**82.6**	**81.6**	**80.3**	**79.2**	**79.1**	**78.4**	**78.3**	**77.4**	**77.5**	**77.9**	**77.4**	**78.8**	**79.8**	**81.4**	**82.4**			**81.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	94.6	93.2	93.3	93.6	93.8	94.1	93.6	88.5	83.9	84.0	82.9	76.8	79.1	82.7	82.8	82.9	83.0	83.2	77.9	80.6	79.7	85.3	89.5	91.9	94.6	76.8	86.3
2	94.0	94.9	95.9	96.2	96.2	95.4	91.6	87.0	81.4	78.4	86.6	87.7	87.8	85.3	84.7	88.3	91.0	91.5	93.3	95.6	95.1	92.8	93.6	95.2	96.2	78.4	90.8
3	95.5	95.8	96.4	96.6	96.9	96.9	96.8	94.6	90.3	80.6	84.4	85.0	83.0	83.3	81.9	81.7	78.8	76.9	79.2	83.2	88.0	90.8	91.9	93.1	96.9	76.9	88.4
4	92.9	92.8	93.6	95.4	96.0	96.6	96.2	94.3	92.3	86.4	86.9	83.2	82.9	81.0	85.1	84.0	84.1	84.7	84.9	88.2	91.0	92.2	92.9	93.0	96.6	81.0	89.6
5	91.8	92.4	93.7	93.9	94.6	95.0	94.5	94.0	94.5	92.3	90.4	85.4	85.6	79.1	76.4	79.7	74.2	72.5	73.7	75.6	77.9	82.6	83.8	83.4	95.0	72.5	85.7
6	85.8	81.1	88.7	91.5	89.3	88.0	88.5	85.0	80.8	76.1	71.4	66.7	60.5	52.0	48.9	49.2	65.1	74.0	70.3	63.1	65.8	68.6	70.4	70.2	91.5	48.9	73.0
7	70.7	70.7	78.3	83.2	85.6	86.8	88.5	88.9	81.8	75.8	77.6	82.9	81.7	80.7	86.7	91.9	91.4	92.8	94.4	94.9	95.9	96.3	96.8	96.5	96.8	70.7	86.3
8	96.5	96.5	97.0	97.1	96.4	94.3	94.1	94.6	91.4	91.5	90.9	90.9	92.2	91.5	92.9	94.2	92.6	90.6	90.1	90.5	93.6	94.6	95.2	94.8	97.1	90.1	93.5
9	95.9	96.5	96.9	96.1	94.8	92.5	91.2	89.4	82.9	76.9	83.8	85.6	83.7	79.6	80.9	81.1	80.3	84.0	91.3	93.7	94.0	94.1	93.2	95.3	96.9	76.9	88.9
10	96.0	96.1	96.2	96.3	96.4	96.6	96.7	96.9	96.9	95.8	93.6	87.1	88.1	84.8	88.2	87.3	84.3	84.6	90.4	86.0	86.6	90.0	91.8	93.0	96.9	84.3	91.7
11	94.0	95.0	94.9	93.4	92.3	93.5	94.4	93.9	92.7	90.2	84.5	84.9	83.2	83.8	84.4	84.5	85.1	89.7	86.5	86.2	88.8	90.7	92.4	94.0	95.0	83.2	89.7
12	94.9	95.3	95.9	93.5	90.7	90.3	90.4	88.1	83.7	80.4	77.5	81.3	83.5	87.6	88.1	88.1	87.1	88.3	93.1	93.3	89.9	84.1	83.2	84.7	95.9	77.5	88.0
13	84.9	85.7	85.2	87.5	91.6	94.2	95.2	94.2	88.8	84.9	84.5	85.4	74.4	77.1	77.4	74.5	75.6	80.2	68.6	70.3	83.2	88.4	87.7	87.9	95.2	68.6	83.6
14	89.4	87.2	76.8	75.7	86.2	94.0	92.8	93.1	92.0	91.3	90.8	91.1	91.3	91.6	89.7	89.8	89.4	92.1	91.6	91.3	87.5	84.4	80.0	86.3	94.0	75.7	88.6
15	90.0	92.5	93.4	93.8	92.9	85.3	78.5	74.7	74.1	73.9	79.8	82.7	83.7	87.1	91.1	90.1	85.8	86.8	88.5	89.8	90.9	89.6	88.6	88.3	93.8	73.9	86.3
16	88.1	88.8	87.2	84.5	82.8	76.3	79.2	81.6	72.4	70.3	71.4	74.4	73.0	78.1	73.9	74.5	78.4	83.5	81.3	81.7	79.8	80.2	81.9	84.7	88.8	70.3	79.5
17	85.9	86.9	90.8	89.9	90.7	90.9	90.5	88.6	88.6	91.3	91.8	86.3	76.4	75.5	71.3	69.0	70.5	70.7	72.8	71.6	71.6	76.9	81.7	88.6	91.8	69.0	82.0
18	89.2	91.1	89.4	86.7	87.2	84.5	80.5	74.8	72.1	72.5	87.4	90.1	82.9	77.2	78.0	78.1	79.8	84.4	85.6	87.8	93.5	94.5	94.7	93.9	94.7	72.1	84.8
19	91.8	90.0	88.4	88.2	84.9	86.0	89.8	89.7	87.0	87.4	88.6	87.1	86.8	85.3	86.8	84.8	76.7	81.3	84.4	89.5	93.2	94.2	94.6	95.1	95.1	76.7	88.0
20	96.2	97.0	97.0	93.3	89.3	85.9	82.4	77.5	76.7	75.1	73.3	71.0	69.7	68.2	65.8	65.5	67.2	70.1	69.8	74.6	75.1	76.1	74.0	71.6	97.0	65.5	77.6
21	71.7	76.0	85.8	88.0	90.6	88.5	83.6	82.8	81.9	86.5	86.1	85.5	86.7	90.0	87.5	88.6	88.5	89.8	91.3	92.8	93.2	94.1	94.4	93.7	94.4	71.7	87.4
22	93.6	96.3	96.0	89.5	87.2	86.0	82.7	81.0	78.4	79.7	78.4	75.2	72.4	72.4	74.1	79.0	78.9	77.6	77.5	76.2	74.5	76.8	77.9	77.7	96.3	72.4	80.8
23	76.5	76.4	77.0	78.4	77.5	78.3	78.3	79.6	78.6	75.9	73.0	72.8	72.3	71.8	71.6	70.9	68.9	75.1	73.9	82.6	87.2	89.0	92.6	93.5	93.5	68.9	78.0
24	93.4	93.7	92.7	93.3	92.9	92.5	94.4	94.0	89.5	83.9	80.8	74.7	73.0	74.4	77.3	78.1	79.5	72.0	63.6	63.0	66.7	81.9	87.9	89.6	94.4	63.0	82.6
25	90.2	91.3	92.4	92.9	92.5	92.0	92.0	91.6	88.3	87.5	85.1	78.9	74.0	70.7	70.4	71.5	73.8	73.8	72.3	68.1	66.0	65.6	67.1	67.2	92.9	65.6	79.8
26	70.9	75.2	76.3	81.0	78.6	72.5	71.5	74.4	78.5	85.2	85.3	80.2	81.0	81.6	82.7	87.2	88.1	89.9	96.3	96.7	97.1	97.2	97.3	97.4	97.4	70.9	84.3
27	97.4	97.6	97.7	97.8	97.8	96.0	93.2	77.0	72.2	79.3	84.0	82.6	82.9	84.1	85.5	79.0	78.4	84.8	90.7	90.4	92.8	93.8	94.6	95.0	97.8	72.2	88.5
28	95.7	96.1	96.5	96.7	96.9	97.0	97.1	96.1	95.1	94.8	92.4	87.8	85.9	83.9	82.2	72.3	69.3	71.3	71.4	67.6	64.0	63.2	62.0	64.6	97.1	62.0	83.3
29	64.2	63.8	60.4	56.6	55.5	58.5	64.4	68.8	64.1	58.9	56.5	52.6	50.6	53.1	51.1	49.7	54.1	54.3	56.2	58.6	62.2	62.3	61.7	60.3	68.8	49.7	58.3
30	62.5	58.2	59.4	51.4	52.6	51.4	43.7	53.4	66.4	66.0	63.2	63.2	50.9	60.8	60.1	53.8	57.4	51.6	49.3	51.6	61.8	73.2	74.5	81.4	81.4	43.7	59.1
Max.	**97.4**	**97.6**	**97.7**	**97.8**	**97.8**	**97.0**	**97.1**	**96.9**	**96.9**	**95.8**	**93.6**	**91.1**	**92.2**	**91.6**	**92.9**	**94.2**	**92.6**	**92.8**	**96.3**	**96.7**	**97.1**	**97.2**	**97.3**	**97.4**	**97.8**		
Min.	**62.5**	**58.2**	**59.4**	**51.4**	**52.6**	**51.4**	**43.7**	**53.4**	**64.1**	**58.9**	**56.5**	**52.6**	**50.6**	**52.0**	**48.9**	**49.2**	54.1	51.6	**49.3**	**51.6**	**61.8**	**62.3**	**61.7**	**60.3**		**43.7**	
Avg.	**87.8**	**88.1**	**88.8**	**88.4**	**88.4**	**87.7**	**86.9**	**85.6**	**83.2**	**81.8**	**82.1**	**80.6**	**78.6**	**78.5**	**78.6**	**78.3**	**78.6**	**80.1**	**80.3**	**81.2**	**82.9**	**84.8**	**85.6**	**86.7**			**83.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	87.0	89.5	88.7	89.2	88.9	87.1	84.8	84.5	85.2	83.4	83.1	81.2	83.0	83.3	86.0	89.4	87.5	84.0	82.5	83.6	92.2	94.0	94.1	94.5	94.5	81.2	86.9
2	94.9	93.5	92.0	92.4	91.6	90.9	89.8	91.2	90.5	90.1	90.3	88.8	90.8	90.3	89.3	91.2	89.3	88.2	88.6	90.4	94.6	93.3	93.6	94.2	94.9	88.2	91.2
3	94.1	93.8	93.9	94.4	95.1	95.4	95.5	94.8	94.8	87.8	75.7	73.8	74.0	74.0	72.7	73.2	76.2	74.7	72.8	70.2	74.5	78.6	77.7	74.2	95.5	70.2	82.6
4	78.9	86.2	84.0	73.9	65.3	60.0	63.9	62.9	73.9	73.5	73.9	79.1	80.7	85.4	80.8	77.4	81.6	84.2	84.7	86.1	87.5	88.2	88.8	89.7	89.7	60.0	78.8
5	89.0	83.8	86.2	90.5	92.0	92.7	90.4	81.1	76.9	75.7	74.5	72.8	68.5	65.8	62.5	62.1	63.1	65.8	73.0	76.8	75.3	74.4	71.2	68.2	92.7	62.1	76.3
6	67.3	77.7	81.2	83.4	85.5	85.3	82.6	89.3	92.4	94.3	92.0	90.5	89.9	89.6	88.0	89.1	90.8	90.1	91.8	92.2	93.3	94.0	94.1	93.6	94.3	67.3	88.2
7	93.4	92.8	92.2	92.2	92.4	92.4	92.6	92.9	93.6	94.5	94.7	95.1	94.7	94.6	94.0	93.1	93.1	93.7	93.3	93.1	94.1	94.5	94.7	94.4	95.1	92.2	93.6
8	90.1	86.5	83.9	88.9	89.5	88.5	90.8	90.4	90.8	89.7	88.8	87.9	87.5	87.1	88.2	87.1	82.4	85.3	80.0	76.8	73.7	78.5	84.9	86.8	90.8	73.7	86.0
9	89.9	90.5	91.1	91.9	93.3	93.6	94.9	95.4	95.6	93.4	86.9	84.4	84.4	85.9	86.7	86.5	87.2	87.1	87.0	87.6	89.2	89.2	89.3	86.2	95.6	84.4	89.5
10	84.7	88.4	91.4	91.8	90.6	84.2	82.2	84.4	90.4	88.8	86.7	82.3	79.6	73.8	70.5	78.5	77.7	77.5	79.2	79.5	80.0	80.5	83.7	85.1	91.8	70.5	83.0
11	84.6	80.1	78.4	85.3	86.2	85.8	88.4	89.8	91.5	92.7	93.1	87.0	76.2	77.1	70.3	76.2	71.5	75.3	76.9	79.7	86.1	86.8	84.5	85.4	93.1	70.3	82.9
12	85.8	87.6	91.9	93.9	94.8	95.4	95.6	95.6	95.2	94.6	94.1	93.9	92.9	91.1	89.2	88.9	90.1	92.5	93.6	93.8	93.3	92.9	91.1	90.6	95.6	85.8	92.4
13	91.5	86.3	85.1	82.1	81.4	80.0	77.1	77.8	81.8	85.5	81.4	76.7	73.0	70.3	76.4	77.4	79.3	83.9	85.0	89.1	91.4	92.6	93.3	93.1	93.3	70.3	83.0
14	91.3	76.3	72.6	71.9	61.8	50.7	57.0	49.4	51.4	57.4	63.8	63.1	63.9	64.7	66.9	68.4	69.5	69.2	67.6	68.5	59.6	70.9	77.3	81.6	91.3	49.4	66.4
15	84.1	85.7	86.6	86.9	85.2	82.5	80.6	85.1	82.1	63.0	57.3	54.1	55.0	49.8	48.6	50.4	54.2	64.5	61.8	60.4	59.3	55.6	56.9	66.4	86.9	48.6	67.3
16	69.0	65.6	77.1	87.7	90.8	93.5	94.8	95.7	96.2	96.6	97.1	97.1	96.0	94.2	93.2	91.5	90.6	89.8	89.0	87.9	85.6	84.4	86.5	84.8	97.1	65.6	88.9
17	83.9	85.8	86.2	88.7	86.3	85.1	85.1	85.9	88.9	90.2	90.0	88.1	88.4	86.5	82.7	80.2	79.8	77.3	79.0	79.3	79.9	83.1	84.8	83.3	90.2	77.3	84.5
18	83.7	85.9	89.2	93.8	94.0	94.7	94.9	95.0	95.3	95.3	95.2	95.1	93.7	92.6	92.1	91.2	89.7	90.9	84.4	78.7	83.1	86.7	84.5	82.7	95.3	78.7	90.1
19	84.9	85.7	82.1	77.0	76.0	77.0	72.7	74.1	77.6	84.9	88.8	89.4	83.7	81.7	77.3	80.6	87.3	90.9	92.4	92.4	92.8	93.3	94.6	89.3	94.6	72.7	84.4
20	85.7	88.2	90.5	87.7	85.4	81.1	81.5	82.9	88.1	88.0	84.1	87.6	83.0	73.0	70.5	67.6	71.3	77.3	80.0	86.9	89.2	90.0	90.1	89.5	90.5	67.6	83.3
21	87.8	88.0	82.3	76.3	73.3	61.9	57.3	53.3	55.2	57.0	50.5	45.7	45.2	48.3	50.7	53.4	58.2	59.9	56.8	54.5	45.8	52.3	65.2	72.9	88.0	45.2	60.5
22	73.5	73.2	74.2	62.4	62.9	71.0	60.6	60.1	64.6	66.1	68.0	59.0	61.8	61.2	70.1	66.0	56.0	58.8	71.2	74.8	77.4	79.3	80.5	75.5	80.5	56.0	67.8
23	69.6	68.7	66.6	63.5	60.1	58.4	56.1	60.7	59.2	54.3	54.8	51.7	47.3	48.9	52.2	54.6	61.9	64.8	64.0	63.8	61.7	61.7	61.6	58.7	69.6	47.3	59.4
24	64.3	70.5	70.8	68.8	72.0	89.3	93.8	95.6	96.2	96.3	96.6	96.9	97.3	96.9	95.9	95.4	95.3	97.0	98.5	99.2	99.5	99.6	99.8	99.9	99.9	64.3	91.1
25	99.9	99.9	99.9	98.9	96.4	94.8	94.4	92.8	91.4	83.9	79.1	76.2	76.0	75.5	75.4	72.1	73.7	74.4	74.2	73.8	74.2	72.6	72.4	70.8	99.9	70.8	83.0
26	70.1	69.2	67.9	68.6	70.0	65.8	63.6	66.6	66.7	62.4	59.9	59.5	59.6	59.4	58.1	57.8	55.2	55.4	52.8	52.4	54.5	53.1	50.8	51.2	70.1	50.8	60.4
27	51.8	53.9	54.4	52.4	51.1	52.1	51.0	46.6	56.2	65.1	59.7	55.6	44.3	40.5	40.8	35.7	31.5	33.2	35.2	36.4	44.3	47.3	47.7	51.3	65.1	31.5	47.4
28	54.4	57.7	62.7	65.6	70.2	73.4	77.1	79.0	79.4	76.8	79.5	79.0	78.2	69.6	67.6	80.5	89.5	89.1	88.8	83.3	79.7	84.8	85.6	91.6	91.6	54.4	76.8
29	95.4	96.0	95.9	96.5	96.9	96.9	97.1	97.3	97.5	93.2	93.1	89.6	70.9	64.7	64.1	67.0	64.4	61.3	66.9	64.7	64.2	72.7	75.1	74.2	97.5	61.3	81.5
30	75.3	76.2	76.9	75.9	76.0	78.0	83.2	88.6	84.9	80.4	78.7	74.2	69.8	72.0	72.5	69.4	74.8	76.1	74.4	74.4	63.3	70.4	79.4	84.4	88.6	63.3	76.2
31	87.1	85.1	85.7	88.5	89.8	88.5	86.5	83.0	83.6	85.5	86.2	82.3	79.2	77.6	74.5	67.1	68.2	75.3	79.5	81.1	81.9	82.5	83.7	82.4	89.8	67.1	81.9
Max.	**99.9**	**99.9**	**99.9**	**98.9**	**96.9**	**96.9**	**97.1**	**97.3**	**97.5**	**96.6**	**97.1**	**97.1**	**97.3**	**96.9**	**95.9**	**95.4**	**95.3**	**97.0**	**98.5**	**99.2**	**99.5**	**99.6**	**99.8**	**99.9**	**99.9**		
Min.	**51.8**	**53.9**	**54.4**	**52.4**	**51.1**	**50.7**	**51.0**	**46.6**	**51.4**	**54.3**	**50.5**	**45.7**	**44.3**	**40.5**	**40.8**	**35.7**	31.5	33.2	**35.2**	**36.4**	**44.3**	**47.3**	**47.7**	**51.2**		**31.5**	
Avg.	**82.0**	**82.2**	**82.6**	**82.6**	**82.1**	**81.5**	**81.2**	**81.3**	**82.8**	**81.9**	**80.6**	**78.6**	**76.4**	**75.0**	**74.4**	**74.8**	**75.5**	**77.0**	**77.6**	**77.8**	**78.1**	**79.9**	**81.2**	**81.5**			**79.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	82.9	83.0	82.6	81.9	82.6	82.3	83.0	84.9	86.6	85.3	82.7	79.9	73.9	67.8	65.7	60.4	69.2	77.0	79.0	80.3	80.8	82.9	82.2	86.4	86.6	60.4	79.3
2	86.5	88.6	89.2	87.6	88.2	89.0	88.6	89.7	89.9	90.3	85.7	80.1	72.6	72.1	67.6	64.2	68.2	77.0	80.3	82.6	82.8	81.0	83.7	85.1	90.3	64.2	82.1
3	83.9	85.7	83.3	85.8	85.1	85.3	86.0	85.9	87.1	84.0	81.0	72.0	67.6	67.6	68.1	62.7	61.0	74.7	76.5	80.2	79.5	82.4	80.4	81.0	87.1	61.0	78.6
4	86.8	86.4	84.7	85.1	81.9	83.2	83.6	83.7	83.9	81.3	75.2	66.5	64.0	64.6	63.2	59.1	63.2	70.3	75.5	77.7	78.9	79.1	81.8	82.9	86.8	59.1	76.8
5	83.7	85.5	84.9	85.1	83.0	79.4	77.4	75.4	72.1	75.2	74.2	67.6	64.2	62.5	47.3	34.6	37.5	49.6	52.4	54.3	61.5	58.2	54.3	58.8	85.5	34.6	65.8
6	67.9	70.5	70.2	69.7	72.9	70.4	70.6	72.5	73.9	73.1	69.0	65.2	64.9	64.7	58.8	50.6	43.4	41.7	40.4	44.1	41.9	39.2	40.3	39.4	73.9	39.2	59.0
7	42.3	39.9	45.0	46.9	45.1	50.9	61.4	60.4	61.2	61.7	61.1	60.3	57.2	54.0	52.7	51.0	51.9	52.6	57.7	56.1	53.2	52.1	51.8	51.6	61.7	39.9	53.2
8	50.7	50.9	52.3	54.8	56.6	56.4	55.5	56.9	62.9	66.2	64.3	59.2	60.2	57.1	56.5	50.1	52.5	53.0	52.8	53.8	56.3	55.5	64.5	66.1	66.2	50.1	56.9
9	67.4	69.4	71.2	74.5	76.6	72.7	72.9	72.7	67.9	72.2	70.9	65.7	63.5	59.5	58.3	59.0	57.7	64.3	68.3	66.1	65.4	64.2	69.7	72.4	76.6	57.7	67.6
10	71.7	73.2	73.5	79.4	79.9	77.4	77.6	77.9	78.8	85.5	92.8	94.2	92.3	89.7	85.4	84.2	83.7	83.5	83.6	83.1	83.9	84.4	83.3	83.1	94.2	71.7	82.6
11	85.0	85.6	87.3	86.9	87.6	87.1	86.5	84.7	81.6	78.0	75.8	70.4	67.0	65.9	65.5	58.3	62.0	71.1	72.7	74.4	73.9	74.7	76.6	76.6	87.6	58.3	76.5
12	76.3	76.8	76.3	76.2	76.1	77.8	77.2	76.4	72.9	68.2	68.6	63.6	55.4	43.3	36.0	34.5	32.1	29.9	30.3	39.5	39.0	39.0	46.6	52.8	77.8	29.9	56.9
13	56.3	58.3	56.8	60.2	60.1	61.6	63.4	60.1	46.5	31.1	28.6	28.3	38.3	41.5	39.1	35.0	29.5	28.7	32.1	31.3	29.1	30.6	29.4	28.6	63.4	28.3	41.8
14	31.9	31.6	31.5	39.7	50.6	49.5	52.4	53.7	53.7	65.1	68.8	67.1	52.7	27.5	26.0	29.9	33.8	39.1	37.5	30.2	32.5	32.2	31.2	28.9	68.8	26.0	41.5
15	30.9	30.2	29.6	31.0	36.9	41.2	41.8	40.4	43.3	43.3	43.8	41.2	43.5	46.9	44.2	43.8	46.2	45.6	45.8	41.9	42.2	41.8	47.7	42.9	47.7	29.6	41.1
16	46.4	46.8	47.2	58.7	66.4	63.6	56.7	62.9	67.7	67.7	71.7	69.8	63.3	63.7	65.2	59.2	62.7	61.0	64.3	70.1	74.1	72.3	75.2	73.7	75.2	46.4	63.8
17	75.2	70.2	73.8	74.6	72.5	74.9	76.4	76.5	77.7	78.1	78.8	75.1	74.6	74.3	66.5	71.7	76.7	75.9	76.7	78.1	77.6	77.8	78.5	79.6	79.6	66.5	75.5
18	81.6	82.1	81.5	81.2	80.1	80.4	78.9	80.3	82.8	83.4	82.6	78.3	77.2	76.5	74.8	68.0	68.3	68.4	69.3	65.6	64.4	65.6	66.2	67.2	83.4	64.4	75.2
19	68.6	55.3	50.4	51.6	48.8	46.3	52.5	59.1	62.5	64.7	67.8	55.5	37.0	36.7	32.4	29.6	30.4	30.0	28.7	28.5	31.1	47.2	54.3	51.8	68.6	28.5	46.7
20	53.6	46.6	40.8	51.6	45.1	46.4	48.4	46.1	45.7	47.0	46.4	51.0	47.2	48.9	50.0	50.5	51.3	51.0	62.3	64.7	66.6	64.5	66.9	68.4	68.4	40.8	52.5
21	68.4	69.9	71.5	71.6	71.3	72.3	73.8	75.6	74.4	74.7	73.4	72.2	70.6	66.4	60.6	54.3	43.1	41.0	39.7	40.7	40.1	49.7	46.2	47.3	75.6	39.7	61.2
22	45.2	45.2	50.0	52.3	60.0	69.6	65.7	66.8	68.6	67.9	65.5	61.6	61.3	65.0	63.9	61.1	65.3	70.8	73.7	74.8	76.9	77.8	78.4	79.1	79.1	45.2	65.3
23	80.2	79.7	81.1	80.5	80.4	81.4	82.9	83.6	82.9	84.5	83.0	80.1	77.6	74.5	73.3	69.3	63.2	64.4	64.0	70.7	53.5	53.7	69.5	71.8	84.5	53.5	74.4
24	69.6	72.9	60.2	54.9	55.6	59.7	55.3	55.8	53.2	71.8	69.0	69.1	51.7	60.0	52.0	33.7	55.0	57.7	55.0	48.9	46.3	40.5	36.6	34.4	72.9	33.7	54.9
25	37.6	40.8	42.0	40.0	38.2	40.2	39.4	43.1	44.1	44.3	36.6	34.6	35.0	40.7	36.2	37.7	40.2	42.8	44.7	47.0	46.5	44.9	45.8	44.9	47.0	34.6	41.1
26	43.6	45.1	42.9	40.1	41.3	42.8	44.8	44.7	43.8	42.3	39.4	42.9	47.6	48.4	50.0	55.2	64.4	76.3	87.0	87.3	85.6	85.2	87.0	87.4	87.4	39.4	57.3
27	87.0	90.6	91.1	91.5	90.3	90.4	89.9	89.2	87.0	89.8	88.7	87.6	89.6	82.8	78.9	77.0	79.6	74.9	78.4	77.2	77.8	80.4	82.1	81.3	91.5	74.9	84.7
28	80.0	79.5	81.0	79.1	78.3	76.1	75.7	79.9	79.1	80.2	78.8	73.7	67.5	67.0	66.0	70.3	65.2	69.4	71.4	75.4	77.7	81.4	84.8	89.5	89.5	65.2	76.1
29	92.0	94.1	88.4	84.5	83.5	81.8	83.2	83.6	84.4	83.9	89.3	83.7	76.4	76.7	76.3	74.1	77.7	77.9	75.7	78.5	82.5	82.4	80.0	76.3	94.1	74.1	82.0
30	78.3	74.3	69.0	69.3	89.4	93.4	93.5	96.1	96.9	97.4	97.1	96.2	95.6	95.0	96.7	97.8	98.1	98.3	98.2	97.7	97.3	94.3	91.6	88.4	98.3	69.0	91.7
Max.	**92.0**	**94.1**	**91.1**	**91.5**	**90.3**	**93.4**	**93.5**	**96.1**	**96.9**	**97.4**	**97.1**	**96.2**	**95.6**	**95.0**	**96.7**	**97.8**	**98.1**	**98.3**	**98.2**	**97.7**	**97.3**	**94.3**	**91.6**	**89.5**	**98.3**		
Min.	**30.9**	**30.2**	**29.6**	**31.0**	**36.9**	**40.2**	**39.4**	**40.4**	**43.3**	**31.1**	**28.6**	**28.3**	**35.0**	**27.5**	**26.0**	**29.6**	29.5	28.7	**28.7**	**28.5**	**29.1**	**30.6**	**29.4**	**28.6**		**26.0**	
Avg.	**67.0**	**67.0**	**66.3**	**67.5**	**68.8**	**69.5**	**69.8**	**70.6**	**70.4**	**71.3**	**70.3**	**67.1**	**63.6**	**62.0**	**59.2**	**56.2**	**57.8**	**60.6**	**62.5**	**63.4**	**63.3**	**63.8**	**65.6**	**65.9**			**65.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Relative Humidity (%)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	78.0	77.0	76.1	68.3	65.6	62.3	55.4	51.5	50.1	53.8	63.4	73.9	64.9	73.6	71.8	67.3	71.3	75.2	76.7	72.1	70.0	70.7	72.8	72.2	78.0	50.1	68.1
2	73.1	75.1	81.8	81.8	82.1	72.4	55.8	49.5	54.9	53.6	56.2	56.6	68.8	59.6	52.9	47.5	42.0	39.1	38.6	39.6	71.4	75.3	74.0	66.9	82.1	38.6	61.2
3	54.5	61.7	61.8	65.7	77.7	86.4	86.9	91.0	94.9	96.1	96.6	97.0	97.2	97.5	97.8	98.0	98.2	98.4	98.5	98.6	98.7	98.8	98.9	98.9	98.9	54.5	89.6
4	98.9	99.0	99.0	99.0	99.3	98.1	97.0	97.0	96.7	94.7	93.4	93.9	94.2	94.2	94.5	93.9	93.6	94.8	95.3	95.7	94.7	94.9	94.4	91.4	99.3	91.4	95.7
5	86.9	86.4	83.8	77.5	74.9	76.6	69.4	70.8	73.5	74.8	72.5	72.4	70.5	73.0	73.6	69.8	74.3	67.6	60.9	62.5	63.9	64.0	64.2	69.6	86.9	60.9	72.2
6	81.4	92.3	95.3	96.3	96.7	96.5	96.4	96.1	96.3	96.1	96.1	96.5	96.3	96.2	95.7	95.9	96.0	95.9	95.9	96.5	96.2	96.2	96.5	96.2	96.7	81.4	95.4
7	95.3	94.0	94.2	93.7	92.3	90.9	89.7	83.7	83.5	87.6	90.6	88.7	87.8	87.7	85.4	79.2	75.2	76.8	73.4	78.5	87.0	84.5	85.9	89.1	95.3	73.4	86.4
8	93.6	96.3	95.2	96.1	98.4	98.6	98.6	98.9	98.7	98.3	97.9	98.3	98.4	98.4	99.3	99.8	99.9	99.5	99.0	98.4	99.0	99.4	99.6	99.7	99.9	93.6	98.3
9	99.7	99.5	99.6	99.7	99.2	97.6	98.1	98.2	99.0	99.0	99.0	99.2	99.5	99.6	99.7	99.7	99.7	99.8	99.9	99.8	99.8	99.6	99.5	98.9	99.9	97.6	99.3
10	99.0	99.1	99.1	99.0	99.0	99.0	98.8	98.8	98.7	98.4	98.8	98.8	98.9	98.2	98.1	99.1	99.3	98.5	97.2	96.0	88.1	80.8	82.0	83.4	99.3	80.8	96.1
11	81.7	80.5	77.7	77.4	72.2	76.8	78.8	80.7	83.2	88.1	90.2	92.6	92.8	94.7	94.7	92.1	89.9	90.7	90.3	90.2	85.3	88.5	91.5	88.7	94.7	72.2	86.2
12	88.4	88.4	91.5	90.2	87.9	89.3	88.5	84.6	84.5	85.2	81.8	83.4	81.2	82.1	82.2	81.7	80.7	78.1	82.9	85.8	86.9	86.6	87.1	88.9	91.5	78.1	85.3
13	82.4	81.5	82.1	75.4	74.0	71.1	71.6	70.3	70.9	70.3	70.0	67.8	67.0	65.8	65.1	65.4	64.2	62.8	61.8	59.7	57.8	56.2	56.1	54.8	82.4	54.8	67.7
14	56.9	54.1	55.1	57.2	58.5	58.9	56.1	54.3	53.5	55.0	58.9	59.9	59.6	60.6	57.7	56.6	54.8	57.5	56.1	58.3	57.0	57.0	54.3	55.0	60.6	53.5	56.8
15	56.0	55.1	53.1	52.4	51.4	49.0	49.4	50.7	51.6	55.4	63.8	69.5	64.1	68.1	69.9	68.0	63.7	67.7	74.2	72.6	68.8	65.9	63.9	62.8	74.2	49.0	61.1
16	65.9	82.1	87.3	86.6	85.1	86.6	91.5	92.4	92.3	92.6	94.0	93.9	93.6	95.7	96.6	97.2	97.6	97.9	98.0	98.1	98.1	98.2	98.3	98.3	98.3	65.9	92.4
17	98.4	98.4	98.3	98.3	98.4	98.4	97.9	97.0	96.3	96.3	96.4	96.0	95.3	94.5	94.3	94.7	95.2	92.1	78.2	72.7	70.0	67.6	68.8	67.0	98.4	67.0	90.0
18	66.3	67.7	68.0	68.1	70.5	70.0	70.2	70.2	69.6	71.1	73.0	72.0	69.9	70.5	69.5	64.8	66.7	61.4	56.7	65.8	75.8	79.2	82.4	80.4	82.4	56.7	70.0
19	77.9	75.9	73.0	66.7	58.1	57.8	60.4	65.1	62.6	66.6	56.9	52.1	51.4	45.9	49.0	67.9	78.3	89.8	93.1	91.2	93.9	95.8	95.6	93.6	95.8	45.9	71.6
20	85.7	80.3	79.4	78.3	76.6	73.4	71.0	69.5	67.6	66.6	66.4	66.8	66.7	63.8	60.6	59.3	57.4	59.7	57.5	63.8	69.0	75.8	78.0	77.9	85.7	57.4	69.6
21	78.7	78.3	78.1	71.5	61.7	56.8	56.1	56.4	58.0	59.4	63.5	67.2	68.8	64.5	60.3	54.5	59.1	70.5	79.3	79.2	76.5	75.4	74.4	76.8	79.3	54.5	67.7
22	77.7	79.6	78.7	80.4	78.6	74.5	72.8	73.1	74.6	75.0	75.8	76.3	74.5	72.3	72.7	72.2	72.2	72.0	73.5	76.2	73.3	69.9	67.5	58.5	80.4	58.5	73.8
23	57.1	27.8	37.9	37.2	45.1	46.5	40.6	25.0	32.8	50.9	50.9	56.8	56.6	58.3	57.6	39.3	28.4	31.9	50.2	57.1	63.1	63.3	67.2	67.0	67.2	25.0	47.9
24	62.8	70.0	73.7	75.5	76.3	75.4	69.3	68.4	69.0	69.7	73.9	69.7	65.3	63.8	56.3	64.6	71.0	78.1	79.6	80.1	77.0	74.2	75.5	68.7	80.1	56.3	71.2
25	67.3	68.3	49.9	28.4	27.9	32.9	37.1	37.7	39.1	40.0	42.4	40.2	36.5	40.4	32.7	38.0	38.5	38.7	41.8	46.3	53.4	58.9	64.5	65.7	68.3	27.9	44.4
26	67.2	69.4	73.9	75.3	75.4	71.5	66.5	61.6	59.4	61.6	58.7	55.4	61.1	69.9	73.4	72.0	70.9	63.4	60.1	44.9	40.6	55.6	49.1	52.6	75.4	40.6	62.9
27	53.1	48.5	39.6	38.4	35.4	40.1	45.8	47.5	49.2	50.6	55.7	60.6	65.5	84.3	93.3	94.9	93.6	94.4	94.1	97.9	98.5	95.1	92.0	92.4	98.5	35.4	69.2
28	92.4	95.6	96.1	97.3	97.8	98.3	98.7	99.1	98.9	98.7	98.4	98.9	98.1	98.0	98.7	97.5	97.5	97.0	95.7	95.9	97.4	94.9	88.7	81.2	99.1	81.2	96.3
29	78.7	75.3	77.5	73.8	77.7	79.6	70.4	49.7	40.6	48.4	46.3	48.5	49.7	54.3	55.0	57.9	58.1	59.2	64.0	61.5	57.8	60.2	60.3	61.5	79.6	40.6	61.1
30	61.6	58.8	60.5	59.6	57.2	55.7	55.6	55.7	56.3	57.0	56.6	57.4	58.3	58.4	62.4	63.6	63.0	62.3	64.2	63.8	65.0	66.1	61.7	61.5	66.1	55.6	60.1
31	61.2	61.5	68.8	76.1	76.7	79.6	83.0	81.0	79.7	77.9	73.7	70.5	65.1	66.6	69.6	65.3	56.2	57.7	59.3	60.0	61.4	65.0	55.4	58.0	83.0	55.4	67.9
Max.	**99.7**	**99.5**	**99.6**	**99.7**	**99.3**	**99.0**	**98.8**	**99.1**	**99.0**	**99.0**	**99.0**	**99.2**	**99.5**	**99.6**	**99.7**	**99.8**	**99.9**	**99.8**	**99.9**	**99.8**	**99.8**	**99.6**	**99.6**	**99.7**	**99.9**		
Min.	**53.1**	**27.8**	**37.9**	**28.4**	**27.9**	**32.9**	**37.1**	**25.0**	**32.8**	**40.0**	**42.4**	**40.2**	**36.5**	**40.4**	**32.7**	**38.0**	28.4	31.9	**38.6**	**39.6**	**40.6**	**55.6**	**49.1**	**52.6**		**25.0**	
Avg.	**76.7**	**76.7**	**77.0**	**75.5**	**75.1**	**74.9**	**73.5**	**71.8**	**72.1**	**73.8**	**74.6**	**75.2**	**74.8**	**75.8**	**75.5**	**74.8**	**74.4**	**75.1**	**75.7**	**76.1**	**77.3**	**77.9**	**77.4**	**76.7**			**75.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	6	15	31	31	25	12	1	0	0	0	0	0	0	0	31	0	5
2	0	0	0	0	0	0	0	0	0	0	3	16	19	14	17	6	1	0	0	0	0	0	0	0	19	0	3
3	0	0	0	0	0	0	0	0	0	0	5	16	32	39	24	13	2	0	0	0	0	0	0	0	39	0	5
4	0	0	0	0	0	0	0	0	0	1	24	83	111	126	94	45	4	0	0	0	0	0	0	0	126	0	20
5	0	0	0	0	0	0	0	0	0	0	12	62	60	45	31	20	5	0	0	0	0	0	0	0	62	0	10
6	0	0	0	0	0	0	0	0	0	0	8	28	45	35	33	14	2	0	0	0	0	0	0	0	45	0	7
7	0	0	0	0	0	0	0	0	0	0	9	36	50	45	30	17	3	0	0	0	0	0	0	0	50	0	8
8	0	0	0	0	0	0	0	0	0	0	6	37	50	46	44	26	4	0	0	0	0	0	0	0	50	0	9
9	0	0	0	0	0	0	0	0	0	0	5	17	31	39	29	22	4	0	0	0	0	0	0	0	39	0	6
10	0	0	0	0	0	0	0	0	0	0	40	86	93	46	32	21	4	0	0	0	0	0	0	0	93	0	13
11	0	0	0	0	0	0	0	0	0	0	10	43	52	57	37	25	3	0	0	0	0	0	0	0	57	0	9
12	0	0	0	0	0	0	0	0	0	1	13	31	41	52	65	33	7	0	0	0	0	0	0	0	65	0	10
13	0	0	0	0	0	0	0	0	0	1	9	30	108	143	124	72	9	0	0	0	0	0	0	0	143	0	21
14	0	0	0	0	0	0	0	0	0	0	11	38	37	41	23	7	4	0	0	0	0	0	0	0	41	0	7
15	0	0	0	0	0	0	0	0	0	1	18	32	69	46	32	29	5	0	0	0	0	0	0	0	69	0	10
16	0	0	0	0	0	0	0	0	0	1	14	54	62	53	39	28	8	0	0	0	0	0	0	0	62	0	11
17	0	0	0	0	0	0	0	0	0	1	15	39	73	88	94	73	25	1	0	0	0	0	0	0	94	0	17
18	0	0	0	0	0	0	0	0	0	2	25	66	78	75	75	72	14	0	0	0	0	0	0	0	78	0	17
19	0	0	0	0	0	0	0	0	0	1	40	127	190	164	161	86	15	0	0	0	0	0	0	0	190	0	33
20	0	0	0	0	0	0	0	0	0	1	9	31	55	115	102	63	9	0	0	0	0	0	0	0	115	0	16
21	0	0	0	0	0	0	0	0	0	0	7	23	31	33	27	13	5	0	0	0	0	0	0	0	33	0	6
22	0	0	0	0	0	0	0	0	0	2	21	44	52	85	86	44	10	1	0	0	0	0	0	0	86	0	14
23	0	0	0	0	0	0	0	0	0	1	17	44	63	138	165	113	27	1	0	0	0	0	0	0	165	0	24
24	0	0	0	0	0	0	0	0	0	4	52	130	179	196	176	125	31	2	0	0	0	0	0	0	196	0	37
25	0	0	0	0	0	0	0	0	0	3	53	140	187	202	180	130	33	2	0	0	0	0	0	0	202	0	39
26	0	0	0	0	0	0	0	0	0	6	73	161	210	222	189	134	36	2	0	0	0	0	0	0	222	0	43
27	0	0	0	0	0	0	0	0	0	4	64	146	194	210	190	136	38	2	0	0	0	0	0	0	210	0	41
28	0	0	0	0	0	0	0	0	0	2	20	55	66	111	185	93	44	5	0	0	0	0	0	0	185	0	24
29	0	0	0	0	0	0	0	0	0	4	52	58	57	54	45	47	16	3	0	0	0	0	0	0	58	0	14
30	0	0	0	0	0	0	0	0	0	3	11	32	81	70	67	59	25	3	0	0	0	0	0	0	81	0	15
31	0	0	0	0	0	0	0	0	0	2	12	21	28	54	107	93	39	7	0	0	0	0	0	0	107	0	15
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**73**	**161**	**210**	**222**	**190**	**136**	**44**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**222**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**15**	**19**	**14**	**17**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**21**	**56**	**78**	**86**	**82**	**54**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**0**			**16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	8	77	155	211	232	211	158	58	4	0	0	0	0	0	0	232	0	46
2	0	0	0	0	0	0	0	0	0	13	91	173	220	238	218	167	66	4	0	0	0	0	0	0	238	0	50
3	0	0	0	0	0	0	0	0	0	3	21	35	46	54	87	57	42	5	0	0	0	0	0	0	87	0	15
4	0	0	0	0	0	0	0	0	0	3	20	72	81	49	47	44	19	5	0	0	0	0	0	0	81	0	14
5	0	0	0	0	0	0	0	0	0	3	8	40	52	74	63	66	31	4	0	0	0	0	0	0	74	0	14
6	0	0	0	0	0	0	0	0	0	2	4	5	6	11	9	12	10	1	0	0	0	0	0	0	12	0	2
7	0	0	0	0	0	0	0	0	0	19	53	84	55	46	63	79	36	9	0	0	0	0	0	0	84	0	18
8	0	0	0	0	0	0	0	0	1	39	94	133	131	123	108	106	43	10	0	0	0	0	0	0	133	0	33
9	0	0	0	0	0	0	0	0	0	2	10	25	41	80	173	68	51	5	0	0	0	0	0	0	173	0	19
10	0	0	0	0	0	0	0	0	0	2	13	33	21	39	129	228	125	25	1	0	0	0	0	0	228	0	26
11	0	0	0	0	0	0	0	0	0	2	7	12	21	19	16	13	8	2	0	0	0	0	0	0	21	0	4
12	0	0	0	0	0	0	0	0	0	7	15	22	45	54	115	122	92	18	0	0	0	0	0	0	122	0	20
13	0	0	0	0	0	0	0	0	1	41	117	76	57	30	24	20	8	2	0	0	0	0	0	0	117	0	16
14	0	0	0	0	0	0	0	0	0	10	27	45	63	56	45	36	32	13	0	0	0	0	0	0	63	0	14
15	0	0	0	0	0	0	0	0	1	23	74	93	115	115	49	18	9	1	0	0	0	0	0	0	115	0	21
16	0	0	0	0	0	0	0	0	1	21	45	65	103	109	85	83	47	17	1	0	0	0	0	0	109	0	24
17	0	0	0	0	0	0	0	0	0	15	16	38	53	55	71	23	25	10	0	0	0	0	0	0	71	0	13
18	0	0	0	0	0	0	0	0	1	15	46	56	52	51	42	22	12	3	0	0	0	0	0	0	56	0	13
19	0	0	0	0	0	0	0	0	2	47	112	181	322	265	150	124	58	21	1	0	0	0	0	0	322	0	53
20	0	0	0	0	0	0	0	0	4	61	265	249	397	234	178	106	30	9	1	0	0	0	0	0	397	0	64
21	0	0	0	0	0	0	0	0	8	85	197	281	340	369	357	189	84	22	3	0	0	0	0	0	369	0	81
22	0	0	0	0	0	0	0	0	5	27	114	255	300	339	343	279	163	45	4	0	0	0	0	0	343	0	78
23	0	0	0	0	0	0	0	0	2	41	254	344	321	414	200	203	145	25	4	0	0	0	0	0	414	0	81
24	0	0	0	0	0	0	0	0	10	87	183	273	328	346	337	249	144	26	4	0	0	0	0	0	346	0	83
25	0	0	0	0	0	0	0	0	1	11	17	11	66	103	165	186	140	37	4	0	0	0	0	0	186	0	31
26	0	0	0	0	0	0	0	0	12	79	146	221	223	299	277	204	123	37	5	0	0	0	0	0	299	0	68
27	0	0	0	0	0	0	0	0	2	40	66	119	171	173	105	67	55	26	5	0	0	0	0	0	173	0	35
28	0	0	0	0	0	0	0	0	13	65	219	339	392	409	377	301	163	24	6	0	0	0	0	0	409	0	96
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**87**	**265**	**344**	**397**	**414**	**377**	**301**	**163**	**45**	**6**	**0**	**0**	**0**	**0**	**0**	**414**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**5**	**6**	**11**	**9**	**12**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**28**	**83**	**123**	**151**	**157**	**144**	**115**	**65**	**15**	**1**	**0**	**0**	**0**	**0**	**0**			**37**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	18	109	215	295	342	362	341	233	91	48	7	0	0	0	0	0	362	0	86
2	0	0	0	0	0	0	0	0	2	13	31	40	61	60	65	95	57	29	6	0	0	0	0	0	95	0	19
3	0	0	0	0	0	0	0	0	10	34	59	89	146	157	132	107	49	24	5	0	0	0	0	0	157	0	34
4	0	0	0	0	0	0	0	0	7	27	56	129	132	125	86	68	29	13	4	0	0	0	0	0	132	0	28
5	0	0	0	0	0	0	0	0	1	6	22	41	45	34	32	26	23	18	12	0	0	0	0	0	45	0	11
6	0	0	0	0	0	0	0	1	62	193	306	395	443	457	427	359	224	23	10	0	0	0	0	0	457	0	121
7	0	0	0	0	0	0	0	0	22	66	106	279	453	338	462	349	180	40	11	0	0	0	0	0	462	0	96
8	0	0	0	0	0	0	0	2	94	166	253	349	405	439	427	355	189	41	23	1	0	0	0	0	439	0	114
9	0	0	0	0	0	0	0	3	66	184	297	380	437	462	435	365	228	29	13	1	0	0	0	0	462	0	121
10	0	0	0	0	0	0	0	3	71	198	309	381	415	469	438	342	142	73	17	0	0	0	0	0	469	0	119
11	0	0	0	0	0	0	0	2	23	41	67	78	97	143	105	74	39	21	6	0	0	0	0	0	143	0	29
12	0	0	0	0	0	0	0	2	23	44	82	150	186	224	185	108	100	64	18	1	0	0	0	0	224	0	49
13	0	0	0	0	0	0	0	7	51	164	247	337	363	445	327	352	214	25	12	1	0	0	0	0	445	0	106
14	0	0	0	0	0	0	0	6	99	226	336	424	472	489	459	391	256	29	15	2	0	0	0	0	489	0	133
15	0	0	0	0	0	0	0	4	71	226	337	425	475	493	466	402	265	33	16	2	0	0	0	0	493	0	134
16	0	0	0	0	0	0	0	7	107	231	351	426	485	510	339	334	159	83	39	2	0	0	0	0	510	0	128
17	0	0	0	0	0	0	0	6	32	70	92	98	112	126	147	137	57	35	13	2	0	0	0	0	147	0	39
18	0	0	0	0	0	0	0	1	16	35	72	114	106	119	130	119	107	65	26	2	0	0	0	0	130	0	38
19	0	0	0	0	0	0	0	8	38	132	135	193	189	226	201	102	91	57	24	2	0	0	0	0	226	0	58
20	0	0	0	0	0	0	0	6	36	56	87	155	318	329	132	222	276	111	47	6	0	0	0	0	329	0	74
21	0	0	0	0	0	0	0	3	16	46	100	167	197	287	315	280	163	96	50	7	0	0	0	0	315	0	72
22	0	0	0	0	0	0	0	20	148	272	384	472	518	536	507	440	305	24	15	4	0	0	0	0	536	0	152
23	0	0	0	0	0	0	0	25	138	348	259	482	522	540	575	315	293	36	28	6	0	0	0	0	575	0	149
24	0	0	0	0	0	0	0	24	149	276	390	480	529	548	518	450	319	33	21	6	0	0	0	0	548	0	156
25	0	0	0	0	0	0	0	14	48	137	295	261	272	447	322	237	186	84	30	7	0	0	0	0	447	0	97
26	0	0	0	0	0	0	0	20	85	184	274	395	377	420	364	427	338	30	20	6	0	0	0	0	427	0	123
27	0	0	0	0	0	0	1	24	140	301	415	490	557	556	517	388	346	34	24	8	0	0	0	0	557	0	158
28	0	0	0	0	0	0	1	44	182	156	210	253	311	295	246	350	335	69	44	12	0	0	0	0	350	0	104
29	0	0	0	0	0	0	2	43	177	306	422	512	562	579	549	479	359	36	25	8	0	0	0	0	579	0	169
30	0	0	0	0	0	0	0	5	9	19	30	44	37	31	27	23	18	9	4	2	0	0	0	0	44	0	11
31	0	0	0	0	0	0	0	4	14	25	30	46	57	59	55	54	42	30	17	4	0	0	0	0	59	0	18
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**44**	**182**	**348**	**422**	**512**	**562**	**579**	**575**	**479**	**359**	**111**	**50**	**12**	**0**	**0**	**0**	**0**	**579**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**22**	**40**	**37**	**31**	**27**	**23**	**18**	**9**	**4**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**63**	**138**	**202**	**270**	**310**	**332**	**301**	**257**	**177**	**43**	**19**	**3**	**0**	**0**	**0**	**0**			**89**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	8	45	80	129	161	289	373	461	519	384	64	57	19	0	0	0	0	519	0	108
2	0	0	0	0	0	0	7	81	155	211	325	536	560	518	457	457	230	113	66	15	0	0	0	0	560	0	155
3	0	0	0	0	0	0	1	12	32	76	85	80	82	77	89	94	69	56	27	7	0	0	0	0	94	0	33
4	0	0	0	0	0	0	1	18	57	81	101	117	136	166	160	158	128	95	52	13	0	0	0	0	166	0	53
5	0	0	0	0	0	0	9	35	122	367	238	491	616	635	609	534	435	45	24	12	1	0	0	0	635	0	174
6	0	0	0	0	0	0	8	89	236	372	488	574	619	633	584	504	312	137	50	14	1	0	0	0	633	0	193
7	0	0	0	0	0	0	2	26	51	103	140	198	228	272	281	271	218	102	39	15	0	0	0	0	281	0	81
8	0	0	0	0	0	0	1	7	23	47	60	65	81	91	85	96	83	82	34	12	0	0	0	0	96	0	32
9	0	0	0	0	0	0	5	36	69	268	465	604	465	396	351	188	177	95	40	21	2	0	0	0	604	0	133
10	0	0	0	0	0	0	7	51	127	277	264	375	353	350	285	213	141	79	47	28	2	0	0	0	375	0	108
11	0	0	0	0	0	0	17	109	137	169	203	203	169	135	91	111	82	46	22	7	0	0	0	0	203	0	63
12	0	0	0	0	0	0	5	28	53	84	109	134	169	178	146	87	69	63	25	10	1	0	0	0	178	0	48
13	0	0	0	0	0	0	12	79	262	359	459	639	708	703	656	575	436	90	37	18	3	0	0	0	708	0	210
14	0	0	0	0	0	1	23	135	276	418	535	616	664	680	646	574	467	81	25	16	3	0	0	0	680	0	215
15	0	0	0	0	0	1	23	151	298	435	551	639	680	696	660	585	472	101	37	21	4	0	0	0	696	0	223
16	0	0	0	0	0	1	23	55	108	106	157	204	223	218	206	241	201	134	81	24	2	0	0	0	241	0	83
17	0	0	0	0	0	0	5	13	13	272	91	385	623	280	439	382	214	191	118	35	4	0	0	0	623	0	128
18	0	0	0	0	0	1	33	145	285	468	560	643	683	691	673	597	490	112	24	16	5	0	0	0	691	0	226
19	0	0	0	0	0	2	51	179	311	444	558	644	681	692	649	587	491	126	29	20	6	0	0	0	692	0	228
20	0	0	0	0	0	1	14	43	65	74	142	141	334	162	117	70	64	72	25	5	1	0	0	0	334	0	55
21	0	0	0	0	0	1	7	28	68	145	316	143	101	191	469	304	154	83	30	13	2	0	0	0	469	0	86
22	0	0	0	0	0	3	32	92	149	149	168	296	478	631	665	571	325	149	100	34	4	0	0	0	665	0	160
23	0	0	0	0	0	1	15	26	25	63	269	705	669	668	679	589	499	160	33	31	15	0	0	0	705	0	185
24	0	0	0	0	0	1	12	46	97	145	128	240	245	338	356	271	202	130	71	32	7	0	0	0	356	0	97
25	0	0	0	0	0	9	67	89	141	252	191	396	315	151	178	106	83	46	28	17	3	0	0	0	396	0	86
26	0	0	0	0	0	4	42	123	226	266	315	416	411	347	375	390	341	183	83	53	12	0	0	0	416	0	150
27	0	0	0	0	0	4	38	121	187	303	379	308	373	565	505	549	470	183	61	25	17	0	0	0	565	0	170
28	0	0	0	0	0	4	34	80	120	65	77	254	354	344	368	433	297	233	83	38	19	0	0	0	433	0	117
29	0	0	0	0	0	11	73	218	368	496	595	678	708	734	703	632	535	195	36	23	11	1	0	0	734	0	251
30	0	0	0	0	0	10	86	147	349	474	619	665	569	627	458	338	212	196	36	28	10	0	0	0	665	0	201
Max.	**0**	**0**	**0**	**0**	**0**	**11**	**86**	**218**	**368**	**496**	**619**	**705**	**708**	**734**	**703**	**632**	**535**	**233**	**118**	**53**	**19**	**1**	**0**	**0**	**734**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**13**	**47**	**60**	**65**	**81**	**77**	**85**	**70**	**64**	**45**	**22**	**5**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**2**	**22**	**76**	**148**	**236**	**290**	**385**	**420**	**418**	**413**	**368**	**276**	**115**	**47**	**21**	**5**	**0**	**0**	**0**			**135**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	5	20	68	105	185	165	246	374	402	368	294	174	97	55	12	2	0	0	0	402	0	107
2	0	0	0	0	0	8	33	40	62	176	259	186	220	331	337	370	261	174	123	47	9	0	0	0	370	0	110
3	0	0	0	0	0	10	69	167	391	465	618	646	573	444	189	105	96	82	59	26	6	0	0	0	646	0	164
4	0	0	0	0	0	3	12	51	92	127	180	182	188	160	122	73	74	37	18	9	3	0	0	0	188	0	55
5	0	0	0	0	0	2	9	22	64	114	179	168	160	117	97	81	68	41	57	29	9	0	0	0	179	0	51
6	0	0	0	0	0	5	22	53	95	137	252	333	465	536	604	622	488	278	67	32	16	2	0	0	622	0	167
7	0	0	0	0	0	17	87	220	294	280	358	393	349	387	481	595	424	246	52	39	17	3	0	0	595	0	177
8	0	0	0	0	1	33	116	119	135	131	140	250	178	183	161	91	128	118	95	48	17	2	0	0	250	0	81
9	0	0	0	0	0	4	15	37	48	69	118	187	242	260	264	309	266	199	160	85	24	2	0	0	309	0	95
10	0	0	0	0	1	26	69	268	341	447	662	434	232	391	443	318	196	129	84	39	15	1	0	0	662	0	171
11	0	0	0	0	0	11	47	52	130	271	566	645	745	765	735	661	573	229	34	29	26	3	0	0	765	0	230
12	0	0	0	0	1	24	115	247	399	527	634	716	755	772	743	676	574	251	29	22	15	4	0	0	772	0	271
13	0	0	0	0	3	39	146	270	404	532	632	719	758	690	744	622	523	243	45	36	20	3	0	0	758	0	268
14	0	0	0	0	4	49	97	201	254	542	555	485	392	320	176	119	165	159	100	67	23	4	0	0	555	0	155
15	0	0	0	0	3	36	78	184	332	269	318	745	650	504	463	391	197	234	149	79	31	4	0	0	745	0	195
16	0	0	0	0	1	12	39	92	330	486	634	718	753	772	749	666	596	227	48	27	17	7	0	0	772	0	257
17	0	0	0	0	5	54	166	299	396	524	431	560	575	278	339	233	137	177	118	44	31	7	0	0	575	0	182
18	0	0	0	0	5	66	92	152	311	510	625	626	804	658	666	460	214	234	84	46	26	7	0	0	804	0	233
19	0	0	0	0	5	50	150	278	411	538	579	609	484	271	205	201	99	28	19	10	3	1	0	0	609	0	164
20	0	0	0	0	1	15	35	58	103	118	90	116	133	155	151	139	101	78	45	27	16	3	0	0	155	0	58
21	0	0	0	0	2	17	73	194	232	332	364	570	733	773	747	695	571	380	119	32	18	7	0	0	773	0	244
22	0	0	0	0	6	59	168	288	410	536	643	726	764	783	744	672	531	285	54	64	64	10	0	0	783	0	284
23	0	0	0	0	10	62	167	291	419	544	648	730	762	779	753	690	594	292	27	21	16	8	1	0	779	0	284
24	0	0	0	0	6	55	146	278	367	445	590	644	671	676	713	674	545	275	92	110	47	15	1	0	713	0	265
25	0	0	0	0	9	65	170	291	419	540	643	724	760	776	747	681	583	298	35	26	18	9	1	0	776	0	283
26	0	0	0	0	10	64	166	285	403	534	630	709	757	767	734	681	577	300	55	42	29	13	1	0	767	0	282
27	0	0	0	0	6	46	109	169	218	363	496	464	564	492	540	558	512	275	44	28	19	6	1	0	564	0	205
28	0	0	0	1	20	104	211	301	426	549	627	628	769	779	753	625	591	363	110	61	32	13	2	0	779	0	290
29	0	0	0	0	11	71	178	301	426	548	659	736	773	793	767	646	549	155	37	28	21	10	1	0	793	0	280
30	0	0	0	0	4	21	47	58	89	88	104	104	96	104	130	151	150	109	80	47	22	6	1	0	151	0	59
31	0	0	0	0	2	8	15	44	130	127	255	221	204	359	209	83	53	78	58	30	14	5	0	0	359	0	79
Max.	**0**	**0**	**0**	**1**	**20**	**104**	**211**	**301**	**426**	**549**	**662**	**745**	**804**	**793**	**767**	**695**	**596**	**380**	**160**	**110**	**64**	**15**	**2**	**0**	**804**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**22**	**48**	**69**	**90**	**104**	**96**	**104**	**97**	**73**	**53**	**28**	**18**	**9**	**2**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**4**	**34**	**93**	**173**	**266**	**357**	**440**	**491**	**512**	**499**	**480**	**425**	**342**	**196**	**69**	**40**	**20**	**5**	**0**	**0**			**185**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	4	30	132	184	285	408	410	446	590	741	650	678	586	307	48	56	25	12	2	0	741	0	233
2	0	0	0	1	14	75	180	295	425	544	649	729	766	792	761	688	586	315	52	38	27	13	2	0	792	0	290
3	0	0	0	1	13	74	178	304	453	471	474	545	765	786	768	689	608	326	36	29	24	12	2	0	786	0	273
4	0	0	0	1	15	77	181	319	451	578	686	795	801	818	687	703	627	329	60	45	21	12	3	0	818	0	300
5	0	0	0	1	14	89	196	292	375	469	565	701	729	719	541	727	492	346	48	34	21	12	2	0	729	0	266
6	0	0	0	1	16	88	194	316	444	564	667	741	780	797	771	707	467	231	82	67	34	11	3	0	797	0	291
7	0	0	0	0	2	9	25	31	32	49	98	96	73	97	92	84	51	33	29	22	12	5	0	0	98	0	35
8	0	0	0	0	1	7	15	30	51	76	88	122	111	171	133	89	113	67	48	23	19	5	0	0	171	0	49
9	0	0	0	0	2	7	15	27	45	102	157	150	150	107	163	129	74	71	29	4	3	0	0	0	163	0	51
10	0	0	0	0	2	4	12	16	22	27	124	271	142	120	183	135	103	49	23	21	11	5	0	0	271	0	53
11	0	0	0	0	2	10	18	50	48	58	59	112	115	85	83	92	85	69	39	27	10	3	0	0	115	0	40
12	0	0	0	0	2	12	23	38	67	73	107	102	113	115	146	113	80	42	49	29	16	5	0	0	146	0	47
13	0	0	0	0	1	8	17	37	46	79	126	232	439	665	639	579	327	238	149	93	40	12	2	0	665	0	155
14	0	0	0	0	3	18	44	68	104	232	241	162	135	148	139	174	254	179	126	78	36	14	1	0	254	0	90
15	0	0	0	1	17	68	105	147	157	241	355	423	421	160	160	149	100	55	66	60	31	6	1	0	423	0	113
16	0	0	0	0	4	11	18	32	34	97	139	86	163	247	186	166	98	101	62	36	33	12	2	0	247	0	64
17	0	0	0	0	3	25	74	75	190	323	266	305	98	202	198	162	231	115	113	67	36	17	1	0	323	0	104
18	0	0	0	0	4	18	30	86	96	107	89	109	185	157	113	91	92	64	55	30	16	4	1	0	185	0	56
19	0	0	0	1	4	19	47	123	208	156	189	304	250	201	226	235	97	52	46	55	43	15	2	0	304	0	95
20	0	0	0	1	19	76	121	247	357	432	255	126	116	84	127	332	491	352	117	58	40	17	4	0	491	0	140
21	0	0	0	1	17	47	79	131	306	559	616	754	780	671	714	670	497	283	31	40	37	19	3	0	780	0	261
22	0	0	0	0	3	17	19	15	30	48	71	71	90	114	148	111	80	84	82	71	46	20	5	0	148	0	47
23	0	0	0	0	3	20	51	87	107	111	181	415	362	364	490	448	398	384	129	45	23	15	3	0	490	0	151
24	0	0	0	1	22	104	159	299	446	569	674	735	817	792	744	605	608	335	105	84	80	38	4	0	817	0	301
25	0	0	0	1	9	67	162	183	373	342	289	404	521	794	661	746	609	372	70	59	28	16	4	0	794	0	238
26	0	0	0	1	5	25	43	96	167	73	123	104	67	63	119	124	112	83	70	71	34	14	4	0	167	0	58
27	0	0	0	1	25	116	202	338	434	554	656	736	771	794	769	709	618	363	28	23	18	11	3	0	794	0	299
28	0	0	0	1	17	85	194	313	452	560	655	733	744	748	720	490	555	380	63	51	29	19	4	0	748	0	284
29	0	0	0	1	20	73	108	123	442	220	371	654	660	301	87	93	70	38	20	18	5	2	0	0	660	0	138
30	0	0	0	0	1	10	30	85	141	154	154	329	654	546	338	328	297	116	67	37	21	9	2	0	654	0	138
Max.	**0**	**0**	**0**	**1**	**25**	**116**	**202**	**338**	**453**	**578**	**686**	**795**	**817**	**818**	**771**	**746**	**627**	**384**	**149**	**93**	**80**	**38**	**5**	**0**	**818**		
Min.	**0**	**0**	**0**	**0**	**1**	**4**	**12**	**15**	**22**	**27**	**59**	**71**	**67**	**63**	**83**	**84**	**51**	**33**	**20**	**4**	**3**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**1**	**9**	**43**	**89**	**146**	**226**	**276**	**318**	**383**	**414**	**413**	**385**	**368**	**313**	**193**	**65**	**46**	**27**	**12**	**2**	**0**			**155**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	1	13	85	197	284	417	548	639	743	782	786	778	673	541	357	35	28	20	12	4	0	786	0	289
2	0	0	0	1	15	86	189	310	436	556	662	741	775	793	764	702	606	366	63	49	31	19	3	0	793	0	299
3	0	0	0	1	8	19	34	40	79	134	141	147	156	173	161	146	116	181	51	31	29	13	3	0	181	0	69
4	0	0	0	1	12	74	175	345	359	639	713	655	504	364	300	244	221	168	57	27	28	18	2	0	713	0	204
5	0	0	0	0	1	11	20	29	78	173	92	90	119	123	156	167	99	98	77	52	12	3	1	0	173	0	58
6	0	0	0	0	2	18	22	77	124	180	170	295	455	339	209	193	223	194	114	44	5	2	0	0	455	0	111
7	0	0	0	0	1	4	12	43	51	61	79	66	51	40	41	40	39	48	40	27	9	2	0	0	79	0	27
8	0	0	0	0	2	13	47	67	175	578	724	750	784	798	681	531	642	374	32	25	19	11	2	0	798	0	261
9	0	0	0	0	9	53	159	269	281	497	360	353	380	370	450	312	219	213	36	42	28	6	0	0	497	0	168
10	0	0	0	0	1	9	20	38	52	58	103	162	256	285	212	156	85	51	49	14	5	2	0	0	285	0	65
11	0	0	0	0	2	14	25	43	117	250	126	95	160	210	151	87	141	192	157	140	57	21	2	0	250	0	83
12	0	0	0	0	5	39	126	242	415	531	640	726	762	781	738	692	594	366	76	56	27	18	2	0	781	0	285
13	0	0	0	0	8	50	142	295	433	545	528	304	405	541	415	630	423	213	101	72	38	21	4	0	630	0	215
14	0	0	0	0	4	37	151	301	428	530	635	714	735	589	634	350	230	125	67	48	46	19	1	0	735	0	235
15	0	0	0	0	3	22	60	247	438	600	568	627	675	675	705	606	504	240	83	48	16	7	0	0	705	0	255
16	0	0	0	0	0	2	4	9	13	21	32	46	108	138	148	128	140	119	82	41	18	6	0	0	148	0	44
17	0	0	0	0	0	3	50	43	67	61	92	111	79	80	112	100	70	54	27	13	9	2	0	0	112	0	41
18	0	0	0	0	0	4	14	24	35	50	41	55	52	70	80	67	69	51	44	29	13	5	0	0	80	0	29
19	0	0	0	0	4	26	58	84	168	344	303	221	174	237	223	241	162	160	115	82	38	8	0	0	344	0	110
20	0	0	0	0	4	24	21	49	77	89	98	139	161	87	95	108	176	71	61	27	8	5	0	0	176	0	54
21	0	0	0	0	2	14	32	55	66	128	138	142	153	105	136	94	152	110	72	28	31	4	0	0	153	0	61
22	0	0	0	0	1	7	17	26	36	85	98	101	118	91	43	45	41	50	45	22	12	3	0	0	118	0	35
23	0	0	0	0	0	4	16	20	30	56	96	103	160	195	191	129	67	76	65	32	15	4	0	0	195	0	52
24	0	0	0	0	0	4	21	32	53	80	98	113	153	79	53	39	38	33	23	14	8	2	0	0	153	0	35
25	0	0	0	0	0	3	14	20	46	113	137	167	168	208	255	234	168	120	129	88	40	4	0	0	255	0	80
26	0	0	0	0	2	35	49	82	206	428	571	652	604	576	708	450	595	306	32	26	18	8	0	0	708	0	223
27	0	0	0	0	2	33	134	250	375	500	610	637	713	746	720	670	580	329	30	33	24	9	0	0	746	0	266
28	0	0	0	0	2	18	130	248	359	484	562	575	674	646	601	248	297	187	82	50	18	6	0	0	674	0	216
29	0	0	0	0	1	8	12	114	406	250	333	350	595	705	436	300	182	115	67	55	23	5	0	0	705	0	165
30	0	0	0	0	1	38	130	83	288	457	349	134	171	205	172	175	221	160	90	44	24	5	0	0	457	0	114
31	0	0	0	0	1	24	122	243	351	419	537	511	575	567	568	380	238	160	82	63	35	5	0	0	575	0	203
Max.	**0**	**0**	**0**	**1**	**15**	**86**	**197**	**345**	**438**	**639**	**724**	**750**	**784**	**798**	**778**	**702**	**642**	**374**	**157**	**140**	**57**	**21**	**4**	**0**	**798**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**9**	**13**	**21**	**32**	**46**	**51**	**40**	**41**	**39**	**38**	**33**	**23**	**13**	**5**	**2**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**3**	**25**	**71**	**129**	**208**	**305**	**331**	**339**	**376**	**374**	**353**	**288**	**254**	**171**	**67**	**44**	**23**	**8**	**1**	**0**			**140**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	16	43	58	66	121	129	116	321	263	120	69	63	65	57	15	4	0	0	0	321	0	64
2	0	0	0	0	0	1	8	21	25	32	50	58	63	61	67	54	45	32	16	8	4	2	0	0	67	0	23
3	0	0	0	0	0	2	10	24	30	33	94	122	88	111	121	188	180	132	63	39	15	2	0	0	188	0	52
4	0	0	0	0	0	3	14	33	67	68	65	96	116	131	120	118	158	111	93	67	30	2	0	0	158	0	54
5	0	0	0	0	0	17	68	259	331	441	561	454	490	398	327	336	475	150	74	50	14	3	0	0	561	0	185
6	0	0	0	0	0	14	95	209	335	461	569	653	694	716	692	630	534	269	29	23	14	3	0	0	716	0	248
7	0	0	0	0	0	19	96	189	326	416	560	645	685	688	652	634	528	262	35	27	14	2	0	0	688	0	241
8	0	0	0	0	0	8	50	166	315	341	430	611	677	700	645	544	397	200	118	45	26	2	0	0	700	0	220
9	0	0	0	0	0	3	18	43	73	97	372	301	165	208	189	65	31	22	6	5	3	0	0	0	372	0	67
10	0	0	0	0	0	1	5	12	23	19	30	37	35	44	32	24	17	12	9	6	3	0	0	0	44	0	13
11	0	0	0	0	0	1	18	22	77	173	147	126	87	132	184	154	160	114	61	20	5	0	0	0	184	0	62
12	0	0	0	0	0	2	9	45	176	241	273	743	619	300	166	314	243	227	23	21	16	1	0	0	743	0	142
13	0	0	0	0	0	1	6	22	45	76	118	94	108	162	164	152	103	81	57	36	7	0	0	0	164	0	51
14	0	0	0	0	0	2	16	36	31	12	17	27	19	15	17	34	26	21	19	6	2	0	0	0	36	0	12
15	0	0	0	0	0	1	6	22	51	84	81	113	136	95	101	110	91	95	48	16	3	0	0	0	136	0	44
16	0	0	0	0	0	1	13	48	93	142	251	309	345	198	345	368	228	135	86	45	12	0	0	0	368	0	109
17	0	0	0	0	0	1	9	38	70	135	216	407	494	384	500	454	251	216	83	42	14	0	0	0	500	0	138
18	0	0	0	0	0	1	12	27	50	40	46	66	64	49	46	64	66	37	46	61	11	0	0	0	66	0	29
19	0	0	0	0	0	2	36	100	302	306	123	491	547	317	440	229	274	151	79	42	12	0	0	0	547	0	144
20	0	0	0	0	0	0	14	58	110	254	188	311	206	251	211	365	379	190	24	16	7	0	0	0	379	0	108
21	0	0	0	0	0	3	40	157	248	303	280	317	448	569	552	256	212	133	55	22	2	0	0	0	569	0	150
22	0	0	0	0	0	0	1	1	6	23	137	239	314	383	471	198	313	84	75	37	7	0	0	0	471	0	95
23	0	0	0	0	0	2	63	180	310	576	614	764	621	735	705	501	448	132	35	25	7	0	0	0	764	0	238
24	0	0	0	0	0	0	2	10	25	53	84	105	101	128	172	142	101	73	35	10	5	0	0	0	172	0	44
25	0	0	0	0	0	1	43	176	271	310	534	587	549	612	616	542	445	97	25	21	4	0	0	0	616	0	201
26	0	0	0	0	0	0	7	27	47	41	55	80	129	151	171	135	119	94	34	12	2	0	0	0	171	0	46
27	0	0	0	0	0	0	17	191	290	397	494	572	610	630	601	526	426	136	48	33	4	0	0	0	630	0	207
28	0	0	0	0	0	1	28	119	287	405	500	575	608	620	589	523	427	71	24	15	3	0	0	0	620	0	200
29	0	0	0	0	0	1	14	130	259	358	468	470	582	546	394	210	168	107	65	43	4	0	0	0	582	0	159
30	0	0	0	0	0	0	1	9	21	35	46	51	70	77	80	106	105	60	24	7	1	0	0	0	106	0	29
31	0	0	0	0	0	0	7	27	65	141	161	193	231	137	69	77	52	39	21	9	0	0	0	0	231	0	51
Max.	**0**	**0**	**0**	**0**	**0**	**19**	**96**	**259**	**335**	**576**	**614**	**764**	**694**	**735**	**705**	**634**	**534**	**269**	**118**	**67**	**30**	**3**	**0**	**0**	**764**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**6**	**12**	**17**	**27**	**19**	**15**	**17**	**24**	**17**	**12**	**6**	**5**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**3**	**25**	**79**	**143**	**198**	**248**	**314**	**330**	**316**	**308**	**262**	**228**	**114**	**47**	**27**	**8**	**1**	**0**	**0**			**110**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	12	145	199	260	457	251	317	478	504	497	398	38	25	14	2	0	0	0	504	0	150
2	0	0	0	0	0	0	8	117	284	376	458	278	190	150	108	39	31	31	28	19	3	0	0	0	458	0	88
3	0	0	0	0	0	0	5	102	113	386	294	402	420	293	538	510	379	36	23	13	1	0	0	0	538	0	146
4	0	0	0	0	0	0	9	41	96	322	261	485	451	349	177	220	148	107	64	14	0	0	0	0	485	0	114
5	0	0	0	0	0	0	4	14	25	43	133	224	348	252	160	181	202	102	61	12	0	0	0	0	348	0	73
6	0	0	0	0	0	0	5	82	234	351	454	530	566	588	581	539	394	47	28	7	0	0	0	0	588	0	184
7	0	0	0	0	0	0	8	49	74	171	107	145	166	95	30	26	14	8	3	1	0	0	0	0	171	0	37
8	0	0	0	0	0	0	0	3	16	24	25	23	32	53	39	38	41	16	5	1	0	0	0	0	53	0	13
9	0	0	0	0	0	0	1	28	90	104	61	113	172	131	134	118	50	18	5	2	0	0	0	0	172	0	43
10	0	0	0	0	0	0	2	14	41	115	175	174	234	235	149	183	113	69	29	11	0	0	0	0	235	0	64
11	0	0	0	0	0	0	5	48	149	195	315	495	560	577	407	371	291	35	16	6	0	0	0	0	577	0	145
12	0	0	0	0	0	0	3	66	202	317	417	492	525	532	499	429	280	21	15	6	0	0	0	0	532	0	158
13	0	0	0	0	0	0	4	72	202	322	419	495	516	510	476	282	153	94	37	4	0	0	0	0	516	0	149
14	0	0	0	0	0	0	0	3	8	11	22	20	28	47	71	81	68	22	8	1	0	0	0	0	81	0	16
15	0	0	0	0	0	0	0	8	14	21	30	29	46	22	32	56	70	18	6	0	0	0	0	0	70	0	15
16	0	0	0	0	0	0	0	2	13	31	37	32	43	66	78	52	51	35	17	3	0	0	0	0	78	0	19
17	0	0	0	0	0	0	0	14	67	127	231	410	262	312	323	251	134	108	53	4	0	0	0	0	410	0	96
18	0	0	0	0	0	0	1	7	11	16	14	15	18	33	25	21	18	9	4	0	0	0	0	0	33	0	8
19	0	0	0	0	0	0	0	6	28	40	55	79	101	89	100	101	56	33	9	0	0	0	0	0	101	0	29
20	0	0	0	0	0	0	1	19	30	95	167	249	308	566	493	356	193	34	19	2	0	0	0	0	566	0	105
21	0	0	0	0	0	0	0	2	5	11	20	29	41	45	47	31	16	10	2	0	0	0	0	0	47	0	11
22	0	0	0	0	0	0	0	27	88	124	113	332	221	201	156	121	62	50	13	0	0	0	0	0	332	0	63
23	0	0	0	0	0	0	0	11	55	195	339	318	437	291	261	189	159	45	15	1	0	0	0	0	437	0	96
24	0	0	0	0	0	0	0	27	135	249	349	431	470	466	423	351	169	25	12	1	0	0	0	0	470	0	130
25	0	0	0	0	0	0	0	15	108	94	116	119	130	184	299	215	65	26	10	0	0	0	0	0	299	0	58
26	0	0	0	0	0	0	0	3	15	31	32	33	44	50	36	21	15	10	2	0	0	0	0	0	50	0	12
27	0	0	0	0	0	0	0	8	55	62	80	121	132	55	59	24	32	14	2	0	0	0	0	0	132	0	27
28	0	0	0	0	0	0	0	11	43	80	157	154	326	147	188	185	131	50	10	0	0	0	0	0	326	0	62
29	0	0	0	0	0	0	0	26	132	238	349	411	450	433	386	333	123	21	9	0	0	0	0	0	450	0	121
30	0	0	0	0	0	0	0	19	125	239	311	383	429	340	320	258	102	31	3	0	0	0	0	0	429	0	107
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**145**	**284**	**386**	**458**	**530**	**566**	**588**	**581**	**539**	**398**	**108**	**64**	**19**	**3**	**0**	**0**	**0**	**588**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**11**	**14**	**15**	**18**	**22**	**25**	**21**	**14**	**8**	**2**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**33**	**89**	**155**	**200**	**242**	**266**	**253**	**237**	**203**	**132**	**39**	**18**	**4**	**0**	**0**	**0**	**0**			**78**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	2	12	37	73	65	96	61	55	54	59	11	4	0	0	0	0	0	96	0	22
2	0	0	0	0	0	0	0	1	8	22	39	29	40	35	23	36	14	5	1	0	0	0	0	0	40	0	11
3	0	0	0	0	0	0	0	1	6	120	346	383	437	458	422	259	68	27	4	0	0	0	0	0	458	0	105
4	0	0	0	0	0	0	0	4	29	148	43	76	58	23	105	200	105	20	7	0	0	0	0	0	200	0	34
5	0	0	0	0	0	0	0	4	53	206	389	482	478	412	291	250	104	21	4	0	0	0	0	0	482	0	112
6	0	0	0	0	0	0	0	0	3	6	15	30	40	49	56	39	18	8	1	0	0	0	0	0	56	0	11
7	0	0	0	0	0	0	0	0	1	3	6	5	6	4	5	4	3	1	0	0	0	0	0	0	6	0	2
8	0	0	0	0	0	0	0	0	3	12	20	26	33	30	38	25	25	10	0	0	0	0	0	0	38	0	9
9	0	0	0	0	0	0	0	0	2	9	89	78	58	84	41	43	29	9	3	0	0	0	0	0	89	0	18
10	0	0	0	0	0	0	0	2	21	53	72	235	254	317	145	93	44	20	1	0	0	0	0	0	317	0	52
11	0	0	0	0	0	0	0	2	18	57	197	347	364	246	83	142	59	23	2	0	0	0	0	0	364	0	64
12	0	0	0	0	0	0	0	1	12	15	39	43	57	71	56	37	20	7	1	0	0	0	0	0	71	0	15
13	0	0	0	0	0	0	0	2	53	167	246	311	342	347	256	232	81	15	1	0	0	0	0	0	347	0	85
14	0	0	0	0	0	0	0	3	25	78	197	292	284	378	216	91	63	36	2	0	0	0	0	0	378	0	69
15	0	0	0	0	0	0	0	1	33	71	194	195	142	160	196	118	63	18	0	0	0	0	0	0	196	0	50
16	0	0	0	0	0	0	0	0	1	9	51	219	131	236	102	87	26	3	0	0	0	0	0	0	236	0	36
17	0	0	0	0	0	0	0	0	4	29	76	100	115	132	105	85	61	15	0	0	0	0	0	0	132	0	30
18	0	0	0	0	0	0	0	0	2	10	27	86	85	62	85	56	22	7	0	0	0	0	0	0	86	0	18
19	0	0	0	0	0	0	0	1	20	66	66	131	273	187	119	38	33	11	0	0	0	0	0	0	273	0	39
20	0	0	0	0	0	0	0	0	21	117	209	275	309	266	246	208	74	12	0	0	0	0	0	0	309	0	72
21	0	0	0	0	0	0	0	0	25	113	215	278	313	309	265	201	56	6	0	0	0	0	0	0	313	0	74
22	0	0	0	0	0	0	0	0	6	53	198	184	295	268	263	186	52	7	0	0	0	0	0	0	295	0	63
23	0	0	0	0	0	0	0	0	35	122	205	264	300	273	247	214	70	7	0	0	0	0	0	0	300	0	72
24	0	0	0	0	0	0	0	0	1	7	13	20	63	53	90	72	24	2	0	0	0	0	0	0	90	0	14
25	0	0	0	0	0	0	0	0	4	26	81	173	318	286	254	197	97	16	0	0	0	0	0	0	318	0	60
26	0	0	0	0	0	0	0	0	4	36	74	148	143	111	86	95	43	7	0	0	0	0	0	0	148	0	31
27	0	0	0	0	0	0	0	0	8	84	188	246	271	281	167	89	46	5	0	0	0	0	0	0	281	0	58
28	0	0	0	0	0	0	0	0	13	108	135	207	162	126	80	39	10	2	0	0	0	0	0	0	207	0	37
29	0	0	0	0	0	0	0	0	2	22	50	79	190	122	63	18	7	1	0	0	0	0	0	0	190	0	23
30	0	0	0	0	0	0	0	0	4	69	94	94	284	194	174	129	24	3	0	0	0	0	0	0	284	0	45
31	0	0	0	0	0	0	0	0	4	71	162	219	250	247	206	142	27	3	0	0	0	0	0	0	250	0	55
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**53**	**206**	**389**	**482**	**478**	**458**	**422**	**259**	**105**	**36**	**7**	**0**	**0**	**0**	**0**	**0**	**482**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**6**	**5**	**6**	**4**	**5**	**4**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**14**	**63**	**123**	**172**	**200**	**188**	**146**	**112**	**46**	**11**	**1**	**0**	**0**	**0**	**0**	**0**			**45**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	8	70	151	212	246	236	206	134	28	3	0	0	0	0	0	0	246	0	54
2	0	0	0	0	0	0	0	0	4	62	153	210	241	236	199	135	25	2	0	0	0	0	0	0	241	0	53
3	0	0	0	0	0	0	0	0	5	58	145	202	233	229	192	128	23	2	0	0	0	0	0	0	233	0	51
4	0	0	0	0	0	0	0	0	4	54	141	198	229	224	187	122	21	2	0	0	0	0	0	0	229	0	49
5	0	0	0	0	0	0	0	0	3	52	142	200	231	227	190	125	18	1	0	0	0	0	0	0	231	0	50
6	0	0	0	0	0	0	0	0	3	50	136	194	225	218	181	116	15	1	0	0	0	0	0	0	225	0	47
7	0	0	0	0	0	0	0	0	2	47	145	202	166	136	166	114	14	1	0	0	0	0	0	0	202	0	41
8	0	0	0	0	0	0	0	0	2	38	123	182	226	188	173	106	12	1	0	0	0	0	0	0	226	0	44
9	0	0	0	0	0	0	0	0	0	12	31	58	69	84	79	41	11	0	0	0	0	0	0	0	84	0	16
10	0	0	0	0	0	0	0	0	0	1	13	30	50	30	16	19	10	0	0	0	0	0	0	0	50	0	7
11	0	0	0	0	0	0	0	0	1	33	116	175	205	199	163	95	8	0	0	0	0	0	0	0	205	0	41
12	0	0	0	0	0	0	0	0	1	32	93	90	163	164	113	53	8	0	0	0	0	0	0	0	164	0	30
13	0	0	0	0	0	0	0	0	0	14	107	169	198	193	158	88	8	0	0	0	0	0	0	0	198	0	39
14	0	0	0	0	0	0	0	0	0	29	78	116	150	195	156	83	7	0	0	0	0	0	0	0	195	0	34
15	0	0	0	0	0	0	0	0	0	7	90	156	184	179	143	73	7	0	0	0	0	0	0	0	184	0	35
16	0	0	0	0	0	0	0	0	0	9	32	93	121	102	59	60	14	0	0	0	0	0	0	0	121	0	20
17	0	0	0	0	0	0	0	0	0	7	83	149	177	172	139	68	6	0	0	0	0	0	0	0	177	0	33
18	0	0	0	0	0	0	0	0	0	14	82	145	175	170	138	67	6	0	0	0	0	0	0	0	175	0	33
19	0	0	0	0	0	0	0	0	0	13	76	140	170	167	134	61	6	0	0	0	0	0	0	0	170	0	32
20	0	0	0	0	0	0	0	0	0	9	43	74	146	158	124	54	5	0	0	0	0	0	0	0	158	0	25
21	0	0	0	0	0	0	0	0	0	15	71	128	104	125	77	28	7	0	0	0	0	0	0	0	128	0	23
22	0	0	0	0	0	0	0	0	0	10	66	130	160	157	122	51	4	0	0	0	0	0	0	0	160	0	29
23	0	0	0	0	0	0	0	0	0	9	63	127	158	154	120	49	4	0	0	0	0	0	0	0	158	0	28
24	0	0	0	0	0	0	0	0	0	6	60	125	166	137	94	29	3	0	0	0	0	0	0	0	166	0	26
25	0	0	0	0	0	0	0	0	0	3	24	73	54	67	59	13	1	0	0	0	0	0	0	0	73	0	12
26	0	0	0	0	0	0	0	0	0	1	5	12	27	23	12	5	0	0	0	0	0	0	0	0	27	0	4
27	0	0	0	0	0	0	0	0	0	2	20	49	55	43	24	6	1	0	0	0	0	0	0	0	55	0	8
28	0	0	0	0	0	0	0	0	0	1	11	42	62	59	45	20	2	0	0	0	0	0	0	0	62	0	10
29	0	0	0	0	0	0	0	0	0	4	46	106	136	134	94	26	2	0	0	0	0	0	0	0	136	0	23
30	0	0	0	0	0	0	0	0	0	0	3	7	13	11	5	2	0	0	0	0	0	0	0	0	13	0	2
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**70**	**153**	**212**	**246**	**236**	**206**	**135**	**28**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**246**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**7**	**13**	**11**	**5**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**22**	**78**	**126**	**151**	**147**	**119**	**66**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**30**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Solar (Watts/m^2)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	3	35	101	137	122	93	33	3	0	0	0	0	0	0	0	137	0	22
2	0	0	0	0	0	0	0	0	0	1	18	66	75	135	53	16	2	0	0	0	0	0	0	0	135	0	15
3	0	0	0	0	0	0	0	0	0	0	4	12	12	8	8	2	0	0	0	0	0	0	0	0	12	0	2
4	0	0	0	0	0	0	0	0	0	0	5	12	12	15	14	9	1	0	0	0	0	0	0	0	15	0	3
5	0	0	0	0	0	0	0	0	0	1	11	19	38	15	12	10	0	0	0	0	0	0	0	0	38	0	4
6	0	0	0	0	0	0	0	0	0	0	2	3	3	6	3	1	0	0	0	0	0	0	0	0	6	0	1
7	0	0	0	0	0	0	0	0	0	0	4	16	22	42	55	14	1	0	0	0	0	0	0	0	55	0	6
8	0	0	0	0	0	0	0	0	0	0	9	13	12	5	1	0	0	0	0	0	0	0	0	0	13	0	2
9	0	0	0	0	0	0	0	0	0	0	2	6	3	5	7	2	0	0	0	0	0	0	0	0	7	0	1
10	0	0	0	0	0	0	0	0	0	0	1	4	13	9	3	2	0	0	0	0	0	0	0	0	13	0	1
11	0	0	0	0	0	0	0	0	0	0	8	26	67	86	67	32	1	0	0	0	0	0	0	0	86	0	12
12	0	0	0	0	0	0	0	0	0	0	9	20	33	26	17	8	1	0	0	0	0	0	0	0	33	0	5
13	0	0	0	0	0	0	0	0	0	0	9	30	37	28	56	22	1	0	0	0	0	0	0	0	56	0	8
14	0	0	0	0	0	0	0	0	0	0	14	44	80	93	74	28	2	0	0	0	0	0	0	0	93	0	14
15	0	0	0	0	0	0	0	0	0	1	20	70	86	83	41	10	1	0	0	0	0	0	0	0	86	0	13
16	0	0	0	0	0	0	0	0	0	0	2	9	12	15	12	5	0	0	0	0	0	0	0	0	15	0	2
17	0	0	0	0	0	0	0	0	0	0	3	9	12	9	7	3	0	0	0	0	0	0	0	0	12	0	2
18	0	0	0	0	0	0	0	0	0	1	35	114	102	128	92	25	2	0	0	0	0	0	0	0	128	0	21
19	0	0	0	0	0	0	0	0	0	0	5	20	19	23	16	6	0	0	0	0	0	0	0	0	23	0	4
20	0	0	0	0	0	0	0	0	0	0	9	40	61	69	61	43	4	0	0	0	0	0	0	0	69	0	12
21	0	0	0	0	0	0	0	0	0	1	25	78	107	112	74	25	2	0	0	0	0	0	0	0	112	0	18
22	0	0	0	0	0	0	0	0	0	0	3	17	33	35	24	9	1	0	0	0	0	0	0	0	35	0	5
23	0	0	0	0	0	0	0	0	0	0	21	90	141	116	78	27	2	0	0	0	0	0	0	0	141	0	20
24	0	0	0	0	0	0	0	0	0	0	7	33	78	104	67	18	2	0	0	0	0	0	0	0	104	0	13
25	0	0	0	0	0	0	0	0	0	0	16	67	107	112	79	28	2	0	0	0	0	0	0	0	112	0	17
26	0	0	0	0	0	0	0	0	0	0	18	68	106	111	81	22	2	0	0	0	0	0	0	0	111	0	17
27	0	0	0	0	0	0	0	0	0	0	3	19	21	14	8	3	0	0	0	0	0	0	0	0	21	0	3
28	0	0	0	0	0	0	0	0	0	0	1	28	56	74	47	18	2	0	0	0	0	0	0	0	74	0	9
29	0	0	0	0	0	0	0	0	0	0	4	13	26	28	25	13	2	0	0	0	0	0	0	0	28	0	5
30	0	0	0	0	0	0	0	0	0	0	13	39	63	127	86	26	3	0	0	0	0	0	0	0	127	0	15
31	0	0	0	0	0	0	0	0	0	0	9	22	37	36	29	8	1	0	0	0	0	0	0	0	37	0	6
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**35**	**114**	**141**	**135**	**93**	**43**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**141**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**3**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**36**	**52**	**58**	**42**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	975	975	975	976	976	977	977	977	977	977	978	978	978	978	978	977	978	978	978	978	978	978	978	979	979	975	977.2
2	979	979	979	979	979	980	980	981	981	982	983	983	984	984	984	985	985	987	988	989	990	991	991	993	993	979	984.0
3	993	994	995	996	996	997	997	998	999	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1004	1004	1005	1005	1006	1006	993	1000.3
4	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1006	1005	1005	1004	1009	1004	1007.1
5	1003	1002	1001	1001	1000	999	998	998	997	997	997	996	995	995	994	993	993	993	993	993	993	993	994	994	1003	993	996.3
6	994	994	994	994	994	994	994	994	994	995	995	995	995	995	995	995	995	995	995	995	995	994	994	994	995	994	994.6
7	994	994	993	993	992	991	990	989	988	988	988	988	987	987	987	987	987	986	985	985	985	984	984	984	994	984	988.1
8	983	983	982	983	983	983	983	983	983	983	984	983	983	983	983	983	982	982	982	982	982	982	982	982	984	982	982.6
9	982	982	982	982	981	981	982	981	981	982	982	982	982	982	982	982	983	983	983	983	983	983	983	984	984	981	982.3
10	984	984	984	984	984	985	985	985	986	986	987	987	987	987	988	989	989	989	990	990	990	991	991	992	992	984	987.2
11	992	993	993	993	994	994	995	995	995	996	996	997	997	997	997	997	997	998	998	999	999	999	1000	1000	1000	992	996.3
12	1000	1001	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1000	1002.3
13	1002	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1002	1003	1001	1001.9
14	1002	1002	1002	1002	1002	1002	1002	1001	1002	1002	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	999	999	999	999	1002	999	1000.7
15	999	999	999	998	998	998	998	998	998	998	997	998	997	997	997	997	997	997	997	997	997	997	997	997	999	997	997.6
16	997	997	997	997	996	996	996	996	996	996	997	996	996	997	996	996	997	997	997	997	997	996	996	996	997	996	996.4
17	996	996	996	996	995	995	995	995	995	996	996	996	996	996	995	996	997	997	997	998	998	999	999	1000	1000	995	996.5
18	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1005	1005	1005	1006	1006	1007	1007	1007	1001	1003.8
19	1007	1007	1008	1008	1008	1007	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1007	1007	1009	1007	1008.1
20	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1002	1002	1001	1000	999	998	997	997	996	995	995	994	993	991	1007	991	1000.0
21	990	988	987	985	984	983	981	981	980	980	979	979	978	977	976	975	975	974	974	974	975	975	976	976	990	974	979.2
22	979	980	980	982	983	987	988	988	990	991	993	993	994	995	997	998	1000	1000	1001	1002	1003	1005	1007	1008	1008	979	993.5
23	1009	1010	1011	1013	1013	1014	1015	1016	1016	1017	1018	1018	1018	1019	1018	1018	1018	1018	1019	1019	1018	1018	1018	1018	1019	1009	1016.3
24	1018	1017	1017	1016	1016	1015	1015	1014	1013	1013	1013	1012	1012	1011	1010	1010	1009	1008	1008	1007	1006	1006	1006	1005	1018	1005	1011.5
25	1004	1004	1003	1002	1001	1001	999	999	999	999	998	998	997	997	997	997	998	998	998	999	999	1000	1000	1001	1004	997	999.5
26	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1003	1003	1003	1003	1003	1002	1002	1002	1001	1001	1001	1001	1001	1001	1004	1001	1002.1
27	1001	1001	1002	1002	1001	1001	1002	1000	1000	1000	1001	1000	1000	1000	1000	1000	999	1000	1000	999	999	998	998	998	1002	998	1000.2
28	996	995	995	994	993	991	991	991	991	990	990	991	991	990	991	991	991	991	991	992	992	992	993	993	996	990	991.9
29	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	993	992	992	992	992	992	992	991	991	993	991	992.6
30	991	991	990	990	989	988	988	987	987	986	987	986	986	985	985	985	985	984	984	984	984	984	983	983	991	983	986.3
31	983	983	983	983	982	982	981	981	981	981	981	981	980	980	979	979	979	979	978	978	978	977	977	977	983	977	980.0
Max.	**1018**	**1017**	**1017**	**1016**	**1016**	**1015**	**1015**	**1016**	**1016**	**1017**	**1018**	**1018**	**1018**	**1019**	**1018**	**1018**	**1018**	**1018**	**1019**	**1019**	**1018**	**1018**	**1018**	**1018**	**1019**		
Min.	**975**	**975**	**975**	**976**	**976**	**977**	**977**	**977**	**977**	**977**	**978**	**978**	**978**	**977**	**976**	**975**	**975**	**974**	**974**	**974**	**975**	**975**	**976**	**976**		**974**	
Avg.	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**996**	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**996**	**996**			**995.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	977	976	976	976	976	976	976	976	976	977	977	978	978	978	979	979	981	981	983	983	983	984	985	986	986	976	979.1
2	987	988	989	990	990	991	992	993	994	995	995	997	997	998	998	999	999	1000	1000	1000	1001	1002	1001	1002	1002	987	995.6
3	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1006	1006	1006	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1007	1003	1004.8
4	1004	1003	1003	1002	1001	1001	1001	1000	1000	999	998	997	997	996	995	994	993	993	993	992	992	991	990	989	1004	989	996.8
5	988	988	988	987	986	985	984	982	982	981	981	981	981	981	980	979	978	976	975	972	971	970	970	970	988	970	979.7
6	970	969	968	967	966	963	963	963	963	964	965	967	968	970	973	975	976	977	978	979	980	982	983	985	985	963	971.3
7	985	986	986	987	987	988	989	989	990	992	992	993	994	995	996	997	998	999	1001	1002	1004	1005	1007	1008	1008	985	994.6
8	1009	1010	1011	1010	1008	1007	1005	1004	1004	1004	1007	1009	1012	1014	1015	1016	1017	1020	1021	1020	1020	1020	1018	1018	1021	1004	1012.5
9	1016	1015	1013	1011	1008	1005	1002	999	997	995	994	993	991	991	992	992	993	994	996	997	999	1001	1002	1002	1016	991	1000.0
10	1001	1000	999	997	996	994	991	990	988	988	989	990	992	992	994	996	997	998	999	999	1000	1001	1001	1000	1001	988	995.5
11	999	998	996	994	993	992	991	990	988	988	987	986	985	984	984	983	984	985	985	985	985	985	986	987	999	983	988.4
12	987	987	988	988	988	989	989	991	992	994	994	995	998	999	1000	1002	1003	1005	1007	1007	1008	1009	1010	1011	1011	987	997.6
13	1013	1014	1015	1017	1018	1019	1021	1022	1023	1025	1026	1028	1028	1029	1029	1030	1032	1032	1033	1034	1034	1035	1035	1036	1036	1013	1026.1
14	1037	1037	1038	1038	1038	1038	1038	1039	1039	1040	1040	1040	1039	1039	1038	1038	1038	1038	1038	1038	1037	1036	1037	1036	1040	1036	1037.8
15	1036	1035	1035	1034	1034	1035	1034	1034	1034	1034	1033	1034	1034	1034	1033	1032	1032	1033	1033	1034	1034	1034	1035	1035	1036	1032	1033.9
16	1035	1036	1036	1036	1037	1037	1038	1038	1038	1039	1040	1040	1040	1040	1040	1039	1039	1039	1039	1039	1039	1038	1038	1037	1040	1035	1038.2
17	1036	1035	1034	1033	1032	1031	1030	1030	1029	1030	1029	1029	1028	1027	1027	1027	1026	1026	1026	1026	1025	1025	1025	1025	1036	1025	1028.7
18	1025	1025	1024	1024	1024	1024	1024	1024	1023	1023	1023	1023	1022	1021	1020	1020	1019	1019	1019	1018	1018	1018	1018	1018	1025	1018	1021.3
19	1018	1018	1018	1018	1018	1019	1019	1020	1021	1020	1020	1021	1021	1022	1022	1022	1021	1022	1022	1022	1023	1022	1023	1023	1023	1018	1020.5
20	1023	1023	1022	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1019	1020	1021	1022	1022	1023	1023	1023	1019	1021.4
21	1023	1024	1025	1025	1025	1025	1026	1027	1029	1029	1030	1031	1030	1031	1031	1031	1032	1032	1032	1032	1032	1032	1032	1032	1032	1023	1029.1
22	1032	1032	1032	1032	1032	1032	1031	1031	1030	1030	1031	1031	1031	1031	1032	1031	1031	1031	1031	1030	1030	1029	1028	1028	1032	1028	1030.7
23	1027	1027	1026	1025	1025	1024	1024	1023	1023	1022	1023	1023	1023	1024	1024	1024	1025	1025	1026	1027	1027	1028	1028	1029	1029	1022	1025.0
24	1030	1030	1030	1030	1030	1031	1031	1032	1032	1032	1033	1033	1033	1033	1033	1032	1033	1033	1033	1033	1033	1033	1033	1033	1033	1030	1031.9
25	1033	1032	1031	1031	1030	1029	1028	1026	1025	1024	1023	1022	1021	1019	1018	1017	1017	1018	1018	1018	1018	1018	1019	1020	1033	1017	1023.1
26	1019	1018	1018	1017	1017	1017	1017	1017	1016	1015	1015	1014	1013	1012	1011	1009	1008	1007	1005	1004	1003	1001	1000	998	1019	998	1011.3
27	996	995	994	992	992	992	992	992	992	992	993	993	994	994	995	995	996	997	998	999	1000	1001	1002	1003	1003	992	995.3
28	1004	1005	1005	1006	1006	1007	1008	1009	1010	1011	1012	1012	1013	1013	1014	1015	1014	1015	1016	1016	1016	1016	1017	1017	1017	1004	1011.5
Max.	**1037**	**1037**	**1038**	**1038**	**1038**	**1038**	**1038**	**1039**	**1039**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1038**	**1038**	**1037**	**1040**		
Min.	**970**	**969**	**968**	**967**	**966**	**963**	**963**	**963**	**963**	**964**	**965**	**967**	**968**	**970**	**973**	**975**	**976**	**976**	**975**	**972**	**971**	**970**	**970**	**970**		**963**	
Avg.	**1011**	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1009**	**1009**	**1010**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1012**	**1012**	**1013**			**1010.8**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1018	1019	1020	1020	1020	1021	1021	1022	1022	1022	1022	1021	1021	1021	1020	1020	1019	1019	1018	1018	1017	1016	1016	1016	1022	1016	1019.5
2	1016	1015	1015	1014	1013	1012	1012	1011	1010	1010	1009	1009	1008	1007	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1016	1005	1008.8
3	1006	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1006	1009.0
4	1010	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1007	1006	1006	1005	1005	1005	1004	1003	1003	1002	1002	1001	1001	1010	1001	1006.1
5	1000	999	999	998	997	997	997	997	997	997	996	996	997	997	997	997	997	997	997	997	998	999	999	999	1000	996	997.5
6	999	1000	1000	1000	1000	1000	1000	1000	1001	1000	1000	1000	999	999	998	998	997	997	997	997	996	996	996	996	1001	996	998.5
7	995	995	995	994	994	993	993	993	993	993	992	992	992	992	991	990	990	989	988	988	988	988	987	987	995	987	991.3
8	987	988	988	988	989	988	988	990	992	992	994	991	991	992	993	993	992	995	996	996	997	1000	1002	1002	1002	987	992.6
9	1004	1005	1005	1007	1010	1012	1012	1014	1015	1015	1017	1017	1018	1018	1019	1020	1020	1020	1020	1021	1022	1022	1023	1024	1024	1004	1015.9
10	1024	1025	1026	1026	1026	1026	1027	1027	1026	1026	1026	1026	1026	1025	1024	1024	1024	1023	1023	1023	1022	1021	1021	1021	1027	1021	1024.4
11	1020	1020	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1017	1017	1016	1016	1015	1015	1015	1014	1014	1014	1014	1013	1020	1013	1016.8
12	1013	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1013	1013	1014	1014	1015	1016	1016	1011	1012.1
13	1016	1017	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1016	1018.2
14	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1016	1016	1016	1017	1017	1017	1017	1017	1018	1016	1017.5
15	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1016	1014	1014.9
16	1015	1014	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1015	1014	1014.3
17	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1012	1012	1011	1011	1010	1010	1010	1010	1010	1010	1010	1009	1014	1009	1011.8
18	1008	1008	1007	1007	1006	1006	1005	1005	1004	1003	1003	1002	1001	1001	1000	1001	1001	1001	1001	1001	1001	1001	1001	1000	1008	1000	1002.9
19	1000	1000	1000	999	999	999	998	997	996	996	995	994	994	993	992	992	991	991	991	991	991	991	991	991	1000	991	994.6
20	991	991	991	991	991	992	992	992	993	993	994	993	994	994	994	994	994	994	994	995	995	995	995	996	996	991	993.3
21	997	997	998	998	999	1000	1001	1002	1003	1004	1004	1005	1006	1006	1007	1007	1008	1008	1009	1009	1010	1010	1010	1010	1010	997	1004.3
22	1009	1009	1009	1008	1008	1008	1008	1007	1007	1007	1007	1007	1008	1008	1009	1009	1010	1010	1011	1012	1013	1013	1014	1014	1014	1007	1009.4
23	1015	1015	1015	1015	1015	1015	1016	1015	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1012	1012	1011	1011	1011	1016	1011	1013.8
24	1011	1011	1010	1010	1010	1009	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1011	1006	1007.8
25	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1005	1005.4
26	1006	1007	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1011	1011	1011	1012	1012	1013	1013	1014	1014	1014	1014	1006	1010.1
27	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1016	1014	1015.0
28	1015	1014	1014	1013	1013	1012	1012	1011	1011	1011	1011	1011	1010	1010	1009	1009	1008	1008	1007	1007	1007	1007	1007	1006	1015	1006	1010.1
29	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1006	1006.8
30	1007	1006	1006	1006	1005	1005	1005	1004	1004	1004	1003	1003	1002	1002	1002	1001	1000	1000	999	999	999	998	997	998	1007	997	1002.2
31	997	996	996	995	995	995	995	994	994	994	994	994	994	994	994	994	994	995	995	996	997	998	998	999	999	994	995.2
Max.	1024	1025	1026	1026	1026	1026	1027	1027	1026	1026	1026	1026	1026	1025	1024	1024	1024	1023	1023	1023	1022	1022	1023	1024	1027		
Min.	987	988	988	988	989	988	988	990	992	992	992	991	991	992	991	990	990	989	988	988	988	988	987	987		987	
Avg.	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1008	1008			1007.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	999	1000	1000	1001	1001	1002	1003	1004	1004	1005	1005	1006	1007	1007	1008	1008	1009	1009	1010	1010	1011	1011	1011	1012	1012	999	1005.9
2	1012	1013	1013	1013	1013	1014	1014	1014	1014	1014	1015	1014	1014	1014	1014	1013	1013	1013	1013	1012	1012	1011	1011	1010	1015	1010	1013.0
3	1010	1009	1008	1007	1006	1005	1004	1003	1003	1002	1001	1000	999	999	998	998	997	997	997	997	997	997	996	996	1010	996	1001.1
4	996	996	996	996	996	996	996	996	996	996	997	997	998	998	998	999	999	999	1000	1001	1001	1001	1001	1002	1002	996	998.1
5	1002	1002	1002	1002	1002	1002	1003	1002	1003	1003	1003	1004	1004	1004	1004	1004	1003	1003	1003	1003	1005	1004	1005	1005	1005	1002	1003.1
6	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1007	1008	1008	1009	1009	1010	1010	1010	1005	1006.4
7	1010	1011	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1010	1009	1009	1013	1009	1011.4
8	1008	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1002	1002	1001	1001	1000	1001	1000	1000	1001	1001	1001	1002	1008	1000	1002.9
9	1002	1002	1001	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1004	1001	1002.3
10	1005	1005	1006	1006	1007	1007	1007	1008	1008	1009	1010	1010	1011	1011	1010	1010	1011	1011	1012	1012	1012	1013	1014	1015	1015	1005	1009.5
11	1014	1015	1015	1014	1013	1014	1013	1012	1011	1010	1010	1008	1007	1006	1004	1003	1001	1000	998	998	997	996	996	995	1015	995	1006.2
12	994	994	993	993	993	992	992	992	991	991	991	990	989	989	989	988	988	987	987	986	986	986	986	985	994	985	989.7
13	985	986	986	986	986	986	986	986	987	987	988	987	987	987	986	987	987	988	989	990	990	990	990	990	990	985	987.4
14	990	991	991	991	991	992	993	993	994	994	995	995	996	996	997	997	997	997	997	998	998	999	999	999	999	990	995.0
15	1000	1000	1000	1001	1001	1002	1002	1003	1003	1004	1004	1005	1005	1005	1005	1005	1005	1006	1006	1005	1005	1005	1004	1004	1006	1000	1003.5
16	1003	1002	1001	1000	999	998	997	996	995	994	994	993	991	990	988	987	986	984	983	982	982	981	980	980	1003	980	991.1
17	979	978	977	978	980	980	981	981	982	982	983	985	985	986	986	987	987	988	988	989	990	991	991	992	992	977	984.4
18	993	993	994	994	995	995	996	997	997	998	998	999	1000	1000	1000	1001	1001	1001	1002	1002	1003	1003	1004	1004	1004	993	998.8
19	1004	1005	1005	1005	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1004	1006.4
20	1007	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1003	1003	1002	1002	1007	1002	1004.8
21	1001	1001	1000	1000	999	998	998	998	998	998	998	998	999	999	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	998	999.5
22	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1003	1004	1004	1005	1006	1007	1007	1008	1009	1009	1009	1001	1003.4
23	1009	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1010	1010	1009	1009	1008	1007	1006	1005	1004	1004	1003	1002	1001	1011	1001	1007.8
24	1000	1000	999	999	998	998	997	997	997	997	997	998	998	998	999	999	1000	1000	1001	1002	1003	1004	1004	1005	1005	997	999.6
25	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1005	1006.7
26	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1003	1003	1002	1002	1002	1002	1002	1001	1007	1001	1004.3
27	1001	1001	1000	1000	999	999	998	998	998	997	997	996	996	995	994	993	992	992	991	991	991	990	990	990	1001	990	995.4
28	990	990	991	991	992	993	994	995	996	997	998	999	999	1000	1001	1001	1001	1002	1002	1002	1003	1003	1004	1004	1004	990	997.8
29	1004	1004	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1004	1006.5
30	1009	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1009	1011.6
Max.	**1014**	**1015**	**1015**	**1014**	**1013**	**1014**	**1014**	**1014**	**1014**	**1014**	**1015**	**1014**	**1014**	**1014**	**1014**	**1013**	**1013**	**1013**	**1013**	**1013**	**1014**	**1014**	**1014**	**1015**	**1015**		
Min.	**979**	**978**	**977**	**978**	**980**	**980**	**981**	**981**	**982**	**982**	**983**	**985**	**985**	**986**	**986**	**987**	**986**	**984**	**983**	**982**	**982**	**981**	**980**	**980**		**977**	
Avg.	**1002**	**1002**	**1001**	**1001**	**1001**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**			**1001.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1014	1014	1014	1014	1013	1013	1013	1012	1012	1011	1011	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1006	1006	1014	1006	1010.2
2	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1011	1011	1011	1011	1006	1008.4
3	1010	1010	1010	1009	1009	1008	1007	1007	1006	1005	1004	1002	1001	1000	999	998	998	997	996	996	995	995	995	994	1010	994	1002.2
4	995	995	995	996	996	996	996	996	995	995	994	995	994	995	995	994	994	994	993	993	992	992	991	990	996	990	994.1
5	989	989	989	988	987	987	986	986	986	986	986	986	986	987	987	987	986	986	985	985	985	986	985	985	989	985	986.5
6	985	985	985	986	986	986	987	987	988	988	989	989	990	990	991	991	991	991	991	992	993	993	993	994	994	985	989.2
7	995	995	996	996	997	997	997	998	998	998	999	999	1000	1000	1001	1000	1001	1001	1001	1001	1002	1003	1003	1003	1003	995	999.1
8	1003	1003	1004	1004	1005	1005	1005	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1007	1007	1006	1007	1003	1005.9
9	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006.6
10	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1011	1011	1012	1012	1012	1007	1009.0
11	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1012	1014.3
12	1017	1017	1018	1018	1019	1019	1020	1020	1020	1021	1021	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1025	1025	1025	1017	1021.2
13	1025	1026	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1026	1026	1026	1026	1025	1025	1025	1025	1025	1027	1025	1026.2
14	1025	1024	1023	1023	1023	1023	1023	1023	1022	1023	1023	1023	1023	1024	1024	1024	1024	1025	1025	1026	1026	1027	1028	1028	1028	1022	1024.1
15	1028	1028	1029	1029	1029	1029	1029	1029	1029	1029	1028	1028	1028	1027	1027	1027	1026	1026	1025	1024	1024	1023	1023	1022	1029	1022	1026.7
16	1021	1020	1020	1020	1019	1019	1018	1017	1017	1017	1016	1016	1015	1015	1014	1013	1013	1012	1012	1012	1011	1011	1011	1011	1021	1011	1015.4
17	1011	1011	1011	1011	1010	1011	1010	1011	1011	1011	1011	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1010	1012.0
18	1014	1014	1014	1014	1014	1015	1014	1015	1014	1014	1014	1014	1014	1015	1016	1016	1015	1016	1016	1016	1017	1017	1017	1018	1018	1014	1015.1
19	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1015	1015	1014	1013	1012	1012	1011	1010	1010	1010	1009	1008	1018	1008	1014.3
20	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1001	1001	1001	1001	1000	1000	1001	1001	1002	1003	1004	1005	1005	1006	1008	1000	1003.3
21	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1006	1008.1
22	1009	1009	1009	1009	1009	1009	1009	1008	1009	1008	1008	1008	1008	1007	1007	1006	1006	1006	1005	1005	1005	1006	1005	1005	1009	1005	1007.4
23	1005	1006	1006	1006	1006	1007	1007	1008	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1012	1012	1012	1013	1013	1005	1009.3
24	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1013	1014.9
25	1016	1016	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1016	1017.6
26	1018	1018	1018	1018	1018	1019	1019	1019	1018	1019	1019	1019	1018	1018	1018	1017	1016	1016	1016	1015	1015	1015	1014	1014	1019	1014	1017.3
27	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1009	1009	1008	1008	1008	1008	1008	1008	1009	1009	1014	1008	1010.7
28	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1012	1012	1009	1010.0
29	1012	1012	1013	1013	1014	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1017	1012	1015.4
30	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1015	1015	1015	1015	1015	1015	1014	1017	1014	1016.0
31	1014	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1014	1012	1012.4
Max.	**1028**	**1028**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1028**	**1028**	**1028**	**1027**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1027**	**1028**	**1028**	**1029**		
Min.	**985**	**985**	**985**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**986**	**987**	**987**	**987**	**986**	**986**	**985**	**985**	**985**	**986**	**985**	**985**		**985**	
Avg.	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**			**1010.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1012	1012	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1012	1009	1011.2
2	1009	1009	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1006	1006	1006	1006	1005	1005	1005	1005	1006	1006	1006	1009	1005	1006.8
3	1006	1006	1006	1007	1007	1008	1008	1009	1009	1009	1010	1010	1009	1010	1009	1009	1009	1009	1009	1009	1009	1009	1010	1011	1011	1006	1008.6
4	1011	1011	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1013	1013	1013	1013	1013	1012	1012	1012	1013	1013	1013	1014	1011	1012.7
5	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1012	1012.6
6	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1016	1016	1012	1013.4
7	1016	1016	1015	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1015	1016.8
8	1018	1018	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1014	1013	1013	1012	1011	1010	1011	1011	1010	1009	1018	1009	1014.2
9	1008	1007	1007	1006	1005	1005	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1007	1007	1008	1008	1009	1009	1009	1009	1004	1005.8
10	1010	1010	1010	1010	1011	1011	1011	1012	1013	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1017	1018	1010	1014.3
11	1017	1017	1017	1017	1017	1017	1016	1016	1017	1016	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1012	1012	1012	1017	1012	1014.9
12	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013	1011	1011.6
13	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1010	1011	1010	1010	1010	1010	1010	1010	1010	1013	1010	1011.3
14	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1005	1005	1005	1004	1009	1004	1007.2
15	1004	1004	1003	1003	1003	1004	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1002	1002	1002	1001	1001	1001	1000	1000	1004	1000	1002.2
16	1000	1000	999	999	999	999	999	999	999	999	999	1000	1000	1001	1001	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	999	1000.4
17	1002	1002	1002	1003	1003	1003	1004	1004	1004	1004	1005	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1002	1005.5
18	1009	1008	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1008	1010.1
19	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1011	1011	1010	1010	1010	1012	1013	1013	1013	1014	1014	1014	1014	1010	1011.5
20	1014	1014	1015	1015	1014	1015	1015	1015	1015	1015	1016	1017	1018	1019	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1020	1014	1017.0
21	1019	1019	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1014	1014	1019	1014	1016.2
22	1014	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1019	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1014	1018.4
23	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1024	1024	1024	1023	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1022	1022.9
24	1024	1024	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1021	1021	1020	1020	1020	1020	1020	1020	1020	1024	1020	1021.7
25	1020	1019	1020	1020	1019	1019	1019	1020	1020	1021	1021	1021	1021	1021	1021	1022	1021	1021	1021	1022	1022	1022	1022	1022	1022	1019	1020.7
26	1022	1022	1022	1023	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1021	1021	1021	1023	1021	1022.2
27	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1017	1017	1017	1017	1018	1020	1017	1018.8
28	1018	1019	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1018	1018.2
29	1018	1018	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1018	1021.2
30	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1024	1024	1024	1023	1023	1023	1023	1023	1024	1022	1022.8
Max.	**1024**	**1024**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**		
Min.	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1001**	**1001**	**1001**	**1002**	**1002**	**1002**	**1001**	**1001**	**1001**	**1000**	**1000**		**999**	
Avg.	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**			**1013.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1023	1023	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1023	1022	1022	1021	1021	1021	1021	1024	1021	1023.2
2	1021	1021	1020	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1018	1018	1021	1017	1019.5
3	1018	1018	1019	1018	1018	1019	1019	1020	1019	1020	1020	1020	1020	1020	1021	1021	1021	1020	1020	1020	1020	1021	1021	1021	1021	1018	1019.8
4	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1022	1022	1022	1022	1021	1021.4
5	1022	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1017	1016	1016	1022	1016	1019.2
6	1016	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1016	1013	1013.7
7	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1016	1014	1015.1
8	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1015	1014	1014.3
9	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1015	1013	1014.0
10	1012	1012	1011	1011	1010	1010	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1012	1006	1008.4
11	1006	1006	1006	1005	1005	1005	1005	1005	1005	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1004	1005.5
12	1007	1007	1007	1006	1006	1006	1005	1006	1005	1005	1005	1005	1005	1005	1004	1004	1003	1002	1002	1003	1003	1003	1003	1003	1007	1002	1004.5
13	1003	1003	1003	1003	1004	1004	1005	1006	1006	1006	1006	1007	1006	1006	1006	1007	1007	1006	1006	1006	1007	1007	1008	1008	1008	1003	1005.8
14	1008	1009	1008	1008	1008	1008	1007	1008	1008	1008	1008	1008	1008	1008	1008	1009	1008	1008	1009	1009	1008	1009	1009	1010	1010	1007	1008.3
15	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1018	1010	1013.4
16	1018	1019	1018	1019	1019	1019	1019	1020	1020	1021	1021	1021	1021	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1022	1018	1020.3
17	1021	1020	1020	1020	1020	1020	1019	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1021	1018	1019.4
18	1018	1018	1017	1017	1017	1017	1017	1016	1016	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1018	1014	1015.8
19	1014	1014	1013	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1007	1014	1007	1010.4
20	1007	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1008	1009	1010	1010	1010	1010	1005	1006.2
21	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1013	1013	1014	1014	1014	1015	1015	1015	1014	1014	1014	1014	1015	1015	1015	1010	1012.9
22	1015	1014	1014	1014	1013	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1013	1013	1013	1013	1015	1012	1012.9
23	1013	1012	1012	1012	1011	1011	1010	1009	1009	1008	1006	1006	1005	1004	1003	1003	1003	1001	1000	1001	1000	1000	1000	1000	1013	1000	1005.8
24	999	999	999	999	998	998	998	998	998	998	998	998	998	999	999	999	999	999	999	999	999	999	998	998	999	998	998.7
25	998	998	997	997	998	998	998	998	998	998	998	999	999	999	999	999	1000	1000	1000	1001	1002	1002	1003	1004	1004	997	999.2
26	1005	1005	1006	1006	1007	1008	1009	1009	1010	1010	1011	1012	1013	1013	1014	1014	1015	1016	1016	1016	1017	1017	1018	1019	1019	1005	1011.8
27	1019	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1023	1022	1022	1022	1022	1022	1022	1021	1022	1021	1021	1021	1023	1019	1021.4
28	1021	1021	1020	1020	1020	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1018	1018	1017	1017	1017	1017	1021	1017	1019.2
29	1017	1016	1016	1016	1015	1015	1015	1014	1013	1013	1013	1013	1013	1013	1014	1013	1013	1013	1012	1012	1012	1012	1011	1010	1017	1010	1013.5
30	1010	1009	1009	1008	1007	1007	1006	1005	1004	1004	1004	1004	1003	1002	1002	1001	1001	1000	1000	1000	1001	1001	1001	1002	1010	1000	1003.7
31	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1005	1006	1005	1006	1006	1006	1007	1007	1002	1004.5
Max.	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1023**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1024**		
Min.	**998**	**998**	**997**	**997**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**998**	**998**		**997**	
Avg.	**1013**	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**1012.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1007	1008.9
2	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1013	1012	1012	1012	1013	1013	1014	1011	1012.6
3	1012	1011	1010	1010	1009	1008	1007	1006	1005	1005	1003	1002	1001	1001	1000	999	999	998	997	997	997	997	997	998	1012	997	1002.9
4	998	998	999	1000	1001	1001	1002	1002	1003	1003	1004	1004	1005	1005	1005	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	998	1003.7
5	1008	1009	1009	1009	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1008	1010.4
6	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1012	1013.4
7	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1015	1013	1014.2
8	1013	1013	1012	1012	1012	1012	1012	1011	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1013	1011	1011.4
9	1010	1011	1011	1011	1011	1011	1011	1012	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1010	1012.9
10	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1014	1014	1014	1014	1013	1012	1012	1011	1010	1009	1008	1007	1007	1015	1007	1012.8
11	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1006	1006	1005	1005	1006	1006	1006	1006	1004	1005.0
12	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1008	1009	1009	1009	1008	1008	1009	1010	1010	1010	1011	1011	1006	1007.7
13	1012	1012	1012	1012	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1014	1015	1012	1013.6
14	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1011	1011	1010	1010	1009	1009	1009	1009	1009	1014	1009	1011.7
15	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1008	1009.1
16	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1011	1012.4
17	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1014	1012	1013.3
18	1012	1011	1011	1011	1010	1010	1009	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1005	1005	1006	1006	1006	1006	1006	1012	1005	1007.9
19	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1005	1005	1005	1004	1004	1003	1003	1003	1006	1003	1005.0
20	1003	1002	1001	1000	999	999	998	998	998	998	998	999	999	999	1000	1000	1000	1000	1001	1001	1001	1003	1003	1004	1004	998	1000.1
21	1005	1005	1006	1006	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1005	1008.7
22	1009	1009	1009	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1007	1006	1007	1007	1007	1008	1008	1009	1010	1010	1011	1011	1006	1007.6
23	1011	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1014	1013	1015	1011	1013.3
24	1013	1012	1011	1010	1009	1009	1009	1008	1007	1005	1004	1004	1003	1002	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1013	1000	1004.5
25	999	1000	1000	1000	1000	1001	1000	1001	1001	1002	1002	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1003	1004	1004	1004	999	1001.8
26	1005	1006	1006	1006	1007	1006	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1009	1009	1010	1010	1011	1011	1012	1012	1012	1005	1008.4
27	1012	1013	1013	1013	1013	1013	1013	1013	1013	1014	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1010	1010	1010	1010	1014	1010	1012.1
28	1010	1010	1010	1011	1010	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1010	1010	1010	1010	1010	1011	1009	1009.9
29	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1006	1005	1006	1005	1004	1004	1010	1004	1007.5
30	1004	1003	1003	1003	1002	1001	1001	1000	1000	999	998	998	997	996	996	995	994	994	994	994	994	994	994	994	1004	994	997.8
31	994	994	993	993	993	993	992	992	993	993	993	993	993	994	994	995	995	995	995	996	996	997	997	998	998	992	994.2
Max.	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015		
Min.	994	994	993	993	993	993	992	992	993	993	993	993	993	994	994	995	994	994	994	994	994	994	994	994		992	
Avg.	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008			1008.2

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	999	999	1000	1000	1000	1001	1001	1002	1003	1003	1004	1004	1005	1005	1006	1006	1006	1006	1007	1007	1008	1008	1009	1009	1009	999	1004.1
2	1009	1009	1009	1009	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1009	1011.1
3	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1012	1012	1015	1012	1013.7
4	1011	1011	1011	1010	1009	1009	1008	1007	1007	1006	1006	1006	1006	1005	1005	1005	1005	1005	1006	1006	1007	1007	1007	1008	1011	1005	1007.2
5	1008	1009	1009	1009	1010	1011	1011	1012	1013	1014	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1016	1008	1013.5
6	1015	1015	1014	1014	1014	1013	1012	1011	1011	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1015	1008	1010.4
7	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1006	1006	1005	1004	1003	1003	1001	1000	999	998	996	1008	996	1004.8
8	995	994	993	992	991	990	989	988	987	987	987	987	987	987	987	987	987	987	986	987	987	987	988	988	995	986	988.5
9	989	989	989	989	989	990	990	990	990	990	992	992	992	993	994	994	995	996	996	997	997	998	998	999	999	989	992.8
10	999	999	1000	1000	1000	1000	1001	1001	1002	1002	1003	1003	1004	1005	1005	1005	1005	1006	1006	1007	1008	1008	1009	1010	1010	999	1003.7
11	1010	1011	1011	1012	1013	1013	1013	1014	1015	1015	1016	1017	1017	1017	1018	1018	1018	1018	1019	1019	1020	1020	1020	1021	1021	1010	1016.0
12	1021	1021	1022	1022	1023	1023	1023	1024	1025	1025	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1028	1028	1028	1028	1028	1021	1025.3
13	1029	1029	1029	1029	1029	1029	1029	1029	1029	1029	1029	1028	1028	1027	1027	1026	1026	1026	1025	1025	1025	1024	1024	1024	1029	1024	1027.1
14	1022	1021	1020	1018	1017	1016	1015	1015	1014	1014	1013	1012	1012	1011	1011	1010	1009	1009	1008	1008	1008	1007	1006	1005	1022	1005	1012.6
15	1005	1004	1003	1003	1002	1001	1000	1000	1000	1000	999	999	999	999	1000	999	999	999	999	1000	1000	1001	1001	1001	1005	999	1000.6
16	1002	1002	1002	1003	1002	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	1006	1006	1006	1006	1007	1008	1008	1009	1009	1009	1002	1005.0
17	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1012	1011	1011	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1009	1010.9
18	1011	1011	1010	1010	1010	1009	1009	1009	1008	1008	1008	1007	1007	1006	1005	1004	1003	1002	1001	1000	999	999	998	998	1011	998	1005.5
19	997	996	995	995	994	994	994	994	993	994	994	994	994	994	994	994	994	994	995	995	996	997	997	998	998	993	994.8
20	999	999	999	1000	1000	1001	1001	1002	1003	1003	1003	1004	1005	1006	1006	1006	1007	1007	1008	1008	1008	1009	1009	1009	1009	999	1004.2
21	1009	1009	1009	1008	1007	1007	1007	1007	1006	1005	1004	1003	1001	999	998	995	993	990	988	986	985	984	984	984	1009	984	998.7
22	985	986	987	989	991	992	993	994	996	997	998	999	1001	1002	1002	1003	1004	1005	1005	1006	1007	1007	1008	1009	1009	985	998.6
23	1009	1010	1010	1011	1011	1012	1012	1013	1013	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1009	1013.6
24	1015	1015	1015	1015	1014	1014	1014	1013	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1010	1009	1010	1010	1010	1009	1015	1009	1012.0
25	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1010	1010	1010	1009	1009	1008	1008	1007	1007	1006	1006	1011	1006	1009.2
26	1005	1004	1003	1002	1000	999	999	998	998	998	998	997	997	997	996	996	996	995	995	995	995	995	995	996	1005	995	997.9
27	996	996	996	997	996	996	997	997	997	998	998	998	998	998	998	998	998	997	997	997	997	997	997	997	998	996	997.2
28	997	998	998	998	998	998	998	998	998	999	999	999	999	999	999	999	999	999	1000	1000	1001	1001	1001	1002	1002	997	999.1
29	1002	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1005	1005	1006	1007	1007	1008	1008	1008	1009	1009	1009	1002	1005.0
30	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1008	1008	1008	1008	1008	1007	1007	1006	1010	1006	1008.9
Max.	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1029**	**1028**	**1028**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1028**	**1028**	**1028**	**1028**	**1029**		
Min.	**985**	**986**	**987**	**989**	**989**	**990**	**989**	**988**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**986**	**986**	**985**	**984**	**984**	**984**		**984**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**			**1006.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1006	1006	1006	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1003	1004	1003	1003	1003	1003	1003	1004	1004	1006	1003	1004.1
2	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1005	1005	1005	1005	1005	1006	1006	1005	1005	1006	1004	1004.8
3	1004	1002	1001	1000	999	999	998	998	997	997	997	997	996	996	995	994	994	993	993	993	993	993	994	994	1004	993	996.6
4	994	995	995	996	997	998	998	999	999	999	999	999	999	998	998	997	997	997	998	998	999	999	1000	1000	1000	994	997.9
5	1001	1001	1002	1002	1003	1003	1003	1004	1005	1005	1006	1007	1007	1008	1008	1008	1009	1009	1010	1011	1011	1012	1012	1012	1012	1001	1006.6
6	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1012	1010	1010.7
7	1010	1010	1009	1009	1009	1009	1009	1010	1010	1010	1009	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1014	1014	1014	1009	1010.8
8	1013	1013	1012	1012	1011	1010	1009	1008	1007	1006	1004	1003	1001	1000	999	998	998	997	997	996	994	992	991	990	1013	990	1002.6
9	989	989	987	985	985	985	985	985	985	986	987	987	988	988	988	988	989	989	989	990	990	990	990	990	990	985	987.7
10	991	991	991	991	992	993	994	995	996	996	997	998	998	998	999	1000	999	1000	1000	1000	1000	1001	1001	1002	1002	991	996.8
11	1002	1003	1004	1004	1004	1005	1006	1006	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1012	1012	1013	1013	1014	1013	1014	1002	1008.4
12	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1015	1013	1013.9
13	1013	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1010	1010	1009	1009	1009	1008	1008	1008	1008	1008	1008	1007	1013	1007	1009.9
14	1007	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1008	1007	1008	1009	1009	1009	1006	1007.1
15	1009	1010	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1009	1010	1009	1009.4
16	1009	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1010	1010	1009	1010	1009	1009	1009	1009	1009	1009	1009	1009	1008	1010	1008	1009.3
17	1008	1007	1007	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1003	1002	1002	1002	1002	1001	1000	999	1008	999	1004.1
18	998	997	997	995	994	992	991	991	990	989	989	989	989	989	990	991	993	994	996	998	999	1000	1001	1002	1002	989	993.9
19	1003	1004	1005	1005	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1009	1010	1011	1011	1003	1006.7
20	1011	1012	1013	1013	1013	1013	1014	1014	1015	1015	1015	1015	1014	1014	1013	1013	1013	1012	1011	1011	1010	1009	1009	1008	1015	1008	1012.4
21	1007	1006	1006	1004	1003	1002	1001	1001	1000	999	998	997	997	997	997	996	995	995	995	994	994	994	994	994	1007	994	998.5
22	994	993	993	993	993	994	994	994	995	995	996	996	996	996	996	996	996	996	996	996	998	997	997	997	997	993	995.3
23	998	998	998	999	999	1000	1000	1001	1002	1002	1003	1004	1004	1004	1004	1005	1004	1005	1005	1005	1005	1005	1004	1004	1005	998	1002.3
24	1003	1002	1001	1000	999	996	995	993	991	990	988	987	985	984	983	983	982	983	983	983	984	984	984	984	1003	982	989.4
25	984	985	985	985	986	985	985	985	986	986	986	988	988	989	989	990	989	991	991	992	993	993	994	996	996	984	988.4
26	996	998	998	999	999	1000	1001	1002	1003	1004	1005	1006	1007	1007	1008	1009	1010	1011	1012	1012	1013	1014	1015	1016	1016	996	1006.0
27	1016	1017	1018	1018	1019	1019	1020	1021	1022	1023	1023	1024	1024	1024	1024	1024	1025	1025	1026	1025	1025	1026	1027	1027	1027	1016	1022.5
28	1027	1027	1027	1027	1027	1027	1027	1028	1028	1028	1028	1027	1027	1027	1026	1026	1026	1026	1025	1026	1025	1025	1025	1025	1028	1025	1026.4
29	1024	1024	1023	1023	1023	1023	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1020	1020	1021	1021	1021	1021	1021	1024	1020	1021.6
30	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1021	1021	1021	1021	1021	1021	1022	1022	1023	1023	1023	1023	1021	1021.3
31	1023	1023	1024	1024	1024	1024	1024	1024	1025	1025	1026	1026	1026	1026	1026	1026	1026	1026	1026	1027	1027	1027	1027	1027	1027	1023	1025.4
Max.	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1028**	**1028**	**1028**	**1028**	**1027**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1027**	**1027**	**1027**	**1027**	**1027**	**1028**		
Min.	**984**	**985**	**985**	**985**	**985**	**985**	**985**	**985**	**985**	**986**	**986**	**987**	**985**	**984**	**983**	**983**	**982**	**983**	**983**	**983**	**984**	**984**	**984**	**984**		**982**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1007**	**1007**			**1006.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1027	1027	1027	1027	1027	1026	1026	1026	1026	1026	1026	1026	1025	1025	1024	1024	1023	1023	1023	1023	1023	1022	1022	1022	1027	1022	1024.8
2	1022	1021	1021	1020	1020	1020	1019	1019	1019	1019	1019	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1015	1022	1015	1018.0
3	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1015	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1015	1013	1014.1
4	1013	1013	1012	1012	1012	1011	1011	1011	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1013	1009	1010.2
5	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1009	1009	1008	1011	1008	1010.0
6	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1001	1000	999	999	998	998	998	997	997	997	997	997	997	1008	997	1000.9
7	997	998	997	997	998	998	998	999	999	999	999	999	998	998	998	998	998	999	998	999	999	999	1000	1000	1000	997	998.4
8	1000	1000	1000	1001	1001	1000	1000	1001	1001	1001	1001	1002	1002	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	999	1002	999	1000.5
9	999	999	999	998	998	998	998	998	998	998	997	997	997	997	997	996	996	996	996	996	996	995	995	995	999	995	997.0
10	994	994	994	992	992	991	990	990	990	989	989	989	989	989	990	991	991	992	992	993	994	995	995	996	996	989	991.6
11	996	997	997	997	997	997	998	998	998	998	999	999	1000	1000	1001	1001	1001	1001	1002	1002	1003	1004	1005	1005	1005	996	999.7
12	1006	1006	1006	1007	1007	1007	1006	1006	1006	1006	1007	1007	1007	1007	1006	1006	1007	1006	1007	1006	1006	1005	1004	1003	1007	1003	1006.1
13	1002	1001	1001	1000	999	998	998	998	998	998	998	999	1000	1001	1000	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	998	1000.4
14	1003	1003	1002	1001	1000	1000	999	998	997	996	995	994	992	992	990	990	991	991	990	990	990	990	990	989	1003	989	994.6
15	988	989	988	988	988	988	987	987	988	988	988	988	987	987	987	987	987	987	987	988	988	988	988	988	989	987	987.7
16	988	989	989	990	990	990	990	991	991	992	992	992	993	992	993	993	994	994	995	996	996	997	997	998	998	988	992.5
17	999	999	1000	1000	1001	1001	1002	1002	1003	1003	1004	1004	1005	1005	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	999	1003.2
18	1006	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1007	1006	1005	1005	1005	1004	1003	1003	1002	1001	1001	1000	1008	1000	1005.3
19	999	998	997	997	996	995	994	994	993	993	992	991	990	990	990	989	990	990	992	994	995	996	997	997	999	989	993.7
20	998	999	1000	1001	1001	1001	1002	1003	1003	1004	1005	1006	1007	1008	1009	1009	1010	1011	1012	1013	1014	1014	1015	1016	1016	998	1006.7
21	1016	1016	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1018	1016	1017.1
22	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1016	1017.2
23	1019	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1019	1021.1
24	1023	1023	1023	1024	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1021	1021	1022	1021	1021	1024	1021	1022.5
25	1021	1020	1020	1021	1021	1022	1022	1022	1022	1023	1024	1024	1025	1025	1025	1025	1025	1025	1025	1026	1026	1025	1025	1025	1026	1020	1023.5
26	1025	1025	1025	1025	1025	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1022	1022	1021	1021	1021	1019	1019	1018	1017	1025	1017	1022.6
27	1018	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1018	1018	1018	1018	1018	1017	1017.5
28	1017	1017	1016	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1011	1011	1011	1010	1010	1009	1009	1009	1008	1008	1017	1008	1012.5
29	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1006	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006.5
30	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1009	1010	1011	1012	1012	1013	1014	1015	1016	1016	1007	1009.1
Max.	**1027**	**1027**	**1027**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1026**	**1026**	**1025**	**1025**	**1025**	**1027**		
Min.	**988**	**989**	**988**	**988**	**988**	**988**	**987**	**987**	**988**	**988**	**988**	**988**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**988**	**988**	**988**	**988**	**988**		**987**	
Avg.	**1008**	**1008**	**1008**	**1008**	**1008**	**1007**	**1007**	**1007**	**1008**	**1008**	**1008**	**1008**	**1008**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1008**	**1008**	**1008**	**1008**			**1007.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Barometric Pressure (mbar)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1016	1017	1018	1019	1019	1020	1021	1021	1022	1023	1023	1023	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1022	1022	1024	1016	1021.7
2	1022	1021	1021	1021	1020	1019	1018	1018	1017	1016	1016	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1002	1001	1022	1001	1013.0
3	1000	999	998	997	997	996	996	995	995	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	1000	995	996.4
4	996	997	997	997	997	998	998	998	999	999	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1001	1002	996	999.6
5	1001	1001	1000	999	998	998	997	997	996	995	995	994	993	993	992	991	988	987	986	985	983	982	981	979	1001	979	992.1
6	978	977	976	975	974	974	975	977	978	979	979	979	980	980	980	980	980	981	980	980	980	981	981	981	981	974	978.5
7	981	981	981	980	980	979	978	978	978	978	978	977	977	976	976	975	975	975	975	976	976	977	977	978	981	975	977.6
8	979	979	979	978	977	977	977	978	979	980	980	980	979	979	977	976	975	975	976	977	979	979	978	978	980	975	978.0
9	978	979	979	978	978	978	978	978	978	977	977	977	977	976	976	975	975	975	975	975	975	975	976	976	979	975	976.7
10	977	977	977	978	978	978	979	979	979	980	980	981	980	980	981	980	980	980	981	980	980	980	979	979	981	977	979.3
11	979	979	979	979	979	979	978	979	979	979	979	979	979	979	979	979	979	979	979	979	980	980	980	980	980	978	979.1
12	981	980	980	980	980	980	980	980	980	980	981	981	982	982	982	983	983	984	984	985	985	986	986	986	986	980	982.1
13	986	986	986	986	986	986	987	987	987	988	988	988	988	988	987	988	988	988	988	988	988	988	988	989	989	986	987.4
14	989	989	990	990	993	991	993	993	995	995	995	996	996	996	996	997	997	998	998	998	999	1000	1000	1000	1000	989	995.2
15	1001	1002	1002	1003	1003	1003	1003	1003	1004	1004	1004	1003	1003	1002	1002	1001	1001	1001	1000	1000	999	999	998	998	1004	998	1001.6
16	998	997	996	996	995	995	994	994	994	994	994	994	994	994	993	993	992	992	991	990	990	989	988	987	998	987	993.1
17	986	985	984	983	982	982	981	980	980	980	980	979	979	977	976	975	975	974	973	972	972	972	971	970	986	970	977.8
18	970	969	969	971	970	969	969	970	970	971	971	972	973	974	974	975	976	976	977	977	978	979	979	979	979	969	973.3
19	979	979	979	979	978	977	976	975	973	972	970	968	967	965	964	963	963	962	961	961	961	961	960	960	979	960	968.9
20	960	960	960	961	961	961	962	963	964	965	967	968	969	970	970	972	973	974	975	977	977	978	978	978	978	960	968.5
21	978	978	979	978	979	979	980	980	981	982	982	984	984	986	987	987	989	990	990	991	992	993	994	995	995	978	984.9
22	996	996	996	996	996	995	995	995	994	994	993	992	991	990	989	988	987	987	986	985	984	983	983	983	996	983	990.6
23	982	983	983	984	984	985	985	985	986	987	988	989	989	989	990	990	991	991	992	992	993	994	994	995	995	982	988.4
24	996	997	997	997	997	997	996	996	995	995	994	993	992	991	990	989	989	988	988	987	986	985	985	985	997	985	991.9
25	985	985	984	984	984	984	984	984	985	985	985	986	986	986	987	987	988	988	988	989	990	990	991	992	992	984	986.5
26	993	994	995	995	995	996	997	997	999	1000	1001	1002	1003	1004	1004	1004	1004	1004	1005	1005	1005	1006	1005	1005	1006	993	1000.8
27	1005	1004	1003	1003	1002	1000	999	997	997	995	992	990	987	985	982	980	979	977	977	980	981	983	984	985	1005	977	990.3
28	984	985	985	985	985	984	985	987	988	989	990	991	991	990	990	990	991	990	989	988	987	985	983	981	991	981	987.2
29	979	978	976	974	973	971	971	970	970	970	970	971	971	972	972	972	973	974	977	975	976	978	979	980	980	970	973.8
30	980	983	983	986	986	988	987	989	989	991	992	993	993	994	995	995	995	995	996	995	996	996	995	995	996	980	991.1
31	995	995	995	995	994	994	993	992	992	992	992	991	989	988	987	985	984	984	982	981	980	979	977	977	995	977	988.0
Max.	1022	1021	1021	1021	1020	1020	1021	1021	1022	1023	1023	1023	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1022	1022	1024		
Min.	960	960	960	961	961	961	962	963	964	965	967	968	967	965	964	963	963	962	961	961	961	961	960	960		960	
Avg.	988	988	988	988	988	988	987	988	988	988	988	988	988	988	987	987	987	987	987	987	987	987	987	987			987.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	6.8	6.0	5.4	5.8	5.2	5.9	6.6	6.1	5.8	5.8	4.8	4.9	4.8	5.4	6.3	6.1	6.9	6.6	6.9	6.7	6.6	6.5	6.0	6.9	4.8	6.0
2	6.5	5.9	5.8	5.3	6.0	6.0	5.5	5.9	8.0	7.3	6.8	6.5	6.2	6.4	6.0	6.2	6.2	5.4	6.0	5.3	5.8	5.3	5.4	4.6	8.0	4.6	6.0
3	4.5	5.6	4.9	5.3	6.3	5.3	5.2	5.4	5.1	4.8	4.1	4.0	4.1	4.5	4.7	5.1	5.1	5.4	4.3	4.1	4.0	5.0	5.5	4.5	6.3	4.0	4.9
4	3.9	4.4	2.3	2.3	3.6	2.7	2.3	0.8	1.2	0.9	1.4	2.2	2.0	2.4	3.0	2.0	4.1	2.9	1.2	3.6	3.1	1.2	1.4	3.6	4.4	0.8	2.4
5	3.5	4.8	5.5	4.1	4.3	5.3	5.4	3.6	1.5	1.7	1.7	1.1	1.2	2.2	2.1	1.3	0.9	2.0	3.4	3.5	2.5	3.0	1.2	1.2	5.5	0.9	2.8
6	2.0	1.7	1.8	3.0	2.7	1.9	2.7	2.4	2.5	2.4	0.7	0.8	2.6	2.5	2.5	1.6	0.6	1.7	1.3	0.8	1.0	1.9	2.2	1.1	3.0	0.6	1.9
7	3.0	1.8	1.8	2.2	1.5	1.0	0.7	2.1	4.0	5.3	5.6	7.4	8.6	9.6	9.4	7.0	6.4	5.6	5.7	7.7	8.3	9.1	8.3	8.2	9.6	0.7	5.4
8	8.1	7.8	7.6	7.6	7.7	8.2	7.3	7.6	7.5	6.5	5.6	5.5	5.5	4.1	2.0	1.2	2.0	1.0	1.4	1.1	1.7	2.4	2.6	2.4	8.2	1.0	4.8
9	1.8	2.5	2.4	2.4	2.3	1.9	1.6	2.3	2.4	2.1	1.5	1.1	1.2	2.8	2.4	1.2	0.9	2.0	1.5	0.8	1.4	0.8	1.5	1.4	2.8	0.8	1.8
10	0.7	1.6	1.1	1.9	4.4	4.5	3.0	1.2	1.2	1.5	1.4	1.4	2.5	1.7	2.2	3.3	4.3	5.3	5.9	5.1	4.5	6.1	5.6	4.3	6.1	0.7	3.1
11	3.5	4.8	2.8	2.1	3.5	6.3	4.6	1.5	2.0	2.1	1.8	1.5	3.1	2.2	2.3	2.0	1.1	0.8	2.9	3.0	3.9	3.4	1.8	3.2	6.3	0.8	2.8
12	0.9	2.5	6.2	5.7	5.1	6.8	7.9	8.0	5.1	2.4	2.4	2.5	3.2	3.5	3.4	3.0	3.5	2.6	2.0	2.1	1.9	1.8	1.6	2.0	8.0	0.9	3.6
13	1.8	1.7	2.5	1.5	2.0	1.9	2.0	1.9	2.0	3.2	1.6	3.2	3.5	3.8	4.4	3.2	3.0	3.0	3.4	2.4	1.7	2.5	2.9	2.0	4.4	1.5	2.5
14	2.9	3.4	3.2	3.3	4.7	4.7	4.5	4.0	3.2	4.6	5.0	5.6	5.7	6.8	6.5	7.1	6.8	6.7	6.9	6.7	6.7	7.0	7.5	7.7	7.7	2.9	5.5
15	7.7	7.9	8.3	8.1	8.1	8.5	8.6	8.0	7.7	8.6	7.5	7.9	7.8	8.4	8.1	7.7	8.3	7.5	7.7	8.4	8.1	8.6	7.7	8.3	8.6	7.5	8.1
16	7.8	7.0	7.0	7.3	8.3	8.2	7.5	7.3	6.8	7.2	6.3					5.2	2.8	2.8	1.9	1.4	0.6	1.0	1.6	1.8	8.3	0.6	5.0
17	0.9	1.7	2.4	2.5	2.4	2.2	4.2	3.2	3.8	3.4	3.7	4.8	6.0	4.0	4.8	3.5	5.9	6.6	9.4	7.7	6.5	6.9	8.6	9.4	9.4	0.9	4.8
18	8.7	8.7	8.3	6.8	6.8	7.7	4.1	4.3	6.1	4.4	2.3	2.8	2.7	2.6	2.3	2.9	3.1	2.7	2.6	1.6	1.8	1.9	2.8	2.8	8.7	1.6	4.2
19	2.3	2.9	6.5	4.7	3.6	2.4	3.4	3.3	6.5	5.0	5.3	5.6	6.2	4.8	3.9	3.9	3.9	3.1	2.5	2.0	1.3	2.0	4.3	3.4	6.5	1.3	3.9
20	2.4	3.1	3.2	3.6	3.3	4.1	4.6	4.5	4.2	4.6	4.2	3.9	4.3	4.9	4.5	3.1	3.2	2.8	2.4	2.3	2.3	2.5	1.9	2.6	4.9	1.9	3.4
21	3.1	4.3	5.8	7.0	5.7	7.4	6.6	5.5	4.7	4.4	3.8	2.4	1.9	5.0	5.8	7.5	6.9	8.1	6.9	6.6	13.7	16.6	17.9	17.8	17.9	1.9	7.3
22	15.0	11.8	12.7	12.9	11.8	11.9	12.1	15.7	15.4	15.6	15.6	15.7	15.4	16.6	18.0	19.6	18.8	20.1	20.4	18.8	17.4	16.0	14.3	13.7	20.4	11.8	15.6
23	13.0	11.7	7.4	5.3	5.1	5.5	4.1	3.8	3.0	5.7	5.3	3.9	3.4	5.8	6.7	6.3	7.0	6.3	4.6	5.1	5.3	4.5	6.2	5.1	13.0	3.0	5.8
24	5.2	5.1	4.9	4.9	5.3	5.8	5.6	6.0	6.6	6.2	7.2	8.4	8.2	7.6	8.1	8.1	6.5	7.9	7.4	7.6	6.6	5.7	5.2	5.1	8.4	4.9	6.5
25	4.8	4.6	3.9	3.4	3.4	3.8	3.7	2.1	3.3	3.0	3.7	5.2	5.2	4.2	3.5	4.0	3.8	5.1	5.8	6.2	6.5	8.4	8.0	9.3	9.3	2.1	4.8
26	9.1	9.1	9.5	10.0	9.7	9.7	8.9	8.8	8.9	10.4	9.5	9.7	10.3	9.5	9.4	9.1	8.1	7.4	8.2	9.5	8.2	9.3	9.0	8.6	10.4	7.4	9.2
27	7.2	6.9	7.5	6.8	8.7	11.5	8.6	13.2	10.1	8.9	11.4	14.2	12.5	12.8	13.9	14.6	16.5	14.2	15.1	17.1	16.3	14.3	16.3	16.3	17.1	6.8	12.3
28	14.5	16.2	16.4	16.7	17.9	19.4	19.6	17.3	16.6	16.1	15.0	14.0	11.3	8.1	6.9	6.5	7.4	6.6	7.8	6.2	4.3	6.1	6.8	7.8	19.6	4.3	11.9
29	7.8	6.6	7.1	6.5	6.1	5.5	5.4	5.8	5.9	5.6	5.4	5.3	5.4	5.5	4.4	2.9	3.3	4.3	4.7	4.3	5.2	5.5	5.0	5.4	7.8	2.9	5.4
30	5.6	5.8	5.9	5.5	4.9	4.7	5.1	4.9	4.7	4.4	3.3	3.7	4.7	3.6	3.3	2.6	2.9	2.5	1.9	1.4	3.1	3.0	4.1	4.9	5.9	1.4	4.0
31	4.5	4.6	4.7	4.8	4.3	3.6	4.1	2.9	3.8	4.3	4.4	4.5	4.0	3.9	5.4	6.0	4.7	4.6	4.7	5.6	8.3	9.2	10.4	8.5	10.4	2.9	5.2
Max.	**15.0**	**16.2**	**16.4**	**16.7**	**17.9**	**19.4**	**19.6**	**17.3**	**16.6**	**16.1**	**15.6**	**15.7**	**15.4**	**16.6**	**18.0**	**19.6**	**18.8**	**20.1**	**20.4**	**18.8**	**17.4**	**16.6**	**17.9**	**17.8**	**20.4**		
Min.	**0.7**	**1.6**	**1.1**	**1.5**	**1.5**	**1.0**	**0.7**	**0.8**	**1.2**	**0.9**	**0.7**	**0.8**	**1.2**	**1.7**	**2.0**	**1.2**	**0.6**	**0.8**	**1.2**	**0.8**	**0.6**	**0.8**	**1.2**	**1.1**		**0.6**	
Avg.	**5.5**	**5.6**	**5.7**	**5.4**	**5.7**	**5.9**	**5.6**	**5.5**	**5.5**	**5.4**	**5.1**	**5.3**	**5.5**	**5.5**	**5.5**	**5.3**	**5.3**	**5.3**	**5.4**	**5.3**	**5.4**	**5.7**	**5.9**	**5.9**			**5.5**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.9	9.7	9.8	11.2	9.6	8.1	10.6	9.9	10.1	13.2	13.4	14.0	14.4	14.1	16.3	14.8	12.9	7.4	7.7	10.3	7.9	7.3	11.2	11.7	16.3	7.3	11.0
2	13.5	14.8	13.0	11.9	11.1	12.3	13.3	12.9	13.9	12.9	8.4	6.6	7.4	7.5	7.8	6.6	8.0	8.3	7.1	3.5	5.4	5.8	5.6	4.9	14.8	3.5	9.3
3	5.3	6.3	7.4	7.3	6.9	6.9	7.7	7.2	7.3	6.7	6.7	6.8	7.5	7.4	6.7	7.4	8.1	7.7	7.5	8.2	7.9	8.2	8.4	7.8	8.4	5.3	7.3
4	7.4	8.5	8.9	9.2	10.0	9.6	9.6	9.7	9.6	10.0	9.8	10.3	10.7	11.9	11.6	12.1	12.9	12.1	12.3	11.6	11.6	12.8	12.6	14.1	14.1	7.4	10.8
5	14.4	14.5	13.2	14.2	13.9	12.9	12.9	13.3	13.6	12.6	13.1	11.6	9.9	9.1	8.7	9.0	9.4	11.4	10.5	11.9	12.3	12.9	11.1	11.0	14.5	8.7	12.0
6	11.1	10.5	10.1	9.2	8.6	9.3	8.3	6.4	5.6	2.9	2.0	0.3	2.4	0.7	2.7	1.9	2.5	2.2	2.2	1.7	2.5	2.3	2.4	2.1	11.1	0.3	4.6
7	2.7	3.9	3.4	2.9	1.9	1.3	1.1	2.7	6.4	6.2	6.1	9.3	9.9	10.7	9.2	4.4	3.5	4.2	4.4	7.2	7.7	6.8	5.9	5.6	10.7	1.1	5.3
8	5.3	4.9	2.2	3.3	3.0	3.0	3.4	4.0	5.3	6.0	4.7	5.7	5.6	5.7	7.3	8.5	8.6	8.4	8.5	7.7	8.0	8.7	8.7	8.3	8.7	2.2	6.0
9	9.5	9.7	10.0	10.0	10.5	12.0	13.7	14.8	15.8	16.1	16.3	15.7	15.1	13.9	13.4	11.2	10.4	9.6	8.8	8.7	8.9	7.6	5.8	4.9	16.3	4.9	11.3
10	6.3	7.7	7.8	8.3	8.8	8.6	9.5	8.7	9.2	9.6	9.1	6.9	5.2	3.2			1.8	3.1	2.8	4.2	2.9	2.6	3.4	4.3	9.6	1.8	6.1
11	4.5	5.1	5.8	5.7	6.3	6.4	7.4	8.2	9.0	8.3	8.9	7.9	7.6	8.0	7.5	8.4	9.1	9.0	8.3	8.1	7.5	7.6	7.7	6.8	9.1	4.5	7.5
12	5.2	4.8	3.0	2.9	7.5	5.3	6.5	7.6	7.8	7.2	8.3	10.7	11.6	8.0	6.3	6.1	10.2	12.1	11.0	10.6	11.2	9.5	6.9	6.3	12.1	2.9	7.8
13	2.2	1.4	1.9	1.6	2.3	1.7	0.9	2.8	4.2	3.7	1.8	5.6	5.6	6.2	5.5	5.0	5.1	5.8	6.3	5.3	5.3	4.7	4.0	3.9	6.3	0.9	3.9
14	4.2	4.8	4.7	4.9	4.9	5.3	4.2	5.2	5.1	4.6	5.5	6.7	6.2	6.3	5.8	5.3	5.0	4.4	4.5	4.4	5.6	6.3	5.7	6.3	6.7	4.2	5.2
15	6.7	7.6	5.5	6.5	6.8	6.7	6.7	7.2	7.3	4.4	3.5	4.2	4.2	3.2	4.2	5.2	4.4	4.4	4.4	5.3	4.8	4.5	3.9	4.3	7.6	3.2	5.2
16	4.8	3.8	4.1	4.3	4.3	3.6	1.5	1.9	1.6	1.0	0.6	0.7	1.9	2.6	1.5	1.7	3.9	3.4	3.7	4.4	4.1	3.8	4.5	4.7	4.8	0.6	3.0
17	5.3	5.9	6.2	6.0	5.6	7.2	7.9	9.3	10.3	9.6	8.6	8.7	7.7	7.3	7.1	6.5	6.9	6.5	6.4	5.3	5.7	6.2	7.4	5.4	10.3	5.3	7.0
18	4.5	4.8	5.2	4.9	4.9	4.6	4.2	4.7	5.0	6.0	4.8	3.4	2.7	3.5	1.7	3.1	3.2	2.6	2.5	2.9	4.7	5.1	4.7	3.9	6.0	1.7	4.1
19	2.0	4.2	8.9	9.5	8.1	4.6	4.4	4.0	6.0	5.0	6.4	5.5	5.5	3.8	5.5	5.4	6.0	9.3	9.1	8.4	8.3	9.0	5.9	6.5	9.5	2.0	6.3
20	5.7	5.1	5.8	2.8	2.6	2.7	3.2	4.1	4.0	4.8	3.1	3.4	3.7	8.2	4.9	5.2	7.9	10.6	12.3	13.7	11.3	13.8	13.9	10.8	13.9	2.6	6.8
21	12.9	7.1	6.8	4.9	6.5	6.0	6.8	7.3	7.7	6.7	4.7	5.1	7.1	6.4	5.0	4.7	4.5	3.8	4.4	4.1	4.5	4.1	3.8	3.8	12.9	3.8	5.8
22	3.9	4.8	3.4	3.1	2.7	2.3	8.3	5.2	4.9	4.3	4.5	4.9	3.5	3.3	3.5	2.7	2.8	2.8	2.1	3.1	3.5	3.7	3.1	3.1	8.3	2.1	3.7
23	2.2	1.9	2.0	1.8	0.7	2.0	1.7	2.2	1.7	5.4	6.2	6.5	4.5	4.4	3.8	3.6	4.0	4.6	3.2	2.4	2.9	3.9	4.2	3.6	6.5	0.7	3.3
24	3.3	3.4	3.9	4.0	3.4	4.2	3.7	4.7	6.5	6.9	7.0	5.1	3.7	3.0	3.1	2.7	1.9	1.9	3.4	3.7	4.0	4.1	3.2	3.1	7.0	1.9	3.9
25	3.6	3.5	3.1	2.1	2.2	2.0	1.6	0.7	0.7	3.3	1.6	0.8	4.2	1.8	5.5	4.4	4.5	5.5	7.7	7.9	9.4	6.8	5.3	5.9	9.4	0.7	3.9
26	5.2	4.9	6.1	4.3	4.6	3.1	2.6	3.3	2.5	3.4	3.2	4.1	2.8	3.5	3.1	3.8	3.0	3.3	2.1	1.8	1.6	3.3	3.6	5.1	6.1	1.6	3.5
27	5.7	6.8	7.2	6.9	5.8	4.0	1.9	3.2	8.5	4.4	4.2	3.2	2.3	2.7	4.7	5.1	3.4	4.1	7.6	6.9	5.2	4.2	5.6	5.7	8.5	1.9	5.0
28	5.7	9.2	7.6	7.4	7.4	9.3	9.6	9.8	6.7	7.2	5.9	7.3	9.3	10.4	12.7	12.3	10.2	10.2	10.2	9.7	9.2	11.0	9.9	9.4	12.7	5.7	9.1
Max.	**14.4**	**14.8**	**13.2**	**14.2**	**13.9**	**12.9**	**13.7**	**14.8**	**15.8**	**16.1**	**16.3**	**15.7**	**15.1**	**14.1**	**16.3**	**14.8**	**12.9**	**12.1**	**12.3**	**13.7**	**12.3**	**13.8**	**13.9**	**14.1**	**16.3**		
Min.	**2.0**	**1.4**	**1.9**	**1.6**	**0.7**	**1.3**	**0.9**	**0.7**	**0.7**	**1.0**	**0.6**	**0.3**	**1.9**	**0.7**	**1.5**	**1.7**	**1.8**	**1.9**	**2.1**	**1.7**	**1.6**	**2.3**	**2.4**	**2.1**		**0.3**	
Avg.	**6.1**	**6.4**	**6.3**	**6.1**	**6.1**	**5.9**	**6.2**	**6.5**	**7.0**	**6.9**	**6.4**	**6.5**	**6.5**	**6.3**	**6.5**	**6.2**	**6.2**	**6.4**	**6.5**	**6.5**	**6.6**	**6.7**	**6.4**	**6.2**			**6.4**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.4	4.6	3.7	5.8	6.8	7.3	6.8	6.1	2.4	3.8	5.0	4.9	5.2	4.1	3.1	2.3	3.1	4.0	5.8	6.2	5.6	6.5	6.8	4.3	9.4	2.3	5.2
2	3.1	5.8	6.3	6.2	6.4	6.9	7.2	8.6	9.1	8.6	8.2	7.8	8.0	8.5	7.9	7.3	8.1	7.6	8.0	7.5	7.9	8.0	7.9	8.7	9.1	3.1	7.5
3	7.7	7.8	6.4	6.0	7.1	7.3	7.1	6.8	7.5	6.8	6.3	5.5	5.9	6.1	5.5	5.0	4.0	3.1	3.9	4.3	4.3	4.7	4.6	4.9	7.8	3.1	5.8
4	5.0	4.5	4.7	5.5	5.2	5.3	5.6	5.5	6.1	5.3	5.4	5.3	5.6	4.5	5.0	5.3	5.0	5.8	5.5	5.4	5.2	5.6	5.4	5.5	6.1	4.5	5.3
5	5.5	5.8	6.0	6.3	6.4	6.2	5.5	1.8	1.4	1.3	1.2	3.3	4.1	3.6	3.0	2.6	2.7	3.8	6.1	6.5	4.6	3.9	3.5	4.2	6.5	1.2	4.1
6	6.3	6.0	5.1	4.6	5.6	4.8	3.6	5.9	9.9	10.8	11.2	9.8	9.0	5.8	7.1	5.9	5.0	3.0	2.2	1.8	3.3	3.9	4.6	5.8	11.2	1.8	5.9
7	5.9	5.0	3.0	3.9	3.3	4.0	5.3	5.2	8.0	10.5	11.5	11.5	10.5	9.9	9.5	9.7	10.0	8.0	8.6	8.3	6.4	8.1	9.2	11.7	11.7	3.0	7.8
8	12.7	14.4	12.8	12.3	14.2	12.7	13.3	16.2	11.8	11.1	11.0	10.1	8.5	8.6	8.1	10.8	11.3	14.5	11.2	7.2	7.6	7.1	5.5	5.9	16.2	5.5	10.8
9	7.1	7.0	7.4	6.9	8.3	9.2	8.7	8.5	7.7	8.7	10.5	8.6	7.1	9.6	7.8	7.1	7.7	8.9	8.9	9.4	10.4	10.6	8.7	6.5	10.6	6.5	8.4
10	6.2	4.8	5.1	5.0	5.1	5.7	5.0	2.3	4.5	4.5	4.4	3.4	2.7	2.8	3.1	1.8	1.5	3.5	4.7	4.6	4.8	5.1	5.4	5.3	6.2	1.5	4.2
11	5.6	5.5	8.2	7.5	7.3	8.4	7.6	8.2	8.9	8.8	8.6	7.7	7.5	7.8	7.2	7.0	6.8	7.9	7.7	8.2	8.6	7.8	6.6	5.9	8.9	5.5	7.5
12	9.1	8.0	8.0	9.2	8.7	8.4	7.8	6.6	6.3	6.0	6.5	6.9	6.8	7.4	7.5	7.2	6.4	6.1	5.7	5.3	4.9	3.8	2.1	1.6	9.2	1.6	6.5
13	2.6	1.6	1.3	1.0	1.0	2.0	1.7	1.4	1.5	1.8	2.4	3.8	3.2	2.8	2.4	2.1	2.3	1.7	1.8	2.1	1.6	1.4	2.0	1.5	3.8	1.0	2.0
14	1.3	2.6	2.0	2.9	3.3	3.0	2.5	2.8	3.4	4.2	3.9	2.5	3.1	3.4	4.2	3.8	2.2	2.3	3.0	2.9	3.3	4.2	3.2	2.5	4.2	1.3	3.0
15	2.5	3.9	3.5	5.1	4.7	4.0	3.6	2.9	2.9	4.4	2.8	1.5	1.3	1.6	1.2	1.1	2.2	2.2	3.0	1.4	3.4	3.9	5.0	5.0	5.1	1.1	3.1
16	4.6	5.4	5.9	5.5	5.3	5.4	5.1	5.8	7.0	7.4	7.4	6.9	7.3	6.0	4.5	4.6	5.2	3.3	3.8	4.2	4.0	4.5	5.0	4.6	7.4	3.3	5.4
17	4.6	4.3	4.7	6.3	6.1	5.9	5.2	5.5	6.1	5.5	5.9	7.2	8.8	7.8	7.7	7.7	7.2	7.2	7.8	6.5	7.5	7.4	7.7	7.0	8.8	4.3	6.6
18	8.4	9.3	8.6	8.4	8.5	7.8	8.2	7.8	7.8	7.7	8.1	9.0	9.5	8.9	8.0	6.8	4.8	3.6	1.7	0.5	0.8	0.6	0.5	0.8	9.5	0.5	6.1
19	2.1	1.3	2.1	2.3	2.1	2.0	2.6	3.3	1.7	3.2	2.6	1.3	2.3	2.9	4.4	3.7	3.1	2.4	2.4	1.6	0.8	2.6	4.1	4.2	4.4	0.8	2.6
20	4.4	4.5	3.6	3.7	4.8	5.0	4.3	3.3	1.7	1.5	1.7	1.1	1.3	3.4	4.0	5.0	4.9	4.2	5.9	6.0	6.0	6.9	7.0	6.1	7.0	1.1	4.2
21	5.9	5.8	4.9	4.9	4.0	4.6	3.4	3.4	1.5	1.6	3.3	3.1	1.7	1.8	1.0	1.3	2.9	3.0	2.5	3.5	3.2	2.3	2.4	4.0	5.9	1.0	3.2
22	6.2	6.7	6.9	7.0	6.9	8.2	8.9	9.2	9.5	8.9	8.9	6.4	6.1	6.2	5.4	5.0	2.5	1.7	1.3	1.4	3.5	4.1	4.0	3.7	9.5	1.3	5.8
23	3.5	2.5	2.7	1.4	1.3	1.5	2.8	3.5	4.9	5.8	4.1	4.3	3.2	4.2	1.7	2.0	2.4	5.3	7.9	6.6	7.3	6.6	6.8	5.1	7.9	1.3	4.1
24	6.1	7.9	8.0	8.9	8.4	7.9	7.6	5.5	6.2	6.8	4.4	3.0	1.6	1.8	2.9	3.6	2.4	1.2	2.5	5.1	5.1	4.4	4.7	4.5	8.9	1.2	5.0
25	4.4	4.4	3.6	2.1	4.7	4.2	4.8	4.7	5.2	5.3	4.6	1.6	0.9	1.5	1.7	1.2	1.2	1.9	1.7	4.4	3.7	3.7	4.8	6.1	6.1	0.9	3.4
26	3.7	5.3	5.7	5.3	5.3	5.3	5.5	5.8	7.1	6.6	3.8	2.6	1.7	2.1	2.0	2.5	1.8	2.0	0.9	2.9	4.0	3.9	3.7	3.5	7.1	0.9	3.9
27	3.0	3.8	2.4	2.1	3.5	2.5	1.7	2.0	3.0	1.0	1.0	2.6	2.9	3.0	3.3	3.2	2.8	2.5	2.1	1.5	1.3	1.1	2.2	2.2	3.8	1.0	2.4
28	2.2	2.8	2.6	3.8	3.8	4.0	4.2	4.1	3.2	1.4	0.9	1.6	3.5	3.2	3.5	3.0	2.8	2.4	3.7	2.3	0.7	1.1	1.3	1.3	4.2	0.7	2.6
29	2.9	2.8	2.9	3.3	3.7	4.0	3.6	3.9	3.6	3.7	2.9	2.1	1.0	2.5	4.8	4.7	4.2	1.1	1.3	1.1	0.8	1.0	2.3	3.8	4.8	0.8	2.8
30	4.8	3.9	4.4	5.1	4.4	5.8	6.4	6.8	7.4	6.3	6.9	6.7	7.8	7.3	7.8	8.2	7.8	7.2	6.3	6.4	5.0	5.1	6.5	6.4	8.2	3.9	6.3
31	6.7	7.0	6.7	6.1	6.6	6.3	7.3	7.4	7.2	8.0	7.8	7.7	8.5	8.0	8.3	7.6	6.7	5.7	4.6	2.1					8.5	2.1	6.8
Max.	**12.7**	**14.4**	**12.8**	**12.3**	**14.2**	**12.7**	**13.3**	**16.2**	**11.8**	**11.1**	**11.5**	**11.5**	**10.5**	**9.9**	**9.5**	**10.8**	**11.3**	**14.5**	**11.2**	**9.4**	**10.4**	**10.6**	**9.2**	**11.7**	**16.2**		
Min.	**1.3**	**1.3**	**1.3**	**1.0**	**1.0**	**1.5**	**1.7**	**1.4**	**1.4**	**1.0**	**0.9**	**1.1**	**0.9**	**1.5**	**1.0**	**1.1**	**1.2**	**1.1**	**0.9**	**0.5**	**0.7**	**0.6**	**0.5**	**0.8**		**0.5**	
Avg.	**5.3**	**5.3**	**5.1**	**5.3**	**5.6**	**5.7**	**5.6**	**5.5**	**5.6**	**5.7**	**5.6**	**5.2**	**5.0**	**5.1**	**4.9**	**4.8**	**4.5**	**4.4**	**4.6**	**4.4**	**4.5**	**4.7**	**4.8**	**4.7**			**5.1**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					4.3	4.3	5.5	7.7	7.6	8.0	7.6	5.6	4.8	7.1	6.0	4.6	4.8	4.8	4.7	5.2	4.3	4.5	4.3	5.6	8.0	4.3	5.6
2	3.8	5.7	7.0	5.1	7.6	5.1	3.3	3.9	3.6	2.0	2.5	1.5	1.7	1.6	1.5	2.4	2.9	2.5	2.3	2.8	3.7	5.1	5.2	5.9	7.6	1.5	3.7
3	6.8	6.7	6.3	6.7	6.8	7.2	7.4	7.5	7.4	8.0	7.9	8.1	8.2	8.3	8.2	7.3	7.2	6.4	6.1	6.0	5.5	5.6	6.5	6.0	8.3	5.5	7.0
4	6.4	5.5	5.5	5.5	5.2	5.8	5.5	5.4	5.8	4.8	4.3	2.3	1.3	0.8	1.1	1.1	1.0	1.1	0.8	0.9	0.9	1.0	0.9	1.1	6.4	0.8	3.1
5	2.3	4.9	4.2	5.1	3.0	3.2	5.6	3.7	7.2	6.2	8.4	9.6	9.8	8.3	5.3	7.1	4.5	6.7	6.7	9.3	9.2	9.4	9.6	10.1	10.1	2.3	6.6
6	9.6	9.6	9.2	5.4	4.0	4.4	5.4	5.0	6.2	4.7	2.5	2.4	2.6	3.0	3.8	2.9	2.8	2.7	2.0	2.0	2.4	1.5	0.8	1.3	9.6	0.8	4.0
7	1.8	0.9	2.6	3.1	1.3	3.6	3.5	3.6	3.8	2.1	2.1	2.1	1.5	1.1	1.2	1.6	2.1	1.6	1.8	1.8	1.5	2.8	2.7	3.2	3.8	0.9	2.2
8	3.8	4.0	3.6	3.6	3.5	3.8	3.6	5.4	5.2	4.1	4.6	4.3	3.8	4.1	4.1	3.8	4.0	3.8	4.1	3.9	3.5	2.8	1.7	1.9	5.4	1.7	3.8
9	0.9	0.5	1.1	1.7	1.7	1.2	1.6	1.7	1.9	2.8	2.7	1.3	1.2	3.4	3.9	3.7	3.5	3.0	1.0	1.2	1.6	3.6	2.8	4.8	4.8	0.5	2.2
10	5.0	6.5	5.5	5.1	4.7	6.6	7.2	7.8	8.2	8.7	9.2	9.8	7.0	8.5	12.1	14.8	12.5	9.3	3.2	3.6	7.8	10.1	7.7	6.9	14.8	3.2	7.8
11	6.8	6.8	4.5	4.6	3.6	3.5	3.4	3.6	3.0	2.5	3.8	3.4	3.4	4.3	6.7	8.4	9.2	8.5	8.0	8.2	8.4	8.7	8.9	8.0	9.2	2.5	5.8
12	8.3	8.3	8.5	8.4	8.4	8.3	8.3	8.2	7.8	7.7	7.9	7.5	7.1	6.6	5.0	2.8	0.7	0.4	0.7	1.8	2.3	3.9	4.8	4.4	8.5	0.4	5.8
13	6.8	8.5	9.6	9.2	9.0	9.2	9.0	9.2	8.6	7.5	9.1	8.1	9.7	12.9	13.2	11.8	12.1	10.6	6.7	7.0	8.9	10.2	10.6	10.5	13.2	6.7	9.5
14	11.0	10.7	9.9	9.5	11.1	11.1	11.2	10.5	10.1	11.0	10.9	10.5	10.8	10.2	10.0	8.9	7.8	6.8	5.0	6.3	7.0	9.6	8.7	7.9	11.2	5.0	9.4
15	7.3	7.9	6.3	7.0	6.1	4.3	4.4	5.4	5.9	9.2	7.4	9.8	10.6	8.2	7.9	7.1	7.0	7.3	5.8	4.3	2.8	3.1	3.0	4.8	10.6	2.8	6.4
16	3.6	5.3	4.2	3.7	4.6	6.6	7.3	8.2	8.5	7.9	7.8	8.1	8.2	7.7	9.5	10.4	10.1	10.6	10.8	11.1	11.3	11.4	10.6	10.5	11.4	3.6	8.2
17	10.6	10.7	10.5	11.3	10.1	9.2	7.8	5.6	3.0	5.7	4.9	4.8	3.9	5.4	5.3	5.4	4.7	4.4	4.7	5.1	3.3	2.7	2.5	2.8	11.3	2.5	6.0
18	1.5	4.6	1.8	2.5	1.3	1.5	2.0	2.2	2.3	1.9	1.1	2.2	3.0	3.1	3.5	3.6	2.2	1.1	1.0	3.6	4.4	4.3	3.6	2.7	4.6	1.0	2.5
19	6.1	8.2	8.7	8.4	8.8	9.5	9.0	6.8	3.9	3.6	3.8	3.4	3.8	3.9	1.4	2.0	2.7	1.6	0.7	0.8	2.1	2.0	1.8	3.0	9.5	0.7	4.4
20	1.7	1.7	2.5	3.7	4.1	3.9	4.1	3.8	4.1	4.2	4.6	2.1	2.2	2.6	3.1	4.0	4.8	3.7	4.0	3.0	3.7	4.5	6.2	6.0	6.2	1.7	3.7
21	6.5	7.8	8.5	8.6	9.1	8.9	9.3	9.6	9.7	9.2	9.2	8.6	7.2	5.6	4.8	2.1	2.8	2.1	2.5	4.4	3.9	3.4	3.3	3.1	9.7	2.1	6.3
22	3.8	4.1	4.4	4.8	4.2	3.8	3.7	3.4	3.1	2.8	1.3	1.4	1.2	1.3	2.0	2.1	2.2	2.0	1.8	1.9	1.5	1.5	1.7	3.0	4.8	1.2	2.6
23	2.6	3.8	3.9	4.5	3.9	4.2	4.3	4.1	2.9	3.2	3.8	4.7	4.1	3.2	1.9	3.4	3.9	1.7	0.9	4.5	6.3	5.7	6.8	6.6	6.8	0.9	3.9
24	4.3	3.1	2.0	1.7	3.6	6.3	4.6	3.4	2.0	4.5	4.4	4.6	5.9	9.0	8.2	7.6	5.7	4.5	9.7	11.1	6.5	6.3	9.6	9.3	11.1	1.7	5.7
25	7.1	4.6	1.6	2.4	2.2	2.6	3.4	4.2	4.4	4.3	3.7	4.6	5.1	4.3	5.0	4.6	4.7	5.4	4.9	5.1	5.2	4.8	5.9	4.7	7.1	1.6	4.4
26	5.9	6.2	6.5	6.1	5.8	6.8	6.6	6.6	7.0	7.5	7.2	7.4	6.6	6.7	6.3	6.4	5.7	4.7	4.7	4.8	4.9	5.0	3.6	4.0	7.5	3.6	6.0
27	5.1	5.2	5.0	4.7	4.8	5.2	5.3	5.7	5.0	4.8	4.4	4.2	3.1	2.4	1.2	1.8	2.0	1.8	1.1	1.0	1.0	1.7	2.0	2.8	5.7	1.0	3.4
28	3.7	3.7	4.1	3.8	2.6	2.4	3.0	1.9	2.6	2.1	2.0	1.4	2.0	3.0	2.3	2.5	2.9	2.5	1.5	0.8	1.0	1.5	1.9	1.9	4.1	0.8	2.4
29	1.9	3.1	7.2	7.2	8.2	8.9	8.1	9.9	9.2	6.4	5.6	3.3	3.1	3.2	3.5	5.0	5.1	4.9	4.3	3.9	5.1	4.4	3.1	3.0	9.9	1.9	5.3
30	2.9	2.9	3.2	2.5	3.0	3.5	5.3	3.6	4.0	6.1	5.4	2.6	1.9	2.5	3.9	3.1	2.0	2.0	1.1	2.3	2.2	2.5	2.4	2.6	6.1	1.1	3.1
Max.	**11.0**	**10.7**	**10.5**	**11.3**	**11.1**	**11.1**	**11.2**	**10.5**	**10.1**	**11.0**	**10.9**	**10.5**	**10.8**	**12.9**	**13.2**	**14.8**	**12.5**	**10.6**	**10.8**	**11.1**	**11.3**	**11.4**	**10.6**	**10.5**	**14.8**		
Min.	**0.9**	**0.5**	**1.1**	**1.7**	**1.3**	**1.2**	**1.6**	**1.7**	**1.9**	**1.9**	**1.1**	**1.3**	**1.2**	**0.8**	**1.1**	**1.1**	**0.7**	**0.4**	**0.7**	**0.8**	**0.9**	**1.0**	**0.8**	**1.1**		**0.4**	
Avg.	**5.1**	**5.6**	**5.5**	**5.4**	**5.2**	**5.5**	**5.6**	**5.6**	**5.5**	**5.4**	**5.3**	**5.0**	**4.8**	**5.1**	**5.1**	**5.1**	**4.8**	**4.3**	**3.7**	**4.3**	**4.4**	**4.8**	**4.8**	**4.9**			**5.0**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.3	3.3	5.0	5.0	5.0	4.7	6.3	7.4	8.3	8.1	8.8	9.2	10.0	9.9	10.3	10.0	10.2	10.9	11.5	11.1	10.8	10.5	10.7	11.5	3.2	8.1
2	10.5	10.3	9.6	9.1	8.6	9.0	8.3	7.9	7.0	7.4	8.2	7.4	6.5	5.8	5.4	4.8	4.6	4.1	4.6	3.6	3.9	3.4	2.2	3.5	10.5	2.2	6.5
3	4.4	4.1	4.1	3.8	4.4	4.9	5.6	5.0	6.3	7.1	9.1	9.2	9.3	8.8	6.4	3.9	4.9	5.1	4.7	4.3	4.6	5.0	5.6	6.6	9.3	3.8	5.7
4	7.5	7.3	7.3	5.5	3.2	3.3	2.5	3.6	2.9	2.4	2.6	2.3	2.5	2.1	2.8	2.6	2.5	3.5	3.5	3.7	3.6	4.8	5.2	6.0	7.5	2.1	3.9
5	6.9	6.3	4.5	6.3	6.9	7.2	7.6	8.1	9.4	8.9	8.7	8.0	7.0	5.3	2.2	2.2	2.0	1.6	1.5	1.0	1.3	2.0	1.7	4.0	9.4	1.0	5.0
6	3.2	1.2	1.3	1.1	1.5	0.9	0.6	1.1	1.4	0.7	1.1	1.0	1.2	1.1	2.7	5.1	6.3	7.6	8.1	7.6	7.7	8.0	8.0	8.8	8.8	0.6	3.6
7	10.2	9.7	10.2	10.2	9.8	9.3	9.5	9.6	9.2	9.4	8.4	9.1	7.3	5.9	5.9	7.1	7.8	6.1	5.0	5.5	6.0	5.6	7.3	7.3	10.2	5.0	8.0
8	6.0	4.3	3.3	2.3	2.0	2.8	4.1	4.4	4.3	5.2	5.2	5.6	6.8	7.4	6.6	6.6	6.7	7.1	6.8	7.8	7.3	7.6	8.2	8.6	8.6	2.0	5.7
9	9.3	9.5	10.1	10.7	10.4	9.2	9.9	10.0	11.3	11.0	10.2	10.2	10.6	10.4	10.1	9.7	10.3	9.4	8.6	8.7	7.6	6.0	6.2	6.3	11.3	6.0	9.4
10	7.0	6.7	9.0	6.5	5.4	3.7	4.8	4.9	4.1	2.2	3.5	2.5	1.8	1.8	1.0	1.0	1.9	1.0	1.3	1.6	2.1	0.9	2.4	2.2	9.0	0.9	3.3
11	1.0	2.3	3.8	2.6	1.0	2.0	1.9	3.5	2.8	2.5	2.3	1.6	1.2	1.3	1.1	2.3	2.2	1.7	1.0	1.7	3.2	4.1	4.1	3.4	4.1	1.0	2.3
12	3.7	4.2	3.2	2.9	3.2	2.5	2.3	4.4	4.9	4.2	4.2	2.4	1.3	5.9	5.6	4.8	3.0	1.4	1.0	0.9	0.9	2.4	3.4	3.9	5.9	0.9	3.2
13	3.6	2.9	2.6	2.5	2.6	3.0	3.0	4.4	4.5	3.6	3.5	3.6	3.0	2.2	1.2	2.6	2.3	1.4	0.9	0.7	2.4	2.2	1.1	0.8	4.5	0.7	2.5
14	0.6	1.0	0.9	2.0	1.8	2.5	3.1	3.6	1.1	2.9	3.7	2.7	2.1	2.6	2.6	2.2	2.1	2.1	2.3	2.5	2.1	1.2	1.3	2.3	3.7	0.6	2.1
15	1.5	1.3	2.1	1.4	1.5	0.9	1.1	2.1	2.4	1.2	1.2	1.9	2.8	3.8	4.8	5.0	5.3	5.0	3.7	2.8	1.8	1.2	1.7	1.0	5.3	0.9	2.4
16	0.9	4.4	5.5	6.0	5.9	5.8	4.9	3.1	2.6	3.7	3.1	2.5	2.8	3.1	3.0	3.7	4.7	4.1	4.3	1.9	1.6	1.4	1.3	0.7	6.0	0.7	3.4
17	1.1	2.0	3.6	4.2	4.0	4.4	5.4	6.1	6.3	6.6	5.6	4.4	3.6	2.6	3.0	3.4	2.9	2.2	1.5	1.6	1.2	2.0	1.2	1.4	6.6	1.1	3.4
18	2.0	2.6	2.3	2.7	2.1	1.7	2.8	1.3	1.6	3.2	2.1	2.6	3.8	4.5	6.0	5.4	6.3	5.8	6.2	5.9	4.8	5.5	6.1	8.7	8.7	1.3	4.0
19	9.2	8.5	8.5	7.2	4.3	4.6	3.5	3.4	4.8	2.5	2.1	1.7	2.2	3.1	2.4	1.8	2.5	3.2	5.6	6.4	5.4	3.6	4.3	5.4	9.2	1.7	4.4
20	6.0	6.7	6.3	5.6	5.7	6.8	6.8	6.0	6.1	6.3	6.2	5.7	5.7	6.3	7.0	6.0	5.2	4.3	3.7	2.0	0.9	1.8	1.5	1.6	7.0	0.9	5.0
21	2.6	2.5	2.5	2.8	2.6	2.7	3.5	3.4	5.1	5.8	5.6	6.1	6.0	4.1	3.4	5.5	3.6	3.2	4.1	5.1	6.0	7.5	7.9	7.6	7.9	2.5	4.5
22	7.3	4.8	4.7	3.7	4.6	4.7	5.1	5.2	4.8	4.1	2.3	2.4	3.6	4.4	5.8	5.7	6.2	6.8	7.0	4.6	1.5	2.8	2.2	2.8	7.3	1.5	4.5
23	3.4	2.6	1.3	1.1	1.3	1.2	2.3	4.3	1.2	1.9	3.0	1.6	3.2	4.7	3.7	2.2	2.2	1.7	1.1	0.6	0.9	3.4	3.9	3.9	4.7	0.6	2.4
24	4.3	4.5	3.7	2.4	1.0	3.1	1.5	2.2	1.5	1.9	2.1	3.0	4.3	2.1	1.6	1.6	2.0	1.2	0.5	0.6	0.9	2.4	2.6	2.6	4.5	0.5	2.2
25	2.1	3.2	1.4	0.6	1.2	2.3	1.2	1.0	1.2	2.3	1.8	1.3	2.0	1.5	1.7	1.6	1.0	0.8	0.7	0.6	1.1	2.2	3.1	4.4	4.4	0.6	1.7
26	4.0	3.5	3.4	3.2	3.3	3.0	3.7	4.4	3.5	2.5	1.4	1.8	2.0	1.5	1.1	2.8	1.6	1.4	1.5	1.3	1.9	2.4	3.5	3.9	4.4	1.1	2.6
27	3.9	2.9	1.2	1.3	2.5	1.9	2.1	2.3	2.4	2.0	1.9	1.5	1.0	1.0	1.9	1.5	1.7	1.5	1.7	1.2	1.3	3.4	4.5	3.1	4.5	1.0	2.1
28	4.0	3.4	2.7	3.5	3.1	4.1	3.6	1.1	1.9	3.8	5.3	7.1	5.2	5.0	5.1	4.5	4.1	2.5	1.7	1.3	0.9	1.2	2.1	2.3	7.1	0.9	3.3
29	1.1	1.0	1.2	1.3	1.7	3.0	3.9	3.2	2.3	1.8	1.2	1.7	1.5	1.5	1.7	1.4	1.5	1.5	1.3	1.7	0.8	1.4	1.2	1.3	3.9	0.8	1.7
30	1.4	1.3	1.3	1.7	1.4	2.1	2.7	3.5	2.6	2.2	0.8	1.2	0.9	1.1	1.8	1.3	1.2	1.1	1.0	1.5	1.4	0.9	1.2	1.0	3.5	0.8	1.5
31	1.0	2.8	2.5	2.7	2.3	1.5	1.6	1.0	1.1	1.5	1.9	2.5	2.4	2.4	2.7	3.1	2.2	1.8	2.4	1.5	1.8	1.4	1.0	1.2	3.1	1.0	1.9
Max.	**10.5**	**10.3**	**10.2**	**10.7**	**10.4**	**9.3**	**9.9**	**10.0**	**11.3**	**11.0**	**10.2**	**10.2**	**10.6**	**10.4**	**10.1**	**10.3**	**10.3**	**10.2**	**10.9**	**11.5**	**11.1**	**10.8**	**10.5**	**10.7**	**11.5**		
Min.	**0.6**	**1.0**	**0.9**	**0.6**	**1.0**	**0.9**	**0.6**	**1.0**	**1.1**	**0.7**	**0.8**	**1.0**	**0.9**	**1.0**	**1.0**	**1.0**	**1.0**	**0.8**	**0.5**	**0.6**	**0.8**	**0.9**	**1.0**	**0.7**		**0.5**	
Avg.	**4.3**	**4.2**	**4.1**	**3.9**	**3.7**	**3.8**	**4.0**	**4.2**	**4.1**	**4.2**	**4.1**	**4.0**	**4.0**	**4.0**	**3.9**	**3.9**	**3.9**	**3.6**	**3.5**	**3.3**	**3.2**	**3.5**	**3.8**	**4.1**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.1	1.2	2.1	4.1	3.1	2.2	2.4	2.3	1.7	1.3	1.4	2.4	2.9	3.8	3.6	2.8	2.2	1.5	0.9	1.3	0.9	0.9	1.9	4.3	4.3	0.9	2.2
2	4.5	3.9	3.9	3.2	3.1	2.6	4.1	4.0	3.6	4.6	5.1	3.9	2.7	2.4	3.5	4.9	3.8	3.0	1.8	1.3	1.5	2.3	1.7	1.2	5.1	1.2	3.2
3	1.5	1.2	1.5	5.7	4.0	5.7	9.1	9.7	8.5	5.3	7.2	8.0	8.0	3.9	4.8	6.1	5.5	4.0	3.5	3.1	5.8	6.3	3.9	5.7	9.7	1.2	5.3
4	6.2	7.0	5.5	3.4	3.0	3.9	3.5	3.3	2.2	1.2	2.6	3.6	3.4	3.7	3.9	3.9	4.1	4.0	3.0	2.8	2.4	2.2	1.7	2.9	7.0	1.2	3.5
5	3.8	3.2	2.9	1.2	1.7	1.5	3.0	2.0	1.2	1.8	4.3	3.8	3.8	3.6	3.9	3.9	3.7	3.1	2.8	2.6	2.6	1.8	1.3	1.9	4.3	1.2	2.7
6	3.1	2.8	2.1	1.0	2.3	1.8	1.9	1.3	1.9	3.4	2.5	2.3	2.4	2.1	2.2	1.9	2.2	1.7	1.6	2.9	1.1	1.7	1.5	2.6	3.4	1.0	2.1
7	3.5	4.1	4.0	3.0	2.5	1.6	2.8	1.9	2.2	3.0	2.3	2.2	2.1	2.2	2.2	1.9	2.0	2.3	2.8	2.3	2.4	4.6	3.8	2.9	4.6	1.6	2.7
8	3.1	3.3	3.4	4.3	4.1	4.3	4.7	5.4	5.5	6.1	6.5	7.2	6.9	6.1	6.3	6.7	6.1	6.5	6.5	7.0	7.0	7.5	6.8	7.6	7.6	3.1	5.8
9	7.7	8.1	7.8	8.1	8.7	9.1	8.3	8.8	9.3	9.3	9.2	9.0	7.9	7.6	7.8	7.5	6.4	3.8	3.2	4.7	5.0	4.1	3.0	3.8	9.3	3.0	7.0
10	3.1	2.4	1.8	2.3	2.3	2.6	3.2	3.5	3.0	2.2	2.4	2.4	2.0	3.1	3.1	2.6	3.4	3.4	3.1	3.0	3.4	5.1	4.1	3.4	5.1	1.8	3.0
11	3.7	3.7	2.8	3.4	3.4	3.5	4.4	5.2	5.1	4.5	4.4	6.5	6.8	6.1	5.6	5.7	6.0	6.1	5.6	6.9	6.0	6.3	6.8	6.4	6.9	2.8	5.2
12	6.1	5.6	5.5	4.5	5.0	5.0	4.7	4.2	3.8	3.8	2.3	1.3	0.9	1.1	1.0	0.7	1.9	1.9	1.6	2.0	1.7	2.2	2.1	1.4	6.1	0.7	2.9
13	1.5	2.0	2.0	1.8	1.9	0.7	0.7	2.3	1.6	0.6	1.2	1.6	2.9	3.1	2.6	3.0	3.8	3.1	1.8	1.9	1.4	1.4	0.7	0.7	3.8	0.6	1.9
14	0.5	1.3	1.0	2.1	0.8	0.5	0.7	1.2	0.6	1.5	1.6	1.3	2.1	1.9	1.2	0.9	2.2	3.8	2.3	1.8	1.5	2.0	2.8	2.5	3.8	0.5	1.6
15	2.9	2.8	3.5	2.2	1.8	1.4	2.1	1.7	2.0	1.0	2.0	2.7	2.7	2.7	2.2	1.3	1.2	1.3	0.8	1.4	0.9	0.6	0.7	0.7	3.5	0.6	1.8
16	0.8	1.4	1.2	1.2	3.1	3.2	2.1	3.0	2.8	1.9	1.4	1.4	1.3	1.5	1.5	1.3	1.6	1.3	0.8	0.7	1.3	3.6	3.8	3.6	3.8	0.7	1.9
17	3.9	2.9	1.8	1.4	1.9	2.8	3.4	3.2	3.9	4.4	4.6	3.1	3.2	4.0	3.3	3.4	5.0	5.9	5.3	4.7	3.2	1.5	2.4	3.0	5.9	1.4	3.4
18	3.0	1.1	3.5	3.3	3.9	3.9	4.3	4.5	6.5	6.4	5.8	5.7	5.4	5.6	5.6	5.5	4.6	4.5	4.9	4.0	4.5	3.4	3.7	4.5	6.5	1.1	4.5
19	4.9	4.6	4.6	5.6	6.3	6.3	5.9	6.2	6.0	4.8	4.8	4.0	4.7	4.1	3.6	2.3	3.2	4.3	2.5	2.7	2.5	1.1	3.6	3.7	6.3	1.1	4.3
20	2.9	3.5	2.2	1.9	1.7	1.1	1.4	3.9	5.5	4.2	4.3	4.2	4.2	2.2	1.6	2.6	2.0	1.5	1.1	1.4	1.9	1.8	1.2	1.0	5.5	1.0	2.5
21	1.7	2.9	2.4	2.1	1.9	1.9	2.7	2.7	2.5	1.7	2.0	2.6	2.4	3.4	3.4	3.4	3.9	3.9	3.9	2.9	3.3	1.9	1.8	1.2	3.9	1.2	2.6
22	1.5	2.3	1.8	1.5	1.6	2.8	2.5	1.0	0.9	1.8	1.4	1.4	2.1	2.7	2.3	1.4	1.2	2.5	2.8	2.0	1.9	1.9	2.0	2.8	2.8	0.9	1.9
23	2.7	2.3	1.8	1.7	1.0	1.1	4.3	2.3	2.9	2.5	2.1	1.6	1.8	2.8	3.4	3.8	4.6	3.8	4.2	3.1	1.5	2.5	1.6	0.9	4.6	0.9	2.5
24	0.9	0.8	1.4	1.8	1.4	2.0	2.0	1.9	1.2	1.3	3.0	3.5	3.1	3.3	3.7	3.2	3.4	3.2	2.7	2.0	1.4	0.8	1.4	2.2	3.7	0.8	2.2
25	2.7	2.6	2.5	1.3	1.6	3.5	2.4	2.6	4.0	5.2	3.4	3.5	5.1	6.0	4.0	5.1	2.8	5.8	4.3	2.4	2.0	1.5	1.3	1.2	6.0	1.2	3.2
26	1.7	1.5	1.5	1.5	1.4	2.5	2.6	2.0	1.5	1.8	2.1	2.8	2.2	1.9	1.7	1.0	1.6	1.8	0.8	0.7	1.0	0.6	1.0	1.8	2.8	0.6	1.6
27	0.9	1.6	0.8	1.0	0.9	1.5	2.0	1.4	1.9	1.9	3.0	3.4	3.4	3.5	3.3	3.2	3.1	2.6	2.0	1.5	4.1	7.5	6.8	8.3	8.3	0.8	2.9
28	9.3	9.4	6.9	7.3	8.0	10.9	10.2	9.1	8.8	9.9	9.0	6.8	6.8	6.4	7.4	5.3	6.7	6.7	5.2	6.9	6.5	5.5	7.3	6.2	10.9	5.2	7.6
29	7.1	6.9	6.6	6.5	6.2	6.1	5.2	2.1	2.9	1.6	1.9	2.9	2.8	3.3	2.4	2.9	1.9	1.3	2.0	1.9	2.2	2.3	2.4	2.6	7.1	1.3	3.5
30	2.6	3.4	2.7	2.3	3.1	4.0	4.0	4.3	4.4	2.6	1.3	2.4	3.0	2.8	3.3	3.3	3.0	2.8	3.2	2.1	5.1	5.7	4.9	4.7	5.7	1.3	3.4
Max.	**9.3**	**9.4**	**7.8**	**8.1**	**8.7**	**10.9**	**10.2**	**9.7**	**9.3**	**9.9**	**9.2**	**9.0**	**8.0**	**7.6**	**7.8**	**7.5**	**6.7**	**6.7**	**6.5**	**7.0**	**7.0**	**7.5**	**7.3**	**8.3**	**10.9**		
Min.	**0.5**	**0.8**	**0.8**	**1.0**	**0.8**	**0.5**	**0.7**	**1.0**	**0.6**	**0.6**	**1.2**	**1.3**	**0.9**	**1.1**	**1.0**	**0.7**	**1.2**	**1.3**	**0.8**	**0.7**	**0.9**	**0.6**	**0.7**	**0.7**		**0.5**	
Avg.	**3.3**	**3.3**	**3.1**	**3.0**	**3.1**	**3.3**	**3.7**	**3.6**	**3.6**	**3.4**	**3.5**	**3.6**	**3.6**	**3.6**	**3.5**	**3.4**	**3.4**	**3.4**	**2.9**	**2.8**	**2.9**	**3.0**	**2.9**	**3.2**			**3.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.3	3.1	3.7	4.1	2.8	2.4	3.1	3.0	1.8	1.5	2.3	2.5	3.0	3.2	3.8	4.3	4.5	4.1	3.3	4.0	4.9	2.9	3.1	6.2	6.2	1.5	3.4
2	7.0	8.6	6.3	4.2	5.0	4.9	3.9	4.0	5.1	4.5	1.6	1.5	2.0	1.7	2.1	3.9	6.1	6.0	5.1	2.7	2.0	1.7	2.2	2.8	8.6	1.5	4.0
3	2.4	2.9	2.9	2.0	1.4	2.7	2.8	2.0	2.7	1.9	2.2	2.2	3.0	3.3	3.6	4.1	2.5	1.5	1.6	2.1	2.5	1.9	1.7	1.1	4.1	1.1	2.4
4	1.5	1.6	1.7	1.3	1.4	1.9	1.7	1.1	2.2	2.9	2.9	3.1	3.6	3.4	3.6	3.9	3.2	3.1	2.5	2.8	1.6	1.8	1.3	0.9	3.9	0.9	2.3
5	1.4	1.8	3.0	2.6	1.5	2.0	2.7	2.2	1.5	2.8	3.1	2.8	2.0	2.3	2.2	2.5	2.4	2.3	2.6	2.3	1.6	1.5	1.2	1.6	3.1	1.2	2.2
6	1.2	0.5	0.7	0.7	1.6	0.8	1.6	1.8	1.8	2.0	2.3	1.9	2.3	2.6	2.8	2.9	2.9	3.0	2.3	1.7	1.8	1.2	1.3	2.2	3.0	0.5	1.8
7	1.3	2.1	1.3	1.6	1.5	1.1	1.5	1.5	1.3	2.0	2.2	2.7	2.1	2.6	3.9	2.7	2.2	1.8	1.9	1.7	1.7	1.1	2.9	2.8	3.9	1.1	2.0
8	2.9	2.4	1.3	1.1	0.8	2.1	2.0	3.4	3.6	6.3	6.3	5.9	6.0	6.4	5.5	3.7	2.1	2.2	4.7	5.5	5.2	4.3	2.2	2.4	6.4	0.8	3.7
9	2.4	2.8	2.4	2.8	2.3	2.8	2.8	2.8	1.2	1.4	2.2	2.9	3.2	3.3	3.0	2.5	2.0	1.4	2.0	1.6	2.7	1.6	2.5	2.3	3.3	1.2	2.4
10	2.3	2.0	2.6	2.6	2.3	2.3	2.2	2.2	2.4	1.4	1.3	1.8	1.8	2.9	2.6	2.8	2.8	1.8	2.8	1.3	1.6	2.7	1.5	1.4	2.9	1.3	2.1
11	0.8	1.2	1.7	1.4	1.2	0.9	1.5	1.9	1.7	2.6	3.8	4.0	2.9	2.3	4.3	3.3	2.9	1.9	1.1	3.2	4.3	1.7	1.1	1.0	4.3	0.8	2.2
12	0.8	1.6	1.4	1.6	1.9	2.2	2.7	3.0	2.7	2.1	1.2	2.2	2.5	2.5	2.2	1.5	1.5	3.1	5.8	6.5	4.2	5.2	3.9	3.5	6.5	0.8	2.8
13	2.3	5.3	4.6	2.1	4.3	7.7	6.3	6.2	7.9	7.7	9.1	10.1	10.3	11.4	11.5	12.0	11.4	11.9	12.7	12.7	13.0	11.0	9.5	8.9	13.0	2.1	8.7
14	9.5	9.5	10.1	9.2	9.7	7.7	6.6	6.4	7.3	8.7	9.1	9.2	6.7	7.1	6.9	7.4	5.2	4.0	5.4	3.0	7.0	6.3	5.9	4.2	10.1	3.0	7.2
15	4.4	3.3	6.7	6.6	6.9	7.4	6.7	6.3	4.2	3.6	3.6	3.5	3.2	4.7	5.9	2.8	2.1	1.9	2.0	1.8	1.2	0.9	1.4	1.4	7.4	0.9	3.9
16	1.8	1.6	2.7	1.9	2.0	2.9	3.5	3.4	2.1	1.5	1.7	2.0	1.9	2.1	2.3	1.7	2.0	2.0	2.0	1.8	2.6	1.9	2.4	2.1	3.5	1.5	2.2
17	2.8	3.0	4.3	3.3	2.6	2.9	2.4	2.4	2.2	2.4	1.9	1.9	2.7	5.1	5.2	4.4	3.6	3.7	4.5	4.6	3.6	3.7	4.5	4.7	5.2	1.9	3.4
18	5.1	4.9	4.4	3.7	3.9	3.1	3.3	3.5	2.1	2.8	1.8	2.2	2.3	1.9	1.3	3.1	2.1	1.8	2.0	2.1	2.9	1.7	1.3	2.1	5.1	1.3	2.7
19	1.6	1.5	1.7	3.7	5.9	5.1	4.9	5.9	5.9	7.3	7.1	6.7	5.2	5.6	6.4	6.1	5.8	4.1	5.1	4.1	2.8	1.4	2.5	3.3	7.3	1.4	4.6
20	2.6	1.7	2.0	2.3	4.0	5.3	4.8	5.1	5.4	5.7	5.6	5.2	5.6	5.4	5.5	4.2	4.1	5.0	4.8	4.9	3.7	3.0	2.1	4.0	5.7	1.7	4.3
21	6.1	4.0	3.3	1.4	1.0	2.9	3.9	3.6	5.1	5.1	5.5	5.8	5.5	5.4	4.9	4.0	2.6	2.0	1.5	2.2	3.2	3.5	2.7	1.7	6.1	1.0	3.6
22	1.9	2.3	1.6	1.3	2.0	4.1	4.9	4.9	4.2	5.5	5.0	3.9	4.1	3.4	2.4	2.3	2.0	1.9	2.8	3.6	3.5	3.7	4.5	3.5	5.5	1.3	3.3
23	3.8	3.6	4.0	2.3	3.1	3.4	4.3	4.3	5.0	5.3	7.3	8.2	8.1	8.5	7.8	6.7	5.1	3.1	6.8	7.8	7.8	6.4	6.2	6.4	8.5	2.3	5.6
24	5.6	6.5	5.8	6.4	6.3	7.0	6.5	5.5	4.3	4.6	5.0	4.8	5.2	3.2	1.9	1.4	1.4	1.6	2.3	1.8	1.8	1.2	1.7	3.7	7.0	1.2	4.0
25	3.6	3.6	4.6	4.8	4.0	2.3	1.9	1.9	1.9	1.5	0.9	0.8	0.8	2.8	4.0	3.6	3.0	1.4	0.5	0.7	0.9	1.2	1.1	1.3	4.8	0.5	2.2
26	2.6	2.5	2.0	1.3	1.4	1.7	1.9	3.8	4.4	4.4	5.0	6.6	6.3	5.6	6.4	7.4	7.8	8.4	9.6	9.9	9.8	9.6	9.4	9.4	9.9	1.3	5.7
27	8.7	9.0	9.1	8.3	6.7	4.7	4.8	5.7	4.1	2.4	1.8	1.9	2.0	1.7	2.7	2.3	2.6	2.3	1.9	2.4	3.1	1.1	1.6	4.1	9.1	1.1	4.0
28	4.8	2.6	3.3	5.9	3.4	8.0	8.7	7.6	4.8	3.7	2.3	3.4	4.9	5.7	3.9	3.6	3.2	2.9	2.4	1.9	2.8	4.9	8.3	5.9	8.7	1.9	4.5
29	4.9	4.9	6.6	4.7	9.6	9.4	9.3	12.2	16.0	10.6	12.3	8.6	6.0	8.8	6.5	5.8	5.6	6.0	7.5	5.9	5.3	9.9	10.5	10.4	16.0	4.7	8.2
30	8.0	8.4	4.5	9.7	5.8	7.1	8.9	8.6	7.9	7.4	6.9	5.9	5.4	5.1	7.0	6.4	3.6	2.9	3.7	5.8	2.5	1.8	2.5	4.0	9.7	1.8	5.8
31	6.7	7.8	7.4	6.7	6.9	5.5	4.8	6.4	6.2	6.1	3.9	3.2	4.2	3.5	4.2	4.3	6.1	4.7	4.9	5.5	5.6	6.2	8.3	7.7	8.3	3.2	5.7
Max.	**9.5**	**9.5**	**10.1**	**9.7**	**9.7**	**9.4**	**9.3**	**12.2**	**16.0**	**10.6**	**12.3**	**10.1**	**10.3**	**11.4**	**11.5**	**12.0**	**11.4**	**11.9**	**12.7**	**12.7**	**13.0**	**11.0**	**10.5**	**10.4**	**16.0**		
Min.	**0.8**	**0.5**	**0.7**	**0.7**	**0.8**	**0.8**	**1.5**	**1.1**	**1.2**	**1.4**	**0.9**	**0.8**	**0.8**	**1.7**	**1.3**	**1.4**	**1.4**	**1.4**	**0.5**	**0.7**	**0.9**	**0.9**	**1.1**	**0.9**		**0.5**	
Avg.	**3.7**	**3.8**	**3.8**	**3.6**	**3.6**	**4.0**	**4.1**	**4.3**	**4.2**	**4.1**	**4.1**	**4.1**	**4.0**	**4.3**	**4.4**	**4.1**	**3.7**	**3.4**	**3.8**	**3.8**	**3.8**	**3.5**	**3.6**	**3.8**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.7	5.4	6.7	8.6	7.8	6.7	5.1	4.5	1.7	2.0	2.7	1.8	2.4	2.9	2.1	2.6	2.0	1.0	1.3	1.0	1.2	2.0	2.7	2.8	8.6	1.0	3.4
2	3.5	3.5	3.6	3.5	3.1	3.3	3.3	3.9	3.0	2.3	2.1	1.9	1.7	1.8	2.4	2.8	2.5	4.1	3.4	3.1	4.3	5.0	3.1	2.7	5.0	1.7	3.1
3	4.1	3.0	4.8	5.7	6.2	6.1	6.4	7.2	7.2	7.7	8.1	9.2	8.8	9.3	9.9	12.0	11.5	10.6	10.1	10.0	11.3	10.2	10.1	9.8	12.0	3.0	8.3
4	7.9	7.5	6.4	3.9	1.5	1.0	0.8	1.6	5.4	5.4	4.5	3.0	2.0	1.2	1.7	1.9	1.2	0.8	0.7	0.7	0.9	1.2	1.9	1.7	7.9	0.7	2.7
5	2.2	1.7	1.5	0.9	0.8	1.7	1.1	2.2	2.0	1.2	2.3	2.7	2.2	1.4	1.8	2.1	2.7	2.8	3.7	3.6	5.2	5.3	5.9	4.3	5.9	0.8	2.6
6	3.8	3.6	3.1	3.4	2.9	1.9	2.9	4.5	4.3	2.9	2.1	1.4	3.2	2.5	3.1	5.9	6.4	6.6	6.4	6.9	5.5	6.2	5.1	5.5	6.9	1.4	4.2
7	7.4	6.5	6.4	4.5	4.2	3.7	4.7	5.3	4.9	4.8	4.0	3.3	5.2	7.9	9.7	9.9	10.6	9.5	10.0	13.2	11.4	13.6	12.1	11.0	13.6	3.3	7.7
8	10.5	9.6	9.8	10.4	10.1	9.6	9.2	6.7	4.7	2.3	1.5	3.3	3.4	3.3	1.5	1.3	1.3	1.8	3.0	5.2	8.6	7.4	5.6	2.3	10.5	1.3	5.5
9	2.4	1.9	1.6	3.4	3.9	2.9	3.4	3.4	3.1	2.4	1.8	2.0	1.2	1.2	2.1	1.1	1.6	1.1	1.1	1.5	2.4	1.5	2.0	2.5	3.9	1.1	2.1
10	2.2	1.5	1.4	0.9	1.5	1.3	1.5	1.5	1.5	2.6	1.4	1.6	1.2	1.6	2.3	2.3	2.7	3.9	4.4	4.4	3.8	4.3	4.0	3.1	4.4	0.9	2.4
11	3.6	2.7	3.6	2.7	2.9	2.7	3.0	2.3	1.4	3.3	2.5	3.2	2.7	3.1	2.9	3.5	2.4	2.7	4.4	3.8	4.5	4.6	5.0	4.6	5.0	1.4	3.3
12	2.6	1.4	0.8	1.1	0.7	1.0	1.2	1.7	1.1	0.9	1.1	2.0	3.2	3.5	3.6	3.2	2.4	1.8	3.9	4.8	3.0	2.0	2.6	6.7	6.7	0.7	2.3
13	8.5	7.5	6.0	4.1	5.4	5.7	10.2	7.7	6.4	4.6	4.9	5.3	8.3	7.3	8.9	6.5	6.2	6.1	8.3	4.2	2.7	3.0	1.8	1.2	10.2	1.2	5.9
14	1.9	1.2	1.4	1.5	1.7	1.9	3.2	3.4	3.0	2.0	2.2	2.4	2.6	2.2	3.0	3.4	3.5	2.6	3.0	3.0	3.2	3.3	3.6	5.3	5.3	1.2	2.7
15	5.0	5.5	5.6	5.0	5.6	5.9	5.3	4.9	4.7	5.6	5.7	4.9	4.7	4.5	5.1	4.6	4.8	4.0	3.1	2.9	3.0	1.9	1.6	2.0	5.9	1.6	4.4
16	1.6	1.3	0.6	0.8	0.8	0.9	1.4	0.8	0.7	0.6	1.7	2.9	3.4	3.2	3.2	3.0	2.9	2.7	2.6	1.9	1.4	1.0	1.3	1.6	3.4	0.6	1.8
17	0.7	0.9	1.1	0.9	1.2	1.1	0.7	1.1	1.1	1.3	1.7	2.5	1.5	3.0	4.0	4.0	7.7	7.1	7.1	6.6	5.4	7.2	5.0	6.2	7.7	0.7	3.3
18	7.6	7.2	9.8	7.9	4.2	2.3	2.7	2.1	2.8	2.9	2.3	0.8	1.0	1.1	0.6	0.8	2.4	2.7	5.1	6.0	4.3	3.5	3.5	4.9	9.8	0.6	3.7
19	6.2	3.5	4.2	2.9	2.7	7.3	8.1	5.6	4.0	4.9	5.5	8.5	7.5	5.8	4.0	3.1	3.0	1.9	1.6	1.9	3.3	4.0	3.5	2.6	8.5	1.6	4.4
20	1.4	4.0	4.2	3.7	5.2	6.7	6.2	5.3	4.9	3.7	1.1	0.9	4.2	5.1	4.0	2.9	2.2	2.4	2.0	4.0	3.6	3.1	1.5	1.6	6.7	0.9	3.5
21	3.7	3.0	1.6	1.2	1.1	0.9	1.5	2.0	1.6							1.2	2.7	2.1	1.7	1.9	3.4	3.5	4.9	3.1	4.9	0.9	2.3
22	2.2	3.4	3.2	2.3	2.5	3.0	2.7	2.4	1.9	3.0	1.0	3.1	4.0	9.2	10.4	8.6	3.3	6.9	6.0	5.8	8.7	4.8	4.9	3.6	10.4	1.0	4.5
23	2.3	1.8	2.3	1.4	2.6	3.1	3.1	3.7	3.3	2.9	1.7	2.4	3.0	2.7	3.3	2.9	2.0	1.9	2.5	1.9	1.4	1.6	1.4	1.9	3.7	1.4	2.4
24	1.7	2.3	2.7	3.0	4.4	4.3	4.9	5.3	4.8	7.2	7.7	7.3	6.1	6.0	6.2	4.5	1.7	1.2	1.1	3.1	3.3	3.7	5.9	4.0	7.7	1.1	4.3
25	3.3	3.6	2.5	2.0	2.0	2.2	2.3	3.6	5.0	3.8	3.4	3.8	2.9	6.4	7.2	4.4	2.6	3.4	2.9	2.6	1.8	1.8	2.5	2.9	7.2	1.8	3.3
26	3.2	1.3	1.5	1.3	1.6	1.3	3.8	3.6	3.1	4.1	4.4	4.2	4.7	3.9	4.7	4.8	5.3	5.4	4.6	4.8	4.6	3.4	2.9	1.4	5.4	1.3	3.5
27	2.1	1.5	2.3	2.5	2.7	2.7	3.4	4.1	3.9	2.1	1.4	1.3	2.2	3.9	4.5	6.9	5.2	5.7	4.6	3.6	3.8	4.7	3.9	2.6	6.9	1.3	3.4
28	3.1	5.5	6.5	5.2	5.5	6.6	7.0	8.7	8.7	7.9	6.9	6.1	4.5	2.8	1.4	3.7	6.6	7.0	7.6	7.1	8.0	6.0	5.4	5.4	8.7	1.4	6.0
29	7.8	10.3	10.8	9.7	9.5	8.0	5.4	4.5	4.5	3.8	2.9	1.9	2.3	2.5	2.7	2.2	2.1	1.4	2.2	1.3	2.0	1.9	2.1	3.5	10.8	1.3	4.4
30	2.8	4.0	4.2	2.9	4.4	5.3	5.6	6.6	7.3	6.9	6.0	6.6	7.3	7.6	8.3	7.2	7.9	9.3	8.9	8.6	7.5	6.4	5.9	6.7	9.3	2.8	6.4
31	4.3	1.4	0.6	2.1	3.3	4.6	6.2	6.3	3.4	2.5	2.1	1.7	1.7	1.0	1.1	1.2	1.6	1.7	2.3	2.2	2.7	2.4	0.9	0.8	6.3	0.6	2.4
Max.	**10.5**	**10.3**	**10.8**	**10.4**	**10.1**	**9.6**	**10.2**	**8.7**	**8.7**	**7.9**	**8.1**	**9.2**	**8.8**	**9.3**	**10.4**	**12.0**	**11.5**	**10.6**	**10.1**	**13.2**	**11.4**	**13.6**	**12.1**	**11.0**	**13.6**		
Min.	**0.7**	**0.9**	**0.6**	**0.8**	**0.7**	**0.9**	**0.7**	**0.8**	**0.7**	**0.6**	**1.0**	**0.8**	**1.0**	**1.0**	**0.6**	**0.8**	**1.2**	**0.8**	**0.7**	**0.7**	**0.9**	**1.0**	**0.9**	**0.8**		**0.6**	
Avg.	**4.0**	**3.8**	**3.9**	**3.5**	**3.6**	**3.7**	**4.1**	**4.1**	**3.7**	**3.6**	**3.2**	**3.4**	**3.6**	**3.9**	**4.2**	**4.0**	**3.9**	**3.9**	**4.2**	**4.3**	**4.4**	**4.2**	**3.9**	**3.8**			**3.9**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.8	2.6	2.7	2.8	2.1	2.2	2.5	2.6	2.6	2.6	1.7	0.7	1.1	2.9	2.9	2.8	2.7	2.3	2.9	2.0	1.1	0.9	1.8	1.1	2.9	0.7	2.1
2	1.4	1.3	1.4	1.7	2.3	2.8	3.2	3.1	3.7	1.9	2.1	1.6	1.2	1.3	3.0	4.8	3.9	1.7	1.9	1.3	1.4	1.9	1.1	1.2	4.8	1.1	2.1
3	2.0	1.6	1.7	1.5	1.7	2.4	1.3	2.6	2.3	2.0	1.8	2.8	2.7	2.9	3.1	3.1	3.0	2.7	2.3	1.7	0.9	1.8	2.0	3.4	3.4	0.9	2.2
4	3.4	2.3	0.6	1.6	2.2	2.1	1.6	1.1	0.9	1.1	1.7	1.4	1.9	2.9	2.6	2.7	2.5	2.5	1.9	2.2	2.3	1.6	1.7	1.8	3.4	0.6	1.9
5	1.2	1.3	1.4	0.8	1.1	1.0	1.0	1.9	1.5	2.0	1.5	1.9	1.4	1.1	1.8	3.8	3.7	3.0	3.3	3.3	3.2	3.1	3.7	4.3	4.3	0.8	2.2
6	4.5	4.2	2.1	3.0	3.4	3.9	3.0	3.5	4.7	3.6	2.2	2.5	3.1	5.3	4.8	3.4	4.1	6.4	5.1	4.8	4.4	5.6	7.2	6.9	7.2	2.1	4.2
7	7.0	4.1	2.1	2.3	2.7	2.7	3.3	4.5	4.3	4.0	2.9	3.5	2.2	1.8	2.2	2.3	2.7	2.6	2.4	3.6	3.9	4.5	4.4	4.4	7.0	1.8	3.4
8	3.9	4.4	3.6	2.7	5.1	6.5	6.8	6.5	7.7	7.6	7.2	4.8	3.3	3.1	2.6	2.7	2.8	2.5	2.8	5.0	3.3	3.4	3.0	2.7	7.7	2.5	4.3
9	1.8	2.7	3.8	4.7	5.5	6.2	5.5	5.8	6.7	6.4	4.9	5.4	7.0	6.1	4.8	3.9	4.5	5.1	1.6	1.5	1.2	1.0	1.4	2.1	7.0	1.0	4.2
10	2.6	2.0	2.7	2.7	2.8	2.6	2.0	1.8	2.4	1.6	1.0	1.2	2.7	2.3	2.5	2.5	2.1	1.8	1.2	1.6	1.3	1.3	1.6	1.4	2.8	1.0	2.0
11	2.0	2.2	2.3	2.3	0.9	1.5	1.8	1.1	2.1	1.2	1.3	2.7	2.9	2.6	2.6	3.0	3.2	3.0	3.0	1.0	1.0	1.3	1.1	1.5	3.2	0.9	2.0
12	1.2	1.2	2.4	2.9	2.9	2.5	2.6	2.7	3.0	2.6	2.7	1.6	2.3	2.8	2.8	2.7	2.6	1.3	1.2	1.5	3.0	4.1	3.4	3.5	4.1	1.2	2.5
13	2.5	1.9	2.0	0.8	0.8	1.3	1.5	1.4	4.6	1.5	2.4	4.0	4.4	3.9	3.9	2.6	2.7	2.9	3.4	2.4	2.0	2.4	1.9	3.2	4.6	0.8	2.5
14	2.5	4.6	7.0	6.5	8.4	8.4	9.0	9.2	9.7	9.1	8.7	8.5	8.4	9.0	8.9	9.5	9.7	8.8	9.0	8.8	8.9	8.4	8.0	7.8	9.7	2.5	8.2
15	8.6	8.5	9.0	8.4	9.1	10.4	10.1	9.7	8.9	8.7	8.6	9.2	9.1	9.5	9.2	8.8	9.0	8.3	8.3	8.7	8.1	7.5	6.1	5.6	10.4	5.6	8.6
16	6.0	6.0	6.1	5.5	6.0	5.5	4.6	4.4	4.9	4.0	5.0	4.7	3.9	4.6	4.7	4.8	4.3	4.2	4.9	5.3	5.1	4.9	4.5	4.4	6.1	3.9	4.9
17	4.7	3.6	3.7	4.3	4.2	3.6	3.5	3.8	3.4	4.0	3.7	4.0	3.0	2.3	2.7	2.6	3.0	3.1	2.8	2.1	1.8	1.0	1.2	2.7	4.7	1.0	3.1
18	3.5	3.8	3.6	3.9	3.5	4.0	4.6	4.1	3.9	5.1	6.3	7.0	6.9	6.6	6.2	6.2	6.6	6.6	7.1	7.3	8.2	8.2	8.3	8.2	8.3	3.5	5.8
19	8.2	8.4	8.5	9.3	9.6	9.5	8.9	9.7	9.5	9.2	8.7	8.3	7.8	7.7	7.4	8.4	8.5	6.1	5.9	4.6	3.2	2.3	2.4	1.9	9.7	1.9	7.2
20	2.7	2.5	2.6	3.6	5.4	6.3	6.5	5.2	5.0	5.6	5.7	5.5	3.6	3.6	5.0	4.3	4.5	2.9	4.4	4.7	4.2	5.5	6.1	7.5	7.5	2.5	4.7
21	5.9	2.3	1.9	3.5	3.9	3.6	3.2	2.4	2.3	4.1	6.0	6.6	7.0	6.7	7.7	7.8	8.6	8.9	10.0	11.3	11.9	11.0	9.4	7.1	11.9	1.9	6.4
22	5.3	2.2	5.9	7.2	4.6	5.0	8.1	7.0	8.0	9.4	9.5	8.8	10.3	8.8	9.1	8.4	7.8	7.2	8.0	9.5	8.0	11.5	11.5	7.7	11.5	2.2	7.9
23	6.5	7.5	6.6	6.5	6.8	7.7	7.5	6.9	6.8	5.4	7.1	7.3	7.2	5.4	5.2	4.1	2.1	1.3	1.9	1.5	1.0	1.4	2.3	2.1	7.7	1.0	4.9
24	2.2	2.0	2.7	2.7	2.4	2.2	2.9	2.0	3.3	3.7	3.3	1.8	2.0	2.6	3.1	2.8	1.8	2.7	4.9	5.5	4.7	3.6	3.0	2.9	5.5	1.8	2.9
25	2.7	2.5	2.8	3.0	3.0	3.2	2.9	2.6	2.8	3.0	2.7	1.3	2.1	4.5	2.9	3.3	3.8	3.5	4.4	5.4	5.4	5.8	5.5	5.1	5.8	1.3	3.5
26	4.4	6.4	7.9	7.8	7.4	8.0	8.5	8.9	8.6	7.0	6.5	6.4	6.9	6.8	6.7	6.5	5.5	5.8	4.8	4.6	4.5	4.1	3.4	1.9	8.9	1.9	6.2
27	1.1	1.2	0.4	0.9	2.0	2.3	3.1	5.5	3.0	2.7	1.8	1.9	2.4	2.0	1.9	3.5	3.4	2.3	2.0	2.7	4.0	4.3	4.8	4.6	5.5	0.4	2.7
28	4.5	4.3	2.7	1.4	2.8	2.8	2.7	1.8	1.9	2.7	2.7	1.2	3.0	4.4	5.2	5.6	4.9	3.3	4.0	7.1	6.5	6.5	7.5	5.0	7.5	1.2	3.9
29	6.6	4.5	4.1	6.1	5.5	3.6	3.1	4.0	4.1	3.8	5.9	4.7	4.0	4.0	4.5	5.9	5.2	5.6	5.6	5.5	4.0	4.4	3.9	3.1	6.6	3.1	4.7
30	3.1	6.9	3.0	4.9	3.2	3.4	7.3	4.8	4.7	4.9	4.6	3.6	1.8	3.2	3.3	2.1	4.0	2.5	3.2	2.8	3.2	4.3	4.7	6.4	7.3	1.8	4.0
Max.	**8.6**	**8.5**	**9.0**	**9.3**	**9.6**	**10.4**	**10.1**	**9.7**	**9.7**	**9.4**	**9.5**	**9.2**	**10.3**	**9.5**	**9.2**	**9.5**	**9.7**	**8.9**	**10.0**	**11.3**	**11.9**	**11.5**	**11.5**	**8.2**	**11.9**		
Min.	**1.1**	**1.2**	**0.4**	**0.8**	**0.8**	**1.0**	**1.0**	**1.1**	**0.9**	**1.1**	**1.0**	**0.7**	**1.1**	**1.1**	**1.8**	**2.1**	**1.8**	**1.3**	**1.2**	**1.0**	**0.9**	**0.9**	**1.1**	**1.1**		**0.4**	
Avg.	**3.8**	**3.6**	**3.6**	**3.8**	**4.0**	**4.2**	**4.4**	**4.4**	**4.6**	**4.4**	**4.3**	**4.2**	**4.2**	**4.4**	**4.4**	**4.5**	**4.4**	**4.0**	**4.1**	**4.3**	**4.1**	**4.2**	**4.2**	**4.0**			**4.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.9	8.3	8.0	7.5	6.7	7.8	7.4	8.4	8.4	9.3	7.8	8.2	8.6	8.0	7.3	7.3	7.1	6.5	6.6	6.6	7.1	7.3	6.7	6.7	9.3	6.5	7.6
2	6.8	6.6	6.2	6.1	7.2	7.0	6.7	6.3	5.8	5.5	5.2	5.0	5.1	5.8	5.5	5.3	4.6	5.2	5.2	5.8	5.5	3.4	2.6	4.2	7.2	2.6	5.5
3	4.2	4.9	8.2	8.9	8.6	7.6	7.4	7.0	5.3	2.9	2.4	2.1	2.7	1.8	2.2	3.1	1.6	2.0	2.5	1.8	1.2	1.4	2.5	2.2	8.9	1.2	3.9
4	2.2	1.5	3.8	7.4	10.9	9.3	2.4	2.4	2.4	3.5	2.5	2.6	3.9	3.1	3.6	2.9	3.8	2.2	1.3	2.2	2.2	1.7	0.9	1.5	10.9	0.9	3.3
5	1.5	2.5	2.2	1.5	1.6	1.1	5.1	6.9	6.8	7.8	8.2	8.9	7.7	6.1	4.2	5.1	5.1	6.5	5.4	4.6	6.8	3.6	4.6	7.0	8.9	1.1	5.0
6	4.5	2.5	1.6	2.5	2.6	4.2	4.5	4.0	4.1	3.1	6.2	6.7	6.4	6.6	6.4	4.5	3.7	3.3	2.2	1.6	1.5	1.7	3.6	4.1	6.7	1.5	3.8
7	3.7	4.0	3.0	3.7	3.1	3.3	2.8	3.5	2.3	2.4	2.3	2.1	2.9	2.2	2.7	2.7	2.4	2.9	3.2	3.5	2.7	2.6	2.9	3.4	4.0	2.1	2.9
8	4.3	3.8	4.9	5.2	6.0	6.6	8.0	7.9	8.3	9.2	10.8	11.0	11.5	11.6	12.3	11.9	11.3	10.6	10.1	9.8	9.5	12.1	11.9	11.1	12.3	3.8	9.1
9	12.3	13.7	11.8	12.3	10.6	9.1	7.1	8.0	6.4	4.8	6.8	3.9	3.3	3.0	2.8	2.8	2.8	2.7	2.9	4.0	3.9	2.9	2.8	3.4	13.7	2.7	6.0
10	3.7	5.2	2.7	1.3	4.3	3.9	3.6	2.4	2.1	2.3	2.7	2.6	3.4	3.0	4.5	6.6	6.2	6.6	6.7	6.1	5.9	6.4	6.7	5.6	6.7	1.3	4.4
11	2.4	3.2	2.5	2.5	2.6	1.8	1.4	2.2	1.8	2.2	1.5	1.0	2.9	3.1	3.3	3.0	2.5	1.3	1.5	1.3	3.1	2.6	3.2	3.7	3.7	1.0	2.4
12	4.4	3.4	4.2	4.7	3.3	4.7	5.0	5.3	5.0	4.0	3.4	2.4	2.1	1.5	2.6	2.4	3.1	3.2	2.9	3.3	3.5	3.8	4.2	4.4	5.3	1.5	3.6
13	4.6	5.1	5.1	5.3	4.8	5.0	5.2	4.6	4.7	5.0	3.9	3.6	2.1	3.2	4.2	3.8	4.6	4.7	1.4	0.9	1.8	2.0	2.5	2.7	5.3	0.9	3.8
14	2.9	5.2	4.1	4.7	3.9	5.4	2.8	5.1	6.1	5.3	6.8	6.7	8.5	5.4	7.6	7.5	5.9	5.2	4.0	3.2	6.4	3.5	2.3	2.4	8.5	2.3	5.0
15	3.2	3.6	3.7	3.8	1.8	3.2	2.5	1.3	3.4	4.2	6.1	4.8	4.7	5.2	5.0	4.6	3.5	1.8	4.6	4.9	6.6	6.5	5.6	4.9	6.6	1.3	4.1
16	4.7	6.3	4.6	5.6	6.2	6.0	5.7	5.3	5.4	5.2	4.7	5.4	5.1	5.7	4.9	4.6	4.5	5.5	5.6	5.5	4.3	4.7	5.1	4.6	6.3	4.3	5.2
17	5.1	4.9	5.2	5.1	5.0	2.5	4.4	5.5	5.1	4.1	3.8	3.9	3.8	2.5	2.3	2.2	3.7	4.5	4.2	4.4	5.8	5.3	6.0	5.9	6.0	2.2	4.4
18	5.9	7.0	5.3	4.3	4.1	5.1	6.1	7.6	6.8	7.3	7.7	8.4	8.5	8.5	6.4	6.2	4.5	2.1	4.8	4.9	3.0	1.1	4.4	4.8	8.5	1.1	5.6
19	5.0	5.1	8.6	5.2	6.3	6.1	4.4	2.2	3.2	1.8	2.3	2.9	4.2	4.1	2.8	2.6	2.5	3.9	3.8	4.1	3.3	1.9	2.0	3.5	8.6	1.8	3.8
20	3.6	2.1	1.6	3.2	2.0	2.0	1.7	1.4	1.2	2.7	3.7	2.3	2.9	3.2	2.2	1.9	1.1	1.3	2.1	2.2	1.5	2.4	2.3	2.4	3.7	1.1	2.2
21	2.7	2.5	3.3	2.3	3.4	4.6	4.8	3.5	4.7	3.5	6.4	7.0	7.0	7.6	5.9	4.3	4.8	5.2	5.6	8.1	7.8	4.3	2.8	3.4	8.1	2.3	4.8
22	3.1	4.4	4.1	3.3	4.4	4.2	3.8	3.5	3.0	1.8	3.1	2.8	2.3	1.3	4.8	4.3	2.0	3.3	2.4	2.8	2.7	2.9	2.6	3.6	4.8	1.3	3.2
23	3.3	5.4	5.5	6.9	7.2	5.4	6.5	3.8	5.8	7.3	6.6	7.9	5.5	4.3	5.1	4.6	5.6	4.6	4.6	8.9	4.9	4.4	4.5	4.0	8.9	3.3	5.5
24	2.7	2.4	2.8	4.7	4.1	5.4	6.4	7.9	9.3	8.5	9.0	8.7	9.7	9.8	9.7	8.2	7.6	8.8	6.6	2.1	0.8	0.3	0.2	0.3	9.8	0.2	5.7
25	0.6	1.0	2.2	4.6	6.1	7.0	9.3	8.8	9.8	9.3	9.4	9.7	12.1	14.2	7.4	7.0	11.5	10.8	5.5	5.4	5.7	5.8	6.0	6.7	14.2	0.6	7.3
26	6.8	5.8	6.7	7.1	8.1	7.9	7.8	7.5	7.2	6.4	6.0	5.0	5.3	5.1	6.5	6.7	7.4	6.8	5.6	6.9	8.2	8.4	7.9	7.4	8.4	5.0	6.9
27	7.9	7.2	7.4	6.8	5.0	6.6	7.6	7.0	5.1	6.6	5.3	6.1	6.2	7.5	7.0	8.1	6.4	6.7	6.3	6.4	5.7	7.2	6.6	7.3	8.1	5.0	6.7
28	7.3	6.9	7.8	7.5	4.5	4.7	3.7	3.0	3.9	4.9	5.2	5.3	4.3	3.3	3.6	4.2	4.1	4.4	4.6	4.2	4.7	5.1	5.1	5.5	7.8	3.0	4.9
29	5.6	4.3	4.3	4.9	2.6	2.3	1.4	0.9	1.4	6.4	3.0	3.6	9.3	7.7	6.3	5.2	5.7	9.6	9.4	9.9	8.2	9.5	9.3	11.5	11.5	0.9	5.9
30	11.2	7.4	9.3	6.0	6.0	3.9	2.6	2.3	3.9	7.1	7.0	5.2	5.0	6.2	6.7	2.9	2.0	6.2	1.8	3.2	6.5	3.5	2.1	2.0	11.2	1.8	5.0
31	3.0	2.8	2.6	2.2	3.1	2.6	3.0	2.6	2.4	3.4	4.1	3.6	3.9	3.7	1.6	1.6	2.2	2.4	2.6	2.9	2.7	2.7	2.8	2.9	4.1	1.6	2.8
Max.	**12.3**	**13.7**	**11.8**	**12.3**	**10.9**	**9.3**	**9.3**	**8.8**	**9.8**	**9.3**	**10.8**	**11.0**	**12.1**	**14.2**	**12.3**	**11.9**	**11.5**	**10.8**	**10.1**	**9.9**	**9.5**	**12.1**	**11.9**	**11.5**	**14.2**		
Min.	**0.6**	**1.0**	**1.6**	**1.3**	**1.6**	**1.1**	**1.4**	**0.9**	**1.2**	**1.8**	**1.5**	**1.0**	**2.1**	**1.3**	**1.6**	**1.6**	**1.1**	**1.3**	**1.3**	**0.9**	**0.8**	**0.3**	**0.2**	**0.3**		**0.2**	
Avg.	**4.7**	**4.8**	**4.9**	**5.1**	**5.0**	**5.0**	**4.9**	**4.8**	**4.9**	**5.1**	**5.3**	**5.1**	**5.5**	**5.3**	**5.1**	**4.8**	**4.6**	**4.9**	**4.4**	**4.6**	**4.6**	**4.2**	**4.3**	**4.6**			**4.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.5	2.7	2.8	2.8	2.8	3.2	3.5	3.1	2.7	4.1	5.3	5.4	4.0	1.5	2.7	1.9	2.7	5.2	4.8	4.5	3.7	3.9	2.4	4.3	5.4	1.5	3.4
2	3.1	2.9	4.6	3.2	2.7	3.2	2.9	3.0	2.4	3.0	4.9	5.0	3.9	4.2	3.0	2.7	3.1	4.0	5.0	4.2	4.1	3.2	2.9	3.1	5.0	2.4	3.5
3	2.4	3.7	2.9	4.1	4.1	3.7	3.6	3.1	5.0	4.3	4.9	3.5	3.5	3.4	4.7	3.3	1.5	4.4	3.9	5.6	4.4	5.3	3.9	2.2	5.6	1.5	3.8
4	4.1	4.6	4.4	4.2	3.5	5.2	4.4	3.1	4.2	4.3	3.5	3.3	3.6	3.5	3.0	2.4	1.9	1.9	2.9	2.6	2.7	1.3	1.9	1.9	5.2	1.3	3.3
5	2.2	2.3	3.7	2.7	2.8	3.5	3.9	2.0	2.9	3.7	4.3	4.7	4.5	4.4	3.6	3.5	3.3	3.3	3.3	3.4	2.9	3.0	3.3	3.2	4.7	2.0	3.4
6	4.2	4.6	3.9	3.6	4.1	4.3	3.7	3.3	2.9	3.7	4.8	6.1	6.6	5.8	3.3	3.3	6.8	9.6	9.4	12.1	10.2	7.3	8.9	7.2	12.1	2.9	5.8
7	5.4	5.0	6.8	5.6	7.5	5.1	5.5	6.2	4.7	9.8	15.1	13.5	9.4	5.1	4.9	6.5	6.2	6.0	7.3	6.7	7.8	8.2	8.8	8.4	15.1	4.7	7.3
8	7.4	6.9	5.3	5.9	7.7	9.2	8.5	6.2	2.3	4.2	5.9	5.1	5.6	3.2	2.7	3.0	3.2	5.2	5.8	6.1	5.9	4.2	3.6	3.4	9.2	2.3	5.3
9	3.6	3.0	1.9	2.4	4.2	2.1	3.4	3.8	1.9	4.4	2.8	1.6	2.0	2.2	2.1	2.2	2.9	2.7	3.4	2.7	2.0	1.1	2.3	3.8	4.4	1.1	2.7
10	4.6	6.0	5.9	4.0	4.8	5.9	7.9	9.8	9.7	5.8	2.4	1.3	2.0	5.3	4.1	4.9	6.3	4.5	6.3	6.9	3.9	4.6	4.9	3.5	9.8	1.3	5.2
11	4.3	3.5	5.2	5.0	6.2	6.4	6.9	5.4	7.4	6.9	7.5	6.6	5.2	5.3	3.8	2.7	1.8	3.6	2.3	2.6	3.0	5.6	5.6	5.6	7.5	1.8	4.9
12	4.6	4.1	3.5	4.0	4.2	5.3	6.2	7.5	8.1	8.7	8.1	6.0	5.6	5.2	9.7	10.8	9.6	10.3	10.2	8.7	7.8	8.6	9.4	9.0	10.8	3.5	7.3
13	6.7	4.4	4.2	4.2	4.4	4.4	8.2	5.0	6.0	5.5	4.3	4.1	5.0	4.8	5.9	7.9	7.8	10.0	11.3	9.4	9.3	8.3	7.6	6.2	11.3	4.1	6.4
14	5.4	6.0	5.1	7.1	6.9	2.7	4.3	6.3	6.3	7.4	6.4	4.8	4.6	8.5	6.5	8.6	7.6	6.1	6.2	5.2	8.3	9.4	9.0	9.4	9.4	2.7	6.6
15	7.3	7.1	8.2	8.0	7.2	8.3	9.1	7.8	9.1	8.6	7.5	4.4	3.0	3.5	7.6	8.6	7.3	6.8	8.2	8.8	8.3	7.2	3.1	3.0	9.1	3.0	7.0
16	2.4	4.1	3.0	2.6	2.7	5.2	3.4	4.5	5.5	5.2	7.4	7.8	5.9	6.2	7.3	4.3	5.7	3.3	2.2	4.3	6.2	3.2	3.6	3.0	7.8	2.2	4.5
17	5.6	4.0	5.1	4.9	3.3	5.0	4.0	4.6	5.6	4.1	5.6	5.5	6.8	6.3	3.3	6.7	7.4	5.4	5.3	5.5	4.7	5.2	5.9	6.1	7.4	3.3	5.2
18	6.6	6.1	6.0	6.0	4.6	5.1	3.9	2.9	5.0	4.7	6.2	6.0	6.6	6.6	6.5	4.0	4.9	3.5	3.6	3.7	2.5	5.0	4.8	4.1	6.6	2.5	5.0
19	5.5	5.1	9.7	9.1	7.3	6.5	5.0	5.5	4.7	4.2	6.6	7.6	11.2	12.4	13.4	13.2	12.5	12.4	12.0	9.5	7.2	5.9	5.8	5.3	13.4	4.2	8.2
20	5.5	4.0	7.5	5.7	8.5	7.3	9.6	8.7	5.0	6.6	5.0	3.6	5.3	7.1	6.6	5.8	5.0	4.3	4.7	5.1	5.6	5.5	5.1	6.2	9.6	3.6	6.0
21	6.7	6.6	6.8	6.0	6.7	6.6	7.3	7.2	7.1	7.2	6.7	6.8	7.1	5.3	5.1	4.9	6.3	6.6	8.3	9.8	8.9	5.5	5.1	5.1	9.8	4.9	6.6
22	5.1	4.3	4.4	3.9	2.5	3.6	2.2	3.4	3.6	3.7	5.5	4.9	4.8	5.2	5.1	4.7	5.0	5.4	4.8	2.9	2.8	3.2	3.0	3.2	5.5	2.2	4.0
23	3.3	2.8	3.0	3.2	3.1	3.2	3.8	3.6	2.9	3.3	5.1	5.1	4.0	4.1	3.6	2.4	2.9	3.4	3.2	4.2	3.6	3.0	3.2	2.2	5.1	2.2	3.4
24	3.3	2.7	3.4	3.8	3.3	3.6	4.9	3.4	3.3	3.7	5.0	5.1	5.4	5.2	4.4	5.9	7.3	8.3	8.9	9.9	9.0	8.3	8.2	8.8	9.9	2.7	5.6
25	8.1	7.5	7.0	6.9	6.0	7.4	7.7	7.2	7.0	7.1	6.3	5.4	4.7	5.6	6.3	5.9	6.2	5.6	5.6	5.9	5.6	6.0	5.5	5.8	8.1	4.7	6.3
26	6.7	6.9	7.7	7.9	7.0	7.3	7.1	7.4	7.9	7.7	8.3	8.3	7.4	7.2	7.0	7.8	7.6	8.0	7.6	7.4	7.9	8.1	9.1	9.3	9.3	6.7	7.7
27	9.7	9.3	9.1	9.4	9.5	8.3	7.8	7.7	7.4	6.4	6.4	6.4	6.4	6.9	7.0	6.6	7.0	6.5	6.4	6.2	6.2	6.2	6.0	5.3	9.7	5.3	7.2
28	5.9	6.0	6.0	6.1	5.7	6.6	6.0	5.6	5.2	5.6	5.2	5.3	5.7	6.2	6.0	5.9	5.3	4.9	4.0	2.3	1.6	1.5	1.0	1.2	6.6	1.0	4.8
29	1.3	2.3	3.4	3.0	3.2	3.4	2.8	3.0	2.8	1.6	1.9	3.2	2.8	2.7	3.1	2.9	3.4	4.4	4.6	3.2	5.5	6.6	6.4	6.2	6.6	1.3	3.5
30	6.8	7.3	6.5	7.2	7.6	8.0	8.9	8.0	7.8	7.7	7.4	7.9	8.1	7.1	5.2	4.4	0.8	0.2	0.2	0.2	0.2	0.2	0.2	1.4	8.9	0.2	5.0
Max.	**9.7**	**9.3**	**9.7**	**9.4**	**9.5**	**9.2**	**9.6**	**9.8**	**9.7**	**9.8**	**15.1**	**13.5**	**11.2**	**12.4**	**13.4**	**13.2**	**12.5**	**12.4**	**12.0**	**12.1**	**10.2**	**9.4**	**9.4**	**9.4**	**15.1**		
Min.	**1.3**	**2.3**	**1.9**	**2.4**	**2.5**	**2.1**	**2.2**	**2.0**	**1.9**	**1.6**	**1.9**	**1.3**	**2.0**	**1.5**	**2.1**	**1.9**	**0.8**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**1.2**		**0.2**	
Avg.	**5.0**	**4.9**	**5.2**	**5.1**	**5.1**	**5.3**	**5.5**	**5.3**	**5.2**	**5.4**	**5.9**	**5.5**	**5.4**	**5.3**	**5.2**	**5.3**	**5.3**	**5.5**	**5.7**	**5.6**	**5.4**	**5.1**	**5.0**	**4.9**			**5.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (Climatronics) (m/s)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.8	3.8	4.9	7.1	6.9	8.0	7.7	5.5	5.1	3.9	4.0	2.6	3.2	3.2	3.2	2.8	2.5	2.9	3.0	2.7	2.5	2.6	2.6	1.8	8.0	1.8	4.1
2	1.9	2.0	2.5	1.5	3.2	4.8	5.5	4.6	5.5	6.9	7.1	6.6	7.9	8.8	8.4	9.1	8.8	8.3	8.1	7.3	6.7	6.4	6.2	9.3	9.3	1.5	6.1
3	8.5	5.4	5.4	6.0	5.2	6.3	6.3	6.3	5.4	2.5	1.3	0.8	1.0	0.8	0.9	0.4	0.3	0.7	0.5	0.6	0.8	1.0	0.9	1.5	8.5	0.3	2.9
4	0.8	1.3	1.3	0.7	3.6	6.2	5.6	4.8	5.9	5.9	6.2	5.9	5.0	4.7	5.5	5.6	4.6	3.7	3.7	3.4	2.7	1.4	4.0	4.9	6.2	0.7	4.1
5	6.2	6.4	6.5	5.8	5.8	6.6	7.3	7.8	8.0	8.2	8.5	8.5	8.8	8.4	8.3	8.9	10.6	11.0	11.3	11.5	12.7	12.1	12.6	13.0	13.0	5.8	8.9
6	11.7	9.5	8.8	8.6	8.2	8.0	8.9	8.9	8.1	7.6	6.2	8.1	7.2	5.6	5.5	6.1	5.9	7.3	7.8	7.0	7.8	7.0	5.6	5.6	11.7	5.5	7.5
7	6.8	5.9	5.7	6.5	5.8	5.8	6.3	8.2	8.9	8.9	7.7	7.2	7.3	6.9	6.7	6.6	7.6	7.5	7.7	6.8	5.8	7.3	6.5	6.1	8.9	5.7	6.9
8	6.2	4.4	4.3	5.9	8.2	9.7	9.4	10.1	6.7	4.2	4.7	5.0	4.9	2.3	0.4	1.1	6.9	9.7	8.4	3.0	3.3	2.3	2.4	3.5	10.1	0.4	5.3
9	2.7	3.6	3.2	3.6	4.9	5.2	5.8	4.6	5.7	7.9	8.3	7.6	8.9	6.6	7.0	8.0	8.1	8.1	7.3	6.7	7.7	6.0	7.1	5.4	8.9	2.7	6.2
10	2.3	2.4	3.1	2.4	2.0	2.6	2.6	2.2	2.3	2.9	2.1	2.9	4.1	2.8	3.0	5.3	6.1	5.5	7.0	5.8	6.2	6.0	5.5	5.7	7.0	2.0	3.9
11	6.1	5.8	5.7	5.8	5.3	5.4	5.6	3.9	1.1	1.8	1.5	1.1	1.0	1.0	1.0	2.4	2.9	3.0	2.9	2.7	1.5	1.8	2.5	1.6	6.1	1.0	3.1
12	1.6	1.1	2.1	1.8	1.7	1.9	3.2	3.3	3.1	3.3	3.4	4.5	4.1	4.1	3.4	4.6	4.0	2.9	3.3	2.7	1.6	1.7	1.8	2.2	4.6	1.1	2.8
13	3.4	1.9	3.0	3.1	3.2	6.5	7.8	8.2	8.3	9.1	8.7	10.1	11.6	10.7	11.8	11.4	11.0	12.4	13.1	12.4	12.8	12.2	12.9	13.2	13.2	1.9	9.1
14	11.6	11.5	13.2	12.6	11.7	10.9	11.2	11.4	10.8	8.1	7.4	8.0	8.4	8.6	5.0	6.4	6.5	8.0	6.3	5.5	6.9	9.2	10.1	9.4	13.2	5.0	9.1
15	9.8	10.1	10.5	10.0	10.2	9.0	8.2	6.5	6.7	3.5	3.5	6.7	4.5	5.4	6.1	5.8	5.0	4.2	4.7	5.2	5.6	5.9	6.9	7.8	10.5	3.5	6.7
16	8.0	7.8	8.1	8.9	9.1	8.8	8.4	8.0	7.5	6.5	6.1	6.8	6.1	5.6	5.1	4.6	3.2	1.8	0.5	0.9	1.0	0.6	1.0	1.1	9.1	0.5	5.2
17	0.9	1.8	1.8	1.1	0.7	1.7	1.8	2.0	1.8	1.6	2.1	2.0	1.5	1.1	1.2	0.9	2.3	3.0	7.6	7.8	6.9	6.6	9.4	9.0	9.4	0.7	3.2
18	9.0	10.0	9.6	7.9	8.9	6.6	7.5	6.2	6.2	6.2	5.7	5.9	5.5	10.2	6.9	6.1	6.9	5.6	5.7	3.8	2.5	2.3	2.2	3.5	10.2	2.2	6.3
19	5.0	6.4	5.9	6.4	5.8	6.8	7.0	6.7	7.7	7.5	7.0	6.3	4.3	1.5	1.6	2.1	1.4	1.9	2.8	3.5	4.1	3.5	2.8	1.5	7.7	1.4	4.6
20	4.5	6.3	6.8	4.3	2.9	8.8	11.0	12.1	11.8	11.9	11.7	11.6	11.6	11.4	10.3	10.4	10.4	6.7	5.4	5.1	4.8	5.1	5.6	2.4	12.1	2.4	8.0
21	5.8	5.1	6.9	5.8	10.4	11.6	12.4	9.7	9.0	8.7	7.4	5.9	6.0	5.0	3.6	2.3	3.3	3.1	4.0	4.5	5.2	3.2	3.9	6.0	12.4	2.3	6.2
22	6.1	5.3	3.3	5.5	4.2	1.3	3.8	3.0	2.1	2.2	1.2	1.3	2.6	1.3	2.6	3.4	1.7	1.4	1.6	5.4	3.2	1.7	3.3	5.2	6.1	1.2	3.0
23	4.6	6.4	4.6	5.1	5.1	4.4	4.9	8.1	6.7	4.6	4.1	6.4	7.1	6.7	7.5	6.9	8.1	7.9	7.5	5.5	5.7	7.3	8.4	4.3	8.4	4.1	6.2
24	3.1	5.4	4.9	6.0	5.7	5.5	4.4	3.5	2.6	3.2	2.9	3.0	2.6	3.3	3.3	5.1	5.7	8.3	8.9	9.3	8.5	9.1	10.2	8.7	10.2	2.6	5.5
25	9.3	9.5	7.1	8.1	12.9	12.4	11.5	11.0	13.0	13.3	12.8	12.3	11.3	6.1	6.0	7.4	7.1	7.1	7.6	9.3	7.3	5.8	7.3	6.6	13.3	5.8	9.2
26	6.7	8.8	6.7	4.4	5.9	5.0	5.9	5.3	4.6	4.0	5.0	3.4	3.4	4.9	3.9	2.2	2.7	3.9	5.7	5.3	4.7	6.0	6.2	6.7	8.8	2.2	5.1
27	7.8	7.2	8.4	8.1	8.7	9.3	9.7	9.9	13.3	13.4	14.1	14.6	15.7	15.6	17.5	18.0	18.4	18.1	16.9	14.8	12.3	8.9	8.0	8.1	18.4	7.2	12.4
28	7.7	8.0	7.7	6.2	6.6	6.2	5.0	3.9	4.2	4.4	3.8	2.1	3.3	4.9	5.6	5.3	5.5	4.7	5.0	4.2	5.2	6.4	5.0	3.6	8.0	2.1	5.2
29	1.8	2.3	1.6	3.1	1.8	1.9	4.8	6.0	5.8	4.0	6.4	10.0	9.2	9.3	11.1	14.1	13.3	13.4	13.5	13.5	10.0	10.7	12.0	9.0	14.1	1.6	7.9
30	15.4	13.3	8.2	9.7	8.9	10.2	10.6	11.3	7.9	7.3	7.9	6.5	8.7	8.5	9.3	9.9	9.5	9.2	9.2	8.1	8.2	7.6	7.5	8.4	15.4	6.5	9.2
31	6.0	5.0	2.4	2.9	2.6	3.6	3.3	4.6	5.0	5.2	5.9	6.9	6.9	6.8	7.1	7.7	7.7	8.1	7.4	7.0	5.5	4.9	5.2	2.6	8.1	2.4	5.4
Max.	**15.4**	**13.3**	**13.2**	**12.6**	**12.9**	**12.4**	**12.4**	**12.1**	**13.3**	**13.4**	**14.1**	**14.6**	**15.7**	**15.6**	**17.5**	**18.0**	**18.4**	**18.1**	**16.9**	**14.8**	**12.8**	**12.2**	**12.9**	**13.2**	**18.4**		
Min.	**0.8**	**1.1**	**1.3**	**0.7**	**0.7**	**1.3**	**1.8**	**2.0**	**1.1**	**1.6**	**1.2**	**0.8**	**1.0**	**0.8**	**0.4**	**0.4**	**0.3**	**0.7**	**0.5**	**0.6**	**0.8**	**0.6**	**0.9**	**1.1**		**0.3**	
Avg.	**6.0**	**5.9**	**5.6**	**5.6**	**6.0**	**6.5**	**6.9**	**6.7**	**6.5**	**6.1**	**6.0**	**6.1**	**6.3**	**5.9**	**5.8**	**6.2**	**6.4**	**6.4**	**6.6**	**6.2**	**5.8**	**5.6**	**6.0**	**5.7**			**6.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	28.7	29.1	22.3	19.8	20.9	15.6	0.0	348.1	353.5	347.9	350.0	17.4	23.1	15.6	19.6	17.3	8.2	352.8	356.7	6.7	3.2	4.2	6.9	3.6
2	353.1	7.5	15.9	20.4	8.5	15.3	17.7	23.5	18.0	9.9	8.4	4.4	3.4	8.5	4.2	5.0	8.1	13.8	355.4	4.5	3.3	12.0	1.7	14.3
3	354.9	354.3	358.3	358.4	357.6	7.2	345.3	359.0	9.7	12.9	22.0	13.5	17.3	20.8	18.2	6.8	18.9	15.9	19.5	22.1	11.5	9.2	23.0	18.9
4	22.9	15.7	11.7	17.3	20.7	15.5	5.3	4.4	21.2	25.4	26.5	39.0	38.8	39.0	38.5	20.9	23.0	19.2	253.6	23.2	47.4	22.1	216.5	28.2
5	19.8	22.4	16.0	11.8	24.3	19.4	21.0	26.2	13.6	41.5	10.5	331.8	25.0	31.4	21.9	332.9	0.9	20.0	25.6	24.1	20.2	30.3	21.5	358.4
6	23.3	14.2	247.0	23.8	21.2	24.2	25.2	26.5	27.0	22.5	17.4	225.5	30.4	30.3	35.0	36.2	353.4	17.4	299.4	236.7	326.6	13.5	19.8	235.1
7	139.8	22.4	29.0	26.1	23.7	17.3	346.5	21.9	27.5	29.0	15.1	22.2	23.2	22.7	24.9	15.6	18.8	22.4	15.4	16.7	18.4	26.9	21.2	27.4
8	21.4	16.8	18.3	15.7	19.7	26.5	26.2	23.8	17.8	12.1	16.8	24.5	20.9	15.1	53.7	23.8	21.2	21.1	21.8	8.8	17.5	16.6	21.5	17.4
9	11.9	14.8	24.9	23.9	26.9	27.4	24.1	24.1	18.8	14.8	13.8	24.9	18.3	42.5	30.4	18.3	17.7	28.7	27.0	33.7	28.8	328.5	25.8	24.1
10	19.8	22.4	24.9	29.3	29.6	24.3	25.1	309.4	229.6	112.3	175.7	20.5	38.4	60.8	189.6	191.8	55.5	56.5	57.0	60.3	60.4	59.2	54.5	53.1
11	40.7	49.6	30.9	18.0	58.2	53.2	45.3	25.0	26.2	4.2	22.0	12.4	39.1	36.2	42.4	21.8	12.4	271.4	51.3	37.2	43.8	42.4	28.8	39.3
12	292.0	56.1	60.6	50.7	50.7	60.4	55.2	56.1	36.3	40.1	8.9	31.7	35.6	36.5	35.2	35.1	38.2	32.9	16.1	24.6	18.5	11.5	27.3	12.9
13	30.7	8.2	20.6	4.3	12.5	20.6	10.4	17.8	26.3	38.5	347.6	40.6	41.4	40.9	47.5	30.7	29.8	21.2	14.0	4.2	13.8	15.4	16.5	19.5
14	31.6	31.7	22.7	18.7	27.5	28.5	27.0	23.6	20.0	34.9	29.6	30.8	27.7	26.0	24.5	23.5	23.6	25.2	23.8	22.6	26.9	30.1	25.6	23.2
15	18.1	22.7	26.1	24.2	22.9	23.2	23.5	18.8	20.7	23.5	16.9	25.1	23.5	26.7	24.5	16.5	1.1	21.7	17.5	21.0	20.0	12.5	19.7	18.7
16	17.7	22.1	22.5	29.0	34.9	29.2	27.6	24.2	20.6	11.9						26.6	12.1	20.4	24.1	22.5	299.2	6.1	28.6	27.2
17	25.5	14.7	19.8	351.8	354.9	357.2	36.6	16.4	22.3	16.6	27.2	40.8	61.2	70.1	62.9	342.6	3.3	351.0	329.9	342.3	10.8	45.2	55.0	52.7
18	46.9	48.1	50.8	39.2	46.3	55.7	37.0	33.9	52.9	46.9	13.2	37.0	33.1	35.1	29.4	42.1	37.3	21.7	22.1	353.1	12.0	8.7	19.9	43.9
19	5.3	342.4	55.5	42.6	29.3	13.0	24.2	20.7	49.0	46.2	48.5	45.2	51.9	47.1	33.2	50.2	48.3	33.7	32.2	21.2	10.8	26.5	40.4	46.2
20	6.5	27.2	25.7	20.4	11.1	20.4	18.3	18.2	15.6	17.5	17.3	19.6	19.0	22.2	23.0	13.5	21.5	10.9	1.8	20.3	18.5	30.0	16.0	23.9
21	23.1	23.3	29.0	27.2	28.9	29.2	26.3	20.6	22.2	23.1	29.8	34.0	45.3	54.3	51.6	56.8	57.4	60.1	58.4	345.6	317.4	316.1	314.4	311.5
22	304.8	349.7	41.2	47.9	13.0	318.6	296.9	291.0	293.9	299.2	298.5	283.8	290.8	307.1	310.0	312.7	309.6	313.6	312.1	312.6	315.0	316.7	315.3	316.5
23	315.2	317.5	331.9	51.6	47.1	53.7	37.2	44.7	22.9	54.2	46.4	68.3	56.8	59.4	55.5	55.7	56.2	48.7	42.9	42.1	42.6	50.7	47.3	37.0
24	50.8	44.6	46.6	47.4	46.4	43.3	39.0	38.6	40.1	35.9	40.2	52.3	56.1	53.9	54.4	53.6	43.9	53.5	49.3	46.9	40.7	31.1	34.4	29.4
25	23.7	27.9	15.8	5.9	4.5	14.7	14.9	5.5	8.0	8.0	25.5	35.0	36.0	36.3	36.3	44.9	33.0	39.5	39.5	43.3	45.6	52.0	48.0	51.0
26	53.2	50.2	55.2	57.5	55.7	57.2	55.4	54.0	47.7	54.0	49.3	48.2	52.2	51.4	51.6	53.2	52.0	47.4	44.9	43.2	36.5	50.2	60.6	58.2
27	59.1	42.1	320.1	339.2	306.5	10.3	44.8	298.4	347.6	74.7	289.6	307.6	308.7	313.0	315.0	315.4	313.6	315.3	310.2	312.7	310.7	308.1	308.9	309.2
28	315.0	313.5	314.7	315.2	313.9	311.3	312.9	310.6	311.5	311.9	315.7	315.3	310.6	319.7	55.7	56.1	54.6	59.9	60.1	54.3	51.3	57.3	51.6	52.8
29	53.8	52.6	51.8	51.0	50.8	48.5	48.4	51.5	52.3	49.3	52.3	53.6	54.8	53.2	49.4	48.9	41.9	46.2	46.2	49.7	52.0	48.3	43.7	52.3
30	54.8	51.7	52.0	51.3	49.7	46.0	49.4	49.4	44.1	40.7	44.9	43.7	49.7	49.4	45.5	46.0	39.4	30.7	28.0	15.2	30.6	29.3	26.9	22.2
31	22.0	18.6	22.4	21.8	20.6	21.5	16.4	13.2	34.4	34.9	41.8	46.3	42.5	42.8	48.6	50.3	48.0	49.7	48.2	46.5	52.6	52.8	59.1	55.3

Total Hours in Month 744 **Hours Data Available** 739 **Data Recovery** 99.3%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	50.2	52.2	44.0	54.3	38.7	349.0	312.4	315.1	321.4	313.3	311.7	313.2	311.5	313.1	312.1	310.6	303.8	28.7	150.6	181.4	189.0	180.2	302.7	309.7
2	312.9	313.8	312.4	315.1	307.9	312.3	314.5	315.4	316.7	310.8	312.5	338.8	50.0	55.9	52.3	44.0	54.5	52.7	46.8	11.1	28.9	33.2	27.5	29.3
3	24.0	20.8	18.0	8.8	17.6	12.5	13.4	7.0	6.0	11.2	17.4	26.5	16.3	18.5	20.3	18.2	12.8	2.9	14.8	10.1	9.7	9.9	14.0	11.2
4	10.5	359.6	8.7	6.0	0.6	8.3	10.9	15.5	10.1	10.2	14.1	18.1	16.9	17.0	17.6	14.0	10.8	12.7	13.2	14.3	18.3	19.2	20.8	19.5
5	18.6	19.3	19.2	21.1	20.6	20.3	20.4	20.8	22.0	27.0	24.6	12.4	1.0	11.5	2.7	12.8	17.4	20.0	18.5	19.9	19.0	15.1	10.0	6.5
6	11.0	8.7	3.0	357.7	0.3	4.3	14.9	14.5	5.1	17.5	203.5	225.2	88.3	137.9	172.0	15.9	348.0	14.9	25.3	10.3	31.7	32.4	15.7	5.7
7	21.2	31.8	30.3	24.8	13.0	347.9	70.3	198.5	195.6	201.9	201.1	191.0	181.2	175.2	186.2	66.4	100.9	169.7	193.6	195.1	164.2	154.7	98.4	90.9
8	26.7	332.6	357.2	25.2	17.0	15.4	19.1	23.2	26.9	9.6	21.8	23.6	21.9	15.7	358.0	357.5	4.7	358.6	4.5	4.1	2.4	7.1	2.0	5.9
9	13.7	10.7	14.5	15.6	14.2	15.5	18.0	20.6	20.9	21.0	21.6	22.3	21.5	19.1	16.9	19.4	21.3	12.7	11.3	5.3	6.6	4.6	12.1	9.6
10	348.3	357.6	5.5	8.0	10.5	354.8	357.1	6.6	6.3	2.6	347.6	336.4	339.1	303.9			344.0	320.9	354.8	314.0	317.1	8.0	334.1	274.7
11	358.5	349.8	358.8	22.2	11.5	17.7	20.2	19.6	12.7	11.8	15.5	21.3	21.8	17.2	11.1	8.3	1.8	357.3	358.7	357.1	358.9	359.6	351.6	346.1
12	347.6	343.7	333.3	212.8	208.6	227.2	306.4	318.0	314.4	306.3	333.6	173.1	172.0	162.5	172.3	161.4	166.7	170.5	150.7	306.4	309.6	316.3	312.7	332.1
13	8.2	335.3	353.3	305.7	4.2	327.0	234.7	21.7	29.3	33.9	208.6	33.8	29.4	18.4	21.2	13.1	22.1	14.8	3.7	349.9	353.5	359.0	354.3	352.7
14	354.7	342.3	347.1	347.4	0.3	351.5	1.9	345.9	2.1	4.9	355.3	3.8	353.2	357.5	354.9	4.1	3.7	358.7	356.6	349.2	7.5	5.1	5.9	6.5
15	9.5	359.5	12.6	350.1	355.3	354.1	0.0	353.9	354.5	6.4	14.9	14.7	192.4	18.5	8.8	347.2	351.3	332.3	346.7	346.7	337.9	321.9	351.9	31.6
16	38.9	28.3	34.2	33.7	34.8	33.0	23.6	11.7	31.3	10.1	26.9	44.0	27.9	32.9	33.4	13.8	13.2	20.1	16.4	14.4	21.2	24.9	30.0	22.7
17	22.0	21.3	17.1	17.9	13.3	8.5	8.2	1.0	352.2	3.2	349.9	345.1	349.7	354.3	358.5	0.7	3.7	2.6	1.3	4.3	5.1	347.8	321.9	330.4
18	337.7	12.5	18.0	9.3	10.5	6.2	358.9	18.6	335.2	323.9	325.4	332.2	307.1	272.2	311.0	284.5	316.1	289.0	302.9	22.0	22.7	32.1	31.9	30.2
19	34.1	71.8	190.5	188.5	183.5	150.7	182.4	174.6	179.8	174.4	196.0	193.7	194.9	342.4	205.4	203.9	213.9	201.7	195.1	199.4	190.5	188.8	196.9	193.0
20	196.9	192.5	192.9	187.0	56.7	46.8	202.6	179.6	165.4	155.3	75.4	81.0	95.2	184.3	181.6	195.7	202.3	208.8	192.7	194.4	192.0	194.0	190.6	194.9
21	199.9	199.5	199.2	193.2	205.4	181.4	194.7	187.3	198.3	196.5	173.1	182.8	189.0	156.9	106.1	73.9	62.9	87.0	76.2	78.8	91.6	160.5	144.2	98.9
22	191.6	201.4	133.3	199.8	191.2	228.0	185.5	192.0	200.3	198.9	182.5	186.3	174.3	152.7	71.0	124.6	110.0	77.0	5.7	141.6	55.0	76.1	101.3	180.8
23	49.2	10.5	17.0	7.9	229.8	22.6	26.1	183.5	18.1	186.8	133.1	54.9	159.1	141.4	128.9	126.4	140.1	147.6	123.3	119.6	299.5	309.3	314.1	358.2
24	1.3	16.2	27.2	15.6	5.2	22.0	26.3	32.7	46.9	45.5	50.2	47.6	34.9	37.0	35.6	34.6	40.1	17.5	39.8	34.0	36.5	27.0	16.1	14.1
25	19.3	18.9	24.0	26.7	25.9	26.4	25.4	5.6	259.5	198.4	215.9	64.4	199.4	160.1	206.5	188.0	54.9	63.5	52.4	47.1	38.0	45.5	54.5	45.8
26	42.6	38.1	23.1	66.6	105.1	213.5	241.0	175.6	173.1	188.1	191.4	193.3	207.3	195.3	162.2	98.8	97.4	46.9	25.2	335.2	20.2	27.4	28.8	26.4
27	25.3	25.9	25.2	27.2	29.3	23.0	23.6	349.5	213.3	225.0	240.2	257.4	3.1	52.8	313.7	310.4	316.8	331.5	315.4	316.3	331.6	338.2	35.0	44.9
28	326.1	315.0	314.5	314.7	317.6	317.9	316.7	315.6	6.4	336.5	338.4	314.6	307.9	308.8	313.9	301.1	295.2	303.2	295.7	322.9	300.4	313.9	310.5	314.6

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	315.3	349.9	26.0	42.1	52.7	55.2	48.4	41.4	2.9	48.8	46.4	37.5	36.6	32.3	44.2	37.9	28.1	14.6	34.9	32.0	28.5	27.7	26.5	19.2
2	19.2	26.4	26.1	15.1	17.2	14.6	14.7	30.7	31.1	30.5	24.9	22.6	24.3	25.2	23.3	16.3	14.7	14.7	12.4	14.8	12.3	8.0	9.2	12.2
3	9.7	16.0	13.5	17.0	15.0	22.4	26.5	16.4	15.8	12.5	14.6	13.5	20.3	26.4	28.0	30.2	31.2	23.7	29.3	28.7	28.6	22.6	27.7	26.6
4	24.9	24.2	25.9	22.5	24.9	25.5	22.6	21.6	22.5	26.5	25.1	27.7	22.1	4.0	16.7	19.6	20.5	21.7	14.3	21.4	19.2	18.2	15.5	17.1
5	17.2	17.6	8.5	6.8	7.7	12.8	13.0	316.0	40.7	29.4	226.0	189.7	140.2	173.7	190.2	103.8	82.4	147.8	173.8	177.9	150.9	73.5	75.0	96.8
6	180.7	189.0	179.3	175.9	208.0	209.0	205.7	173.3	301.2	304.3	310.4	315.3	318.3	316.5	317.1	322.1	321.5	359.5	5.2	350.5	29.4	29.4	36.2	46.3
7	54.4	58.0	40.9	37.2	53.7	54.1	62.5	350.0	313.0	313.5	312.6	314.5	315.7	313.8	316.1	307.4	293.0	41.8	9.3	66.5	139.0	134.7	345.4	287.1
8	291.0	302.4	294.0	299.5	298.9	340.1	318.6	307.4	330.9	353.3	311.0	78.6	70.0	71.1	144.4	179.7	174.6	175.9	174.6	162.9	188.7	192.1	31.4	19.5
9	202.6	285.4	118.7	148.5	148.7	145.1	85.1	58.5	26.8	122.1	167.9	133.9	150.0	85.4	126.5	307.9	293.2	289.5	298.1	302.9	304.6	306.3	315.6	328.9
10	48.5	37.5	44.3	36.6																				
11																								
12														11.9	18.4	24.9	26.5	28.5	26.0	27.5	24.2	17.6	22.1	12.9
13	30.4	6.8	335.2	96.9	26.3	30.8	28.9	10.4	357.0	39.3	182.1	191.5	192.2	195.2	193.6	199.4	201.9	214.5	223.5	236.4	235.9	299.8	27.4	17.1
14	11.0	22.8	15.2	20.5	12.6	12.8	12.7	12.7	21.7															
15														47.0	64.5	121.5	213.3	220.6	218.9	347.4	3.2	13.9	8.9	4.7
16	5.4	1.7	7.1	12.0	19.9	9.5	5.9	7.6	12.7	20.5	23.9	24.5	24.7	22.1	16.1	15.9	15.2	5.8	18.4	2.4	358.4	356.1	353.9	358.9
17	2.7	12.0	26.1	29.0	25.9	25.0	20.7	17.1	17.7	30.6	23.5	17.1	24.7	20.8	16.8	18.4	9.0	3.6	6.9	17.7	31.7	18.0	12.8	24.9
18	13.5	16.7	17.1	10.7	14.7	15.5	15.3	14.4	17.5	22.0	19.1	16.6	22.9	19.7	18.4	18.2	18.8	16.9	329.8	346.6	318.5	210.9	354.6	281.7
19	19.6	5.9	5.2	5.3	7.8	20.0	21.5	30.5	31.5	37.3	37.6	68.3	195.6	199.5	210.4	207.5	181.6	179.0	170.2	208.2	317.3	18.7	29.3	28.4
20	28.4	33.1	28.7	27.4	26.2	28.9	29.2	24.0	233.5	21.4	201.8	60.9	106.1	180.8	206.9	211.5	301.4	313.8	310.1	307.2	318.9	311.6	314.5	319.7
21	328.1	334.7	14.8	40.2	52.6	57.4	55.9	42.6	48.4	95.2	47.2	54.1	94.4	169.5	97.8	68.8	56.1	46.3	42.3	40.1	24.3	3.9	359.5	27.2
22	41.0	36.3	47.6	51.2	47.3	55.6	54.9	51.3	14.8	46.0	63.3	51.3	53.7	47.8	48.6	45.6	21.3	0.1	224.0	34.0	29.9	19.2	17.6	13.1
23	9.2	12.0	6.5	10.0	26.7	1.0	17.6	15.4	43.9	43.9	50.6	62.5	101.0	61.9	123.2	155.8	169.2	327.1	312.2	343.1	41.9	15.3	357.1	31.4
24	49.6	52.3	52.8	53.7	55.3	53.2	53.0	51.8	56.5	54.7	64.0	47.2	67.1	41.6	52.3	40.6	28.8	40.2	82.3	51.1	48.6	42.4	46.2	42.3
25	39.9	34.3	40.4	125.5	59.6	41.1	43.8	37.1	45.4	49.4	51.5	44.3	101.5	68.0	37.8	49.8	54.7	48.5	9.0	53.4	61.2	59.0	57.4	53.9
26	40.5	58.4	56.2	50.9	51.5	50.3	44.7	42.2	48.5	52.6	71.3	61.5	44.5	42.4	40.0	40.2	49.1	33.0	308.3	57.4	39.6	37.4	22.9	27.4
27	19.6	23.8	24.4	30.2	29.1	24.2	291.7	26.1	30.4	61.9	170.0	203.8	202.5	205.6	207.9	209.0	208.8	215.0	210.6	223.1	41.9	28.1	26.0	29.6
28	26.8	30.1	26.6	31.1	28.3	31.5	31.0	31.5	38.3	95.6	197.5	195.7	204.4	197.9	208.8	205.0	208.7	213.2	206.2	204.2	249.0	13.2	29.2	260.8
29	18.7	31.3	11.1	24.6	18.3	23.1	16.5	28.3	36.4	46.5	40.4	51.5	96.0	182.7	205.7	211.9	201.5	3.4	215.3	202.6	332.8	15.3	16.1	22.6
30	32.5	27.8	3.1	7.7	16.9	9.3	9.4	7.0	14.4	356.0	359.1	347.1	3.5	349.5	356.8	354.3	355.1	352.6	354.1	345.5	4.5	1.3	346.5	355.2
31	355.1	336.7	341.7	337.1	332.1	350.0	335.8	326.5	358.5	350.5	357.4	0.9	355.5	355.7	356.9	356.2	358.8	13.8	26.1	28.0	77.7	54.7	59.9	55.2

Total Hours in Month 744 **Hours Data Available** 659 **Data Recovery** 88.6%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	55.4	49.4	42.1	344.7	317.7	337.9	328.3	309.1	307.0	310.3	308.8	332.7	312.2	60.6	77.2	91.4	111.2	154.2	173.4	199.4	176.8	170.9	159.9	170.5
2	174.2	171.0	172.6	204.0	193.0	197.4	123.6	145.8	122.2	185.4	50.4	79.7	93.7	74.0	93.0	42.9	32.0	35.1	26.6	19.8	11.1	24.2	21.8	10.8
3	24.1	21.1	19.7	8.9	9.5	9.4	9.5	14.8	13.3	1.9	6.4	6.5	10.3	9.9	1.1	359.9	8.2	18.9	24.7	19.5	22.9	6.8	12.1	10.6
4	351.2	12.6	13.6	29.2	32.9	28.4	27.0	29.1	26.5	26.2	22.0	66.0	199.4	183.7	169.2	199.5	195.4	196.9	201.1	183.2	271.3	23.8	6.3	42.6
5	32.1	304.9	334.3	327.4	32.5	44.2	311.8	339.2	306.1	291.6	318.4	303.6	302.4	292.6	114.0	76.5	149.2	149.0	144.3	50.7	339.1	298.4	290.8	313.4
6	313.7	314.7	316.1	43.3	45.2	51.1	60.9	62.3	63.2	50.9	44.7	41.1	41.2	45.4	41.2	43.5	43.9	38.4	33.7	16.0	41.6	34.1	270.6	357.4
7	31.7	229.8	34.1	27.7	7.7	21.8	27.7	27.3	32.7	29.5	32.4	25.3	45.7	86.2	173.9	273.6	261.8	260.6	128.0	339.5	320.2	315.4	0.5	357.0
8	356.7	351.4	350.1	15.9	1.1	14.2	7.2	347.6	345.7	354.4	348.8	5.4	8.4	338.9	330.2	355.3	348.7	23.7	22.6	25.4	35.2	31.7	10.5	25.4
9	24.6	293.8	334.2	32.3	32.5	3.8	27.5	32.9	34.0	35.9	42.7	57.2	179.4	202.0	197.6	206.4	190.0	147.3	151.6	11.7	16.6	68.8	27.5	322.5
10	323.3	49.5	17.8	57.1	56.2	182.4	190.3	199.2	191.2	199.1	189.4	198.9	195.5	199.3	203.0	193.6	200.7	196.1	210.4	199.3	195.6	194.8	199.9	174.5
11	67.0	64.2	70.0	39.2	23.7	4.0	19.1	39.1	38.9	39.5	29.6	32.0	18.3	12.5	25.0	22.2	22.4	17.0	14.6	11.4	7.6	4.0	2.4	5.3
12	2.3	2.6	5.1	6.7	6.1	5.4	5.8	11.8	8.7	10.1	3.1	4.4	16.5	24.0	28.7	27.3	27.7	156.4	70.8	16.7	252.4	92.9	58.2	122.8
13	301.2	307.7	309.0	310.1	308.4	308.8	309.1	291.8	3.3	315.1	319.0	336.9	170.9	187.0	180.6	171.9	152.4	157.9	101.5	47.0	298.8	296.1	312.1	312.4
14	313.3	315.8	314.8	316.8	314.2	316.9	315.5	314.8	318.0	316.8	317.9	316.5	313.7	313.1	310.5	300.4	290.6	35.5	109.2	314.8	306.4	308.5	302.3	297.8
15	275.8	291.2	284.9	282.6	288.6	291.6	311.5	301.8	72.1	306.6	307.8	326.4	308.8	310.3	298.5	316.4	316.1	313.4	316.5	329.7	321.5	28.6	4.8	23.0
16	18.6	25.9	23.3	32.4	11.4	0.9	4.7	358.7	19.0	11.9	16.5	19.6	22.0	16.2	20.3	22.4	13.1	11.5	12.0	13.6	13.3	22.8	12.4	16.6
17	18.0	15.1	16.8	19.0	18.5	13.7	18.1	12.6	11.0	9.3	20.8	5.9	18.9	7.2	14.1	19.9	27.4	14.5	8.8	7.8	20.8	29.7	29.8	8.7
18	44.2	24.1	0.4	19.6	332.4	22.2	25.2	30.6	40.5	45.2	130.7	194.0	193.5	201.9	199.3	202.8	189.1	186.3	202.1	304.5	312.9	304.6	351.7	337.6
19	308.4	311.3	315.9	314.6	315.5	315.9	316.6	322.1	33.8	41.1	18.2	35.7	45.9	40.0	91.8	94.3	39.4	24.4	302.7	207.1	50.7	26.8	8.0	32.3
20	12.2	1.2	19.7	25.3	32.9	29.1	28.2	20.4	22.7	32.1	10.8	23.7	119.4	74.4	27.2	23.7	345.2	4.4	8.4	339.4	353.7	5.9	353.0	356.2
21	353.5	357.7	0.6	5.1	9.8	13.7	14.0	10.9	8.9	7.2	10.9	4.4	358.0	358.7	10.8	356.6	23.5	2.2	29.6	25.0	5.9	329.6	345.4	353.0
22	347.9	9.5	6.8	5.5	13.2	18.3	28.3	26.7	29.7	43.1	84.9	62.1	72.1	171.3	186.9	182.3	190.3	180.9	206.6	177.4	188.7	303.1	11.5	35.8
23	19.6	31.6	22.5	25.2	15.7	25.4	19.1	29.2	25.9	26.8	11.3	27.7	35.5	35.3	134.8	201.6	202.1	261.4	253.8	310.9	311.8	308.1	308.9	313.9
24	334.8	21.5	226.7	185.3	330.4	311.4	349.6	17.7	123.1	79.6	80.1	133.1	153.5	163.2	158.9	158.2	147.7	146.1	166.8	163.0	108.7	324.7	305.1	316.5
25	318.6	321.5	335.8	358.2	4.0	19.3	24.8	30.5	31.5	33.7	13.2	17.6	25.8	23.2	17.9	15.1	4.9	2.6	358.6	3.8	353.4	356.7	345.6	13.5
26	3.6	351.3	353.9	3.8	0.7	7.1	10.2	9.7	21.5	23.7	21.8	20.2	23.3	20.0	17.9	18.3	18.0	11.9	11.5	9.8	11.5	11.5	25.5	17.5
27	6.9	3.0	10.0	10.1	10.4	11.1	12.3	11.1	7.6	11.3	14.1	27.3	27.8	36.3	117.9	15.3	18.7	320.3	268.0	2.7	222.4	358.2	3.0	19.9
28	15.2	0.7	4.6	10.7	10.1	7.5	13.7	17.9	54.9	51.1	34.1	40.3	38.6	40.0	2.9	43.2	38.3	40.4	7.8	321.6	358.9	350.8	3.0	351.1
29	350.6	1.9	314.0	317.0	314.1	309.7	307.6	312.7	308.7	310.4	313.1	32.5	15.2	54.7	357.0	318.8	314.8	312.4	304.6	312.8	309.5	318.0	16.5	11.6
30	16.7	14.9	8.6	358.4	19.9	19.4	45.1	57.0	36.8	35.8	36.9	64.2	201.1	210.3	148.4	145.7	214.9	274.6	336.0	9.9	37.5	330.1	330.9	10.0

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	23.9	356.0	11.3	3.7	8.7	7.7	11.6	7.3	16.0	22.3	23.5	24.6	29.5	30.1	29.8	29.0	25.3	25.3	27.8	26.6	20.5	14.4	14.4	16.2
2	15.3	13.1	14.5	18.3	18.8	25.6	20.9	21.1	17.3	11.3	20.9	22.1	18.4	10.7	359.4	6.3	10.5	17.7	9.6	5.4	0.9	78.4	3.0	346.8
3	345.0	350.1	0.1	11.8	352.8	355.8	6.6	9.8	19.4	22.8	26.6	28.9	27.8	26.6	19.6	7.1	22.8	2.1	352.4	343.6	348.8	0.6	3.7	4.5
4	17.5	8.9	351.0	348.0	353.7	5.8	19.6	340.7	350.0	319.0	1.6	32.0	37.6	82.2	38.2	1.5	10.3	21.6	10.5	345.1	338.3	16.1	3.6	5.7
5	355.8	0.7	358.3	349.7	0.7	7.3	6.2	11.0	9.2	7.9	9.3	3.3	358.1	357.0	62.4	24.2	24.6	46.7	93.2	240.8	231.4	278.1	329.1	31.2
6	46.0	251.5	271.9	339.2	229.8	312.6	350.2	21.1	33.9	144.3	182.2	60.2	155.9	92.2	45.5	316.6	313.4	314.7	307.4	299.6	298.9	291.7	290.6	301.8
7	309.1	302.4	294.2	294.4	296.3	292.0	291.5	295.3	295.7	305.6	312.0	301.5	304.4	43.9	1.7	44.1	65.7	95.1	104.8	100.2	51.8	18.2	314.7	312.9
8	315.9	308.1	315.4	356.5	356.3	15.7	33.0	33.3	25.2	18.1	25.2	21.8	16.1	20.8	17.6	18.6	15.0	14.4	8.9	10.5	6.7	13.0	14.3	16.4
9	17.8	18.4	17.8	20.1	17.7	17.5	17.7	17.8	19.9	16.9	14.5	15.2	18.8	20.7	22.6	24.5	25.7	26.4	24.2	25.1	23.1	20.4	19.3	18.8
10	16.4	19.6	26.5	15.2	20.4	19.3	4.2	16.0	16.5	55.9	190.8	193.3	183.9	86.3	149.6	141.9	100.8	196.0	194.8	187.6	212.1	258.5	12.8	19.5
11	354.7	24.6	28.8	24.2	244.4	24.1	22.4	27.7	37.2	41.4	46.2	78.3	81.7	177.2	143.0	61.0	59.8	23.9	324.4	348.4	21.3	12.7	15.4	18.1
12	21.1	13.9	6.2	12.2	16.0	11.6	16.3	32.4	47.2	57.1	53.7	105.7	130.1	323.7	316.3	310.5	34.6	358.1	276.4	313.8	328.0	23.6	11.7	18.2
13	1.2	6.3	0.5	13.5	7.9	13.7	27.6	45.0	51.2	61.1	40.7	42.9	49.4	165.6	147.8	46.4	46.2	238.3	297.4	3.5	12.6	6.8	348.5	214.1
14	210.4	314.6	6.1	24.6	4.1	26.8	34.5	35.2	120.8	148.1	150.1	167.6	175.0	139.2	135.1	114.6	99.5	80.0	81.0	68.9	114.4	116.0	57.3	315.8
15	277.4	251.3	239.8	251.5	11.1	31.2	331.4	37.1	37.0	56.5	112.9	166.5	183.8	204.2	209.2	212.4	208.2	207.7	197.7	187.0	131.1	9.5	346.7	280.9
16	344.4	292.3	317.9	318.0	318.8	315.9	321.7	27.1	59.4	51.3	63.8	68.5	139.5	166.1	177.5	205.5	213.5	212.2	207.9	216.2	232.2	235.9	227.1	253.9
17	19.8	21.0	21.5	19.7	19.2	29.0	27.5	30.7	25.8	28.5	34.1	108.3	115.2	117.5	130.4	132.4	142.0	186.6	288.8	165.8	191.9	153.7	331.4	349.5
18	11.8	21.8	24.4	26.3	27.1	32.5	37.6	67.0	158.5	110.0	106.1	134.4	158.0	102.7	143.6	23.2	66.3	111.7	167.1	154.1	141.6	127.1	19.2	299.8
19	308.0	300.9	313.7	318.6	321.3	330.7	45.6	34.1	35.0	47.0	194.1	169.0	148.6	97.1	26.2	91.8	71.3	61.9	2.0	350.0	346.7	19.9	345.5	18.1
20	13.1	4.0	5.8	15.6	15.5	5.4	4.6	5.0	3.8	7.8	7.2	7.1	15.5	22.7	23.6	16.7	10.9	0.7	25.3	21.0	8.9	343.7	332.9	26.0
21	8.6	30.2	359.6	39.4	9.3	18.0	32.8	39.5	324.6	311.1	317.4	321.5	315.6	310.4	124.6	172.6	153.8	177.3	302.8	301.6	307.3	309.5	311.5	314.0
22	324.8	6.1	10.0	3.8	15.5	19.4	32.4	41.5	44.2	49.3	116.3	194.6	50.7	314.3	320.8	318.2	318.5	315.7	316.3	313.4	322.7	17.0	6.6	16.2
23	16.1	23.2	18.1	241.4	9.4	28.6	49.5	38.1	172.3	179.7	183.2	166.7	184.6	199.6	188.4	184.8	186.4	197.7	207.1	342.4	80.4	9.7	16.9	18.2
24	16.6	16.2	21.7	24.0	344.2	24.8	25.8	35.1	125.4	207.1	211.2	195.9	201.0	170.1	196.6	201.0	194.3	200.8	294.0	173.5	357.0	23.5	26.0	21.8
25	24.0	17.1	358.1	188.9	31.5	28.4	37.1	69.5	50.3	163.4	204.9	213.5	203.3	173.1	164.2	168.5	155.4	164.2	25.0	319.1	16.6	21.0	24.0	21.8
26	23.1	24.7	19.9	14.3	17.0	11.5	27.7	30.5	37.1	73.5	204.8	201.0	203.6	205.8	190.5	203.2	192.0	217.9	212.0	226.0	6.2	18.4	21.7	26.6
27	30.4	21.0	242.0	229.5	17.9	12.7	21.7	28.4	29.8	41.4	53.5	207.0	195.4	205.9	207.4	204.0	203.2	215.1	225.1	227.1	15.1	22.3	26.5	24.6
28	34.0	32.1	3.3	20.4	31.4	30.5	40.7	140.8	192.0	204.6	206.1	207.6	205.8	205.8	206.9	209.3	207.3	203.6	205.9	221.0	243.7	241.1	223.4	225.4
29	246.6	35.5	4.8	263.7	302.4	21.6	33.0	38.7	212.8	189.4	181.6	180.3	183.1	197.6	171.9	143.5	51.5	91.3	223.6	230.2	240.8	252.4	297.1	297.9
30	281.4	337.1	18.2	28.2	29.0	38.0	33.9	95.2	132.2	122.8	50.0	82.9	74.9	222.0	276.1	240.6	217.2	31.4	136.0	335.6	279.6	280.9	149.0	104.0
31	340.2	12.5	24.0	29.2	23.0	13.4	17.8	26.0	48.2	178.2	152.6	183.5	186.0	188.7	194.9	189.9	208.1	200.6	188.9	177.0	161.6	166.3	213.8	194.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	358.2	302.1	11.7	332.8	13.2	13.3	47.2	59.5	155.4	156.0	156.7	154.1	133.9	173.6	179.5	166.0	175.2	172.7	186.6	218.7	224.2	216.9	12.8	20.6
2	32.6	14.8	28.6	12.2	13.1	13.1	41.6	49.2	43.3	34.9	34.6	37.7	41.5	11.5	102.1	103.1	116.0	131.7	354.0	290.9	340.7	354.2	339.7	12.2
3	9.9	4.6	47.6	160.6	189.8	128.9	308.5	308.5	50.8	89.7	343.9	286.9	177.3	154.8	197.3	197.0	196.6	121.3	91.5	89.3	170.9	181.5	181.3	288.4
4	304.3	309.4	330.7	8.7	10.1	36.3	38.1	53.0	64.4	115.4	134.4	173.1	193.1	160.1	159.7	173.7	185.0	213.1	226.7	227.4	240.7	251.1	13.0	25.2
5	23.9	27.5	23.2	31.9	340.8	40.0	37.5	42.9	85.9	135.5	198.5	203.8	184.1	183.0	186.2	190.9	189.0	194.5	195.0	220.5	216.0	220.7	245.5	334.8
6	28.2	28.3	23.7	16.6	31.0	36.2	42.3	67.1	193.2	160.9	199.2	187.4	174.4	196.2	207.1	206.8	190.3	209.1	263.2	313.9	336.0	8.8	344.8	354.2
7	356.8	6.7	356.0	25.6	2.2	4.1	12.7	325.1	13.3	348.5	336.0	86.1	171.9	332.1	340.8	88.3	8.4	325.3	292.8	279.6	11.5	324.8	337.2	343.0
8	321.4	1.4	354.5	345.7	340.6	351.4	346.9	352.6	351.2	358.9	3.3	2.9	12.8	8.4	7.3	11.8	16.0	14.2	11.5	7.3	7.7	9.1	9.1	9.2
9	7.8	9.1	11.1	13.9	14.2	14.4	11.9	11.7	9.7	10.2	9.2	14.1	13.0	10.4	5.7	14.3	9.9	64.4	16.8	1.7	7.8	348.1	341.6	308.8
10	2.7	3.7	342.4	5.7	36.7	24.9	12.1	11.4	28.9	73.6	69.9	308.8	30.1	339.9	348.4	54.7	22.4	0.8	10.5	331.8	335.3	348.1	344.5	333.9
11	295.1	354.6	319.4	3.6	7.9	9.3	352.5	353.9	349.6	2.0	4.0	6.1	3.2	9.0	6.8	7.3	0.5	0.7	3.8	347.5	352.1	354.8	352.0	353.7
12	350.1	359.6	353.5	358.7	353.8	1.3	1.8	8.5	25.9	4.1	17.7	183.6	194.0	67.4	168.5	181.5	164.6	237.9	214.4	217.5	219.7	241.8	266.3	234.3
13	2.3	338.2	340.9	295.6	132.6	194.8	200.3	33.1	17.6	146.3	205.6	198.0	202.7	202.1	201.8	207.0	194.9	183.8	181.3	182.4	190.1	189.7	206.5	297.8
14	286.5	30.6	12.4	23.8	247.7	288.1	7.3	29.5	17.3	205.9	198.4	182.9	203.9	201.9	201.1	189.8	36.9	29.6	29.0	13.4	346.0	18.0	11.5	9.3
15	12.8	8.6	13.7	0.9	15.3	262.3	24.5	143.7	191.3	175.9	190.9	204.7	194.4	206.8	199.7	199.0	214.7	214.9	231.6	223.5	188.7	344.0	348.4	340.3
16	309.7	25.7	44.0	233.6	207.6	202.1	204.5	209.4	201.1	202.0	203.2	203.1	194.3	161.9	234.3	223.4	218.9	224.2	242.7	221.8	30.2	25.6	34.6	32.8
17	35.6	30.9	225.8	232.9	206.5	216.1	211.5	215.4	208.5	208.2	210.7	229.6	250.8	215.6	222.3	222.7	215.1	211.0	213.5	222.2	205.2	18.3	23.9	24.7
18	25.9	14.5	26.2	25.5	15.4	21.7	19.5	10.8	4.1	11.2	12.6	9.4	11.6	8.2	7.8	358.5	348.1	5.5	4.5	14.0	4.9	21.5	22.9	20.4
19	16.2	8.1	4.5	3.4	13.6	14.1	14.4	12.9	16.7	9.8	11.5	20.6	27.0	23.0	25.5	40.7	212.1	215.4	222.6	226.6	213.9	4.7	22.1	25.5
20	20.5	8.7	360.0	213.2	23.7	196.7	38.8	200.0	208.5	207.0	209.4	228.0	143.9	177.3	2.4	333.3	332.1	268.1	220.1	238.8	258.7	247.5	243.9	292.3
21	22.9	24.7	21.4	26.5	19.4	26.8	29.7	27.7	34.5	74.9	187.1	201.0	198.2	203.9	203.8	197.0	202.3	202.5	190.0	203.0	204.5	198.9	192.1	316.0
22	263.9	205.3	232.0	266.6	9.5	20.1	4.0	292.3	120.0	324.0	355.7	1.9	37.3	330.3	266.6	61.3	301.5	278.0	277.7	264.7	264.8	283.7	288.5	22.8
23	26.2	24.9	26.6	20.9	227.1	216.3	212.0	14.1	36.6	39.1	61.0	190.4	180.8	203.7	208.8	209.7	209.0	211.5	209.5	214.2	211.3	222.4	220.9	260.5
24	243.5	325.2	19.5	24.4	23.0	34.2	31.1	39.7	67.1	162.6	188.8	193.4	208.5	217.7	209.9	215.6	217.6	208.8	204.6	208.6	198.1	166.7	354.0	23.9
25	27.2	14.1	12.4	329.2	31.9	24.7	43.2	202.3	206.9	221.4	214.9	202.7	207.6	207.7	208.1	213.4	208.4	212.3	201.2	195.4	232.9	239.2	252.7	272.9
26	251.5	263.5	272.1	283.6	338.4	28.1	25.7	50.0	104.6	168.9	133.0	134.8	113.6	145.8	143.4	73.4	136.8	143.1	193.1	147.3	299.9	249.0	353.4	5.9
27	354.2	15.6	243.5	350.6	172.8	34.9	43.2	151.6	186.9	162.8	170.6	175.0	178.2	190.0	202.0	205.6	211.5	205.8	207.8	225.8	331.6	308.8	298.9	307.8
28	304.6	304.4	294.9	307.9	308.1	313.5	317.8	315.8	322.0	330.1	323.8	336.2	324.0	173.1	175.3	138.6	172.5	127.8	159.3	154.0	123.2	139.9	69.6	93.7
29	67.4	103.6	9.3	28.8	35.7	322.7	330.1	345.4	61.5	149.1	196.7	163.0	203.1	180.2	246.1	315.4	357.2	85.5	359.4	31.9	309.9	216.5	331.3	331.7
30	348.1	12.7	17.4	20.4	357.5	15.3	10.7	18.0	25.1	30.7	126.3	161.1	178.9	181.2	184.9	184.0	197.1	201.0	192.3	252.5	293.4	312.4	321.6	320.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	358.2	11.1	4.3	28.4	359.7	5.7	48.6	60.3	81.1	154.4	164.0	182.2	178.1	176.1	173.2	188.2	196.9	207.3	213.6	235.8	54.1	39.2	50.7	303.3
2	301.8	312.1	300.9	347.2	11.9	18.0	32.8	39.7	54.1	60.5	131.7	131.1	183.2	185.9	193.2	254.0	356.7	69.1	74.7	97.0	13.5	359.9	215.2	213.9
3	223.4	210.8	191.3	238.0	357.4	118.2	128.7	114.9	123.2	110.8	126.6	146.4	170.6	176.1	178.9	185.2	187.1	181.5	208.8	224.6	213.2	235.5	249.9	243.6
4	277.6	319.1	317.6	347.4	335.8	34.2	55.0	86.3	155.2	169.4	199.1	185.0	174.4	190.9	189.5	196.5	208.0	212.6	206.5	190.7	192.5	202.0	241.0	249.9
5	352.6	35.3	134.3	149.5	140.0	326.2	111.2	133.1	142.1	124.7	122.9	140.1	162.5	171.6	164.8	184.7	189.7	186.5	189.3	148.2	210.3	159.6	152.9	152.0
6	209.5	305.2	310.1	241.2	168.0	187.5	149.7	136.3	130.4	128.0	153.7	167.8	180.5	186.6	192.0	197.8	211.7	199.5	208.3	234.8	160.1	273.5	321.9	333.4
7	336.8	332.6	346.5	315.0	335.2	268.9	236.7	221.4	174.4	148.7	154.4	130.4	24.9	38.6	119.3	101.6	359.0	294.0	152.3	206.1	3.2	221.6	19.8	26.9
8	20.5	18.8	5.1	11.7	331.3	5.7	24.2	147.2	48.6	319.2	317.7	314.4	317.2	317.1	314.9	218.6	165.5	183.5	309.2	311.5	309.9	314.0	354.0	352.8
9	354.1	0.5	355.8	7.5	15.7	15.6	26.1	50.4	176.8	184.5	199.0	202.7	205.0	206.4	207.2	207.9	341.7	164.8	221.0	219.5	279.8	260.5	328.7	314.4
10	322.4	351.7	329.1	340.4	349.4	335.4	311.0	98.9	193.3	219.5	209.6	189.5	185.6	237.2	243.6	264.5	288.2	242.0	168.3	36.2	15.4	352.6	8.2	214.0
11	261.5	213.4	160.9	275.3	286.1	239.9	233.9	226.6	212.3	43.7	16.7	15.3	6.1	214.1	211.2	221.5	213.5	204.2	187.1	188.8	215.7	210.1	331.3	271.4
12	258.9	7.0	13.0	18.5	29.2	25.0	30.7	37.3	46.9	47.6	137.4	188.6	177.1	195.2	203.1	193.4	167.7	334.0	316.5	325.6	104.9	299.2	8.6	19.5
13	6.0	304.0	325.6	36.1	330.7	293.6	281.9	16.9	302.2	311.9	303.4	313.6	318.3	316.9	313.8	306.0	308.0	305.9	309.3	313.3	311.7	306.3	281.5	292.6
14	303.4	308.9	296.5	293.8	300.9	335.1	14.4	294.7	292.5	293.1	308.7	313.6	320.8	317.4	317.6	304.1	52.1	117.0	161.3	114.7	181.2	186.2	196.3	192.6
15	190.9	209.2	203.2	202.2	200.9	195.2	193.7	188.9	141.8	166.2	134.8	115.3	255.3	196.6	208.0	206.1	214.8	202.2	279.9	240.5	154.8	338.5	317.5	3.9
16	341.2	347.4	7.7	32.3	34.1	21.5	13.4	349.9	341.1	353.8	295.2	355.5	25.4	96.8	98.2	117.9	77.9	84.6	41.4	23.6	84.9	31.3	2.8	354.3
17	345.0	336.6	345.0	355.6	343.2	332.9	356.9	356.4	301.7	335.6	11.9	322.9	5.4	12.8	6.8	18.1	358.1	353.9	13.6	20.0	14.5	359.2	18.9	7.5
18	348.0	9.2	15.4	11.4	7.2	21.0	5.2	11.5	49.2	132.1	105.0	77.8	48.6	79.2	50.5	349.3	114.7	168.5	167.1	324.8	346.4	311.8	259.2	338.0
19	334.2	355.1	325.7	348.0	354.8	359.6	3.1	4.2	10.1	21.8	25.7	27.3	21.5	23.2	23.4	27.1	17.9	14.8	16.4	5.5	333.2	230.4	320.6	4.6
20	19.5	2.3	18.5	16.0	21.9	18.2	24.4	20.0	22.6	19.7	18.9	24.0	21.0	17.1	20.7	22.7	13.9	5.3	13.2	11.8	246.4	219.3	220.0	25.7
21	30.1	16.7	22.2	278.5	223.0	16.8	9.0	21.1	22.3	20.0	17.0	22.0	23.5	18.6	16.8	42.3	214.3	209.8	202.2	34.5	2.4	226.5	227.1	240.3
22	214.2	212.0	212.4	215.0	20.7	18.6	18.6	14.4	13.8	7.2	12.0	9.1	5.9	12.9	201.3	213.0	194.2	301.7	333.1	3.6	2.3	2.8	358.3	13.5
23	8.3	17.1	359.6	109.2	135.9	28.5	356.5	3.1	355.0	0.1	10.3	7.0	11.4	11.9	7.8	2.2	110.3	57.2	4.6	5.3	6.7	7.1	4.3	357.6
24	347.3	359.1	5.5	12.4	8.0	13.2	13.4	19.6	12.7	8.0	4.1	11.5	356.9	290.3	221.0	220.7	265.5	315.2	308.9	295.8	332.0	38.3	353.3	351.9
25	5.3	16.1	8.9	6.3	37.1	13.7	327.5	173.6	154.7	198.9	186.5	168.7	166.7	39.5	29.5	30.6	11.0	210.7	205.0	209.4	307.9	4.5	6.3	1.7
26	17.3	25.5	28.4	358.5	7.3	17.2	20.1	320.1	14.0	357.0	321.1	293.5	296.7	301.4	304.3	296.5	304.5	306.5	300.1	305.3	306.3	308.4	309.5	315.9
27	318.2	315.9	318.9	318.2	317.5	340.8	44.4	55.4	54.6	45.5	60.9	55.3	112.5	171.1	178.0	181.8	193.3	197.2	211.8	210.7	210.7	246.7	27.6	28.7
28	38.6	222.8	250.4	25.4	27.5	33.2	30.7	35.1	41.2	50.3	175.2	179.7	188.4	206.5	207.0	206.2	194.0	193.9	195.7	172.4	75.6	60.9	135.0	165.7
29	48.3	162.2	199.6	200.9	195.2	197.5	195.9	192.5	189.9	190.1	186.6	189.2	184.7	193.7	186.0	53.5	56.8	71.1	178.7	175.5	164.9	166.7	135.0	60.2
30	138.2	97.3	113.3	178.3	187.1	181.9	160.5	150.7	156.6	173.4	310.0	49.6	300.7	5.4	305.7	338.2	137.9	135.5	126.0	170.6	144.1	172.8	141.0	116.9
31	286.9	310.5	309.7	308.0	310.9	323.3	343.2	315.5	309.7	310.0	244.4	151.4	113.5	73.6	36.9	39.1	288.8	325.1	301.6	290.3	311.6	313.8	314.1	301.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	25.0	299.2	293.7	308.6	310.2	314.9	316.8	314.2	26.9	55.6	30.3	83.6	160.7	165.0	158.2	117.4	101.2	68.1	99.1	145.7	163.5	18.5	6.1	12.7
2	23.6	25.3	25.1	26.4	26.6	28.9	26.9	28.5	24.1	4.7	329.5	336.2	358.6	318.0	11.3	10.6	355.6	331.2	323.5	346.9	356.3	355.3	37.9	346.4
3	348.6	352.0	357.2	355.3	357.2	351.9	358.0	4.7	7.0	14.8	14.5	15.6	17.3	17.2	16.6	22.1	21.0	23.9	22.3	22.3	23.1	21.8	20.5	21.7
4	13.7	6.3	9.9	12.6	285.6	275.2	323.3	340.2	319.3	316.8	351.1	15.3	23.7	30.3	29.9	24.5	56.3	175.5	42.4	17.9	356.9	0.0	12.7	24.5
5	22.3	17.6	15.1	2.5	359.8	15.5	17.3	39.9	45.5	70.0	196.8	197.8	185.9	173.6	176.2	176.9	122.8	319.9	306.6	315.2	313.5	310.9	313.6	329.5
6	6.7	21.3	6.2	7.9	358.5	355.2	26.2	48.4	56.0	48.1	47.7	62.9	69.8	74.3	283.6	320.9	318.0	317.3	314.9	315.0	291.4	304.3	333.1	329.9
7	314.1	326.0	335.4	11.7	0.1	27.4	30.7	40.8	50.9	57.3	65.2	64.7	304.0	310.2	312.7	314.0	313.1	303.4	309.1	316.2	310.9	313.9	306.3	306.1
8	304.2	307.8	311.4	313.0	314.4	315.6	316.9	333.6	43.6	63.2	67.9	312.7	53.3	47.5	150.9	146.6	105.1	46.6	62.6	331.7	316.7	318.5	346.2	343.4
9	28.5	346.8	350.0	3.7	24.3	16.2	24.4	32.9	29.7	32.3	50.4	158.9	247.8	103.5	171.2	225.0	255.8	150.6	147.8	271.2	242.9	212.1	215.5	226.2
10	223.4	228.1	298.8	319.6	299.7	304.7	338.2	4.0	10.2	105.8	310.9	352.6	334.4	319.1	315.5	341.3	345.1	331.5	324.7	329.8	319.7	308.7	323.6	311.0
11	300.1	354.6	20.6	44.1	257.5	311.7	338.0	310.5	302.7	35.8	66.2	143.3	204.1	203.7	192.1	190.7	189.3	195.8	207.8	186.7	159.4	179.1	198.0	208.3
12	219.6	6.7	195.5	349.2	331.4	17.2	347.5	21.7	57.3	103.7	102.7	148.2	176.2	213.8	208.9	217.9	218.9	319.8	177.9	177.6	171.7	220.4	253.2	193.4
13	190.9	186.7	193.6	163.1	185.4	158.5	189.7	194.6	184.7	180.9	181.2	198.5	202.5	201.0	200.4	201.2	203.3	195.9	200.5	203.7	36.4	37.5	345.3	6.2
14	357.8	319.7	9.5	359.6	350.7	17.1	24.0	25.4	30.7	20.9	353.3	325.7	350.1	34.5	8.1	297.1	328.0	332.5	4.7	346.3	348.1	352.4	345.2	2.2
15	11.2	3.5	357.0	1.7	359.6	358.5	359.3	356.0	7.1	358.7	3.9	5.0	10.9	6.7	357.6	354.7	358.7	10.7	19.9	27.3	19.3	25.1	219.1	216.5
16	213.2	211.7	27.8	26.6	25.9	25.6	26.0	54.3	61.4	171.3	197.8	208.4	212.8	206.3	202.1	203.0	200.6	202.5	202.6	196.1	203.8	208.6	211.2	212.1
17	194.8	230.8	246.4	218.5	234.7	235.4	210.0	197.4	245.1	193.9	178.2	193.0	148.1	151.9	177.1	182.2	182.0	179.8	178.2	182.4	182.2	203.4	178.5	199.3
18	198.2	189.3	191.9	190.3	203.7	7.1	194.7	246.2	238.6	37.3	34.4	71.8	207.2	208.2	228.5	196.6	199.3	5.2	195.1	205.0	221.5	222.6	212.0	217.3
19	215.7	144.0	211.9	222.8	216.0	205.1	208.4	199.7	190.6	208.2	212.0	190.8	175.7	187.8	174.1	20.8	27.0	17.2	6.8	359.4	16.0	18.2	10.7	5.0
20	356.7	338.3	350.8	359.3	5.6	13.9	14.5	20.4	37.2	36.7	83.5	108.5	184.4	196.1	145.2	167.4	176.7	238.3	329.6	203.3	205.1	116.8	337.7	308.6
21	97.4	213.5	306.9	8.7	311.1	289.0	24.6	35.9	45.3							306.1	226.6	223.7	222.6	169.6	110.5	24.2	4.3	352.9
22	318.1	352.9	349.4	328.7	346.9	10.4	359.7	337.1	166.4	196.0	173.1	66.4	135.6	180.1	191.8	194.1	181.5	194.1	164.0	193.0	184.1	174.1	295.7	318.9
23	358.7	248.9	233.5	240.3	357.1	23.6	17.0	32.2	36.3	46.4	147.6	197.9	206.6	192.9	168.5	187.1	200.3	214.2	272.1	279.6	355.8	354.4	357.1	50.6
24	34.0	330.4	340.7	336.0	12.5	11.1	1.7	4.7	8.7	11.2	14.7	18.3	16.8	17.5	18.3	19.7	350.6	213.9	202.4	298.8	330.8	317.6	303.9	216.1
25	201.4	71.8	19.6	254.1	354.8	306.8	171.7	99.1	181.8	101.8	109.8	108.4	108.0	155.5	175.3	134.9	166.7	282.6	301.3	325.5	1.7	8.7	17.4	19.6
26	14.4	45.0	157.0	244.9	273.2	14.5	23.4	20.0	13.3	13.6	4.2	6.0	2.0	22.7	14.3	13.4	13.0	14.5	12.7	13.8	16.8	17.7	10.7	10.7
27	13.3	357.1	18.5	14.0	13.5	14.1	24.7	32.7	36.3	38.7	66.0	100.2	84.8	154.0	177.0	177.8	133.8	99.3	95.7	38.1	150.2	96.4	103.6	28.3
28	157.6	50.5	353.1	90.9	291.8	307.3	299.6	285.7	311.2	307.0	309.3	314.6	318.1	283.7	145.2	290.8	314.5	309.6	310.8	300.6	303.4	294.5	286.3	305.3
29	308.1	314.3	315.6	311.8	311.2	312.8	317.3	55.0	59.1	55.2	37.4	112.9	159.6	172.9	187.4	199.1	201.3	205.8	187.9	193.3	235.4	261.4	29.2	28.1
30	5.2	20.0	25.2	355.4	359.5	6.5	0.4	355.7	353.7	4.9	6.0	7.5	13.6	14.5	10.9	12.1	14.5	16.0	18.0	18.1	22.0	17.5	16.9	8.7
31	358.1	266.6	273.8	345.4	357.0	336.7	313.6	304.8	343.2	29.0	36.8	86.6	167.6	169.6	163.7	182.3	188.2	22.3	20.4	9.2	6.6	359.8	338.7	335.0

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	7.8	11.9	17.2	15.9	2.6	18.3	22.8	22.8	31.7	36.3	49.2	124.3	176.7	201.7	204.9	193.1	195.5	223.5	223.5	224.7	247.7	25.0	22.8	8.7
2	12.3	17.9	26.3	357.7	11.1	10.0	11.6	25.0	46.8	74.7	175.8	170.5	165.1	194.4	33.7	18.0	16.5	331.7	359.9	11.0	228.4	232.0	237.2	252.7
3	24.6	23.0	24.8	21.7	24.7	19.2	10.3	31.2	25.4	46.2	185.1	204.5	213.3	217.0	212.7	211.7	217.8	238.7	226.3	223.5	353.9	5.0	24.1	21.5
4	22.5	318.8	101.0	357.1	25.4	26.6	19.6	16.4	31.6	139.5	191.1	181.8	192.2	206.9	207.7	209.2	222.5	225.9	226.1	226.6	224.3	216.9	206.2	176.0
5	240.8	275.9	260.0	231.1	347.8	271.2	310.1	358.7	326.2	171.7	196.6	158.4	190.2	195.4	344.5	17.2	20.8	9.4	2.7	3.2	13.5	0.8	13.0	13.1
6	18.3	18.3	17.0	22.4	11.8	18.9	12.2	22.3	32.4	49.8	62.5	58.7	54.4	320.3	310.6	321.7	186.6	207.3	210.6	189.8	305.9	299.2	309.2	311.0
7	313.5	325.7	359.6	359.6	4.4	3.3	21.2	29.8	29.2	22.3	47.0	124.4	122.4	99.0	117.7	29.8	68.0	219.4	4.6	344.8	350.4	323.6	301.1	293.4
8	289.5	262.8	286.8	118.5	16.1	16.9	2.0	359.9	347.0	348.0	348.6	351.1	12.3	345.2	346.0	352.7	325.8	315.3	349.8	351.8	356.6	324.7	354.3	351.2
9	23.4	360.0	12.8	359.6	359.9	0.1	11.4	11.9	11.6	18.6	22.6	14.6	13.3	15.6	19.6	16.8	359.0	355.9	228.0	0.3	357.1	252.8	338.8	26.9
10	21.2	24.7	15.0	15.1	15.6	17.6	3.5	18.2	29.1	38.5	50.0	172.2	200.8	218.7	215.6	214.1	208.3	213.8	219.6	221.6	218.9	356.8	30.1	16.0
11	22.6	21.4	11.9	5.8	331.8	24.6	23.4	13.4	36.2	45.6	161.0	192.6	193.8	191.8	184.3	193.4	181.5	194.9	198.7	271.9	340.2	16.7	24.5	21.3
12	16.4	0.7	13.4	20.1	12.3	12.3	9.4	18.1	31.9	38.2	48.7	148.7	182.2	197.3	199.9	203.8	208.0	218.0	213.2	20.8	34.4	22.1	21.9	19.3
13	18.3	2.8	8.5	273.1	20.5	18.0	32.0	15.2	34.7	71.1	195.3	198.8	203.9	203.7	192.6	219.4	221.0	192.8	7.1	168.8	190.8	155.5	160.0	110.0
14	355.4	14.9	344.1	354.9	5.5	3.8	359.0	0.2	1.1	1.2	357.6	1.8	3.8	0.3	357.6	358.7	354.6	3.0	2.0	6.2	9.7	11.2	11.2	10.1
15	9.5	11.7	12.1	8.8	8.3	8.8	8.5	14.5	10.4	12.8	9.9	8.6	8.1	8.8	3.4	357.5	356.2	359.6	352.9	346.1	352.1	355.5	353.8	353.7
16	1.2	4.0	1.4	4.4	359.0	359.9	8.4	8.9	8.2	12.6	9.0	2.4	6.8	5.3	12.3	12.5	358.0	352.8	355.6	359.8	1.0	11.4	1.1	357.2
17	353.2	5.2	16.3	16.8	20.2	14.5	8.6	2.7	22.5	26.9	34.0	36.8	39.5	197.3	205.8	207.0	209.5	207.0	208.0	230.4	241.4	282.6	17.6	20.1
18	23.6	28.2	30.1	26.2	28.4	33.3	18.6	21.1	7.4	10.6	6.1	0.7	336.3	348.3	354.8	358.0	3.9	3.5	3.1	1.0	3.0	4.6	6.4	9.9
19	11.6	11.2	12.1	13.2	13.1	13.7	10.7	12.9	11.7	11.7	9.8	11.5	12.5	13.2	11.6	13.3	15.9	21.6	16.1	18.3	17.7	11.9	357.5	15.4
20	16.8	31.9	358.3	327.8	319.9	310.1	303.1	304.5	62.7	349.0	121.2	184.3	172.9	103.6	167.5	144.9	124.6	90.8	145.9	184.1	171.5	97.7	293.9	304.3
21	306.5	333.8	338.1	3.3	18.3	10.8	19.6	359.9	343.1	342.4	337.6	342.3	347.9	4.4	9.7	8.6	14.1	13.7	17.0	16.4	16.3	17.8	16.2	13.7
22	7.8	3.0	149.3	178.9	34.4	91.3	179.5	187.1	199.8	195.2	198.9	204.6	198.5	200.4	195.9	197.2	204.0	202.6	205.6	196.5	194.8	196.5	198.2	196.5
23	190.1	199.4	193.3	193.1	201.0	203.3	195.6	195.8	192.3	189.3	189.9	202.9	204.1	199.1	201.3	64.8	87.0	277.3	251.9	328.2	267.4	356.5	28.1	23.8
24	29.4	25.5	28.1	29.0	24.5	17.8	19.0	12.5	24.5	30.7	39.8	58.5	145.3	151.2	143.8	143.9	157.0	303.6	311.8	305.0	316.3	6.9	5.0	11.7
25	8.6	6.4	6.4	7.9	359.0	0.1	358.9	0.7	29.8	36.4	36.8	214.4	28.9	17.2	36.4	68.9	32.9	4.0	357.7	352.3	349.1	356.0	2.1	3.2
26	18.3	16.3	19.0	17.4	14.0	14.5	23.2	22.0	21.1	16.4	18.9	10.8	13.7	2.7	11.3	1.1	358.7	6.5	23.8	23.7	28.7	26.1	25.0	25.4
27	24.8	19.9	345.5	352.6	277.7	221.5	40.5	321.4	296.9	10.8	28.9	35.7	40.8	91.2	143.7	151.3	147.7	109.6	16.2	357.0	14.6	12.7	19.3	20.6
28	22.2	20.9	15.1	2.1	14.7	17.6	16.1	23.5	25.1	30.5	38.6	59.4	203.0	207.6	198.1	185.2	180.6	159.6	181.2	153.5	150.9	156.5	164.6	153.8
29	45.2	63.2	26.3	70.7	175.8	68.2	17.3	50.7	61.8	114.2	200.5	201.8	179.4	74.8	72.7	64.3	53.8	74.3	53.4	50.3	70.2	101.3	138.5	195.2
30	168.2	190.4	197.5	56.5	276.0	12.5	302.8	346.3	42.0	37.5	36.7	41.8	52.9	128.4	117.7	66.9	115.8	21.9	3.5	13.7	18.3	8.6	0.5	13.7

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	13.7	12.1	8.8	6.9	8.6	2.3	5.9	7.9	5.7	1.6	11.0	8.0	7.5	10.3	8.9	3.3	358.4	359.0	354.1	3.7	0.1	357.8	353.0	349.5
2	351.9	346.2	359.0	359.3	1.3	6.9	11.2	16.3	8.8	7.5	10.3	2.5	0.8	8.4	2.4	11.6	3.0	358.9	341.5	351.1	25.3	325.0	344.8	319.9
3	304.0	357.0	358.1	0.3	1.3	3.9	350.6	345.5	341.4	24.8	91.1	124.9	163.9	130.7	94.4	135.4	36.4	0.9	213.7	236.2	293.5	234.0	224.2	230.8
4	20.4	18.6	264.4	216.9	191.0	187.7	264.4	240.7	14.0	31.2	21.1	359.6	359.6	353.9	227.4	145.3	27.6	354.8	346.9	8.2	22.5	21.9	1.6	13.5
5	269.3	214.5	3.8	13.5	3.0	344.8	197.0	195.4	199.2	200.0	203.8	204.1	198.5	198.4	193.9	191.2	185.8	175.2	194.8	191.8	192.2	232.7	1.9	314.6
6	328.4	3.6	344.9	7.4	19.9	27.8	20.2	13.0	0.0	67.5	183.7	187.9	187.8	190.4	186.2	192.8	189.0	183.0	178.2	276.5	22.2	192.1	172.8	171.6
7	173.7	171.1	178.3	177.8	186.0	199.4	185.2	201.0	13.5	121.9	291.2	280.3	210.6	212.3	208.9	229.5	284.7	32.7	197.4	195.6	231.9	245.4	358.4	169.1
8	312.2	323.3	346.7	6.6	4.8	3.4	359.7	6.3	7.2	11.2	9.8	13.5	15.0	14.7	10.5	9.2	7.3	8.9	7.2	5.8	13.9	13.2	10.3	11.1
9	2.0	2.3	6.7	6.8	357.4	355.9	354.0	1.7	4.5	339.7	349.5	15.5	16.0	1.7	4.2	354.3	43.2	18.9	11.6	328.9	298.5	329.5	355.6	356.3
10	161.3	165.0	170.1	13.0	335.7	324.9	349.6	24.2	3.1	23.9	35.4	27.8	36.4	351.5	214.0	180.1	170.4	178.7	180.1	181.7	187.9	192.3	190.3	188.9
11	229.1	254.5	347.0	18.7	14.6	20.0	356.6	8.4	26.0	22.3	37.9	83.5	199.2	201.3	210.5	61.5	343.6	325.1	318.8	340.8	24.2	25.0	27.5	29.5
12	32.5	22.5	29.6	25.9	23.1	28.9	26.6	27.1	24.2	31.0	25.4	16.9	352.0	36.6	329.6	352.5	357.4	11.3	18.5	350.8	357.6	359.5	349.7	23.3
13	7.6	7.7	4.8	8.2	4.5	1.7	1.0	5.0	21.1	31.0	33.8	36.1	61.2	203.9	200.9	206.1	208.8	206.6	268.3	330.9	346.8	19.8	16.6	18.7
14	20.7	43.2	15.9	354.4	26.7	300.4	87.8	316.7	293.6	330.0	306.8	310.6	66.1	174.9	219.8	169.1	132.2	141.6	211.8	213.6	311.7	19.5	354.5	1.7
15	7.1	5.0	20.4	26.0	18.8	25.8	23.2	5.6	18.5	17.1	24.6	31.6	26.3	26.9	31.9	31.4	34.5	20.9	3.6	4.1	358.2	358.1	356.5	335.4
16	354.8	4.2	351.4	16.1	4.3	17.3	23.2	23.8	17.0	13.1	13.0	18.1	18.8	20.1	12.4	7.8	7.0	0.8	0.7	354.4	2.2	359.2	334.1	338.6
17	350.9	351.7	345.3	342.9	337.8	345.7	354.0	2.1	0.7	358.4	1.1	24.5	32.7	31.8	30.7	37.9	8.8	355.6	4.0	352.8	351.9	348.6	359.8	358.6
18	3.6	352.7	349.8	0.3	355.2	348.4	357.8	6.2	2.7	5.7	11.1	12.3	17.6	20.2	17.0	16.0	18.7	323.9	293.5	297.3	315.1	312.5	204.7	194.3
19	180.2	184.3	184.1	173.2	192.8	183.1	160.4	359.9	7.3	18.1	32.3	29.2	31.1	33.5	30.7	1.2	9.8	20.2	29.0	27.9	26.4	12.6	231.4	37.2
20	275.9	350.1	6.4	191.8	119.1	0.1	276.7	355.9	8.3	38.9	40.1	67.2	56.4	43.7	39.7	40.7	325.8	257.1	5.5	24.3	17.5	27.0	23.9	17.1
21	15.6	17.2	31.1	15.3	43.2	37.5	63.2	134.7	200.2	168.4	178.1	184.5	171.3	178.3	150.8	80.8	104.5	119.7	247.7	313.4	313.5	346.1	3.3	15.0
22	14.3	18.9	20.6	14.3	16.3	17.6	14.4	21.1	20.3	16.0	38.3	37.4	50.8	151.8	203.6	198.8	336.1	317.6	6.7	3.1	3.2	4.8	12.0	342.2
23	335.3	314.7	313.3	303.5	301.2	3.3	63.5	93.6	99.1	64.8	151.5	184.1	147.1	92.6	151.9	49.4	130.4	99.4	51.7	184.4	87.6	69.4	333.8	293.3
24	3.3	3.4	7.4	25.6	6.7	3.9	6.4	12.2	5.1	8.3	6.9	13.1	15.6	21.9	22.7	24.7	23.9	24.0	21.4	0.5	13.4	310.3	329.9	342.6
25	296.2	8.1	9.8	12.9	7.9	61.0	172.9	146.0	131.2	165.2	158.2	137.5	147.1	152.3	146.7	93.9	144.4	172.4	95.1	66.4	156.6	130.9	124.1	76.5
26	63.7	346.6	303.8	297.1	306.4	306.6	311.2	315.5	310.5	311.6	310.8	314.3	316.2	309.0	313.8	313.6	312.8	301.3	312.8	309.2	313.8	315.0	316.0	316.3
27	314.1	312.7	312.6	310.6	311.0	312.9	314.4	315.0	10.4	57.1	50.6	56.5	327.7	313.3	314.8	307.5	303.3	346.8	42.4	354.5	62.7	309.3	309.8	312.5
28	322.3	324.8	311.7	316.7	1.6	18.8	10.6	7.4	19.1	30.5	34.4	34.7	31.5	28.4	25.6	14.1	17.0	12.6	15.8	23.2	16.4	20.0	24.1	26.3
29	26.0	22.0	23.4	26.4	19.9	24.4	19.9	283.8	280.1	174.5	50.2	205.0	192.0	179.0	176.2	170.5	195.1	184.7	203.9	200.8	206.4	203.9	204.3	201.5
30	200.8	207.7	203.9	213.2	204.4	218.9	321.9	14.7	200.9	182.8	201.9	204.5	188.5	197.5	196.2	185.8	11.1	170.6	292.6	153.5	321.1	3.5	17.5	10.7
31	10.7	14.3	16.6	18.0	18.3	15.3	14.4	19.8	14.2	28.7	36.0	36.5	37.7	37.8	54.5	38.1	6.3	5.1	358.3	5.3	10.9	3.7	356.6	2.3

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	5.2	9.1	1.8	3.0	3.3	8.8	11.7	9.4	5.5	34.6	46.2	50.1	45.1	47.6	47.5	47.5	28.9	49.6	45.3	42.0	32.3	38.3	3.5	40.6
2	22.0	16.2	40.5	26.8	18.9	22.5	22.7	20.2	16.5	31.6	47.4	50.4	45.9	45.4	41.2	53.7	46.5	42.2	44.1	37.2	30.0	20.1	14.9	12.0
3	358.1	21.1	8.3	26.1	33.0	29.0	24.0	15.6	38.1	38.7	48.1	36.4	42.6	42.8	42.3	44.2	12.8	42.0	38.0	44.8	40.7	40.7	29.5	359.6
4	33.9	38.8	32.4	36.4	25.1	41.9	36.4	24.8	37.4	46.6	41.0	32.3	36.2	36.2	37.0	39.8	21.8	17.4	22.2	15.3	16.5	348.8	10.6	355.3
5	356.4	355.4	8.9	4.0	9.5	20.1	27.5	14.9	22.2	31.0	34.7	34.1	34.0	34.3	26.2	20.6	12.9	19.3	20.2	20.2	24.6	14.7	15.3	23.3
6	29.1	22.5	15.2	19.4	31.3	17.1	11.9	7.1	5.0	32.5	45.3	54.1	57.0	58.2	53.3	33.2	317.9	314.9	307.8	312.3	315.3	292.6	276.8	292.4
7	161.4	105.2	149.8	173.4	177.1	128.5	156.1	165.0	157.8	188.3	183.8	183.1	184.9	166.4	139.7	118.7	90.1	39.4	87.6	306.4	298.8	311.9	316.2	314.0
8	313.1	313.1	319.2	308.5	313.9	313.9	312.6	320.2	12.9	50.5	52.9	48.8	46.5	39.4	38.4	3.6	343.3	317.0	312.2	311.2	312.9	323.5	52.0	56.8
9	50.6	42.7	14.9	7.3	46.9	10.5	44.9	49.7	15.1	64.1	33.0	179.8	81.2	29.3	21.1	6.4	2.0	24.2	36.7	14.3	356.1	343.3	12.9	36.7
10	68.6	53.0	53.9	5.9	346.1	313.1	311.6	311.1	311.5	331.8	59.6	208.0	31.4	23.9	30.7	50.3	44.6	35.7	40.1	55.1	54.0	62.9	49.3	14.7
11	28.6	17.7	30.3	32.1	38.5	40.2	39.8	39.7	54.0	53.2	55.5	54.7	54.4	57.2	57.7	29.0	0.5	41.5	2.7	71.6	356.6	59.0	38.1	41.3
12	27.7	21.1	15.4	24.7	24.2	38.3	49.2	53.3	54.7	57.1	49.7	31.7	25.1	358.2	315.4	294.7	296.7	300.9	303.1	90.7	143.3	127.2	164.0	168.8
13	171.0	143.1	76.8	102.6	171.5	148.6	173.0	168.5	287.7	313.3	297.3	315.2	7.3	323.6	332.6	304.7	308.8	309.6	306.3	309.1	307.7	304.9	302.1	301.9
14	307.7	257.2	269.6	202.1	205.4	239.3	227.2	96.4	174.9	196.5	195.8	195.2	159.6	45.0	46.8	47.3	52.5	141.7	63.1	344.0	312.8	309.1	310.1	305.3
15	307.2	312.0	310.1	309.2	311.8	314.3	314.5	315.5	311.4	315.8	315.8	330.6	25.6	24.1	312.0	315.8	315.0	312.8	313.3	313.8	311.8	310.5	341.2	329.9
16	340.7	317.5	338.6	1.9	15.6	46.5	34.9	37.2	42.7	39.9	55.2	57.4	46.8	52.6	54.7	43.9	48.1	21.0	340.1	41.5	42.8	10.3	26.9	7.8
17	45.9	42.2	46.8	42.3	27.1	41.8	34.2	33.9	36.3	32.3	47.9	50.6	56.6	56.4	45.2	56.6	51.3	42.2	45.8	42.7	35.8	46.0	45.7	41.7
18	45.9	45.2	48.7	51.1	41.6	48.3	38.9	22.9	42.1	34.2	51.3	53.6	56.2	53.3	54.8	32.2	49.6	39.4	36.5	36.7	22.6	45.9	44.8	33.0
19	54.2	332.6	311.4	312.8	316.3	311.1	352.2	31.7	45.9	39.1	58.2	21.7	310.0	308.8	307.6	307.9	305.2	303.2	307.3	308.3	318.6	45.0	52.5	40.4
20	49.5	349.3	313.0	26.7	315.1	313.0	314.7	311.8	313.4	312.7	306.9	330.0	312.1	315.8	312.7	313.4	312.5	315.9	49.3	46.7	49.2	54.2	46.0	55.1
21	55.7	57.3	58.1	53.5	55.1	53.0	51.6	48.9	47.2	47.9	47.2	45.0	45.3	38.4	37.6	19.4	312.6	314.7	324.3	324.1	326.1	11.8	355.7	30.4
22	300.4	334.4	25.6	15.9	24.3	17.1	13.9	14.7	13.6	21.7	49.2	44.4	44.9	56.5	63.6	58.3	51.6	46.0	33.8	359.5	9.3	0.7	2.0	6.7
23	4.5	1.1	9.8	8.0	4.8	11.4	16.3	18.5	11.4	16.7	39.0	40.8	35.3	32.4	32.6	21.0	15.8	23.1	26.3	30.1	19.9	27.5	28.7	21.8
24	30.9	29.4	16.9	19.2	23.6	24.7	22.5	24.7	24.0	28.7	30.8	33.4	39.1	41.1	24.1	6.2	11.5	4.9	1.5	353.1	358.1	7.8	7.3	9.1
25	18.7	18.5	19.7	15.8	16.5	1.9	357.9	10.5	10.4	8.2	11.3	18.4	22.8	35.3	24.3	26.5	20.5	17.6	17.4	20.0	18.2	20.0	24.3	20.7
26	8.1	8.0	4.8	1.8	12.1	11.7	11.9	9.1	359.7	351.8	341.6	344.6	347.6	3.7	1.2	3.4	7.4	8.0	9.5	0.8	359.9	359.6	358.3	355.3
27	342.4	348.9	343.1	346.8	348.4	351.3	351.0	353.1	358.1	13.4	4.6	13.1	16.4	8.5	4.5	4.5	6.3	11.9	16.5	15.7	14.8	12.9	14.3	15.0
28	16.5	19.6	18.7	21.5	15.8	10.8	13.1	18.6	13.8	12.8	13.9	17.1	6.7	8.5	9.1	18.3	11.2	18.2	14.9	21.2	19.8	24.7	16.7	340.5
29	17.1	29.9	14.4	26.9	19.1	18.2	16.0	26.4	15.3	13.6	21.5	30.0	30.7	27.4	28.8	13.3	19.3	19.6	23.7	24.2	25.6	29.2	26.8	27.9
30	32.4	27.6	21.9	16.4	15.8	12.2	15.3	21.3	20.1	20.1	13.1	6.5	3.9	7.5	27.0	30.3	293.0	24.3	196.8	88.5	224.7	201.7	192.6	189.7

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	155.7	104.2	345.5	301.1	296.8	311.1	305.2	312.4	314.5	328.4	4.3	26.8	31.0	30.5	24.5	11.4	19.1	21.1	19.4	13.3	14.0	17.4	24.6	350.2
2	21.7	21.8	15.5	288.6	18.6	16.4	5.1	8.3	16.6	17.8	17.6	18.7	16.5	14.0	13.2	9.9	8.8	9.6	11.3	17.7	10.3	17.8	16.8	23.5
3	25.1	17.6	12.4	16.4	17.4	9.5	12.6	15.9	24.7	2.8	9.0	25.6	16.1	21.2	34.4	198.6	227.1	200.0	22.6	306.7	347.5	220.7	346.8	292.4
4	319.1	5.5	13.5	247.9	359.4	358.2	355.4	1.3	354.6	356.0	356.5	356.2	1.3	4.2	358.5	357.8	358.4	8.2	19.2	5.1	9.5	270.1	359.1	348.6
5	344.2	341.5	345.7	354.1	11.3	12.7	2.1	359.9	5.4	5.2	11.4	8.1	9.8	9.7	11.2	14.9	16.0	15.2	17.1	18.6	18.3	20.6	24.1	25.6
6	24.3	20.0	11.8	11.8	16.0	15.0	6.3	358.0	354.9	0.3	358.4	357.0	347.4	353.2	1.6	359.5	358.3	352.6	350.6	2.2	359.0	3.5	348.7	348.2
7	346.6	5.0	18.3	21.6	16.5	18.4	24.7	20.2	14.8	12.4	15.0	14.5	21.7	24.2	21.3	18.5	9.5	13.5	8.7	18.3	3.5	346.7	358.3	352.2
8	351.5	343.9	18.0	6.9	358.2	359.8	358.6	347.6	339.9	340.7	8.1	20.2	16.3	1.6	192.3	30.1	359.5	357.7	343.6	33.6	8.4	67.1	23.2	23.9
9	353.1	356.0	345.7	6.9	351.4	346.8	345.5	349.9	357.2	353.8	1.7	2.3	355.2	358.3	349.8	354.9	356.6	359.0	352.6	351.0	345.1	350.1	341.6	338.2
10	346.8	257.0	276.3	311.4	253.7	244.0	287.7	255.1	258.7	269.2	320.7	244.6	287.5	353.8	0.4	5.0	2.6	358.6	355.9	5.6	0.2	0.1	12.1	18.2
11	19.4	18.7	16.9	21.1	22.0	27.2	26.3	27.1	15.1	22.3	24.8	0.3	28.1	205.5	216.8	215.8	28.4	26.6	14.8	19.2	18.7	22.0	23.5	15.0
12	22.6	21.8	26.2	15.0	11.1	4.1	18.6	19.0	17.0	29.0	40.3	48.4	49.9	48.3	55.4	51.0	58.6	30.1	55.4	42.7	18.8	9.9	37.4	354.4
13	32.4	56.4	20.4	316.0	328.1	312.9	314.9	316.5	316.3	315.4	316.7	315.7	314.0	313.5	313.2	311.4	310.9	313.3	311.8	312.4	309.9	308.7	309.2	306.2
14	297.1	302.9	300.8	325.8	330.0	348.5	293.9	296.3	292.5	38.0	116.5	136.0	107.0	140.7	104.2	162.0	78.9	86.5	72.7	143.2	98.8	55.3	306.4	302.7
15	311.0	311.0	314.2	311.9	311.5	313.8	316.4	314.7	315.0	351.0	15.1	44.9	31.2	31.7	32.0	24.5	21.2	15.2	32.4	17.6	9.3	5.0	5.5	8.2
16	14.1	21.4	20.2	12.7	12.7	16.7	20.1	23.2	20.5	22.7	23.1	24.7	24.8	26.6	28.8	26.7	26.3	23.8	233.1	10.6	15.8	196.5	30.1	24.0
17	17.8	29.2	24.3	4.1	2.1	13.3	4.7	10.0	3.0	7.4	18.9	16.6	7.9	359.7	16.1	8.4	34.7	0.7	312.3	313.2	306.7	304.3	294.5	298.5
18	336.8	45.2	59.0	60.0	91.4	102.1	87.7	104.4	134.5	156.6	156.8	137.5	146.5	181.6	165.5	111.1	186.9	88.7	299.0	29.4	9.1	347.9	4.9	17.3
19	24.0	29.7	29.4	29.4	20.0	15.7	16.6	16.5	20.5	23.0	20.3	22.9	11.4	281.9	5.2	84.6	18.4	34.0	32.5	34.8	41.7	42.7	23.4	358.7
20	47.7	56.3	59.2	37.7	45.5	319.1	313.4	313.7	315.8	314.1	314.4	312.8	315.5	313.5	315.8	317.6	318.8	340.6	330.9	11.3	27.4	55.3	45.7	353.8
21	46.5	40.1	50.9	11.0	313.2	310.3	313.5	314.3	324.3	346.4	356.9	121.1	192.7	137.0	97.8	355.7	25.3	333.5	22.4	30.4	26.2	9.0	19.8	46.5
22	46.7	44.5	22.9	44.9	31.2	343.0	19.4	21.3	349.4	19.1	11.6	226.4	30.4	338.7	0.5	38.0	12.9	356.6	347.1	43.2	15.1	0.9	9.2	13.8
23	23.5	337.6	12.2	4.7	20.4	11.5	348.0	323.1	1.2	35.9	41.1	39.5	51.9	50.8	35.0	347.6	315.4	328.2	41.8	37.5	29.1	42.1	50.9	18.9
24	13.5	29.1	24.8	32.6	34.5	32.7	16.6	22.5	22.3	23.6	24.5	23.6	29.7	35.7	25.9	36.2	32.8	49.9	53.8	51.1	48.3	43.6	41.3	26.4
25	38.2	55.8	16.6	306.3	305.5	307.0	308.1	309.4	308.5	310.5	310.0	311.4	306.5	0.0	301.2	295.0	311.9	303.2	9.5	81.0	111.0	126.9	110.2	94.4
26	117.6	145.6	161.7	112.6	180.1	65.4	53.1	57.7	107.5	221.9	217.0	165.8	40.1	42.7	41.5	3.2	358.4	16.1	23.9	24.9	14.6	23.9	12.7	14.1
27	12.2	22.5	15.0	13.0	7.3	4.8	10.9	15.8	25.2	26.2	24.9	21.3	22.2	21.1	21.7	21.3	23.6	26.2	21.6	11.7	1.3	350.3	350.9	355.3
28	348.8	359.2	357.3	1.8	356.1	7.8	10.7	7.5	10.9	6.3	16.8	325.9	351.3	34.1	23.3	21.3	20.6	10.3	13.3	22.1	23.2	25.6	24.9	7.0
29	354.1	346.9	21.1	10.6	12.7	4.0	18.0	306.2	343.8	356.6	321.5	309.0	310.0	304.5	308.6	313.8	308.3	306.5	282.8	316.0	340.5	292.1	308.3	11.5
30	308.3	306.7	17.3	287.8	320.5	324.2	324.7	309.7	288.7	181.8	311.0	355.7	1.7	298.0	297.6	310.4	314.2	314.1	308.9	311.7	315.5	322.7	313.6	317.5
31	317.6	317.2	4.9	19.4	355.2	16.8	14.3	22.5	25.4	26.1	24.0	23.9	24.2	18.6	21.8	15.4	5.4	4.4	10.1	9.8	15.7	22.0	22.3	345.8

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.0	9.4	7.2	8.0	8.8	9.7	9.6	9.5	10.5	11.4	10.8	10.1	9.9	10.5	8.9	8.9	8.9	8.8	9.1	9.0	8.5	12.0	11.6	9.9	12.0	7.2	9.6
2	11.4	9.2	9.8	8.0	10.3	8.5	9.6	9.6	9.7	9.5	9.7	9.2	9.7	9.1	9.7	9.6	9.8	10.1	13.4	10.7	10.7	8.9	13.4	16.1	16.1	8.0	10.2
3	13.1	15.8	13.7	17.2	11.6	12.2	15.4	10.0	8.2	8.7	9.1	8.1	8.0	7.5	7.7	9.6	8.5	8.1	7.7	6.6	10.3	8.7	9.1	7.4	17.2	6.6	10.1
4	7.5	8.8	49.8	21.9	9.7	9.5	45.7	52.9	45.3	43.4	16.5	8.4	5.1	5.3	4.0	13.0	9.4	27.9	49.2	8.9	27.9	32.7	58.5	15.0	58.5	4.0	24.0
5	17.1	9.0	9.1	9.7	9.8	8.0	8.6	35.9	52.7	36.9	11.7	67.1	36.2	9.3	9.0	38.6	38.2	26.9	6.4	6.4	11.6	6.0	69.2	40.0	69.2	6.0	23.9
6	17.3	28.8	19.0	6.1	7.3	13.7	7.2	5.3	8.7	10.9	50.4	16.8	23.2	11.0	6.1	24.6	45.3	6.4	22.3	30.3	23.9	8.4	9.2	66.2	66.2	5.3	19.5
7	31.1	31.5	8.0	10.4	22.9	18.2	36.9	29.0	18.2	8.8	9.7	9.5	9.6	9.2	8.6	9.6	9.1	9.4	8.9	10.3	9.6	8.8	9.2	8.6	36.9	8.0	14.4
8	8.5	9.4	9.3	10.1	9.0	8.5	9.1	8.8	9.3	10.1	11.3	9.3	9.1	8.9	71.6	35.5	14.7	51.5	30.5	35.6	18.3	12.7	10.4	11.6	71.6	8.5	17.6
9	14.0	9.9	7.7	7.5	8.3	11.8	11.8	14.5	15.1	16.9	30.2	37.9	60.5	25.4	11.6	14.4	22.5	7.4	11.0	16.4	8.6	30.8	39.7	25.0	60.5	7.4	19.1
10	65.2	18.5	26.1	17.1	5.9	8.4	13.6	60.7	71.9	62.2	61.8	45.1	9.7	72.0	51.5	38.0	15.3	12.0	10.0	15.9	29.6	10.6	12.9	46.0	72.0	5.9	32.5
11	49.4	27.6	44.4	66.0	51.9	9.3	12.9	51.6	29.0	31.8	42.8	41.6	18.2	15.6	9.7	12.4	33.0	54.4	21.7	22.9	19.1	20.3	33.2	36.4	66.0	9.3	31.5
12	53.9	43.7	11.3	37.5	28.6	13.4	12.2	9.0	26.4	50.4	14.3	21.0	13.9	12.9	17.2	15.1	12.9	14.7	38.2	33.6	29.1	23.4	57.1	27.9	57.1	9.0	25.7
13	52.9	25.8	21.7	33.2	27.2	28.4	20.5	32.8	36.7	28.7	51.8	42.0	29.5	18.4	21.8	17.5	24.0	25.5	22.8	34.0	47.7	25.6	15.1	31.3	52.9	15.1	29.8
14	14.1	10.5	14.8	11.9	9.5	6.5	6.7	10.7	13.8	8.0	12.5	9.2	7.4	7.6	8.3	8.3	7.3	8.4	7.6	8.0	8.1	6.6	7.1	8.1	14.8	6.5	9.2
15	9.8	7.9	7.2	8.4	8.1	7.7	7.4	9.2	9.3	8.2	9.7	7.2	8.5	7.0	7.7	8.8	9.2	9.2	8.9	8.7	8.3	8.8	8.7	9.3	9.8	7.0	8.5
16	8.9	8.7	8.8	8.6	7.5	9.1	9.4	9.5	9.7	9.6						7.8	11.6	13.1	21.5	18.0	61.0	24.9	8.8	7.2	61.0	7.2	13.9
17	24.4	14.2	10.6	11.1	11.7	17.0	19.2	22.0	25.8	19.3	31.6	27.5	12.4	65.1	65.0	82.7	44.2	41.3	20.2	29.5	34.0	13.6	9.5	8.5	82.7	8.5	27.5
18	12.5	8.9	10.4	22.2	18.5	12.0	21.1	23.0	20.8	38.2	22.1	13.0	13.4	16.5	17.3	13.4	21.2	36.0	26.0	21.4	42.5	41.8	43.1	63.5	63.5	8.9	24.1
19	46.8	50.7	16.6	23.0	25.5	23.2	33.2	27.5	25.0	26.1	26.5	14.0	14.0	15.5	15.2	18.2	24.6	22.2	26.1	30.5	44.3	43.9	14.5	17.2	50.7	14.0	26.0
20	17.7	10.9	19.2	7.9	9.8	8.0	8.0	6.8	6.6	7.6	6.1	7.3	9.1	8.3	9.6	9.8	8.3	7.9	10.4	11.3	10.7	10.2	9.7	8.6	19.2	6.1	9.6
21	8.7	7.9	7.1	6.6	8.5	5.5	6.9	8.1	9.9	8.9	8.1	6.3	10.3	11.7	8.4	6.3	13.9	10.8	11.8	30.0	12.8	14.4	14.1	20.4	30.0	5.5	10.7
22	32.7	58.3	60.4	50.2	55.9	58.9	59.6	28.7	27.5	25.2	27.4	30.2	28.5	22.7	18.4	15.0	17.8	15.9	13.9	14.6	14.6	15.2	15.8	14.9	60.4	13.9	30.1
23	14.4	14.3	29.8	15.6	13.1	17.8	23.9	19.6	39.3	13.4	12.3	22.1	24.4	15.3	13.6	23.7	15.0	31.6	47.9	43.9	28.4	49.6	18.3	21.2	49.6	12.3	23.7
24	19.5	23.7	37.2	32.2	18.7	18.4	18.9	17.8	16.1	17.7	15.8	10.7	12.0	12.8	11.0	10.4	29.7	9.5	11.6	13.2	17.4	18.7	21.2	20.0	37.2	9.5	18.1
25	23.0	20.5	24.8	18.9	25.6	25.5	19.9	19.5	13.9	12.3	9.9	5.4	5.4	6.3	8.6	10.2	18.1	18.5	13.5	13.6	11.5	9.6	12.7	11.9	25.6	5.4	15.0
26	9.9	11.0	9.3	8.6	8.9	9.5	11.0	8.8	11.8	6.8	7.8	7.9	6.4	7.7	7.8	7.4	7.7	10.5	10.1	13.3	28.5	21.4	13.3	18.2	28.5	6.4	11.0
27	20.2	62.3	30.9	48.6	51.3	47.7	72.3	29.0	55.1	48.4	32.5	21.8	19.5	13.7	14.2	14.2	13.8	14.4	13.5	13.0	15.4	15.8	16.0	14.4	72.3	13.0	29.1
28	12.9	14.1	13.3	13.2	13.4	13.1	13.4	13.7	13.7	14.8	15.2	16.8	15.7	28.2	23.5	15.2	10.8	27.7	11.4	18.0	42.7	19.8	26.4	11.4	42.7	10.8	17.4
29	9.1	10.2	8.7	9.4	9.1	11.9	12.5	12.4	11.6	11.3	8.8	9.1	10.5	10.0	12.8	34.0	20.3	33.1	22.8	25.4	11.4	12.8	28.6	11.3	34.0	8.7	14.9
30	8.8	8.6	8.8	9.2	13.5	13.5	10.7	12.3	14.7	14.9	18.1	17.2	10.2	13.1	12.6	11.5	14.9	20.7	23.9	55.2	7.7	7.8	6.2	8.9	55.2	6.2	14.3
31	7.8	7.5	8.3	9.3	8.6	8.7	9.0	8.6	12.3	7.8	7.8	7.9	9.4	11.0	8.0	6.2	17.8	19.6	23.2	33.9	12.2	12.9	8.8	13.1	33.9	6.2	11.7
Max.	**65.2**	**62.3**	**60.4**	**66.0**	**55.9**	**58.9**	**72.3**	**60.7**	**71.9**	**62.2**	**61.8**	**67.1**	**60.5**	**72.0**	**71.6**	**82.7**	**45.3**	**54.4**	**49.2**	**55.2**	**61.0**	**49.6**	**69.2**	**66.2**	**82.7**		
Min.	**7.5**	**7.5**	**7.1**	**6.1**	**5.9**	**5.5**	**6.7**	**5.3**	**6.6**	**6.8**	**6.1**	**5.4**	**5.1**	**5.3**	**4.0**	**6.2**	**7.3**	**6.4**	**6.4**	**6.4**	**7.7**	**6.0**	**6.2**	**7.2**		**4.0**	
Avg.	**21.0**	**19.3**	**18.2**	**18.3**	**17.0**	**15.3**	**18.6**	**19.9**	**21.9**	**20.3**	**20.1**	**18.6**	**15.3**	**16.3**	**16.6**	**17.7**	**18.0**	**19.8**	**18.6**	**20.7**	**21.5**	**18.0**	**20.4**	**20.3**			**18.8**

Total Hours in Month 744 **Hours Data Available** 739 **Data Recovery** 99.3%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.0	9.5	13.0	11.3	24.4	27.8	16.5	15.2	20.4	13.1	14.3	13.9	14.8	13.9	12.7	19.2	27.1	79.3	73.0	39.2	42.1	67.0	31.2	29.7	79.3	9.5	26.7
2	26.5	15.2	20.5	20.9	23.7	18.5	14.5	17.3	10.9	14.8	29.9	46.3	20.5	10.6	12.2	19.1	14.2	12.9	17.3	17.2	8.1	5.2	7.2	6.8	46.3	5.2	17.1
3	6.3	7.7	8.3	8.8	8.4	8.7	9.5	9.9	9.4	9.8	8.5	7.8	9.4	8.6	8.9	10.2	10.4	10.5	10.2	9.1	9.6	9.2	9.0	9.4	10.5	6.3	9.1
4	11.0	11.3	9.8	9.8	10.4	10.5	10.5	10.6	10.2	9.9	11.8	10.4	10.0	10.2	9.6	9.7	9.5	9.7	9.7	9.4	9.1	9.2	9.6	9.7	11.8	9.1	10.1
5	9.6	9.4	10.0	8.9	9.2	9.3	8.9	8.8	8.6	9.1	9.2	9.9	11.5	8.5	11.1	9.5	9.2	8.7	9.2	9.3	9.3	9.3	9.0	8.9	11.5	8.5	9.3
6	9.6	9.4	9.5	9.3	9.4	9.2	8.6	9.6	11.4	19.9	37.2	44.1	59.7	47.0	30.2	55.6	37.1	11.7	14.9	18.3	16.6	23.7	12.9	10.7	59.7	8.6	21.9
7	7.6	5.2	6.8	6.8	40.4	46.9	75.2	65.2	24.4	28.7	30.8	19.1	21.0	24.5	22.6	32.1	50.7	39.9	31.8	25.9	22.4	19.7	44.1	72.2	75.2	5.2	31.8
8	72.6	54.4	42.0	50.3	35.8	10.8	13.0	13.8	7.5	10.0	8.1	11.8	9.8	9.4	11.1	10.1	9.9	10.2	9.1	9.3	10.7	10.0	10.4	9.6	72.6	7.5	18.7
9	10.0	10.0	9.0	9.5	10.0	9.7	9.3	9.4	9.4	9.1	8.7	8.7	9.0	9.2	9.5	9.5	10.6	10.0	9.8	9.5	10.2	11.2	16.3	23.2	23.2	8.7	10.4
10	13.2	12.2	9.8	9.8	10.8	10.4	8.7	10.0	10.7	9.6	9.4	11.9	28.2	42.8			60.8	43.3	35.9	36.8	62.8	51.0	68.5	35.4	68.5	8.7	26.9
11	38.3	17.7	9.4	6.7	9.0	9.1	7.9	7.8	8.3	10.1	9.1	9.9	9.3	9.2	10.5	9.9	9.9	9.7	9.9	8.2	9.2	10.2	9.8	10.3	38.3	6.7	10.8
12	9.9	11.1	28.4	48.2	6.7	15.4	23.8	16.8	16.3	43.4	43.1	27.9	26.0	37.6	40.5	42.9	36.0	30.2	44.3	32.5	20.8	15.5	26.8	29.2	48.2	6.7	28.0
13	61.5	36.3	18.4	43.1	30.7	25.9	62.2	9.8	7.3	30.9	54.1	6.3	5.7	10.4	11.1	20.7	18.9	14.2	12.9	20.6	20.1	13.4	25.3	23.7	62.2	5.7	24.3
14	31.3	32.3	33.0	19.3	13.9	14.9	16.4	18.1	20.8	22.1	12.5	11.5	11.5	11.1	10.0	8.9	11.1	10.4	11.2	17.8	9.4	8.1	9.7	10.4	33.0	8.1	15.6
15	12.1	11.0	13.3	11.0	11.6	11.3	10.5	11.0	14.3	30.1	20.9	54.7	30.7	57.5	14.3	37.5	37.5	41.5	31.4	29.9	37.4	34.0	54.7	32.1	57.5	10.5	27.1
16	9.1	15.9	12.9	4.3	3.4	4.0	53.3	16.9	16.7	33.3	44.9	50.0	55.1	10.8	13.7	45.9	9.3	9.6	9.3	8.9	9.2	8.0	6.5	6.9	55.1	3.4	19.1
17	9.9	8.9	8.1	8.7	9.8	9.9	9.5	10.4	11.1	9.6	10.9	11.3	15.4	16.9	18.3	11.6	9.3	10.5	14.7	23.6	21.3	18.6	17.3	30.7	30.7	8.1	13.6
18	37.1	23.0	13.6	18.2	10.7	9.8	32.4	13.5	20.4	20.4	31.2	53.3	45.2	41.3	66.2	27.8	34.5	49.6	53.2	26.7	9.5	5.6	5.5	7.3	66.2	5.5	27.3
19	46.7	49.8	17.6	17.7	22.3	50.0	48.7	52.6	37.3	36.8	30.6	63.6	50.9	61.2	22.7	30.4	43.7	16.3	18.6	23.2	21.8	19.6	18.8	20.5	63.6	16.3	34.2
20	21.1	22.2	19.4	61.6	71.4	55.6	40.8	39.2	41.2	44.0	50.6	36.4	46.8	25.1	37.1	49.1	16.2	18.8	22.8	15.4	22.8	14.7	15.3	18.7	71.4	14.7	33.6
21	14.7	36.0	38.7	57.1	34.7	63.2	44.2	48.6	32.9	32.1	42.4	32.8	29.9	46.1	43.3	45.9	40.2	42.8	35.7	43.6	36.0	56.0	63.0	42.7	63.2	14.7	41.8
22	45.0	43.8	57.5	50.7	54.5	56.0	21.7	29.7	26.9	44.5	46.2	35.4	59.9	42.6	36.3	51.0	32.5	47.2	51.0	57.2	54.8	40.0	52.5	43.5	59.9	21.7	45.0
23	68.9	21.2	44.6	10.7	37.4	7.5	33.2	52.6	45.6	39.6	39.3	20.3	38.0	38.9	38.8	37.2	36.6	44.0	52.8	72.1	31.0	21.1	19.3	30.2	72.1	7.5	36.7
24	20.2	23.8	19.6	21.8	28.6	17.2	21.8	16.9	8.4	7.1	5.9	9.1	7.7	7.6	8.4	11.1	24.0	24.2	24.9	22.1	17.9	15.9	12.6	11.2	28.6	5.9	16.2
25	7.5	8.5	7.6	8.2	10.0	12.0	8.6	15.8	47.6	7.3	24.1	51.5	9.1	41.7	51.2	34.5	35.0	39.0	23.5	26.4	22.2	29.7	41.1	31.0	51.5	7.3	24.7
26	40.4	50.7	38.0	70.6	58.2	59.1	65.7	58.0	67.0	22.9	36.2	48.2	31.2	53.1	61.6	55.5	56.3	34.5	28.7	17.9	16.9	6.9	6.7	6.1	70.6	6.1	41.3
27	7.4	6.8	7.1	8.5	8.3	9.8	18.6	38.3	7.7	10.8	21.3	28.8	52.8	22.9	13.7	13.9	19.2	26.7	12.8	18.8	36.1	46.1	33.1	34.3	52.8	6.8	21.0
28	28.4	15.1	16.9	22.1	22.0	14.8	12.5	13.7	39.6	31.1	34.2	23.2	15.7	16.9	13.9	28.2	31.9	28.6	29.5	53.2	41.7	13.8	14.2	13.5	53.2	12.5	23.9
Max.	**72.6**	**54.4**	**57.5**	**70.6**	**71.4**	**63.2**	**75.2**	**65.2**	**67.0**	**44.5**	**54.1**	**63.6**	**59.9**	**61.2**	**66.2**	**55.6**	**60.8**	**79.3**	**73.0**	**72.1**	**62.8**	**67.0**	**68.5**	**72.2**	**79.3**		
Min.	**6.3**	**5.2**	**6.8**	**4.3**	**3.4**	**4.0**	**7.9**	**7.8**	**7.3**	**7.1**	**5.9**	**6.3**	**5.7**	**7.6**	**8.4**	**8.9**	**9.2**	**8.7**	**9.1**	**8.2**	**8.1**	**5.2**	**5.5**	**6.1**		**3.4**	
Avg.	**24.6**	**20.6**	**19.4**	**22.6**	**22.3**	**21.7**	**25.2**	**22.8**	**21.1**	**21.8**	**25.9**	**27.1**	**26.2**	**26.3**	**23.7**	**27.3**	**26.5**	**26.2**	**25.3**	**25.1**	**22.8**	**21.2**	**23.2**	**22.1**			**23.8**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.1	30.3	22.9	23.5	16.6	13.0	16.2	21.1	29.2	15.7	6.5	6.4	4.2	6.4	6.9	8.1	9.1	9.3	7.1	8.1	8.0	6.6	7.1	9.6	30.3	4.2	12.7
2	13.0	7.3	7.9	8.7	9.5	9.2	9.5	7.5	6.5	7.4	6.8	7.9	7.3	7.0	6.8	8.9	8.5	9.4	9.7	9.5	9.6	8.4	9.3	7.8	13.0	6.5	8.5
3	8.7	8.1	8.9	8.9	8.9	7.5	6.7	8.4	8.1	8.7	8.8	8.8	8.9	5.7	5.2	5.3	5.3	7.2	5.6	6.2	6.3	7.7	5.9	6.3	8.9	5.2	7.3
4	6.8	7.1	6.6	7.6	7.6	6.8	7.9	7.9	7.9	7.2	8.1	7.1	13.6	27.6	21.5	19.3	15.1	8.7	9.4	10.7	14.1	8.3	8.3	7.6	27.6	6.6	10.5
5	8.8	7.9	11.8	9.6	8.7	8.3	10.5	26.8	51.0	72.3	61.7	30.9	50.7	46.2	31.7	65.0	52.0	52.4	34.0	25.8	40.5	44.8	37.5	37.4	72.3	7.9	34.4
6	31.8	21.6	42.4	39.5	24.0	26.1	42.8	53.0	27.6	21.1	13.3	13.0	12.2	19.5	14.7	24.7	17.6	22.5	32.8	40.1	27.8	20.4	20.4	9.8	53.0	9.8	25.8
7	8.3	10.6	24.7	24.3	42.5	25.3	14.6	27.2	14.2	12.1	11.4	10.5	13.1	13.3	14.7	24.6	30.7	59.9	62.7	61.4	61.4	64.4	73.1	32.0	73.1	8.3	30.7
8	29.1	23.1	27.4	26.4	29.9	55.8	40.6	28.5	60.0	61.6	63.0	46.6	51.2	48.6	53.6	43.6	34.4	47.2	46.6	48.1	65.5	59.4	83.2	71.8	83.2	23.1	47.7
9	55.1	78.8	70.6	71.4	69.9	66.7	69.5	46.7	78.7	56.8	51.6	62.0	70.5	49.8	63.4	71.2	46.7	28.0	26.4	22.8	18.9	14.0	17.1	24.4	78.8	14.0	51.3
10	14.2	23.3	32.2	26.5																					32.2	14.2	24.1
11																											
12														9.1	8.4	6.9	5.9	5.8	6.9	6.4	7.3	8.3	37.5	42.8	42.8	5.8	13.2
13	9.6	21.9	34.2	49.1	47.9	7.6	36.2	37.5	39.7	9.9	15.3	12.7	8.4	7.4	8.3	6.1	6.8	11.9	15.4	8.4	9.2	35.5	13.5	29.1	49.1	6.1	20.1
14	42.1	9.2	12.8	8.2	5.9	7.0	7.9	8.9	12.0																42.1	5.9	12.7
15														11.7	26.7	40.3	11.1	13.6	37.2	33.4	7.8	7.8	8.0	9.2	40.3	7.8	18.8
16	7.8	8.5	8.2	8.1	6.9	8.3	8.2	8.2	9.1	8.7	7.8	7.2	7.0	10.2	11.8	11.8	9.4	9.8	12.1	10.3	9.7	9.3	10.9	9.5	12.1	6.9	9.1
17	8.6	9.2	5.7	4.7	6.5	7.2	7.6	7.8	8.1	7.4	7.7	9.3	8.3	9.4	8.5	8.6	9.8	11.2	10.9	10.1	8.4	9.5	8.6	8.9	11.2	4.7	8.4
18	8.4	8.4	9.7	9.3	8.4	8.9	8.2	10.2	9.5	8.7	8.6	8.2	8.0	8.5	8.6	9.2	9.4	9.8	41.5	46.1	39.6	17.9	39.5	21.2	46.1	8.0	15.2
19	15.3	20.5	11.3	12.8	10.4	8.7	7.8	7.9	49.2	10.4	8.7	36.3	6.7	5.4	11.1	7.4	16.5	25.3	25.6	24.0	56.2	8.8	6.2	6.5	56.2	5.4	16.6
20	7.5	4.8	6.8	6.3	6.5	5.8	6.2	8.9	52.8	32.5	21.0	28.7	65.2	10.1	5.4	7.4	33.1	19.0	17.4	19.4	23.7	16.4	12.4	14.8	65.2	4.8	18.0
21	23.4	30.7	30.1	18.5	22.6	26.3	46.9	29.9	48.5	60.7	29.1	18.7	51.2	27.0	65.7	47.5	36.5	25.8	68.1	33.9	25.1	46.3	54.2	26.0	68.1	18.5	37.2
22	25.7	18.7	16.4	16.7	18.8	15.5	10.9	12.8	26.1	29.3	9.1	9.4	8.5	7.3	8.6	7.8	16.6	54.5	37.4	69.4	38.2	17.7	21.4	17.4	69.4	7.3	21.4
23	17.8	22.2	16.6	44.5	69.4	57.0	10.9	19.1	11.3	10.3	15.9	27.3	53.7	22.2	58.8	37.0	48.2	28.7	15.0	32.2	25.7	27.6	32.9	32.6	69.4	10.3	30.7
24	16.3	12.4	11.0	9.2	8.0	9.4	8.3	20.0	16.0	10.6	14.4	12.2	27.5	47.3	26.3	7.1	22.6	70.3	56.2	17.4	12.9	16.1	14.6	15.7	70.3	7.1	20.1
25	15.7	14.8	15.7	61.6	15.9	30.0	25.8	13.6	10.0	11.0	9.6	10.7	38.0	26.4	19.7	32.0	49.2	56.6	33.8	19.2	32.4	26.5	18.5	17.1	61.6	9.6	25.2
26	44.3	25.3	14.0	15.7	15.8	17.0	19.3	29.5	11.7	11.8	34.7	18.3	9.2	7.2	7.3	5.4	12.4	11.1	62.1	40.8	24.8	34.7	20.1	23.0	62.1	5.4	21.5
27	22.8	11.0	39.2	21.7	11.3	33.8	54.3	13.1	7.6	25.4	34.0	5.9	4.9	5.1	3.1	4.6	8.3	10.3	9.5	14.9	24.9	19.9	8.9	56.1	56.1	3.1	18.8
28	10.7	26.1	46.7	7.6	7.4	5.2	4.3	4.2	50.5	49.4	52.3	13.9	4.7	6.0	5.7	5.1	6.5	8.6	6.8	10.8	49.7	22.7	15.3	77.4	77.4	4.2	20.7
29	39.1	29.8	29.4	14.4	15.2	18.0	14.0	15.3	12.0	6.6	4.9	6.4	14.9	16.8	4.4	5.6	15.0	44.6	35.1	61.6	48.7	49.7	12.7	6.2	61.6	4.4	21.7
30	5.2	7.7	9.9	9.0	11.0	11.5	12.2	15.4	9.7	21.1	26.3	24.4	16.2	23.4	17.1	13.1	14.5	17.7	18.8	26.1	42.5	25.4	26.6	21.2	42.5	5.2	17.8
31	20.9	25.2	24.9	29.1	22.0	17.5	17.3	29.6	16.4	13.0	8.6	8.8	9.0	8.8	8.4	8.8	10.6	9.5	9.3	67.1	59.9	17.1	14.9	27.8	67.1	8.4	20.2
Max.	**55.1**	**78.8**	**70.6**	**71.4**	**69.9**	**66.7**	**69.5**	**53.0**	**78.7**	**72.3**	**63.0**	**62.0**	**70.5**	**49.8**	**65.7**	**71.2**	**52.0**	**70.3**	**68.1**	**69.4**	**65.5**	**64.4**	**83.2**	**77.4**	**83.2**		
Min.	**5.2**	**4.8**	**5.7**	**4.7**	**5.9**	**5.2**	**4.3**	**4.2**	**6.5**	**6.6**	**4.9**	**5.9**	**4.2**	**5.1**	**3.1**	**4.6**	**5.3**	**5.8**	**5.6**	**6.2**	**6.3**	**6.6**	**5.9**	**6.2**		**3.1**	
Avg.	**19.0**	**18.7**	**21.3**	**21.2**	**19.5**	**19.0**	**19.4**	**19.2**	**25.3**	**22.7**	**20.7**	**17.4**	**22.0**	**17.6**	**19.0**	**19.4**	**20.1**	**24.6**	**26.9**	**28.0**	**28.5**	**23.3**	**22.8**	**23.9**			**21.7**

Total Hours in Month 744 **Hours Data Available** 659 **Data Recovery** 88.6%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	20.6	11.3	18.5	33.1	41.3	42.0	32.4	17.3	19.2	22.5	22.1	64.6	71.5	54.5	41.7	61.3	64.2	46.0	47.7	38.2	48.9	43.1	58.3	52.4	71.5	11.3	40.5
2	49.8	25.5	23.1	27.9	20.9	31.4	47.2	57.7	44.3	38.3	37.6	21.3	27.1	20.7	24.3	7.9	9.5	7.2	8.6	7.8	8.9	6.7	7.3	8.4	57.7	6.7	23.7
3	6.4	7.0	7.9	8.1	7.9	7.9	7.8	8.2	8.3	9.6	8.0	8.3	7.9	8.1	9.7	10.6	8.3	7.8	7.8	8.2	7.6	11.3	8.7	9.8	11.3	6.4	8.4
4	11.2	12.0	7.8	6.0	4.7	5.6	6.7	5.5	5.9	6.2	7.6	39.5	15.4	44.3	45.3	29.6	48.3	19.1	23.4	56.3	72.6	73.5	71.3	59.0	73.5	4.7	28.2
5	64.5	41.9	41.2	50.0	48.0	54.0	37.8	61.3	17.5	28.7	33.5	24.3	23.6	44.7	59.4	34.3	47.2	38.6	46.8	54.0	44.9	32.6	27.3	18.3	64.5	17.5	40.6
6	15.0	12.9	12.4	25.5	35.0	41.1	17.2	18.7	14.6	10.1	16.9	8.4	8.6	7.7	5.9	7.8	8.0	10.5	10.2	21.8	51.8	49.1	49.7	50.1	51.8	5.9	21.2
7	50.0	37.4	42.4	44.9	67.3	10.4	7.8	6.8	4.9	12.0	33.6	30.6	26.1	64.8	27.1	46.1	49.2	55.1	51.3	48.9	46.1	33.3	22.9	30.8	67.3	4.9	35.4
8	39.8	40.7	36.6	38.4	47.8	53.2	34.1	10.4	16.6	21.5	20.1	15.4	15.4	29.9	30.5	32.9	24.9	18.9	8.7	7.5	3.9	9.8	20.4	42.6	53.2	3.9	25.8
9	39.6	66.9	53.3	8.4	15.2	23.1	16.9	20.6	8.2	4.7	3.4	41.5	18.4	4.9	5.5	5.9	12.7	15.8	59.2	52.5	63.1	55.9	89.1	50.9	89.1	3.4	30.6
10	44.7	36.3	47.4	46.8	30.5	51.5	16.0	12.9	16.8	18.6	19.9	23.1	32.4	21.2	13.9	16.8	18.1	30.5	57.0	73.7	40.3	24.4	24.0	33.1	73.7	12.9	31.2
11	34.6	26.4	44.5	42.3	72.0	61.2	27.8	18.0	22.2	12.1	12.1	8.5	9.3	12.4	11.9	8.6	7.9	8.0	7.8	8.4	9.6	8.9	9.4	9.5	72.0	7.8	20.6
12	9.5	9.9	8.0	7.7	8.0	8.4	8.8	8.0	8.2	8.9	9.1	9.4	8.2	6.8	5.9	9.5	10.7	19.6	41.1	39.3	34.2	56.4	62.9	86.1	86.1	5.9	20.2
13	53.5	19.1	19.7	17.9	21.6	18.0	17.9	28.9	59.7	51.1	26.7	54.2	41.7	21.7	24.3	32.6	36.9	28.5	45.6	64.6	34.2	26.2	14.2	13.3	64.6	13.3	32.2
14	13.0	12.6	12.7	13.5	12.5	12.3	12.9	13.5	13.4	12.9	13.5	14.0	16.6	19.6	21.5	29.2	31.0	56.6	53.7	55.6	51.8	28.3	25.7	27.1	56.6	12.3	23.9
15	21.2	27.5	31.4	23.8	26.5	46.5	58.1	47.7	67.0	33.8	52.0	48.6	22.0	22.0	27.3	20.4	16.6	15.3	15.4	12.5	16.2	41.7	23.0	11.4	67.0	11.4	30.3
16	13.2	6.4	7.8	9.7	12.8	10.7	9.0	10.2	9.8	8.5	10.2	10.3	10.5	10.4	10.9	9.9	9.0	9.1	8.9	9.0	10.2	10.1	9.6	10.1	13.2	6.4	9.8
17	9.2	8.7	9.5	9.1	9.9	9.3	10.6	9.3	14.7	9.3	14.5	13.1	17.7	16.1	12.4	10.6	8.6	11.5	10.9	9.5	11.6	10.6	8.0	36.7	36.7	8.0	12.1
18	52.6	8.4	32.4	14.9	53.1	61.4	48.2	9.3	5.0	5.4	15.3	4.6	3.6	6.2	5.2	6.5	8.8	27.0	72.7	48.5	15.0	31.8	36.9	65.4	72.7	3.6	26.6
19	44.1	11.9	11.8	12.1	12.7	12.2	13.2	22.5	33.2	26.3	20.6	35.0	9.8	7.9	23.5	24.4	14.2	49.6	50.9	56.5	53.6	26.3	42.3	22.2	56.5	7.9	26.5
20	39.1	20.5	13.5	13.4	8.6	8.0	7.2	10.8	12.4	8.1	15.5	48.2	38.3	35.1	31.4	13.2	27.6	38.2	15.5	27.3	36.8	17.7	12.3	11.3	48.2	7.2	21.2
21	10.0	8.1	7.9	8.5	8.1	8.7	9.4	9.1	9.1	9.4	10.4	9.4	10.6	10.8	13.3	45.2	45.1	12.7	51.3	9.8	20.4	23.4	37.8	28.1	51.3	7.9	17.4
22	15.9	14.7	11.2	8.8	9.9	9.0	6.8	9.5	7.6	16.3	49.0	28.1	31.0	25.8	6.6	7.6	6.4	5.9	9.8	12.3	14.5	21.0	13.9	15.3	49.0	5.9	14.9
23	10.4	8.9	11.4	8.4	10.4	9.5	7.9	7.3	11.3	9.7	11.0	7.8	4.7	11.3	22.3	5.8	6.7	35.2	50.6	19.5	12.1	15.6	13.9	14.1	50.6	4.7	13.6
24	24.9	21.8	48.9	38.3	53.9	14.9	59.0	44.1	67.2	63.4	61.1	47.9	39.1	28.4	27.8	30.1	40.2	50.6	23.7	23.8	57.3	55.0	20.8	13.9	67.2	13.9	39.8
25	13.9	36.8	36.2	44.4	28.9	12.0	7.5	6.7	5.1	4.8	12.7	12.3	8.3	8.8	9.4	11.7	11.1	11.0	13.6	11.1	12.7	15.5	11.8	14.3	44.4	4.8	15.0
26	10.6	10.6	9.4	9.1	8.5	9.2	9.6	9.7	9.7	8.8	9.2	9.4	9.9	9.9	11.1	10.9	10.4	10.0	9.3	9.0	9.3	10.5	10.6	9.6	11.1	8.5	9.8
27	9.3	9.0	8.6	10.5	9.4	9.5	10.5	9.0	10.1	11.2	11.5	9.8	12.3	14.6	59.9	24.2	21.1	40.0	37.2	64.5	37.0	27.4	34.6	42.5	64.5	8.6	22.2
28	21.2	31.5	22.3	13.2	13.1	16.3	19.8	27.3	32.3	22.8	10.9	32.5	12.6	15.3	31.8	4.9	5.6	3.0	28.9	48.9	26.2	32.4	16.1	12.1	48.9	3.0	20.9
29	17.3	25.0	14.9	13.7	13.5	13.4	17.2	10.9	12.9	16.1	17.2	25.1	27.4	6.5	32.0	14.4	13.6	16.4	31.9	32.9	17.0	21.8	25.4	24.6	32.9	6.5	19.2
30	8.5	9.8	11.4	16.6	23.0	21.0	13.5	20.0	5.2	3.8	4.4	55.5	35.1	50.4	10.2	11.6	20.0	38.8	49.1	46.9	64.1	62.7	67.3	56.4	67.3	3.8	29.4
Max.	**64.5**	**66.9**	**53.3**	**50.0**	**72.0**	**61.4**	**59.0**	**61.3**	**67.2**	**63.4**	**61.1**	**64.6**	**71.5**	**64.8**	**59.9**	**61.3**	**64.2**	**56.6**	**72.7**	**73.7**	**72.6**	**73.5**	**89.1**	**86.1**	**89.1**		
Min.	**6.4**	**6.4**	**7.8**	**6.0**	**4.7**	**5.6**	**6.7**	**5.5**	**4.9**	**3.8**	**3.4**	**4.6**	**3.6**	**4.9**	**5.2**	**4.9**	**5.6**	**3.0**	**7.8**	**7.5**	**3.9**	**6.7**	**7.3**	**8.4**		**3.0**	
Avg.	**25.8**	**20.6**	**22.1**	**20.8**	**24.5**	**23.1**	**20.0**	**18.4**	**19.1**	**17.2**	**19.6**	**25.4**	**20.5**	**21.4**	**22.1**	**19.5**	**21.4**	**24.6**	**31.6**	**32.6**	**31.1**	**29.4**	**29.2**	**29.3**			**23.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	27.8	17.8	12.3	11.4	12.7	15.1	12.3	8.7	11.1	10.9	10.7	10.7	10.5	9.8	9.9	11.3	10.3	11.2	11.7	11.7	11.2	10.1	10.2	10.3	27.8	8.7	12.1
2	10.1	10.0	9.7	9.4	9.7	8.9	9.8	8.9	9.7	9.4	9.2	9.4	9.9	10.9	9.9	9.9	11.0	11.2	8.1	9.0	7.5	31.9	37.9	18.6	37.9	7.5	12.1
3	10.7	11.6	11.0	10.6	10.0	9.3	9.1	9.9	10.2	9.1	9.4	9.8	9.3	9.1	10.3	13.0	13.4	15.7	11.9	10.3	10.9	11.6	10.5	10.1	15.7	9.1	10.7
4	9.4	9.5	11.4	9.9	14.8	33.1	63.2	38.4	49.9	46.7	26.9	46.9	58.0	66.5	37.5	45.3	67.0	30.6	41.5	43.6	73.0	33.8	15.4	16.6	73.0	9.4	37.0
5	11.3	12.7	19.9	13.5	11.5	10.2	9.4	9.6	8.4	9.6	9.6	9.3	9.8	10.1	56.7	42.4	55.0	75.8	42.7	38.5	28.0	42.3	42.5	10.3	75.8	8.4	24.5
6	13.0	45.4	39.0	21.6	17.5	17.7	17.9	10.6	7.3	26.9	16.7	18.7	17.4	18.8	34.3	14.7	15.0	14.4	20.0	28.6	29.3	31.4	32.7	28.0	45.4	7.3	22.4
7	20.5	25.5	30.5	28.0	33.2	39.4	34.1	28.2	28.2	26.1	23.6	29.2	48.9	68.8	56.3	48.7	31.8	42.7	46.1	42.6	49.3	56.7	19.4	16.6	68.8	16.6	36.4
8	14.8	27.4	36.3	17.0	11.7	9.1	8.0	5.9	8.7	11.6	9.0	9.8	9.5	9.6	10.6	10.4	10.5	10.0	9.3	9.5	9.4	9.8	9.8	10.1	36.3	5.9	12.0
9	10.1	9.8	10.0	9.8	10.0	10.2	9.8	11.0	9.8	10.3	10.3	10.2	9.8	9.7	9.3	10.1	10.1	9.3	9.4	10.4	10.4	10.3	10.3	10.6	11.0	9.3	10.0
10	10.5	10.0	10.8	10.2	9.5	8.9	10.0	12.9	13.6	23.1	22.9	16.1	33.7	37.5	35.2	41.6	49.5	60.4	37.4	60.2	15.7	36.3	9.9	21.7	60.4	8.9	24.9
11	22.6	5.9	8.8	23.1	49.8	12.4	11.5	6.4	5.3	5.5	6.4	24.3	23.5	34.4	39.3	18.6	9.7	26.0	43.4	11.4	32.4	13.8	14.7	20.6	49.8	5.3	19.6
12	12.7	13.4	13.7	9.8	16.3	13.7	39.3	12.9	10.5	16.8	17.7	39.3	39.1	26.7	14.1	24.5	59.1	65.8	65.0	59.5	66.0	12.7	18.0	8.8	66.0	8.8	28.1
13	9.1	7.1	14.2	11.7	11.4	11.7	12.8	13.0	12.3	14.7	6.8	9.9	27.3	42.4	38.7	26.9	38.1	38.2	65.7	56.1	19.0	12.2	29.9	57.5	65.7	6.8	24.4
14	53.3	22.6	24.5	17.3	33.1	12.4	9.1	5.0	36.6	29.7	11.7	16.0	20.9	23.5	19.2	18.0	17.4	24.6	16.9	19.9	16.2	39.0	54.8	12.2	54.8	5.0	23.1
15	21.2	36.1	8.9	22.1	36.7	16.5	43.0	13.2	11.5	20.6	17.9	12.1	6.3	8.7	6.0	5.3	5.6	6.0	10.6	13.9	29.8	25.5	19.2	62.5	62.5	5.3	19.1
16	65.4	38.7	13.7	13.1	17.4	14.4	20.3	28.5	14.1	5.0	10.4	13.4	11.3	15.7	9.4	7.2	6.0	7.7	5.8	20.5	9.1	7.9	9.8	20.2	65.4	5.0	16.0
17	37.2	9.9	5.6	6.2	5.5	6.7	7.8	7.4	9.2	9.0	10.0	13.2	11.3	15.7	13.2	11.3	13.8	22.5	25.4	30.1	33.2	40.8	55.7	17.0	55.7	5.5	17.4
18	8.0	9.4	10.9	6.2	6.9	18.4	3.4	14.2	41.2	27.6	23.8	35.6	34.6	28.0	44.1	63.0	57.5	36.4	38.0	40.3	36.5	62.5	65.2	29.7	65.2	3.4	30.9
19	22.9	26.1	17.1	15.0	18.1	28.3	12.5	7.5	4.6	34.9	15.3	26.4	18.1	31.2	27.8	53.0	57.6	37.6	14.2	13.9	41.3	38.1	24.4	13.8	57.6	4.6	25.0
20	9.5	9.7	8.8	11.4	10.6	8.4	8.7	9.4	10.2	9.4	9.8	10.9	9.5	8.8	8.3	10.5	10.6	11.2	8.4	14.7	28.7	29.4	19.4	56.2	56.2	8.3	13.9
21	37.1	31.1	62.1	48.3	64.9	39.6	16.2	14.3	31.1	16.0	15.0	15.8	20.3	51.2	46.7	29.2	56.1	59.7	40.5	25.7	21.1	13.6	12.4	14.6	64.9	12.4	32.6
22	18.0	18.8	14.7	17.3	18.0	15.6	13.3	10.8	12.1	10.9	49.8	20.0	36.7	38.1	17.5	15.8	15.1	13.7	13.1	24.3	58.7	12.2	27.0	18.4	58.7	10.8	21.2
23	7.0	23.3	51.2	62.4	51.3	54.9	32.9	34.8	40.3	17.4	20.6	26.9	10.1	6.5	7.4	10.8	19.5	14.3	21.7	58.2	64.9	19.7	9.3	10.1	64.9	6.5	28.1
24	7.5	7.5	10.1	57.1	54.2	12.3	32.9	9.8	23.6	8.3	8.4	13.4	2.2	64.6	20.0	16.3	13.8	18.2	51.8	45.2	55.8	23.8	10.5	10.6	64.6	2.2	24.1
25	14.0	9.3	60.1	51.3	37.1	12.4	49.8	56.3	52.8	33.1	9.2	13.3	7.6	18.5	23.2	12.9	29.3	39.3	49.7	74.0	23.8	12.2	10.8	9.4	74.0	7.6	29.6
26	8.9	10.1	11.1	8.4	10.2	13.0	10.2	8.2	8.0	41.0	24.5	10.1	7.5	18.7	46.7	13.0	16.5	25.7	30.0	57.4	40.6	13.7	9.9	24.0	57.4	7.5	19.5
27	11.6	9.2	71.1	56.1	11.5	14.3	16.0	13.7	18.6	15.1	30.3	12.9	59.4	57.9	9.8	20.1	16.3	31.1	20.3	31.6	53.0	14.7	7.7	17.9	71.1	7.7	25.8
28	8.8	13.0	38.2	16.1	13.7	10.9	41.7	47.6	22.9	5.3	5.5	4.7	4.6	4.6	3.4	4.2	3.9	8.0	12.4	15.1	33.3	19.5	18.1	15.9	47.6	3.4	15.5
29	44.6	45.2	46.9	37.3	57.6	31.9	12.4	49.9	28.7	15.5	48.9	18.2	28.6	30.3	28.1	44.7	68.1	49.2	53.1	40.6	66.6	32.8	46.8	43.8	68.1	12.4	40.4
30	39.2	23.7	41.9	20.4	35.2	8.5	9.5	10.2	17.1	11.8	39.5	40.2	46.4	42.3	37.0	50.8	22.3	67.7	39.9	38.1	62.1	66.1	46.9	33.7	67.7	8.5	35.4
31	62.4	8.3	10.4	11.2	11.4	14.5	15.7	36.8	18.7	14.1	10.3	8.2	5.7	6.4	9.0	8.8	8.0	8.0	17.3	19.1	11.1	18.7	24.5	45.6	62.4	5.7	16.8
Max.	**65.4**	**45.4**	**71.1**	**62.4**	**64.9**	**54.9**	**63.2**	**56.3**	**52.8**	**46.7**	**49.8**	**46.9**	**59.4**	**68.8**	**56.7**	**63.0**	**68.1**	**75.8**	**65.7**	**74.0**	**73.0**	**66.1**	**65.2**	**62.5**	**75.8**		
Min.	**7.0**	**5.9**	**5.6**	**6.2**	**5.5**	**6.7**	**3.4**	**5.0**	**4.6**	**5.0**	**5.5**	**4.7**	**2.2**	**4.6**	**3.4**	**4.2**	**3.9**	**6.0**	**5.8**	**9.0**	**7.5**	**7.9**	**7.7**	**8.8**		**2.2**	
Avg.	**21.3**	**18.0**	**23.7**	**21.4**	**22.9**	**17.2**	**19.4**	**17.9**	**18.9**	**17.6**	**17.4**	**17.9**	**20.9**	**26.6**	**23.8**	**23.0**	**26.4**	**28.8**	**28.4**	**31.4**	**33.8**	**25.9**	**23.7**	**22.4**			**22.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.6	60.1	63.6	25.7	32.6	21.3	14.7	10.9	18.6	13.3	10.3	8.3	12.1	7.2	5.9	7.6	6.2	14.5	27.4	18.5	36.5	28.3	22.0	8.2	64.6	5.9	22.4
2	14.1	15.5	9.4	6.3	8.9	19.6	11.9	9.8	7.1	5.1	5.1	4.6	9.0	70.1	39.5	34.5	32.9	38.6	49.5	77.0	68.3	21.9	46.0	39.1	77.0	4.6	26.8
3	48.5	65.9	64.6	35.0	43.3	59.2	25.3	21.8	39.0	48.9	68.4	30.9	38.9	52.3	49.9	33.8	30.9	63.8	36.7	57.6	37.0	34.2	73.6	30.7	73.6	21.8	45.4
4	23.8	14.2	22.3	27.9	14.3	14.1	10.5	6.8	16.1	20.1	29.2	10.5	12.9	6.4	6.1	8.7	10.1	11.7	10.0	11.7	13.5	11.6	39.3	8.1	39.3	6.1	15.0
5	6.7	7.2	17.7	57.1	71.9	52.2	4.3	5.3	23.8	30.9	10.8	5.5	5.1	5.4	5.0	4.9	6.2	7.2	10.4	7.7	6.4	15.0	21.2	17.1	71.9	4.3	16.9
6	6.6	7.8	8.9	58.5	7.3	22.6	6.9	19.4	19.3	20.3	18.5	12.2	10.3	12.6	12.3	17.8	23.0	47.4	50.3	48.2	47.1	32.6	61.0	19.7	61.0	6.6	24.6
7	18.9	9.1	20.0	37.3	47.8	58.6	46.6	78.7	60.4	36.4	75.7	51.9	84.2	75.1	71.0	55.6	56.1	48.7	41.7	65.5	51.0	23.4	42.0	38.4	84.2	9.1	49.8
8	42.1	28.9	31.2	17.2	18.2	10.9	15.2	10.5	10.2	9.1	8.6	10.2	10.2	10.3	11.7	10.9	12.8	11.6	11.7	9.2	11.8	10.2	9.0	9.1	42.1	8.6	14.2
9	10.4	10.3	10.2	10.7	9.8	10.8	9.9	10.2	9.7	9.4	10.1	10.4	10.8	10.4	9.9	11.2	11.3	50.7	46.2	46.2	32.0	60.5	28.6	45.6	60.5	9.4	20.2
10	51.8	56.8	74.8	39.9	52.3	57.3	78.9	66.3	73.2	64.5	61.3	71.3	73.5	69.3	53.8	66.1	49.4	65.6	60.2	61.4	53.0	28.8	37.9	63.5	78.9	28.8	59.6
11	68.9	42.8	56.0	26.6	22.8	14.7	33.8	14.1	14.8	17.5	14.6	9.6	9.2	9.8	9.8	10.4	9.3	9.6	10.3	10.2	11.8	9.8	10.0	9.3	68.9	9.2	19.0
12	9.5	9.4	11.0	9.3	9.7	10.1	9.3	10.0	9.1	12.3	34.2	25.5	36.4	46.0	27.7	67.4	28.9	23.7	22.7	11.8	19.3	15.0	37.9	58.5	67.4	9.1	23.1
13	29.1	31.0	22.0	42.2	27.1	70.1	23.3	26.4	32.2	48.0	15.4	7.7	4.8	5.2	6.0	7.1	3.5	5.3	7.1	10.4	9.1	8.4	27.1	55.8	70.1	3.5	21.8
14	39.4	18.8	58.4	34.6	29.1	53.8	49.5	16.0	82.8	8.8	13.0	11.6	7.3	11.3	38.2	42.1	26.3	6.3	7.4	40.5	27.5	21.7	9.9	8.1	82.8	6.3	27.6
15	9.3	9.6	10.4	10.1	14.9	38.7	27.7	19.3	18.4	16.2	11.4	7.8	8.1	15.1	8.7	10.9	34.3	41.3	28.6	16.5	45.7	54.5	26.6	52.1	54.5	7.8	22.3
16	36.9	24.2	24.2	52.0	15.5	13.0	26.5	8.0	12.9	8.4	8.4	41.3	30.3	13.8	48.4	51.3	34.0	27.4	32.5	52.1	28.4	7.6	5.4	9.7	52.1	5.4	25.5
17	6.4	39.2	18.5	71.1	23.5	10.0	5.7	8.0	4.2	4.7	8.4	24.3	28.5	13.8	11.4	11.8	8.7	6.4	8.4	10.8	31.2	37.3	14.2	14.0	71.1	4.2	17.5
18	13.0	56.6	9.8	9.1	9.7	10.4	11.2	10.8	10.2	11.1	9.2	10.2	10.0	10.0	9.8	10.0	9.9	9.5	9.4	8.6	10.3	14.8	10.0	8.8	56.6	8.6	12.2
19	10.2	8.8	10.2	8.7	9.6	9.3	9.4	9.6	11.6	12.3	13.1	11.9	8.6	10.1	11.0	22.3	43.6	23.6	19.1	11.5	10.3	26.6	11.0	6.3	43.6	6.3	13.7
20	13.2	10.7	48.5	13.7	50.0	52.9	7.4	27.6	3.8	4.5	6.3	13.7	19.8	44.0	40.7	19.1	60.1	54.7	20.8	29.9	9.2	9.8	17.8	18.3	60.1	3.8	24.9
21	14.3	8.3	16.7	10.1	11.8	13.3	10.2	8.5	8.3	20.7	12.6	6.9	7.8	3.8	4.9	7.3	4.4	6.3	6.9	12.4	13.9	44.7	64.4	56.5	64.4	3.8	15.6
22	71.8	17.3	15.4	39.6	17.0	11.9	39.1	54.7	56.2	21.1	19.9	29.1	8.9	24.9	40.9	40.1	53.5	17.1	19.6	21.7	21.9	15.7	41.6	6.9	71.8	6.9	29.4
23	9.1	10.1	16.1	18.2	45.8	60.4	6.9	32.3	7.0	4.2	19.0	10.8	12.7	9.3	7.1	4.1	3.5	7.4	4.0	6.0	13.9	7.9	23.1	24.9	60.4	3.5	15.2
24	26.9	26.4	24.0	9.6	14.8	7.9	8.7	6.5	18.9	25.1	5.7	3.8	9.0	12.2	8.4	16.4	13.2	8.6	8.8	8.8	23.5	35.7	20.6	18.4	35.7	3.8	15.1
25	12.5	14.4	32.5	78.0	46.7	27.2	18.2	46.2	10.8	11.7	17.0	14.1	6.9	6.2	15.1	7.2	12.5	6.7	11.6	22.0	19.1	23.4	25.3	31.9	78.0	6.2	21.5
26	27.4	18.7	28.5	46.7	50.2	47.2	8.9	11.3	35.5	26.9	46.0	19.5	16.0	23.1	35.1	59.7	18.3	9.7	35.8	52.1	27.2	46.8	13.4	16.6	59.7	8.9	30.0
27	29.0	30.4	62.2	42.7	57.2	11.6	6.5	26.3	9.7	10.6	5.8	5.6	6.4	5.4	6.3	5.5	6.1	5.0	16.6	70.9	63.2	21.9	41.1	25.2	70.9	5.0	23.8
28	23.7	37.1	58.6	41.8	31.4	17.7	15.7	14.8	14.8	14.4	15.5	41.2	42.3	48.2	40.8	47.3	43.9	32.5	51.1	45.5	43.6	46.7	41.3	55.7	58.6	14.4	36.1
29	43.3	48.2	51.3	41.3	45.5	40.0	32.6	56.2	25.4	39.0	36.3	13.3	19.4	11.7	41.8	33.3	39.5	43.1	34.6	58.3	73.7	75.5	76.2	75.7	76.2	11.7	44.0
30	62.0	17.9	52.9	39.0	19.3	9.1	9.1	9.1	8.5	9.0	45.9	11.9	8.4	8.7	7.4	7.5	9.6	13.0	14.5	45.8	46.9	23.7	14.3	18.9	62.0	7.4	21.3
Max.	**71.8**	**65.9**	**74.8**	**78.0**	**71.9**	**70.1**	**78.9**	**78.7**	**82.8**	**64.5**	**75.7**	**71.3**	**84.2**	**75.1**	**71.0**	**67.4**	**60.1**	**65.6**	**60.2**	**77.0**	**73.7**	**75.5**	**76.2**	**75.7**	**84.2**		
Min.	**6.4**	**7.2**	**8.9**	**6.3**	**7.3**	**7.9**	**4.3**	**5.3**	**3.8**	**4.2**	**5.1**	**3.8**	**4.8**	**3.8**	**4.9**	**4.1**	**3.5**	**5.0**	**4.0**	**6.0**	**6.4**	**7.6**	**5.4**	**6.3**		**3.5**	
Avg.	**28.1**	**25.2**	**31.7**	**32.0**	**28.6**	**28.5**	**19.5**	**21.8**	**22.4**	**19.5**	**21.8**	**17.8**	**18.9**	**21.7**	**22.8**	**24.4**	**23.4**	**23.9**	**23.8**	**31.6**	**30.2**	**27.1**	**30.4**	**28.4**			**25.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	22.2	16.5	24.8	19.6	14.2	18.2	19.5	21.8	24.4	19.3	10.9	10.0	12.4	11.8	10.9	8.6	6.9	10.6	24.6	55.9	52.6	38.6	70.7	32.0	70.7	6.9	23.2
2	20.5	10.7	24.6	40.4	23.2	22.2	19.2	12.7	11.2	11.4	27.3	47.6	17.2	27.6	14.0	38.6	31.9	32.5	54.9	78.7	74.6	31.1	41.9	17.8	78.7	10.7	30.5
3	18.4	33.5	26.5	27.0	14.9	33.9	12.8	22.4	10.1	15.8	11.0	16.7	9.4	6.7	6.9	6.1	12.0	40.6	27.1	17.0	19.7	18.1	22.8	50.6	50.6	6.1	20.0
4	38.1	20.0	31.2	43.2	41.4	15.3	14.0	14.1	11.2	9.9	8.4	7.5	6.8	7.1	5.4	5.3	6.7	14.3	9.8	10.8	20.7	19.9	11.4	31.6	43.2	5.3	16.8
5	25.9	49.4	19.7	12.3	22.3	20.8	28.7	20.2	33.1	11.3	10.3	13.7	11.1	10.3	9.3	9.8	10.4	8.8	9.3	11.1	19.7	16.1	16.8	11.0	49.4	8.8	17.1
6	20.3	48.0	33.7	26.0	12.3	21.9	15.8	13.2	9.7	10.1	6.8	7.3	8.3	8.9	7.2	7.7	10.4	8.6	10.9	29.7	23.9	49.1	54.3	36.1	54.3	6.8	20.0
7	61.6	31.2	71.2	65.9	52.6	53.7	40.8	43.5	42.1	18.6	27.3	12.7	28.8	30.3	14.5	32.4	49.8	38.6	20.9	33.7	42.9	65.3	12.0	7.5	71.2	7.5	37.4
8	7.6	9.3	47.9	27.2	45.7	18.1	41.0	39.6	65.4	21.5	25.1	22.9	15.9	14.3	15.4	40.9	16.8	28.5	37.9	15.3	16.8	28.3	39.8	16.7	65.4	7.6	27.4
9	15.6	17.5	18.0	11.4	12.8	11.1	12.6	10.9	25.9	23.3	12.7	8.6	6.2	7.2	6.0	17.2	56.5	33.5	24.1	30.8	26.9	46.1	46.5	25.0	56.5	6.0	21.1
10	34.2	40.8	37.9	19.0	30.9	38.7	51.3	41.9	24.4	40.3	24.1	22.1	28.1	35.8	28.7	43.9	42.9	65.3	18.2	53.4	29.5	21.6	44.1	45.9	65.3	18.2	36.0
11	51.0	36.1	30.2	25.0	37.9	37.3	23.7	21.0	10.9	31.4	11.2	10.1	32.6	33.0	5.2	12.6	9.3	27.5	30.8	23.9	9.0	13.6	44.5	43.2	51.0	5.2	25.5
12	64.9	16.7	15.6	14.9	8.0	9.5	10.0	8.0	15.8	8.5	26.6	15.0	10.1	7.8	6.9	25.7	49.9	57.0	12.9	36.7	58.9	58.2	42.6	15.6	64.9	6.9	24.8
13	60.4	36.7	50.8	72.4	75.2	29.1	62.9	84.4	51.5	46.3	28.4	14.4	14.1	14.6	18.6	22.9	26.2	28.0	21.3	20.1	17.3	26.8	30.8	40.1	84.4	14.1	37.2
14	32.1	32.3	34.1	36.7	30.1	51.5	72.0	69.3	55.5	36.7	26.8	21.3	18.9	19.6	21.6	39.1	65.0	62.4	45.7	66.6	27.7	33.1	32.4	30.6	72.0	18.9	40.0
15	31.3	34.6	13.7	16.0	24.4	16.9	16.3	20.6	38.1	32.7	55.6	81.3	65.9	37.7	7.8	16.0	29.7	43.4	24.6	29.9	60.2	80.4	63.9	15.9	81.3	7.8	35.7
16	11.0	41.7	18.7	35.2	58.5	17.3	14.8	21.0	47.5	67.9	76.7	42.1	72.8	45.5	28.7	38.1	59.2	37.5	49.7	57.7	34.3	66.3	51.8	38.9	76.7	11.0	43.0
17	57.0	63.7	21.2	25.6	40.2	26.6	43.6	60.3	69.2	58.3	63.8	55.0	38.4	14.1	8.9	11.0	30.5	28.3	15.4	13.4	13.0	27.8	12.1	16.3	69.2	8.9	33.9
18	20.5	17.4	12.7	14.1	17.9	14.2	9.7	16.0	54.7	18.0	53.9	36.4	55.4	49.5	59.9	21.4	59.5	37.3	31.5	38.2	17.6	42.5	58.2	38.5	59.9	9.7	33.1
19	49.4	60.4	38.7	19.1	13.1	12.2	9.9	8.8	10.2	10.3	9.9	9.2	9.3	10.5	9.7	9.9	10.1	12.4	10.4	10.3	46.0	49.9	25.7	10.3	60.4	8.8	19.4
20	13.1	12.5	13.4	14.2	9.2	10.0	9.8	11.0	10.4	11.0	9.9	9.2	9.4	10.6	10.1	10.5	9.0	9.7	10.0	9.6	53.9	12.6	38.1	46.8	53.9	9.0	15.2
21	6.9	13.1	11.8	58.6	38.4	25.2	12.5	12.8	11.4	9.8	11.0	10.8	10.8	10.7	11.5	35.3	26.2	12.3	25.9	14.9	38.0	16.4	14.8	22.8	58.6	6.9	19.2
22	10.2	16.5	16.3	12.9	27.8	9.2	10.0	9.3	10.2	10.2	9.1	9.5	10.0	31.2	31.7	17.4	35.3	64.5	20.8	11.3	9.1	9.8	8.3	11.3	64.5	8.3	17.2
23	13.4	10.3	15.7	57.1	16.4	22.9	15.2	15.1	10.7	11.6	10.2	9.6	9.8	9.8	9.7	10.1	43.5	42.3	11.2	9.6	9.3	8.8	8.9	10.2	57.1	8.8	16.3
24	11.5	11.8	11.7	9.4	9.8	9.2	10.1	10.0	13.2	13.8	11.4	10.3	11.3	53.7	33.5	34.3	60.6	52.9	33.5	44.1	34.2	51.8	36.7	18.1	60.6	9.2	24.9
25	13.6	9.1	8.7	9.2	35.2	41.6	59.3	48.4	34.3	20.8	37.6	46.8	23.8	7.1	6.9	9.3	13.5	56.7	42.2	16.7	24.1	37.8	21.7	26.6	59.3	6.9	27.1
26	24.2	10.9	13.1	44.6	49.2	49.2	59.9	52.1	73.0	73.2	60.2	33.1	29.9	39.5	35.4	29.8	31.9	29.7	27.9	25.3	19.5	16.1	13.1	13.7	73.2	10.9	35.6
27	13.2	13.6	13.9	14.4	15.6	29.2	18.0	7.3	8.8	11.1	23.8	29.7	17.0	14.2	10.9	6.4	5.4	7.6	11.2	7.9	8.0	40.0	15.4	8.0	40.0	5.4	14.6
28	32.7	14.3	30.7	14.0	62.2	4.9	6.3	6.2	10.0	36.4	10.8	11.7	11.0	6.7	6.0	6.5	5.6	6.0	7.9	45.9	71.9	39.1	53.7	43.0	71.9	4.9	22.6
29	49.7	59.6	26.5	39.2	23.2	23.4	22.3	19.8	17.2	24.7	23.3	44.3	45.1	28.4	34.0	28.3	33.6	28.8	45.0	40.6	48.5	37.3	47.5	38.2	59.6	17.2	34.5
30	46.3	50.6	56.4	38.7	48.5	38.5	43.0	45.9	57.2	41.6	56.8	59.8	74.8	70.4	33.0	41.4	37.3	44.5	44.2	37.9	62.1	58.8	59.3	65.6	74.8	33.0	50.5
31	38.9	21.3	18.6	17.6	14.7	32.3	33.4	17.9	22.9	25.3	55.6	40.9	76.8	62.2	63.3	65.3	32.6	68.8	59.1	49.9	20.2	12.5	12.6	24.8	76.8	12.5	37.0
Max.	**64.9**	**63.7**	**71.2**	**72.4**	**75.2**	**53.7**	**72.0**	**84.4**	**73.0**	**73.2**	**76.7**	**81.3**	**76.8**	**70.4**	**63.3**	**65.3**	**65.0**	**68.8**	**59.1**	**78.7**	**74.6**	**80.4**	**70.7**	**65.6**	**84.4**		
Min.	**6.9**	**9.1**	**8.7**	**9.2**	**8.0**	**4.9**	**6.3**	**6.2**	**8.8**	**8.5**	**6.8**	**7.3**	**6.2**	**6.7**	**5.2**	**5.3**	**5.4**	**6.0**	**7.9**	**7.9**	**8.0**	**8.8**	**8.3**	**7.5**		**4.9**	
Avg.	**29.5**	**27.7**	**26.1**	**28.4**	**29.9**	**24.6**	**26.4**	**26.0**	**28.7**	**25.2**	**27.0**	**24.8**	**25.5**	**23.8**	**18.4**	**22.6**	**29.6**	**33.5**	**26.4**	**30.5**	**32.6**	**34.6**	**33.9**	**27.5**			**27.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	71.1	54.4	37.0	23.1	21.5	15.6	13.3	14.6	36.2	10.2	8.6	25.0	10.3	10.2	19.9	13.6	21.1	58.7	25.4	48.9	28.2	18.8	12.9	11.0	71.1	8.6	25.4
2	9.3	9.6	7.3	7.1	7.1	6.5	7.0	7.0	10.5	18.7	26.8	37.1	37.3	46.0	19.1	11.7	24.3	26.3	28.7	31.4	17.2	13.2	44.6	59.0	59.0	6.5	21.4
3	36.6	56.5	14.5	13.6	10.2	11.9	9.6	9.1	9.1	10.0	10.7	10.9	10.1	10.3	10.4	10.2	10.8	9.9	9.2	9.6	9.6	10.0	10.7	10.2	56.5	9.1	13.5
4	10.6	9.5	9.5	22.5	55.3	60.9	63.5	57.4	19.9	22.9	19.5	21.2	23.2	17.8	19.0	10.0	21.5	39.0	54.1	43.5	46.6	27.7	9.1	8.0	63.5	8.0	28.8
5	5.9	9.2	19.7	25.6	31.1	24.5	19.6	3.8	4.8	25.1	5.2	5.0	10.9	18.6	24.5	72.5	51.4	58.5	37.0	34.8	16.0	14.1	12.7	28.4	72.5	3.8	23.3
6	29.5	25.9	14.9	23.4	13.7	34.0	19.8	10.3	6.8	7.7	16.2	56.8	34.4	21.6	53.9	14.4	14.1	11.4	13.3	19.6	42.7	25.5	30.1	26.1	56.8	6.8	23.6
7	13.7	25.1	23.5	24.0	32.5	42.3	25.4	21.5	22.7	24.7	17.7	47.8	32.5	16.5	11.2	12.0	16.7	26.9	19.0	13.0	15.6	12.6	15.1	15.1	47.8	11.2	22.0
8	16.3	14.9	14.3	13.0	13.1	13.6	12.9	28.3	32.0	19.5	26.9	57.2	9.4	8.8	32.5	62.3	37.8	46.1	26.0	30.5	13.9	20.4	26.5	41.3	62.3	8.8	25.7
9	47.0	59.3	39.8	35.9	19.5	24.7	21.3	23.2	17.0	19.7	11.3	23.5	62.0	52.7	37.3	57.7	40.9	43.4	55.7	51.7	16.4	43.6	24.4	21.4	62.0	11.3	35.4
10	47.5	33.3	53.9	52.1	53.5	39.5	37.7	30.3	46.1	29.3	46.2	33.1	47.2	61.0	55.9	36.8	26.5	32.5	36.5	34.3	41.7	36.9	50.6	67.7	67.7	26.5	42.9
11	52.9	47.5	10.3	47.5	30.6	51.9	25.3	48.2	40.4	7.7	28.1	11.2	9.0	4.7	5.3	4.5	6.2	5.6	3.3	8.6	16.7	23.9	12.6	11.0	52.9	3.3	21.4
12	45.1	62.8	61.4	54.9	65.1	21.3	48.1	11.5	40.9	41.1	29.5	17.7	13.4	10.1	14.0	15.7	22.7	39.3	56.0	53.6	67.5	62.5	56.7	28.9	67.5	10.1	39.2
13	25.1	27.8	28.3	38.8	62.6	44.6	18.3	20.2	25.7	28.8	32.9	15.6	12.2	17.1	13.5	19.7	12.3	18.4	15.5	42.6	52.9	43.7	60.3	53.7	62.6	12.2	30.4
14	34.2	52.7	47.7	56.9	60.8	12.6	8.1	9.5	12.6	31.4	51.9	60.2	28.3	55.6	37.1	61.6	43.4	67.6	24.6	53.1	60.3	28.8	41.4	13.2	67.6	8.1	39.7
15	8.6	9.2	11.1	10.4	9.1	9.7	10.2	10.2	10.1	11.0	10.2	10.5	10.2	10.7	9.6	12.2	9.8	9.4	8.3	7.3	8.8	7.5	43.9	16.6	43.9	7.3	11.4
16	8.5	6.5	47.3	9.2	8.7	9.1	7.1	14.9	25.2	9.3	5.1	5.7	10.5	6.2	6.4	6.1	4.4	6.2	6.0	8.2	8.3	11.4	10.0	10.2	47.3	4.4	10.4
17	47.5	28.6	13.7	20.8	11.0	14.4	46.0	19.7	32.9	20.2	18.0	14.3	34.1	37.1	12.9	15.1	18.2	18.5	24.8	20.8	49.1	31.1	36.9	29.4	49.1	11.0	25.6
18	18.5	28.2	19.0	21.4	60.1	47.5	71.0	71.5	46.5	47.2	16.0	40.5	14.3	15.0	39.2	17.7	29.8	46.8	46.2	18.8	12.8	9.5	7.1	8.9	71.5	7.1	31.4
19	9.7	48.7	46.4	39.3	44.3	13.1	13.6	17.1	22.0	21.7	10.6	25.4	32.1	26.6	46.0	27.4	11.5	13.7	20.6	14.4	7.7	6.6	13.2	20.2	48.7	6.6	23.0
20	51.5	27.7	25.9	20.5	8.5	8.9	9.7	8.9	7.8	4.5	24.6	25.6	10.1	6.2	12.5	16.5	14.0	42.1	64.8	56.4	43.5	66.4	51.8	74.5	74.5	4.5	28.4
21	55.8	36.6	53.1	66.8	59.4	62.7	31.9	47.5	29.0							42.7	25.9	35.1	22.5	60.4	17.0	12.2	8.2	29.6	66.8	8.2	38.7
22	59.8	25.7	43.0	51.8	27.0	36.1	28.2	21.1	41.3	11.2	40.3	38.6	53.7	28.5	25.0	23.0	56.6	15.1	40.0	32.8	17.7	47.7	33.8	31.0	59.8	11.2	34.5
23	21.9	24.5	13.8	25.3	43.8	8.1	12.8	6.8	6.6	5.4	23.3	11.2	9.9	13.9	8.1	7.8	10.8	18.4	20.8	33.3	52.0	24.9	62.5	30.6	62.5	5.4	20.7
24	36.4	39.9	30.2	18.4	10.0	11.0	11.2	10.3	8.9	9.8	9.0	8.7	9.7	9.1	9.3	8.7	35.4	18.2	46.9	39.4	40.1	44.7	27.1	55.3	55.3	8.7	22.8
25	36.6	53.0	70.6	27.0	62.6	34.2	64.0	54.8	47.0	51.0	56.4	43.8	39.5	22.4	30.4	51.7	47.0	39.4	15.2	25.2	17.1	29.3	26.0	18.9	70.6	15.2	40.1
26	11.0	55.3	45.1	23.3	14.9	35.8	7.4	8.9	8.6	8.6	10.1	11.3	10.8	9.3	10.1	9.4	10.2	10.4	10.0	8.9	8.5	8.5	10.7	58.9	58.9	7.4	16.9
27	10.3	27.0	8.8	7.8	10.2	11.2	8.0	6.8	4.7	7.3	24.0	39.4	28.0	41.1	30.6	21.2	40.3	42.4	64.7	69.1	65.5	68.5	64.2	71.4	71.4	4.7	32.2
28	57.4	60.9	50.9	47.2	53.8	39.0	41.1	29.8	20.1	17.1	17.1	13.9	24.6	53.3	47.9	49.3	13.0	14.5	16.2	28.5	27.0	45.3	82.2	79.7	82.2	13.0	38.7
29	23.1	13.6	12.6	14.6	11.5	11.8	25.8	11.5	16.3	11.8	6.3	23.9	11.1	8.5	9.1	6.8	7.8	25.5	12.0	26.1	23.2	40.8	53.5	7.2	53.5	6.3	17.3
30	13.5	10.5	12.1	24.0	13.3	9.2	8.9	9.6	9.7	8.3	9.5	9.7	9.7	9.7	9.8	10.0	9.6	10.0	9.9	10.2	9.7	10.4	10.2	9.8	24.0	8.3	10.7
31	9.5	40.9	63.0	42.5	39.3	26.3	22.2	21.5	26.1	27.5	32.5	17.5	10.2	14.1	31.0	23.7	33.1	14.3	8.0	10.6	7.3	13.0	27.5	32.3	63.0	7.3	24.7
Max.	**71.1**	**62.8**	**70.6**	**66.8**	**65.1**	**62.7**	**71.0**	**71.5**	**47.0**	**51.0**	**56.4**	**60.2**	**62.0**	**61.0**	**55.9**	**72.5**	**56.6**	**67.6**	**64.8**	**69.1**	**67.5**	**68.5**	**82.2**	**79.7**	**82.2**		
Min.	**5.9**	**6.5**	**7.3**	**7.1**	**7.1**	**6.5**	**7.0**	**3.8**	**4.7**	**4.5**	**5.1**	**5.0**	**9.0**	**4.7**	**5.3**	**4.5**	**4.4**	**5.6**	**3.3**	**7.3**	**7.3**	**6.6**	**7.1**	**7.2**		**3.3**	
Avg.	**29.8**	**33.1**	**30.6**	**29.3**	**31.1**	**25.5**	**24.2**	**21.5**	**22.2**	**18.9**	**21.5**	**25.4**	**21.9**	**22.1**	**23.0**	**24.3**	**23.5**	**27.9**	**27.1**	**30.5**	**27.8**	**27.7**	**31.5**	**31.6**			**26.4**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.9	6.3	7.0	6.9	9.2	23.4	11.9	7.0	10.0	6.6	5.8	29.8	16.5	5.6	5.9	7.4	8.3	12.8	9.9	37.8	37.0	60.4	18.0	26.9	60.4	5.6	16.0
2	32.0	36.2	47.1	33.7	9.5	10.7	13.4	14.3	10.7	34.9	7.6	10.3	12.9	15.8	34.2	9.4	10.8	34.6	16.0	11.7	45.7	16.7	19.9	40.9	47.1	7.6	22.0
3	9.7	14.1	8.2	17.4	10.8	8.8	54.4	36.6	9.5	10.7	21.2	8.3	14.6	14.8	10.4	10.8	18.0	17.4	11.0	11.6	52.0	13.8	51.0	6.2	54.4	6.2	18.4
4	6.0	48.9	81.9	26.7	8.4	10.7	14.1	65.1	40.5	32.7	13.4	16.3	15.5	14.1	7.7	7.9	15.6	17.2	22.4	20.7	10.9	18.2	16.8	14.6	81.9	6.0	22.7
5	39.8	42.8	25.6	52.8	20.2	31.2	23.3	42.3	56.3	57.1	51.4	20.9	58.7	63.6	53.9	10.4	8.6	9.1	7.4	8.8	8.4	7.1	9.8	9.3	63.6	7.1	30.0
6	8.4	9.0	28.0	12.0	13.5	9.9	9.5	7.8	8.3	18.1	34.3	36.0	26.8	42.9	29.4	76.4	48.6	12.3	12.9	29.1	62.9	32.4	15.8	14.9	76.4	7.8	25.0
7	14.2	23.4	20.5	19.2	16.1	9.8	9.6	5.6	6.6	10.8	22.0	22.2	40.2	57.2	66.6	83.9	76.1	84.1	73.1	50.9	39.0	67.8	67.7	59.4	84.1	5.6	39.4
8	66.5	64.4	85.0	77.4	27.6	18.9	16.7	18.8	13.8	13.2	15.9	41.6	65.9	50.1	72.0	67.7	62.2	63.4	45.1	13.9	50.0	52.5	27.0	31.2	85.0	13.2	44.2
9	56.0	37.0	11.9	10.1	8.7	10.1	10.0	9.2	10.3	8.7	10.1	10.7	9.5	10.3	9.1	13.5	10.9	13.5	55.1	39.9	25.9	35.5	37.3	7.7	56.0	7.7	19.2
10	6.8	13.5	8.1	8.3	9.4	8.5	31.8	15.9	13.9	14.6	26.9	23.4	4.7	16.3	9.9	11.7	13.7	7.8	10.6	7.9	12.6	24.0	13.1	49.8	49.8	4.7	15.1
11	20.7	27.1	19.3	11.7	41.8	17.3	9.8	35.3	12.9	28.1	39.7	3.8	5.2	5.5	6.9	6.4	6.8	6.9	13.5	46.4	29.6	42.8	62.4	30.5	62.4	3.8	22.1
12	58.9	64.0	33.9	11.9	8.8	7.5	8.6	7.7	6.7	6.2	13.1	24.2	8.0	4.2	6.4	5.8	9.6	30.8	73.8	56.5	28.6	9.8	11.2	9.5	73.8	4.2	21.1
13	9.0	12.3	16.7	60.5	49.8	53.8	48.8	38.4	4.8	24.4	8.4	5.3	5.2	5.7	21.0	42.3	32.2	48.0	37.2	44.9	54.4	34.0	59.8	35.3	60.5	4.8	31.3
14	46.4	13.2	13.1	11.9	9.9	9.4	10.3	9.9	8.7	9.0	8.8	9.2	10.2	9.1	9.9	8.3	9.4	9.5	9.4	9.7	10.3	9.9	11.6	10.9	46.4	8.3	11.6
15	9.9	9.7	9.3	9.7	9.8	10.8	10.0	10.5	11.1	11.9	10.3	10.1	10.9	9.5	9.9	10.1	10.1	9.6	9.7	10.7	9.9	10.6	10.2	9.9	11.9	9.3	10.2
16	9.8	9.0	8.6	11.0	10.6	9.1	8.3	8.2	8.8	11.3	9.8	9.5	8.3	8.6	9.1	8.1	8.6	8.0	7.9	8.6	9.2	8.9	8.8	8.0	11.3	7.9	9.0
17	8.2	8.8	6.8	6.5	7.6	6.7	6.1	7.5	7.9	6.4	4.9	2.6	3.3	37.0	5.1	5.8	5.4	5.5	10.9	13.5	49.7	43.5	35.8	10.5	49.7	2.6	12.8
18	6.3	6.6	5.6	6.0	6.9	6.0	9.2	10.2	12.9	9.1	9.6	9.2	15.2	21.1	11.3	9.5	8.7	9.4	9.6	9.1	9.0	8.8	9.7	9.8	21.1	5.6	9.5
19	10.1	9.7	9.7	10.1	10.2	9.6	9.5	9.7	9.6	9.2	9.8	9.7	9.6	9.9	9.3	9.9	10.5	10.3	9.2	7.7	8.1	7.6	9.3	21.4	21.4	7.6	10.0
20	12.0	26.6	67.0	34.2	16.3	14.8	19.6	36.8	68.4	56.9	45.8	33.6	52.6	31.6	34.5	49.6	50.5	72.0	43.1	49.3	40.3	61.6	48.9	22.2	72.0	12.0	41.2
21	19.4	38.3	22.2	9.6	7.2	6.8	8.5	29.0	50.8	19.4	13.6	10.1	12.4	9.5	10.9	9.7	11.0	10.7	10.2	10.6	10.3	10.3	10.1	10.6	50.8	6.8	15.0
22	12.9	50.6	46.7	24.7	44.2	55.6	33.2	15.0	9.8	15.8	13.5	19.9	12.6	20.0	16.8	17.2	10.0	18.4	13.7	17.7	30.4	15.3	14.1	26.1	55.6	9.8	23.1
23	25.3	21.8	21.8	14.1	12.1	12.0	15.1	10.3	15.8	18.0	14.4	13.9	15.7	18.5	15.9	41.1	56.7	35.6	23.7	55.7	34.9	27.2	5.6	16.6	56.7	5.6	22.6
24	6.1	13.2	8.0	7.6	9.2	13.5	8.1	15.1	9.5	7.4	6.5	33.6	34.8	9.0	7.9	12.5	39.8	44.2	12.1	15.4	26.8	9.8	13.6	10.2	44.2	6.1	15.6
25	11.2	12.5	10.6	11.1	13.2	12.2	12.2	16.6	9.4	6.2	9.0	47.3	47.8	10.6	20.7	17.9	12.7	8.6	8.1	10.4	10.1	9.3	10.6	10.5	47.8	6.2	14.5
26	13.7	12.1	10.6	11.3	9.8	10.3	9.3	9.3	9.5	8.7	8.3	9.5	8.9	10.2	9.1	11.1	12.1	9.6	7.9	9.1	7.0	7.4	8.0	47.0	47.0	7.0	11.2
27	11.3	31.9	58.1	35.0	56.4	49.3	40.9	32.1	48.4	23.5	13.9	10.5	6.2	33.4	49.7	18.1	15.3	43.9	28.8	30.0	8.5	8.0	7.4	9.1	58.1	6.2	27.9
28	7.5	7.8	7.6	12.8	7.6	8.1	6.7	22.4	22.3	6.9	4.0	31.8	8.1	4.2	5.8	22.3	44.2	61.0	56.4	37.4	41.4	37.9	38.7	39.0	61.0	4.0	22.6
29	22.2	29.4	49.2	41.1	53.5	54.8	42.7	44.6	33.8	44.7	30.4	37.0	60.3	39.0	52.2	39.3	38.2	40.1	38.1	25.9	52.4	51.6	54.1	63.1	63.1	22.2	43.2
30	73.6	24.2	59.4	38.8	56.7	63.2	22.8	28.2	14.3	6.4	4.2	6.0	57.4	15.2	13.4	48.3	11.4	18.7	15.6	24.9	35.3	12.9	11.2	10.1	73.6	4.2	28.0
Max.	**73.6**	**64.4**	**85.0**	**77.4**	**56.7**	**63.2**	**54.4**	**65.1**	**68.4**	**57.1**	**51.4**	**47.3**	**65.9**	**63.6**	**72.0**	**83.9**	**76.1**	**84.1**	**73.8**	**56.5**	**62.9**	**67.8**	**67.7**	**63.1**	**85.0**		
Min.	**6.0**	**6.3**	**5.6**	**6.0**	**6.9**	**6.0**	**6.1**	**5.6**	**4.8**	**6.2**	**4.0**	**2.6**	**3.3**	**4.2**	**5.1**	**5.8**	**5.4**	**5.5**	**7.4**	**7.7**	**7.0**	**7.1**	**5.6**	**6.2**		**2.6**	
Avg.	**21.6**	**24.1**	**26.9**	**21.5**	**19.2**	**19.1**	**17.8**	**20.6**	**18.5**	**17.9**	**16.2**	**18.5**	**21.9**	**20.1**	**20.8**	**23.1**	**22.5**	**25.8**	**23.4**	**24.2**	**28.3**	**25.2**	**23.9**	**22.4**			**21.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.9	8.2	8.8	7.9	9.3	9.1	9.9	8.5	8.9	9.0	8.5	9.1	8.9	9.7	9.3	9.6	9.6	10.5	10.8	10.3	9.6	10.1	11.2	10.3	11.2	7.9	9.4
2	9.5	11.0	10.7	9.9	8.6	8.9	8.7	8.1	9.2	8.9	9.4	8.8	9.4	9.6	12.4	9.4	8.6	9.8	15.0	16.3	33.7	86.5	72.2	64.3	86.5	8.1	19.1
3	59.2	31.4	10.6	9.2	9.0	11.3	15.1	17.0	19.7	40.3	69.3	48.9	37.3	75.4	48.8	31.2	60.3	56.5	27.1	18.9	18.5	25.4	16.6	12.8	75.4	9.0	32.1
4	23.1	32.0	36.4	21.6	18.5	17.9	47.1	52.9	14.8	13.0	22.0	13.5	8.1	50.5	17.6	33.4	16.0	38.5	30.1	12.3	10.4	11.7	51.8	36.1	52.9	8.1	26.2
5	26.1	61.3	18.9	45.3	52.0	72.5	47.5	15.2	15.9	13.0	11.3	10.2	13.7	16.0	31.4	27.4	22.2	19.7	21.7	20.9	22.2	73.4	55.2	18.2	73.4	10.2	30.5
6	22.7	32.4	37.7	8.9	17.0	7.2	13.0	19.6	38.5	35.1	10.8	8.8	9.2	9.5	9.4	10.9	12.2	14.7	28.3	33.2	48.8	65.8	18.7	23.2	65.8	7.2	22.3
7	26.7	31.9	66.1	32.3	45.0	30.8	53.8	42.7	61.7	80.7	68.7	72.0	51.8	75.8	60.2	79.7	70.4	83.4	68.1	36.9	70.6	63.3	86.6	72.6	86.6	26.7	59.7
8	60.1	71.9	40.4	25.6	13.7	17.5	10.2	10.7	11.7	10.6	10.0	10.8	11.1	11.2	10.1	10.1	10.1	10.2	9.8	10.5	11.8	10.2	10.2	11.7	71.9	9.8	17.5
9	10.6	10.2	10.5	10.3	12.6	12.5	24.7	34.8	41.9	69.7	55.4	59.0	49.0	64.0	67.3	54.9	82.8	87.8	66.3	63.9	54.8	80.6	72.4	47.1	87.8	10.2	47.6
10	58.5	22.7	33.1	24.9	16.8	37.9	39.1	36.2	15.3	14.4	8.5	12.8	9.4	35.5	47.1	11.5	14.1	10.4	9.8	9.7	8.0	8.1	7.2	6.5	58.5	6.5	20.7
11	13.4	15.8	28.9	11.3	7.5	7.8	48.6	29.9	31.3	46.2	31.2	33.3	9.9	23.0	65.3	47.8	25.2	51.3	19.7	49.1	7.2	9.4	7.5	6.6	65.3	6.6	26.1
12	8.3	17.1	12.9	10.6	10.1	8.6	8.6	8.0	8.3	8.6	14.8	47.8	34.0	66.5	34.7	63.7	31.8	10.8	14.2	12.4	10.7	12.2	9.8	7.0	66.5	7.0	19.6
13	9.1	8.2	6.9	7.1	7.5	8.5	8.9	8.4	8.5	4.6	4.3	3.9	31.3	5.4	7.0	6.2	6.0	5.7	39.1	35.5	14.9	18.3	13.5	11.1	39.1	3.9	11.7
14	28.6	37.9	26.6	37.0	73.3	64.3	73.4	60.9	30.9	55.9	57.8	51.8	34.7	53.6	37.2	46.1	29.1	39.8	54.5	53.1	32.0	27.8	25.7	15.6	73.4	15.6	43.7
15	13.9	9.5	8.7	10.5	51.3	11.6	16.8	33.9	11.8	8.5	8.6	7.0	7.0	8.4	5.8	6.6	7.5	43.7	7.0	9.1	8.0	9.6	13.3	16.7	51.3	5.8	13.9
16	14.8	10.5	28.1	11.5	9.1	10.3	10.3	9.4	9.1	8.2	9.2	10.0	9.6	9.0	10.8	11.4	10.4	9.4	11.5	11.7	21.1	13.8	13.5	16.5	28.1	8.2	12.0
17	13.8	18.6	15.0	23.3	23.2	60.1	23.9	14.4	19.5	9.6	12.8	12.4	4.5	5.3	9.4	9.7	11.4	9.4	8.9	10.9	9.7	11.2	8.7	9.5	60.1	4.5	14.8
18	8.9	11.7	22.0	26.7	18.3	12.6	11.7	9.6	9.6	10.2	10.9	9.6	9.8	9.3	9.7	9.8	8.7	35.6	26.4	23.7	32.8	66.0	16.6	15.4	66.0	8.7	17.7
19	25.6	44.4	19.4	38.3	21.2	17.9	44.2	45.3	15.4	17.7	10.9	7.8	6.6	4.7	6.1	14.2	8.7	10.9	10.8	6.7	8.8	48.6	54.0	47.6	54.0	4.7	22.3
20	45.3	35.6	34.7	63.1	68.4	72.4	57.7	46.1	58.4	38.4	6.5	17.9	10.2	7.0	8.1	10.5	27.9	14.4	15.2	9.7	38.6	10.5	23.7	11.4	72.4	6.5	30.5
21	8.8	30.1	37.9	63.0	46.7	42.8	33.9	74.4	29.8	41.5	27.8	30.0	35.5	32.6	41.8	35.5	39.1	59.6	40.1	43.7	13.6	32.6	18.8	20.5	74.4	8.8	36.7
22	11.6	12.8	7.6	8.0	11.1	8.2	8.5	7.4	7.7	32.3	7.4	5.6	9.7	17.2	5.6	12.0	49.6	15.8	16.6	10.0	11.0	9.0	16.1	44.3	49.6	5.6	14.4
23	67.8	14.4	18.8	26.4	27.4	55.4	28.1	51.5	60.2	24.8	34.6	27.5	45.5	50.3	45.1	34.4	33.5	41.6	49.2	21.2	52.8	56.4	57.5	53.3	67.8	14.4	40.7
24	32.4	26.3	10.9	11.3	14.3	13.5	10.2	9.1	10.3	9.2	9.8	9.3	9.5	9.3	9.3	9.5	9.7	10.3	8.3	21.9	32.5	31.8	17.5	14.5	32.5	8.3	14.6
25	24.6	33.9	76.6	60.0	51.2	51.5	29.3	54.0	54.5	54.6	57.6	57.5	50.1	36.4	51.2	49.3	34.4	37.4	46.2	45.5	48.6	60.6	56.2	57.0	76.6	24.6	49.1
26	56.3	57.5	45.5	31.6	27.1	24.3	21.3	16.1	17.7	20.7	17.4	18.6	14.2	16.0	14.2	16.6	19.0	28.6	16.1	14.4	12.6	14.4	14.4	14.9	57.5	12.6	22.9
27	12.8	13.3	13.6	14.1	16.0	13.2	13.7	13.2	30.7	7.9	10.9	7.3	24.8	15.8	16.1	20.5	39.6	46.5	43.8	61.2	38.6	36.5	18.6	17.1	61.2	7.3	22.7
28	17.0	17.1	16.2	15.1	37.1	20.0	13.2	12.1	8.5	5.8	5.1	4.0	5.5	7.7	8.1	9.2	11.7	10.9	9.5	12.9	10.3	8.5	7.4	5.3	37.1	4.0	11.6
29	5.8	8.5	8.5	6.5	11.2	8.1	19.3	45.0	62.7	53.3	54.2	69.9	19.2	28.0	30.8	38.8	34.0	24.5	13.5	12.7	14.9	11.3	15.2	12.6	69.9	5.8	25.3
30	14.4	22.2	15.4	19.5	22.4	53.5	36.5	45.9	29.6	14.7	13.7	18.4	23.2	16.0	15.5	31.1	59.6	28.0	67.5	63.2	18.5	21.4	46.3	28.9	67.5	13.7	30.2
31	9.2	6.4	7.4	10.6	7.8	10.7	7.6	6.7	9.8	5.5	3.7	3.8	3.4	3.7	24.7	24.9	46.3	21.8	18.9	14.9	17.1	15.2	12.0	10.0	46.3	3.4	12.6
Max.	**67.8**	**71.9**	**76.6**	**63.1**	**73.3**	**72.5**	**73.4**	**74.4**	**62.7**	**80.7**	**69.3**	**72.0**	**51.8**	**75.8**	**67.3**	**79.7**	**82.8**	**87.8**	**68.1**	**63.9**	**70.6**	**86.5**	**86.6**	**72.6**	**87.8**		
Min.	**5.8**	**6.4**	**6.9**	**6.5**	**7.5**	**7.2**	**7.6**	**6.7**	**7.7**	**4.6**	**3.7**	**3.8**	**3.4**	**3.7**	**5.6**	**6.2**	**6.0**	**5.7**	**7.0**	**6.7**	**7.2**	**8.1**	**7.2**	**5.3**		**3.4**	
Avg.	**24.1**	**24.7**	**23.7**	**22.6**	**24.7**	**25.8**	**25.6**	**27.3**	**24.6**	**24.9**	**22.0**	**22.8**	**19.5**	**25.2**	**24.8**	**25.4**	**27.4**	**28.9**	**26.6**	**25.0**	**24.0**	**31.0**	**28.0**	**23.8**			**25.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.7	8.8	9.6	10.6	10.8	16.2	13.4	12.6	12.0	10.4	5.9	6.0	7.4	16.3	11.3	23.1	37.9	11.3	13.5	22.3	24.7	22.6	32.1	15.5	37.9	5.9	15.3
2	23.0	21.4	12.5	23.9	29.9	27.1	21.7	20.2	34.0	32.2	6.7	7.5	11.1	7.8	9.3	11.9	36.2	20.7	21.1	21.7	18.7	16.7	20.2	19.3	36.2	6.7	19.8
3	19.7	25.7	17.7	18.7	28.3	21.5	23.2	21.0	14.0	15.5	7.0	10.6	10.3	7.8	7.6	11.3	29.8	19.4	17.8	15.1	19.3	17.6	18.2	30.6	30.6	7.0	17.8
4	22.7	18.7	18.7	21.7	31.7	25.0	23.4	51.6	22.3	14.6	13.5	11.5	11.3	11.7	12.7	13.9	26.9	19.6	35.5	30.4	35.5	45.1	20.3	20.0	51.6	11.3	23.3
5	19.6	15.9	8.1	13.4	9.7	7.6	10.4	46.6	15.0	8.2	4.8	4.2	3.7	5.9	8.0	6.8	8.5	6.4	5.9	5.2	5.9	7.6	10.3	19.2	46.6	3.7	10.7
6	10.1	10.4	9.8	12.2	13.9	13.1	11.6	13.3	16.3	11.9	7.3	6.0	6.5	10.2	16.4	23.3	23.4	14.6	18.6	15.1	17.3	33.1	29.6	60.6	60.6	6.0	16.9
7	57.4	64.7	47.2	43.3	31.0	47.4	54.7	48.7	61.1	26.4	14.6	17.3	38.4	47.1	51.4	39.6	48.9	80.2	61.4	63.4	36.1	22.6	14.0	13.1	80.2	13.1	42.9
8	13.4	13.2	18.8	14.4	14.2	14.2	14.8	29.0	29.9	13.8	11.0	13.2	8.7	21.7	22.9	23.0	28.1	15.8	16.5	13.9	13.6	23.9	31.9	29.5	31.9	8.7	18.7
9	19.9	18.2	53.9	46.4	24.3	31.9	43.4	36.0	34.2	45.5	63.3	46.3	40.7	19.7	18.5	35.3	32.0	21.1	24.0	16.6	11.9	50.4	43.8	39.0	63.3	11.9	34.0
10	32.1	12.1	14.5	41.7	37.6	24.4	16.3	13.2	14.0	38.0	23.7	57.7	62.4	24.4	26.4	21.6	15.1	38.8	21.2	16.8	39.5	25.6	23.5	23.6	62.4	12.1	27.7
11	22.0	22.4	19.2	21.4	18.7	22.0	14.8	41.6	11.0	15.1	12.7	10.1	11.8	12.7	15.2	24.4	34.5	44.3	54.7	75.9	66.7	27.9	26.1	20.5	75.9	10.1	26.9
12	24.3	31.1	25.5	27.0	25.4	21.6	17.8	12.0	9.3	9.3	10.0	26.2	24.8	67.5	45.1	40.5	40.1	31.9	40.5	64.5	44.3	56.9	42.5	32.8	67.5	9.3	32.1
13	41.9	47.3	47.6	42.7	46.4	57.2	27.9	47.6	35.5	30.8	27.6	24.6	29.9	46.4	43.6	26.9	21.7	14.7	14.5	19.8	21.9	22.1	24.2	27.6	57.2	14.5	32.9
14	49.2	58.8	44.9	56.1	23.7	54.5	35.7	55.0	41.4	23.6	21.9	34.5	35.8	17.3	23.7	23.3	30.1	38.7	43.3	47.5	16.4	17.5	38.7	25.2	58.8	16.4	35.7
15	16.4	13.8	13.4	14.7	12.6	13.3	13.3	13.7	13.0	13.4	13.1	25.9	53.2	28.9	13.9	12.0	12.4	14.4	12.9	14.9	14.7	16.4	44.5	30.0	53.2	12.0	18.5
16	39.6	21.2	24.0	33.1	54.1	26.0	17.7	23.2	19.5	23.7	9.1	9.4	11.3	11.4	13.9	15.2	18.2	29.0	57.3	54.6	13.4	35.7	48.1	68.6	68.6	9.1	28.2
17	23.2	27.5	35.2	37.4	57.6	50.2	37.9	26.7	19.0	23.7	11.4	10.6	7.2	7.7	14.9	9.3	9.1	17.0	29.0	13.9	25.8	17.7	16.4	14.8	57.6	7.2	22.6
18	11.0	13.1	12.1	13.3	37.6	23.0	33.1	36.5	20.5	20.1	7.5	9.0	7.7	9.1	8.8	21.3	32.9	29.6	42.0	28.0	56.3	31.3	30.6	52.0	56.3	7.5	24.4
19	22.0	34.1	14.6	13.5	19.0	22.0	42.5	30.9	51.8	38.3	16.6	23.0	14.4	14.7	15.1	13.3	15.5	17.4	16.3	15.8	28.3	15.7	21.9	34.6	51.8	13.3	23.0
20	26.8	60.1	15.9	26.7	20.5	16.3	13.5	15.5	17.3	15.2	17.9	45.1	23.2	14.4	13.5	14.2	15.8	28.5	37.5	17.6	13.9	15.2	29.1	8.5	60.1	8.5	21.8
21	6.8	8.0	10.0	11.8	11.6	13.1	8.1	6.5	9.6	8.0	7.7	8.2	8.5	14.0	15.8	42.6	18.2	21.4	34.5	17.7	35.4	50.6	54.3	64.0	64.0	6.5	20.3
22	36.7	32.2	19.8	8.8	45.6	12.6	35.8	7.9	19.3	20.9	9.9	8.2	6.5	7.3	17.5	10.1	18.2	13.1	12.8	14.1	14.9	13.2	12.2	9.7	45.6	6.5	17.0
23	9.8	14.8	18.4	14.2	14.7	15.5	15.6	15.9	35.2	20.8	9.5	5.6	5.7	6.5	7.6	11.0	7.6	6.6	9.5	5.9	5.4	6.2	5.6	13.0	35.2	5.4	11.7
24	6.9	15.0	7.7	6.8	6.5	5.9	6.8	7.6	6.6	5.9	5.4	9.2	5.7	6.4	8.8	10.4	8.9	9.1	8.9	11.1	9.8	8.8	8.6	8.2	15.0	5.4	8.1
25	9.6	10.0	11.0	11.6	10.1	10.7	10.7	8.2	10.4	8.2	8.8	10.8	10.6	6.5	6.9	7.0	8.5	8.5	8.7	8.6	9.5	8.1	8.3	7.8	11.6	6.5	9.1
26	9.2	9.3	9.9	9.2	9.0	8.6	8.7	9.5	10.7	12.7	12.8	11.3	11.4	9.3	11.3	8.3	9.3	9.5	9.4	10.5	9.8	9.5	9.9	10.0	12.8	8.3	10.0
27	16.5	13.3	13.6	14.6	9.4	12.0	13.7	10.9	11.2	9.6	10.9	10.6	8.6	8.7	9.5	9.3	9.1	10.6	9.7	8.7	11.0	9.2	8.7	11.8	16.5	8.6	10.9
28	8.5	7.8	9.0	8.5	9.4	7.8	8.8	8.5	9.5	9.2	8.8	7.4	8.5	8.8	10.4	8.0	8.8	6.6	8.0	14.8	52.2	17.5	59.2	62.5	62.5	6.6	15.3
29	68.6	51.0	40.1	26.4	17.5	13.3	19.7	16.0	13.5	22.1	11.1	5.9	11.2	9.3	6.9	10.6	7.5	6.2	7.9	7.0	6.2	5.3	5.1	5.7	68.6	5.1	16.4
30	4.2	5.4	8.5	9.1	8.0	8.1	8.1	8.2	7.6	7.4	9.1	10.2	8.2	11.0	6.5	5.3	45.8	44.3	48.9	51.7	62.9	24.0	27.0	38.9	62.9	4.2	19.5
Max.	**68.6**	**64.7**	**53.9**	**56.1**	**57.6**	**57.2**	**54.7**	**55.0**	**61.1**	**45.5**	**63.3**	**57.7**	**62.4**	**67.5**	**51.4**	**42.6**	**48.9**	**80.2**	**61.4**	**75.9**	**66.7**	**56.9**	**59.2**	**68.6**	**80.2**		
Min.	**4.2**	**5.4**	**7.7**	**6.8**	**6.5**	**5.9**	**6.8**	**6.5**	**6.6**	**5.9**	**4.8**	**4.2**	**3.7**	**5.9**	**6.5**	**5.3**	**7.5**	**6.2**	**5.9**	**5.2**	**5.4**	**5.3**	**5.1**	**5.7**		**3.7**	
Avg.	**22.8**	**23.5**	**20.4**	**21.8**	**23.0**	**21.4**	**20.8**	**23.1**	**20.8**	**18.5**	**13.3**	**16.2**	**16.8**	**16.4**	**16.4**	**17.8**	**22.0**	**21.6**	**24.7**	**24.1**	**24.7**	**22.5**	**25.5**	**27.2**			**21.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (Climatronics)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.7	50.5	40.3	21.8	24.1	19.9	18.6	18.9	20.6	42.7	23.1	10.5	7.3	6.9	9.3	10.1	11.9	19.6	8.7	15.6	15.2	36.3	20.7	52.2	64.7	6.9	23.7
2	23.8	28.2	50.1	59.4	31.9	15.6	9.4	9.5	8.0	9.2	10.0	8.8	8.6	8.6	8.2	8.2	8.2	9.1	8.3	8.9	8.6	9.0	9.9	9.8	59.4	8.0	15.4
3	9.3	10.9	10.5	10.9	10.1	9.6	9.7	9.2	7.4	44.2	55.9	55.1	15.0	69.0	9.7	35.9	51.7	37.4	82.1	56.2	56.3	64.1	68.4	28.8	82.1	7.4	34.1
4	61.8	18.5	16.6	63.3	39.2	12.4	13.3	11.0	11.6	10.4	9.4	9.9	9.1	9.4	8.8	9.3	8.9	10.8	8.4	13.5	38.2	27.5	8.6	10.6	63.3	8.4	18.4
5	11.5	10.1	12.5	12.5	10.3	9.0	8.9	9.5	10.7	10.3	9.8	10.4	9.5	9.9	11.0	10.4	9.5	9.6	10.4	9.9	10.0	9.0	10.0	10.3	12.5	8.9	10.2
6	10.6	9.6	9.6	9.2	9.1	8.8	10.1	11.8	10.2	9.9	10.5	13.2	28.7	28.4	18.7	14.4	9.4	9.4	11.2	9.8	11.4	11.1	14.5	13.3	28.7	8.8	12.6
7	12.5	11.2	10.2	8.8	10.1	9.7	10.1	10.7	9.4	9.3	9.7	10.4	8.9	7.9	8.3	8.5	9.6	9.8	10.1	10.7	10.0	11.6	11.7	14.6	14.6	7.9	10.2
8	15.7	37.0	42.6	13.8	11.6	9.5	10.6	10.6	14.2	21.6	27.3	8.0	13.0	53.7	52.3	10.5	11.2	10.3	23.6	49.0	22.1	45.5	19.1	11.7	53.7	8.0	22.7
9	25.5	20.0	39.1	24.8	22.5	20.9	19.3	26.7	12.0	10.4	9.4	9.9	10.4	10.4	15.6	9.4	10.2	9.8	13.4	12.1	19.6	25.8	19.3	29.3	39.1	9.4	17.7
10	51.2	36.8	23.6	45.5	52.0	37.6	52.6	52.2	74.1	67.6	60.1	61.4	17.2	35.6	44.0	14.2	10.9	10.8	12.2	12.0	9.0	9.5	10.2	8.9	74.1	8.9	33.7
11	7.0	7.9	8.0	7.7	8.6	5.8	6.6	9.3	70.8	36.2	35.5	42.0	49.3	34.5	26.7	20.3	20.3	7.8	20.7	21.6	17.0	26.5	13.0	13.7	70.8	5.8	21.5
12	17.2	52.0	16.0	17.0	14.2	27.5	21.9	24.5	17.1	25.1	37.1	14.8	25.4	12.1	42.9	10.8	13.7	35.5	15.2	34.3	25.1	32.2	37.6	49.1	52.0	10.8	25.8
13	27.4	27.8	38.5	35.9	47.6	15.6	14.9	15.2	14.5	15.2	14.1	15.1	15.7	16.7	15.1	19.4	18.4	14.5	16.2	15.0	15.6	18.5	19.0	20.5	47.6	14.1	20.3
14	23.8	23.6	27.3	42.2	40.9	48.9	33.2	30.5	36.0	79.8	52.8	47.7	50.3	49.7	51.0	54.9	72.0	70.3	48.2	58.8	59.4	45.9	43.5	24.0	79.8	23.6	46.5
15	20.6	18.5	16.5	15.2	15.9	15.0	13.1	15.4	15.2	19.5	23.0	9.5	10.8	8.1	6.3	6.8	7.4	8.2	10.0	8.9	8.2	9.6	9.4	9.3	23.0	6.3	12.5
16	9.1	9.7	8.7	8.5	9.6	8.8	8.1	8.5	8.8	8.3	7.5	6.3	6.6	6.3	5.9	6.7	8.3	29.9	48.3	40.2	43.2	58.0	22.5	9.4	58.0	5.9	16.1
17	26.6	8.0	24.2	43.0	55.5	17.9	13.8	8.8	9.4	11.3	8.0	12.0	12.7	22.2	17.6	40.6	15.0	23.8	13.5	16.6	23.1	25.7	25.7	24.9	55.5	8.0	20.8
18	45.6	40.6	47.0	84.4	48.6	48.0	41.3	46.5	42.0	42.9	36.4	48.8	43.5	24.0	33.2	37.2	26.2	47.9	25.2	37.4	52.3	15.4	25.3	16.0	84.4	15.4	39.8
19	9.3	5.0	4.8	5.5	8.5	9.3	8.3	8.4	7.8	7.1	8.3	8.6	10.1	40.7	37.2	28.0	30.8	9.1	9.5	14.0	9.9	10.3	18.4	38.3	40.7	4.8	14.5
20	32.6	11.2	13.0	35.2	20.7	29.4	13.5	13.1	12.7	12.9	14.0	14.7	14.1	16.3	17.2	16.0	14.3	36.0	31.2	42.6	31.3	21.3	15.9	53.9	53.9	11.2	22.2
21	18.2	24.6	20.2	38.1	14.0	15.9	17.1	37.6	45.1	40.2	52.1	48.5	27.3	35.6	60.4	69.7	51.9	50.2	23.0	28.3	16.9	31.5	21.4	22.8	69.7	14.0	33.8
22	17.9	17.5	40.8	15.2	30.0	32.6	12.3	14.7	50.6	60.4	50.8	49.1	48.9	57.0	50.3	20.5	26.5	38.9	66.9	24.6	24.2	17.5	14.5	9.1	66.9	9.1	32.9
23	24.2	33.6	36.6	25.2	23.3	20.9	21.2	19.5	25.4	28.1	62.8	17.3	14.8	11.6	25.6	35.3	17.2	27.1	15.9	26.7	32.2	17.9	11.2	40.6	62.8	11.2	25.6
24	20.5	15.0	16.3	19.8	17.3	17.6	14.4	12.9	42.1	11.1	15.2	7.8	12.8	10.7	15.8	14.6	18.2	8.6	6.8	6.6	8.4	12.3	11.6	16.6	42.1	6.6	14.7
25	13.7	11.9	55.9	43.3	13.5	13.8	14.4	15.8	13.5	13.3	12.9	14.2	16.2	58.2	38.7	35.6	29.8	32.3	47.1	44.5	51.6	48.2	60.1	52.4	60.1	11.9	31.3
26	64.9	48.9	36.3	47.3	46.8	48.1	33.9	52.0	45.7	28.5	20.6	63.3	31.2	14.0	18.0	32.4	11.9	8.5	7.8	7.7	9.6	6.7	8.2	8.5	64.9	6.7	29.2
27	8.8	8.0	10.7	10.6	9.2	10.2	9.3	9.9	8.8	9.5	9.0	9.2	9.9	9.5	9.0	9.4	9.2	9.5	9.8	9.5	10.0	12.8	10.7	13.0	13.0	8.0	9.8
28	13.7	14.2	11.9	10.7	10.1	9.6	9.4	10.7	7.9	9.7	20.8	40.5	25.8	18.7	8.1	8.1	7.9	8.8	8.0	6.9	8.4	6.4	9.5	13.6	40.5	6.4	12.5
29	57.6	36.7	23.6	9.3	28.7	44.0	34.4	47.0	39.5	34.8	43.7	13.7	12.4	18.1	17.2	11.7	19.6	22.0	25.1	23.8	40.3	38.3	28.5	59.7	59.7	9.3	30.4
30	19.2	30.4	80.6	58.9	64.7	43.8	38.6	31.7	76.6	81.9	75.0	72.4	48.0	32.5	27.9	17.8	15.1	15.7	19.2	21.1	18.8	28.6	19.8	13.8	81.9	13.8	39.7
31	14.6	15.8	43.0	31.8	29.1	18.5	21.1	11.2	9.8	6.6	6.9	6.3	6.6	7.9	7.2	8.0	9.1	8.8	9.3	8.4	8.3	7.4	8.5	14.8	43.0	6.3	13.3
Max.	**64.9**	**52.0**	**80.6**	**84.4**	**64.7**	**48.9**	**52.6**	**52.2**	**76.6**	**81.9**	**75.0**	**72.4**	**50.3**	**69.0**	**60.4**	**69.7**	**72.0**	**70.3**	**82.1**	**58.8**	**59.4**	**64.1**	**68.4**	**59.7**	**84.4**		
Min.	**7.0**	**5.0**	**4.8**	**5.5**	**8.5**	**5.8**	**6.6**	**8.4**	**7.4**	**6.6**	**6.9**	**6.3**	**6.6**	**6.3**	**5.9**	**6.7**	**7.4**	**7.8**	**6.8**	**6.6**	**8.2**	**6.4**	**8.2**	**8.5**		**4.8**	
Avg.	**25.1**	**22.4**	**26.9**	**28.2**	**25.1**	**21.1**	**18.2**	**19.8**	**25.1**	**26.4**	**26.8**	**24.5**	**20.0**	**24.0**	**23.1**	**20.5**	**18.8**	**21.0**	**21.5**	**22.4**	**23.0**	**23.9**	**20.2**	**23.0**			**23.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.0	10.6	8.3	8.3	8.7	10.7	9.3	10.4	11.1	9.5	9.6	7.3	7.4	8.7	8.4	9.9	9.0	11.4	10.4	10.3	10.0	10.9	11.8	11.9	11.9	7.3	9.7
2	11.6	8.9	9.4	7.8	9.5	9.5	8.9	10.2	13.9	13.2	12.0	11.1	10.2	9.4	9.8	9.6	9.5	9.0	13.2	8.6	8.5	9.4	8.8	9.7	13.9	7.8	10.1
3	7.2	10.4	8.1	9.6	10.8	8.8	9.1	9.1	7.7	7.2	6.0	5.8	6.6	7.3	6.8	7.6	7.9	8.1	6.9	6.4	6.0	7.6	8.0	6.4	10.8	5.8	7.7
4	5.4	7.1	4.4	4.8	6.5	4.2	5.2	1.6	3.4	2.4	2.1	3.0	2.8	4.1	4.3	3.4	7.1	6.4	2.9	6.2	6.1	2.9	4.0	6.3	7.1	1.6	4.4
5	6.4	7.6	9.4	6.7	6.9	8.5	8.4	6.0	4.0	4.5	2.8	2.2	2.4	3.6	3.5	2.0	1.6	3.9	5.2	4.7	3.9	4.4	3.5	2.5	9.4	1.6	4.8
6	3.4	3.1	3.7	3.9	3.5	3.0	3.7	3.1	4.1	3.9	2.3	1.7	3.7	3.7	3.5	2.9	1.4	2.6	2.2	1.5	1.5	3.5	3.3	5.1	5.1	1.4	3.1
7	6.0	3.6	3.3	3.3	3.1	1.9	1.2	4.8	8.5	9.0	9.3	11.6	14.2	15.0	15.4	12.3	10.2	9.7	9.0	14.2	13.1	13.1	14.6	13.5	15.4	1.2	9.2
8	12.3	11.3	11.3	12.3	12.2	12.5	12.1	12.0	12.5	11.2	9.6	9.0	8.9	6.0	5.9	2.9	3.0	2.9	3.2	3.0	3.2	3.7	4.5	4.2	12.5	2.9	7.9
9	3.4	3.6	3.7	3.3	4.0	3.9	2.5	3.9	4.2	4.1	4.3	2.5	2.6	4.8	3.8	2.0	1.5	3.3	2.6	1.5	2.3	1.8	2.9	2.7	4.8	1.5	3.1
10	1.4	2.8	2.4	5.0	6.1	6.9	4.8	4.1	3.7	4.8	3.8	2.9	3.8	4.0	5.2	8.3	7.5	7.6	8.8	8.3	9.6	10.0	9.7	9.8	10.0	1.4	5.9
11	10.8	10.4	8.6	7.2	9.0	9.0	7.6	4.7	5.8	7.3	5.6	5.9	6.2	4.1	3.7	3.7	2.7	3.0	7.5	7.6	6.8	7.0	4.6	7.9	10.8	2.7	6.5
12	3.8	8.1	10.4	11.0	11.0	11.2	12.4	12.8	11.7	8.1	4.6	6.4	6.5	6.6	6.1	5.2	6.5	5.2	4.3	4.4	5.7	4.0	4.4	5.7	12.8	3.8	7.3
13	6.2	4.1	5.2	3.6	4.3	4.1	4.1	5.7	7.9	9.2	4.4	10.0	8.9	10.0	9.7	8.1	9.7	8.3	10.3	7.6	6.5	7.5	5.5	5.2	10.3	3.6	6.9
14	5.4	7.1	5.9	6.5	6.9	6.5	6.8	5.2	5.2	6.7	7.4	8.2	8.1	10.0	9.4	10.0	9.1	9.5	9.9	9.5	9.3	9.4	11.2	10.8	11.2	5.2	8.1
15	11.3	11.1	11.1	12.1	11.6	12.3	12.5	13.3	11.3	12.0	10.8	10.9	11.1	12.1	11.1	11.5	12.4	10.8	11.5	12.4	13.0	13.9	12.3	13.1	13.9	10.8	11.9
16	11.6	11.5	10.7	10.7	13.7	13.1	12.3	11.9	10.5	10.9	9.8					7.2	5.3	5.6	4.0	2.6	1.4	2.1	2.6	2.7	13.7	1.4	8.0
17	2.2	3.0	3.4	3.9	3.5	5.0	8.5	7.1	8.6	7.5	7.4	9.5	10.8	11.5	12.8	14.4	18.5	17.5	23.3	16.9	15.4	12.4	13.1	13.1	23.3	2.2	10.3
18	14.4	13.8	11.8	13.3	12.5	12.5	12.3	14.5	13.1	10.1	6.3	5.1	5.6	5.8	4.5	6.3	7.6	7.6	7.8	3.5	7.1	6.8	11.3	8.2	14.5	3.5	9.2
19	10.2	11.1	12.3	10.8	10.3	8.1	9.4	10.5	12.8	11.6	12.4	11.7	12.9	11.2	7.6	9.4	11.1	6.7	6.1	4.9	4.8	5.9	7.8	7.2	12.9	4.8	9.4
20	6.2	5.2	6.0	4.8	5.3	6.5	7.1	5.9	5.6	6.1	5.3	5.7	6.4	6.2	6.7	5.3	5.1	4.5	4.0	3.3	3.7	4.3	3.4	4.7	7.1	3.3	5.3
21	4.5	8.4	8.3	10.1	8.5	10.4	9.6	9.2	8.2	7.0	6.2	3.8	6.0	7.8	9.6	10.1	14.3	13.8	11.6	18.1	24.4	27.2	28.3	32.6	32.6	3.8	12.4
22	31.7	32.0	35.7	38.3	37.9	28.8	29.0	30.7	33.1	29.8	30.8	31.7	35.4	31.4	31.5	32.6	34.2	34.2	35.5	34.9	29.9	31.1	26.5	23.1	38.3	23.1	32.1
23	22.7	20.9	18.8	10.2	8.6	11.0	10.8	9.9	9.2	11.7	11.2	10.6	12.3	11.3	12.3	12.0	12.9	12.5	10.3	11.1	10.7	10.3	12.0	11.1	22.7	8.6	12.3
24	10.9	10.8	11.4	13.1	10.8	10.8	9.8	11.5	11.3	13.2	12.4	12.9	12.8	13.3	14.3	13.4	12.8	12.7	11.8	13.1	11.1	11.2	10.1	9.6	14.3	9.6	11.9
25	9.4	9.1	8.9	7.1	7.6	8.6	8.5	5.4	6.2	5.4	6.5	7.3	7.5	6.1	5.6	6.3	7.0	8.9	9.1	9.9	9.9	12.4	12.3	15.7	15.7	5.4	8.4
26	14.4	15.5	14.3	14.7	14.5	14.9	13.5	14.3	14.5	14.7	13.6	14.5	14.3	13.5	14.3	12.9	11.1	11.2	12.2	14.7	15.8	16.9	15.5	15.0	16.9	11.1	14.2
27	14.7	19.0	16.8	26.0	26.0	34.1	27.2	25.6	23.5	23.6	25.1	29.1	24.3	22.7	24.0	25.8	27.4	25.1	25.2	29.1	28.1	24.8	27.4	26.7	34.1	14.7	25.0
28	25.7	27.8	26.7	26.6	28.2	33.0	33.5	29.2	29.4	28.4	30.1	26.4	24.0	20.7	13.7	12.6	12.4	13.3	14.0	12.3	12.5	13.8	11.9	12.3	33.5	11.9	21.6
29	10.7	10.0	9.6	10.1	8.9	7.9	8.6	9.2	9.2	9.4	8.0	7.7	9.4	8.2	8.6	8.1	9.2	8.2	8.4	8.2	8.3	9.3	8.7	8.3	10.7	7.7	8.8
30	8.2	8.2	8.9	8.2	8.2	7.2	7.4	7.3	8.0	7.2	6.8	6.6	7.3	6.1	5.1	4.5	4.9	4.8	4.0	3.7	4.5	4.9	6.3	7.0	8.9	3.7	6.5
31	6.9	6.9	7.6	8.4	6.0	5.1	5.7	4.8	6.3	6.3	6.7	6.6	5.9	6.2	7.8	8.1	8.2	10.1	12.3	13.0	13.3	15.8	15.5	14.9	15.8	4.8	8.7
Max.	**31.7**	**32.0**	**35.7**	**38.3**	**37.9**	**34.1**	**33.5**	**30.7**	**33.1**	**29.8**	**30.8**	**31.7**	**35.4**	**31.4**	**31.5**	**32.6**	**34.2**	**34.2**	**35.5**	**34.9**	**29.9**	**31.1**	**28.3**	**32.6**	**38.3**		
Min.	**1.4**	**2.8**	**2.4**	**3.3**	**3.1**	**1.9**	**1.2**	**1.6**	**3.4**	**2.4**	**2.1**	**1.7**	**2.4**	**3.6**	**3.5**	**2.0**	**1.4**	**2.6**	**2.2**	**1.5**	**1.4**	**1.8**	**2.6**	**2.5**		**1.2**	
Avg.	**10.0**	**10.4**	**10.2**	**10.4**	**10.5**	**10.6**	**10.4**	**10.1**	**10.5**	**10.2**	**9.5**	**9.6**	**9.9**	**9.7**	**9.5**	**9.3**	**9.7**	**9.6**	**9.9**	**9.8**	**9.9**	**10.3**	**10.4**	**10.5**			**10.0**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.1	14.5	14.6	16.6	19.0	17.7	22.9	19.0	22.8	24.4	20.7	24.8	23.4	26.5	27.5	27.2	25.8	22.2	22.2	23.0	18.9	22.4	28.2	27.1	28.2	13.1	21.8
2	25.3	24.7	24.5	23.2	22.6	23.7	22.4	25.3	22.9	22.4	16.0	15.5	13.6	12.5	13.9	14.7	13.6	12.2	11.3	9.1	8.3	7.5	7.9	7.1	25.3	7.1	16.7
3	7.5	9.4	10.6	10.4	10.6	11.2	12.3	10.5	10.4	9.5	9.7	9.0	11.2	11.2	9.5	10.9	12.3	12.4	11.4	11.4	12.0	12.3	12.5	12.5	12.5	7.5	10.9
4	12.5	12.6	14.7	14.8	16.1	16.4	16.3	17.8	17.2	15.8	18.7	16.8	17.0	18.4	17.7	19.4	20.6	20.0	19.1	17.0	17.9	19.2	20.6	22.5	22.5	12.5	17.5
5	21.6	23.1	21.0	20.7	21.9	20.7	20.8	20.5	19.8	19.6	20.8	19.3	16.0	13.5	13.0	14.4	16.0	18.2	16.7	18.8	18.8	19.5	17.5	17.1	23.1	13.0	18.7
6	19.1	16.5	14.9	14.5	13.7	14.2	13.9	10.2	10.6	7.5	3.9	2.8	9.2	4.9	9.3	7.3	5.3	4.0	4.4	3.3	4.6	4.2	4.1	2.9	19.1	2.8	8.6
7	4.0	5.3	5.1	4.0	3.2	2.7	3.1	9.0	16.6	15.9	13.1	19.7	23.0	28.1	23.4	9.9	10.0	8.2	12.4	16.6	14.7	12.0	18.5	18.7	28.1	2.7	12.4
8	19.3	16.0	8.3	6.6	5.4	5.2	5.4	6.7	7.4	9.4	8.0	10.0	8.4	10.6	14.1	12.8	13.4	14.2	13.3	12.2	13.1	13.3	13.1	12.7	19.3	5.2	10.8
9	16.9	17.9	14.8	17.3	15.8	20.3	21.1	22.6	24.6	24.4	23.8	23.2	22.5	24.2	21.5	17.9	18.6	17.7	15.6	14.1	14.3	12.7	11.9	11.0	24.6	11.0	18.5
10	13.5	14.8	13.3	14.1	14.9	15.8	14.6	15.4	14.3	15.1	14.6	12.4	10.4	9.6			4.8	9.6	8.0	9.6	8.2	7.8	10.1	12.4	15.8	4.8	12.0
11	11.2	10.8	9.5	7.7	9.8	12.3	10.4	12.2	13.3	13.4	14.1	13.1	10.9	11.5	12.1	14.4	14.1	13.9	14.2	12.4	11.6	13.2	12.2	11.4	14.4	7.7	12.1
12	9.0	9.2	8.0	8.0	11.8	11.2	12.7	13.1	17.0	16.9	21.7	27.1	27.1	21.3	16.4	16.4	23.5	25.8	28.1	23.0	21.7	18.5	14.7	13.3	28.1	8.0	17.3
13	6.9	3.6	4.0	4.6	4.3	2.9	2.0	5.5	6.4	6.0	5.2	8.0	8.0	9.3	8.5	8.6	7.5	11.1	9.8	11.6	9.1	6.9	7.4	7.2	11.6	2.0	6.9
14	9.5	10.5	13.5	9.7	8.8	9.6	7.1	11.7	9.8	8.4	8.3	10.0	11.1	9.7	8.7	7.9	7.9	7.3	7.6	8.6	10.2	10.7	11.3	11.2	13.5	7.1	9.5
15	11.2	11.9	9.7	10.7	12.2	10.8	11.3	12.1	14.4	9.7	5.5	9.4	8.2	8.6	9.4	14.8	12.0	10.6	10.2	14.7	11.2	9.2	8.4	6.8	14.8	5.5	10.5
16	6.6	5.9	5.6	5.2	5.4	5.0	3.2	2.9	2.9	2.8	2.1	2.2	4.1	4.1	2.8	4.3	6.1	5.0	6.5	7.3	6.0	6.0	6.5	6.5	7.3	2.1	4.8
17	9.1	8.8	9.1	9.2	9.0	11.1	12.2	14.3	17.2	17.2	14.1	12.8	15.0	11.4	12.7	11.8	11.0	9.2	11.2	11.4	14.5	12.6	14.2	12.2	17.2	8.8	12.1
18	12.7	9.8	8.2	8.2	7.0	7.3	9.2	7.8	11.5	13.7	18.2	9.2	7.6	9.1	4.2	7.8	6.6	6.5	6.5	6.8	7.3	6.8	6.4	6.1	18.2	4.2	8.5
19	4.6	17.8	25.7	23.6	15.4	11.9	11.1	14.9	16.8	13.2	16.0	16.2	15.4	9.8	13.4	13.0	19.3	23.9	25.6	23.0	16.5	19.1	12.8	13.3	25.7	4.6	16.3
20	10.8	13.9	12.1	10.5	7.3	7.7	7.8	10.4	11.5	15.1	9.8	8.9	9.5	20.0	16.2	16.7	22.1	26.7	32.0	28.7	24.9	26.8	30.3	31.0	32.0	7.3	17.1
21	25.7	19.3	18.7	14.7	17.8	21.0	17.7	18.9	22.6	16.2	14.6	13.9	18.4	17.8	14.8	14.6	11.0	10.2	9.6	9.3	10.6	10.2	13.7	12.4	25.7	9.3	15.6
22	11.2	12.2	10.0	7.3	7.2	7.6	17.2	17.8	11.2	10.4	11.2	14.7	10.3	9.6	7.7	5.8	6.8	6.4	6.0	15.6	9.1	9.6	8.2	8.0	17.8	5.8	10.0
23	5.6	5.1	4.7	3.4	1.7	3.7	3.4	5.2	3.7	11.7	16.1	12.6	13.2	11.9	13.3	7.9	9.2	13.1	10.3	6.3	7.9	8.0	8.6	9.0	16.1	1.7	8.2
24	7.4	8.1	9.9	9.0	8.2	7.8	8.5	7.6	10.0	9.4	8.9	9.3	6.0	5.0	4.9	4.5	4.0	4.2	8.3	6.7	6.8	7.1	5.8	4.8	10.0	4.0	7.2
25	4.8	4.6	5.2	3.3	3.3	3.3	2.5	1.8	1.5	4.8	4.0	1.5	7.5	4.4	19.4	10.6	13.5	13.7	17.0	18.7	21.9	20.2	12.7	12.7	21.9	1.5	8.9
26	19.5	13.1	16.8	12.0	12.5	12.2	8.6	10.5	7.3	8.4	7.8	9.9	9.7	12.0	7.8	8.9	7.9	8.2	5.6	3.0	2.7	5.5	5.7	8.0	19.5	2.7	9.3
27	8.8	9.0	10.1	9.8	9.1	7.1	4.0	11.1	13.8	7.9	8.7	7.6	6.9	5.0	10.1	8.6	9.3	11.5	13.5	14.7	11.7	11.1	11.1	11.9	14.7	4.0	9.7
28	14.2	17.3	15.9	15.4	17.3	17.7	17.2	17.8	19.2	14.9	12.6	15.7	18.5	20.4	22.8	25.6	23.6	22.8	20.6	26.9	20.6	17.5	17.0	16.4	26.9	12.6	18.7
Max.	**25.7**	**24.7**	**25.7**	**23.6**	**22.6**	**23.7**	**22.9**	**25.3**	**24.6**	**24.4**	**23.8**	**27.1**	**27.1**	**28.1**	**27.5**	**27.2**	**25.8**	**26.7**	**32.0**	**28.7**	**24.9**	**26.8**	**30.3**	**31.0**	32.0		
Min.	**4.0**	**3.6**	**4.0**	**3.3**	**1.7**	**2.7**	**2.0**	**1.8**	**1.5**	**2.8**	**2.1**	**1.5**	**4.1**	**4.1**	**2.8**	**4.3**	**4.0**	**4.0**	**4.4**	**3.0**	**2.7**	**4.2**	**4.1**	**2.9**		1.5	
Avg.	**12.2**	**12.3**	**12.1**	**11.2**	**11.1**	**11.4**	**11.4**	**12.6**	**13.4**	**13.0**	**12.4**	**12.7**	**12.9**	**12.9**	**13.1**	**12.5**	**12.7**	**13.2**	**13.5**	**13.7**	**12.7**	**12.5**	**12.6**	**12.4**			12.5

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	19.6	13.4	8.0	12.0	11.8	11.5	11.5	11.2	7.3	8.7	8.2	6.6	6.7	6.1	4.5	3.7	5.2	5.9	8.5	8.9	7.8	9.0	10.0	9.0	19.6	3.7	9.0
2	5.6	8.8	9.3	8.8	10.0	10.2	10.8	11.8	12.0	12.0	12.0	11.0	11.2	12.2	10.8	11.4	13.1	11.3	11.7	11.3	11.5	12.4	11.5	12.2	13.1	5.6	10.9
3	11.9	11.2	10.5	9.4	11.3	10.9	10.0	10.5	11.1	10.7	9.9	8.0	8.7	8.0	7.6	7.3	5.5	4.6	5.5	5.9	6.4	6.8	6.0	7.0	11.9	4.6	8.5
4	6.7	6.8	7.3	8.3	7.6	7.2	7.9	8.3	8.7	7.8	7.2	7.0	8.5	8.9	9.5	8.0	7.9	8.3	8.1	7.9	8.1	8.3	8.4	8.2	9.5	6.7	7.9
5	8.5	8.2	10.1	9.5	10.2	9.4	9.5	3.9	7.5	3.8	4.2	10.8	10.7	9.5	7.6	6.3	7.5	11.2	14.0	15.9	12.6	10.8	9.0	10.6	15.9	3.8	9.2
6	15.8	13.9	16.4	13.6	15.3	11.3	10.6	19.9	23.2	21.2	21.5	15.6	17.0	13.0	12.6	11.7	10.4	8.6	6.8	5.8	7.5	7.9	8.4	8.8	23.2	5.8	13.2
7	9.0	8.5	8.5	9.5	9.8	7.9	9.3	10.7	16.2	17.1	18.4	18.3	16.2	15.7	18.1	18.6	20.3	22.8	24.8	36.0	22.7	24.8	26.1	25.0	36.0	7.9	17.3
8	28.1	30.0	27.8	26.4	29.9	34.0	34.0	35.8	32.7	29.5	28.8	26.2	27.2	25.3	30.2	30.1	31.9	37.4	30.3	21.9	29.9	21.0	18.4	17.7	37.4	17.7	28.5
9	24.9	24.2	22.8	21.6	38.1	35.9	24.9	31.7	21.9	32.9	31.6	27.6	26.7	27.6	26.7	21.9	20.5	22.4	17.3	20.1	19.3	18.4	18.2	16.1	38.1	16.1	24.7
10	11.1	9.9	9.2	9.8	9.7	10.0	10.8	5.5	7.6	6.3	6.0	4.7	4.1	3.8	4.2	3.0	3.3	6.9	8.2	7.0	7.9	8.7	9.2	8.7	11.1	3.0	7.3
11	9.2	8.8	13.1	13.5	11.6	13.5	11.6	12.6	13.6	14.4	13.3	13.3	11.3	12.6	12.3	10.9	10.6	12.6	12.1	13.3	12.9	11.9	11.4	10.0	14.4	8.8	12.1
12	14.8	13.1	13.6	13.5	12.6	12.1	10.8	10.1	9.0	8.1	8.7	10.3	10.1	10.8	11.4	10.2	8.8	8.2	8.2	7.3	6.8	5.6	4.7	4.3	14.8	4.3	9.7
13	4.9	4.0	2.8	2.2	2.5	3.0	3.1	3.8	2.9	3.3	6.0	7.1	4.4	4.0	3.4	3.2	3.2	2.8	2.8	2.9	2.3	2.1	3.4	2.9	7.1	2.1	3.5
14	2.9	3.8	3.5	4.0	4.4	4.0	3.5	4.2	5.7	6.0	6.1	4.1	5.1	4.6	5.6	6.2	3.7	6.1	6.4	5.7	6.8	7.0	7.0	4.6	7.0	2.9	5.1
15	6.2	6.4	6.3	7.3	7.1	7.6	6.8	5.8	5.3	6.4	4.0	2.9	2.3	2.2	2.2	2.5	3.9	3.7	5.6	4.3	5.0	6.2	7.9	7.8	7.9	2.2	5.2
16	6.9	9.6	8.8	7.8	7.8	7.9	8.1	9.2	10.3	10.7	10.5	9.1	9.5	9.0	6.9	8.4	8.2	5.2	6.9	7.0	7.3	8.1	9.0	7.1	10.7	5.2	8.3
17	7.3	7.4	6.3	8.1	8.4	8.1	7.6	8.6	8.4	8.3	8.7	11.9	12.7	13.3	11.0	11.2	10.2	10.6	11.3	9.7	10.3	11.4	11.2	10.7	13.3	6.3	9.7
18	12.4	15.4	13.8	13.0	12.0	11.8	12.3	11.5	11.8	10.4	12.1	13.1	13.8	14.3	12.3	10.4	7.9	6.0	4.0	1.8	1.4	1.7	0.9	1.7	15.4	0.9	9.4
19	3.5	2.8	3.5	3.8	3.1	3.0	4.6	4.8	5.0	5.1	4.2	3.0	3.4	4.2	7.5	6.5	5.8	4.6	4.5	3.2	2.0	4.4	6.1	6.1	7.5	2.0	4.4
20	5.7	5.6	5.2	5.3	6.4	6.6	6.0	5.0	4.0	4.8	3.7	2.1	3.6	4.9	5.1	9.6	9.9	8.9	11.7	12.3	11.5	12.4	11.8	11.6	12.4	2.1	7.2
21	11.9	11.8	11.1	8.9	8.4	10.0	8.0	7.9	5.4	5.5	7.7	7.0	3.6	4.4	2.9	4.1	6.6	7.7	6.6	7.9	7.4	7.9	7.2	9.5	11.9	2.9	7.5
22	11.8	12.8	12.6	12.6	12.4	14.4	15.7	15.2	20.6	16.4	13.8	11.4	12.6	10.4	9.3	8.0	5.3	5.3	2.2	4.2	7.4	8.4	7.9	7.1	20.6	2.2	10.7
23	8.1	5.3	4.8	3.3	3.1	3.5	4.9	7.7	8.3	9.9	8.1	10.7	8.4	9.2	3.8	5.1	7.9	15.4	16.9	16.2	14.7	17.3	16.4	11.9	17.3	3.1	9.2
24	11.3	11.6	13.1	12.7	11.7	11.9	11.6	11.0	11.4	11.6	10.2	7.6	4.4	3.5	5.2	6.0	4.2	6.3	6.9	9.0	9.7	9.4	8.6	8.0	13.1	3.5	9.0
25	8.0	7.5	7.3	5.2	7.9	7.4	8.0	7.7	7.7	8.0	9.3	2.7	1.9	3.1	3.0	2.5	4.0	6.3	6.2	9.0	8.3	8.0	9.3	10.6	10.6	1.9	6.6
26	9.2	10.6	10.6	10.8	10.2	10.3	10.8	12.1	11.2	11.2	9.1	7.1	2.9	3.3	3.1	3.9	3.9	4.3	2.0	8.9	7.3	8.6	6.9	7.0	12.1	2.0	7.7
27	7.0	6.1	5.9	5.1	5.7	5.5	3.6	3.9	4.3	2.5	2.4	3.4	3.6	3.8	4.3	3.9	3.9	3.8	3.2	2.7	2.3	2.1	4.8	4.6	7.0	2.1	4.1
28	3.7	4.8	4.6	5.7	5.3	5.6	5.7	5.2	5.7	3.6	1.8	3.3	4.5	4.5	4.7	3.9	4.0	3.7	5.4	3.5	2.1	1.8	2.6	6.1	6.1	1.8	4.2
29	9.7	7.2	5.7	5.8	6.6	7.6	6.1	7.1	5.3	5.7	4.0	3.3	1.9	5.3	5.9	6.7	6.9	1.9	3.1	2.6	1.7	1.8	4.4	5.0	9.7	1.7	5.0
30	6.7	5.3	7.0	7.5	7.2	10.6	9.8	10.8	10.9	11.6	10.9	12.9	12.1	22.1	13.5	14.5	12.5	14.9	12.3	15.9	12.7	16.7	18.8	13.5	22.1	5.3	12.1
31	17.8	17.2	14.8	17.2	16.5	12.4	16.3	17.4	11.4	14.1	11.2	11.3	14.5	12.3	12.3	11.6	10.4	9.7	7.3	6.5					17.8	6.5	13.1
Max.	**28.1**	**30.0**	**27.8**	**26.4**	**38.1**	**35.9**	**34.0**	**35.8**	**32.7**	**32.9**	**31.6**	**27.6**	**27.2**	**27.6**	**30.2**	**30.1**	**31.9**	**37.4**	**30.3**	**36.0**	**29.9**	**24.8**	**26.1**	**25.0**	**38.1**		
Min.	**2.9**	**2.8**	**2.8**	**2.2**	**2.5**	**3.0**	**3.1**	**3.8**	**2.9**	**2.5**	**1.8**	**2.1**	**1.9**	**2.2**	**2.2**	**2.5**	**3.2**	**1.9**	**2.0**	**1.8**	**1.4**	**1.7**	**0.9**	**1.7**		**0.9**	
Avg.	**10.3**	**10.1**	**9.8**	**9.7**	**10.5**	**10.5**	**10.1**	**10.7**	**10.5**	**10.6**	**10.1**	**9.5**	**9.1**	**9.4**	**9.0**	**8.7**	**8.6**	**9.3**	**9.1**	**9.5**	**9.1**	**9.4**	**9.5**	**9.1**			**9.7**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					10.4	10.3	12.1	14.4	15.9	15.4	15.8	16.9	16.6	23.4	20.9	16.7	14.3	16.2	13.7	14.8	13.2	11.6	17.4	13.7	23.4	10.3	15.2
2	10.3	13.9	15.1	15.0	16.3	14.4	9.9	10.7	8.1	6.6	7.3	3.2	3.2	3.0	3.7	4.2	4.3	3.5	3.0	4.4	5.6	6.7	7.1	8.6	16.3	3.0	7.8
3	9.2	9.2	9.0	9.6	10.0	10.3	10.4	11.0	11.0	12.7	11.8	11.4	12.4	11.6	12.3	12.2	10.6	9.2	8.3	8.4	8.4	9.2	9.5	9.8	12.7	8.3	10.3
4	10.0	8.3	8.4	6.6	6.8	7.9	7.1	7.3	7.9	7.5	6.0	5.6	2.8	2.0	2.2	2.1	2.4	1.8	1.7	1.9	2.4	2.6	2.8	2.4	10.0	1.7	4.9
5	5.7	11.5	10.5	11.7	8.3	7.8	11.0	13.1	15.1	13.0	16.7	18.1	18.4	19.8	18.3	18.1	13.8	19.4	20.4	28.4	24.2	22.3	21.3	20.4	28.4	5.7	16.1
6	15.8	17.0	15.7	10.5	9.5	11.5	11.5	10.2	11.5	10.4	4.9	4.4	4.4	5.2	4.7	4.6	4.6	4.4	3.2	3.7	5.1	3.2	2.0	2.6	17.0	2.0	7.5
7	3.7	2.3	5.5	4.8	3.2	6.7	5.4	5.3	5.3	4.0	3.9	4.4	2.8	2.6	2.7	3.1	6.2	3.6	4.3	4.4	3.4	7.2	7.0	7.3	7.3	2.3	4.5
8	10.1	15.0	10.0	9.4	10.8	9.1	9.5	10.0	11.9	7.2	10.2	7.1	6.6	11.7	8.5	8.3	9.3	8.6	6.6	5.6	4.7	4.1	2.6	3.7	15.0	2.6	8.4
9	1.8	1.3	2.1	3.2	2.8	2.1	3.4	3.9	3.2	4.2	3.6	2.2	2.8	4.9	5.2	4.9	6.4	4.8	2.1	2.7	3.7	10.0	8.5	13.6	13.6	1.3	4.3
10	14.4	20.3	16.2	14.7	12.2	16.0	14.6	14.7	17.8	16.2	25.0	22.8	18.7	22.7	25.2	29.1	23.7	23.6	11.5	9.9	21.2	21.3	18.7	17.3	29.1	9.9	18.7
11	15.2	14.9	14.0	14.4	11.9	11.5	8.2	6.5	6.5	4.6	5.8	4.7	5.9	9.1	11.7	12.4	12.9	13.1	11.8	12.4	12.9	13.2	14.5	12.3	15.2	4.6	10.9
12	12.3	13.1	11.9	11.5	11.6	13.0	12.5	11.6	10.7	11.0	12.1	11.7	10.0	9.3	7.3	5.0	1.4	0.9	1.6	4.0	4.0	12.7	15.4	16.3	16.3	0.9	9.6
13	18.7	18.1	18.4	18.8	18.2	18.0	16.2	22.7	22.4	19.3	20.8	20.8	24.0	26.0	27.9	28.4	33.4	29.3	19.3	20.8	21.5	20.1	18.6	17.8	33.4	16.2	21.6
14	17.6	17.8	16.6	16.1	16.9	19.8	18.5	17.9	17.8	19.5	20.7	18.2	21.3	18.7	19.5	22.2	16.6	18.3	15.6	16.1	16.4	21.7	18.6	17.0	22.2	15.6	18.3
15	15.5	18.0	14.0	15.3	13.2	12.7	10.5	14.2	18.5	19.0	19.3	23.6	20.7	17.2	18.3	15.1	12.6	13.7	10.3	9.9	7.6	7.3	5.7	8.8	23.6	5.7	14.2
16	6.0	7.6	5.8	5.7	10.0	10.8	12.9	13.2	13.5	12.3	12.0	13.9	13.4	11.6	15.6	18.9	15.1	16.0	16.6	16.7	17.0	19.6	18.0	17.4	19.6	5.7	13.3
17	16.2	16.7	16.1	17.3	18.0	14.3	14.3	9.5	5.2	9.3	9.4	6.9	7.3	9.4	8.8	8.3	6.9	8.3	8.7	8.4	5.3	3.8	3.6	9.4	18.0	3.6	10.1
18	5.1	6.9	4.8	3.7	2.9	2.8	3.7	3.3	3.4	2.7	2.5	3.1	4.3	4.1	5.4	6.7	3.0	2.3	2.4	8.0	8.5	9.2	8.0	9.4	9.4	2.3	4.8
19	13.9	13.5	14.7	14.7	15.8	17.0	16.4	14.0	9.1	10.5	9.5	8.5	6.6	6.1	2.7	4.4	4.2	3.7	1.3	1.8	6.0	5.9	5.1	5.3	17.0	1.3	8.8
20	4.3	3.2	4.2	5.1	6.5	5.7	5.3	5.4	5.8	6.3	7.8	6.6	7.4	5.6	6.7	7.0	10.3	10.7	7.7	8.2	9.7	11.2	10.1	9.9	11.2	3.2	7.1
21	10.7	12.0	12.3	13.0	13.0	13.2	17.2	14.1	17.4	15.8	14.5	13.5	11.5	9.8	7.5	6.0	7.0	3.8	4.7	6.2	6.4	7.4	6.4	7.1	17.4	3.8	10.4
22	6.0	7.2	7.0	7.2	7.1	6.4	5.3	4.8	4.4	5.4	2.6	2.7	2.2	2.7	2.7	3.0	3.0	2.8	2.5	3.0	2.7	2.8	3.5	5.0	7.2	2.2	4.2
23	4.4	5.8	6.9	6.7	6.3	7.6	6.9	5.2	4.8	4.4	5.7	6.6	5.5	6.0	2.8	4.9	5.9	3.7	2.9	9.2	11.7	10.1	10.9	12.4	12.4	2.8	6.5
24	10.2	7.7	4.3	4.9	8.9	12.1	16.8	10.1	5.4	19.3	12.3	16.2	17.0	21.0	23.3	16.2	14.8	13.6	20.8	26.5	22.0	15.8	19.8	16.0	26.5	4.3	14.8
25	14.1	10.6	3.7	8.2	5.5	6.2	5.3	5.8	6.0	5.5	6.1	7.1	7.3	6.8	7.8	7.4	9.2	8.6	9.5	7.9	8.8	8.0	9.0	8.3	14.1	3.7	7.6
26	10.8	10.2	10.5	9.9	10.8	12.8	12.1	10.7	11.0	13.1	11.1	11.1	10.8	10.9	9.9	10.1	9.7	8.7	7.8	8.3	8.4	8.5	6.5	7.4	13.1	6.5	10.0
27	8.4	7.7	8.0	9.2	9.1	9.3	9.4	9.8	9.2	8.1	7.2	6.4	6.1	4.3	2.7	3.7	3.4	4.0	2.9	2.9	1.9	3.7	4.7	4.8	9.8	1.9	6.1
28	7.7	7.5	7.9	6.8	4.6	4.4	6.8	4.5	4.9	3.8	3.0	2.5	3.0	4.3	4.1	3.9	4.0	3.1	3.0	1.5	1.8	2.9	3.1	3.2	7.9	1.5	4.3
29	3.1	9.6	12.6	12.4	14.0	14.4	14.5	15.1	16.2	13.9	10.8	10.2	8.5	4.7	8.0	8.7	8.7	8.7	9.0	8.5	9.2	7.7	6.8	6.3	16.2	3.1	10.1
30	5.0	4.3	5.4	4.0	7.2	7.7	8.5	8.6	6.0	7.8	7.3	5.5	3.9	6.0	5.8	5.4	4.1	6.8	2.1	5.0	5.8	7.8	6.3	7.5	8.6	2.1	6.0
Max.	**18.7**	**20.3**	**18.4**	**18.8**	**18.2**	**19.8**	**18.5**	**22.7**	**22.4**	**19.5**	**25.0**	**23.6**	**24.0**	**26.0**	**27.9**	**29.1**	**33.4**	**29.3**	**20.8**	**28.4**	**24.2**	**22.3**	**21.3**	**20.4**	**33.4**		
Min.	**1.8**	**1.3**	**2.1**	**3.2**	**2.8**	**2.1**	**3.4**	**3.3**	**3.2**	**2.7**	**2.5**	**2.2**	**2.2**	**2.0**	**2.2**	**2.1**	**1.4**	**0.9**	**1.3**	**1.5**	**1.8**	**2.6**	**2.0**	**2.4**		**0.9**	
Avg.	**9.9**	**10.7**	**10.1**	**10.0**	**10.1**	**10.5**	**10.5**	**10.3**	**10.2**	**10.3**	**10.2**	**9.9**	**9.5**	**10.0**	**10.1**	**10.0**	**9.4**	**9.2**	**7.8**	**9.0**	**9.3**	**9.9**	**9.7**	**10.0**			**9.9**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.0	6.2	6.4	8.6	9.2	9.1	8.2	10.6	12.8	14.4	12.7	15.4	16.5	15.4	17.7	16.0	16.5	19.0	19.9	21.2	22.0	17.5	16.6	16.8	22.0	6.2	14.0
2	17.1	15.8	14.9	14.3	13.1	14.4	14.1	13.9	11.0	11.9	13.2	12.7	10.7	9.5	8.4	7.6	7.6	6.7	6.8	5.4	5.6	6.0	5.9	6.9	17.1	5.4	10.6
3	7.0	8.3	6.3	5.8	7.1	9.7	8.2	7.8	10.7	11.5	14.7	15.5	15.0	13.9	11.3	7.6	9.9	8.9	8.2	7.6	8.7	8.5	9.8	10.6	15.5	5.8	9.7
4	11.1	13.3	12.7	9.7	7.2	7.2	7.7	9.5	7.5	6.2	5.3	6.0	5.3	6.2	6.8	6.9	6.8	8.6	8.7	8.6	10.5	10.4	9.2	12.0	13.3	5.3	8.5
5	11.5	10.6	11.0	15.7	12.5	11.6	12.5	13.5	16.2	13.6	13.1	13.1	12.3	9.0	6.6	5.6	5.1	4.9	3.6	2.2	2.6	5.4	3.8	5.8	16.2	2.2	9.2
6	5.2	2.0	2.5	1.9	2.5	1.9	1.3	2.0	2.0	1.5	1.8	1.8	2.2	1.8	6.9	10.5	11.6	13.6	14.7	17.4	16.5	16.9	21.0	20.0	21.0	1.3	7.5
7	18.5	19.1	20.9	24.3	25.2	22.7	19.8	21.7	22.5	17.9	17.8	18.3	18.6	19.6	18.9	18.8	22.0	21.9	13.7	16.0	16.2	17.8	14.3	13.2	25.2	13.2	19.1
8	9.7	9.8	7.8	7.0	3.3	4.1	5.6	5.9	7.0	8.3	7.8	8.6	11.0	11.2	11.5	11.3	10.8	11.3	11.5	12.2	12.2	12.2	13.2	15.6	15.6	3.3	9.5
9	14.5	14.9	15.0	17.6	16.5	15.1	15.5	16.2	18.0	17.8	17.0	17.5	17.3	16.1	15.9	16.4	16.4	14.7	14.6	14.3	13.1	10.1	10.4	10.8	18.0	10.1	15.2
10	12.4	11.4	15.9	11.1	10.0	6.2	8.3	7.8	6.9	6.2	7.2	5.2	3.5	5.2	2.1	2.4	4.4	3.2	2.8	4.4	3.7	2.0	4.8	4.5	15.9	2.0	6.3
11	2.1	4.9	6.0	5.5	2.4	3.2	3.6	5.5	3.9	3.4	3.5	3.2	2.2	2.2	2.5	3.8	3.4	3.3	2.2	2.4	9.5	5.8	7.6	6.5	9.5	2.1	4.1
12	7.1	7.2	5.5	4.8	5.8	5.1	6.3	7.7	7.7	8.4	7.3	5.3	3.5	11.1	10.5	9.9	9.4	3.9	2.2	2.2	2.2	4.0	5.4	5.9	11.1	2.2	6.2
13	5.3	4.5	4.5	4.0	3.9	5.1	6.3	7.8	9.2	8.5	5.2	5.7	4.5	4.3	2.3	4.3	3.8	2.7	2.1	1.3	4.9	3.3	2.5	2.3	9.2	1.3	4.5
14	1.1	1.9	2.0	3.2	3.7	4.2	4.4	5.1	2.9	5.4	5.7	5.1	3.9	4.9	5.1	4.2	4.4	4.8	4.0	4.3	3.8	2.9	3.0	4.4	5.7	1.1	3.9
15	3.7	2.6	3.1	2.3	3.3	1.9	2.5	3.4	4.3	2.4	2.1	4.5	4.1	5.7	6.2	7.2	7.2	7.1	5.8	4.2	3.3	2.3	3.4	2.3	7.2	1.9	3.9
16	2.5	10.5	9.7	10.6	12.3	10.3	10.7	8.0	5.1	5.0	6.0	4.2	4.6	5.4	4.4	5.1	6.4	5.6	6.4	4.4	2.1	1.9	2.2	1.5	12.3	1.5	6.0
17	2.5	3.7	5.5	5.6	6.0	6.1	7.9	8.5	9.7	9.6	9.3	8.6	6.2	4.4	5.6	5.3	4.8	4.4	3.0	3.4	3.3	3.2	2.7	2.2	9.7	2.2	5.5
18	2.8	3.6	3.8	3.7	3.1	3.0	3.6	2.9	4.9	6.7	4.5	6.9	8.6	14.5	14.6	17.9	17.1	19.1	17.8	17.3	11.7	15.4	16.8	19.8	19.8	2.8	10.0
19	20.2	17.7	17.0	14.7	8.9	11.3	6.2	5.5	6.3	4.8	3.9	2.9	4.2	6.8	6.9	4.8	7.2	8.4	9.8	12.1	11.7	8.7	7.6	8.6	20.2	2.9	9.0
20	9.2	10.7	11.0	10.8	9.2	10.0	9.9	9.4	9.2	9.9	10.4	9.8	8.6	9.7	11.1	10.4	8.6	9.1	5.2	3.8	1.9	4.0	2.9	6.0	11.1	1.9	8.3
21	6.6	4.4	7.0	7.1	8.4	5.8	7.0	7.1	10.6	11.7	10.4	11.4	12.1	10.4	10.6	12.3	12.4	11.1	9.3	12.7	11.7	12.8	12.8	14.1	14.1	4.4	10.0
22	13.1	11.1	7.9	6.9	9.5	8.7	8.7	8.4	8.5	7.2	6.8	5.0	9.0	10.2	9.8	9.8	12.6	11.7	11.9	9.1	5.4	4.8	4.0	4.4	13.1	4.0	8.5
23	4.6	5.4	4.3	2.6	2.6	3.7	7.2	7.8	2.4	3.0	5.7	3.2	5.1	6.2	6.4	3.4	3.7	2.7	2.5	1.3	2.7	5.4	5.6	5.5	7.8	1.3	4.3
24	6.3	6.3	5.7	5.4	2.5	6.6	3.6	3.8	3.2	3.1	3.7	3.8	5.1	4.4	2.5	2.5	3.8	2.1	0.9	1.3	3.0	4.1	4.4	4.3	6.6	0.9	3.9
25	4.0	4.5	4.2	1.4	2.6	3.9	3.3	2.2	2.5	3.7	2.8	2.1	2.6	2.5	3.5	2.9	2.7	2.6	1.4	1.2	2.9	4.3	5.4	6.3	6.3	1.2	3.1
26	5.8	5.9	5.0	4.6	5.1	4.5	6.0	6.4	6.9	5.7	2.5	2.5	3.1	3.1	2.4	5.1	2.5	2.4	2.9	3.1	3.9	4.5	6.2	6.7	6.9	2.4	4.5
27	6.6	4.7	3.3	2.9	3.9	3.4	3.7	3.9	5.1	4.1	3.0	2.2	3.1	2.5	3.3	3.2	3.4	3.0	2.6	2.6	4.1	6.6	6.1	6.4	6.6	2.2	3.9
28	6.0	6.0	5.4	6.4	5.3	7.1	6.5	2.2	6.8	5.9	7.3	9.5	6.7	6.1	6.0	5.8	5.1	3.9	2.5	2.4	1.8	2.0	4.4	4.0	9.5	1.8	5.2
29	2.1	2.1	3.3	5.0	3.3	6.4	5.6	5.8	7.4	3.6	2.8	3.4	2.6	3.4	3.1	3.4	4.5	4.6	3.4	4.1	2.0	3.3	2.8	2.6	7.4	2.0	3.8
30	3.0	3.3	2.5	2.6	2.2	3.0	4.5	6.2	4.8	4.5	1.7	2.4	1.8	2.8	4.4	2.5	2.3	3.2	2.7	4.5	2.8	1.8	2.1	2.3	6.2	1.7	3.1
31	2.5	4.4	3.8	4.6	4.4	2.4	3.1	2.5	1.9	2.6	2.5	3.5	3.1	3.4	3.9	4.3	3.2	2.9	3.8	3.0	2.8	2.7	1.6	2.2	4.6	1.6	3.1
Max.	**20.2**	**19.1**	**20.9**	**24.3**	**25.2**	**22.7**	**19.8**	**21.7**	**22.5**	**17.9**	**17.8**	**18.3**	**18.6**	**19.6**	**18.9**	**18.8**	**22.0**	**21.9**	**19.9**	**21.2**	**22.0**	**17.8**	**21.0**	**20.0**	**25.2**		
Min.	**1.1**	**1.9**	**2.0**	**1.4**	**2.2**	**1.9**	**1.3**	**2.0**	**1.9**	**1.5**	**1.7**	**1.8**	**1.8**	**1.8**	**2.1**	**2.4**	**2.3**	**2.1**	**0.9**	**1.2**	**1.8**	**1.8**	**1.6**	**1.5**		**0.9**	
Avg.	**7.5**	**7.6**	**7.5**	**7.4**	**6.9**	**7.0**	**7.1**	**7.4**	**7.7**	**7.4**	**7.0**	**7.1**	**7.0**	**7.5**	**7.5**	**7.5**	**7.7**	**7.5**	**6.7**	**6.8**	**6.7**	**6.8**	**7.0**	**7.6**			**7.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.8	2.8	6.7	9.2	7.9	4.6	3.7	4.4	2.8	2.3	2.1	3.4	5.2	5.4	4.8	4.1	3.2	2.6	1.6	2.3	2.0	1.8	4.6	6.5	9.2	1.6	4.0
2	10.9	8.3	6.1	4.4	4.4	4.8	6.8	6.0	6.2	7.0	7.0	5.9	4.9	8.6	8.1	13.2	10.0	7.9	4.4	4.4	4.0	5.2	4.0	2.8	13.2	2.8	6.5
3	3.2	2.7	4.0	14.6	11.1	17.4	18.6	19.9	20.2	15.7	19.0	18.9	18.5	13.1	12.4	15.0	14.8	11.5	8.9	11.1	17.4	14.0	11.7	14.2	20.2	2.7	13.7
4	12.9	12.1	13.1	7.7	5.9	6.3	6.0	5.0	4.0	1.9	6.9	5.7	5.2	4.9	5.1	5.3	5.3	5.8	4.7	4.5	4.0	3.3	3.9	5.3	13.1	1.9	6.0
5	5.5	5.2	5.3	3.1	4.8	3.7	4.1	2.7	2.2	4.5	6.1	5.0	4.7	4.6	4.8	5.5	5.1	3.9	4.0	3.5	3.3	2.7	2.9	4.2	6.1	2.2	4.2
6	4.4	4.4	3.4	2.5	3.1	3.3	3.2	2.2	4.4	7.2	4.3	4.1	4.1	3.0	3.8	3.8	3.6	4.8	3.9	5.7	2.7	4.6	4.3	5.5	7.2	2.2	4.0
7	7.9	7.3	7.9	8.3	7.4	5.9	6.7	6.0	7.3	8.1	6.0	6.4	6.9	5.2	6.1	5.4	5.2	6.1	7.2	6.8	7.5	10.0	7.9	8.1	10.0	5.2	7.0
8	9.2	8.6	7.1	8.8	9.2	7.6	8.1	8.6	8.6	9.2	10.6	11.7	10.8	9.7	10.9	12.4	11.5	12.6	10.8	10.0	13.8	11.6	10.8	12.9	13.8	7.1	10.2
9	13.0	14.9	13.3	14.8	13.9	18.4	13.5	14.8	14.3	14.2	15.7	14.3	15.3	12.4	12.3	11.5	12.9	9.2	10.8	11.5	11.0	11.7	8.6	9.4	18.4	8.6	13.0
10	9.9	7.9	6.9	5.8	6.1	7.6	12.9	9.7	10.9	6.8	5.4	7.7	7.2	11.3	11.4	9.2	9.7	13.2	8.7	12.9	8.9	12.3	12.5	11.9	13.2	5.4	9.4
11	11.6	10.2	7.3	6.6	6.4	7.6	9.9	9.3	9.9	9.5	9.9	10.3	10.2	10.1	8.4	8.4	9.5	9.5	9.5	11.7	10.8	10.9	10.0	10.0	11.7	6.4	9.5
12	9.4	10.4	9.0	9.1	8.3	7.8	8.7	7.1	6.2	7.3	5.0	2.7	2.2	2.3	2.1	1.7	4.1	3.9	2.9	3.0	3.9	4.5	5.4	3.8	10.4	1.7	5.5
13	3.8	4.7	4.3	5.3	4.5	1.8	1.9	3.4	2.7	1.2	2.1	2.5	3.9	3.8	3.3	4.4	4.7	4.6	2.4	2.7	2.6	2.1	1.4	1.9	5.3	1.2	3.2
14	1.1	2.7	2.9	3.8	1.5	1.1	1.6	1.9	1.5	2.4	2.4	2.0	2.7	2.9	2.2	2.0	4.5	5.1	4.0	3.3	2.4	3.1	4.0	3.4	5.1	1.1	2.7
15	4.4	4.4	5.8	3.8	2.9	2.6	4.2	3.7	4.1	1.5	3.3	3.6	3.7	5.3	3.4	2.0	2.7	2.7	2.1	2.2	2.0	1.1	1.5	1.0	5.8	1.0	3.1
16	2.1	3.6	2.8	4.5	4.9	4.8	3.9	5.1	4.6	2.9	2.2	3.5	2.5	2.7	2.9	3.7	3.3	3.5	1.4	1.4	2.5	5.4	5.1	5.6	5.6	1.4	3.6
17	5.8	5.2	5.1	4.1	3.7	4.4	4.2	4.4	5.1	6.5	6.3	5.8	6.1	6.1	6.0	5.3	7.7	7.8	8.0	8.7	5.7	2.8	4.8	5.2	8.7	2.8	5.6
18	4.7	2.8	5.1	4.7	7.1	6.3	7.4	8.0	13.2	10.8	10.6	8.6	9.0	10.0	8.9	8.7	8.1	7.6	7.6	7.3	7.6	6.9	7.1	6.8	13.2	2.8	7.7
19	7.9	6.8	8.9	9.6	11.5	10.3	9.6	9.7	9.3	8.1	9.6	6.4	7.3	7.2	5.9	4.9	8.3	10.5	6.1	4.4	4.1	2.5	6.1	4.8	11.5	2.5	7.5
20	6.1	6.6	4.3	3.2	3.0	2.1	2.6	6.8	7.6	5.3	5.6	6.2	10.3	7.3	5.3	5.5	6.4	3.7	2.8	3.2	3.1	2.8	2.4	1.8	10.3	1.8	4.7
21	3.5	4.7	4.0	3.6	3.4	3.5	4.3	3.9	3.7	2.8	2.9	3.4	2.9	4.4	4.3	4.6	4.8	5.0	5.3	5.3	6.9	4.9	4.9	3.1	6.9	2.8	4.2
22	4.7	4.9	3.4	3.0	3.3	5.1	4.7	2.5	3.8	3.1	2.4	2.3	3.4	6.9	5.9	2.8	2.6	5.8	8.2	4.2	3.6	3.1	3.6	3.7	8.2	2.3	4.0
23	3.9	3.8	3.4	3.0	2.0	3.0	7.0	6.0	4.2	3.1	3.0	2.5	3.1	4.0	4.6	5.1	5.7	5.4	5.2	5.1	2.4	3.7	3.7	1.7	7.0	1.7	3.9
24	1.6	1.8	2.3	3.2	3.0	3.3	2.8	2.5	2.1	2.6	4.0	4.2	5.2	5.4	6.1	5.5	5.4	4.9	3.7	2.9	2.3	2.4	3.0	4.3	6.1	1.6	3.5
25	4.4	5.0	4.7	2.6	2.9	6.0	6.3	4.7	7.5	8.1	7.5	7.0	8.4	9.5	7.4	8.8	6.2	8.9	8.4	4.7	4.7	3.0	2.5	3.1	9.5	2.5	5.9
26	3.3	2.8	3.6	3.7	2.9	4.5	4.3	3.0	3.5	2.8	4.7	5.1	4.5	3.5	3.8	3.1	3.0	3.1	1.7	1.3	2.0	1.6	2.1	2.6	5.1	1.3	3.2
27	1.9	2.7	2.2	2.1	2.6	2.9	3.3	2.9	3.0	3.3	4.0	4.1	4.7	4.5	4.1	4.0	4.1	3.3	3.5	3.7	11.5	13.1	16.3	18.5	18.5	1.9	5.3
28	17.5	20.1	18.6	19.3	19.3	19.6	17.1	15.1	16.7	16.7	17.8	15.4	17.0	16.5	18.1	17.6	17.5	15.6	14.6	16.5	21.8	14.2	24.3	17.2	24.3	14.2	17.7
29	22.5	21.8	18.8	16.6	17.6	17.9	11.5	8.3	6.1	4.0	4.6	4.6	4.9	5.4	5.4	8.2	5.1	3.3	4.6	6.7	7.1	6.5	6.6	8.4	22.5	3.3	9.4
30	9.8	7.2	8.1	5.4	7.3	6.5	6.0	6.2	6.8	4.3	2.9	3.8	4.5	4.1	4.4	4.7	4.4	4.9	5.4	4.5	11.4	12.0	10.3	10.9	12.0	2.9	6.5
Max.	**22.5**	**21.8**	**18.8**	**19.3**	**19.3**	**19.6**	**18.6**	**19.9**	**20.2**	**16.7**	**19.0**	**18.9**	**18.5**	**16.5**	**18.1**	**17.6**	**17.5**	**15.6**	**14.6**	**16.5**	**21.8**	**14.2**	**24.3**	**18.5**	**24.3**		
Min.	**1.1**	**1.8**	**2.2**	**2.1**	**1.5**	**1.1**	**1.6**	**1.9**	**1.5**	**1.2**	**2.1**	**2.0**	**2.2**	**2.3**	**2.1**	**1.7**	**2.6**	**2.6**	**1.4**	**1.3**	**2.0**	**1.1**	**1.4**	**1.0**		**1.0**	
Avg.	**7.0**	**6.9**	**6.6**	**6.5**	**6.4**	**6.7**	**6.8**	**6.5**	**6.8**	**6.1**	**6.5**	**6.2**	**6.6**	**6.7**	**6.4**	**6.5**	**6.6**	**6.5**	**5.8**	**5.9**	**6.4**	**6.1**	**6.6**	**6.6**			**6.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.6	8.1	10.5	6.9	5.0	5.5	6.7	6.5	5.3	2.5	3.7	3.6	4.7	5.0	6.1	6.4	6.0	5.9	5.7	11.3	15.3	10.2	12.7	13.2	15.3	2.5	7.3
2	13.3	12.4	12.5	10.7	11.4	12.9	9.2	7.2	8.8	8.0	4.4	3.7	3.6	3.0	3.8	11.2	15.4	16.0	13.8	14.1	11.0	3.4	4.7	5.1	16.0	3.0	9.1
3	4.6	5.7	6.3	3.5	2.3	4.9	6.1	3.6	4.4	3.8	3.6	4.0	4.0	4.3	5.0	5.2	4.0	3.2	3.3	3.3	3.6	3.1	3.7	2.2	6.3	2.2	4.1
4	2.9	3.8	3.5	3.5	2.7	3.2	2.6	1.8	3.7	3.8	4.1	4.2	6.1	4.6	5.2	4.9	4.2	4.5	3.9	4.1	3.6	3.5	2.8	2.5	6.1	1.8	3.7
5	2.5	4.7	5.5	4.4	2.8	3.8	5.3	4.4	4.0	4.8	4.8	4.3	3.2	3.4	3.5	3.7	3.3	3.5	3.7	3.5	3.2	2.2	2.3	2.5	5.5	2.2	3.7
6	2.5	0.9	1.1	1.1	2.5	1.5	2.5	2.8	2.7	2.9	2.9	2.6	2.9	3.4	3.6	3.9	4.7	4.3	3.3	3.7	3.5	2.3	2.8	4.9	4.9	0.9	2.9
7	3.2	3.9	3.1	4.9	4.6	2.4	3.2	3.5	3.2	4.4	4.1	4.3	4.0	4.9	7.5	6.5	4.7	3.8	4.4	4.5	5.1	3.2	5.0	4.2	7.5	2.4	4.3
8	4.1	3.7	2.5	2.6	2.2	4.1	5.3	8.4	14.4	13.2	13.1	13.2	12.1	11.3	10.3	8.9	4.4	5.5	10.8	10.2	9.6	9.1	6.1	4.2	14.4	2.2	7.9
9	3.9	5.1	4.0	4.5	4.3	4.4	4.8	4.8	2.8	2.5	3.9	4.3	4.3	4.2	3.8	4.2	4.6	3.7	4.0	4.4	6.3	4.8	5.8	5.0	6.3	2.5	4.4
10	6.4	4.4	4.9	5.4	6.8	6.4	6.2	6.1	4.9	3.6	2.9	3.4	4.7	6.5	4.9	6.0	7.2	4.4	4.4	3.2	4.4	5.0	3.7	3.5	7.2	2.9	5.0
11	2.2	2.7	3.7	2.4	2.8	2.1	2.7	3.3	2.7	6.0	7.0	6.5	6.3	4.8	6.3	4.9	4.3	3.7	2.7	7.2	6.6	3.3	2.4	2.2	7.2	2.1	4.1
12	2.0	2.5	2.4	2.8	2.9	3.5	4.4	4.6	5.3	4.0	2.2	3.8	3.4	3.3	3.4	2.3	5.5	8.5	11.5	14.2	16.3	14.2	10.0	6.3	16.3	2.0	5.8
13	8.7	12.7	13.0	5.5	16.9	16.0	19.4	18.5	19.2	19.2	18.7	17.8	16.5	20.8	21.5	24.1	23.3	24.5	23.6	23.2	22.9	21.0	22.8	19.0	24.5	5.5	18.7
14	26.4	20.1	23.9	22.8	19.8	20.2	17.6	19.0	18.8	20.5	18.4	17.9	16.1	16.5	17.6	15.2	16.6	15.4	13.8	12.6	15.9	13.4	14.8	9.9	26.4	9.9	17.6
15	10.5	8.0	13.5	16.5	13.3	14.7	14.4	12.2	9.3	8.3	10.7	10.5	8.8	8.6	9.2	5.1	4.3	4.4	4.0	3.5	3.8	2.1	3.1	2.9	16.5	2.1	8.4
16	3.2	3.4	5.2	5.5	5.1	4.9	7.8	6.9	6.3	4.4	5.0	4.8	7.1	5.1	5.5	4.3	5.2	4.9	5.2	4.8	6.0	5.5	6.3	5.4	7.8	3.2	5.3
17	6.0	7.7	8.7	8.3	7.1	6.8	5.8	6.8	6.1	6.5	5.6	5.5	9.3	7.5	7.3	7.3	7.2	7.5	7.7	7.5	5.3	6.7	8.0	7.6	9.3	5.3	7.1
18	9.8	9.2	7.5	6.9	7.1	5.1	6.3	5.6	5.2	6.0	5.8	5.3	5.2	4.6	3.6	6.9	6.1	6.0	4.3	5.8	6.0	3.7	3.7	3.8	9.8	3.6	5.8
19	3.4	3.7	3.0	8.1	9.6	9.3	8.3	9.8	9.3	12.0	11.7	10.3	8.4	10.4	10.7	9.8	10.8	7.9	9.6	6.9	5.9	3.2	4.4	5.9	12.0	3.0	8.0
20	6.5	2.6	2.7	2.9	9.9	8.2	6.8	8.6	9.6	10.5	9.2	8.6	10.8	8.9	9.0	6.9	8.3	8.0	10.1	7.9	13.2	4.7	5.4	7.5	13.2	2.6	7.8
21	8.1	7.8	4.6	3.7	3.8	6.4	7.2	6.4	11.0	8.3	9.6	9.7	9.2	8.4	8.8	8.4	6.3	2.9	3.4	4.4	6.3	6.7	5.2	3.8	11.0	2.9	6.7
22	3.3	4.1	3.4	2.4	3.8	6.5	7.3	7.3	6.7	9.6	7.9	6.3	6.7	6.8	6.0	4.3	3.9	7.0	6.2	5.6	5.8	6.0	7.0	6.0	9.6	2.4	5.8
23	8.0	5.9	6.7	5.5	5.0	6.0	8.2	8.1	9.3	10.3	13.4	13.6	13.3	14.2	12.7	11.9	13.1	8.9	11.7	13.8	13.3	9.9	9.8	10.3	14.2	5.0	10.1
24	9.9	11.8	10.2	10.7	10.7	10.1	11.0	8.2	7.6	8.9	9.4	8.0	9.6	7.7	4.1	3.2	3.8	3.9	5.1	4.5	5.2	4.2	5.2	7.6	11.8	3.2	7.5
25	6.8	5.8	6.8	7.5	7.8	5.4	4.5	4.0	4.0	2.5	1.6	1.9	1.7	5.5	5.7	5.9	6.3	2.9	1.1	1.5	1.6	1.9	2.1	2.3	7.8	1.1	4.1
26	5.8	4.0	3.5	2.5	3.0	3.7	7.0	11.0	12.2	14.7	15.3	13.9	15.3	13.0	14.9	15.1	17.5	18.8	19.5	19.5	17.6	19.1	15.5	15.4	19.5	2.5	12.4
27	14.9	15.7	16.8	15.9	12.8	12.3	8.1	10.4	7.3	3.6	3.4	4.0	3.6	3.8	5.4	3.2	3.2	3.1	3.2	3.2	4.9	3.0	2.8	6.5	16.8	2.8	7.1
28	8.0	5.7	7.0	11.0	9.1	11.6	12.2	11.8	9.1	6.7	3.4	5.6	7.4	7.8	5.4	4.6	4.2	3.8	3.4	4.6	8.6	15.5	22.8	17.4	22.8	3.4	8.6
29	15.1	12.9	14.2	12.2	20.7	18.9	18.7	27.2	30.0	24.3	24.4	19.9	16.4	19.7	17.2	13.4	14.6	13.5	17.8	17.2	16.6	24.7	29.7	25.9	30.0	12.2	19.4
30	20.5	23.0	21.2	23.1	17.3	17.6	22.1	23.5	23.2	24.6	22.6	18.6	17.3	17.6	16.5	16.1	11.1	9.0	10.5	15.7	8.3	5.4	9.6	15.1	24.6	5.4	17.1
31	14.7	13.7	14.4	12.3	14.0	11.3	11.9	12.9	13.0	13.0	10.8	8.6	13.2	10.8	13.4	12.6	12.9	14.4	13.2	11.5	10.7	11.1	14.5	15.1	15.1	8.6	12.7
Max.	**26.4**	**23.0**	**23.9**	**23.1**	**20.7**	**20.2**	**22.1**	**27.2**	**30.0**	**24.6**	**24.4**	**19.9**	**17.3**	**20.8**	**21.5**	**24.1**	**23.3**	**24.5**	**23.6**	**23.2**	**22.9**	**24.7**	**29.7**	**25.9**	**30.0**		
Min.	**2.0**	**0.9**	**1.1**	**1.1**	**2.2**	**1.5**	**2.5**	**1.8**	**2.7**	**2.5**	**1.6**	**1.9**	**1.7**	**3.0**	**3.4**	**2.3**	**3.2**	**2.9**	**1.1**	**1.5**	**1.6**	**1.9**	**2.1**	**2.2**		**0.9**	
Avg.	**7.9**	**7.6**	**7.9**	**7.6**	**8.0**	**8.1**	**8.5**	**8.9**	**9.0**	**8.8**	**8.5**	**8.0**	**8.2**	**8.3**	**8.3**	**7.9**	**8.0**	**7.5**	**7.9**	**8.3**	**8.6**	**7.5**	**8.2**	**7.8**			**8.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.9	14.4	14.8	18.0	15.6	13.6	11.7	8.1	5.1	4.1	4.1	3.4	3.4	4.5	4.0	4.6	3.8	3.3	2.9	2.4	2.6	3.5	4.4	4.2	18.0	2.4	7.1
2	5.1	5.0	5.2	4.9	4.0	4.2	4.6	5.4	4.1	6.2	5.0	4.3	5.7	4.4	4.3	3.9	6.4	9.7	9.0	7.0	7.9	8.4	7.1	6.4	9.7	3.9	5.7
3	8.1	8.1	10.5	10.0	10.3	12.3	10.5	12.0	10.8	11.9	14.4	15.6	14.5	15.2	16.8	20.1	20.1	20.6	15.4	15.1	17.3	16.2	16.8	16.3	20.6	8.1	14.1
4	13.9	14.6	11.6	8.1	3.7	1.9	1.5	5.2	10.1	11.6	10.1	6.8	4.8	2.4	2.7	3.2	2.1	2.0	1.6	1.3	1.6	2.4	2.9	2.7	14.6	1.3	5.4
5	3.2	2.6	2.7	2.0	1.6	3.4	2.7	3.3	2.8	1.9	3.0	3.6	3.2	2.4	3.8	9.9	7.0	7.4	8.4	7.9	8.7	9.4	12.6	8.9	12.6	1.6	5.1
6	8.8	8.3	5.3	7.8	5.1	4.3	6.0	7.2	6.8	4.8	3.5	2.9	6.3	5.0	10.2	11.3	11.1	10.5	11.9	13.9	12.8	13.0	11.0	10.0	13.9	2.9	8.2
7	11.5	12.0	12.2	9.7	10.3	7.8	10.7	10.8	8.4	9.5	9.9	10.9	13.2	14.2	17.1	17.5	19.7	19.5	19.4	25.9	19.1	24.8	19.8	19.6	25.9	7.8	14.7
8	18.4	17.3	17.5	17.2	19.6	16.6	15.9	15.4	11.5	6.8	2.9	11.3	5.0	5.4	4.3	2.8	2.7	4.8	6.6	12.9	14.2	14.1	12.0	8.0	19.6	2.7	11.0
9	6.2	5.7	3.9	11.4	7.8	6.3	6.9	7.2	5.9	5.8	2.8	4.4	3.8	3.5	4.3	3.1	5.4	2.5	3.2	5.4	4.9	3.4	5.8	6.0	11.4	2.5	5.2
10	7.1	3.5	3.4	2.4	3.3	3.7	3.5	2.6	5.4	6.2	3.5	5.9	2.9	4.5	5.6	5.0	5.2	9.3	10.1	12.5	8.9	14.4	13.7	10.1	14.4	2.4	6.4
11	10.8	7.5	6.0	5.0	7.9	9.4	8.2	6.8	4.0	4.7	3.8	4.9	4.0	4.0	3.5	4.4	3.4	3.5	5.6	5.2	7.9	9.6	10.8	9.0	10.8	3.4	6.2
12	7.8	3.7	1.6	1.9	2.1	2.4	2.9	3.0	2.9	1.9	2.2	3.5	5.2	5.9	5.4	6.1	4.6	4.0	13.4	13.8	9.5	7.3	8.2	19.3	19.3	1.6	5.8
13	17.5	15.6	13.3	13.9	15.8	15.0	22.9	16.2	14.8	11.8	12.1	12.9	17.6	17.5	19.2	13.6	10.6	16.2	17.0	12.1	8.4	8.7	4.5	3.4	22.9	3.4	13.8
14	4.6	2.7	2.9	3.5	5.2	3.4	4.4	5.6	4.4	4.8	7.3	5.2	5.8	6.8	7.8	10.5	12.9	7.8	7.6	7.4	9.8	9.7	9.2	8.5	12.9	2.7	6.6
15	7.7	8.6	8.2	8.2	9.0	9.8	9.0	7.6	7.5	9.3	8.5	8.3	7.1	7.6	8.2	7.1	7.2	6.4	4.8	4.6	4.7	3.2	3.1	3.2	9.8	3.1	7.0
16	2.7	1.9	1.3	1.2	1.1	1.8	2.1	1.3	1.2	1.0	2.3	4.1	4.9	4.9	4.3	3.8	3.9	3.5	3.2	2.8	2.1	1.9	2.0	2.4	4.9	1.0	2.6
17	1.6	1.5	1.9	2.1	2.2	2.0	1.3	2.5	2.4	2.0	3.8	3.7	3.8	10.0	7.0	11.7	14.5	13.9	14.7	13.3	13.9	15.7	11.6	14.7	15.7	1.3	7.2
18	18.6	17.2	23.3	17.5	13.9	5.5	9.0	6.3	8.2	6.6	3.9	2.3	2.1	1.8	1.2	1.7	5.1	5.3	18.7	16.3	7.6	6.1	5.4	8.3	23.3	1.2	8.8
19	13.7	14.5	10.3	11.8	8.0	17.7	16.2	14.3	10.4	10.7	13.1	19.4	24.6	20.4	12.2	8.3	5.6	3.0	3.4	2.8	5.2	5.3	6.6	5.1	24.6	2.8	10.9
20	3.6	14.0	9.8	7.3	7.8	10.3	10.0	8.3	7.1	5.4	2.7	1.5	8.0	6.6	6.8	4.6	4.6	4.4	6.3	11.0	10.8	11.5	3.5	7.7	14.0	1.5	7.2
21	9.5	8.0	4.4	3.5	2.3	3.2	3.9	3.7	3.4							5.4	4.8	5.4	4.8	4.5	6.3	6.0	7.4	7.8	9.5	2.3	5.2
22	6.7	7.9	6.8	6.0	4.8	7.8	6.1	5.0	6.1	5.4	3.3	13.7	20.1	23.3	27.6	26.6	8.7	15.9	15.9	16.9	19.4	14.0	14.1	10.0	27.6	3.3	12.2
23	7.8	4.2	4.5	3.0	7.5	4.8	5.2	4.9	5.0	3.9	2.8	3.4	4.6	4.2	4.6	4.1	3.0	3.6	4.2	3.8	3.3	2.9	3.1	4.6	7.8	2.8	4.3
24	3.8	6.2	6.8	5.6	7.3	7.9	8.3	8.2	7.8	12.9	12.9	11.4	10.4	9.4	10.3	7.7	4.5	3.0	2.9	7.6	8.0	12.4	11.5	14.3	14.3	2.9	8.4
25	9.5	11.9	7.0	5.4	5.2	3.9	7.2	8.9	15.4	11.3	9.1	11.6	7.1	16.7	17.1	12.9	6.2	7.6	5.6	4.7	2.8	3.2	5.5	5.2	17.1	2.8	8.4
26	5.8	3.8	2.9	2.8	3.3	3.3	5.7	5.2	5.3	8.7	7.5	7.6	8.8	6.2	7.9	8.1	8.4	9.0	8.1	8.0	6.5	5.5	4.9	3.3	9.0	2.8	6.1
27	3.9	3.0	3.3	3.7	3.7	4.4	4.8	5.8	5.5	3.7	2.3	2.7	6.3	10.4	13.4	13.7	12.2	15.4	18.6	11.0	13.3	14.2	12.2	11.6	18.6	2.3	8.3
28	11.0	19.7	22.4	16.5	16.1	17.4	15.2	18.3	16.7	15.3	13.7	11.0	9.6	8.3	3.1	10.9	11.0	12.3	14.1	15.3	18.0	15.8	16.2	20.7	22.4	3.1	14.5
29	15.0	18.9	19.1	15.9	16.6	13.9	9.9	7.1	7.8	6.7	4.4	3.7	3.6	3.7	4.0	3.1	2.9	2.7	3.7	3.6	4.4	4.2	4.9	5.2	19.1	2.7	7.7
30	5.3	6.3	6.4	4.8	10.2	8.2	8.9	10.7	10.8	10.1	9.9	11.5	11.7	11.9	14.0	11.5	13.1	13.9	14.3	13.6	12.3	10.6	11.0	11.5	14.3	4.8	10.5
31	8.1	4.2	1.1	6.9	8.4	9.1	12.4	13.1	8.4	4.3	4.3	3.6	2.7	1.6	2.4	2.0	2.9	2.9	3.8	3.7	3.8	3.8	1.9	1.6	13.1	1.1	4.9
Max.	**18.6**	**19.7**	**23.3**	**18.0**	**19.6**	**17.7**	**22.9**	**18.3**	**16.7**	**15.3**	**14.4**	**19.4**	**24.6**	**23.3**	**27.6**	**26.6**	**20.1**	**20.6**	**19.4**	**25.9**	**19.4**	**24.8**	**19.8**	**20.7**	**27.6**		
Min.	**1.6**	**1.5**	**1.1**	**1.2**	**1.1**	**1.8**	**1.3**	**1.3**	**1.2**	**1.0**	**2.2**	**1.5**	**2.1**	**1.6**	**1.2**	**1.7**	**2.1**	**2.0**	**1.6**	**1.3**	**1.6**	**1.9**	**1.9**	**1.6**		**1.0**	
Avg.	**8.8**	**8.8**	**8.1**	**7.7**	**7.7**	**7.6**	**8.0**	**7.7**	**7.3**	**7.0**	**6.3**	**7.2**	**7.7**	**8.1**	**8.4**	**8.4**	**7.5**	**8.0**	**9.0**	**9.2**	**8.9**	**9.1**	**8.5**	**8.7**			**8.1**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.7	3.5	3.7	3.9	3.5	4.4	4.1	3.5	3.9	3.9	3.4	1.1	2.3	3.7	3.7	3.5	4.1	3.4	4.5	3.5	2.4	1.9	3.2	2.0	4.5	1.1	3.3
2	2.8	3.0	3.5	2.7	3.2	5.1	5.2	6.1	6.3	4.6	3.2	2.7	2.1	2.1	6.4	7.5	6.5	3.8	3.2	2.2	2.8	3.0	2.2	2.9	7.5	2.1	3.9
3	3.2	3.0	2.7	2.4	2.6	4.3	3.9	4.6	5.2	2.9	3.5	4.1	4.6	5.3	4.8	5.0	4.8	5.0	3.9	2.7	2.2	2.9	3.4	4.5	5.3	2.2	3.8
4	4.8	5.0	1.2	3.3	3.3	3.1	2.7	2.4	1.8	2.1	2.5	2.5	3.7	4.7	3.8	3.6	3.8	4.4	3.2	3.5	3.5	2.5	3.0	2.8	5.0	1.2	3.2
5	3.1	2.6	2.9	1.7	1.6	2.0	2.0	4.1	3.9	5.5	3.8	3.3	3.3	2.8	3.7	6.5	5.8	4.4	5.1	5.7	4.3	4.2	6.3	6.5	6.5	1.6	4.0
6	6.7	6.6	5.6	5.1	5.6	5.7	4.5	6.5	6.5	6.5	4.3	7.3	9.6	12.2	9.4	10.5	9.4	12.1	10.4	12.6	11.0	12.2	12.3	11.5	12.6	4.3	8.5
7	12.4	11.0	5.0	5.7	5.1	4.3	4.9	6.6	7.0	6.0	7.3	7.8	4.8	4.7	5.7	6.7	7.9	9.6	8.9	8.4	11.5	16.4	18.3	13.1	18.3	4.3	8.3
8	13.1	13.0	13.9	12.6	14.7	14.7	14.6	15.8	15.1	12.4	13.5	14.2	8.9	9.1	10.3	7.4	9.6	7.6	10.4	11.6	11.2	11.3	7.2	6.7	15.8	6.7	11.6
9	4.2	5.5	6.9	8.3	9.4	9.9	8.6	8.8	10.8	9.8	9.3	9.7	11.2	9.8	8.3	6.0	7.5	9.7	4.5	4.1	2.3	2.1	3.1	3.5	11.2	2.1	7.2
10	3.9	3.2	4.1	4.3	4.2	3.7	4.1	3.4	3.7	3.1	2.1	2.3	3.5	4.0	3.9	3.5	3.6	2.9	2.4	2.2	2.4	2.3	2.8	3.8	4.3	2.1	3.3
11	4.1	3.9	4.0	3.8	2.0	2.9	3.2	2.1	3.8	2.7	2.4	3.5	3.5	3.2	3.2	4.2	4.1	3.9	4.6	2.3	2.1	2.3	2.6	2.8	4.6	2.0	3.2
12	2.7	2.8	5.0	4.5	4.1	3.5	3.7	3.6	4.3	3.8	4.9	2.6	2.9	3.5	3.7	3.5	3.4	3.0	3.2	4.1	6.1	6.2	7.1	5.1	7.1	2.6	4.0
13	3.8	2.7	3.3	1.9	1.3	2.3	2.6	3.3	6.3	4.3	4.2	5.5	5.9	7.9	8.4	6.0	5.7	6.8	7.0	6.0	5.4	5.5	5.1	8.4	8.4	1.3	5.0
14	6.0	8.0	14.4	12.3	14.4	13.8	15.1	14.7	14.8	15.3	13.3	14.4	13.9	13.6	14.8	14.9	15.1	13.4	13.3	14.0	14.6	13.9	14.0	13.0	15.3	6.0	13.5
15	13.6	14.3	14.8	13.9	16.6	17.9	17.2	17.0	17.0	14.9	16.1	14.8	15.4	15.2	15.3	14.8	14.1	13.3	13.1	13.5	13.5	13.4	10.2	10.0	17.9	10.0	14.6
16	9.2	9.5	9.2	8.9	9.8	8.9	8.3	6.0	9.3	6.8	8.1	7.5	6.4	7.5	8.1	7.3	6.5	6.2	7.5	8.8	7.9	8.4	7.9	6.4	9.8	6.0	7.9
17	7.8	5.8	5.8	5.9	6.4	5.2	4.9	5.6	5.5	5.8	4.9	4.8	3.8	3.7	3.7	3.4	3.8	4.4	3.8	3.4	3.0	1.9	3.2	4.4	7.8	1.9	4.6
18	4.5	5.2	4.9	5.3	5.2	6.2	7.4	6.4	6.6	7.8	9.5	10.3	13.3	12.2	9.2	10.8	10.0	10.8	11.8	11.5	13.8	12.2	13.8	13.0	13.8	4.5	9.2
19	13.3	14.4	13.4	14.8	15.1	15.3	13.1	14.9	15.0	13.9	14.1	12.9	12.5	13.0	12.7	13.6	15.1	10.6	9.8	6.4	5.6	3.3	3.6	4.3	15.3	3.3	11.7
20	4.4	6.0	6.8	7.8	9.1	11.4	12.0	11.1	14.7	17.7	16.7	13.1	9.9	8.0	14.8	12.3	13.7	11.9	14.3	13.3	13.4	15.8	15.1	15.3	17.7	4.4	12.0
21	12.2	7.5	3.6	5.4	5.2	5.0	4.8	5.1	6.2	8.3	11.3	10.7	14.1	10.9	13.4	13.7	13.9	14.8	17.0	19.3	20.3	21.3	14.6	12.8	21.3	3.6	11.3
22	11.4	7.0	16.0	14.5	13.5	16.0	17.1	13.0	15.7	21.3	23.0	19.3	20.6	19.7	20.3	17.0	16.8	16.4	17.8	22.9	18.6	27.5	24.0	19.2	27.5	7.0	17.8
23	14.7	14.3	13.8	13.0	14.1	14.3	15.4	12.9	16.0	12.3	13.0	13.9	14.5	11.3	9.9	9.7	6.0	3.8	4.0	2.9	1.9	2.7	3.1	3.2	16.0	1.9	10.0
24	3.6	3.5	4.0	3.5	3.5	3.6	4.4	3.7	5.0	5.3	4.7	4.2	6.2	3.7	4.6	4.5	4.7	6.8	8.4	10.8	9.1	5.5	4.6	4.2	10.8	3.5	5.1
25	4.0	3.7	4.2	4.7	4.8	5.1	4.7	5.2	4.1	5.2	5.0	2.8	5.6	7.4	5.2	5.9	6.7	5.4	7.1	8.4	8.6	9.3	9.4	8.7	9.4	2.8	5.9
26	8.8	12.0	13.7	13.3	12.7	14.3	14.3	13.7	15.0	12.5	10.0	10.8	11.2	11.7	10.1	11.0	10.0	10.0	7.3	6.6	6.1	5.8	4.9	4.1	15.0	4.1	10.4
27	1.7	2.1	1.1	1.7	8.4	8.9	10.8	11.6	7.9	6.5	3.2	3.3	3.4	5.9	5.7	6.7	5.9	5.8	4.8	5.6	5.6	6.2	6.7	6.9	11.6	1.1	5.7
28	6.2	6.1	4.8	2.5	3.9	3.8	3.9	3.3	4.1	3.8	3.4	2.2	5.4	5.5	11.2	12.2	12.9	10.1	10.2	18.7	20.5	15.8	21.4	13.1	21.4	2.2	8.5
29	16.1	10.6	10.9	15.2	14.2	11.0	9.7	10.5	8.5	9.1	13.8	11.9	10.0	10.6	11.5	14.6	12.5	16.7	12.9	15.5	10.6	11.6	11.3	11.3	16.7	8.5	12.1
30	11.1	13.1	11.3	12.2	13.5	14.5	15.0	10.6	7.6	7.3	6.6	4.9	5.9	5.7	5.8	5.9	6.4	4.4	6.5	7.5	7.9	8.7	8.6	11.9	15.0	4.4	8.9
Max.	**16.1**	**14.4**	**16.0**	**15.2**	**16.6**	**17.9**	**17.2**	**17.0**	**17.0**	**21.3**	**23.0**	**19.3**	**20.6**	**19.7**	**20.3**	**17.0**	**16.8**	**16.7**	**17.8**	**22.9**	**20.5**	**27.5**	**24.0**	**19.2**	27.5		
Min.	**1.7**	**2.1**	**1.1**	**1.7**	**1.3**	**2.0**	**2.0**	**2.1**	**1.8**	**2.1**	**2.1**	**1.1**	**2.1**	**2.1**	**3.2**	**3.4**	**3.4**	**2.9**	**2.4**	**2.2**	**1.9**	**1.9**	**2.2**	**2.0**		1.1	
Avg.	**7.2**	**7.0**	**7.1**	**7.2**	**7.7**	**8.0**	**8.1**	**7.9**	**8.4**	**8.0**	**8.0**	**7.6**	**7.9**	**7.9**	**8.4**	**8.4**	**8.3**	**8.0**	**8.0**	**8.6**	**8.3**	**8.5**	**8.4**	**7.8**			8.0

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.9	12.6	11.8	10.6	10.7	12.2	10.9	12.8	12.9	13.9	13.1	12.0	12.7	13.3	11.5	11.9	12.4	10.6	10.9	11.3	11.2	12.4	10.6	11.0	13.9	10.6	11.9
2	10.0	10.1	9.8	10.1	10.9	10.4	10.3	9.8	9.2	8.6	8.3	8.4	7.6	8.9	8.4	7.9	7.9	8.4	10.8	11.5	14.3	12.6	10.0	14.7	14.7	7.6	10.0
3	15.2	10.4	13.2	13.1	13.8	13.8	13.9	12.8	10.8	8.7	7.0	5.7	7.0	5.9	6.2	8.9	4.0	6.5	5.2	4.2	2.2	3.8	5.5	3.4	15.2	2.2	8.4
4	4.0	3.4	17.2	21.0	25.4	20.8	10.0	6.2	4.6	7.6	5.7	5.2	5.9	7.3	8.4	7.4	7.9	6.0	2.8	3.7	4.1	2.7	3.1	3.1	25.4	2.7	8.1
5	4.4	7.9	4.4	4.2	5.0	3.8	13.9	13.8	13.7	15.7	15.4	14.8	17.7	11.9	9.1	12.2	11.1	13.4	10.3	12.1	15.3	9.9	12.5	12.9	17.7	3.8	11.1
6	10.3	6.7	3.6	4.0	4.1	6.6	6.3	7.8	10.9	7.4	9.9	10.3	9.7	10.4	9.8	7.9	7.2	6.3	4.4	3.4	3.3	5.3	7.3	8.7	10.9	3.3	7.1
7	8.1	9.5	10.9	9.5	7.2	8.0	7.8	9.8	6.2	9.8	7.2	6.2	8.0	6.5	9.7	7.6	7.8	8.3	10.8	8.5	9.1	8.3	8.4	12.5	12.5	6.2	8.6
8	12.8	14.6	11.8	15.3	11.8	13.8	11.5	14.7	14.8	15.7	17.7	21.2	20.2	19.4	18.9	19.6	20.4	17.7	17.0	16.2	17.8	21.1	20.2	18.5	21.2	11.5	16.8
9	21.6	24.8	20.9	21.1	18.1	16.8	14.4	22.7	18.5	15.6	20.2	14.0	10.0	7.9	10.0	8.5	8.6	9.7	10.4	15.6	12.7	7.8	8.0	9.8	24.8	7.8	14.5
10	9.7	13.6	13.5	2.1	10.0	10.7	8.4	5.3	3.5	4.0	3.9	4.1	4.7	8.6	11.9	11.5	12.4	11.8	10.5	9.7	10.9	9.9	9.2	8.3	13.6	2.1	8.7
11	5.0	6.7	5.7	4.7	3.5	2.7	2.6	4.1	3.0	4.7	3.4	1.7	4.9	5.2	16.2	12.2	6.8	3.5	2.7	2.7	4.4	4.3	4.9	6.0	16.2	1.7	5.1
12	6.0	6.0	6.8	6.6	4.9	6.0	7.2	7.0	7.1	6.5	5.4	4.6	6.5	3.8	7.0	6.7	5.9	5.0	4.4	5.2	5.8	6.4	6.4	6.9	7.2	3.8	6.0
13	7.6	7.0	7.5	7.9	6.9	7.8	9.5	7.4	6.8	6.9	4.7	4.8	3.7	4.5	5.8	5.2	6.3	6.1	3.8	2.0	3.5	3.6	4.2	4.2	9.5	2.0	5.7
14	6.4	14.6	10.8	10.8	15.3	15.2	7.9	13.3	13.8	15.4	17.3	20.0	17.8	18.6	18.6	17.4	15.1	13.7	15.5	10.9	11.5	10.5	4.4	4.6	20.0	4.4	13.3
15	5.4	5.5	5.1	6.1	4.1	5.2	5.0	2.5	6.1	7.3	8.9	8.0	6.8	7.3	6.5	6.3	6.0	4.0	6.7	8.3	10.1	10.5	8.5	8.4	10.5	2.5	6.6
16	9.0	10.8	9.0	9.5	10.3	8.6	8.3	7.4	8.1	7.8	7.4	7.6	7.6	9.5	7.1	6.9	7.0	8.4	9.5	8.5	8.4	7.9	9.0	7.9	10.8	6.9	8.4
17	9.1	8.9	9.8	12.2	11.6	6.8	8.4	9.4	8.8	7.7	5.8	5.6	4.8	3.4	3.6	3.6	6.2	6.9	7.6	7.8	9.4	8.4	9.4	10.0	12.2	3.4	7.7
18	9.2	12.6	12.7	12.0	9.4	9.5	11.5	12.6	11.3	12.5	12.5	12.3	13.7	13.8	9.9	8.9	7.4	6.7	9.0	10.4	6.2	3.0	11.5	8.8	13.8	3.0	10.3
19	13.0	12.9	18.1	14.3	17.0	12.5	9.9	5.2	5.6	5.2	3.5	4.6	5.6	5.6	3.9	4.9	3.5	5.9	5.2	6.1	4.9	3.6	9.3	11.6	18.1	3.5	8.0
20	11.5	5.2	3.7	11.9	5.1	6.1	4.8	4.2	3.1	7.8	6.6	4.0	4.3	4.5	4.3	3.0	2.2	2.3	3.3	3.9	3.0	4.2	3.6	4.1	11.9	2.2	4.9
21	4.7	4.4	10.1	7.9	12.4	15.4	14.6	13.7	10.2	8.0	14.8	15.0	17.0	16.4	14.9	10.9	12.8	13.9	15.4	18.5	17.0	9.9	7.6	6.1	18.5	4.4	12.2
22	5.2	6.2	6.1	5.3	6.8	5.9	5.2	4.9	4.7	3.5	4.4	4.0	3.2	3.1	6.7	6.7	6.2	6.1	4.4	4.4	4.6	4.1	4.8	7.9	7.9	3.1	5.2
23	10.5	11.0	11.6	13.4	15.4	15.5	14.2	12.4	19.8	18.1	17.6	21.6	14.8	10.4	12.6	10.6	17.0	10.8	11.8	18.6	17.6	15.4	13.9	12.5	21.6	10.4	14.5
24	7.3	4.2	4.6	7.3	6.2	11.1	10.6	12.3	17.1	14.7	14.5	13.4	14.5	14.5	15.0	12.4	13.8	14.2	10.6	6.0	1.6	0.9	0.3	1.2	17.1	0.3	9.5
25	1.4	2.1	18.5	15.8	18.9	19.3	23.8	24.1	31.1	26.9	29.3	29.8	33.4	38.5	21.3	25.6	35.7	32.6	15.1	13.1	15.9	21.1	20.4	20.7	38.5	1.4	22.2
26	20.7	18.3	16.1	15.2	16.1	15.9	16.9	14.0	13.0	12.8	11.5	9.4	9.7	9.5	12.0	12.3	14.5	14.9	11.7	12.0	13.7	14.5	13.9	12.6	20.7	9.4	13.8
27	13.5	13.4	14.3	13.1	11.2	13.0	13.4	13.0	9.6	9.3	8.6	8.8	12.2	13.8	13.2	14.9	14.6	15.2	16.5	17.7	13.8	15.2	12.3	14.1	17.7	8.6	13.1
28	13.0	13.2	15.0	13.4	10.5	10.1	6.7	5.0	6.2	6.3	6.5	6.4	6.0	5.1	5.1	7.3	7.1	6.9	7.3	6.8	8.8	7.8	7.2	6.8	15.0	5.0	8.1
29	7.3	6.7	6.1	7.7	4.2	3.7	2.7	1.7	8.3	23.5	11.5	14.4	19.9	20.5	16.7	19.5	16.0	23.5	18.0	25.9	19.4	20.3	19.8	24.7	25.9	1.7	14.2
30	23.0	17.8	23.3	15.1	16.3	12.3	9.9	6.1	9.1	13.3	16.1	12.7	12.0	12.3	13.2	6.2	6.4	13.1	6.0	11.8	11.9	8.5	4.3	3.5	23.3	3.5	11.8
31	4.8	3.8	4.0	3.7	4.6	3.8	4.4	3.6	3.6	4.7	5.1	5.1	5.3	4.9	3.2	3.3	5.2	5.2	6.2	6.0	6.2	4.7	4.5	4.4	6.2	3.2	4.6
Max.	**23.0**	**24.8**	**23.3**	**21.1**	**25.4**	**20.8**	**23.8**	**24.1**	**31.1**	**26.9**	**29.3**	**29.8**	**33.4**	**38.5**	**21.3**	**25.6**	**35.7**	**32.6**	**18.0**	**25.9**	**19.4**	**21.1**	**20.4**	**24.7**	**38.5**		
Min.	**1.4**	**2.1**	**3.6**	**2.1**	**3.5**	**2.7**	**2.6**	**1.7**	**3.0**	**3.5**	**3.4**	**1.7**	**3.2**	**3.1**	**3.2**	**3.0**	**2.2**	**2.3**	**2.7**	**2.0**	**1.6**	**0.9**	**0.3**	**1.2**		**0.3**	
Avg.	**9.7**	**9.8**	**10.8**	**10.5**	**10.6**	**10.4**	**9.8**	**9.7**	**10.0**	**10.6**	**10.4**	**10.2**	**10.6**	**10.5**	**10.3**	**9.9**	**10.2**	**10.2**	**9.2**	**9.7**	**9.6**	**9.0**	**8.9**	**9.3**			**10.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.4	4.5	4.4	4.5	4.4	6.4	5.6	5.2	4.7	6.9	7.6	7.3	6.2	3.0	5.6	7.5	8.4	8.3	7.4	7.9	7.6	7.3	6.0	6.5	8.4	3.0	6.1
2	6.2	6.0	7.0	6.2	5.9	6.6	5.7	5.8	7.1	7.4	7.3	7.0	6.5	6.7	5.3	6.0	9.3	8.4	8.4	7.8	8.0	7.2	7.3	6.6	9.3	5.3	6.9
3	5.8	7.8	6.3	7.7	7.5	7.5	7.9	7.1	7.6	8.0	7.4	6.2	6.0	5.7	7.4	6.6	3.5	8.4	8.4	8.4	8.4	8.7	7.2	6.9	8.7	3.5	7.2
4	6.8	6.8	7.1	8.1	8.6	8.1	8.1	8.0	9.0	7.4	7.1	5.0	6.1	5.5	5.3	4.5	3.9	5.0	7.0	7.5	8.7	3.3	5.5	4.5	9.0	3.3	6.5
5	5.6	4.4	5.6	4.6	4.4	4.9	6.3	5.2	4.9	5.5	5.5	6.0	6.2	5.9	4.9	4.6	4.4	4.7	4.4	4.2	4.0	3.9	5.6	5.0	6.3	3.9	5.0
6	7.6	7.9	6.4	6.9	7.0	7.3	6.6	5.2	5.7	6.3	6.9	8.4	9.1	9.0	6.8	12.0	13.6	18.3	18.4	21.4	19.4	16.5	18.5	17.1	21.4	5.2	10.9
7	20.1	17.9	16.0	15.7	20.0	17.8	13.6	17.6	12.5	20.8	28.5	28.2	24.1	15.2	13.9	16.6	18.7	16.8	25.6	17.4	17.7	16.6	16.5	14.5	28.5	12.5	18.4
8	12.8	12.8	11.4	11.6	15.5	16.6	14.9	14.9	6.6	9.0	9.6	9.4	8.4	6.6	5.0	8.8	6.9	11.6	13.0	12.3	11.1	10.5	6.8	6.5	16.6	5.0	10.5
9	7.1	7.2	5.7	7.1	8.8	6.5	9.3	8.7	5.4	9.7	9.3	4.8	5.9	4.9	4.0	9.6	8.3	7.2	7.6	7.6	3.4	2.4	10.2	11.1	11.1	2.4	7.2
10	10.0	9.8	8.9	10.0	12.0	14.4	14.2	17.0	16.7	14.7	5.0	3.0	6.6	12.6	9.9	10.0	13.4	12.1	12.8	13.4	8.9	9.4	9.9	8.5	17.0	3.0	11.0
11	8.6	7.9	12.7	10.0	11.3	12.3	11.1	10.0	11.6	12.9	12.8	11.5	11.0	11.7	10.6	5.8	4.7	10.9	8.5	8.6	9.6	10.7	10.6	10.1	12.9	4.7	10.2
12	9.2	9.1	8.8	9.1	8.3	10.3	10.6	11.5	12.2	14.8	11.7	13.8	10.7	12.7	23.3	24.2	21.5	22.8	21.8	23.7	23.4	24.2	25.9	22.0	25.9	8.3	16.1
13	16.4	11.2	12.0	10.6	11.7	11.0	18.6	12.8	12.6	14.1	10.8	9.2	9.1	10.8	15.1	17.1	15.5	17.4	20.6	22.0	17.2	16.1	16.7	13.1	22.0	9.1	14.2
14	13.1	14.3	13.1	20.6	19.1	9.3	11.3	19.3	15.7	15.2	15.1	12.2	14.4	19.9	19.0	19.8	19.6	17.4	17.3	13.1	14.1	16.3	21.9	22.5	22.5	9.3	16.4
15	14.3	13.7	14.0	13.9	14.2	14.4	16.5	15.2	15.6	16.3	13.5	13.0	7.8	9.7	13.7	13.7	13.4	14.7	16.1	16.6	15.4	15.7	10.8	8.5	16.6	7.8	13.8
16	8.5	9.5	8.1	7.1	8.2	9.9	8.7	9.3	11.1	11.6	11.6	12.4	12.0	11.8	11.6	7.4	12.0	8.9	7.3	9.3	9.9	10.0	9.3	10.5	12.4	7.1	9.8
17	11.0	9.4	10.6	9.3	9.0	9.3	8.6	9.7	10.6	8.2	9.6	9.0	9.7	9.6	10.6	11.0	10.6	9.2	10.3	9.6	10.1	8.8	10.8	9.3	11.0	8.2	9.7
18	9.4	9.2	9.4	9.9	9.6	8.6	7.6	8.8	8.4	9.2	9.5	9.0	9.8	10.3	10.5	9.7	10.3	9.6	9.3	8.7	8.8	10.0	11.0	9.9	11.0	7.6	9.4
19	10.6	14.6	20.9	19.0	15.9	18.2	11.9	12.9	10.2	11.4	11.6	18.0	20.9	21.4	26.3	24.2	25.1	22.6	23.3	18.6	16.6	11.0	10.8	11.9	26.3	10.2	17.0
20	10.0	12.3	15.2	12.5	16.3	15.2	18.0	18.4	11.8	12.7	12.4	10.6	14.1	13.1	11.7	13.6	10.8	10.3	10.2	8.9	8.5	9.3	8.7	8.8	18.4	8.5	12.2
21	9.7	9.1	9.8	9.9	10.3	10.1	11.0	10.0	10.5	10.1	9.0	9.6	10.6	7.9	8.7	13.7	13.4	13.8	16.9	18.4	18.3	15.3	17.1	15.4	18.4	7.9	12.0
22	11.8	10.6	7.3	6.8	5.2	6.2	4.9	4.7	8.4	7.7	8.7	7.6	6.9	8.6	8.8	7.2	9.1	8.4	7.3	5.4	5.1	5.4	5.5	5.2	11.8	4.7	7.2
23	5.4	5.5	6.8	6.0	6.8	5.9	6.9	6.7	6.4	6.7	7.6	7.2	6.1	5.6	5.1	4.1	3.7	5.1	5.1	5.9	5.0	4.7	4.9	4.2	7.6	3.7	5.7
24	4.8	4.7	5.0	5.6	5.0	5.9	6.3	5.8	4.6	4.8	6.8	7.4	7.5	7.2	7.9	10.1	12.5	12.6	16.0	16.8	15.2	13.1	13.6	13.7	16.8	4.6	8.9
25	12.7	11.1	10.4	10.9	10.4	12.0	12.5	10.6	10.5	10.9	9.5	7.7	7.1	8.4	8.2	8.0	8.7	8.4	8.7	8.7	9.2	9.2	8.4	8.9	12.7	7.1	9.6
26	10.2	11.1	11.6	11.5	10.4	10.7	11.4	11.3	13.6	12.8	13.2	13.7	11.8	12.0	11.5	12.0	14.0	12.9	12.3	12.2	12.2	13.0	13.9	13.9	14.0	10.2	12.2
27	18.0	15.3	16.1	15.5	15.6	13.3	12.9	11.2	13.0	9.3	10.4	9.1	9.8	10.2	11.3	9.9	10.1	9.7	9.3	10.0	9.2	9.4	8.8	8.3	18.0	8.3	11.5
28	8.4	8.6	9.9	8.7	8.7	9.7	8.7	8.2	8.1	8.2	7.2	7.7	8.5	9.3	8.8	9.2	9.0	6.7	6.3	4.7	3.5	3.3	2.1	2.6	9.9	2.1	7.3
29	3.1	5.6	9.1	6.9	5.3	5.3	5.3	6.3	6.2	3.3	2.9	5.5	5.3	3.8	4.4	4.3	5.9	6.3	7.7	5.2	7.6	9.0	8.5	9.3	9.3	2.9	5.9
30	8.4	10.0	9.7	10.9	10.9	12.0	12.3	12.2	11.7	10.6	10.8	11.6	11.5	11.3	7.8	6.3	3.6	0.2	0.2	0.2	0.2	0.2	0.2	13.8	13.8	0.2	7.8
Max.	**20.1**	**17.9**	**20.9**	**20.6**	**20.0**	**18.2**	**18.6**	**19.3**	**16.7**	**20.8**	**28.5**	**28.2**	**24.1**	**21.4**	**26.3**	**24.2**	**25.1**	**22.8**	**25.6**	**23.7**	**23.4**	**24.2**	**25.9**	**22.5**	**28.5**		
Min.	**3.1**	**4.4**	**4.4**	**4.5**	**4.4**	**4.9**	**4.9**	**4.7**	**4.6**	**3.3**	**2.9**	**3.0**	**5.3**	**3.0**	**4.0**	**4.1**	**3.5**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**2.6**		**0.2**	
Avg.	**9.7**	**9.6**	**10.0**	**9.9**	**10.2**	**10.2**	**10.2**	**10.3**	**9.8**	**10.2**	**10.0**	**9.7**	**9.7**	**9.7**	**10.1**	**10.6**	**10.8**	**11.0**	**11.6**	**11.1**	**10.5**	**10.0**	**10.4**	**10.3**			**10.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum Instantaneous Wind Speed (Climatronics) (m/s)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	15.5	10.7	13.1	14.2	13.1	15.6	15.1	12.0	9.9	10.2	10.0	4.4	4.4	4.4	4.4	5.2	3.7	5.6	4.4	4.4	4.6	5.4	4.3	3.7	15.6	3.7	8.3
2	3.4	4.4	5.1	4.5	8.1	9.0	8.4	8.0	8.0	11.6	11.7	11.3	12.5	13.7	13.1	13.1	12.4	13.2	12.3	13.4	10.3	10.2	11.5	14.1	14.1	3.4	10.1
3	14.0	9.6	8.4	9.7	8.8	11.8	9.7	11.1	8.7	6.4	3.2	1.8	2.2	1.9	1.5	1.1	0.7	1.6	1.6	2.1	1.7	2.7	3.0	3.5	14.0	0.7	5.3
4	1.7	2.4	2.6	2.1	10.6	10.6	10.2	7.8	10.1	9.1	9.6	8.9	8.1	7.5	8.5	8.5	7.5	7.2	6.1	6.2	5.1	3.5	6.9	8.2	10.6	1.7	7.0
5	9.8	10.2	12.1	11.2	9.1	12.0	12.5	13.2	12.5	13.1	14.5	14.1	15.1	13.7	16.1	16.2	16.9	17.7	18.8	19.6	20.0	19.2	21.1	23.8	23.8	9.1	15.1
6	21.1	16.8	13.6	12.9	13.0	11.3	14.5	16.9	12.5	11.6	10.2	14.4	16.0	11.6	10.9	10.0	9.7	11.3	12.7	11.3	13.1	11.3	9.6	10.0	21.1	9.6	12.8
7	11.4	10.4	9.2	9.1	10.6	8.8	10.0	14.2	15.0	15.3	13.2	13.5	12.1	9.7	9.5	9.3	13.0	12.6	13.0	11.3	10.0	12.0	12.2	12.0	15.3	8.8	11.5
8	13.7	11.7	11.7	10.7	13.1	15.4	14.7	16.5	14.0	8.9	7.7	7.4	7.8	9.0	1.0	6.8	13.8	15.8	22.7	9.1	7.0	7.0	4.0	5.8	22.7	1.0	10.6
9	5.0	7.8	7.8	8.2	9.0	10.3	11.9	10.8	9.5	12.0	12.8	13.0	14.5	11.5	13.9	12.3	14.0	12.5	13.8	11.2	16.8	10.8	16.0	13.3	16.8	5.0	11.6
10	6.6	6.6	6.8	6.6	5.4	8.4	7.9	5.0	6.9	9.8	7.0	9.5	9.3	8.1	8.0	9.0	9.1	8.7	11.7	11.4	9.4	9.6	9.0	8.5	11.7	5.0	8.3
11	8.0	8.5	8.0	7.9	7.5	8.4	8.0	6.2	3.5	3.0	3.2	2.9	2.0	1.7	2.2	4.4	4.6	4.5	5.5	5.1	3.6	3.9	4.5	2.7	8.5	1.7	5.0
12	3.4	2.8	4.8	3.0	3.5	3.8	8.1	8.1	6.0	6.8	9.2	7.0	7.7	7.1	8.0	7.3	7.0	7.0	7.1	6.4	4.1	6.7	5.8	7.2	9.2	2.8	6.2
13	8.4	7.0	8.6	9.4	8.0	15.2	13.6	14.8	14.7	15.4	17.4	19.2	19.2	20.6	21.1	22.9	21.0	21.8	22.0	23.9	23.1	24.2	25.1	26.1	26.1	7.0	17.6
14	24.9	23.1	28.7	29.9	29.1	35.0	22.6	28.7	26.4	25.3	24.8	25.7	27.4	23.8	13.1	21.1	21.6	28.4	20.7	18.2	21.5	24.0	22.5	21.7	35.0	13.1	24.5
15	20.0	20.9	18.4	18.3	18.2	18.4	15.8	12.6	13.4	12.2	8.3	10.7	8.7	7.5	8.4	8.1	6.8	6.4	7.1	7.8	8.2	9.3	11.2	12.8	20.9	6.4	12.1
16	13.2	12.3	11.7	12.7	14.2	13.5	11.6	11.4	10.8	10.3	9.4	9.5	8.8	7.3	7.4	6.2	5.2	3.9	1.2	1.6	2.3	1.1	1.8	2.0	14.2	1.1	7.9
17	2.1	3.0	3.3	1.8	1.5	2.6	3.0	2.9	2.7	2.1	2.8	2.9	2.6	2.1	2.2	2.4	4.2	9.7	13.7	13.6	15.7	12.5	22.8	18.5	22.8	1.5	6.3
18	23.1	27.0	33.5	23.7	24.9	24.9	17.7	18.5	16.7	16.6	16.7	13.9	14.1	19.3	21.3	16.6	14.6	16.2	12.9	11.1	6.3	3.7	5.2	6.3	33.5	3.7	16.9
19	7.8	8.2	7.6	8.1	8.4	10.0	10.4	10.6	11.1	10.4	10.5	9.7	7.5	3.4	3.1	4.9	2.3	3.3	4.8	5.5	6.7	5.6	5.3	5.9	11.1	2.3	7.1
20	8.6	10.0	12.3	9.8	8.1	18.8	19.5	20.3	19.6	22.5	21.2	21.0	21.5	21.1	22.3	19.9	17.8	15.3	12.8	16.6	10.7	9.5	9.4	10.8	22.5	8.1	15.8
21	10.0	11.3	11.8	13.8	17.9	19.8	22.6	24.5	23.0	23.3	22.4	15.7	11.7	17.9	12.6	7.5	9.1	8.8	7.9	9.3	9.2	7.3	7.8	10.7	24.5	7.3	14.0
22	10.0	9.3	9.1	10.4	9.4	3.4	6.5	6.2	7.1	6.1	2.4	2.8	8.3	4.3	7.9	6.5	4.6	3.9	8.5	9.2	7.2	4.0	6.7	7.1	10.4	2.4	6.7
23	8.5	14.5	11.0	10.8	11.3	10.0	12.5	15.3	14.3	10.1	12.1	10.5	10.9	10.9	13.6	13.9	17.0	16.0	14.0	10.8	12.0	13.5	13.8	12.3	17.0	8.5	12.5
24	8.9	9.2	8.9	10.1	8.9	8.8	7.8	5.6	5.5	4.9	4.9	4.7	4.6	4.8	5.7	8.6	10.8	11.7	12.3	13.3	13.3	14.2	15.8	15.2	15.8	4.6	9.1
25	15.2	15.2	16.7	18.2	23.4	21.4	20.3	20.0	22.8	25.9	21.9	23.0	21.2	16.5	18.9	17.0	16.3	15.7	21.3	29.0	25.5	20.4	28.9	23.1	29.0	15.2	20.7
26	28.2	23.2	17.8	11.9	16.4	14.7	14.1	13.8	14.5	9.9	10.5	8.9	7.4	10.2	7.1	5.1	4.6	6.8	8.4	8.0	6.8	8.9	9.2	9.4	28.2	4.6	11.5
27	11.1	10.2	12.8	12.3	13.8	13.7	14.9	17.4	19.2	21.5	23.1	22.6	26.5	25.1	27.4	27.6	28.8	26.9	27.8	23.5	23.7	17.5	13.9	12.5	28.8	10.2	19.7
28	14.1	13.7	14.2	9.8	10.0	9.7	9.2	6.4	6.7	6.0	6.5	6.3	5.8	7.6	8.7	8.3	7.8	7.4	8.0	6.1	8.5	9.0	7.9	5.6	14.2	5.6	8.5
29	5.0	6.0	3.7	4.6	3.9	9.4	9.7	14.7	12.3	11.6	14.3	17.4	18.1	16.4	21.4	24.5	23.0	25.7	29.5	30.3	26.7	25.0	26.4	26.4	30.3	3.7	16.9
30	27.6	27.9	30.6	26.6	25.1	28.5	27.8	26.7	25.2	22.0	23.8	22.3	26.4	18.5	20.3	20.3	17.8	16.0	16.5	16.5	15.8	15.0	14.3	14.8	30.6	14.3	21.9
31	12.3	10.3	6.8	6.0	7.6	7.6	6.7	7.7	7.3	7.3	8.8	9.4	9.9	10.2	10.1	11.0	11.9	12.2	10.8	10.8	9.0	7.4	7.7	5.7	12.3	5.7	8.9
Max.	**28.2**	**27.9**	**33.5**	**29.9**	**29.1**	**35.0**	**27.8**	**28.7**	**26.4**	**25.9**	**24.8**	**25.7**	**27.4**	**25.1**	**27.4**	**27.6**	**28.8**	**28.4**	**29.5**	**30.3**	**26.7**	**25.0**	**28.9**	**26.4**	**35.0**		
Min.	**1.7**	**2.4**	**2.6**	**1.8**	**1.5**	**2.6**	**3.0**	**2.9**	**2.7**	**2.1**	**2.4**	**1.8**	**2.0**	**1.7**	**1.0**	**1.1**	**0.7**	**1.6**	**1.2**	**1.6**	**1.7**	**1.1**	**1.8**	**2.0**		**0.7**	
Avg.	**12.0**	**11.7**	**12.0**	**11.2**	**12.0**	**13.2**	**12.8**	**13.2**	**12.6**	**12.3**	**12.1**	**11.8**	**12.0**	**11.2**	**11.3**	**11.5**	**11.5**	**12.1**	**12.6**	**12.2**	**11.5**	**10.8**	**11.7**	**11.6**			**11.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.8	6.8	6.1	5.4	5.8	5.2	5.9	6.6	6.2	5.8	5.8	4.8	5.0	4.8	5.4	6.3	6.1	7.0	6.6	7.0	6.8	6.6	6.6	6.0	7.0	4.8	6.1
2	6.5	5.9	5.8	5.3	6.0	6.0	5.5	5.9	7.9	7.3	6.9	6.5	6.3	6.4	6.1	6.2	6.2	5.4	5.9	5.3	5.9	5.3	5.4	4.5	7.9	4.5	6.0
3	4.5	5.5	4.8	5.3	6.3	5.3	5.1	5.4	5.1	4.8	4.1	4.0	4.1	4.5	4.7	5.1	5.1	5.4	4.3	4.2	4.0	5.0	5.6	4.5	6.3	4.0	4.9
4	3.9	4.3	2.1	2.2	3.5	2.6	2.2	0.6	1.0	0.7	1.2	2.2	2.0	2.3	3.0	1.9	4.0	2.8	1.0	3.5	2.9	1.0	1.2	3.5	4.3	0.6	2.3
5	3.4	4.8	5.5	4.1	4.3	5.3	5.4	3.5	1.4	1.5	1.6	0.9	1.1	2.2	2.0	1.1	0.7	1.9	3.4	3.4	2.4	2.9	1.0	1.1	5.5	0.7	2.7
6	1.9	1.6	1.7	3.0	2.6	1.7	2.6	2.3	2.4	2.4	0.5	0.6	2.5	2.5	2.5	1.5	0.3	1.6	1.2	0.6	0.9	1.8	2.1	0.9	3.0	0.3	1.7
7	3.0	1.7	1.7	2.1	1.4	0.9	0.4	2.0	4.0	5.3	5.6	7.3	8.5	9.5	9.3	7.0	6.3	5.6	5.7	7.7	8.2	9.0	8.2	8.2	9.5	0.4	5.4
8	8.1	7.7	7.5	7.6	7.6	8.2	7.3	7.6	7.4	6.4	5.6	5.5	5.5	4.1	1.9	1.0	1.9	0.8	1.3	0.9	1.6	2.3	2.6	2.3	8.2	0.8	4.7
9	1.7	2.5	2.4	2.3	2.2	1.8	1.5	2.2	2.3	2.1	1.3	0.9	1.0	2.8	2.3	1.0	0.7	1.9	1.4	0.6	1.3	0.6	1.4	1.2	2.8	0.6	1.6
10	0.5	1.5	1.0	2.3	5.4	4.8	2.9	1.0	0.9	1.3	1.2	1.2	2.4	1.5	2.1	3.1	4.1	5.2	5.8	4.9	4.2	5.9	5.4	4.1	5.9	0.5	3.0
11	3.3	4.6	2.6	1.9	3.3	6.2	4.6	1.4	1.8	2.0	1.6	1.2	3.0	2.1	2.2	1.9	0.9	0.6	2.7	2.9	3.8	3.3	1.7	3.0	6.2	0.6	2.6
12	0.6	2.3	6.1	5.5	4.9	6.6	7.7	7.8	4.9	2.2	2.3	2.3	3.2	3.5	3.3	2.9	3.5	2.5	1.8	1.9	1.8	1.7	1.4	1.9	7.8	0.6	3.4
13	1.6	1.5	2.4	1.3	1.9	1.7	1.9	1.8	1.8	3.0	1.4	3.0	3.3	3.7	4.3	3.1	2.9	2.9	3.3	2.3	1.5	2.4	2.9	1.8	4.3	1.3	2.4
14	2.8	3.3	3.1	3.2	4.7	4.8	4.5	4.0	3.1	4.6	5.0	5.6	5.8	6.8	6.5	7.1	6.8	6.7	7.0	6.7	6.8	7.1	7.6	7.7	7.7	2.8	5.5
15	7.7	7.9	8.4	8.1	8.1	8.5	8.7	8.0	7.7	8.6	7.5	8.0	7.9	8.4	8.2	7.7	8.3	7.5	7.7	8.4	8.1	8.6	7.7	8.2	8.7	7.5	8.1
16	7.7	6.9	7.0	7.3	8.3	8.2	7.5	7.3	6.7	7.2	6.4					5.2	2.7	2.7	1.8	1.2	0.4	0.8	1.5	1.7	8.3	0.4	4.9
17	0.7	1.6	2.3	2.5	2.3	2.2	4.1	3.0	3.6	3.3	3.5	4.6	5.7	3.7	4.3	3.2	5.5	6.2	8.6	6.9	6.0	6.7	8.4	9.2	9.2	0.7	4.5
18	8.5	8.6	8.2	6.6	6.6	7.5	3.9	4.2	5.9	4.1	2.2	2.8	2.7	2.5	2.2	2.8	3.0	2.5	2.5	1.5	1.6	1.7	2.6	2.5	8.6	1.5	4.1
19	2.1	2.6	6.3	4.6	3.4	2.3	3.2	3.1	6.3	4.8	5.1	5.5	6.0	4.7	3.8	3.8	3.7	3.0	2.4	1.9	1.1	1.8	4.2	3.2	6.3	1.1	3.7
20	2.3	3.0	3.1	3.6	3.2	4.1	4.5	4.4	4.2	4.6	4.2	3.9	4.3	4.9	4.5	3.1	3.2	2.7	2.3	2.3	2.2	2.5	2.0	2.8	4.9	2.0	3.4
21	3.3	4.5	6.0	7.2	5.8	7.6	6.7	5.6	4.8	4.5	3.9	2.4	1.8	5.0	5.8	7.4	6.7	7.8	6.6	5.9	11.8	14.2	15.2	15.0	15.2	1.8	6.9
22	12.8	10.1	11.1	11.5	10.3	10.2	10.0	13.3	13.1	13.2	13.1	13.4	13.1	14.1	15.2	16.6	15.9	17.1	17.3	16.0	14.9	13.7	12.3	11.8	17.3	10.0	13.3
23	11.2	10.1	6.4	5.1	5.0	5.3	4.0	3.7	2.8	5.5	5.2	3.7	3.2	5.5	6.5	5.9	6.7	6.0	4.3	4.8	5.1	4.2	6.0	4.9	11.2	2.8	5.5
24	5.0	4.9	4.6	4.6	5.1	5.7	5.4	5.8	6.3	6.0	7.0	8.2	7.9	7.4	7.9	7.9	6.3	7.7	7.2	7.4	6.4	5.5	5.0	4.9	8.2	4.6	6.3
25	4.6	4.5	3.8	3.3	3.3	3.6	3.5	2.0	3.3	3.0	3.7	5.2	5.2	4.1	3.4	3.9	3.7	4.9	5.7	6.0	6.3	8.2	7.8	8.9	8.9	2.0	4.7
26	8.8	8.8	9.1	9.6	9.4	9.4	8.6	8.5	8.7	10.1	9.3	9.5	10.1	9.3	9.2	8.9	8.0	7.2	8.0	9.2	7.9	8.9	8.6	8.2	10.1	7.2	8.9
27	6.8	6.5	6.8	6.0	7.5	10.3	7.4	11.5	8.8	8.0	10.0	12.2	10.8	11.0	12.0	12.5	14.0	12.1	12.9	14.5	13.9	12.2	13.8	13.8	14.5	6.0	10.6
28	12.4	13.8	14.0	14.2	15.2	16.3	16.5	14.7	14.1	13.5	12.7	12.0	9.6	6.9	6.6	6.3	7.2	6.3	7.5	5.9	4.0	5.9	6.5	7.6	16.5	4.0	10.4
29	7.6	6.5	7.1	6.8	6.5	6.0	5.9	6.7	6.7	6.3	6.0	5.8	5.9	6.2	4.8	3.1	3.6	4.8	5.3	4.9	5.9	6.3	5.7	6.1	7.6	3.1	5.9
30	6.5	6.5	6.4	5.7	4.9	4.4	4.5	4.0	3.4	2.8	1.9	2.0	2.4	1.9	4.5	3.5	4.1	3.4	2.7	1.8	4.5	4.2	5.3	5.3	6.5	1.8	4.0
31	4.5	4.6	4.7	4.8	4.3	3.6	4.1	2.9	3.8	4.3	4.4	4.5	4.0	3.9	5.5	6.0	4.6	4.5	4.5	5.4	8.2	9.0	10.1	8.3	10.1	2.9	5.2
Max.	**12.8**	**13.8**	**14.0**	**14.2**	**15.2**	**16.3**	**16.5**	**14.7**	**14.1**	**13.5**	**13.1**	**13.4**	**13.1**	**14.1**	**15.2**	**16.6**	**15.9**	**17.1**	**17.3**	**16.0**	**14.9**	**14.2**	**15.2**	**15.0**	**17.3**		
Min.	**0.5**	**1.5**	**1.0**	**1.3**	**1.4**	**0.9**	**0.4**	**0.6**	**0.9**	**0.7**	**0.5**	**0.6**	**1.0**	**1.5**	**1.9**	**1.0**	**0.3**	**0.6**	**1.0**	**0.6**	**0.4**	**0.6**	**1.0**	**0.9**		**0.3**	
Avg.	**5.2**	**5.3**	**5.4**	**5.3**	**5.5**	**5.7**	**5.4**	**5.2**	**5.2**	**5.1**	**4.8**	**5.0**	**5.1**	**5.2**	**5.3**	**5.1**	**5.1**	**5.1**	**5.1**	**5.0**	**5.2**	**5.5**	**5.7**	**5.6**			**5.2**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.7	9.5	9.6	10.8	9.2	7.6	9.2	8.6	8.8	11.3	11.4	12.1	12.3	12.1	13.9	12.6	11.3	6.5	6.8	9.6	7.2	6.5	9.7	10.0	13.9	6.5	9.8
2	11.6	12.7	11.1	10.2	9.5	10.5	11.3	11.0	11.9	11.0	7.3	5.8	7.1	7.4	7.6	6.4	7.7	8.1	7.0	3.4	5.5	5.8	5.6	5.0	12.7	3.4	8.4
3	5.4	6.3	7.4	7.4	6.9	7.0	7.6	7.2	7.3	6.7	6.7	6.9	7.5	7.4	6.7	7.4	8.1	7.6	7.5	8.1	7.9	8.2	8.3	7.8	8.3	5.4	7.3
4	7.4	8.5	8.8	9.2	10.0	9.5	9.5	9.5	9.5	9.9	9.7	10.2	10.6	11.6	11.4	11.8	12.7	11.8	12.1	11.3	11.4	12.5	12.4	13.8	13.8	7.4	10.6
5	14.0	14.1	12.8	13.8	13.6	12.7	12.7	13.1	13.3	12.3	12.8	11.4	9.8	9.1	8.8	9.0	9.3	11.1	10.4	11.7	12.1	13.1	12.1	12.1	14.1	8.8	11.9
6	11.1	10.4	10.1	9.2	8.6	9.3	8.3	6.7	5.6	2.8	2.4	0.1	3.1	2.3	3.8	2.2	2.7	2.6	2.6	2.0	3.1	2.8	2.9	2.6	11.1	0.1	4.9
7	3.4	4.9	4.1	3.6	2.2	1.4	1.1	3.0	6.8	6.3	6.1	9.2	9.6	10.3	8.9	4.1	3.2	3.9	4.2	6.9	7.5	6.6	5.5	4.8	10.3	1.1	5.3
8	4.7	4.4	2.1	3.2	3.0	2.9	3.3	3.9	5.3	6.0	4.7	5.8	5.6	5.8	7.3	8.5	8.6	8.5	8.5	7.7	8.0	8.7	8.7	8.3	8.7	2.1	6.0
9	9.4	9.6	9.9	9.9	10.4	11.8	13.3	14.3	15.3	15.5	15.8	15.2	14.8	13.9	13.0	11.0	10.2	9.5	8.8	8.7	8.9	7.6	5.8	4.8	15.8	4.8	11.1
10	6.2	7.7	7.8	8.3	8.8	8.6	9.5	8.7	9.2	9.5	9.1	6.6	4.9	2.9			1.4	2.8	2.6	3.8	2.6	2.3	2.9	4.0	9.5	1.4	5.9
11	4.2	5.0	5.8	5.8	6.3	6.4	7.4	8.2	9.0	8.3	8.9	7.9	7.6	8.0	7.5	8.4	9.1	9.0	8.3	8.2	7.6	7.6	7.7	6.8	9.1	4.2	7.5
12	5.2	4.8	2.9	2.8	7.5	5.3	5.7	6.8	7.0	6.4	7.4	10.0	11.0	7.5	5.9	5.7	9.6	11.4	10.1	9.2	9.8	8.4	6.1	5.6	11.4	2.8	7.2
13	1.9	1.2	1.8	1.4	2.3	1.6	0.7	2.8	4.1	3.7	1.6	5.7	5.7	6.2	5.6	4.9	5.1	5.7	6.3	5.0	5.2	4.8	4.0	3.8	6.3	0.7	3.8
14	4.0	4.5	4.5	4.7	4.9	5.2	4.2	5.0	5.1	4.5	5.5	6.7	6.2	6.3	5.8	5.3	5.0	4.4	4.5	4.3	5.6	6.3	5.7	6.3	6.7	4.0	5.2
15	6.7	7.6	5.5	6.4	6.8	6.7	6.8	7.2	7.3	4.3	3.5	4.0	3.9	2.9	4.2	5.0	4.2	4.0	4.1	5.0	4.4	4.1	3.5	4.3	7.6	2.9	5.1
16	4.9	3.8	4.1	4.5	4.3	3.6	1.4	1.8	1.6	0.8	0.4	0.6	1.8	2.5	1.4	1.5	3.9	3.4	3.7	4.4	4.0	3.7	4.5	4.7	4.9	0.4	3.0
17	5.2	5.9	6.1	5.9	5.6	7.2	7.9	9.2	10.3	9.5	8.6	8.7	7.6	7.2	7.0	6.5	6.9	6.5	6.4	5.1	5.6	5.8	6.7	5.0	10.3	5.0	6.9
18	4.1	4.7	5.1	4.8	4.9	4.6	3.9	4.7	4.7	5.5	4.4	3.1	2.4	3.2	1.4	2.8	2.9	2.3	2.3	3.0	4.8	5.3	4.9	3.9	5.5	1.4	3.9
19	1.9	4.0	8.6	9.3	7.8	4.3	4.2	3.7	5.6	4.7	6.1	5.1	5.1	3.5	5.3	5.2	5.8	9.0	8.8	8.0	8.0	8.7	5.7	6.3	9.3	1.9	6.0
20	5.5	4.9	5.6	2.6	2.3	2.5	3.0	3.9	3.7	4.5	2.7	3.1	3.3	7.9	4.6	5.0	7.7	10.3	11.7	13.1	10.8	13.2	13.4	10.4	13.4	2.3	6.5
21	12.3	6.7	6.4	4.6	6.0	5.5	6.3	6.9	7.3	6.4	4.4	4.8	6.7	5.9	4.6	4.3	4.1	3.4	4.1	3.8	4.1	3.7	3.4	3.5	12.3	3.4	5.4
22	3.6	4.6	3.0	2.9	2.5	2.0	8.0	5.0	4.8	4.0	4.2	4.7	3.2	2.9	3.2	2.5	2.6	2.5	1.9	2.8	3.1	3.4	2.8	2.8	8.0	1.9	3.5
23	1.9	1.8	1.9	1.7	0.5	2.0	1.7	2.3	1.6	5.3	6.0	6.3	4.2	4.0	3.5	3.3	3.7	4.2	2.8	2.2	2.5	3.5	3.7	3.4	6.3	0.5	3.1
24	3.2	3.3	3.8	3.9	3.2	4.2	3.6	4.6	6.5	6.9	6.9	5.0	3.7	2.9	3.1	2.6	1.8	1.8	3.3	3.6	3.9	4.0	3.1	3.1	6.9	1.8	3.8
25	3.5	3.4	3.0	2.0	2.1	1.9	1.5	0.6	0.6	3.4	1.5	0.6	4.4	1.7	5.5	4.1	4.2	5.2	7.3	7.5	8.9	6.4	4.9	5.5	8.9	0.6	3.7
26	4.8	4.6	5.7	3.9	4.3	2.8	2.4	3.0	2.3	3.3	3.0	3.9	2.5	3.3	2.8	3.5	2.7	3.0	1.9	1.7	1.4	3.4	3.7	5.2	5.7	1.4	3.3
27	5.8	6.9	7.2	7.0	5.8	4.0	1.8	3.2	8.4	4.4	4.1	3.0	2.0	2.6	4.1	4.4	3.0	3.7	6.7	6.1	4.6	3.6	5.2	5.2	8.4	1.8	4.7
28	5.0	8.0	6.6	6.4	6.4	8.1	8.3	8.5	6.1	6.5	5.3	6.4	8.1	9.1	10.9	10.5	8.9	8.9	9.0	8.5	7.9	9.5	8.6	8.2	10.9	5.0	7.9
Max.	**14.0**	**14.1**	**12.8**	**13.8**	**13.6**	**12.7**	**13.3**	**14.3**	**15.3**	**15.5**	**15.8**	**15.2**	**14.8**	**13.9**	**13.9**	**12.6**	**12.7**	**11.8**	**12.1**	**13.1**	**12.1**	**13.2**	**13.4**	**13.8**	**15.8**		
Min.	**1.9**	**1.2**	**1.8**	**1.4**	**0.5**	**1.4**	**0.7**	**0.6**	**0.6**	**0.8**	**0.4**	**0.1**	**1.8**	**1.7**	**1.4**	**1.5**	**1.4**	**1.8**	**1.9**	**1.7**	**1.4**	**2.3**	**2.8**	**2.6**		**0.1**	
Avg.	**5.9**	**6.2**	**6.1**	**5.9**	**5.9**	**5.7**	**5.9**	**6.2**	**6.7**	**6.6**	**6.1**	**6.2**	**6.2**	**6.1**	**6.2**	**5.9**	**5.9**	**6.1**	**6.2**	**6.2**	**6.3**	**6.4**	**6.1**	**6.0**			**6.1**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.2	4.2	3.6	5.7	6.6	7.1	6.7	6.0	2.3	3.7	5.0	4.9	5.3	4.2	3.1	2.2	3.1	4.0	5.9	6.2	5.7	6.6	6.9	4.3	8.2	2.2	5.0
2	3.0	5.8	6.3	6.3	6.3	6.9	7.1	8.6	9.1	8.6	8.2	7.8	8.0	8.5	7.9	7.3	8.1	7.5	8.0	7.5	7.9	8.1	7.9	8.7	9.1	3.0	7.5
3	7.7	7.8	6.4	6.0	7.1	7.3	7.2	6.9	7.5	6.8	6.3	5.5	5.9	6.2	5.7	5.1	4.1	3.1	3.9	4.3	4.4	4.7	4.7	5.2	7.8	3.1	5.8
4	5.2	4.7	4.9	5.6	5.4	5.4	5.7	5.5	6.2	5.3	5.5	5.4	5.7	4.5	4.9	5.3	5.0	5.9	5.6	5.5	5.4	5.7	5.4	5.6	6.2	4.5	5.4
5	5.6	5.9	6.1	6.3	6.5	6.3	5.5	1.7	1.3	1.4	1.2	3.4	3.9	3.4	2.9	2.3	2.4	3.5	5.9	6.3	4.3	3.6	3.2	3.8	6.5	1.2	4.0
6	6.0	5.8	4.8	4.2	5.4	4.6	3.4	5.3	8.7	9.3	9.7	8.7	8.0	5.1	6.3	5.2	4.4	2.8	2.0	1.7	3.1	3.8	4.5	5.7	9.7	1.7	5.4
7	5.8	4.9	2.8	3.8	3.1	3.9	5.1	4.7	7.0	9.1	10.0	10.0	9.2	8.7	8.4	8.5	8.7	7.1	7.7	7.4	5.7	7.2	8.0	10.3	10.3	2.8	7.0
8	11.1	12.4	11.2	10.7	12.3	11.1	11.7	13.8	10.1	9.4	9.4	8.9	7.6	7.8	7.3	9.8	10.3	13.2	10.1	6.5	6.8	6.5	5.0	5.2	13.8	5.0	9.5
9	6.3	6.0	6.6	6.0	7.4	8.1	7.7	7.4	6.8	7.8	9.5	7.7	6.2	8.7	6.9	6.2	6.8	7.9	7.9	8.1	9.0	9.2	7.7	5.8	9.5	5.8	7.4
10	6.1	4.6	4.9	4.9	4.9	5.6	4.8	2.2	4.4	4.4	4.4	3.3	2.6	2.7	3.1	1.6	1.4	3.4	4.7	4.6	4.8	5.1	5.4	5.3	6.1	1.4	4.1
11	5.6	5.6	8.2	7.4	7.3	8.3	7.5	8.2	8.8	8.7	8.5	7.7	7.5	7.8	7.2	7.0	6.8	7.9	7.7	8.1	8.6	7.7	6.7	5.9	8.8	5.6	7.5
12	9.1	8.0	8.0	9.1	8.7	8.4	7.8	6.6	6.3	6.1	6.5	7.0	6.9	7.4	7.5	7.3	6.5	6.2	5.7	5.3	4.9	3.8	2.0	1.4	9.1	1.4	6.5
13	2.5	1.4	1.2	0.8	0.9	1.9	1.6	1.2	1.3	1.7	2.2	3.8	3.1	2.8	2.3	2.1	2.2	1.6	1.7	2.0	1.5	1.2	1.9	1.4	3.8	0.8	1.8
14	1.1	2.5	1.9	2.9	3.4	3.0	2.5	2.8	3.4	4.2	3.9	2.5	3.1	3.5	4.3	3.9	2.1	2.1	2.8	2.8	3.3	4.1	3.0	2.4	4.3	1.1	3.0
15	2.4	3.8	3.4	5.1	4.6	3.9	3.5	2.8	2.8	4.4	2.8	1.2	1.1	1.5	1.1	0.9	2.1	2.1	3.0	1.3	3.5	3.9	5.0	5.0	5.1	0.9	3.0
16	4.7	5.4	6.0	5.5	5.4	5.5	5.2	5.9	7.0	7.4	7.4	7.0	7.3	6.1	4.5	4.6	5.2	3.3	3.8	4.2	4.0	4.6	5.0	4.7	7.4	3.3	5.4
17	4.6	4.3	4.8	6.4	6.2	6.0	5.2	5.5	6.2	5.6	6.0	7.3	8.8	7.9	7.8	7.7	7.2	7.2	7.9	6.5	7.6	7.4	7.7	7.1	8.8	4.3	6.6
18	8.3	9.2	8.5	8.4	8.5	7.9	8.3	7.9	7.9	7.9	8.2	9.0	9.5	8.9	8.0	6.8	4.8	3.7	1.6	0.2	0.6	0.4	0.1	0.6	9.5	0.1	6.1
19	2.2	1.2	2.1	2.4	2.1	2.1	2.8	3.5	1.7	3.4	2.7	1.2	2.2	2.8	4.4	3.7	3.3	2.5	2.4	1.6	0.7	2.7	4.3	4.4	4.4	0.7	2.6
20	4.6	4.7	3.7	3.8	5.0	5.2	4.4	3.3	1.5	1.5	1.6	0.9	1.0	3.3	4.0	5.0	4.3	3.7	5.2	5.3	5.3	6.0	6.2	5.4	6.2	0.9	3.9
21	5.2	5.1	4.6	4.8	3.8	4.4	3.2	3.3	1.4	1.4	3.3	3.0	1.5	1.6	0.8	1.0	2.7	2.7	2.2	3.3	3.1	2.1	2.1	3.8	5.2	0.8	2.9
22	6.0	6.4	6.7	6.7	6.7	7.9	8.6	8.9	8.9	8.3	8.5	6.3	6.1	6.2	5.4	5.0	2.4	1.5	1.1	1.1	3.3	4.0	3.9	3.5	8.9	1.1	5.6
23	3.4	2.3	2.7	1.3	1.1	1.3	2.7	3.4	4.8	5.7	4.0	4.0	2.9	3.9	1.4	1.7	2.1	4.7	6.9	6.0	7.1	6.2	6.1	4.8	7.1	1.1	3.8
24	5.9	7.8	7.8	8.7	8.2	7.8	7.4	5.3	5.9	6.6	4.2	2.9	1.4	1.6	2.8	3.6	2.3	0.9	2.2	4.9	5.0	4.3	4.6	4.4	8.7	0.9	4.8
25	4.3	4.3	3.5	2.0	4.7	4.2	4.9	4.7	5.3	5.3	4.6	1.5	0.7	1.3	1.6	0.9	0.9	1.7	1.5	4.2	3.4	3.4	4.6	5.9	5.9	0.7	3.3
26	3.5	5.1	5.5	5.1	5.1	5.1	5.4	5.7	7.0	6.4	3.6	2.4	1.6	2.0	1.9	2.4	1.7	1.9	0.7	2.6	3.8	3.7	3.5	3.3	7.0	0.7	3.7
27	2.9	3.8	2.3	2.0	3.5	2.4	1.5	1.9	3.0	0.8	0.8	2.6	2.8	3.0	3.3	3.1	2.8	2.4	1.9	1.3	1.1	0.9	2.1	2.0	3.8	0.8	2.3
28	2.1	2.7	2.5	3.8	3.8	4.0	4.3	4.2	3.1	1.2	0.6	1.4	3.4	3.2	3.5	3.0	2.7	2.3	3.6	2.1	0.4	0.9	1.2	1.1	4.3	0.4	2.6
29	2.7	2.7	2.8	3.2	3.6	3.9	3.5	3.7	3.5	3.7	2.9	2.0	0.8	2.5	4.8	4.7	4.1	0.9	1.1	0.9	0.7	0.8	2.2	3.8	4.8	0.7	2.7
30	4.8	4.0	4.4	5.1	4.4	5.8	6.5	6.8	7.4	6.1	6.8	6.3	7.8	7.1	7.7	8.2	8.2	7.7	6.9	6.7	5.1	5.5	6.9	6.9	8.2	4.0	6.4
31	7.0	6.9	6.5	5.8	6.3	6.3	7.0	6.7	7.2	8.2	7.8	7.9	8.7	8.1	8.4	7.6	6.8	5.7	4.6	2.6	3.3	3.1	3.9	2.5	8.7	2.5	6.2
Max.	**11.1**	**12.4**	**11.2**	**10.7**	**12.3**	**11.1**	**11.7**	**13.8**	**10.1**	**9.4**	**10.0**	**10.0**	**9.5**	**8.9**	**8.4**	**9.8**	**10.3**	**13.2**	**10.1**	**8.1**	**9.0**	**9.2**	**8.0**	**10.3**	**13.8**		
Min.	**1.1**	**1.2**	**1.2**	**0.8**	**0.9**	**1.3**	**1.5**	**1.2**	**1.3**	**0.8**	**0.6**	**0.9**	**0.7**	**1.3**	**0.8**	**0.9**	**0.9**	**0.9**	**0.7**	**0.2**	**0.4**	**0.4**	**0.1**	**0.6**		**0.1**	
Avg.	**5.1**	**5.1**	**5.0**	**5.2**	**5.4**	**5.5**	**5.4**	**5.3**	**5.4**	**5.5**	**5.4**	**4.9**	**4.9**	**4.9**	**4.8**	**4.7**	**4.4**	**4.2**	**4.4**	**4.2**	**4.3**	**4.4**	**4.6**	**4.5**			**4.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.5	3.2	3.0	3.7	4.3	4.0	5.0	6.9	6.8	7.3	7.0	5.2	4.1	6.4	5.4	4.1	4.3	4.5	4.4	5.0	4.0	4.3	4.0	5.3	7.3	2.5	4.8
2	3.5	5.5	6.8	5.0	7.4	4.8	3.0	3.6	3.2	1.8	2.3	1.3	1.5	1.4	1.3	2.4	2.9	2.4	2.2	2.7	3.7	5.2	5.2	5.9	7.4	1.3	3.5
3	6.9	6.8	6.4	6.9	6.9	7.3	7.5	7.7	7.7	8.2	8.0	8.2	8.2	8.3	8.3	7.3	7.3	6.4	6.1	6.1	5.5	5.6	6.5	6.0	8.3	5.5	7.1
4	6.4	5.5	5.6	5.6	5.3	5.8	5.5	5.5	5.8	4.9	4.4	2.2	1.2	0.6	0.9	0.9	0.8	1.0	0.6	0.6	0.7	0.8	0.6	0.8	6.4	0.6	3.0
5	2.1	4.3	3.7	4.5	2.7	3.0	5.0	3.3	6.4	5.6	7.5	8.4	8.6	7.2	4.7	6.7	4.1	6.2	6.0	8.4	8.3	8.2	8.4	8.7	8.7	2.1	5.9
6	8.4	8.4	8.0	5.1	3.8	4.2	5.2	4.8	5.9	4.6	2.4	2.4	2.6	2.9	3.8	2.9	2.8	2.6	1.9	1.9	2.2	1.3	0.6	1.1	8.4	0.6	3.7
7	1.6	0.7	2.5	3.0	1.1	3.6	3.4	3.6	3.9	2.0	2.0	2.0	1.3	0.9	1.1	1.3	1.7	1.3	1.5	1.6	1.2	2.6	2.5	3.1	3.9	0.7	2.1
8	3.6	3.7	3.4	3.4	3.3	3.7	3.6	5.5	5.1	4.1	4.5	4.3	3.8	3.8	3.8	3.6	3.7	3.8	4.1	3.9	3.5	2.8	1.5	1.8	5.5	1.5	3.7
9	0.6	0.3	0.9	1.6	1.6	1.1	1.5	1.6	1.8	2.9	2.7	1.2	1.0	3.3	3.9	3.6	3.4	2.8	0.8	1.1	1.4	3.2	2.5	4.3	4.3	0.3	2.0
10	4.4	6.1	5.2	4.7	4.4	6.4	7.0	7.6	7.9	8.4	8.9	9.4	6.6	8.2	11.7	14.1	11.9	8.8	2.9	3.2	7.3	9.7	7.4	6.6	14.1	2.9	7.4
11	6.4	6.4	4.1	4.3	3.2	3.2	3.2	3.6	2.9	2.4	3.8	3.5	3.4	4.3	6.8	8.4	9.2	8.5	8.0	8.3	8.4	8.9	9.1	8.1	9.2	2.4	5.8
12	8.5	8.4	8.6	8.5	8.6	8.4	8.4	8.2	7.9	7.8	8.0	7.5	7.2	6.8	5.1	2.9	0.5	0.2	0.6	1.8	2.2	3.5	4.2	3.8	8.6	0.2	5.7
13	6.1	7.4	8.4	8.2	7.9	8.1	8.0	8.1	7.7	6.5	8.0	7.3	9.1	12.3	12.6	11.1	11.2	10.0	6.1	6.2	7.9	9.0	9.1	9.2	12.6	6.1	8.6
14	9.6	9.4	8.7	8.4	9.6	9.7	9.7	9.2	8.9	9.6	9.5	9.1	9.4	8.9	8.7	7.8	6.8	6.2	4.5	5.7	6.3	8.3	7.6	6.9	9.7	4.5	8.3
15	6.8	7.1	5.8	6.4	5.6	3.8	4.0	4.9	5.4	8.0	6.5	8.8	9.2	7.1	7.0	6.3	6.2	6.4	5.2	3.9	2.5	2.9	2.9	4.7	9.2	2.5	5.7
16	3.5	5.3	4.2	3.7	4.6	6.6	7.3	8.2	8.5	8.0	7.8	8.1	8.2	7.7	9.4	10.2	10.1	10.6	10.7	11.1	11.2	11.2	10.5	10.5	11.2	3.5	8.2
17	10.6	10.7	10.6	11.4	10.5	9.5	8.1	6.3	3.5	6.4	4.9	4.8	3.9	5.4	5.3	5.5	4.8	4.4	4.7	5.1	3.3	2.7	2.4	2.7	11.4	2.4	6.1
18	1.3	4.7	1.7	2.4	1.1	1.4	1.9	2.2	2.3	1.9	0.9	2.2	2.9	3.1	3.5	3.6	2.1	0.8	0.8	3.1	3.9	3.9	3.4	2.3	4.7	0.8	2.4
19	5.5	7.2	7.6	7.3	7.7	8.3	7.9	6.0	3.7	3.3	3.6	3.2	3.8	3.9	1.1	1.8	2.6	1.4	0.4	0.5	1.8	1.8	1.6	2.9	8.3	0.4	3.9
20	1.6	1.5	2.4	3.7	4.2	3.9	4.2	3.9	4.1	4.3	4.6	1.9	2.0	2.3	2.9	4.2	4.6	3.6	4.0	2.8	3.8	4.5	6.2	6.3	6.3	1.5	3.6
21	7.1	8.3	8.6	8.7	9.1	8.9	9.3	9.6	9.7	9.2	9.2	8.6	7.2	5.7	4.8	1.8	2.7	2.0	2.4	4.4	3.8	3.1	3.1	2.9	9.7	1.8	6.3
22	3.7	4.1	4.4	4.9	4.2	3.9	3.7	3.4	3.1	2.7	1.1	1.3	1.0	1.2	1.9	2.1	2.1	2.0	1.7	1.8	1.4	1.3	1.6	2.9	4.9	1.0	2.6
23	2.7	3.8	3.9	4.5	4.0	4.3	4.3	4.1	3.0	3.3	3.7	4.8	4.1	3.2	1.7	3.3	3.9	1.4	0.6	4.0	5.6	5.1	6.0	5.8	6.0	0.6	3.8
24	3.9	3.0	1.9	1.5	3.1	5.6	4.1	3.1	1.7	3.9	3.9	4.2	5.5	8.5	7.8	7.2	5.4	4.1	9.2	10.6	5.9	5.5	8.4	8.2	10.6	1.5	5.3
25	6.3	4.1	1.5	2.3	2.0	2.6	3.4	4.3	4.5	4.4	3.7	4.6	5.2	4.6	5.1	4.6	4.7	5.4	4.9	5.2	5.3	4.8	5.9	4.7	6.3	1.5	4.3
26	5.9	6.3	6.5	6.2	5.8	6.8	6.6	6.6	7.0	7.5	7.2	7.3	6.6	6.6	6.3	6.4	5.7	4.7	4.7	4.8	4.9	5.0	3.5	4.0	7.5	3.5	6.0
27	5.0	5.2	5.1	4.7	4.8	5.2	5.4	5.7	5.1	4.9	4.4	4.2	3.1	2.3	1.0	1.6	1.9	1.6	0.9	0.7	0.7	1.6	1.9	2.7	5.7	0.7	3.3
28	3.6	3.5	4.0	3.8	2.5	2.4	2.9	1.7	2.4	2.0	2.0	1.2	1.9	2.9	2.1	2.5	2.9	2.5	1.4	0.5	0.8	1.3	1.9	1.8	4.0	0.5	2.3
29	1.8	2.9	6.3	6.4	7.2	7.8	7.2	8.6	8.1	5.6	4.9	3.1	2.8	3.1	3.1	4.4	4.5	4.4	3.8	3.5	4.5	3.9	3.0	2.9	8.6	1.8	4.7
30	2.9	2.9	3.2	2.4	2.9	3.3	5.2	3.4	4.0	6.2	5.5	2.5	1.7	2.2	3.8	3.0	1.8	1.7	0.8	2.2	2.0	2.2	2.1	2.3	6.2	0.8	2.9
Max.	**10.6**	**10.7**	**10.6**	**11.4**	**10.5**	**9.7**	**9.7**	**9.6**	**9.7**	**9.6**	**9.5**	**9.4**	**9.4**	**12.3**	**12.6**	**14.1**	**11.9**	**10.6**	**10.7**	**11.1**	**11.2**	**11.2**	**10.5**	**10.5**	**14.1**		
Min.	**0.6**	**0.3**	**0.9**	**1.5**	**1.1**	**1.1**	**1.5**	**1.6**	**1.7**	**1.8**	**0.9**	**1.2**	**1.0**	**0.6**	**0.9**	**0.9**	**0.5**	**0.2**	**0.4**	**0.5**	**0.7**	**0.8**	**0.6**	**0.8**		**0.2**	
Avg.	**4.8**	**5.2**	**5.1**	**5.1**	**5.0**	**5.2**	**5.4**	**5.4**	**5.3**	**5.2**	**5.1**	**4.8**	**4.6**	**4.8**	**4.8**	**4.8**	**4.6**	**4.1**	**3.5**	**4.0**	**4.1**	**4.5**	**4.5**	**4.6**			**4.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.1	3.2	3.2	5.1	5.0	5.0	4.7	6.3	7.4	8.3	8.0	8.7	9.1	9.9	9.8	10.2	9.9	10.0	10.7	11.3	10.8	10.7	10.2	10.5	11.3	3.1	8.0
2	10.3	10.1	9.4	8.9	8.5	8.9	8.2	7.9	7.0	7.4	8.1	7.4	6.5	5.8	5.4	4.9	4.6	4.1	4.6	3.7	3.9	3.3	2.0	3.3	10.3	2.0	6.4
3	4.4	4.1	4.1	3.8	4.5	4.9	5.6	5.0	6.3	7.2	9.0	9.2	9.2	8.7	6.4	3.9	4.8	5.1	4.7	4.3	4.7	5.0	5.7	6.6	9.2	3.8	5.7
4	7.4	7.3	7.3	5.6	3.2	3.1	2.2	3.3	2.7	2.2	2.5	2.2	2.3	1.7	2.5	2.4	2.3	3.3	3.3	3.4	3.1	4.7	5.3	6.0	7.4	1.7	3.7
5	7.0	6.3	4.4	6.3	7.0	7.2	7.6	8.1	9.4	8.9	8.7	8.0	7.1	5.3	1.9	2.0	1.8	1.3	1.2	0.8	1.1	1.8	1.5	4.0	9.4	0.8	4.9
6	3.1	1.0	1.2	1.0	1.4	0.6	0.3	1.0	1.3	0.5	1.0	0.8	1.0	0.8	2.4	4.5	5.5	6.7	7.2	6.7	6.8	7.1	7.0	7.6	7.6	0.3	3.2
7	8.8	8.4	8.9	8.9	8.6	8.2	8.4	8.4	8.0	8.2	7.3	8.0	6.3	5.2	5.3	6.6	7.3	5.6	4.4	4.9	5.4	5.0	6.5	6.4	8.9	4.4	7.1
8	5.4	3.9	3.0	2.2	2.0	2.8	4.1	4.4	4.3	5.3	5.2	5.7	6.8	7.4	6.6	6.6	6.6	7.1	6.9	7.8	7.3	7.6	8.2	8.5	8.5	2.0	5.6
9	9.2	9.3	9.9	10.6	10.1	9.1	9.8	9.9	11.1	10.8	10.1	10.1	10.4	10.3	10.0	9.5	10.1	9.3	8.5	8.6	7.5	5.9	6.2	6.2	11.1	5.9	9.3
10	6.9	6.7	8.9	6.5	5.5	3.7	4.9	4.9	4.1	2.0	3.4	2.4	1.6	1.5	0.8	0.8	1.7	0.7	1.1	1.4	2.0	0.7	2.4	2.0	8.9	0.7	3.2
11	0.8	2.2	3.8	2.5	0.8	1.9	1.8	3.6	2.8	2.4	2.3	1.4	0.9	1.0	0.8	2.2	2.1	1.5	0.7	1.6	3.1	4.1	4.1	3.3	4.1	0.7	2.2
12	3.7	4.3	3.2	2.9	3.2	2.4	2.1	4.4	4.9	4.1	4.1	2.1	1.0	5.2	4.9	4.2	2.6	1.2	0.7	0.7	0.7	2.4	3.4	3.9	5.2	0.7	3.0
13	3.6	2.9	2.6	2.4	2.6	3.0	3.0	4.4	4.3	3.4	3.5	3.6	2.9	2.0	0.9	2.6	2.2	1.2	0.6	0.4	2.3	2.1	0.9	0.5	4.4	0.4	2.4
14	0.3	0.8	0.7	1.9	1.6	2.5	3.1	3.7	0.8	2.7	3.5	2.5	1.9	2.4	2.4	1.9	1.8	1.9	2.1	2.3	1.8	0.9	1.0	2.0	3.7	0.3	1.9
15	1.3	1.1	2.0	1.2	1.3	0.7	0.9	2.0	2.3	0.9	0.9	1.7	2.8	3.8	4.8	5.0	5.3	5.0	3.7	2.6	1.5	1.0	1.6	0.7	5.3	0.7	2.3
16	0.7	3.9	4.9	5.2	5.2	5.1	4.3	2.9	2.5	3.7	3.0	2.3	2.6	3.0	2.9	3.7	4.7	4.1	4.3	1.8	1.5	1.2	1.2	0.4	5.2	0.4	3.1
17	0.9	1.9	3.6	4.2	4.0	4.4	5.5	6.2	6.3	6.6	5.6	4.2	3.3	2.3	2.7	3.2	2.7	2.1	1.3	1.4	1.0	1.8	0.8	1.3	6.6	0.8	3.2
18	2.0	2.6	2.2	2.7	2.0	1.5	2.8	1.1	1.3	2.9	1.8	2.3	3.5	4.2	5.5	4.8	5.8	5.4	5.8	5.5	4.5	4.9	5.3	7.6	7.6	1.1	3.7
19	8.1	7.4	7.4	6.4	3.8	4.1	3.5	3.5	4.9	2.4	2.0	1.6	2.0	2.9	2.2	1.5	2.3	3.0	5.7	6.4	5.1	3.5	4.2	5.4	8.1	1.5	4.1
20	6.1	6.7	6.3	5.6	5.6	6.8	6.9	6.0	6.2	6.3	6.2	5.7	5.7	6.3	7.1	5.9	5.2	4.3	3.7	1.9	0.7	1.7	1.3	1.4	7.1	0.7	5.0
21	2.3	2.4	2.3	2.5	2.4	2.6	3.5	3.3	4.5	5.1	4.9	5.4	5.3	3.6	3.0	5.2	3.3	2.9	3.6	4.4	5.2	6.7	6.9	6.6	6.9	2.3	4.1
22	6.5	4.7	4.7	3.7	4.5	4.6	5.0	5.2	4.8	4.0	2.1	2.3	3.3	3.8	5.2	5.1	5.5	6.0	6.2	4.0	1.3	2.8	2.1	2.7	6.5	1.3	4.2
23	3.3	2.5	1.0	0.9	1.1	1.0	2.2	4.2	1.0	1.8	2.9	1.4	3.2	4.7	3.7	2.1	2.0	1.6	0.9	0.4	0.6	3.4	3.9	3.9	4.7	0.4	2.2
24	4.3	4.5	3.7	2.2	0.8	3.1	1.3	2.1	1.4	1.8	2.0	2.9	4.3	1.8	1.4	1.5	1.9	1.0	0.2	0.3	0.7	2.3	2.5	2.6	4.5	0.2	2.1
25	2.0	3.2	1.2	0.3	1.1	2.1	1.0	0.7	1.0	2.3	1.7	1.2	1.9	1.3	1.4	1.4	0.8	0.6	0.5	0.3	0.9	2.1	3.1	4.4	4.4	0.3	1.5
26	3.9	3.4	3.3	3.2	3.3	3.0	3.7	4.4	3.5	2.5	1.3	1.7	1.9	1.4	0.8	2.7	1.5	1.3	1.4	1.1	1.7	2.4	3.4	3.8	4.4	0.8	2.5
27	3.9	2.9	0.9	1.1	2.5	1.8	2.0	2.2	2.4	1.9	1.8	1.4	0.8	0.8	1.8	1.3	1.5	1.4	1.6	1.0	1.1	3.4	4.5	3.0	4.5	0.8	2.0
28	4.0	3.3	2.7	3.5	3.1	4.1	3.6	0.9	1.8	3.9	5.3	7.0	5.2	5.0	5.1	4.5	4.1	2.3	1.6	1.1	0.7	1.0	2.0	2.1	7.0	0.7	3.2
29	0.9	0.8	1.0	1.1	1.5	2.9	3.9	3.2	2.2	1.7	0.9	1.5	1.3	1.2	1.5	1.2	1.2	1.3	1.1	1.4	0.5	1.2	1.0	1.1	3.9	0.5	1.5
30	1.2	1.1	1.1	1.6	1.2	2.0	2.6	3.3	2.4	2.0	0.5	1.0	0.6	0.9	1.6	1.0	1.0	0.8	0.7	1.2	1.1	0.7	1.0	0.7	3.3	0.5	1.3
31	0.8	2.7	2.4	2.6	2.2	1.3	1.5	0.8	0.9	1.4	1.7	2.4	2.3	2.3	2.7	3.1	2.1	1.7	2.2	1.4	1.7	1.3	0.8	0.9	3.1	0.8	1.8
Max.	**10.3**	**10.1**	**9.9**	**10.6**	**10.1**	**9.1**	**9.8**	**9.9**	**11.1**	**10.8**	**10.1**	**10.1**	**10.4**	**10.3**	**10.0**	**10.2**	**10.1**	**10.0**	**10.7**	**11.3**	**10.8**	**10.7**	**10.2**	**10.5**	**11.3**		
Min.	**0.3**	**0.8**	**0.7**	**0.3**	**0.8**	**0.6**	**0.3**	**0.7**	**0.8**	**0.5**	**0.5**	**0.8**	**0.6**	**0.8**	**0.8**	**0.8**	**0.8**	**0.6**	**0.2**	**0.3**	**0.5**	**0.7**	**0.8**	**0.4**		**0.2**	
Avg.	**4.1**	**4.0**	**3.9**	**3.8**	**3.5**	**3.7**	**3.9**	**4.1**	**4.0**	**4.0**	**3.9**	**3.8**	**3.8**	**3.8**	**3.7**	**3.7**	**3.7**	**3.3**	**3.3**	**3.0**	**2.9**	**3.3**	**3.5**	**3.9**			**3.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.9	1.0	1.9	3.7	2.9	2.1	2.2	2.2	1.6	1.2	1.1	2.2	2.6	3.8	3.6	2.8	2.1	1.3	0.6	1.1	0.6	0.7	1.8	4.4	4.4	0.6	2.0
2	4.5	3.9	3.9	3.2	3.0	2.5	4.1	3.9	3.6	4.7	5.2	3.9	2.6	2.2	3.2	4.5	3.5	2.7	1.5	1.0	1.3	2.2	1.5	1.0	5.2	1.0	3.1
3	1.4	1.0	1.2	5.4	3.7	5.2	7.9	8.5	8.0	4.7	6.3	7.0	7.5	3.5	4.5	5.8	5.2	3.6	3.1	2.8	5.5	6.0	3.5	5.1	8.5	1.0	4.9
4	5.5	6.1	4.9	3.2	2.9	3.9	3.5	3.2	2.0	0.9	2.4	3.5	3.3	3.6	3.8	4.0	4.1	3.9	2.9	2.7	2.3	2.1	1.6	2.8	6.1	0.9	3.3
5	3.8	3.1	2.8	1.0	1.5	1.4	3.0	1.9	0.9	1.5	4.2	3.8	3.8	3.6	3.9	3.9	3.7	3.1	2.8	2.6	2.5	1.7	1.1	1.8	4.2	0.9	2.6
6	3.0	2.7	2.0	0.7	2.3	1.6	1.8	1.2	1.7	3.3	2.4	2.2	2.3	2.0	2.1	1.7	2.0	1.5	1.3	2.6	0.8	1.5	1.3	2.6	3.3	0.7	1.9
7	3.5	4.2	3.9	2.9	2.2	1.3	2.5	1.6	1.9	2.9	2.0	1.9	1.7	1.9	1.9	1.6	1.8	1.9	2.4	1.9	2.1	4.2	3.5	2.7	4.2	1.3	2.4
8	2.9	3.2	3.3	4.2	4.0	4.3	4.5	5.5	5.5	6.1	6.6	7.2	6.8	6.2	6.3	6.7	6.1	6.6	6.5	7.0	7.0	7.5	6.9	7.6	7.6	2.9	5.8
9	7.7	8.1	7.7	8.1	8.7	9.0	8.3	8.7	9.2	9.3	9.1	9.0	7.9	7.6	7.8	7.5	6.4	3.5	2.8	4.5	4.9	3.9	2.7	3.4	9.3	2.7	6.9
10	2.8	2.1	1.6	2.0	2.1	2.3	2.8	3.1	2.6	1.8	2.0	2.0	1.7	2.8	2.8	2.3	3.2	3.1	2.9	2.7	3.2	4.8	3.9	3.0	4.8	1.6	2.6
11	3.2	3.5	2.4	3.3	3.4	3.5	4.4	5.2	5.1	4.5	4.4	6.5	6.8	6.1	5.6	5.7	6.1	6.1	5.6	6.9	6.0	6.3	6.9	6.4	6.9	2.4	5.2
12	6.1	5.7	5.5	4.6	5.0	5.0	4.8	4.3	3.8	3.8	2.2	1.1	0.6	0.9	0.7	0.4	1.7	1.7	1.5	1.9	1.5	2.0	1.9	1.2	6.1	0.4	2.8
13	1.4	1.8	1.9	1.6	1.6	0.4	0.5	2.1	1.4	0.3	1.1	1.5	2.9	3.1	2.6	3.0	3.7	3.1	1.8	1.8	1.3	1.2	0.5	0.4	3.7	0.3	1.7
14	0.3	1.1	0.8	2.0	0.5	0.3	0.4	1.0	0.4	1.4	1.5	1.1	2.0	1.7	1.0	0.7	2.1	3.9	2.2	1.7	1.4	1.9	2.8	2.4	3.9	0.3	1.4
15	2.9	2.8	3.5	2.1	1.7	1.2	2.0	1.6	1.8	0.8	1.9	2.6	2.7	2.6	2.1	1.2	1.0	1.1	0.5	1.2	0.7	0.4	0.5	0.4	3.5	0.4	1.6
16	0.6	1.2	1.0	1.0	3.0	3.1	2.0	2.9	2.7	1.8	1.3	1.2	1.1	1.3	1.2	1.0	1.4	1.1	0.6	0.5	1.1	3.5	3.8	3.5	3.8	0.5	1.8
17	3.9	2.8	1.7	1.3	1.8	2.8	3.4	3.2	3.9	4.4	4.6	3.0	3.0	3.9	3.2	3.3	4.9	5.9	5.3	4.7	3.1	1.4	2.3	2.9	5.9	1.3	3.4
18	3.0	0.9	3.5	3.3	3.9	3.9	4.3	4.5	6.5	6.4	5.9	5.7	5.5	5.7	5.6	5.6	4.7	4.5	4.9	4.0	4.5	3.3	3.6	4.5	6.5	0.9	4.5
19	5.0	4.6	4.6	5.6	6.3	6.3	5.9	6.2	6.0	4.8	4.8	4.0	4.7	4.1	3.6	2.2	3.0	4.2	2.4	2.6	2.5	1.0	3.6	3.7	6.3	1.0	4.2
20	2.8	3.5	2.1	1.7	1.5	0.9	1.3	3.9	5.5	4.2	4.3	4.1	3.9	1.9	1.4	2.3	1.6	1.2	0.9	1.2	1.8	1.7	1.1	0.9	5.5	0.9	2.3
21	1.5	2.9	2.3	2.0	1.7	1.8	2.6	2.6	2.4	1.5	1.9	2.5	2.3	3.4	3.3	3.4	3.9	3.8	3.8	2.7	3.2	1.7	1.5	0.9	3.9	0.9	2.5
22	1.2	2.2	1.7	1.3	1.5	2.8	2.4	0.8	0.6	1.5	1.2	1.3	2.0	2.6	2.1	1.2	0.9	2.3	2.6	1.8	1.7	1.8	1.9	2.8	2.8	0.6	1.8
23	2.6	2.2	1.6	1.6	0.8	0.8	4.3	2.1	2.8	2.4	2.0	1.5	1.7	2.7	3.3	3.8	4.6	3.7	4.2	3.1	1.3	2.3	1.4	0.7	4.6	0.7	2.4
24	0.7	0.6	1.2	1.7	1.2	1.9	1.9	1.8	1.0	1.1	3.0	3.4	3.1	3.2	3.7	3.1	3.3	3.1	2.6	1.8	1.2	0.6	1.2	2.1	3.7	0.6	2.0
25	2.6	2.6	2.5	1.1	1.4	3.4	2.3	2.4	3.9	5.2	3.3	3.4	5.0	5.9	4.0	5.0	2.7	5.8	4.2	2.3	1.9	1.2	1.1	1.0	5.9	1.0	3.1
26	1.5	1.3	1.3	1.3	1.1	2.4	2.5	1.9	1.3	1.6	1.9	2.6	1.9	1.7	1.4	0.7	1.3	1.6	0.5	0.4	0.7	0.4	0.9	1.7	2.6	0.4	1.4
27	0.7	1.5	0.6	0.8	0.7	1.3	1.9	1.2	1.8	1.8	3.0	3.5	3.4	3.5	3.3	3.2	3.1	2.5	1.8	1.2	3.6	6.7	6.1	7.3	7.3	0.6	2.7
28	8.2	8.0	6.0	6.4	7.1	9.6	9.1	8.0	7.9	9.2	8.2	6.2	6.0	5.9	6.8	4.7	6.2	6.2	4.7	6.4	5.8	5.0	6.5	5.5	9.6	4.7	6.8
29	6.5	6.3	6.1	6.1	5.8	5.4	4.7	1.8	2.6	1.4	1.7	2.7	2.7	3.3	2.2	2.6	1.5	1.0	1.8	1.6	1.9	2.0	2.0	2.2	6.5	1.0	3.2
30	2.4	3.4	2.5	2.2	3.0	4.0	4.0	4.3	4.4	2.5	1.1	2.2	3.0	2.7	3.3	3.3	2.9	2.7	3.1	1.9	4.6	5.0	4.4	4.1	5.0	1.1	3.2
Max.	**8.2**	**8.1**	**7.7**	**8.1**	**8.7**	**9.6**	**9.1**	**8.7**	**9.2**	**9.3**	**9.1**	**9.0**	**7.9**	**7.6**	**7.8**	**7.5**	**6.4**	**6.6**	**6.5**	**7.0**	**7.0**	**7.5**	**6.9**	**7.6**	**9.6**		
Min.	**0.3**	**0.6**	**0.6**	**0.7**	**0.5**	**0.3**	**0.4**	**0.8**	**0.4**	**0.3**	**1.1**	**1.1**	**0.6**	**0.9**	**0.7**	**0.4**	**0.9**	**1.0**	**0.5**	**0.4**	**0.6**	**0.4**	**0.5**	**0.4**		**0.3**	
Avg.	**3.1**	**3.1**	**2.9**	**2.8**	**2.9**	**3.1**	**3.5**	**3.4**	**3.4**	**3.2**	**3.4**	**3.4**	**3.5**	**3.4**	**3.3**	**3.2**	**3.3**	**3.2**	**2.7**	**2.6**	**2.7**	**2.8**	**2.7**	**3.0**			**3.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	3.0	3.6	4.0	2.7	2.3	3.0	2.8	1.6	1.3	2.2	2.5	2.9	3.2	3.8	4.3	4.5	4.1	3.2	3.7	4.4	2.5	2.7	5.4	5.4	1.3	3.2
2	6.2	7.4	5.5	4.1	4.9	4.7	3.8	3.9	5.0	4.3	1.3	1.2	1.9	1.5	2.0	3.5	5.4	5.6	4.6	2.3	1.7	1.5	2.1	2.7	7.4	1.2	3.6
3	2.3	2.6	2.8	1.8	1.2	2.4	2.5	1.8	2.4	1.7	1.9	2.0	3.0	3.3	3.6	4.0	2.5	1.2	1.4	2.0	2.4	1.7	1.5	0.9	4.0	0.9	2.2
4	1.3	1.3	1.5	1.1	1.1	1.7	1.5	0.9	2.0	2.9	2.9	3.1	3.7	3.4	3.6	3.8	3.1	3.0	2.5	2.7	1.4	1.6	1.2	0.7	3.8	0.7	2.2
5	1.3	1.6	2.7	2.4	1.3	1.7	2.5	1.9	1.3	2.5	2.9	2.6	1.9	2.2	2.2	2.4	2.4	2.2	2.5	2.1	1.4	1.3	1.0	1.5	2.9	1.0	2.0
6	1.1	0.2	0.4	0.4	1.4	0.5	1.4	1.5	1.6	1.8	2.2	1.8	2.2	2.5	2.8	2.8	2.8	2.9	2.2	1.6	1.6	1.0	1.1	1.9	2.9	0.2	1.6
7	1.0	1.9	1.0	1.3	1.3	0.8	1.2	1.3	1.1	1.8	2.0	2.5	1.9	2.4	3.6	2.4	2.0	1.6	1.7	1.5	1.5	0.9	2.8	2.8	3.6	0.8	1.8
8	2.9	2.4	1.0	0.9	0.6	2.0	1.9	3.1	3.2	5.6	5.6	5.2	5.3	5.6	4.8	3.3	1.9	2.1	4.0	4.8	4.5	3.7	2.0	2.3	5.6	0.6	3.3
9	2.4	2.7	2.4	2.7	2.2	2.8	2.7	2.7	1.0	1.3	2.0	2.8	3.1	3.3	2.9	2.4	1.8	1.2	1.8	1.4	2.5	1.4	2.3	2.1	3.3	1.0	2.2
10	2.1	1.7	2.3	2.5	2.1	2.0	2.0	2.0	2.2	1.2	1.1	1.6	1.6	2.6	2.5	2.3	2.4	1.4	2.6	1.0	1.5	2.5	1.3	1.2	2.6	1.0	1.9
11	0.5	1.0	1.4	1.2	0.9	0.7	1.3	1.7	1.6	2.4	3.8	3.9	2.8	2.1	4.3	3.3	2.8	1.7	0.8	3.0	4.2	1.5	0.9	0.8	4.3	0.5	2.0
12	0.6	1.5	1.2	1.4	1.8	2.1	2.7	3.0	2.6	2.0	0.9	2.1	2.4	2.5	2.1	1.3	1.2	2.7	5.1	5.8	3.7	4.7	3.6	3.5	5.8	0.6	2.5
13	2.0	4.7	4.1	1.8	3.8	6.8	5.6	5.5	6.9	6.6	7.9	8.8	9.0	10.0	9.9	10.4	9.9	10.2	10.9	10.9	11.2	9.4	8.4	7.8	11.2	1.8	7.6
14	8.2	8.2	8.7	8.0	8.4	6.8	5.8	5.5	6.3	7.6	7.9	8.0	6.0	6.3	6.1	6.5	4.5	3.5	5.0	2.6	6.7	6.0	5.6	4.0	8.7	2.6	6.3
15	4.1	3.1	6.5	6.4	6.8	7.3	6.6	6.0	3.9	3.4	3.1	3.0	2.8	4.5	5.8	2.7	1.9	1.6	1.7	1.6	0.9	0.6	1.1	1.3	7.3	0.6	3.6
16	1.8	1.5	2.7	1.7	1.8	2.8	3.5	3.3	1.9	1.2	1.4	1.8	1.6	1.8	1.9	1.4	1.8	1.7	1.6	1.5	2.3	1.6	2.2	1.9	3.5	1.2	1.9
17	2.5	2.7	4.1	3.1	2.4	2.6	2.2	2.1	1.8	2.0	1.6	1.6	2.5	5.1	5.2	4.4	3.4	3.5	4.5	4.7	3.6	3.6	4.6	4.6	5.2	1.6	3.3
18	4.9	4.9	4.4	3.7	3.9	3.1	3.3	3.5	1.8	2.5	1.5	2.0	2.0	1.6	1.0	3.0	1.8	1.5	1.8	1.8	2.8	1.4	1.0	1.9	4.9	1.0	2.6
19	1.4	1.2	1.4	3.6	5.9	5.1	5.0	5.9	5.9	7.3	7.1	6.7	5.2	5.6	6.3	6.1	5.8	4.1	5.1	4.1	2.7	1.2	2.4	3.3	7.3	1.2	4.5
20	2.5	1.6	1.9	2.2	3.9	5.3	4.8	5.1	5.4	5.7	5.6	5.2	5.6	5.4	5.5	4.2	4.1	5.1	4.8	5.0	3.5	2.9	2.0	3.9	5.7	1.6	4.2
21	6.2	4.0	3.2	1.2	0.7	2.9	3.9	3.6	5.0	5.1	5.5	5.8	5.5	5.4	4.9	3.9	2.5	1.9	1.4	2.1	3.1	3.5	2.6	1.5	6.2	0.7	3.6
22	1.8	2.2	1.5	1.1	1.9	4.1	4.9	4.9	4.3	5.6	5.0	3.9	4.1	3.3	2.3	2.2	1.8	1.5	2.6	3.6	3.6	3.7	4.5	3.5	5.6	1.1	3.2
23	3.7	3.6	4.0	2.1	2.8	3.3	4.3	4.2	5.0	5.3	7.3	8.2	8.1	8.5	7.8	6.7	4.7	2.8	6.8	7.8	7.8	6.5	6.3	6.5	8.5	2.1	5.6
24	5.6	6.5	5.8	6.4	6.3	7.0	6.6	5.5	4.3	4.6	5.0	4.8	5.2	3.1	1.7	1.2	1.1	1.3	2.0	1.6	1.6	1.0	1.6	3.6	7.0	1.0	3.9
25	3.5	3.6	4.7	4.8	3.8	2.2	1.7	1.7	1.7	1.3	0.6	0.5	0.7	2.8	4.0	3.6	3.0	1.2	0.3	0.5	0.7	1.1	0.9	1.1	4.8	0.3	2.1
26	2.4	2.4	1.8	1.1	1.1	1.5	1.6	3.4	3.9	3.8	4.3	5.7	5.6	4.9	5.6	6.5	6.7	7.4	8.3	8.5	8.5	8.3	8.2	8.2	8.5	1.1	5.0
27	7.7	7.9	8.0	7.3	5.9	4.2	4.7	5.6	4.0	2.3	1.6	1.7	1.9	1.5	2.6	2.3	2.5	2.2	1.7	2.3	3.0	0.9	1.5	4.1	8.0	0.9	3.6
28	4.8	2.5	3.2	5.9	3.2	8.1	8.8	7.7	4.8	3.7	2.2	3.4	4.9	5.7	3.9	3.6	3.1	2.8	2.3	1.7	2.4	4.5	7.6	5.5	8.8	1.7	4.4
29	4.5	4.6	6.3	4.4	9.2	9.0	8.9	11.6	15.2	10.1	11.7	8.1	5.5	8.3	6.0	5.5	5.2	5.5	7.1	5.5	4.9	9.2	9.5	9.6	15.2	4.4	7.7
30	7.2	7.7	3.9	9.1	5.3	6.6	8.3	7.8	7.3	6.8	6.1	5.2	4.7	4.3	6.1	5.7	3.2	2.7	3.3	5.5	2.2	1.5	2.2	3.5	9.1	1.5	5.3
31	5.9	6.7	6.4	5.8	6.1	4.9	4.4	5.6	5.4	5.3	3.4	2.9	3.7	3.1	3.8	3.8	5.3	4.1	4.4	4.8	5.0	5.5	7.2	6.8	7.2	2.9	5.0
Max.	**8.2**	**8.2**	**8.7**	**9.1**	**9.2**	**9.0**	**8.9**	**11.6**	**15.2**	**10.1**	**11.7**	**8.8**	**9.0**	**10.0**	**9.9**	**10.4**	**9.9**	**10.2**	**10.9**	**10.9**	**11.2**	**9.4**	**9.5**	**9.6**	**15.2**		
Min.	**0.5**	**0.2**	**0.4**	**0.4**	**0.6**	**0.5**	**1.2**	**0.9**	**1.0**	**1.2**	**0.6**	**0.5**	**0.7**	**1.5**	**1.0**	**1.2**	**1.1**	**1.2**	**0.3**	**0.5**	**0.7**	**0.6**	**0.9**	**0.7**		**0.2**	
Avg.	**3.4**	**3.4**	**3.5**	**3.3**	**3.4**	**3.8**	**3.9**	**4.0**	**3.9**	**3.8**	**3.8**	**3.8**	**3.8**	**4.1**	**4.2**	**3.9**	**3.4**	**3.0**	**3.5**	**3.5**	**3.5**	**3.1**	**3.3**	**3.5**			**3.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.1	4.7	6.1	7.5	6.8	5.9	4.5	3.9	1.4	1.8	2.6	1.6	2.2	2.9	2.0	2.4	1.7	0.7	1.0	0.7	1.0	1.9	2.7	2.8	7.5	0.7	3.0
2	3.5	3.5	3.6	3.5	3.1	3.3	3.3	3.9	3.0	2.2	1.8	1.7	1.5	1.5	2.4	2.8	2.4	3.8	3.2	2.9	4.2	5.0	2.9	2.5	5.0	1.5	3.0
3	4.0	2.7	4.7	5.6	6.2	6.1	6.4	7.2	7.2	7.7	8.1	9.2	8.7	9.2	9.8	11.7	11.3	10.4	10.1	9.9	11.1	10.1	10.0	9.7	11.7	2.7	8.2
4	7.8	7.5	6.4	3.8	1.3	0.8	0.5	1.4	4.8	4.8	4.2	2.9	1.8	1.0	1.5	1.8	1.0	0.5	0.4	0.5	0.7	1.0	1.8	1.5	7.8	0.4	2.5
5	2.2	1.6	1.4	0.7	0.6	1.5	0.9	2.2	1.9	1.0	2.2	2.6	2.1	1.2	1.6	1.8	2.3	2.4	3.3	3.3	4.6	4.6	5.2	3.9	5.2	0.6	2.3
6	3.6	3.5	3.1	3.3	2.8	1.8	2.8	4.5	4.2	2.8	2.0	1.1	3.0	2.3	2.6	5.3	5.6	5.8	5.6	6.1	4.9	5.5	4.5	4.9	6.1	1.1	3.8
7	6.5	5.7	5.8	4.4	4.0	3.5	4.5	5.1	4.7	4.6	3.7	3.0	4.5	6.9	8.4	8.6	9.2	8.4	8.7	11.3	9.9	11.6	10.5	9.5	11.6	3.0	6.8
8	9.1	8.3	8.5	9.0	8.8	8.3	7.9	6.0	4.3	2.1	1.3	2.9	3.2	3.3	1.4	1.1	1.1	1.6	2.7	4.5	7.5	6.4	5.1	2.1	9.1	1.1	4.9
9	2.2	1.6	1.4	3.1	3.8	2.7	3.3	3.3	3.0	2.3	1.6	1.9	0.9	0.9	1.9	0.8	1.4	0.8	0.8	1.3	2.3	1.3	1.9	2.4	3.8	0.8	1.9
10	2.0	1.3	1.2	0.7	1.2	1.0	1.3	1.4	1.2	2.4	1.1	1.3	1.0	1.3	1.9	2.0	2.5	3.5	3.9	3.9	3.4	3.9	3.6	2.7	3.9	0.7	2.1
11	3.2	2.6	3.6	2.6	2.7	2.4	2.9	2.1	1.2	3.3	2.4	3.0	2.6	3.1	2.9	3.5	2.3	2.6	4.4	3.8	4.4	4.5	4.8	4.4	4.8	1.2	3.1
12	2.3	1.1	0.5	0.8	0.5	0.8	1.1	1.6	0.9	0.7	0.8	1.8	3.2	3.4	3.6	3.1	2.2	1.6	3.6	4.5	2.6	1.7	2.3	6.4	6.4	0.5	2.1
13	8.1	7.1	5.7	3.9	5.0	5.3	9.9	7.4	6.1	4.3	4.7	5.1	8.1	7.2	8.7	6.4	6.1	6.0	8.1	4.0	2.5	2.6	1.6	1.0	9.9	1.0	5.6
14	1.7	0.9	1.3	1.4	1.5	1.8	3.2	3.4	3.0	1.8	2.0	2.2	2.4	1.9	2.8	3.0	3.2	2.2	2.9	2.7	2.9	3.1	3.5	5.4	5.4	0.9	2.5
15	5.1	5.5	5.6	5.0	5.6	5.9	5.4	4.9	4.7	5.6	5.7	4.9	4.8	4.5	5.1	4.6	4.8	4.0	3.1	2.9	2.9	1.8	1.5	1.9	5.9	1.5	4.4
16	1.5	1.2	0.4	0.6	0.5	0.7	1.3	0.5	0.5	0.4	1.6	2.8	3.3	3.2	3.1	3.0	2.9	2.7	2.5	1.8	1.3	0.8	1.1	1.4	3.3	0.4	1.6
17	0.4	0.7	1.0	0.8	1.0	1.0	0.4	0.9	0.9	1.1	1.6	2.4	1.2	2.8	4.0	4.0	7.5	6.9	6.9	6.5	5.1	6.9	4.7	5.8	7.5	0.4	3.1
18	7.3	6.9	9.5	7.6	3.9	2.1	2.4	1.7	2.5	2.7	2.1	0.6	0.8	0.9	0.2	0.6	2.3	2.5	4.9	5.8	4.3	3.4	3.4	4.8	9.5	0.2	3.5
19	6.1	3.2	4.0	2.6	2.5	7.1	7.8	5.5	3.8	4.8	5.5	8.1	7.2	5.6	3.8	3.0	3.0	1.8	1.5	1.9	3.3	4.0	3.5	2.5	8.1	1.5	4.3
20	1.2	3.6	3.9	3.7	5.3	6.7	6.2	5.3	5.0	3.7	0.9	0.7	4.1	5.0	3.9	2.8	2.1	2.2	1.8	3.8	3.4	2.7	1.3	1.4	6.7	0.7	3.4
21	3.4	2.8	1.4	1.0	0.9	0.7	1.3	1.9	1.4																3.4	0.7	1.6
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Max.	**9.1**	**8.3**	**9.5**	**9.0**	**8.8**	**8.3**	**9.9**	**7.4**	**7.2**	**7.7**	**8.1**	**9.2**	**8.7**	**9.2**	**9.8**	**11.7**	**11.3**	**10.4**	**10.1**	**11.3**	**11.1**	**11.6**	**10.5**	**9.7**	**11.7**		
Min.	**0.4**	**0.7**	**0.4**	**0.6**	**0.5**	**0.7**	**0.4**	**0.5**	**0.5**	**0.4**	**0.8**	**0.6**	**0.8**	**0.9**	**0.2**	**0.6**	**1.0**	**0.5**	**0.4**	**0.5**	**0.7**	**0.8**	**1.1**	**1.0**		**0.2**	
Avg.	**4.1**	**3.6**	**3.8**	**3.4**	**3.2**	**3.3**	**3.7**	**3.5**	**3.1**	**3.0**	**2.8**	**3.0**	**3.3**	**3.4**	**3.6**	**3.6**	**3.8**	**3.5**	**4.0**	**4.1**	**4.1**	**4.1**	**3.8**	**3.9**			**3.6**

Total Hours in Month 744 **Hours Data Available** 489 **Data Recovery** 65.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

October *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Speed (RM Young) (m/s)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

January *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	32.7	33.0	26.1	23.8	24.8	19.6	4.2	351.8	357.2	351.7	353.9	21.8	27.3	19.9	23.7	21.6	12.7	356.6	0.9	11.3	7.4	8.1	11.3	7.8
2	356.8	11.9	20.1	24.6	12.7	19.5	21.9	27.6	22.0	14.3	12.7	8.8	7.8	12.8	8.7	9.3	12.5	18.1	359.5	8.9	7.7	16.7	6.1	18.7
3	359.1	358.3	2.7	2.7	1.9	11.2	349.3	3.7	14.0	17.5	26.1	18.2	21.8	25.1	22.7	11.3	23.4	20.3	24.0	26.1	15.9	13.7	27.2	23.2
4	27.1	20.1	15.3	21.3	24.8	19.6	8.9	10.5	27.5	30.8	30.6	43.2	43.1	43.3	42.7	25.0	27.0	23.2	257.5	27.3	51.4	27.4	217.6	32.3
5	24.0	26.5	20.5	15.7	28.4	23.7	25.0	30.4	17.0	44.5	14.0	335.3	29.1	35.5	25.4	336.8	4.6	27.4	29.4	27.9	24.5	34.2	31.2	360.0
6	27.4	19.3	251.1	27.7	24.8	27.4	29.0	30.1	30.6	26.1	28.8	231.0	34.4	34.3	39.1	42.4	1.1	21.3	303.7	241.7	330.2	17.1	23.8	243.1
7	144.6	26.7	32.8	30.0	27.7	22.3	357.9	25.9	31.3	33.2	19.5	26.1	27.0	26.6	28.5	19.8	23.0	26.1	19.4	20.7	22.3	30.5	24.9	30.9
8	25.4	20.9	22.2	19.7	23.6	30.2	30.0	27.8	22.0	16.3	20.8	28.4	25.0	19.3	56.0	27.6	25.2	25.1	25.8	13.1	21.0	20.3	25.2	21.1
9	15.2	18.6	28.4	27.4	30.7	31.4	27.8	27.9	22.8	18.5	17.5	29.1	21.2	46.2	34.5	22.3	22.2	32.5	30.9	38.5	32.8	332.6	29.2	28.2
10	28.7	26.5	29.3	33.2	33.1	28.3	28.9	315.7	237.0	114.7	183.8	24.8	42.6	65.1	192.0	196.6	60.2	61.1	61.7	64.9	64.8	63.9	59.2	58.0
11	45.5	54.3	34.7	22.7	62.8	57.8	49.9	29.7	30.3	8.9	26.9	17.1	43.3	40.7	46.5	25.9	17.5	280.5	55.8	41.8	48.2	46.7	33.6	43.8
12	295.2	61.5	65.5	55.8	55.8	65.6	59.9	60.8	40.8	43.9	12.5	35.7	39.5	40.5	39.2	39.1	42.2	36.8	19.8	28.9	22.5	15.4	31.8	16.9
13	34.6	11.7	24.5	7.7	16.5	25.0	14.3	21.6	30.1	42.6	351.3	45.1	45.7	44.8	51.9	34.8	33.9	24.9	18.0	6.8	17.6	19.1	20.3	23.6
14	35.2	35.3	26.5	22.4	31.2	32.4	30.9	27.4	23.9	38.5	33.3	34.4	31.7	29.9	28.4	27.3	27.5	29.0	27.7	26.7	30.5	33.9	29.5	27.1
15	22.1	26.5	29.9	27.9	26.8	27.0	27.4	22.9	24.6	27.5	21.2	29.0	27.2	30.3	28.3	20.5	5.1	25.5	21.5	24.7	23.8	16.6	23.4	22.5
16	21.5	25.8	26.3	32.5	38.3	32.8	31.2	27.7	24.3	15.7	14.1					29.6	15.9	23.9	28.3	25.7	305.2	7.9	32.4	29.9
17	28.7	18.5	23.0	354.6	357.8	0.2	39.6	19.5	25.4	20.2	29.8	44.0	64.8	72.6	66.4	344.6	7.4	354.9	333.4	345.6	14.6	48.3	58.5	56.1
18	50.2	51.2	54.2	42.4	49.6	59.3	40.1	37.3	57.0	50.4	16.2	40.2	36.3	38.5	32.3	45.4	40.6	24.7	25.2	355.4	14.6	11.9	22.8	46.7
19	8.9	346.3	59.0	45.9	32.5	15.7	27.2	23.9	52.6	49.8	51.8	48.1	55.1	50.2	36.4	53.6	52.0	36.9	35.7	25.0	14.7	29.4	43.5	49.5
20	9.7	30.0	28.5	23.9	14.8	23.9	21.8	21.9	19.3	21.2	20.9	23.1	22.6	25.8	26.5	17.1	25.3	14.8	5.2	23.8	22.1	33.1	19.6	27.3
21	26.5	26.8	32.2	30.4	32.0	32.2	29.6	24.2	25.6	26.4	32.8	36.9	48.5	58.1	55.1	60.7	61.1	63.9	62.1	348.9	320.8	319.1	316.8	311.9
22	300.8	346.6	38.7	45.5	11.5	329.9	307.3	301.1	303.2	308.1	306.3	290.1	296.2	312.7	315.0	317.6	313.8	317.6	316.1	316.2	318.4	320.5	319.0	320.1
23	318.9	321.3	335.6	55.0	50.5	57.5	40.7	48.4	26.3	57.8	49.7	71.9	60.2	63.1	59.3	59.1	59.9	52.5	45.3	46.1	46.3	54.8	51.1	40.5
24	54.1	48.3	50.5	51.0	50.0	46.6	42.5	42.2	43.5	39.2	43.3	55.7	59.7	57.6	58.1	57.3	47.5	57.3	52.8	50.4	44.3	34.7	38.1	32.8
25	27.3	31.7	19.1	10.1	8.4	18.6	18.6	8.9	11.7	11.7	28.4	37.8	38.9	39.2	39.6	48.3	36.7	43.0	42.5	46.6	49.0	55.6	51.5	54.7
26	56.9	53.8	59.0	61.5	59.5	61.3	59.3	57.9	51.2	57.9	52.6	51.3	55.7	54.9	55.1	56.9	55.8	51.0	48.4	46.8	40.2	54.0	64.6	62.3
27	62.9	45.7	323.4	342.5	309.0	14.4	48.7	301.4	351.2	79.4	292.1	311.1	311.6	316.5	318.6	319.1	317.0	318.4	313.7	316.2	314.0	310.9	311.9	312.3
28	318.2	316.9	318.0	318.4	316.8	314.3	316.1	313.5	314.1	314.6	318.5	318.1	313.0	322.2	58.7	59.1	57.4	63.5	63.1	57.0	54.5	60.4	54.5	55.7
29	56.6	55.3	54.3	53.6	53.5	51.3	51.0	54.0	54.8	51.8	54.7	56.3	57.7	56.0	52.3	52.1	44.9	49.6	49.3	53.1	54.7	50.8	46.4	54.9
30	57.6	54.1	54.5	53.9	52.4	48.7	52.2	51.8	46.1	42.4	46.8	45.3	51.0	51.3	46.7	47.2	41.2	33.1	30.4	18.7	32.8	31.7	29.3	25.1
31	24.7	21.5	25.2	24.7	23.7	24.5	19.5	16.1	37.0	37.4	44.3	49.1	45.1	45.5	51.2	52.8	50.5	52.7	51.0	49.3	55.7	55.7	62.1	58.3

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	53.1	55.0	46.7	57.1	41.7	352.5	314.9	317.6	324.2	316.0	314.1	315.8	314.1	315.6	314.9	312.8	305.8	33.8	153.3	184.6	191.6	183.8	304.5	311.4
2	315.1	316.0	314.6	317.1	309.7	314.3	316.7	317.6	319.0	313.0	314.4	341.2	52.6	58.3	54.6	46.6	57.1	55.2	49.1	13.6	31.0	35.4	29.8	31.6
3	26.4	23.4	20.8	11.9	20.3	15.4	16.3	10.2	9.2	14.3	20.1	28.8	19.2	21.1	22.8	21.0	15.8	6.5	17.7	13.1	13.1	13.3	17.0	14.4
4	13.8	3.0	11.8	9.3	4.2	11.5	14.0	18.3	13.4	13.5	17.1	20.9	19.8	20.0	20.5	17.0	13.8	15.7	16.1	17.2	21.0	21.9	23.3	22.2
5	21.7	22.1	21.9	23.7	23.2	23.2	23.1	23.5	24.7	29.4	27.1	15.6	4.5	14.5	6.4	16.0	20.3	22.9	21.2	22.6	21.6	18.3	13.6	10.1
6	14.1	12.2	6.3	1.3	4.3	8.3	18.5	18.4	9.1	21.4	213.2	232.0	93.3	143.5	176.4	16.2	352.0	17.0	27.0	12.7	33.1	34.2	18.1	7.9
7	22.8	32.8	31.3	26.2	15.5	347.6	81.7	202.8	198.8	204.9	204.1	194.5	184.7	178.7	189.3	69.1	103.8	173.1	197.1	198.2	167.6	158.2	101.8	100.5
8	29.9	334.6	358.8	27.6	19.5	17.8	21.0	25.6	29.3	12.6	24.9	26.4	24.6	18.9	1.6	1.2	8.0	2.1	8.1	7.5	5.9	10.4	5.6	9.5
9	16.5	13.9	17.3	18.5	17.1	18.4	20.7	23.2	23.3	23.6	24.2	24.7	24.0	21.8	19.6	21.9	23.9	15.8	14.5	8.8	10.0	8.1	15.1	12.5
10	351.4	1.0	8.8	11.3	13.7	358.4	1.0	10.0	9.6	6.3	350.2	339.1	342.4	304.4			347.4	323.7	356.5	316.5	319.4	12.6	336.5	276.0
11	1.2	353.6	2.2	25.2	14.8	21.0	23.6	23.0	16.4	15.5	19.0	24.5	24.9	20.5	14.7	12.1	5.4	0.9	2.1	0.5	2.2	3.3	354.9	349.0
12	350.4	346.6	336.0	219.2	212.5	229.9	309.0	320.5	316.8	307.7	336.0	176.9	175.8	166.3	175.6	165.2	170.3	174.3	154.3	308.4	311.9	319.2	315.5	335.0
13	12.0	337.7	355.3	307.2	6.8	329.3	243.3	24.5	32.2	37.0	211.1	36.9	32.3	21.7	24.5	16.8	25.5	18.1	7.7	353.7	356.9	2.0	357.2	356.2
14	357.7	345.1	350.0	350.7	3.5	354.3	4.9	348.8	5.7	8.3	358.4	6.9	356.1	0.4	357.9	7.5	6.9	1.8	359.9	352.3	10.5	8.4	9.2	9.7
15	12.7	3.0	15.8	353.1	358.4	357.1	3.1	356.9	357.8	9.5	17.9	17.9	196.7	21.1	11.9	350.1	355.0	335.5	350.0	350.1	340.7	324.1	355.3	35.0
16	42.0	31.2	37.3	36.8	37.8	36.0	26.1	15.0	35.1	11.2	57.0	80.2	33.2	36.1	37.3	17.3	16.8	23.5	20.0	18.0	24.5	28.1	33.0	25.9
17	25.3	24.6	20.4	21.3	16.5	11.9	11.5	4.2	355.4	6.7	353.1	348.1	352.9	357.7	2.0	4.1	7.1	5.9	4.7	7.6	9.0	351.3	325.0	333.0
18	340.6	16.1	21.3	12.9	13.8	9.5	3.1	21.8	338.4	326.9	328.2	335.3	308.8	273.6	310.3	286.0	317.9	289.9	302.8	24.7	26.1	35.4	35.0	33.4
19	37.1	75.5	194.3	192.5	187.3	154.9	185.8	177.7	184.1	178.1	199.3	196.9	198.6	343.4	208.9	207.2	217.0	205.4	198.7	203.0	194.3	192.7	200.7	196.8
20	200.4	196.2	197.0	189.2	61.1	49.5	206.0	183.3	169.2	159.5	78.3	84.1	99.0	188.2	185.1	199.3	205.9	212.2	196.4	198.4	196.0	197.9	194.5	198.7
21	203.7	203.0	202.7	195.9	208.1	185.0	197.8	191.0	201.5	200.1	176.8	186.6	192.4	160.2	109.7	76.8	66.3	90.2	79.0	82.2	94.9	164.2	148.1	102.1
22	195.4	204.9	136.1	202.9	194.2	231.0	189.3	195.3	203.4	201.9	186.4	189.7	178.8	155.3	74.0	127.7	113.4	79.4	4.9	144.9	58.2	78.7	106.1	184.4
23	52.6	13.0	19.3	10.6	236.0	24.9	28.9	187.7	20.5	191.1	136.8	57.7	162.5	144.3	132.7	129.8	143.7	151.6	127.2	124.0	301.0	311.4	316.0	1.0
24	4.0	19.1	29.8	18.2	8.3	25.0	29.4	35.3	49.8	48.1	53.1	50.3	37.3	39.4	38.1	37.3	42.8	20.6	43.0	36.7	39.2	29.5	19.0	16.7
25	22.2	21.8	26.7	29.5	28.6	29.1	28.1	7.3	262.5	202.4	218.6	66.9	203.7	165.8	209.7	191.0	58.5	66.5	55.4	49.7	40.6	48.3	57.9	49.0
26	45.5	41.0	25.7	69.4	108.9	216.4	242.4	181.2	179.3	191.9	194.6	196.4	210.1	198.0	167.0	102.3	101.4	50.2	27.8	338.1	23.3	30.2	31.3	29.2
27	28.1	28.7	27.9	29.9	31.9	25.7	26.8	350.3	216.7	227.1	241.8	258.4	6.0	55.9	316.0	312.5	319.3	334.2	318.0	318.7	334.7	341.4	38.1	48.1
28	328.5	317.4	317.0	317.0	320.1	320.5	319.4	318.0	9.7	338.8	341.4	316.7	309.6	311.1	316.8	302.9	296.9	304.8	296.8	324.6	301.6	316.2	312.7	316.7

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

March *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	317.8	353.0	28.4	45.1	55.7	58.3	51.3	44.4	5.2	51.7	49.2	39.8	39.0	35.0	47.2	40.6	31.0	17.8	37.4	34.5	31.1	30.4	29.3	21.6
2	21.8	28.9	28.7	18.1	20.1	17.8	17.8	33.3	33.6	33.3	27.7	25.6	27.3	28.1	26.4	19.6	18.0	17.9	15.7	18.0	15.7	11.4	12.5	15.5
3	12.9	19.1	16.7	20.3	18.0	25.3	29.0	19.4	19.0	15.9	17.9	16.7	23.4	29.3	30.8	32.8	33.9	26.6	31.9	31.4	31.3	25.7	30.4	29.3
4	27.8	27.1	28.7	25.3	27.7	28.2	25.6	24.7	25.2	29.2	28.0	30.3	24.9	7.1	19.6	22.6	23.3	24.7	17.3	24.6	22.3	21.3	18.9	20.4
5	20.4	21.0	11.7	10.1	11.1	16.4	16.6	316.1	43.0	29.5	228.9	193.8	143.8	176.9	193.6	108.1	86.0	151.8	177.4	181.8	154.6	77.3	78.4	99.9
6	184.1	192.6	183.2	179.5	211.1	211.9	208.8	177.0	302.8	306.2	312.7	317.8	321.1	319.1	320.2	325.0	324.5	2.0	7.7	352.1	32.1	32.0	38.9	49.2
7	57.6	61.4	44.2	40.7	56.5	57.4	65.9	353.0	315.4	316.0	315.1	316.9	318.4	316.3	318.6	309.2	294.5	46.0	11.8	68.9	142.2	138.2	348.3	287.9
8	292.1	304.0	295.4	301.0	300.2	342.7	319.8	309.2	332.7	355.6	312.6	81.7	72.7	73.7	147.1	183.1	178.3	179.2	178.1	166.4	191.5	194.3	34.7	23.4
9	205.4	285.9	122.5	152.2	151.0	148.6	87.8	61.5	31.2	124.3	171.5	137.1	153.3	88.7	129.9	307.3	294.0	290.2	299.4	304.7	306.3	308.0	317.6	331.2
10	51.6	40.3	47.5	39.3	29.6	5.3	7.6	0.4	4.8	13.1	20.2	28.1	33.2	41.3	43.2	46.2	19.4	15.1	14.8	13.8	26.7	15.4	16.0	11.4
11	15.6	4.7	4.2	13.7	11.4	17.3	19.9	9.7	10.8	359.3	359.2	11.8	8.1	1.6	1.8	1.8	1.1	1.9	3.0	3.2	2.2	3.9	5.3	4.0
12	2.9	5.6	6.1	5.3	3.2	4.5	12.9	9.5	10.1	7.2	6.4	8.9	17.1	12.9	19.9	25.5	27.3	30.9	28.6	30.0	26.7	20.6	28.5	15.1
13	31.7	8.2	338.3	104.0	23.5	26.7	26.2	9.7	359.6	37.6	180.4	193.3	194.4	198.1	196.8	202.4	205.0	217.6	226.4	239.2	239.1	302.6	29.5	17.7
14	13.3	25.1	17.2	22.6	15.0	14.6	13.9	13.1	17.4	30.6	26.7	24.6	28.2	24.4	25.2	27.2	32.2	38.6	31.6	9.0	7.5	23.7	18.9	11.0
15	12.4	8.4	6.5	7.6	13.4	5.8	15.6	5.8	10.9	14.0	16.8	45.1	66.3	45.4	64.4	121.5	215.6	221.0	219.2	346.8	2.9	5.7	5.7	6.6
16	8.3	4.7	10.1	15.3	22.8	12.9	9.3	10.9	15.6	23.0	26.3	27.2	27.3	25.2	19.3	18.8	18.5	8.7	21.3	5.1	1.4	358.7	356.7	2.1
17	6.1	15.5	28.8	31.5	28.5	27.8	23.5	20.3	20.6	33.1	26.4	20.3	27.2	23.6	20.0	21.4	12.3	6.5	9.9	20.9	34.2	21.2	16.3	27.6
18	16.7	19.6	19.7	14.1	17.9	18.5	18.4	17.6	20.6	24.9	22.0	19.7	25.5	22.6	21.5	21.0	21.7	19.8	330.3	346.3	321.6	221.9	342.8	283.1
19	21.7	7.7	7.2	7.4	9.5	21.5	23.1	32.1	33.9	39.7	40.4	70.9	199.0	203.0	213.4	210.9	185.1	182.4	174.3	211.3	320.9	21.4	31.9	30.9
20	31.0	35.5	31.2	29.9	28.8	31.5	31.7	26.4	236.7	23.9	205.4	64.5	114.8	184.7	210.4	214.5	303.3	315.8	311.5	308.7	321.1	313.8	316.5	322.3
21	330.7	337.5	17.4	42.9	55.8	60.7	59.3	45.7	51.9	105.0	50.1	57.1	101.6	173.2	107.8	76.2	59.7	49.2	45.4	42.4	27.1	6.4	2.3	29.8
22	43.6	38.9	50.6	54.2	50.3	58.6	58.0	54.2	18.0	49.1	66.3	54.1	56.8	50.7	51.5	48.6	23.7	355.0	228.0	27.6	31.9	21.6	19.8	15.6
23	11.9	14.1	8.6	11.2	24.6	1.0	20.0	17.8	46.4	46.3	53.3	66.0	103.9	65.3	125.3	159.0	167.7	329.6	314.0	346.1	44.9	18.0	359.8	34.6
24	52.8	55.5	56.0	56.9	58.6	56.2	56.1	54.8	59.4	57.5	67.0	50.1	70.3	44.7	55.3	43.3	31.2	42.9	85.0	53.9	51.5	44.9	48.9	45.0
25	42.4	36.8	42.9	132.5	62.9	44.1	46.7	39.9	48.2	52.4	54.4	47.3	105.3	70.9	40.5	52.1	58.1	53.9	11.4	56.4	64.4	62.1	60.6	57.1
26	43.3	61.7	59.2	53.8	54.3	53.2	47.4	45.1	51.5	55.5	74.7	64.6	47.2	45.3	42.7	42.9	52.2	35.7	311.6	59.1	42.5	40.5	25.3	30.0
27	21.7	26.2	26.1	31.6	31.3	27.4	287.3	28.6	32.7	65.9	173.4	207.6	206.4	209.3	211.3	212.1	211.6	217.5	213.7	226.4	43.2	31.2	28.5	32.2
28	29.1	32.5	28.6	33.2	30.4	33.7	33.2	33.8	39.6	98.6	201.2	199.5	207.8	201.5	212.0	208.3	212.0	215.9	209.8	207.7	255.2	13.2	31.4	262.3
29	21.4	33.6	12.7	26.8	20.6	25.4	19.2	30.7	38.7	49.1	42.9	54.3	99.6	186.6	209.2	214.8	204.7	6.6	219.0	206.9	333.7	17.5	18.3	25.6
30	35.2	30.6	6.1	10.9	19.8	12.2	12.4	9.9	17.6	359.4	2.3	350.4	6.7	352.3	359.8	357.2	357.9	355.0	356.9	348.0	6.8	4.1	349.2	357.9
31	357.4	339.5	344.1	339.2	334.2	352.1	338.2	329.1	1.4	352.9	0.3	4.0	358.3	358.9	360.0	358.9	1.8	17.2	28.9	30.7	81.6	58.0	63.1	58.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	58.4	52.0	45.1	347.7	319.6	340.1	330.7	310.8	308.3	311.8	310.5	334.5	313.1	64.3	80.6	95.1	115.1	157.7	177.1	202.4	180.3	175.1	164.1	174.0
2	177.2	174.6	176.5	207.0	196.5	200.4	127.5	149.9	125.4	188.8	54.4	83.3	96.9	77.7	96.5	45.7	34.5	37.6	29.2	22.4	14.1	27.1	24.7	13.9
3	27.1	24.2	22.8	12.3	12.9	12.9	12.9	18.0	16.6	4.9	9.9	9.7	13.8	13.2	4.1	2.8	11.8	22.1	27.9	22.8	26.2	10.4	15.8	14.2
4	354.2	16.3	17.0	32.1	35.6	31.3	30.0	32.0	29.5	29.2	25.2	69.3	203.1	189.9	176.2	203.4	198.9	200.6	205.9	197.0	268.5	24.0	7.5	46.6
5	34.2	306.2	336.8	329.8	35.8	46.8	314.7	340.8	307.8	292.4	320.2	304.9	303.8	293.9	116.8	79.8	152.0	152.1	147.6	53.0	342.2	299.3	292.3	315.3
6	315.7	317.2	318.5	46.5	48.2	54.1	63.9	65.5	66.3	53.5	47.6	43.5	43.9	48.2	43.9	46.3	46.7	40.9	36.4	18.7	44.4	36.5	270.5	1.9
7	33.3	235.7	36.5	29.4	10.2	24.5	30.3	29.8	35.2	32.2	34.7	29.4	50.2	82.0	177.3	273.7	261.2	262.4	138.0	340.9	321.9	317.0	3.4	359.3
8	359.1	353.7	351.8	19.0	3.3	16.8	9.8	350.2	348.7	357.8	352.3	8.7	11.9	342.1	332.4	358.2	352.1	26.8	25.8	28.5	37.8	34.4	13.5	28.2
9	25.9	289.7	335.9	34.8	35.2	5.7	31.0	35.6	36.7	38.6	45.7	60.4	184.9	205.9	201.5	210.0	193.7	151.0	157.2	15.1	11.6	72.0	32.1	323.2
10	325.3	52.9	20.6	60.9	59.3	186.3	193.9	203.0	195.0	202.7	193.2	202.3	198.8	202.8	206.5	197.2	204.1	199.8	212.7	201.2	199.1	198.3	203.2	178.2
11	69.9	67.3	73.5	41.8	27.2	6.5	21.6	41.4	41.6	41.9	32.2	34.4	21.1	15.2	27.9	24.9	25.1	19.9	17.7	14.5	10.9	7.3	5.9	8.4
12	5.7	5.9	8.4	10.0	9.4	9.0	9.0	15.3	12.2	13.5	6.2	7.9	19.7	26.6	31.1	29.6	30.3	165.7	74.6	19.7	254.6	96.6	60.1	132.0
13	302.2	309.2	310.6	311.8	310.2	310.6	310.8	292.8	5.7	316.1	320.7	339.0	174.2	190.6	184.0	175.2	155.5	161.7	105.3	50.8	300.3	297.2	314.1	314.5
14	315.9	318.0	317.3	319.1	316.5	319.4	317.8	317.0	320.4	319.1	320.4	318.9	315.8	315.1	312.5	302.3	292.0	38.9	112.3	315.0	306.4	310.0	303.9	299.2
15	276.3	292.3	285.8	283.0	290.1	292.1	312.0	301.3	75.0	308.2	307.6	327.9	310.4	312.1	299.7	318.0	318.2	315.1	318.9	331.9	323.8	31.8	7.6	25.6
16	21.1	28.6	26.1	35.0	14.3	4.0	8.1	2.0	21.8	15.2	19.4	22.4	24.7	19.2	23.0	25.0	16.2	14.6	15.0	16.6	16.6	25.5	15.4	19.7
17	21.0	18.1	19.8	21.8	21.2	16.8	20.8	15.7	13.8	12.3	23.7	9.0	21.5	10.3	17.2	23.1	30.2	17.9	12.1	11.3	23.9	32.6	32.4	10.8
18	43.1	27.0	2.7	22.2	332.7	24.3	27.2	33.0	42.5	47.7	135.4	197.8	197.4	205.4	202.9	206.2	192.9	189.9	205.8	305.3	314.9	305.7	353.5	338.3
19	309.2	313.4	318.3	316.8	317.5	318.1	318.8	324.4	37.0	44.2	21.3	38.8	48.8	42.5	95.1	97.9	42.1	29.6	302.4	210.1	51.0	29.1	10.2	35.0
20	14.4	2.8	22.0	27.8	35.3	31.5	30.8	23.3	25.5	34.7	13.5	26.0	123.4	77.8	29.8	26.2	347.7	7.2	11.1	341.2	356.3	8.2	355.8	358.9
21	356.2	0.4	3.6	8.6	13.4	17.2	17.2	14.2	12.2	10.4	14.1	7.5	0.8	1.5	13.7	356.9	24.9	5.2	32.5	27.8	8.6	332.1	347.7	355.8
22	350.8	12.9	10.1	8.6	16.3	21.4	30.7	29.2	32.4	45.9	81.2	66.1	76.1	175.9	190.4	185.6	193.5	184.7	209.5	181.2	193.2	304.0	13.9	38.5
23	21.8	34.4	25.5	27.9	18.6	27.8	22.2	31.8	28.3	29.6	14.6	30.5	38.3	38.4	138.6	205.1	205.4	259.0	256.6	312.6	313.5	309.7	310.5	315.6
24	337.5	24.6	229.3	183.7	331.8	313.3	351.4	20.2	125.4	83.3	83.6	136.5	157.3	167.0	162.7	161.7	151.4	150.0	170.6	166.7	112.3	326.3	306.7	318.8
25	321.0	323.8	337.2	0.5	6.8	22.1	27.6	33.3	34.4	36.6	16.4	20.9	28.8	26.2	21.2	18.5	8.3	5.6	1.6	6.7	355.9	359.7	347.9	16.7
26	7.0	354.0	356.7	7.2	4.0	10.3	13.3	12.9	24.4	26.5	24.6	23.4	26.0	22.8	20.8	21.4	21.2	15.3	14.9	13.2	15.1	14.8	28.2	20.8
27	10.2	6.2	13.4	13.4	13.7	14.4	15.4	14.2	11.0	14.5	17.4	29.8	30.6	39.3	122.4	19.4	21.5	322.4	271.5	4.6	226.1	0.0	5.3	22.9
28	18.3	4.1	8.4	13.9	12.4	9.7	16.4	19.6	58.0	53.7	36.7	43.2	41.5	42.9	5.4	46.0	40.7	43.2	10.6	322.6	1.4	353.0	5.0	352.6
29	352.2	4.3	315.8	319.4	316.4	311.4	309.1	314.7	310.1	312.3	314.6	35.8	18.6	57.8	359.4	321.0	316.9	313.8	305.6	313.8	310.6	319.9	18.9	14.3
30	19.2	17.1	10.8	0.3	22.1	21.4	47.4	59.5	38.7	37.9	39.0	67.0	204.0	211.8	152.7	149.9	217.6	274.8	340.4	11.8	38.7	330.6	332.0	11.9

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	26.6	358.5	14.1	6.6	11.5	10.5	14.6	10.6	19.0	25.1	26.2	27.3	31.7	32.4	32.0	31.3	27.8	27.7	30.0	28.9	23.3	17.5	17.2	19.0
2	18.4	16.2	17.5	21.4	21.8	28.1	23.6	23.9	20.3	14.3	23.5	24.7	21.5	13.8	2.5	9.6	13.5	20.4	12.6	8.4	4.0	82.0	4.8	349.7
3	347.2	353.0	3.5	15.0	355.2	358.5	9.9	13.0	22.1	25.2	28.9	31.2	30.2	29.0	22.0	10.1	25.1	4.3	354.8	345.2	350.9	3.4	6.9	7.7
4	20.7	12.0	353.7	350.4	356.2	8.2	22.3	343.8	352.4	320.7	4.6	34.7	40.0	85.8	41.1	4.5	12.0	24.0	12.8	347.2	339.3	18.7	6.1	8.5
5	358.7	3.7	1.3	352.0	3.9	10.6	9.5	14.3	12.7	11.2	12.5	6.3	1.2	360.0	66.5	26.5	28.6	51.1	97.2	243.0	235.6	280.4	331.3	34.5
6	49.0	255.7	275.9	341.1	233.0	313.8	349.7	24.6	36.8	150.4	187.1	64.2	160.3	96.2	49.4	319.0	315.4	316.9	309.1	301.2	299.9	292.9	291.3	303.3
7	311.1	303.9	295.3	295.6	297.4	292.2	292.0	296.4	296.6	307.4	313.7	303.2	305.5	48.1	4.7	47.4	68.9	98.4	107.5	103.0	55.1	21.7	316.5	315.4
8	318.5	309.1	317.0	358.3	357.9	18.1	35.2	35.6	27.8	20.9	27.8	24.8	19.2	23.6	20.7	21.7	17.9	17.5	12.2	13.6	9.8	16.2	17.5	19.6
9	20.7	21.3	20.9	23.1	20.5	20.4	20.6	20.7	22.8	19.8	17.6	18.3	21.9	23.6	25.4	27.3	28.3	28.9	26.7	27.5	25.6	23.1	22.1	21.7
10	19.3	22.5	28.9	18.3	23.1	22.1	7.0	18.7	19.3	60.3	195.0	197.0	187.7	90.0	155.0	146.5	105.3	194.7	198.4	192.0	215.0	262.5	15.6	22.0
11	357.1	26.8	31.1	26.4	247.1	26.4	24.9	30.3	39.0	43.7	48.6	82.1	86.3	180.8	147.1	64.0	62.5	26.2	326.7	349.2	24.0	15.2	17.7	19.9
12	23.4	16.2	8.3	14.3	18.3	13.7	17.9	34.1	49.3	59.4	56.4	108.6	132.4	325.9	318.4	312.0	38.3	357.3	280.3	314.3	327.7	25.5	14.8	20.5
13	3.2	8.4	2.0	15.3	9.8	15.9	29.5	47.0	53.5	63.7	42.9	45.3	52.2	168.8	150.8	49.6	47.9	236.0	291.5	4.1	14.4	8.7	348.4	220.3
14	213.9	316.3	7.4	26.3	6.5	29.1	36.7	37.3	123.5	151.3	154.2	171.6	179.2	143.0	138.8	117.5	102.2	82.9	83.5	71.5	117.4	123.3	59.3	317.7
15	278.5	253.3	241.8	254.5	12.7	33.8	335.0	39.4	39.0	60.1	116.0	170.1	187.3	207.3	212.2	215.2	211.1	210.6	200.8	190.2	134.2	10.4	348.3	280.7
16	346.6	293.3	320.0	320.1	320.2	317.7	323.8	29.5	62.0	53.8	66.1	71.0	143.0	169.2	180.9	208.3	216.0	214.9	211.0	218.8	235.2	239.1	230.2	257.7
17	22.3	22.9	24.0	22.2	21.7	31.3	29.7	32.6	28.1	30.4	36.4	111.3	118.4	120.6	133.8	136.2	145.8	190.2	289.8	169.6	195.1	156.7	335.6	350.8
18	13.8	24.1	26.5	28.3	29.5	35.1	39.5	69.7	163.7	113.0	109.2	138.2	160.4	105.6	146.5	27.5	69.6	114.8	170.2	157.7	145.3	131.1	23.4	300.8
19	309.0	301.7	315.1	320.5	323.4	332.8	48.1	36.0	36.9	50.0	197.2	173.9	152.0	100.3	29.1	94.5	71.8	64.3	4.4	352.2	349.1	22.2	348.0	20.9
20	16.2	6.9	9.1	18.5	18.3	8.5	7.5	7.9	6.7	11.2	10.3	10.2	18.6	25.3	26.1	19.5	14.0	3.3	27.8	23.8	14.6	345.2	335.0	28.3
21	11.5	32.6	2.8	42.5	10.0	20.7	35.2	42.0	325.8	312.8	319.2	323.3	317.0	311.1	127.5	175.7	156.9	180.9	303.8	302.6	308.6	311.1	313.3	316.1
22	326.8	8.6	12.4	6.2	18.0	21.6	34.4	43.6	46.3	51.7	120.5	197.6	53.0	316.4	322.7	319.7	320.4	317.5	318.2	315.1	331.0	19.1	10.1	19.3
23	18.5	24.5	18.4	244.3	10.6	28.0	52.1	40.4	177.4	183.6	185.9	169.9	187.7	202.5	191.2	189.0	190.0	201.1	212.8	337.9	313.7	11.6	19.1	20.1
24	18.8	18.5	23.8	24.8	344.0	26.9	27.7	37.1	132.1	210.0	214.1	199.0	203.9	172.0	198.8	204.0	197.7	205.0	292.6	178.5	354.0	25.2	27.8	23.9
25	25.9	19.0	354.1	214.9	34.7	30.0	41.1	74.0	54.5	167.9	207.9	216.0	205.8	177.2	169.2	172.9	159.5	167.7	24.6	314.6	14.9	22.9	25.6	23.7
26	24.9	26.2	21.7	16.2	18.8	13.2	29.6	32.2	38.7	75.5	208.2	205.1	206.7	207.2	194.6	205.7	195.5	217.8	215.2	228.4	7.4	20.0	23.6	28.4
27	32.4	22.9	240.1	231.9	19.5	14.3	24.0	30.5	32.1	43.7	55.8	209.8	201.5	210.2	210.5	205.3	205.1	218.7	226.3	230.0	16.3	24.5	28.6	26.4
28	36.2	34.0	5.1	22.8	34.3	32.6	42.5	134.1	194.8	207.6	209.2	210.6	208.8	208.9	210.0	212.0	209.7	205.7	209.5	224.2	247.6	244.3	226.3	227.9
29	248.2	38.9	8.5	265.5	303.9	22.7	35.1	40.5	215.1	192.7	188.1	184.1	185.5	201.4	174.7	146.1	53.9	96.0	224.4	231.7	247.0	254.3	297.0	297.9
30	282.0	337.9	20.8	30.2	30.8	40.0	35.9	98.1	135.4	125.7	52.5	86.5	77.8	224.2	276.5	238.1	219.7	46.8	143.4	336.8	272.1	282.2	153.3	110.8
31	346.6	14.7	26.1	30.9	24.8	15.0	19.5	28.3	50.9	182.0	156.3	186.8	189.1	191.6	197.9	193.1	211.0	203.6	191.6	180.7	165.5	170.0	216.7	198.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	357.3	302.9	13.2	335.2	15.3	15.3	49.5	62.3	158.9	159.7	160.3	157.7	137.0	177.0	182.8	169.5	178.6	176.0	190.1	221.6	229.3	224.4	14.9	22.8
2	34.9	16.7	30.7	14.1	15.0	15.2	43.6	51.5	45.5	36.6	36.3	39.4	43.7	12.8	105.3	106.1	118.9	136.8	354.6	289.4	339.6	355.9	339.3	13.1
3	11.1	4.7	48.4	164.1	192.6	131.6	309.7	309.3	53.5	92.2	343.3	287.2	181.2	156.9	200.1	200.0	199.2	124.6	94.6	91.8	174.1	184.4	185.4	288.7
4	304.9	310.3	332.7	10.9	11.7	38.4	40.0	55.5	67.1	117.5	137.9	176.8	196.3	164.0	163.7	177.1	188.2	215.4	228.0	228.9	242.2	253.3	14.1	27.0
5	25.9	29.2	25.5	22.6	341.6	42.3	39.2	45.0	87.9	139.0	201.9	207.1	187.5	186.2	189.1	193.6	191.6	196.9	197.7	222.5	218.5	223.5	248.4	335.9
6	29.8	29.8	25.5	22.1	32.5	38.3	44.3	70.0	197.1	164.5	202.4	190.7	178.0	198.9	209.6	209.2	193.3	212.4	265.0	314.9	336.8	10.3	345.7	355.9
7	358.7	8.9	358.0	27.3	3.9	5.1	14.6	322.3	12.8	350.6	336.2	89.1	174.5	329.6	341.6	90.9	9.7	326.1	293.5	279.8	13.1	326.4	339.2	344.1
8	322.9	3.0	356.2	347.5	342.4	353.3	349.3	354.7	353.4	1.0	5.8	5.5	15.1	11.2	9.9	14.4	18.6	16.7	14.3	10.0	10.4	11.7	12.0	12.0
9	10.4	11.5	13.4	16.6	16.7	16.8	14.4	14.3	12.3	13.1	11.8	16.4	15.4	12.9	8.3	16.6	12.1	66.8	18.5	3.1	9.5	350.7	344.1	310.2
10	4.6	5.5	341.4	6.4	37.5	25.9	14.6	12.3	28.7	77.4	70.5	294.5	31.2	339.5	350.1	56.3	24.6	3.2	11.0	333.6	337.7	349.6	346.7	335.3
11	295.1	356.0	320.8	5.8	10.2	11.5	354.5	356.1	352.1	4.5	6.6	9.1	6.0	11.7	9.8	10.2	3.3	3.5	6.7	349.2	354.4	357.1	354.0	355.8
12	351.9	2.2	356.0	1.4	355.8	3.9	4.7	11.1	28.3	6.6	20.1	187.5	199.2	69.5	171.6	190.0	168.8	239.4	216.5	220.2	222.2	243.2	265.8	236.9
13	5.2	340.2	342.6	294.9	136.0	218.2	206.8	35.4	19.9	151.4	208.4	201.5	205.9	205.3	204.8	209.7	197.9	186.9	184.2	185.0	193.2	192.6	215.6	299.9
14	313.1	33.1	15.7	25.7	250.2	293.9	6.2	31.5	18.3	209.2	200.9	186.0	206.7	204.5	206.8	191.8	40.0	31.8	31.3	14.9	347.1	19.2	13.5	11.1
15	14.9	10.8	15.9	2.5	16.9	263.7	26.8	148.7	193.9	180.3	194.3	207.4	197.4	209.5	203.2	203.1	218.3	218.1	235.5	225.8	199.5	342.8	347.5	338.3
16	304.3	28.5	43.3	237.6	210.1	205.3	207.6	212.5	204.3	205.7	206.9	206.5	198.8	166.3	233.7	225.3	221.9	226.7	257.2	239.4	33.1	27.8	37.0	35.1
17	37.6	32.8	228.2	235.4	209.7	218.7	214.4	218.0	211.8	211.5	213.5	231.2	251.8	217.7	223.8	224.3	217.4	213.8	215.9	224.1	209.1	20.7	26.2	26.8
18	28.2	16.5	28.8	27.9	18.2	24.5	22.1	13.7	7.2	14.1	15.8	12.3	14.7	11.0	10.7	1.1	350.0	8.2	7.3	17.0	7.7	23.7	25.3	23.1
19	19.1	11.2	7.6	6.4	16.8	17.0	17.3	15.9	19.4	12.8	14.3	23.2	29.4	25.8	28.0	43.2	214.9	217.5	224.9	228.2	216.4	6.7	24.7	27.7
20	22.7	11.5	0.1	216.4	24.9	202.4	41.8	203.4	212.0	210.6	212.6	229.7	146.9	180.9	6.1	335.6	333.7	268.6	224.7	241.6	260.4	250.3	247.5	294.2
21	25.4	26.8	23.4	28.6	21.6	29.8	32.1	30.0	36.9	77.5	191.0	204.9	201.8	207.2	207.3	200.0	205.6	205.4	192.6	206.1	207.6	202.6	196.0	315.8
22	268.9	208.6	234.8	268.1	10.7	22.2	7.2	291.1	133.6	325.8	358.0	4.0	40.0	332.0	266.2	64.4	302.7	278.7	278.3	265.4	265.7	284.6	289.4	24.9
23	28.4	26.9	28.0	22.2	234.0	220.3	214.8	29.2	38.9	41.4	63.6	193.9	184.4	207.0	212.0	212.9	212.3	214.4	212.6	217.0	214.3	224.5	225.7	263.6
24	248.0	324.8	21.3	26.1	25.2	36.5	33.4	41.7	70.0	165.5	192.1	196.9	211.1	220.0	212.6	217.8	219.5	211.4	207.8	211.7	201.4	176.4	356.2	26.0
25	29.1	16.2	14.1	325.4	34.4	27.0	45.6	205.5	209.9	223.2	217.3	205.6	210.8	211.0	210.8	215.8	211.1	215.0	204.3	198.8	235.1	241.5	255.2	275.7
26	253.2	264.9	273.1	284.2	340.6	30.0	28.1	52.4	108.0	172.7	137.1	138.1	116.8	149.5	148.0	77.8	140.2	147.2	197.1	155.8	301.2	258.7	354.1	7.0
27	356.3	16.0	247.6	349.9	195.0	37.8	45.6	155.2	190.4	166.4	174.7	178.7	181.8	193.5	205.5	208.9	214.2	208.7	211.4	230.5	333.8	309.9	299.7	308.8
28	305.4	305.6	295.8	308.9	309.2	314.8	319.4	317.8	323.9	332.1	326.1	338.0	325.4	176.8	178.4	141.2	175.1	130.8	162.5	156.9	125.5	142.8	72.2	97.6
29	70.4	106.3	11.8	31.7	38.5	324.1	331.9	344.0	64.2	153.8	199.7	167.5	206.5	184.0	246.0	317.0	358.7	90.1	2.0	33.5	311.2	216.8	332.8	332.3
30	350.5	15.2	19.9	22.2	359.9	18.0	13.6	20.7	27.7	33.1	131.7	165.1	182.5	184.8	188.6	187.6	200.5	204.3	195.9	253.0	293.7	314.1	323.8	322.8

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	0.4	12.9	6.0	30.5	1.9	7.7	52.1	63.0	84.0	158.2	167.6	185.6	181.7	179.7	176.6	191.3	200.0	209.9	216.2	236.8	57.1	40.9	56.2	304.0
2	303.1	314.2	302.4	348.7	14.2	20.2	35.2	41.7	56.4	63.3	133.9	134.0	186.3	188.5	195.8	255.3	358.4	72.2	77.5	104.0	14.7	1.4	217.9	216.5
3	225.7	213.6	194.6	240.1	358.6	123.3	132.2	118.2	126.4	113.8	130.2	150.3	174.6	180.1	182.6	188.7	190.5	186.4	211.5	227.2	216.3	237.2	251.6	246.8
4	279.8	320.5	318.4	347.6	338.5	36.4	58.0	89.7	159.2	173.4	202.6	188.6	178.2	194.4	192.9	199.9	211.1	215.0	209.6	194.1	195.9	204.9	243.2	252.8
5	353.7	35.5	137.5	153.4	145.1	327.7	114.7	136.2	145.7	127.9	126.3	143.8	166.5	175.5	168.8	188.3	193.1	189.8	192.6	152.0	212.3	163.6	158.6	155.9
6	208.7	0.9	312.7	243.4	171.6	193.4	153.1	139.9	133.9	131.6	157.6	171.8	184.1	189.9	195.2	201.0	214.3	202.8	211.1	236.1	164.3	273.9	322.1	336.0
7	340.6	334.1	346.8	316.0	335.4	268.4	238.8	223.4	179.1	152.8	158.4	133.7	27.9	41.4	122.4	105.0	359.3	294.2	156.0	208.5	4.1	232.3	22.4	29.2
8	23.0	21.2	6.0	15.2	322.0	7.2	26.5	150.3	53.1	320.3	319.0	316.5	318.9	319.0	316.4	221.9	168.9	186.8	310.3	312.9	311.3	315.4	355.9	354.3
9	355.5	2.0	357.2	9.3	17.2	17.5	28.0	53.0	180.6	188.6	202.5	206.0	208.7	209.9	210.8	210.9	343.7	169.6	223.3	221.6	280.5	261.0	329.3	315.7
10	324.0	354.0	331.4	342.5	351.4	337.1	315.0	102.8	196.3	223.1	212.4	192.8	188.7	237.4	244.5	263.4	289.3	240.2	172.4	23.2	17.6	354.9	11.9	218.5
11	262.3	217.3	166.0	277.8	287.1	242.7	236.2	228.5	215.1	46.5	19.1	17.6	8.5	216.8	214.0	223.4	216.0	206.7	194.2	192.1	218.2	213.3	332.1	274.6
12	264.5	8.0	14.2	20.0	30.8	26.9	32.9	39.3	49.4	50.5	141.6	191.4	180.6	199.2	206.8	197.3	172.9	335.5	318.5	327.2	107.9	299.2	11.4	21.3
13	8.0	304.6	326.5	37.4	330.9	294.4	281.6	17.0	302.8	312.9	304.2	315.0	320.1	318.7	315.1	307.0	309.2	306.8	310.6	314.3	313.1	307.1	281.8	292.8
14	304.5	310.0	297.3	294.3	301.7	335.7	17.3	294.7	293.4	293.3	309.7	314.9	322.4	319.2	319.2	304.8	54.9	119.4	164.4	117.5	184.3	189.1	199.0	195.3
15	193.3	211.8	206.2	205.1	203.8	198.1	197.0	192.2	145.1	169.7	137.3	121.3	253.8	199.4	211.1	208.7	216.6	204.5	280.3	242.3	158.8	332.8	315.0	5.8
16	342.5	348.7	10.2	28.9	38.2	23.6	15.9	351.7	342.6	353.9	295.8	357.2	28.5	100.1	100.8	119.8	82.5	87.5	43.8	25.0	87.1	32.9	4.5	355.8
17	346.6	338.0	347.5	357.3	344.8	335.0	358.4	359.3	300.5	336.4	15.4	323.8	7.8	15.4	9.1	20.6	0.8	356.9	16.1	22.5	17.1	1.7	21.7	10.7
18	351.0	11.7	18.1	13.8	10.0	23.3	7.6	13.8	53.3	135.7	107.5	80.8	50.0	79.6	52.2	351.0	119.1	172.6	171.0	326.5	348.6	310.1	261.7	339.5
19	334.9	354.7	326.1	350.2	357.2	1.7	5.4	6.3	12.6	24.2	27.7	29.2	23.7	25.5	25.5	29.0	20.1	17.0	18.7	7.6	334.7	233.0	321.8	7.0
20	21.8	3.5	20.0	17.5	23.7	20.3	26.3	22.0	24.6	21.7	21.2	25.9	23.1	19.1	22.8	24.6	15.9	7.3	15.5	13.8	245.8	221.9	221.7	27.6
21	32.2	19.0	24.3	283.3	237.2	19.0	11.5	23.4	24.6	22.2	19.3	24.1	25.6	20.9	19.0	44.9	217.5	212.6	207.5	36.7	4.2	228.6	229.2	242.4
22	217.2	214.9	215.2	218.3	23.5	21.1	20.6	16.6	16.2	9.7	14.8	11.8	8.3	14.1	204.4	215.7	197.6	303.9	335.2	6.1	5.1	5.7	0.6	16.0
23	10.4	19.6	1.8	112.6	139.4	30.9	358.6	5.2	356.7	2.4	13.1	9.8	14.0	14.2	10.3	4.8	113.2	60.4	7.2	8.0	9.3	9.8	6.8	0.1
24	349.2	1.6	8.0	15.2	10.7	15.8	16.0	21.8	15.2	10.5	6.6	14.1	359.1	292.2	223.5	223.1	264.9	316.0	309.8	296.9	333.6	38.1	355.2	354.9
25	8.0	18.7	11.6	8.9	40.2	14.9	327.6	177.1	158.7	202.4	190.7	176.0	170.3	41.7	31.7	32.7	13.4	215.3	212.4	215.4	309.6	5.4	8.3	3.2
26	20.4	27.0	29.8	359.1	8.3	19.3	23.7	322.4	16.4	359.0	318.7	294.4	296.9	301.9	305.1	297.5	305.7	307.4	300.7	306.5	307.4	309.6	310.8	317.8
27	320.1	317.9	320.8	320.1	319.5	342.0	46.6	57.9	57.0	47.5	63.4	56.9	115.9	174.1	181.0	184.0	195.6	200.3	214.7	213.7	213.5	253.5	29.1	30.5
28	40.0	224.8	253.2	27.2	28.9	35.1	32.7	36.9	43.2	52.3	178.9	183.2	191.7	210.0	210.3	209.4	197.2	197.0	199.0	176.5	78.7	63.2	137.9	169.1
29	50.7	164.6	202.3	203.1	198.2	200.4	199.1	195.7	193.2	193.2	190.0	192.4	187.2	196.6	189.5	56.0	58.7	73.8	181.9	178.6	168.4	169.9	138.0	62.5
30	141.3	99.7	116.8	181.0	189.3	184.6	163.7	153.5	160.0	176.8	309.3	53.4	301.4	8.1	306.6	339.6	140.8	138.6	128.9	173.4	148.3	186.4	145.3	120.5
31	287.6	311.8	311.0	309.0	312.4	324.6	344.8	317.0	310.8	311.5	241.7	154.1	119.5	76.3	39.1	42.4	289.0	326.8	299.5	290.1	312.9	315.7	316.0	302.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

August *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	27.3	299.4	294.2	309.7	311.5	316.2	318.9	315.9	29.2	58.1	32.5	86.5	165.0	169.0	162.3	120.6	104.0	72.5	102.6	157.1	167.5	20.2	8.3	15.2
2	25.8	27.6	27.3	28.7	28.7	30.9	29.0	30.7	26.6	6.8	331.0	338.8	1.4	318.2	13.9	13.1	358.1	333.3	325.0	348.9	358.7	357.6	40.4	347.6
3	350.4	353.9	359.6	357.5	359.2	354.0	0.3	7.8	9.8	17.6	17.0	17.9	19.8	19.9	19.2	24.3	23.3	26.1	24.6	24.4	25.1	23.9	22.9	24.0
4	16.1	8.8	12.4	14.9	288.7	276.3	324.0	339.4	321.1	318.3	353.3	17.7	26.0	33.6	32.1	26.4	59.3	182.6	45.1	20.2	357.8	359.9	14.2	25.7
5	23.8	19.3	16.4	355.5	0.3	17.3	19.6	42.1	47.9	73.6	200.3	201.3	189.4	177.6	179.8	181.1	125.9	321.3	307.7	316.2	314.9	312.3	314.9	331.5
6	8.8	23.2	7.9	9.8	0.1	355.5	27.7	50.5	58.4	50.2	49.9	67.8	72.8	77.1	281.5	322.6	320.3	319.1	316.3	316.5	291.2	305.4	335.3	332.6
7	316.2	328.6	338.2	14.0	2.4	29.6	33.1	43.1	53.6	59.8	67.7	66.9	305.1	311.5	314.5	316.4	314.6	304.5	310.1	317.8	312.2	315.8	307.3	307.0
8	305.3	309.1	312.8	314.3	315.9	317.2	318.5	335.8	46.2	65.8	71.6	312.2	55.9	50.1	155.7	150.4	107.7	47.7	65.0	333.6	318.2	320.4	348.4	344.2
9	30.1	347.4	350.8	5.3	26.2	18.5	26.1	34.9	31.7	34.3	52.4	162.8	248.2	136.0	175.3	233.5	255.2	156.7	155.2	269.9	243.8	214.1	217.5	228.1
10	225.3	231.1	297.6	324.1	302.1	304.0	339.3	4.5	14.3	109.9	309.3	353.4	336.0	322.9	314.2	343.6	348.0	333.2	327.2	332.5	320.9	310.3	324.7	310.3
11	300.7	356.3	23.2	46.3	259.4	313.0	340.2	310.3	299.0	38.2	69.0	146.9	207.2	207.0	195.5	193.9	192.7	199.1	211.1	190.4	163.0	182.7	201.2	211.1
12	222.0	7.5	203.3	351.7	327.8	20.1	350.8	24.1	62.4	109.0	107.8	152.2	180.0	216.4	211.8	220.2	221.3	319.2	181.7	180.4	173.1	227.9	252.6	196.6
13	193.8	189.8	196.7	165.8	188.3	161.6	192.9	197.8	187.9	183.9	183.9	201.1	205.4	203.9	203.5	204.2	206.3	198.9	203.4	205.8	39.5	43.3	345.1	7.6
14	359.4	319.6	10.6	1.3	351.8	19.3	26.2	27.5	33.1	23.0	354.5	327.0	352.7	36.6	10.7	298.9	329.8	335.1	6.9	348.7	350.3	354.3	347.6	4.9
15	14.1	6.1	359.0	4.2	2.0	1.2	1.9	358.3	9.8	1.2	6.7	7.8	13.8	9.4	359.9	357.3	1.0	13.6	22.4	29.4	21.7	26.7	221.9	218.9
16	216.4	215.9	360.0	28.3	29.1	28.6	28.3	57.6	67.0	187.1	201.6	211.6	215.3	209.8	205.4	206.3	204.2	206.0	206.1	199.5	207.4	214.0	215.0	215.5
17	203.4	237.5	248.8	222.7	237.5	238.2	216.5	203.7	246.9	197.9	182.2	196.3	152.7	155.6	180.5	185.4	185.1	183.1	181.7	185.7	185.6	206.3	181.7	201.9
18	201.4	192.7	195.1	193.4	207.3	7.2	197.0	252.3	241.2	39.5	36.9	73.7	210.9	211.9	235.0	202.1	204.1	7.6	197.6	208.0	223.1	224.6	215.1	219.6
19	218.1	147.7	214.7	225.6	218.6	207.9	211.1	202.9	193.8	211.1	214.4	193.9	178.8	191.0	177.6	23.1	29.2	19.7	8.5	1.1	18.4	20.5	13.4	7.4
20	356.9	338.1	353.3	1.8	8.4	16.7	17.4	23.0	39.2	38.7	86.5	112.4	187.9	199.7	148.9	171.2	180.2	239.7	328.6	205.8	207.1	119.0	338.7	308.5
21	101.7	216.1	308.0	9.5	306.4	288.3	25.9	38.6	47.5															
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Total Hours in Month 744 **Hours Data Available** 489 **Data Recovery** 65.7%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
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Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

October *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
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Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Resultant Wind Direction (RM Young) (Degrees)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.0	9.4	7.1	7.8	8.7	9.9	11.5	11.1	12.3	12.5	11.9	10.1	10.0	10.5	8.7	9.1	10.0	10.4	10.4	10.2	9.8	12.7	12.7	10.8	12.7	7.1	10.3
2	13.0	10.1	10.0	8.1	10.8	8.6	9.5	9.7	9.6	9.9	10.9	10.6	11.1	9.9	11.5	11.0	10.6	10.3	15.1	11.7	12.1	9.1	14.3	16.3	16.3	8.1	11.0
3	14.2	16.6	15.1	17.7	12.6	13.0	16.6	11.7	8.9	9.3	8.8	8.2	7.9	7.4	7.7	10.5	8.5	7.9	7.4	6.4	10.8	10.0	9.1	7.4	17.7	6.4	10.6
4	7.5	8.8	50.0	22.1	9.6	10.0	45.1	51.2	45.6	45.2	17.3	8.7	5.4	5.5	4.3	13.7	9.4	28.0	51.2	9.1	28.4	31.2	58.5	15.3	58.5	4.3	24.2
5	16.2	9.0	9.4	10.1	9.7	8.8	8.7	35.5	52.9	38.1	11.9	66.4	36.4	9.4	9.0	38.1	36.9	25.7	6.6	6.7	11.9	6.3	67.8	37.9	67.8	6.3	23.7
6	16.8	31.1	19.9	6.2	7.4	12.8	7.4	5.5	9.0	11.1	51.9	17.7	21.7	11.1	6.3	22.1	43.2	6.3	23.0	30.8	23.0	8.7	9.5	65.7	65.7	5.5	19.5
7	30.8	31.6	8.2	10.5	23.1	19.1	36.8	29.5	18.3	8.5	9.9	9.3	9.6	9.3	8.4	9.7	9.3	9.6	8.9	10.2	9.6	8.7	9.1	8.6	36.8	8.2	14.4
8	8.3	9.2	9.5	10.0	8.9	8.4	9.1	8.8	9.4	10.1	11.3	9.3	8.8	9.1	71.3	34.8	15.0	53.5	32.8	35.9	18.9	13.0	10.4	11.9	71.3	8.3	17.8
9	14.2	10.2	7.6	7.7	8.4	12.1	12.0	15.2	15.3	17.5	30.9	37.3	62.3	25.8	11.4	14.6	23.7	7.6	11.5	18.0	8.7	31.7	39.7	26.0	62.3	7.6	19.5
10	64.4	18.7	26.9	16.2	5.5	8.1	13.8	60.0	70.3	61.4	62.2	44.2	10.0	72.0	51.4	38.1	15.8	12.4	10.5	16.4	32.0	11.0	13.5	46.0	72.0	5.5	32.5
11	49.7	27.4	45.5	66.8	51.9	9.8	13.2	52.8	29.7	33.1	43.7	41.0	18.2	16.3	10.1	12.9	37.1	54.3	22.6	23.5	19.5	20.5	33.3	37.0	66.8	9.8	32.1
12	53.2	44.8	11.9	38.3	28.0	14.3	12.8	9.5	27.0	50.2	15.2	21.2	14.5	13.5	17.7	15.7	13.5	15.2	39.2	33.5	29.6	23.8	56.8	28.2	56.8	9.5	26.1
13	53.0	26.3	21.8	32.2	27.5	26.8	20.6	33.6	36.7	29.4	51.8	42.7	30.6	18.6	22.3	18.3	25.9	26.0	23.7	35.4	48.0	26.5	15.3	31.9	53.0	15.3	30.2
14	14.5	10.9	14.8	11.9	9.6	6.4	6.6	10.7	13.9	8.4	12.7	9.4	7.1	7.8	8.0	8.3	7.2	8.2	7.6	7.9	7.9	6.8	7.0	7.9	14.8	6.4	9.2
15	9.7	7.8	7.3	8.2	8.3	7.6	7.3	9.2	9.1	8.1	9.5	6.9	8.1	6.9	7.5	9.2	11.7	9.1	8.8	8.6	8.3	9.6	8.7	9.2	11.7	6.9	8.5
16	9.0	8.6	8.8	8.6	7.7	9.1	9.4	9.2	9.5	9.7	10.7					7.4	11.9	12.7	22.9	18.3	61.0	24.5	7.9	7.4	61.0	7.4	13.7
17	28.4	14.1	10.4	11.7	12.5	17.4	19.3	22.1	26.8	19.5	31.6	26.7	13.1	64.4	64.7	81.9	44.3	41.7	21.0	29.6	34.8	14.0	10.0	8.9	81.9	8.9	27.9
18	13.1	9.5	10.7	22.4	19.0	12.4	21.7	23.0	20.6	38.7	22.2	12.6	13.5	16.6	17.8	14.1	21.5	36.4	26.3	21.9	43.0	41.8	44.0	64.3	64.3	9.5	24.5
19	47.2	51.4	17.0	23.5	25.9	23.6	33.5	28.1	25.0	27.3	27.8	14.1	14.2	15.7	15.1	18.4	25.0	22.1	26.4	31.0	43.9	43.8	14.8	17.6	51.4	14.1	26.3
20	18.0	11.2	19.7	7.8	10.0	7.7	7.9	6.8	6.7	7.5	6.0	7.3	8.8	8.1	9.3	10.3	7.8	8.4	10.9	11.3	10.4	9.9	9.5	8.1	19.7	6.0	9.6
21	8.6	7.7	6.8	6.3	8.2	5.3	6.5	7.7	9.8	8.8	7.8	6.2	11.2	12.1	8.8	6.7	14.3	11.5	12.4	30.6	13.4	15.3	14.9	21.3	30.6	5.3	10.9
22	34.1	59.6	60.8	50.5	56.5	60.3	61.1	29.6	28.5	26.2	28.2	30.5	28.7	23.5	19.4	15.9	18.9	17.2	14.9	15.4	15.7	16.4	16.8	15.3	61.1	14.9	31.0
23	15.4	15.2	30.1	16.0	13.3	18.1	23.8	19.6	39.8	13.8	12.5	22.2	24.9	15.7	14.1	24.0	15.4	32.0	47.4	44.2	28.5	49.3	18.5	21.0	49.3	12.5	23.9
24	20.6	23.7	37.9	32.2	18.8	18.5	19.1	17.9	16.1	17.5	15.9	11.4	12.3	13.2	11.5	10.8	29.5	9.9	12.0	13.5	17.4	18.9	20.8	19.7	37.9	9.9	18.3
25	22.9	20.1	24.8	19.1	26.0	25.7	20.0	19.4	13.7	12.4	9.7	5.5	5.4	6.6	8.6	10.5	18.2	18.0	13.4	13.7	11.7	10.0	13.0	12.3	26.0	5.4	15.0
26	10.5	11.3	9.8	8.9	9.5	9.9	11.5	9.2	12.0	7.3	8.3	8.4	6.9	8.0	8.3	7.8	8.0	10.6	10.3	13.2	28.9	21.6	13.5	18.4	28.9	6.9	11.3
27	20.5	62.3	31.6	49.6	52.0	48.5	72.8	29.8	55.9	49.2	33.8	22.4	20.8	14.3	15.0	15.2	14.7	15.4	14.1	14.0	16.4	16.8	16.9	15.1	72.8	14.0	29.9
28	13.7	15.0	14.2	14.3	14.4	13.8	13.5	14.6	14.8	15.8	16.6	18.2	16.7	29.2	23.4	15.6	11.1	28.8	11.7	18.3	42.4	19.7	26.6	11.9	42.4	11.1	18.1
29	9.5	10.8	9.2	9.8	9.5	12.2	12.6	12.8	12.0	11.7	9.2	9.6	10.9	10.4	13.0	35.4	20.3	34.1	22.9	26.2	11.7	13.1	28.8	11.5	35.4	9.2	15.3
30	9.1	8.9	9.2	9.8	13.7	13.7	11.0	12.7	14.5	14.8	18.4	17.2	10.5	13.3	12.9	11.9	14.3	20.0	23.1	57.4	7.1	7.5	6.0	8.5	57.4	6.0	14.4
31	7.4	7.6	8.1	9.2	8.2	8.4	8.8	8.5	12.5	8.0	7.7	8.1	9.4	11.0	8.1	6.5	17.5	19.8	23.2	34.2	12.7	13.4	9.0	13.4	34.2	6.5	11.7
Max.	**64.4**	**62.3**	**60.8**	**66.8**	**56.5**	**60.3**	**72.8**	**60.0**	**70.3**	**61.4**	**62.2**	**66.4**	**62.3**	**72.0**	**71.3**	**81.9**	**44.3**	**54.3**	**51.2**	**57.4**	**61.0**	**49.3**	**67.8**	**65.7**	**81.9**		
Min.	**7.4**	**7.6**	**6.8**	**6.2**	**5.5**	**5.3**	**6.5**	**5.5**	**6.7**	**7.3**	**6.0**	**5.5**	**5.4**	**5.5**	**4.3**	**6.5**	**7.2**	**6.3**	**6.6**	**6.4**	**7.1**	**6.3**	**6.0**	**7.4**		**4.3**	
Avg.	**21.4**	**19.6**	**18.5**	**18.5**	**17.3**	**15.5**	**18.8**	**20.2**	**22.1**	**20.7**	**20.2**	**18.8**	**15.6**	**16.5**	**16.8**	**18.0**	**18.4**	**20.1**	**19.1**	**21.2**	**21.9**	**18.3**	**20.5**	**20.5**			**19.1**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	13.2	9.7	13.0	11.8	24.4	28.0	17.7	16.2	21.4	14.1	15.6	15.0	15.6	15.1	13.7	20.2	27.6	80.1	73.4	38.7	42.0	66.5	31.7	30.6	80.1	9.7	27.3
2	27.7	16.0	21.0	21.9	24.6	19.3	15.3	17.9	11.7	15.8	30.2	47.3	21.3	11.1	12.5	19.2	14.5	13.1	17.8	17.1	7.9	5.1	7.1	6.6	47.3	5.1	17.6
3	6.1	7.3	8.0	9.5	8.0	8.8	9.6	10.6	10.5	9.6	8.1	7.5	9.3	8.2	8.4	9.9	11.1	11.5	10.3	10.0	9.8	10.0	8.7	9.5	11.5	6.1	9.2
4	11.0	12.8	10.4	11.0	12.2	11.9	10.7	10.5	10.8	10.2	12.0	10.4	9.8	10.0	9.5	9.7	10.0	9.9	9.7	9.1	8.9	9.0	9.7	9.5	12.8	8.9	10.4
5	9.3	9.6	9.8	8.9	9.1	8.8	8.8	8.5	8.4	8.8	9.1	10.1	14.0	9.5	12.1	9.3	9.3	8.4	8.9	9.1	8.9	9.4	9.4	10.1	14.0	8.4	9.5
6	9.9	11.5	11.2	12.2	11.6	10.5	8.6	9.5	12.6	20.2	32.9	40.7	60.8	48.3	29.7	60.4	37.1	11.5	14.7	17.7	16.3	23.4	12.5	10.5	60.8	8.6	22.2
7	7.3	5.1	6.6	6.5	42.6	46.0	74.2	65.6	23.8	28.2	30.5	18.8	21.0	24.6	21.7	32.2	51.1	39.8	31.2	25.6	22.4	19.8	44.2	72.4	74.2	5.1	31.7
8	72.7	54.7	42.6	50.5	36.6	10.4	13.7	14.4	7.4	9.9	8.1	11.4	9.3	9.1	12.4	11.9	11.0	12.1	9.9	11.0	11.3	10.7	11.5	10.6	72.7	7.4	19.3
9	9.8	10.3	8.8	9.5	10.2	9.6	9.2	9.0	9.0	8.8	8.2	8.4	8.6	9.2	9.6	9.4	10.5	9.8	9.7	10.0	11.7	12.3	16.4	23.4	23.4	8.2	10.5
10	14.4	13.9	10.7	10.2	10.7	12.5	11.5	10.4	11.7	11.7	12.5	13.1	29.5	43.1			61.3	44.1	35.5	37.9	62.8	52.0	68.8	35.5	68.8	10.2	27.9
11	40.0	18.7	11.0	6.5	9.9	9.3	7.8	7.7	8.2	10.4	9.1	9.6	9.0	8.6	10.8	10.8	12.4	11.6	11.8	11.2	12.0	12.1	11.7	11.7	40.0	6.5	11.7
12	11.0	11.9	27.1	42.2	6.5	14.8	24.1	17.6	16.8	43.9	43.9	28.1	26.3	38.2	40.4	43.0	36.0	30.4	44.7	33.5	21.9	16.1	27.2	29.3	44.7	6.5	28.1
13	61.6	36.0	18.9	42.8	30.9	25.0	66.0	9.8	7.3	30.9	53.2	6.2	5.4	10.5	10.7	20.4	18.2	14.1	13.6	21.3	20.6	14.3	25.9	24.1	66.0	5.4	24.5
14	31.6	33.1	33.8	19.6	15.1	15.5	16.9	18.7	21.0	22.5	13.7	12.0	13.1	13.2	11.3	9.5	11.6	11.5	12.1	18.8	10.4	9.4	10.8	11.2	33.8	9.4	16.5
15	12.5	12.8	13.6	12.7	12.8	13.1	12.3	12.6	15.3	30.9	21.2	54.5	30.7	58.3	14.9	38.0	38.3	42.2	31.9	30.5	38.4	35.3	55.8	32.3	58.3	12.3	27.9
16	9.1	15.8	13.0	4.1	3.4	3.9	53.9	17.5	16.8	36.4	41.8	44.5	56.4	11.1	14.0	49.5	9.3	9.3	9.3	9.0	9.0	7.9	6.4	6.8	56.4	3.4	19.1
17	9.6	8.8	7.7	8.5	9.9	10.4	10.7	11.8	14.1	11.7	12.9	12.3	16.4	18.1	18.9	13.1	10.8	11.5	15.6	24.0	21.3	18.9	18.0	31.6	31.6	7.7	14.4
18	39.0	23.2	13.5	18.3	11.6	10.4	31.9	13.5	21.3	20.8	31.9	54.5	46.5	41.5	65.6	28.6	35.0	49.5	54.6	27.3	9.8	5.5	5.3	7.2	65.6	5.3	27.8
19	47.9	49.9	17.9	17.5	22.3	50.5	48.3	51.6	37.7	37.2	30.2	62.7	50.3	61.4	22.6	29.6	43.7	16.2	18.0	23.2	21.5	19.7	18.7	20.2	62.7	16.2	34.1
20	20.9	21.7	19.5	62.6	71.7	55.6	40.1	39.2	41.2	44.0	50.0	36.9	47.1	25.1	37.0	48.9	15.9	18.7	22.8	15.3	22.9	14.5	15.3	18.6	71.7	14.5	33.6
21	14.6	35.3	38.3	55.9	34.4	61.7	44.3	48.5	32.6	31.9	42.4	32.2	29.6	45.7	43.3	46.1	40.4	43.6	36.1	44.1	36.0	55.9	62.9	43.3	62.9	14.6	41.6
22	45.3	43.0	57.5	49.7	54.5	55.2	21.7	29.7	26.1	43.9	46.4	35.4	59.9	42.4	36.7	51.6	32.5	46.9	52.1	57.3	54.4	40.6	52.4	43.3	59.9	21.7	44.9
23	68.3	21.1	44.7	11.9	36.1	7.0	35.0	52.8	45.9	39.8	39.3	20.8	37.9	38.7	39.4	38.0	36.8	44.0	52.5	72.4	31.6	22.3	20.1	30.4	72.4	7.0	36.9
24	20.5	23.5	19.2	22.2	28.7	17.6	22.1	17.3	8.8	7.5	6.4	9.5	7.5	7.7	8.5	11.1	24.5	24.6	24.7	22.6	18.1	16.1	12.3	11.4	28.7	6.4	16.3
25	7.1	8.4	7.6	8.0	9.8	12.1	8.4	16.2	48.7	7.2	25.0	50.6	14.9	41.9	52.0	35.1	35.3	39.2	23.7	26.7	22.9	30.3	41.9	31.2	52.0	7.1	25.2
26	40.7	50.6	38.3	70.8	58.7	59.3	65.5	59.4	65.7	22.2	35.6	47.3	31.7	52.7	60.8	56.2	56.6	34.4	28.8	17.5	16.8	6.7	6.7	5.7	70.8	5.7	41.2
27	7.1	6.4	6.6	8.3	8.0	9.6	18.7	38.0	7.4	10.5	21.3	28.5	53.5	23.3	14.8	15.1	20.0	26.7	13.6	19.5	36.4	47.0	33.2	34.6	53.5	6.4	21.2
28	29.4	16.1	17.9	23.4	23.2	15.7	13.3	14.6	39.5	31.6	34.6	24.4	16.6	17.9	15.0	28.7	32.5	29.6	30.5	53.9	42.7	14.6	15.1	14.6	53.9	13.3	24.8
Max.	**72.7**	**54.7**	**57.5**	**70.8**	**71.7**	**61.7**	**74.2**	**65.6**	**65.7**	**44.0**	**53.2**	**62.7**	**60.8**	**61.4**	**65.6**	**60.4**	**61.3**	**80.1**	**73.4**	**72.4**	**62.8**	**66.5**	**68.8**	**72.4**	**80.1**		
Min.	**6.1**	**5.1**	**6.6**	**4.1**	**3.4**	**3.9**	**7.8**	**7.7**	**7.3**	**7.2**	**6.4**	**6.2**	**5.4**	**7.7**	**8.4**	**9.3**	**9.3**	**8.4**	**8.9**	**9.0**	**7.9**	**5.1**	**5.3**	**5.7**		**3.4**	
Avg.	**24.9**	**21.0**	**19.6**	**22.7**	**22.8**	**21.9**	**25.7**	**23.2**	**21.5**	**22.2**	**25.9**	**26.9**	**26.8**	**26.6**	**23.9**	**28.0**	**26.9**	**26.6**	**25.6**	**25.5**	**23.2**	**21.6**	**23.6**	**22.4**			**24.1**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	15.1	30.7	23.1	23.7	17.1	13.5	16.5	21.3	29.2	14.8	7.0	6.6	4.4	6.1	7.2	8.4	8.9	9.2	7.1	7.9	7.8	6.3	6.5	9.8	30.7	4.4	12.8
2	13.0	7.0	7.4	8.8	9.5	9.3	10.0	7.2	6.4	7.3	6.4	7.6	7.0	6.7	6.5	8.9	8.9	10.3	10.0	9.5	10.0	9.4	10.0	8.4	13.0	6.4	8.6
3	9.7	7.9	8.9	8.7	8.8	7.1	6.5	8.3	8.1	9.7	9.1	8.7	8.4	5.3	4.9	5.1	5.1	6.8	5.3	5.9	6.0	7.3	5.6	6.0	9.7	4.9	7.2
4	6.2	6.7	6.2	7.2	7.2	6.4	7.5	7.6	7.4	7.1	7.6	7.1	13.6	28.3	21.2	18.7	14.8	8.5	9.7	10.4	13.6	8.2	8.1	7.6	28.3	6.2	10.3
5	8.5	7.5	12.1	10.5	10.0	8.4	10.7	26.3	50.3	73.5	61.4	30.7	51.6	46.6	31.8	64.6	52.4	52.8	34.0	25.6	39.8	46.1	36.9	37.3	73.5	7.5	34.6
6	31.7	21.1	42.5	39.4	23.6	25.0	42.1	53.0	28.8	21.9	14.1	14.0	12.9	19.8	15.3	25.1	18.4	22.9	34.9	41.0	28.4	20.6	20.9	10.3	53.0	10.3	26.1
7	8.7	10.9	25.3	25.5	43.0	25.5	15.1	27.8	15.2	13.1	12.4	11.4	13.8	14.3	15.3	25.6	31.6	60.5	63.9	61.5	62.1	65.1	73.8	32.7	73.8	8.7	31.4
8	29.4	24.1	27.9	27.1	30.8	56.7	42.0	29.5	60.8	62.1	63.8	47.1	50.9	48.8	53.3	43.6	34.7	47.2	46.4	48.8	65.6	58.7	83.3	72.2	83.3	24.1	48.1
9	54.7	79.0	70.9	71.6	69.7	66.7	69.7	46.7	79.0	57.2	51.8	61.7	70.7	50.2	64.0	72.0	47.4	28.7	27.2	23.7	19.7	15.0	17.9	25.0	79.0	15.0	51.7
10	14.9	23.5	30.8	27.3	28.5	14.1	17.1	17.8	14.9	18.2	20.8	20.9	15.0	10.3	7.9	16.0	70.3	14.6	10.5	8.1	7.1	11.7	11.4	10.1	70.3	7.1	18.4
11	8.2	9.7	11.4	10.6	9.4	9.4	8.7	10.8	11.3	14.2	12.7	9.5	11.2	21.1	14.2	6.1	5.1	7.2	8.7	7.3	8.9	9.0	9.8	9.1	21.1	5.1	10.1
12	20.0	14.8	15.3	15.7	18.4	15.1	11.2	11.0	11.1	10.3	10.7	11.6	13.5	10.1	9.0	8.9	8.3	5.8	6.7	6.4	7.0	8.1	43.0	41.8	43.0	5.8	13.9
13	10.7	23.8	35.8	49.6	43.9	14.2	39.9	42.3	41.3	16.4	33.2	33.7	24.8	16.2	12.8	12.5	8.8	11.8	15.2	8.2	9.2	35.1	14.1	30.9	49.6	8.2	24.3
14	44.4	9.2	13.1	8.2	6.2	7.4	8.5	10.1	16.0	21.0	22.9	22.7	21.4	20.5	17.6	16.8	22.4	49.9	31.7	19.8	18.8	21.3	24.2	23.3	49.9	6.2	19.9
15	23.8	17.7	18.5	17.9	21.0	15.8	22.6	18.3	18.0	21.5	22.4	37.5	44.1	18.9	31.5	43.5	23.2	33.1	44.9	36.1	13.2	10.8	10.4	10.0	44.9	10.0	23.9
16	8.9	11.0	9.0	8.1	6.7	8.8	9.1	9.3	9.4	8.7	7.6	6.8	6.8	9.7	11.6	11.6	9.6	10.6	12.1	11.1	10.9	11.8	12.6	11.1	12.6	6.7	9.7
17	9.7	9.4	5.5	4.5	6.1	6.8	7.4	7.8	8.0	7.4	7.4	9.2	8.0	9.3	8.5	8.3	10.4	12.6	12.0	10.0	8.4	9.2	9.2	8.6	12.6	4.5	8.5
18	8.9	8.4	9.4	9.2	8.7	9.1	8.2	10.8	9.9	8.5	8.5	8.1	7.8	8.4	8.5	9.1	9.1	9.7	40.8	44.7	31.9	16.0	47.0	18.8	47.0	7.8	15.0
19	15.7	20.8	11.7	13.4	10.6	8.3	7.6	7.7	49.9	10.4	8.8	36.0	6.5	5.1	10.7	7.0	16.0	25.1	25.3	23.4	57.6	9.4	6.0	6.1	57.6	5.1	16.6
20	7.2	4.6	6.7	6.0	6.1	5.4	5.9	9.2	52.9	32.6	21.5	28.4	66.8	10.1	5.1	7.0	33.4	20.4	19.0	20.2	24.3	17.5	13.4	15.7	66.8	4.6	18.3
21	24.7	31.7	30.4	18.7	22.6	27.5	48.1	30.0	48.4	60.0	29.9	19.3	52.0	27.0	63.1	47.6	34.4	27.4	68.1	33.9	25.9	46.9	54.4	26.8	68.1	18.7	37.5
22	25.8	19.1	16.8	16.8	18.8	15.9	11.4	13.4	26.3	30.2	9.6	10.0	8.8	7.6	9.1	8.1	17.1	54.8	36.5	71.9	38.3	18.1	21.8	17.2	71.9	7.6	21.8
23	18.6	22.4	16.8	43.1	71.9	56.9	11.2	19.4	11.7	10.7	16.7	25.7	53.8	22.8	58.9	36.7	49.2	29.3	16.0	33.0	26.0	28.0	33.6	33.6	71.9	10.7	31.1
24	16.6	12.7	11.4	9.7	8.4	10.0	8.7	20.3	16.3	11.0	14.6	12.7	27.7	47.7	26.6	7.6	23.1	69.5	56.3	17.9	13.3	16.6	14.9	16.0	69.5	7.6	20.4
25	16.1	14.9	16.1	62.1	16.2	31.2	26.4	13.5	10.6	11.4	10.0	11.3	38.3	27.0	19.6	32.8	50.3	56.7	34.3	19.3	32.5	26.6	18.5	17.3	62.1	10.0	25.5
26	46.7	25.6	14.5	16.4	16.3	17.5	19.9	29.8	12.3	12.3	34.1	18.4	9.5	7.3	7.5	5.7	12.6	11.2	61.7	40.2	24.8	34.9	20.3	23.4	61.7	5.7	21.8
27	23.2	10.9	40.4	22.7	11.3	34.0	51.8	13.4	7.3	24.8	34.1	5.7	4.7	4.8	3.0	4.5	7.9	9.7	9.0	14.9	25.7	22.3	8.8	54.4	54.4	3.0	18.7
28	10.9	29.2	45.6	7.7	7.6	5.3	4.2	4.1	49.7	49.6	52.9	13.5	4.7	5.8	5.4	4.9	6.2	8.1	6.6	10.5	52.4	21.3	15.7	77.5	77.5	4.1	20.8
29	40.6	30.5	29.7	14.1	15.5	18.1	14.1	15.6	12.3	7.2	5.2	6.7	14.7	16.9	4.3	5.4	14.8	46.4	34.4	61.5	45.0	48.7	12.9	6.1	61.5	4.3	21.7
30	4.9	7.1	10.9	10.1	11.0	12.0	12.6	15.8	10.7	21.7	26.7	25.0	17.0	24.2	18.0	14.9	15.3	18.7	20.0	26.8	42.9	25.8	27.2	22.5	42.9	4.9	18.4
31	21.9	25.6	26.3	30.4	22.9	19.2	18.0	30.5	17.0	14.3	11.4	10.6	11.4	11.3	12.1	10.8	12.6	9.6	9.2	65.9	58.8	17.1	15.1	30.1	65.9	9.2	21.3
Max.	**54.7**	**79.0**	**70.9**	**71.6**	**71.9**	**66.7**	**69.7**	**53.0**	**79.0**	**73.5**	**63.8**	**61.7**	**70.7**	**50.2**	**64.0**	**72.0**	**70.3**	**69.5**	**68.1**	**71.9**	**65.6**	**65.1**	**83.3**	**77.5**	**83.3**		
Min.	**4.9**	**4.6**	**5.5**	**4.5**	**6.1**	**5.3**	**4.2**	**4.1**	**6.4**	**7.1**	**5.2**	**5.7**	**4.4**	**4.8**	**3.0**	**4.5**	**5.1**	**5.8**	**5.3**	**5.9**	**6.0**	**6.3**	**5.6**	**6.0**		**3.0**	
Avg.	**19.3**	**18.6**	**21.0**	**20.8**	**19.6**	**18.7**	**19.1**	**19.0**	**24.2**	**22.2**	**21.1**	**18.7**	**22.6**	**18.3**	**18.9**	**19.3**	**22.0**	**25.4**	**26.4**	**26.6**	**27.0**	**22.7**	**22.8**	**23.2**			**21.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	21.0	11.8	18.2	34.1	42.8	42.4	33.6	18.2	20.1	23.4	22.9	65.8	72.4	54.9	41.6	61.5	64.0	46.3	47.6	37.7	49.2	42.8	58.7	52.1	72.4	11.8	41.0
2	48.4	25.5	23.2	27.5	20.6	30.7	47.6	57.7	44.6	38.5	38.2	21.2	27.1	20.6	24.4	8.2	9.4	7.1	8.3	7.6	9.7	6.6	7.0	8.9	57.7	6.6	23.7
3	6.1	6.5	7.9	8.4	8.2	8.7	8.2	8.6	8.1	10.7	9.0	9.4	8.7	8.9	11.8	12.0	8.7	7.5	7.4	8.3	7.4	12.5	8.9	10.3	12.5	6.1	8.8
4	12.8	12.3	8.0	5.8	4.5	5.5	6.4	5.2	5.6	5.9	7.8	39.6	14.7	44.4	47.7	28.5	47.0	19.2	22.4	55.0	71.4	72.7	72.6	57.8	72.7	4.5	28.0
5	65.2	41.5	42.6	50.6	48.1	54.5	38.5	61.7	18.3	28.7	34.5	24.8	24.5	45.5	59.5	34.6	47.7	38.4	46.8	54.6	45.7	33.5	27.8	18.9	65.2	18.3	41.1
6	15.8	13.9	13.3	25.9	35.6	40.8	17.7	19.5	15.0	10.5	16.4	8.8	8.8	8.3	6.2	8.2	8.4	10.6	10.4	22.2	52.2	49.6	49.6	50.4	52.2	6.2	21.6
7	51.1	37.0	42.5	44.5	67.3	10.3	7.5	6.6	4.7	12.7	35.8	29.3	25.9	68.5	26.4	46.0	50.5	54.3	51.6	49.1	46.7	34.4	22.5	31.3	68.5	4.7	35.7
8	40.3	41.2	38.1	39.2	48.1	53.7	34.6	12.5	17.4	21.7	21.1	15.8	15.7	30.2	31.6	33.3	25.0	19.5	8.6	7.3	4.0	10.0	21.1	42.4	53.7	4.0	26.3
9	39.7	65.4	54.1	8.7	15.3	23.4	18.4	21.3	8.2	4.8	3.5	41.8	18.8	4.9	5.5	5.6	12.6	15.7	57.7	52.5	62.3	56.2	89.5	53.0	89.5	3.5	30.8
10	45.7	37.5	48.1	47.4	31.0	51.2	15.8	12.9	16.7	18.0	19.8	23.1	32.5	21.0	13.7	16.6	17.7	30.2	55.8	73.5	38.7	24.2	23.5	33.1	73.5	12.9	31.2
11	35.1	26.8	45.0	42.5	72.1	61.1	28.0	18.4	22.2	12.3	11.9	8.3	9.0	12.9	11.6	8.3	7.8	8.1	7.8	8.9	10.7	11.0	11.6	11.0	72.1	7.8	20.9
12	11.3	11.2	10.1	8.8	9.7	10.1	10.8	8.0	9.0	9.9	11.1	12.1	8.2	6.3	5.7	9.1	10.4	23.5	40.7	39.8	33.3	56.3	63.0	84.7	84.7	5.7	21.0
13	54.9	20.1	20.7	18.6	22.6	18.8	19.0	29.4	60.5	52.1	27.2	54.9	41.8	21.6	24.3	32.4	36.7	28.8	45.8	64.6	35.0	27.4	15.2	14.2	64.6	14.2	32.8
14	13.8	13.6	13.7	14.3	13.6	13.2	13.8	14.4	14.3	13.8	14.1	14.3	17.0	20.4	22.2	29.9	31.7	57.9	53.8	56.3	52.9	28.9	26.3	27.9	57.9	13.2	24.7
15	21.7	28.2	31.4	24.3	27.1	46.7	58.8	47.9	67.3	35.0	52.9	49.5	22.9	22.6	28.3	20.9	17.4	16.1	16.1	13.2	16.6	42.7	23.6	11.2	67.3	11.2	30.9
16	13.1	6.3	7.5	9.9	13.8	12.0	10.8	11.7	9.8	8.3	10.2	10.4	10.0	10.4	10.6	9.5	9.7	9.3	9.6	9.2	11.3	9.9	10.1	10.2	13.8	6.3	10.1
17	8.9	8.7	9.3	8.6	9.6	9.0	10.4	9.4	15.0	10.0	14.5	13.7	17.7	16.2	12.3	10.2	8.4	11.4	11.8	10.4	11.4	10.5	7.8	37.2	37.2	7.8	12.2
18	51.7	8.1	32.4	15.0	53.9	62.2	48.1	9.2	5.3	5.6	14.8	4.5	3.7	6.1	5.0	6.5	8.6	27.8	73.7	48.3	16.0	32.1	38.6	66.5	73.7	3.7	26.8
19	45.0	13.0	12.8	13.2	13.7	13.1	14.2	23.7	33.7	26.9	21.1	35.1	10.0	8.3	23.3	23.6	14.2	53.4	50.2	54.8	54.7	26.8	42.4	22.9	54.8	8.3	27.1
20	41.3	21.1	13.5	13.9	8.8	7.7	6.8	11.1	12.3	7.7	16.0	48.9	38.5	36.0	32.7	13.5	28.7	37.9	16.2	27.9	37.2	18.0	13.3	13.1	48.9	6.8	21.8
21	12.4	11.7	11.8	9.9	8.6	9.3	9.6	10.0	10.5	10.4	10.9	11.0	11.9	12.8	13.4	46.2	44.3	13.6	52.2	9.5	20.6	24.1	38.9	28.8	52.2	8.6	18.4
22	16.2	15.2	11.6	9.8	9.9	8.7	6.8	9.1	7.5	16.2	49.4	29.1	30.6	25.9	6.4	7.3	6.2	5.9	9.3	12.0	14.3	21.1	13.8	15.3	49.4	5.9	14.9
23	10.7	8.7	11.1	8.2	11.3	9.2	7.7	7.1	11.1	9.4	11.2	7.4	4.4	11.3	22.4	5.6	6.6	34.9	50.6	20.2	13.2	16.4	15.1	15.0	50.6	4.4	13.7
24	25.7	21.4	48.7	37.4	54.7	16.0	59.6	44.6	66.7	64.0	60.3	48.1	39.3	28.6	27.7	30.2	40.1	50.7	23.7	23.7	58.0	56.4	21.6	15.0	66.7	15.0	40.1
25	14.4	36.8	36.6	45.2	30.0	11.8	7.5	6.6	5.0	4.6	13.1	12.2	7.7	8.6	9.4	11.8	12.2	12.1	14.8	12.1	14.0	16.4	12.9	14.9	45.2	4.6	15.4
26	11.9	12.3	11.1	9.8	10.9	11.5	10.0	10.3	9.6	8.6	8.8	9.4	9.6	9.8	10.8	11.1	10.1	10.3	9.5	9.4	9.4	10.7	10.5	9.8	12.3	8.6	10.2
27	10.2	11.0	8.5	10.6	9.9	9.7	10.5	9.4	10.6	11.7	11.7	9.5	11.9	14.8	60.4	24.4	21.4	40.0	36.3	65.9	33.9	27.6	35.6	42.9	65.9	8.5	22.4
28	21.1	31.9	22.7	13.7	13.6	16.9	20.0	28.6	32.6	22.9	10.7	32.2	12.9	15.3	32.1	5.0	5.7	3.2	28.9	48.2	27.2	32.0	16.4	12.9	48.2	3.2	21.1
29	17.6	25.5	16.1	14.6	14.7	14.4	18.1	11.8	14.0	17.5	18.2	25.9	29.1	6.7	32.9	15.3	14.7	17.4	32.5	33.7	17.8	22.7	26.0	25.4	33.7	6.7	20.1
30	8.3	9.8	11.7	18.2	23.7	21.1	14.1	20.4	5.4	4.0	4.8	56.2	35.7	49.5	10.4	11.7	19.2	39.8	45.4	47.8	64.4	63.2	67.3	57.6	67.3	4.0	29.6
Max.	**65.2**	**65.4**	**54.1**	**50.6**	**72.1**	**62.2**	**59.6**	**61.7**	**67.3**	**64.0**	**60.3**	**65.8**	**72.4**	**68.5**	**60.4**	**61.5**	**64.0**	**57.9**	**73.7**	**73.5**	**71.4**	**72.7**	**89.5**	**84.7**	**89.5**		
Min.	**6.1**	**6.3**	**7.5**	**5.8**	**4.5**	**5.5**	**6.4**	**5.2**	**4.7**	**4.0**	**3.5**	**4.5**	**3.7**	**4.9**	**5.0**	**5.0**	**5.7**	**3.2**	**7.4**	**7.3**	**4.0**	**6.6**	**7.0**	**8.9**		**3.2**	
Avg.	**26.4**	**21.1**	**22.7**	**21.3**	**25.1**	**23.4**	**20.4**	**18.8**	**19.4**	**17.5**	**20.1**	**25.7**	**20.7**	**21.7**	**22.3**	**19.6**	**21.5**	**25.0**	**31.5**	**32.8**	**31.3**	**29.9**	**29.7**	**29.8**			**24.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	28.2	18.4	12.4	12.4	13.3	16.0	13.0	9.5	11.5	11.0	10.3	10.4	10.4	9.7	9.8	11.2	10.0	11.0	11.6	11.6	10.7	10.1	10.9	10.1	28.2	9.5	12.2
2	10.1	10.7	9.8	9.3	9.6	8.6	9.5	8.8	9.5	10.2	8.8	9.0	9.7	11.7	11.5	10.8	11.4	10.9	8.3	9.9	9.5	32.2	39.2	19.1	39.2	8.3	12.4
3	11.5	12.8	12.1	10.8	11.8	11.6	9.9	10.7	10.0	8.6	9.1	9.5	9.0	8.9	10.3	13.6	13.4	16.5	13.4	11.2	12.7	13.0	11.6	11.2	16.5	8.6	11.4
4	9.3	11.7	13.5	11.7	15.9	34.4	64.1	39.0	50.3	47.0	27.3	47.0	58.6	66.4	37.8	46.1	66.4	30.9	41.2	44.2	74.0	34.2	16.0	17.4	74.0	9.3	37.7
5	13.4	14.0	20.7	14.9	12.7	11.5	11.0	10.4	8.7	11.2	10.3	11.7	12.5	11.4	57.0	43.2	55.1	76.5	42.5	37.7	25.9	42.1	41.6	10.6	76.5	8.7	25.3
6	13.4	43.8	37.7	22.2	17.0	17.6	19.0	10.8	7.2	25.8	15.7	16.7	16.8	18.0	33.8	15.4	16.2	15.1	20.9	29.5	30.1	32.0	32.9	29.0	43.8	7.2	22.4
7	20.9	26.5	31.6	28.4	34.1	39.9	34.5	28.8	29.0	26.6	24.6	30.0	50.1	70.0	57.9	49.0	31.6	42.6	47.4	42.4	50.0	58.1	20.1	17.4	70.0	17.4	37.1
8	15.7	28.3	36.3	17.2	12.5	9.1	8.2	6.0	8.8	11.9	8.6	9.2	9.6	9.4	10.7	10.5	11.2	9.9	9.9	10.3	10.2	10.4	10.4	10.4	36.3	6.0	12.3
9	9.8	9.7	10.4	9.5	9.7	10.0	9.8	10.9	9.4	10.2	10.3	10.3	9.8	9.4	9.2	9.8	10.0	9.0	9.1	10.0	10.1	10.0	10.0	10.3	10.9	9.0	9.9
10	10.7	9.9	10.7	10.6	9.1	8.7	11.6	13.1	14.0	22.6	22.5	15.6	32.7	37.0	35.6	42.8	50.3	60.3	37.6	59.7	15.4	33.4	9.8	22.8	60.3	8.7	24.8
11	24.2	5.5	8.6	23.1	48.3	12.4	11.4	6.1	5.2	5.8	6.6	24.3	23.6	33.6	37.4	18.7	10.2	25.7	44.7	11.5	32.5	14.1	14.8	21.8	48.3	5.2	19.6
12	12.6	13.7	14.2	10.0	16.6	14.0	40.1	13.3	11.1	17.0	19.1	39.4	39.9	27.5	14.9	25.4	60.2	65.5	65.1	57.7	67.3	12.6	17.8	9.1	67.3	9.1	28.5
13	9.9	7.9	14.4	12.2	12.1	12.0	13.0	13.5	13.0	15.0	7.2	10.2	27.3	42.6	38.3	25.2	38.9	40.2	64.9	56.6	19.0	12.9	28.3	61.0	64.9	7.2	24.8
14	52.2	20.4	23.0	17.6	33.8	12.2	8.7	5.1	36.6	30.1	11.9	15.3	20.2	25.4	19.8	18.4	17.6	25.1	17.3	20.0	16.3	38.4	54.8	12.6	54.8	5.1	23.0
15	20.4	35.3	8.6	20.0	38.0	16.9	43.1	13.3	12.0	20.8	17.8	12.6	6.0	8.4	5.8	5.0	5.3	5.7	10.4	14.0	29.0	24.9	19.7	63.1	63.1	5.0	19.0
16	65.5	38.7	14.4	13.8	18.1	15.2	21.6	28.6	13.3	5.4	10.9	13.4	11.5	15.6	9.1	7.1	5.6	7.5	5.6	19.9	9.1	7.6	9.6	18.2	65.5	5.4	16.1
17	36.5	10.1	5.6	5.9	5.4	6.5	7.5	7.2	8.9	8.8	10.0	13.4	11.4	15.6	13.7	11.5	13.9	21.4	26.1	30.1	32.8	43.3	55.6	17.1	55.6	5.4	17.4
18	8.1	9.2	10.7	6.2	6.7	19.2	3.5	13.9	41.4	28.0	23.9	35.0	34.1	28.1	44.8	63.8	57.7	36.5	37.7	41.0	36.5	62.5	66.2	30.8	66.2	3.5	31.1
19	23.9	27.1	18.0	15.7	18.6	29.1	12.9	7.4	4.4	34.4	14.7	27.9	18.2	31.7	28.3	53.4	57.0	38.1	15.3	15.6	41.7	38.2	24.9	13.6	57.0	4.4	25.4
20	9.5	10.9	9.8	11.9	10.7	9.7	9.7	11.3	11.6	10.0	11.0	11.8	9.6	8.4	8.0	10.5	11.4	12.8	8.0	14.9	29.9	33.3	18.6	56.0	56.0	8.0	14.6
21	36.2	31.7	62.4	50.0	62.8	39.8	15.7	14.7	31.9	16.9	15.6	16.4	21.4	52.1	46.9	29.2	56.0	58.9	41.2	26.5	21.4	14.5	13.4	15.6	62.8	13.4	33.0
22	18.9	19.5	15.4	17.9	18.6	15.7	13.5	11.2	12.6	11.5	50.3	19.0	36.4	38.2	18.3	16.9	15.6	14.6	14.0	27.7	55.8	12.4	16.9	15.6	55.8	11.2	21.1
23	7.0	22.0	51.0	61.0	49.8	56.3	32.4	34.2	41.3	17.1	20.4	27.2	10.1	6.5	7.6	11.0	21.1	14.0	21.0	54.8	64.1	21.3	9.6	10.3	64.1	6.5	28.0
24	7.4	7.7	10.3	56.3	56.9	12.2	33.5	10.1	23.4	7.7	7.9	13.6	2.1	63.7	19.5	15.7	13.7	17.1	49.9	43.6	51.3	24.9	10.7	10.9	63.7	2.1	23.7
25	14.7	9.9	57.7	52.8	35.5	12.0	50.8	57.4	50.6	33.3	8.8	11.9	7.8	18.1	23.8	13.5	31.5	36.4	49.9	75.0	22.7	12.8	10.7	9.6	75.0	7.8	29.5
26	8.8	10.1	11.4	8.7	10.4	13.4	10.1	8.1	8.3	40.8	19.8	9.9	7.0	14.9	45.1	13.1	16.2	22.6	27.2	55.3	40.5	14.2	10.4	24.6	55.3	7.0	18.8
27	11.8	9.4	71.5	55.6	11.8	15.0	15.9	13.7	18.8	15.7	30.7	12.5	60.3	53.7	9.8	21.2	17.1	25.5	19.3	30.5	58.2	15.0	7.7	18.1	71.5	7.7	25.8
28	9.1	13.5	38.7	17.2	13.7	10.9	42.6	52.1	23.5	5.2	5.3	4.6	4.4	4.4	3.3	3.9	3.6	7.8	11.8	14.6	31.1	18.7	17.5	15.8	52.1	3.3	15.6
29	46.1	44.1	47.0	37.0	56.3	31.6	12.4	49.6	28.1	14.9	48.1	17.8	29.5	29.2	27.9	43.3	68.3	50.2	52.2	39.9	64.7	32.3	45.5	44.0	68.3	12.4	40.0
30	38.2	20.0	39.4	19.8	34.6	8.5	9.5	10.0	17.6	11.9	40.7	40.4	46.4	41.1	36.4	48.5	21.5	65.8	45.4	40.1	61.7	65.2	46.5	32.1	65.8	8.5	35.0
31	63.8	8.6	10.2	11.3	11.4	14.9	16.1	37.9	18.6	14.2	10.4	7.9	5.6	6.3	8.8	8.7	7.8	7.8	17.3	18.8	11.0	18.1	24.4	46.0	63.8	5.6	16.9
Max.	**65.5**	**44.1**	**71.5**	**61.0**	**62.8**	**56.3**	**64.1**	**57.4**	**50.6**	**47.0**	**50.3**	**47.0**	**60.3**	**70.0**	**57.9**	**63.8**	**68.3**	**76.5**	**65.1**	**75.0**	**74.0**	**65.2**	**66.2**	**63.1**	**76.5**		
Min.	**7.0**	**5.5**	**5.6**	**5.9**	**5.4**	**6.5**	**3.5**	**5.1**	**4.4**	**5.2**	**5.3**	**4.6**	**2.1**	**4.4**	**3.3**	**3.9**	**3.6**	**5.7**	**5.6**	**9.9**	**9.1**	**7.6**	**7.7**	**9.1**		**2.1**	
Avg.	**21.5**	**18.1**	**23.8**	**21.6**	**23.1**	**17.6**	**19.8**	**18.3**	**19.0**	**17.7**	**17.4**	**17.9**	**21.0**	**26.3**	**23.9**	**23.1**	**26.6**	**28.4**	**28.6**	**31.4**	**33.7**	**26.2**	**23.4**	**22.7**			**23.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	64.9	60.7	63.4	26.9	33.9	21.7	15.1	11.4	18.6	13.4	11.0	8.6	12.4	7.2	5.7	7.5	5.9	13.9	27.9	18.0	36.2	31.9	19.8	8.2	64.9	5.7	22.7
2	14.3	17.2	9.3	6.6	9.6	20.3	12.4	10.5	7.4	5.2	5.2	4.9	9.5	70.1	39.9	34.7	33.1	39.3	49.6	75.6	69.0	22.4	45.8	40.1	75.6	4.9	27.2
3	48.8	65.7	66.4	35.3	43.3	59.0	25.6	22.2	39.2	48.8	69.3	31.6	38.9	52.6	49.8	34.0	30.9	63.9	37.5	57.6	36.9	33.3	74.3	30.9	74.3	22.2	45.7
4	24.2	15.5	23.2	28.7	15.0	14.4	10.6	7.3	16.3	19.9	29.9	10.6	12.3	6.5	6.1	8.4	9.9	11.1	9.8	11.5	13.3	11.2	39.2	8.1	39.2	6.1	15.1
5	6.6	7.5	13.9	55.2	72.4	51.3	4.7	5.6	24.1	31.6	10.7	5.4	4.9	5.2	4.8	4.8	6.1	7.0	10.2	7.7	6.4	14.5	20.3	17.2	72.4	4.7	16.6
6	6.7	7.9	8.7	60.6	7.6	21.5	7.3	19.9	18.2	19.9	17.9	11.8	10.3	12.2	12.0	17.5	22.3	46.2	49.2	48.0	48.7	32.5	61.4	20.5	61.4	6.7	24.5
7	19.7	9.7	20.7	37.3	48.6	59.2	47.4	78.3	61.4	37.0	75.5	52.7	83.8	75.0	71.5	57.6	57.7	49.5	42.8	65.5	51.1	24.5	43.3	38.4	83.8	9.7	50.3
8	43.1	29.0	32.0	17.8	18.9	12.6	15.5	12.5	12.3	10.9	10.1	11.9	10.7	11.2	12.8	11.6	13.0	12.3	12.6	10.5	12.4	11.2	9.5	10.3	43.1	9.5	15.2
9	11.5	12.0	11.0	10.9	10.0	11.5	10.3	11.2	11.1	10.3	11.0	11.2	11.2	10.7	11.3	11.4	11.8	51.1	46.8	46.7	32.6	60.2	28.8	46.6	60.2	10.0	20.9
10	52.3	56.9	73.8	42.2	53.5	58.8	78.7	66.6	73.9	64.6	61.5	72.7	74.3	69.7	54.1	67.2	50.1	65.4	59.7	62.2	54.0	30.0	38.9	64.4	78.7	30.0	60.2
11	69.5	43.0	56.3	27.1	23.4	14.9	34.5	15.2	15.6	18.9	15.3	11.0	11.5	10.5	10.8	11.7	10.9	12.3	11.7	12.1	14.0	11.6	11.5	11.3	69.5	10.5	20.2
12	11.6	11.0	12.4	10.8	11.4	11.4	10.5	10.4	8.7	12.8	33.7	25.8	40.0	49.5	26.0	65.2	28.4	22.1	22.0	11.4	18.4	14.4	39.7	56.9	65.2	8.7	23.5
13	29.1	31.4	22.5	40.3	26.1	67.3	25.8	25.9	34.2	49.3	15.0	7.4	4.6	4.8	5.8	6.8	3.4	5.4	7.1	10.3	8.6	8.2	29.7	51.4	67.3	3.4	21.7
14	27.9	21.8	60.2	35.3	30.1	54.9	52.6	16.8	79.3	8.5	12.8	11.2	7.1	10.9	37.9	41.8	27.1	6.1	7.2	38.9	27.3	21.6	10.3	8.7	79.3	6.1	27.3
15	9.5	10.3	10.5	11.1	15.4	38.1	28.1	19.5	18.5	17.8	11.1	7.8	7.9	14.5	8.6	10.4	33.9	39.3	26.6	16.6	49.1	55.0	26.7	50.0	55.0	7.8	22.3
16	32.6	26.3	35.8	46.6	15.4	12.9	25.7	7.8	12.6	8.2	8.2	38.1	29.8	13.3	48.1	50.3	33.2	26.3	33.2	51.6	27.6	7.4	5.5	9.5	51.6	5.5	25.2
17	6.4	39.3	17.9	69.9	21.5	9.6	5.3	8.1	4.1	4.7	8.1	23.6	27.9	13.2	11.0	11.6	8.2	5.9	7.8	10.8	31.7	37.2	14.5	13.8	69.9	4.1	17.2
18	13.0	54.7	9.4	9.3	10.1	10.3	11.3	11.1	12.1	11.3	9.7	10.8	10.6	11.5	10.3	12.3	10.9	10.7	10.7	8.5	12.0	14.3	10.0	8.7	54.7	8.5	12.6
19	10.4	9.6	12.0	10.1	10.0	9.4	9.4	9.6	12.0	12.7	13.4	11.6	8.3	9.9	11.0	22.7	42.7	23.4	18.2	11.2	10.3	26.9	10.6	6.2	42.7	6.2	13.8
20	13.6	12.0	47.6	13.3	49.0	52.4	7.5	26.5	3.6	4.4	5.9	13.4	19.9	43.4	43.0	19.8	61.4	55.2	20.3	29.9	8.9	9.5	16.5	17.2	61.4	3.6	24.8
21	15.2	8.5	18.2	10.5	12.3	13.3	10.2	8.4	8.5	21.1	12.4	6.8	7.5	3.6	4.8	7.2	4.1	6.2	6.8	12.0	13.8	44.0	63.9	55.0	63.9	3.6	15.6
22	69.2	16.9	15.0	39.5	17.3	12.3	40.4	54.5	52.5	21.8	20.7	29.0	8.6	25.0	41.0	39.7	53.4	18.1	19.9	21.6	21.8	15.5	41.4	6.9	69.2	6.9	29.3
23	9.3	10.5	19.4	15.4	44.7	59.4	6.5	32.4	7.1	4.6	19.0	10.5	12.3	9.0	6.8	4.0	3.4	7.0	3.8	5.7	13.4	7.8	21.0	22.8	59.4	3.4	14.8
24	23.9	25.5	24.8	10.2	16.5	8.2	8.6	6.9	18.2	24.8	5.7	3.8	8.5	11.5	7.9	16.1	12.2	8.0	8.8	8.2	24.6	37.2	21.3	19.3	37.2	3.8	15.0
25	12.7	15.0	32.3	78.0	46.8	27.3	17.2	46.0	10.4	11.2	16.1	13.4	6.6	6.0	14.5	6.7	12.1	6.3	11.2	21.9	18.2	22.5	24.7	30.7	78.0	6.0	21.2
26	26.5	18.2	27.5	45.5	50.8	47.4	9.0	11.4	34.9	26.3	45.7	19.7	16.1	23.0	33.4	58.6	19.0	9.8	36.3	55.8	26.6	47.7	14.1	18.6	58.6	9.0	30.1
27	30.8	33.9	62.7	39.5	60.1	11.4	6.7	26.7	9.8	11.6	5.7	5.5	6.2	5.4	6.1	5.3	5.7	4.7	16.4	69.5	63.3	23.0	41.6	25.9	69.5	4.7	24.1
28	24.5	38.2	59.1	42.4	32.4	18.9	16.5	15.3	15.8	15.0	16.0	42.7	43.1	48.8	40.6	47.7	43.4	32.3	52.2	45.7	44.0	47.4	40.9	56.3	59.1	15.0	36.6
29	43.6	48.1	52.2	41.8	45.7	40.9	33.8	57.3	25.6	39.0	35.3	13.2	19.0	11.4	40.0	35.7	41.4	44.4	34.9	58.6	73.8	75.0	76.5	77.2	77.2	11.4	44.3
30	62.7	17.8	53.7	39.2	19.8	9.2	9.8	8.9	8.2	9.2	47.5	12.0	8.2	8.4	7.3	7.4	9.5	12.7	14.1	46.3	47.9	24.0	14.7	19.8	62.7	7.3	21.6
Max.	**69.5**	**65.7**	**73.8**	**78.0**	**72.4**	**67.3**	**78.7**	**78.3**	**79.3**	**64.6**	**75.5**	**72.7**	**83.8**	**75.0**	**71.5**	**67.2**	**61.4**	**65.4**	**59.7**	**75.6**	**73.8**	**75.0**	**76.5**	**77.2**	**83.8**		
Min.	**6.4**	**7.5**	**8.7**	**6.6**	**7.6**	**8.2**	**4.7**	**5.6**	**3.6**	**4.4**	**5.2**	**3.8**	**4.6**	**3.6**	**4.8**	**4.0**	**3.4**	**4.7**	**3.8**	**5.7**	**6.4**	**7.4**	**5.5**	**6.2**		**3.4**	
Avg.	**27.8**	**25.8**	**32.4**	**31.9**	**29.0**	**28.7**	**19.9**	**22.1**	**22.5**	**19.8**	**22.0**	**18.0**	**19.1**	**21.8**	**22.8**	**24.5**	**23.5**	**23.9**	**23.8**	**31.7**	**30.5**	**27.4**	**30.6**	**28.4**			**25.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	23.1	16.6	25.5	20.1	15.3	19.2	17.9	22.4	24.1	19.1	10.6	9.7	12.1	11.6	10.6	8.6	7.0	10.2	24.4	55.8	53.7	39.8	70.9	31.7	70.9	7.0	23.3
2	21.2	11.6	25.0	40.9	23.6	22.7	19.9	13.0	11.6	12.0	26.7	47.7	17.0	26.1	13.3	39.9	32.4	32.5	55.2	78.5	74.4	32.3	42.1	17.6	78.5	11.6	30.7
3	17.8	33.3	25.2	26.4	15.4	35.0	13.3	22.7	10.4	15.9	11.4	17.2	9.2	6.5	6.6	6.0	11.5	40.3	26.3	16.4	19.1	18.2	22.5	46.4	46.4	6.0	19.7
4	36.6	20.1	32.8	43.6	41.3	16.0	14.3	14.5	11.7	9.8	8.3	7.3	6.6	6.9	5.5	5.3	6.5	13.6	9.5	10.5	19.7	18.9	10.9	30.5	43.6	5.3	16.7
5	26.8	49.9	20.1	12.2	22.6	21.0	29.4	21.0	35.2	11.7	10.4	14.1	11.2	10.1	9.2	9.6	10.1	8.6	9.1	11.3	19.2	16.0	19.7	11.2	49.9	8.6	17.5
6	24.6	62.2	32.9	23.2	12.3	21.9	15.6	13.5	9.9	10.1	6.9	7.1	8.2	8.7	7.1	7.7	9.9	8.6	10.2	29.3	23.2	47.3	55.1	36.1	62.2	6.9	20.5
7	62.6	32.0	72.8	66.5	54.0	53.9	39.5	42.6	42.5	19.2	28.1	12.7	28.7	30.6	14.0	33.0	50.7	38.8	20.8	33.5	41.2	53.9	12.1	7.1	72.8	7.1	37.1
8	7.3	9.4	48.1	27.4	48.0	18.3	40.6	40.0	64.9	22.1	25.5	23.4	16.3	15.4	16.2	41.1	16.8	27.8	38.9	16.6	18.0	29.6	39.8	17.3	64.9	7.3	27.9
9	16.3	18.7	18.4	11.9	13.4	11.4	13.3	11.6	25.2	22.4	12.3	8.3	6.0	7.0	5.8	17.3	57.0	32.9	23.7	29.6	26.9	45.9	46.4	25.8	57.0	5.8	21.1
10	35.4	40.2	38.3	20.1	31.0	39.3	50.0	42.0	24.4	37.8	22.2	21.8	27.9	34.8	27.5	43.9	43.7	66.4	17.7	52.1	29.9	22.2	43.0	45.5	66.4	17.7	35.7
11	51.2	35.0	31.0	26.5	37.2	33.9	23.0	20.3	10.4	31.1	11.3	10.4	32.8	33.5	4.7	12.0	8.9	26.9	32.1	24.4	8.7	13.8	44.0	40.3	51.2	4.7	25.1
12	62.4	16.9	15.9	15.2	8.4	9.7	10.1	8.3	16.2	9.1	27.9	14.6	9.9	7.6	6.6	25.4	49.6	57.2	13.8	37.9	58.3	59.5	42.9	15.8	62.4	6.6	25.0
13	61.7	37.7	50.5	72.9	75.1	29.7	62.8	84.7	52.2	47.4	29.2	15.5	14.9	15.6	19.6	23.8	26.7	28.8	22.4	20.9	18.4	27.3	31.6	40.6	84.7	14.9	37.9
14	32.6	33.6	35.0	37.3	30.8	52.3	73.2	70.0	56.0	36.9	27.8	22.0	19.8	20.9	22.1	39.8	65.5	61.9	45.6	66.9	27.6	33.3	32.0	30.5	73.2	19.8	40.6
15	31.6	33.9	13.4	15.9	24.5	16.7	16.1	20.5	38.3	33.0	55.0	81.6	66.3	37.2	7.4	15.9	28.5	42.2	24.9	28.8	59.2	82.3	66.0	16.2	82.3	7.4	35.6
16	11.1	41.9	18.8	32.1	58.3	17.4	15.2	21.4	47.9	68.0	77.2	43.2	72.9	46.1	29.1	39.2	59.0	37.5	50.4	58.2	35.0	67.2	52.0	39.3	77.2	11.1	43.3
17	56.7	63.5	21.9	26.2	41.4	27.6	44.8	62.1	69.8	58.0	64.6	54.0	38.6	14.1	9.7	10.9	30.9	28.4	16.0	13.5	12.8	28.2	12.2	16.0	69.8	9.7	34.2
18	20.8	17.4	12.8	14.6	18.2	14.2	10.6	16.3	52.9	18.1	55.8	38.1	55.9	51.3	62.2	21.8	58.9	37.2	30.1	38.8	18.1	43.1	57.9	40.3	62.2	10.6	33.6
19	49.5	60.9	39.5	20.1	14.2	12.8	11.6	11.3	11.5	10.0	9.8	9.4	9.0	10.1	9.5	10.0	10.8	12.8	10.4	11.3	46.4	50.2	25.3	11.4	60.9	9.0	19.9
20	13.0	12.8	13.5	14.2	9.7	10.7	9.7	10.9	10.4	11.0	9.6	8.9	9.4	10.4	10.2	10.1	9.5	11.5	10.5	10.0	54.4	12.4	36.3	47.4	54.4	8.9	15.3
21	6.6	13.4	12.1	58.4	42.8	26.2	13.0	13.0	11.5	9.5	11.2	10.6	10.4	10.5	11.8	35.0	25.5	11.9	27.1	15.3	36.8	15.8	14.5	22.3	58.4	6.6	19.4
22	9.8	16.1	15.9	12.5	29.3	8.9	9.9	9.7	10.5	11.0	9.8	9.8	10.8	32.1	31.1	17.2	34.4	64.6	21.3	12.4	9.9	10.7	10.0	11.6	64.6	8.9	17.5
23	13.6	10.2	16.6	58.4	16.9	23.3	16.4	16.0	12.5	13.6	10.8	11.3	10.6	10.3	10.1	12.3	43.5	42.5	12.5	11.4	10.3	9.9	10.1	12.3	58.4	9.9	17.3
24	13.1	13.4	12.5	10.0	10.5	9.0	10.5	10.0	13.1	14.5	12.8	10.6	12.8	55.0	32.7	33.7	60.8	53.9	34.1	44.9	34.4	54.6	37.3	18.7	60.8	9.0	25.5
25	14.1	9.3	9.4	10.4	36.1	43.6	59.4	47.3	33.9	20.1	38.3	49.6	24.3	7.3	6.5	9.0	14.1	55.4	33.9	15.0	23.9	34.7	20.8	27.1	59.4	6.5	26.8
26	25.0	11.1	16.4	45.1	50.3	50.1	61.8	52.5	73.4	74.3	60.9	33.9	30.6	40.1	36.6	31.0	32.8	31.4	28.6	26.3	20.0	17.0	14.2	14.4	74.3	11.1	36.6
27	13.7	14.3	14.7	15.2	16.5	29.9	18.5	7.8	9.1	11.5	23.3	29.8	17.2	14.2	10.8	6.1	5.5	8.0	11.0	7.7	7.6	39.3	15.9	8.3	39.3	5.5	14.8
28	32.3	14.2	30.6	14.1	63.2	4.9	6.1	6.4	10.5	36.7	10.5	11.4	10.7	6.8	5.8	6.3	5.6	5.9	7.8	46.7	72.5	38.8	54.1	43.0	72.5	4.9	22.7
29	49.9	58.6	25.9	38.7	22.6	23.1	21.8	19.5	16.8	24.6	23.1	43.1	45.0	28.3	34.3	28.8	33.6	29.1	44.5	40.1	48.9	37.8	47.8	38.3	58.6	16.8	34.4
30	46.7	51.2	55.8	38.6	47.9	38.4	43.2	46.2	57.3	41.2	57.4	60.9	74.6	71.4	34.0	42.1	37.9	45.1	44.4	38.1	62.8	58.3	58.8	66.5	74.6	34.0	50.8
31	39.9	21.9	19.2	18.8	15.4	32.5	33.9	18.5	23.6	26.3	55.5	41.3	76.7	61.8	64.0	66.9	33.2	69.1	59.4	49.7	21.0	13.2	13.5	25.6	76.7	13.2	37.5
Max.	**62.6**	**63.5**	**72.8**	**72.9**	**75.1**	**53.9**	**73.2**	**84.7**	**73.4**	**74.3**	**77.2**	**81.6**	**76.7**	**71.4**	**64.0**	**66.9**	**65.5**	**69.1**	**59.4**	**78.5**	**74.4**	**82.3**	**70.9**	**66.5**	**84.7**		
Min.	**6.6**	**9.3**	**9.4**	**10.0**	**8.4**	**4.9**	**6.1**	**6.4**	**9.1**	**9.1**	**6.9**	**7.1**	**6.0**	**6.5**	**4.7**	**5.3**	**5.5**	**5.9**	**7.8**	**7.7**	**7.6**	**9.9**	**10.0**	**7.1**		**4.7**	
Avg.	**29.9**	**28.4**	**26.5**	**28.6**	**30.5**	**25.0**	**26.6**	**26.3**	**29.0**	**25.4**	**27.2**	**25.1**	**25.7**	**23.9**	**18.5**	**22.9**	**29.7**	**33.6**	**26.3**	**30.7**	**32.7**	**34.6**	**34.2**	**27.6**			**27.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	72.4	55.1	37.7	23.8	22.3	16.7	14.0	15.6	35.9	10.6	8.5	25.4	10.4	10.0	20.2	13.8	21.1	60.9	26.6	43.3	28.5	19.6	13.3	11.0	72.4	8.5	25.7
2	9.1	9.4	7.1	6.8	7.0	6.2	6.8	6.9	10.4	18.6	27.9	38.4	37.3	47.5	19.0	11.8	25.0	26.9	29.3	32.0	18.1	14.1	45.1	57.6	57.6	6.2	21.6
3	36.9	56.8	15.3	14.6	12.0	13.0	11.2	11.0	10.0	10.1	11.0	11.5	9.9	10.4	10.7	10.4	10.6	9.7	8.7	9.4	9.2	9.7	10.8	9.7	56.8	8.7	13.9
4	10.7	11.4	10.4	21.5	52.7	60.7	61.4	58.0	21.4	23.8	19.9	21.5	23.0	22.1	19.4	10.3	21.9	39.4	51.5	41.0	46.3	27.4	9.3	7.8	61.4	7.8	28.9
5	5.8	9.3	20.1	24.4	30.8	25.8	19.6	4.0	5.1	25.2	5.0	5.1	10.8	18.1	25.6	72.2	52.7	60.0	37.4	35.7	16.9	15.1	13.5	29.6	72.2	4.0	23.7
6	30.0	26.6	15.4	24.3	14.1	34.4	20.3	10.9	7.3	8.1	16.6	55.1	33.9	23.8	53.9	14.9	15.1	12.2	14.4	20.7	43.6	26.4	31.3	26.9	55.1	7.3	24.2
7	14.7	25.9	23.8	24.7	31.7	42.5	26.1	21.9	23.1	25.2	18.1	46.9	32.5	17.8	12.2	12.7	17.7	27.3	19.8	13.9	16.8	13.3	15.7	16.2	46.9	12.2	22.5
8	17.3	15.9	15.5	13.8	14.3	14.2	13.8	28.3	32.3	19.8	27.0	57.6	9.9	9.2	32.7	62.1	38.2	46.9	26.9	30.8	14.7	22.0	27.2	40.9	62.1	9.2	26.3
9	47.1	58.8	39.6	36.5	19.7	25.0	21.9	23.6	17.4	19.7	12.0	23.4	64.4	51.8	36.7	57.8	40.4	44.1	58.1	51.8	16.4	42.2	23.6	20.9	64.4	12.0	35.5
10	47.7	31.6	53.9	53.5	55.0	39.4	39.6	31.7	45.2	30.4	49.3	34.4	48.6	61.3	53.1	37.2	27.1	32.4	36.7	36.2	41.5	36.8	51.5	67.1	67.1	27.1	43.4
11	52.9	53.7	9.8	47.3	30.7	52.3	25.8	48.2	40.4	7.6	28.2	11.4	8.9	4.6	5.3	4.3	6.2	5.6	3.2	8.4	16.5	22.2	12.5	10.8	53.7	3.2	21.5
12	44.7	64.4	57.9	55.4	63.0	21.1	44.2	11.6	40.3	42.9	31.5	17.8	13.1	9.6	13.7	15.5	22.4	40.2	57.2	52.6	67.8	63.6	56.3	28.2	67.8	9.6	39.0
13	25.0	27.7	27.6	38.5	62.2	44.6	18.3	19.9	25.9	28.8	32.5	16.2	12.1	17.1	13.2	19.3	12.1	18.1	15.2	42.7	53.2	44.5	59.7	55.0	62.2	12.1	30.4
14	34.9	51.5	48.3	56.7	61.0	12.6	8.0	9.6	12.4	31.9	52.5	61.1	28.3	57.0	38.2	61.8	44.8	68.3	25.9	55.0	60.9	29.6	42.0	14.3	68.3	8.0	40.3
15	8.9	10.9	12.5	12.4	11.2	13.0	11.7	12.8	11.3	13.4	11.4	11.6	10.6	11.4	11.5	13.5	11.8	10.4	8.3	7.3	8.4	7.3	43.7	15.9	43.7	7.3	12.6
16	7.9	6.7	46.6	10.1	9.5	9.2	7.0	21.6	21.8	13.6	5.3	5.3	10.0	6.1	6.4	6.0	4.3	6.1	5.9	8.2	8.2	12.8	10.0	10.1	46.6	4.3	10.8
17	62.3	30.1	12.3	20.8	10.9	14.0	43.0	20.3	34.9	19.6	17.6	14.0	34.5	37.3	12.8	15.2	18.3	18.4	24.6	20.6	49.2	31.2	36.6	29.2	62.3	10.9	26.2
18	18.4	28.2	18.6	21.3	59.1	48.2	70.2	72.3	46.7	46.7	16.1	40.3	13.8	14.7	36.5	17.7	29.6	47.1	46.3	18.3	12.6	9.0	6.8	8.6	72.3	6.8	31.1
19	9.3	49.4	45.9	36.7	43.6	12.8	13.3	16.9	22.1	21.7	10.3	25.4	32.3	26.6	45.5	27.4	11.5	13.7	20.7	15.2	7.5	6.4	13.3	20.0	49.4	6.4	22.8
20	50.9	27.4	27.3	21.4	9.4	9.1	9.6	8.9	8.0	4.6	23.4	26.7	9.7	6.2	12.5	16.5	13.8	41.9	65.3	56.0	43.4	66.5	51.8	73.5	73.5	4.6	28.5
21	55.4	36.8	53.7	67.2	58.2	63.1	32.0	46.4	28.8																67.2	28.8	49.0
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Max.	**72.4**	**64.4**	**57.9**	**67.2**	**63.0**	**63.1**	**70.2**	**72.3**	**46.7**	**46.7**	**52.5**	**61.1**	**64.4**	**61.3**	**53.9**	**72.2**	**52.7**	**68.3**	**65.3**	**56.0**	**67.8**	**66.5**	**59.7**	**73.5**	**73.5**		
Min.	**5.8**	**6.7**	**7.1**	**6.8**	**7.0**	**6.2**	**6.8**	**4.0**	**5.1**	**4.6**	**5.0**	**5.1**	**8.9**	**4.6**	**5.3**	**4.3**	**4.3**	**5.6**	**3.2**	**7.3**	**7.5**	**6.4**	**6.8**	**7.8**		**3.2**	
Avg.	**31.5**	**32.7**	**28.5**	**30.1**	**32.3**	**27.5**	**24.7**	**23.8**	**23.8**	**21.1**	**21.2**	**27.5**	**22.7**	**23.1**	**24.0**	**25.0**	**22.2**	**31.5**	**29.1**	**30.0**	**29.0**	**26.0**	**28.7**	**27.7**			**26.8**

Total Hours in Month 744 **Hours Data Available** 489 **Data Recovery** 65.7%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Min.																											
Avg.																											

Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

October *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 720 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Wind Sigma (RM Young)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

January 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.4	8.5	7.2	6.6	7.2	8.1	7.9	8.2	9.3	7.6	7.8	6.3	6.2	7.0	6.7	7.9	7.4	9.3	9.0	8.6	8.6	8.8	9.3	9.3	9.3	6.2	8.0
2	9.1	7.7	7.7	6.4	7.7	7.3	7.4	8.3	11.0	10.6	10.1	9.2	7.7	8.1	8.4	8.0	7.7	7.4	9.1	7.3	7.3	7.7	7.0	6.9	11.0	6.4	8.1
3	6.4	8.3	6.3	7.6	8.5	7.1	7.4	7.0	6.3	6.2	5.3	5.3	5.4	5.9	5.7	6.6	6.6	7.0	5.9	5.6	5.1	6.4	7.2	5.7	8.5	5.1	6.4
4	4.9	5.9	3.9	4.2	5.2	3.6	4.3	1.4	2.8	2.4	2.1	2.7	2.5	3.8	4.0	3.1	6.0	5.3	2.5	5.6	5.2	2.7	2.8	5.1	6.0	1.4	3.8
5	5.3	5.9	7.1	5.7	5.8	7.2	7.0	5.2	3.8	4.1	2.2	1.9	1.9	3.2	3.1	1.7	1.4	3.4	4.6	4.1	3.7	3.9	3.1	2.3	7.2	1.4	4.1
6	2.9	2.9	3.3	3.7	3.1	2.9	3.4	2.8	3.6	3.3	1.9	1.5	3.4	3.4	3.3	2.8	1.2	2.4	2.1	1.4	1.5	3.1	2.9	4.5	4.5	1.2	2.8
7	5.5	3.3	3.0	3.0	2.9	1.8	1.2	4.3	7.9	8.0	7.8	9.1	11.6	12.0	12.2	10.4	8.0	8.0	7.5	11.7	11.7	11.1	11.9	10.5	12.2	1.2	7.7
8	10.0	9.4	9.4	10.9	9.8	10.0	9.5	9.8	9.6	8.5	7.6	6.9	7.4	5.2	5.2	2.3	2.7	2.5	2.7	2.7	2.9	3.3	3.9	3.3	10.9	2.3	6.5
9	2.7	3.3	3.2	2.9	3.5	3.5	2.4	3.5	3.8	3.5	3.3	2.2	2.5	4.5	3.6	1.8	1.3	3.0	2.3	1.3	2.1	1.6	2.6	2.5	4.5	1.3	2.8
10	1.3	2.6	2.2	4.5	5.5	6.1	4.4	3.3	3.1	4.3	3.0	2.8	3.7	3.7	4.3	7.3	6.5	7.1	7.3	7.2	7.6	8.0	8.4	7.9	8.4	1.3	5.1
11	8.1	9.0	5.8	6.2	7.0	7.9	6.8	4.0	5.2	6.5	4.4	5.0	5.4	3.4	3.2	3.3	2.3	2.4	6.0	6.3	6.1	6.0	4.1	6.9	9.0	2.3	5.5
12	2.3	7.2	8.0	9.2	8.9	9.6	11.1	9.7	10.3	6.6	4.0	4.9	5.5	5.6	5.2	4.4	5.5	4.1	3.6	3.9	4.4	3.4	3.7	4.5	11.1	2.3	6.1
13	5.1	3.4	4.2	3.1	3.5	3.7	3.6	5.1	5.8	7.6	3.9	7.5	7.5	8.1	8.1	6.8	8.2	6.6	8.5	6.3	4.8	6.0	4.2	4.5	8.5	3.1	5.7
14	4.5	6.1	4.5	5.6	6.3	5.9	6.0	4.7	4.4	5.7	6.4	7.2	7.1	8.3	8.0	8.8	8.0	7.8	8.5	7.9	8.5	8.3	8.9	9.1	9.1	4.4	6.9
15	9.8	9.4	9.6	10.0	10.3	10.3	10.2	10.9	10.1	10.3	9.4	9.9	9.6	9.8	9.8	9.9	10.7	9.1	9.9	10.6	10.4	11.0	9.5	10.2	11.0	9.1	10.0
16	9.5	8.7	9.1	9.3	11.4	11.2	9.7	9.4	8.7	9.1	8.4					6.4	4.7	4.7	3.4	2.6	1.2	2.0	2.3	2.4	11.4	1.2	6.7
17	1.9	2.7	3.2	3.3	3.1	4.2	7.7	6.4	7.2	6.5	6.5	8.5	9.5	9.3	10.4	8.5	10.8	11.3	13.5	12.2	11.9	10.0	10.3	11.4	13.5	1.9	7.9
18	11.1	10.7	10.4	10.7	10.1	10.2	10.4	9.8	10.5	8.1	5.1	4.3	4.9	4.9	3.8	5.3	6.1	6.3	5.2	2.7	5.6	5.0	7.6	6.2	11.1	2.7	7.3
19	6.8	8.5	10.1	9.2	8.0	4.8	7.5	8.7	9.8	9.3	10.0	9.9	10.6	9.6	6.2	7.4	8.2	5.6	4.7	4.0	4.0	5.0	6.2	6.4	10.6	4.0	7.5
20	4.5	4.5	5.3	4.4	4.5	5.4	5.8	5.2	4.9	5.7	4.7	4.9	5.4	5.7	5.7	4.7	4.5	3.8	3.5	3.1	3.4	3.7	2.9	4.1	5.8	2.9	4.6
21	3.9	7.2	7.6	8.8	7.5	8.8	7.9	7.7	6.7	6.2	5.5	3.5	5.3	7.1	7.8	8.8	10.2	10.5	9.7	12.0	18.0	21.1	23.2	24.3	24.3	3.5	10.0
22	21.2	19.4	19.5	21.1	19.9	19.4	20.2	21.2	21.7	22.3	22.3	21.8	22.5	21.2	22.2	24.2	23.7	24.2	25.0	24.3	21.8	20.6	18.3	17.5	25.0	17.5	21.5
23	16.8	15.9	13.0	8.7	7.6	8.8	8.9	6.7	7.7	10.3	9.1	8.0	9.3	9.7	10.2	9.8	11.3	9.6	7.8	8.9	8.7	8.0	9.5	8.6	16.8	6.7	9.7
24	8.8	9.2	9.0	10.8	8.6	9.0	8.0	9.2	9.8	9.0	10.1	10.6	11.2	10.8	11.3	10.8	10.2	10.2	10.0	10.3	9.1	8.9	8.0	7.9	11.3	7.9	9.6
25	7.5	7.7	7.6	5.4	6.0	7.3	7.0	4.5	5.1	4.8	5.8	6.5	6.4	5.2	4.8	5.5	6.1	7.3	8.2	7.9	8.7	10.8	10.5	12.1	12.1	4.5	7.0
26	12.5	12.2	11.5	12.9	12.1	12.1	11.1	11.1	11.7	12.8	11.4	11.8	12.2	11.3	11.8	10.9	9.8	9.4	10.9	13.2	13.7	13.9	12.5	12.5	13.9	9.4	11.9
27	12.5	13.4	11.0	14.3	15.6	19.6	14.5	17.7	18.1	17.1	16.8	20.2	16.4	17.6	18.3	20.9	20.4	18.2	18.9	21.9	21.6	19.3	20.7	20.0	21.9	11.0	17.7
28	17.6	20.8	20.0	19.9	20.9	23.9	24.1	21.7	21.2	19.5	20.7	18.8	17.6	13.5	11.1	9.6	11.0	11.6	11.7	10.6	10.9	10.8	10.0	9.9	24.1	9.6	16.1
29	9.4	8.5	8.5	8.0	7.3	7.0	7.5	7.8	7.8	7.2	6.6	6.6	7.1	7.1	7.1	6.3	6.6	6.8	6.8	7.0	6.6	7.6	7.7	6.7	9.4	6.3	7.3
30	6.7	6.7	7.3	7.0	6.7	6.0	6.3	6.5	6.3	6.0	5.9	5.7	5.8	5.2	4.5	3.9	4.2	4.3	3.3	3.4	4.0	4.3	5.1	6.1	7.3	3.3	5.5
31	6.2	5.7	6.7	7.0	5.5	4.4	5.4	4.3	5.7	5.5	5.9	5.8	5.1	5.7	6.6	7.1	7.2	8.4	9.7	11.3	11.1	13.4	13.2	12.0	13.4	4.3	7.4
Max.	**21.2**	**20.8**	**20.0**	**21.1**	**20.9**	**23.9**	**24.1**	**21.7**	**21.7**	**22.3**	**22.3**	**21.8**	**22.5**	**21.2**	**22.2**	**24.2**	**23.7**	**24.2**	**25.0**	**24.3**	**21.8**	**21.1**	**23.2**	**24.3**	**25.0**		
Min.	**1.3**	**2.6**	**2.2**	**2.9**	**2.9**	**1.8**	**1.2**	**1.4**	**2.8**	**2.4**	**1.9**	**1.5**	**1.9**	**3.2**	**3.1**	**1.7**	**1.2**	**2.4**	**2.1**	**1.3**	**1.2**	**1.6**	**2.3**	**2.3**		**1.2**	
Avg.	**7.8**	**8.2**	**7.9**	**8.1**	**8.1**	**8.3**	**8.2**	**7.9**	**8.4**	**8.2**	**7.5**	**7.6**	**7.9**	**7.9**	**7.8**	**7.6**	**7.7**	**7.7**	**7.8**	**7.9**	**8.1**	**8.2**	**8.3**	**8.4**			**8.0**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

February 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.3	12.7	12.7	13.1	13.1	11.5	13.8	14.7	14.5	17.7	16.0	19.5	18.3	18.6	20.6	21.6	16.9	15.1	16.1	17.0	13.1	14.0	19.1	18.9	21.6	11.3	15.8
2	19.0	19.0	18.3	17.5	16.7	16.5	18.0	18.0	17.7	17.3	12.4	11.8	10.5	10.9	11.1	12.1	11.3	10.3	9.9	8.7	7.5	6.9	7.1	6.4	19.0	6.4	13.1
3	6.6	8.0	8.9	9.0	9.2	8.7	10.2	8.6	9.4	8.2	8.5	7.9	9.6	9.1	8.2	9.0	10.3	9.6	9.3	9.7	10.2	11.0	10.5	10.9	11.0	6.6	9.2
4	10.8	10.5	11.4	12.9	13.0	12.3	12.5	12.5	12.9	12.2	13.5	13.7	13.1	14.6	13.7	15.8	16.7	14.6	15.8	13.4	14.9	16.5	16.0	17.4	17.4	10.5	13.8
5	17.8	18.3	15.8	16.8	17.0	16.3	15.5	15.8	16.3	16.0	17.2	14.8	11.9	11.6	11.3	11.7	13.0	15.0	12.5	14.9	14.6	15.4	14.0	13.5	18.3	11.3	14.9
6	13.8	13.3	12.8	12.0	11.9	12.0	10.9	7.9	8.7	6.6	3.5	1.9	6.2	3.1	6.6	4.8	4.3	3.2	3.8	3.6	4.2	3.8	3.6	2.6	13.8	1.9	6.9
7	3.6	5.0	4.6	3.6	3.0	2.4	2.9	7.2	12.6	11.8	10.6	13.4	14.5	17.4	16.1	8.1	7.4	6.6	8.8	12.6	12.0	8.9	11.2	10.8	17.4	2.4	9.0
8	10.1	11.4	6.1	5.9	5.1	4.6	4.5	6.1	6.5	7.6	7.4	7.8	7.5	8.4	12.1	11.3	10.8	11.5	11.1	9.5	10.1	10.6	11.1	10.0	12.1	4.5	8.6
9	13.0	12.0	12.6	13.1	12.7	15.3	16.1	17.7	19.1	19.5	19.2	18.6	18.2	17.4	16.6	13.9	14.0	13.0	11.3	10.7	11.5	10.7	8.5	8.0	19.5	8.0	14.3
10	9.9	11.2	10.5	11.2	10.9	12.8	11.9	11.4	11.8	11.8	12.4	10.7	8.1	6.7			4.4	7.2	5.5	7.5	6.3	5.0	7.2	8.3	12.8	4.4	9.2
11	9.1	8.7	7.9	7.2	8.4	9.6	9.0	10.1	11.2	11.3	11.1	10.4	9.7	9.6	9.7	11.8	12.1	11.3	11.3	10.7	9.5	10.4	10.7	9.4	12.1	7.2	10.0
12	7.4	7.0	6.9	7.4	10.7	9.9	10.1	10.5	12.2	11.1	15.5	16.7	18.1	13.9	11.9	10.8	16.7	20.3	20.1	14.5	16.2	14.4	11.5	10.3	20.3	6.9	12.7
13	5.4	2.7	3.4	3.5	3.8	2.7	1.7	5.0	5.6	5.5	4.5	7.3	7.7	8.0	7.4	7.4	6.9	8.7	8.1	8.4	8.0	6.1	6.0	6.3	8.7	1.7	5.8
14	7.4	8.1	8.3	7.9	7.0	7.6	6.2	9.1	8.0	7.5	6.9	8.8	8.7	8.4	7.4	6.8	6.6	6.6	6.3	6.9	8.0	9.4	8.0	9.8	9.8	6.2	7.7
15	9.6	10.1	8.5	8.9	9.9	9.0	9.8	10.2	9.7	7.6	5.3	7.8	6.8	6.7	7.4	9.2	9.0	8.5	8.6	9.8	8.0	7.4	6.5	6.3	10.2	5.3	8.4
16	6.1	5.3	5.3	4.9	5.0	4.7	2.9	2.7	2.7	2.5	1.9	2.1	3.9	3.9	2.5	3.5	4.9	4.4	5.4	6.2	5.3	5.1	5.7	5.8	6.2	1.9	4.3
17	7.1	7.9	7.8	7.8	7.3	9.2	10.2	11.8	13.7	12.8	10.5	11.2	11.7	10.0	10.1	9.8	9.5	7.9	8.4	8.6	8.8	8.8	10.4	9.0	13.7	7.1	9.6
18	9.3	7.7	7.1	7.2	6.4	6.1	7.1	6.3	7.9	9.9	10.1	7.1	5.5	6.5	3.1	5.6	5.7	4.9	5.2	5.5	6.7	6.2	5.8	5.7	10.1	3.1	6.6
19	4.3	13.6	16.0	14.2	11.4	9.5	7.5	8.2	12.1	9.0	12.1	12.5	11.4	7.1	10.0	10.3	13.7	14.5	15.6	15.2	12.9	13.1	9.9	9.8	16.0	4.3	11.4
20	8.2	9.5	8.8	8.0	5.6	6.5	5.9	7.8	8.3	10.4	7.5	6.8	7.1	13.7	12.4	11.8	13.2	19.3	21.1	20.4	17.2	19.4	19.3	16.9	21.1	5.6	11.9
21	17.6	15.0	15.2	10.4	13.4	15.1	13.9	12.8	16.2	11.0	10.3	10.5	14.6	12.1	10.8	10.5	8.3	7.5	7.5	7.4	8.9	7.0	7.8	8.5	17.6	7.0	11.3
22	8.4	9.3	7.8	5.7	5.9	6.3	13.3	10.3	8.1	8.1	8.9	9.9	8.1	6.1	5.9	5.0	5.5	5.1	5.3	9.1	7.9	7.4	6.6	5.6	13.3	5.0	7.5
23	4.6	4.2	4.0	3.5	1.6	3.4	2.9	4.3	3.2	9.5	12.6	10.1	9.2	8.8	9.2	6.6	7.4	10.0	7.4	4.8	5.9	6.2	5.9	6.9	12.6	1.6	6.3
24	6.5	5.7	6.0	6.6	6.0	7.1	7.4	7.4	8.5	8.3	8.0	7.8	5.2	4.4	4.3	4.2	3.2	3.6	6.4	6.1	6.1	6.1	4.8	4.2	8.5	3.2	6.0
25	4.3	4.1	4.6	2.9	3.0	2.8	2.3	1.7	1.4	4.5	3.9	1.3	6.6	3.9	13.7	9.1	11.3	9.1	13.3	13.5	15.2	12.0	9.1	10.2	15.2	1.3	6.8
26	12.0	9.9	12.7	9.6	9.9	8.9	6.8	7.7	5.6	5.7	6.1	8.0	6.8	9.2	7.5	6.5	6.5	6.7	4.5	2.8	2.4	4.8	5.1	6.2	12.7	2.4	7.2
27	7.9	8.1	8.8	8.5	7.9	6.0	3.7	9.8	12.3	6.8	6.9	5.4	5.5	4.2	6.7	6.8	6.7	8.9	10.4	10.1	8.5	7.6	9.5	9.3	12.3	3.7	7.7
28	11.1	12.0	10.9	11.8	12.0	13.2	13.5	12.9	12.6	12.2	9.0	11.4	13.0	14.0	16.5	18.5	14.9	14.3	14.6	16.0	13.9	13.9	12.8	13.0	18.5	9.0	13.2
Max.	**19.0**	**19.0**	**18.3**	**17.5**	**17.0**	**16.5**	**18.0**	**18.0**	**19.1**	**19.5**	**19.2**	**19.5**	**18.3**	**18.6**	**20.6**	**21.6**	**16.9**	**20.3**	**21.1**	**20.4**	**17.2**	**19.4**	**19.3**	**18.9**	**21.6**		
Min.	**3.6**	**2.7**	**3.4**	**2.9**	**1.6**	**2.4**	**1.7**	**1.7**	**1.4**	**2.5**	**1.9**	**1.3**	**3.9**	**3.1**	**2.5**	**3.5**	**3.2**	**3.2**	**3.8**	**2.8**	**2.4**	**3.8**	**3.6**	**2.6**		**1.3**	
Avg.	**9.4**	**9.6**	**9.4**	**9.0**	**8.8**	**8.9**	**8.9**	**9.6**	**10.3**	**10.1**	**9.7**	**9.8**	**9.9**	**9.6**	**10.1**	**9.7**	**9.7**	**9.9**	**10.1**	**10.1**	**9.8**	**9.6**	**9.4**	**9.3**			**9.6**

Total Hours in Month 672 **Hours Data Available** 670 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

March 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.8	9.5	5.9	10.2	9.8	9.3	10.1	10.1	5.8	6.7	7.1	5.8	5.7	5.6	4.1	3.2	4.2	5.1	7.5	7.9	6.9	8.1	8.7	8.1	14.8	3.2	7.5
2	4.7	7.5	8.1	7.7	7.9	8.8	8.6	10.2	10.8	10.7	10.1	9.7	9.8	10.3	9.2	9.3	11.1	9.4	9.8	9.7	10.0	10.5	9.7	10.5	11.1	4.7	9.3
3	9.7	9.8	8.8	7.6	8.7	9.1	8.6	8.5	9.4	8.6	8.5	6.9	7.1	7.3	6.5	6.4	4.8	4.2	4.9	5.2	5.2	5.7	5.5	6.2	9.8	4.2	7.2
4	5.9	5.7	6.0	7.1	6.3	6.3	6.8	6.8	7.6	6.9	6.6	6.4	7.3	7.4	7.9	7.4	7.5	7.4	7.2	6.7	7.3	7.2	7.2	6.8	7.9	5.7	6.9
5	7.0	7.0	8.6	8.0	8.1	7.5	7.8	2.8	5.0	2.5	2.9	8.2	7.6	8.0	5.6	4.9	5.9	8.3	10.0	11.4	9.0	9.2	6.7	7.9	11.4	2.5	7.1
6	11.5	10.9	9.7	10.4	9.7	8.3	7.8	12.8	15.7	14.7	16.3	12.2	13.9	9.0	10.0	9.0	7.8	6.3	5.6	4.9	5.8	6.8	7.0	7.9	16.3	4.9	9.7
7	8.0	6.7	6.5	7.2	7.3	7.0	8.1	7.7	12.1	13.5	14.0	15.2	13.6	12.4	13.1	14.2	15.0	14.9	15.9	14.8	13.3	18.8	15.0	16.8	18.8	6.5	12.1
8	18.8	20.1	18.4	17.3	21.8	22.2	20.4	22.7	20.5	18.5	17.9	17.5	18.0	17.3	18.0	20.8	22.5	24.4	21.5	15.2	18.2	13.7	10.6	13.3	24.4	10.6	18.7
9	16.4	13.9	16.2	13.5	20.9	21.2	15.7	15.6	15.8	17.2	19.3	17.4	15.3	16.8	13.7	14.6	13.2	13.9	11.9	14.1	14.5	13.5	12.8	11.2	21.2	11.2	15.3
10	9.5	8.6	8.1	8.4	7.8	8.2	9.3	4.3	6.6	5.6	5.5	4.1	3.7	3.5	3.7	2.9	3.1	5.6	6.7	5.7	5.8	7.5	7.5	7.0	9.5	2.9	6.2
11	6.9	7.7	10.7	11.1	9.6	11.2	9.8	10.9	11.0	11.8	10.9	10.0	9.5	10.2	9.5	8.9	8.9	10.5	9.9	10.0	10.5	10.0	9.1	7.7	11.8	6.9	9.8
12	12.0	11.1	10.9	11.5	10.5	10.4	9.2	8.7	7.4	7.1	7.7	8.4	9.2	8.8	9.1	9.1	8.1	7.1	7.2	6.4	5.9	4.8	4.1	3.5	12.0	3.5	8.3
13	3.9	3.4	2.4	2.0	2.3	2.7	2.9	3.3	2.6	3.0	5.2	6.3	4.1	3.5	3.0	2.9	3.0	2.5	2.4	2.6	2.0	2.0	3.0	2.7	6.3	2.0	3.1
14	2.6	3.4	3.2	3.7	4.0	3.4	3.0	3.4	5.0	5.4	5.4	3.7	4.6	4.2	5.1	5.7	3.4	4.9	5.7	4.3	5.0	6.1	5.6	3.7	6.1	2.6	4.4
15	5.7	5.7	5.3	6.6	6.5	6.0	5.9	5.3	4.8	5.9	3.8	2.6	2.0	2.0	2.0	2.2	3.4	3.4	5.0	3.6	4.5	5.5	6.8	6.9	6.9	2.0	4.6
16	6.0	8.2	7.7	6.6	6.7	7.0	6.6	7.8	8.6	9.2	9.1	8.3	8.5	7.8	5.8	7.4	7.0	4.4	6.3	6.0	5.8	6.1	7.6	6.0	9.2	4.4	7.1
17	5.9	6.0	5.8	7.3	7.7	7.3	6.5	6.9	7.5	6.6	7.7	10.4	11.4	11.2	9.5	9.6	9.0	9.3	9.9	7.9	9.1	9.3	9.3	9.0	11.4	5.8	8.3
18	10.5	11.8	10.7	11.1	10.2	9.8	9.7	9.8	9.8	9.1	9.8	10.8	11.5	11.1	10.4	9.0	6.2	5.2	3.3	1.6	1.3	1.6	0.8	1.5	11.8	0.8	7.8
19	3.3	2.1	2.9	3.3	2.7	2.6	4.2	4.3	4.6	4.7	3.8	2.9	3.1	3.9	6.2	6.1	5.0	3.9	3.5	2.6	1.8	3.9	5.7	5.7	6.2	1.8	3.9
20	5.4	5.2	5.0	4.9	5.6	5.9	5.3	4.6	3.6	4.2	3.4	2.1	3.2	4.2	4.6	7.9	7.4	6.9	8.8	9.1	8.4	9.8	9.9	8.1	9.9	2.1	6.0
21	8.4	9.2	7.6	7.6	7.2	7.4	6.5	6.9	4.4	4.3	6.8	5.8	3.3	3.5	2.4	3.3	5.6	6.7	5.6	6.2	5.8	5.5	5.0	7.4	9.2	2.4	5.9
22	10.0	10.2	10.2	10.3	11.0	11.4	11.9	11.9	13.8	11.6	11.2	10.0	9.8	8.5	7.4	7.3	4.7	4.6	2.1	3.4	6.4	6.8	6.7	5.8	13.8	2.1	8.6
23	5.7	4.2	4.2	3.0	2.9	3.1	4.0	5.8	6.6	8.1	8.1	8.4	6.0	7.1	3.3	3.7	6.2	11.8	11.8	11.3	10.6	11.6	11.1	9.1	11.8	2.9	7.0
24	9.4	10.0	10.7	10.5	10.3	10.2	10.2	9.0	9.1	9.5	8.2	6.1	3.8	3.2	4.4	5.3	3.8	4.8	5.9	7.8	8.2	8.2	7.3	6.9	10.7	3.2	7.6
25	6.1	6.3	6.4	4.3	6.8	6.2	6.8	7.0	6.8	7.1	7.7	2.3	1.7	2.7	2.7	2.1	3.0	4.9	4.4	6.9	6.6	7.1	8.0	9.0	9.0	1.7	5.5
26	8.1	8.7	8.4	8.3	8.8	8.5	9.5	10.1	9.7	8.9	7.8	5.8	2.4	2.8	2.6	3.4	3.7	3.9	1.9	6.4	5.8	6.8	5.6	5.9	10.1	1.9	6.4
27	6.1	5.1	5.5	4.6	4.9	5.0	3.2	3.4	3.8	1.9	2.3	3.1	3.3	3.4	4.2	3.7	3.4	3.2	2.7	2.3	2.1	1.8	4.3	4.2	6.1	1.8	3.7
28	3.3	4.1	4.3	5.3	4.9	5.1	5.1	4.7	5.3	3.4	1.7	2.9	4.3	4.2	4.5	3.6	3.7	3.3	4.9	3.1	1.9	1.6	2.4	4.1	5.3	1.6	3.8
29	6.4	5.5	4.5	5.3	5.6	6.7	4.7	6.0	4.9	5.1	3.4	3.1	1.6	4.6	5.7	6.1	6.1	1.6	2.5	2.2	1.5	1.6	4.1	4.7	6.7	1.5	4.3
30	6.0	4.8	5.7	6.5	6.2	9.1	8.4	9.5	9.2	8.9	8.7	9.8	9.9	13.3	10.8	11.1	10.7	11.2	8.8	11.2	10.7	11.9	13.7	9.4	13.7	4.8	9.4
31	11.9	12.3	11.2	11.8	10.6	9.8	10.3	12.0	9.7	10.5	9.4	9.5	11.5	10.6	10.4	9.7	8.4	7.7	5.9	5.9					12.3	5.9	9.9
Max.	**18.8**	**20.1**	**18.4**	**17.3**	**21.8**	**22.2**	**20.4**	**22.7**	**20.5**	**18.5**	**19.3**	**17.5**	**18.0**	**17.3**	**18.0**	**20.8**	**22.5**	**24.4**	**21.5**	**15.2**	**18.2**	**18.8**	**15.0**	**16.8**	**24.4**		
Min.	**2.6**	**2.1**	**2.4**	**2.0**	**2.3**	**2.6**	**2.9**	**2.8**	**2.6**	**1.9**	**1.7**	**2.1**	**1.6**	**2.0**	**2.0**	**2.1**	**3.0**	**1.6**	**1.9**	**1.6**	**1.3**	**1.6**	**0.8**	**1.5**		**0.8**	
Avg.	**8.1**	**7.9**	**7.7**	**7.8**	**8.2**	**8.3**	**8.0**	**8.1**	**8.3**	**8.1**	**8.1**	**7.6**	**7.3**	**7.4**	**6.9**	**7.1**	**7.0**	**7.1**	**7.1**	**7.0**	**7.0**	**7.4**	**7.4**	**7.2**			**7.6**

Total Hours in Month 744 **Hours Data Available** 740 **Data Recovery** 99.5%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

April *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1					8.0	7.4	8.9	11.1	12.3	11.1	12.4	10.4	9.4	16.6	14.0	10.1	10.8	12.5	11.2	10.6	8.4	9.2	9.6	10.8	16.6	7.4	10.7
2	7.8	10.8	10.9	10.6	12.8	9.8	8.0	7.9	6.5	5.4	5.2	3.0	2.9	2.7	3.2	3.9	3.9	3.1	2.7	4.0	4.9	6.1	6.4	7.6	12.8	2.7	6.2
3	8.0	8.3	7.7	8.5	8.2	8.5	8.9	9.5	9.7	10.7	10.2	9.7	10.7	10.3	10.6	10.5	9.4	7.9	7.2	7.6	7.6	8.0	8.3	8.0	10.7	7.2	8.9
4	8.6	7.5	7.3	6.2	6.1	7.1	6.1	6.4	7.0	6.2	5.3	4.5	2.4	1.7	1.9	1.8	2.3	1.7	1.5	1.8	2.0	2.3	2.5	2.3	8.6	1.5	4.3
5	4.6	8.6	8.3	8.2	6.1	6.8	9.4	8.7	10.8	10.4	12.5	14.2	14.1	13.5	11.2	12.9	10.0	12.7	12.5	16.3	15.8	14.8	14.8	14.0	16.3	4.6	11.3
6	12.2	12.8	11.7	8.4	8.2	8.4	9.2	8.5	9.5	8.6	4.6	3.6	3.8	4.7	4.4	4.1	4.3	4.1	3.0	3.2	4.4	2.8	1.8	2.3	12.8	1.8	6.2
7	3.1	2.0	5.2	4.6	2.8	5.9	5.1	4.7	4.8	3.9	3.9	4.0	2.6	2.3	2.5	2.6	4.9	2.7	3.2	3.2	2.8	5.4	6.0	5.5	6.0	2.0	3.9
8	7.0	10.4	6.7	7.6	8.5	7.0	6.7	8.7	8.8	5.9	6.4	5.7	5.5	8.6	6.5	6.6	6.9	6.9	6.1	5.1	4.4	3.7	2.4	3.3	10.4	2.4	6.5
9	1.5	1.2	2.0	2.9	2.6	2.0	3.2	3.6	2.5	4.1	3.4	2.1	2.6	4.7	4.9	4.4	5.4	4.4	1.9	2.5	3.2	7.7	6.3	8.5	8.5	1.2	3.7
10	8.7	12.0	11.5	11.3	8.7	11.9	10.8	11.6	12.6	13.3	15.8	17.2	13.2	15.1	19.9	21.1	18.8	17.9	8.7	7.3	16.5	16.7	14.3	13.4	21.1	7.3	13.7
11	12.4	10.6	9.9	9.0	6.9	8.7	6.4	5.9	5.9	4.1	5.3	4.8	4.7	8.0	9.7	10.3	10.8	11.0	10.3	10.2	10.4	11.4	11.5	10.1	12.4	4.1	8.7
12	10.5	10.8	9.9	10.1	10.0	11.0	10.9	10.5	9.5	9.5	9.9	9.5	8.7	7.9	6.4	4.6	1.3	0.8	1.5	3.4	3.6	8.6	9.8	8.5	11.0	0.8	7.8
13	10.7	12.7	12.7	12.8	13.5	13.2	12.5	13.7	14.4	12.2	13.0	12.7	18.2	18.8	20.4	22.4	21.7	21.2	12.2	14.3	13.8	14.0	13.3	13.7	22.4	10.7	14.9
14	13.8	14.0	13.2	12.5	14.0	14.2	14.4	13.7	13.9	14.0	14.3	14.5	14.4	14.0	13.9	13.2	12.6	12.1	10.5	10.3	11.7	15.2	12.5	11.6	15.2	10.3	13.3
15	12.3	10.9	10.3	10.1	9.8	8.9	7.2	10.1	12.8	12.3	12.1	14.8	15.9	11.0	11.8	10.5	9.8	10.4	9.0	7.7	6.4	6.4	5.1	8.1	15.9	5.1	10.1
16	5.1	6.5	5.1	4.5	7.7	8.7	10.2	10.6	11.2	9.9	9.8	10.8	11.4	10.2	12.4	14.8	12.5	13.1	12.8	13.5	14.1	15.0	12.7	13.9	15.0	4.5	10.7
17	13.0	13.2	12.8	13.9	12.6	11.4	11.1	7.8	4.6	7.9	8.1	5.9	6.4	7.8	7.2	6.8	6.1	7.0	6.9	7.0	4.7	3.4	3.3	7.6	13.9	3.3	8.2
18	4.7	5.7	4.3	3.4	2.5	2.3	3.4	3.1	3.3	2.5	2.4	3.0	4.0	3.7	5.1	6.1	2.7	2.0	2.0	6.0	6.6	7.4	5.8	6.4	7.4	2.0	4.1
19	9.8	11.5	11.4	12.3	10.7	13.0	12.1	10.7	6.9	8.0	7.0	5.8	5.9	5.5	2.2	3.9	3.5	3.1	1.2	1.5	5.5	4.3	4.6	4.8	13.0	1.2	6.9
20	3.6	3.1	3.6	4.7	5.5	5.2	5.0	5.2	5.4	5.8	6.7	5.0	5.7	4.7	5.6	6.1	8.2	7.9	6.0	6.1	6.6	8.4	8.0	8.3	8.4	3.1	5.8
21	8.7	10.1	10.6	10.7	11.2	10.6	12.2	11.9	12.4	12.4	11.5	10.9	9.5	7.9	6.5	4.4	6.0	3.5	4.2	5.5	5.8	5.4	5.3	5.9	12.4	3.5	8.5
22	5.4	6.3	5.7	6.4	6.1	5.1	4.7	4.4	4.0	4.4	2.4	2.5	2.0	2.5	2.5	2.5	2.7	2.7	2.3	2.7	2.4	2.5	3.1	4.8	6.4	2.0	3.8
23	3.9	5.5	6.2	5.7	5.8	7.0	6.0	4.7	4.5	4.1	5.0	6.0	5.1	4.4	2.4	4.5	5.2	2.9	2.5	7.2	7.9	8.5	8.7	8.6	8.7	2.4	5.5
24	7.8	5.7	4.1	3.8	7.1	9.0	10.9	7.2	4.4	9.7	9.8	10.0	11.6	15.0	13.5	11.8	11.1	9.4	15.0	19.0	14.1	10.5	13.4	12.0	19.0	3.8	10.2
25	10.6	8.2	3.2	6.5	4.5	4.9	4.6	5.1	5.4	5.1	5.4	6.0	6.4	5.9	6.7	6.5	7.8	7.5	8.1	6.8	7.6	6.7	7.6	7.1	10.6	3.2	6.4
26	8.2	8.6	8.3	8.0	8.0	10.0	9.9	9.1	9.4	10.7	9.2	9.3	8.8	8.9	8.1	8.0	7.6	6.9	6.3	6.9	6.9	7.1	5.5	5.9	10.7	5.5	8.2
27	6.4	6.4	6.6	6.8	7.6	7.8	7.9	7.8	7.6	7.1	6.0	6.0	5.4	3.7	2.7	2.9	2.8	3.1	2.4	2.1	1.8	3.1	3.7	4.1	7.9	1.8	5.1
28	5.9	6.2	5.5	5.5	4.0	3.8	5.8	4.2	4.3	3.7	2.9	2.3	2.9	4.0	3.6	3.5	3.6	3.0	2.8	1.3	1.5	2.4	2.6	2.7	6.2	1.3	3.7
29	2.7	7.1	9.7	9.3	10.9	11.5	11.7	11.7	11.7	9.5	8.9	7.5	6.1	4.3	6.6	6.9	7.1	6.6	6.6	6.0	6.4	6.7	4.8	4.3	11.7	2.7	7.7
30	4.0	3.7	4.3	3.4	6.2	6.2	7.2	7.5	5.3	7.3	6.6	5.2	3.6	4.4	4.9	4.8	3.7	4.3	1.8	4.0	5.2	5.2	5.0	5.7	7.5	1.8	5.0
Max.	**13.8**	**14.0**	**13.2**	**13.9**	**14.0**	**14.2**	**14.4**	**13.7**	**14.4**	**14.0**	**15.8**	**17.2**	**18.2**	**18.8**	**20.4**	**22.4**	**21.7**	**21.2**	**15.0**	**19.0**	**16.5**	**16.7**	**14.8**	**14.0**	**22.4**		
Min.	**1.5**	**1.2**	**2.0**	**2.9**	**2.5**	**2.0**	**3.2**	**3.1**	**2.5**	**2.5**	**2.4**	**2.1**	**2.0**	**1.7**	**1.9**	**1.8**	**1.3**	**0.8**	**1.2**	**1.3**	**1.5**	**2.3**	**1.8**	**2.3**		**0.8**	
Avg.	**7.6**	**8.3**	**7.9**	**7.8**	**7.9**	**8.2**	**8.3**	**8.2**	**8.0**	**8.0**	**7.9**	**7.6**	**7.5**	**7.7**	**7.7**	**7.8**	**7.4**	**7.1**	**6.1**	**6.8**	**7.1**	**7.6**	**7.3**	**7.7**			**7.6**

Total Hours in Month 720 **Hours Data Available** 716 **Data Recovery** 99.4%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

May *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.6	5.1	5.2	7.0	6.9	7.2	7.0	8.6	10.7	11.3	10.6	11.6	11.8	12.8	13.5	13.1	13.1	14.5	14.9	16.8	16.2	13.9	13.1	13.3	16.8	5.1	11.0
2	13.7	12.7	11.9	11.5	10.2	11.2	11.4	11.5	9.1	9.1	11.2	10.2	9.4	8.0	6.9	6.2	6.5	5.4	5.7	4.6	4.8	5.2	4.6	4.8	13.7	4.6	8.6
3	5.9	5.9	5.3	5.0	6.2	6.9	7.1	6.4	9.2	10.1	11.8	12.5	12.7	11.1	9.3	5.9	7.6	7.1	6.5	6.2	6.2	6.4	7.7	8.7	12.7	5.0	7.8
4	9.3	10.5	10.1	7.6	5.1	5.7	5.0	7.6	5.3	4.9	4.5	4.6	4.3	4.3	5.2	5.6	5.6	7.0	7.1	5.9	6.3	8.4	7.5	9.7	10.5	4.3	6.6
5	9.5	9.1	8.6	10.5	9.6	8.9	9.8	11.0	11.4	11.6	10.9	9.8	9.4	7.6	5.0	4.2	4.1	3.9	2.6	1.9	2.2	4.4	3.3	5.1	11.6	1.9	7.3
6	5.0	1.8	2.2	1.7	2.1	1.9	1.3	1.6	1.8	1.4	1.6	1.5	2.0	1.5	5.5	7.9	8.7	11.2	11.6	12.3	11.3	11.9	12.8	13.5	13.5	1.3	5.6
7	13.9	14.1	14.8	15.2	14.0	14.0	13.2	14.7	12.9	14.8	12.9	13.4	13.3	12.4	10.7	12.0	13.2	13.7	9.4	10.5	10.7	12.2	11.3	10.3	15.2	9.4	12.8
8	8.3	6.7	6.4	4.2	2.8	3.4	4.9	5.3	6.4	7.3	6.8	7.2	9.3	9.3	9.0	8.3	8.9	9.0	9.0	10.1	9.7	9.5	10.1	11.3	11.3	2.8	7.6
9	12.3	11.8	12.1	13.6	12.5	11.8	13.1	12.7	14.6	13.6	12.8	14.1	13.8	12.8	12.4	13.2	13.0	12.5	11.0	11.7	10.6	8.2	8.0	8.6	14.6	8.0	12.1
10	9.5	8.8	12.1	9.2	8.3	5.2	6.6	6.3	5.7	4.5	6.4	4.6	2.8	4.4	1.8	2.2	3.9	2.8	2.7	3.6	3.3	1.8	4.3	3.7	12.1	1.8	5.2
11	1.8	4.2	5.3	5.2	2.1	2.9	3.1	4.8	3.6	3.2	3.0	3.0	2.0	1.9	2.1	3.7	3.0	3.2	1.9	2.1	6.4	5.0	5.9	6.1	6.4	1.8	3.6
12	5.8	6.3	4.7	4.0	4.8	4.5	5.1	6.4	6.8	6.7	6.6	4.6	2.9	8.7	7.5	7.2	6.8	2.9	1.8	2.0	1.9	3.5	5.2	5.5	8.7	1.8	5.1
13	4.6	3.9	3.9	3.5	3.4	4.5	5.4	6.7	7.3	6.9	4.7	5.1	4.1	3.9	2.0	3.8	3.5	2.4	1.9	1.2	3.8	2.9	2.3	1.9	7.3	1.2	3.9
14	1.1	1.7	1.9	2.8	3.1	3.9	4.2	4.4	2.9	4.8	5.2	4.6	2.9	4.2	4.6	3.3	3.9	3.9	3.5	3.7	3.2	2.5	2.8	3.9	5.2	1.1	3.5
15	3.2	2.1	2.6	2.1	2.9	1.8	2.3	3.1	3.8	2.2	1.7	4.1	3.8	5.1	5.7	6.3	6.3	6.1	5.0	4.0	2.6	2.1	2.9	2.0	6.3	1.7	3.5
16	1.9	7.8	7.6	8.4	9.2	8.5	7.7	5.7	4.2	4.7	5.0	4.0	4.2	4.9	3.9	4.7	5.6	5.0	5.2	4.1	1.9	1.9	1.8	1.4	9.2	1.4	5.0
17	2.0	3.3	4.7	5.1	5.0	5.7	7.2	7.7	8.3	8.3	7.6	7.3	5.0	3.7	4.2	4.6	4.2	3.4	2.3	3.0	2.3	3.0	2.4	2.0	8.3	2.0	4.7
18	2.6	3.3	3.2	3.3	2.8	2.6	3.3	2.8	3.6	5.4	3.9	5.0	7.0	10.4	10.5	12.5	10.9	12.3	14.1	12.8	8.8	11.5	12.9	12.9	14.1	2.6	7.4
19	12.7	12.4	11.7	10.4	7.3	7.9	4.9	5.0	5.7	4.6	3.5	2.7	3.7	6.2	5.5	3.6	6.4	6.7	7.5	9.6	9.3	7.4	6.3	7.3	12.7	2.7	7.0
20	7.9	8.8	9.3	9.1	7.7	8.4	8.3	8.0	7.4	7.9	8.7	7.9	7.2	7.7	8.8	8.6	6.9	6.8	4.6	3.5	1.8	3.0	2.5	3.5	9.3	1.8	6.8
21	5.2	3.9	4.8	5.4	7.0	5.1	5.3	5.4	7.3	8.7	7.8	9.0	8.6	7.4	7.1	9.4	7.9	7.7	7.7	7.4	9.4	9.6	10.0	9.9	10.0	3.9	7.4
22	9.7	8.0	6.2	5.2	8.7	7.0	7.3	7.2	7.1	5.7	5.8	4.2	6.7	7.7	8.0	7.9	8.3	8.8	9.6	7.0	3.8	4.0	3.4	4.0	9.7	3.4	6.7
23	4.3	4.4	3.3	2.1	2.4	3.3	6.8	7.3	2.0	2.9	5.1	3.0	4.8	5.6	5.5	3.2	3.3	2.4	2.2	1.0	2.0	4.3	4.8	4.8	7.3	1.0	3.8
24	5.8	5.5	5.2	5.0	2.1	6.0	3.4	3.4	2.9	2.9	3.4	3.7	4.8	4.2	2.2	2.4	3.6	1.8	0.8	1.2	2.5	3.7	3.8	4.0	6.0	0.8	3.5
25	3.6	4.1	3.8	1.4	2.4	3.5	3.1	1.8	2.3	3.4	2.8	1.7	2.5	2.3	3.3	2.6	2.1	2.4	1.3	1.1	2.5	3.9	4.3	5.8	5.8	1.1	2.8
26	5.2	5.4	4.6	4.5	4.4	3.9	5.4	5.4	5.1	5.0	2.2	2.4	3.0	3.0	2.3	4.8	2.4	2.3	2.7	2.9	3.6	3.8	5.5	6.0	6.0	2.2	4.0
27	6.2	4.3	3.1	2.6	3.5	2.9	3.3	3.6	3.9	3.4	2.7	2.0	2.3	2.3	3.1	3.0	3.0	2.7	2.4	2.0	3.5	5.9	5.6	5.4	6.2	2.0	3.4
28	5.4	5.5	4.9	5.8	4.8	6.0	5.6	2.0	6.0	5.7	6.5	8.8	6.1	5.9	5.7	5.3	4.7	3.7	2.3	2.2	1.5	1.6	3.8	3.3	8.8	1.5	4.7
29	1.9	1.9	2.7	4.0	2.8	5.6	5.5	5.4	4.0	2.9	2.3	2.7	2.2	2.7	2.6	2.7	3.1	3.1	2.7	3.0	1.8	2.8	2.4	2.1	5.6	1.8	3.0
30	2.5	3.0	2.3	2.4	2.1	2.9	4.0	5.3	4.6	4.2	1.5	2.0	1.5	2.1	3.4	2.3	1.9	2.5	2.5	3.9	2.6	1.5	1.9	2.0	5.3	1.5	2.7
31	2.3	3.8	3.2	3.9	3.9	2.2	2.6	2.1	1.8	2.4	2.4	3.2	2.9	3.1	3.6	3.8	2.9	2.6	3.4	2.5	2.4	2.2	1.4	2.1	3.9	1.4	2.8
Max.	**13.9**	**14.1**	**14.8**	**15.2**	**14.0**	**14.0**	**13.2**	**14.7**	**14.6**	**14.8**	**12.9**	**14.1**	**13.8**	**12.8**	**13.5**	**13.2**	**13.2**	**14.5**	**14.9**	**16.8**	**16.2**	**13.9**	**13.1**	**13.5**	**16.8**		
Min.	**1.1**	**1.7**	**1.9**	**1.4**	**2.1**	**1.8**	**1.3**	**1.6**	**1.8**	**1.4**	**1.5**	**1.5**	**1.5**	**1.5**	**1.8**	**2.2**	**1.9**	**1.8**	**0.8**	**1.0**	**1.5**	**1.5**	**1.4**	**1.4**		**0.8**	
Avg.	**6.1**	**6.1**	**6.0**	**5.8**	**5.5**	**5.6**	**5.9**	**6.1**	**6.0**	**6.1**	**5.9**	**5.8**	**5.7**	**6.0**	**5.8**	**5.9**	**6.0**	**5.8**	**5.4**	**5.3**	**5.1**	**5.4**	**5.6**	**6.0**			**5.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

June *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.4	2.1	5.0	6.9	5.2	3.5	3.5	3.7	2.5	2.0	1.9	3.1	4.8	4.8	4.3	3.7	3.1	2.3	1.5	2.0	1.7	1.7	4.4	5.7	6.9	1.5	3.4
2	8.3	6.2	5.6	3.8	3.9	4.0	5.6	5.3	5.4	5.8	6.5	5.2	4.3	5.6	5.9	8.3	6.6	6.4	3.5	3.7	3.4	3.9	3.2	2.4	8.3	2.4	5.1
3	2.8	2.4	2.8	10.5	8.5	11.9	12.5	12.9	13.0	10.3	12.9	12.0	14.9	9.7	10.1	11.7	10.4	7.8	6.8	8.7	11.9	9.7	8.4	10.0	14.9	2.4	9.7
4	9.4	9.1	9.3	5.9	5.1	5.9	5.3	4.6	3.4	1.6	5.9	4.6	4.4	4.5	4.7	5.0	4.9	4.9	3.9	3.7	3.4	2.9	3.5	4.5	9.4	1.6	5.0
5	4.6	4.2	4.8	2.7	4.3	3.3	3.7	2.6	2.0	3.9	5.6	4.6	4.2	4.2	4.5	4.8	4.5	3.6	3.8	3.0	3.1	2.5	2.2	3.9	5.6	2.0	3.8
6	3.9	4.1	2.7	2.3	2.9	2.9	2.7	2.1	3.9	5.2	3.4	2.9	3.6	2.8	3.4	3.5	3.1	4.1	3.1	4.6	2.1	3.6	3.7	4.9	5.2	2.1	3.4
7	5.5	5.8	6.7	6.9	4.4	4.5	5.3	4.8	5.4	5.4	4.5	3.9	5.1	3.9	4.7	4.0	3.7	5.0	4.7	4.4	4.8	7.7	6.5	6.9	7.7	3.7	5.2
8	7.4	5.4	5.2	7.4	6.5	6.6	6.9	7.2	7.2	8.2	9.1	9.8	9.1	8.1	8.1	9.1	9.0	9.0	8.7	8.7	9.8	9.2	8.8	10.3	10.3	5.2	8.1
9	9.4	10.2	9.9	10.7	10.6	12.0	10.3	11.9	11.8	11.4	12.6	11.5	10.8	9.5	10.1	9.2	9.9	7.1	7.5	8.5	8.3	7.7	5.9	7.3	12.6	5.9	9.8
10	6.2	5.7	4.2	4.6	4.4	5.0	6.6	6.9	7.9	4.6	4.1	4.8	5.2	7.4	8.1	7.0	6.8	8.0	6.1	7.3	7.0	8.5	8.1	8.8	8.8	4.1	6.4
11	7.9	7.5	6.0	5.5	5.3	6.3	7.3	7.5	7.9	7.6	7.5	8.4	8.3	8.5	6.8	7.0	7.7	7.6	7.8	9.3	8.2	9.2	8.2	7.8	9.3	5.3	7.5
12	8.2	8.9	7.1	7.6	6.2	6.7	7.3	6.2	5.4	5.7	4.3	2.4	1.8	2.1	1.9	1.6	3.5	3.3	2.7	2.8	3.0	3.7	4.1	3.3	8.9	1.6	4.6
13	3.0	3.8	3.5	4.2	4.1	1.4	1.7	3.3	2.5	1.0	2.0	2.4	3.7	3.7	3.2	4.3	4.3	4.2	2.3	2.6	2.5	1.8	1.3	1.7	4.3	1.0	2.9
14	1.0	2.4	2.5	3.6	1.4	0.9	1.4	1.7	1.3	2.3	2.3	1.8	2.6	2.8	2.1	1.8	4.3	4.7	3.4	3.0	2.3	2.9	3.6	3.2	4.7	0.9	2.5
15	3.7	3.7	4.8	3.3	2.7	2.5	4.0	3.7	3.8	1.4	3.1	3.4	3.5	3.8	3.1	1.7	2.2	2.1	1.8	2.2	1.9	1.1	1.4	1.0	4.8	1.0	2.7
16	2.0	3.2	2.6	3.8	4.6	4.5	3.9	4.1	3.8	2.5	2.1	3.1	2.3	2.5	2.6	3.3	2.8	2.7	1.2	1.3	2.0	4.9	4.7	4.8	4.9	1.2	3.1
17	5.3	4.9	4.4	3.6	3.1	3.8	4.0	4.0	4.6	6.0	5.9	5.1	4.8	5.0	4.3	4.4	6.8	6.9	6.9	7.9	4.9	2.5	4.5	4.6	7.9	2.5	4.9
18	4.2	2.5	4.6	4.2	5.8	5.2	6.4	6.3	9.4	8.5	8.6	7.0	6.9	8.3	7.2	7.3	6.0	5.9	6.4	5.4	6.1	5.7	5.7	5.7	9.4	2.5	6.2
19	6.5	5.6	7.2	7.6	8.5	8.2	7.7	8.0	7.6	6.5	7.2	5.4	6.0	5.6	4.9	4.1	7.4	8.4	4.7	3.7	3.5	2.3	5.1	4.3	8.5	2.3	6.1
20	5.0	5.7	3.9	2.8	2.8	2.0	2.4	6.2	6.9	5.1	5.2	5.6	9.1	6.1	3.9	3.7	4.5	3.0	2.2	2.4	2.7	2.6	2.3	1.6	9.1	1.6	4.1
21	3.0	4.2	3.7	3.3	2.8	3.3	4.0	3.5	3.2	2.6	2.7	3.1	2.8	4.2	3.9	4.2	4.3	4.5	4.8	4.5	5.5	4.2	3.7	2.5	5.5	2.5	3.7
22	4.1	4.6	3.1	2.6	2.8	4.3	4.3	2.0	2.5	2.8	2.1	2.0	3.2	5.0	4.9	2.4	2.0	4.1	5.8	3.3	3.1	2.7	2.9	3.3	5.8	2.0	3.3
23	3.6	3.5	3.1	2.7	1.8	2.2	6.0	5.5	3.9	3.0	2.9	2.2	2.9	3.8	4.1	4.8	5.1	4.8	4.8	4.8	2.1	3.4	3.0	1.5	6.0	1.5	3.6
24	1.5	1.6	2.0	2.9	2.5	2.9	2.6	2.3	1.9	2.4	3.6	3.8	4.2	4.3	4.8	4.8	4.9	4.3	3.3	2.8	2.2	2.0	2.6	3.8	4.9	1.5	3.1
25	3.9	4.2	4.1	2.4	2.6	5.6	5.5	4.5	6.2	6.5	6.3	6.1	7.1	7.8	6.4	7.6	5.7	7.8	6.5	4.0	4.0	2.5	2.1	2.3	7.8	2.1	5.1
26	2.8	2.4	3.0	2.7	2.3	4.2	3.7	2.8	2.8	2.5	4.3	4.8	3.4	3.0	3.1	2.8	2.6	2.9	1.6	1.1	1.7	1.1	1.9	2.3	4.8	1.1	2.7
27	1.6	2.5	2.0	1.9	1.9	2.4	3.1	2.6	2.8	2.9	3.6	3.8	3.9	4.2	3.8	3.8	3.5	3.2	3.3	3.3	9.3	10.9	11.5	12.8	12.8	1.6	4.4
28	13.8	14.5	10.3	13.3	12.1	14.6	14.1	12.1	12.4	12.7	12.3	10.5	12.7	11.5	13.0	11.8	12.3	10.1	11.3	12.9	12.6	10.2	14.9	10.6	14.9	10.1	12.4
29	14.8	14.1	11.2	10.9	10.5	10.1	7.9	5.8	4.9	3.6	4.1	4.3	4.0	4.9	4.7	5.5	3.9	2.8	3.7	4.2	5.1	4.5	4.9	6.4	14.8	2.8	6.5
30	7.4	5.4	6.3	4.0	5.1	4.8	5.4	5.3	5.7	4.0	2.6	3.4	3.7	3.8	3.9	4.2	3.8	3.8	4.5	3.8	9.2	9.2	8.0	8.2	9.2	2.6	5.2
Max.	**14.8**	**14.5**	**11.2**	**13.3**	**12.1**	**14.6**	**14.1**	**12.9**	**13.0**	**12.7**	**12.9**	**12.0**	**14.9**	**11.5**	**13.0**	**11.8**	**12.3**	**10.1**	**11.3**	**12.9**	**12.6**	**10.9**	**14.9**	**12.8**	**14.9**		
Min.	**1.0**	**1.6**	**2.0**	**1.9**	**1.4**	**0.9**	**1.4**	**1.7**	**1.3**	**1.0**	**1.9**	**1.8**	**1.8**	**2.1**	**1.9**	**1.6**	**2.0**	**2.1**	**1.2**	**1.1**	**1.7**	**1.1**	**1.3**	**1.0**		**0.9**	
Avg.	**5.4**	**5.3**	**5.0**	**5.2**	**4.8**	**5.2**	**5.5**	**5.3**	**5.4**	**4.9**	**5.3**	**5.0**	**5.4**	**5.4**	**5.2**	**5.2**	**5.3**	**5.2**	**4.6**	**4.7**	**4.9**	**4.8**	**5.0**	**5.2**			**5.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

July *2006*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	6.5	6.2	7.4	6.2	4.2	4.7	5.3	5.4	4.3	2.3	3.3	3.0	4.0	4.4	5.1	5.7	5.5	5.4	5.0	7.1	10.4	7.4	8.6	9.8	10.4	2.3	5.7
2	10.1	10.1	10.3	8.2	8.4	8.1	7.2	6.6	6.9	6.8	3.5	3.2	3.2	2.9	3.6	8.4	10.4	10.5	9.1	9.2	6.5	3.0	4.2	3.9	10.5	2.9	6.8
3	4.0	4.9	4.6	3.0	2.2	4.1	4.5	3.3	3.5	3.1	3.1	3.7	3.6	4.0	4.6	4.8	3.8	2.7	2.6	3.1	3.4	2.5	3.0	1.9	4.9	1.9	3.5
4	2.6	3.1	3.1	2.5	2.5	2.8	2.5	1.6	3.5	3.6	3.7	3.6	4.7	4.0	4.6	4.6	3.6	3.9	3.7	3.8	2.8	3.1	2.2	2.0	4.7	1.6	3.3
5	2.3	4.0	4.8	4.1	2.4	3.4	4.4	4.0	3.4	4.3	4.5	4.1	2.8	2.9	2.9	3.4	3.0	2.8	3.4	2.9	2.6	2.0	2.2	2.2	4.8	2.0	3.3
6	2.3	0.8	0.9	1.0	2.2	1.4	2.3	2.5	2.4	2.5	2.6	2.2	2.5	3.2	3.3	3.4	4.0	3.8	2.9	3.0	2.9	2.0	2.3	4.2	4.2	0.8	2.5
7	2.4	3.3	2.6	3.8	3.2	1.8	2.6	2.8	2.7	3.9	3.6	3.9	3.7	4.4	6.4	5.2	4.0	2.9	3.9	3.9	4.2	2.8	4.6	3.5	6.4	1.8	3.6
8	3.8	3.2	2.2	2.2	2.1	3.7	4.1	6.3	8.7	8.9	9.6	8.7	9.7	8.5	8.0	7.0	3.7	3.1	7.6	8.1	7.4	7.1	4.8	3.3	9.7	2.1	5.9
9	3.3	4.0	3.5	3.8	3.4	3.7	4.2	4.1	2.5	2.2	2.8	3.8	3.8	3.8	3.3	3.5	3.8	3.1	3.4	3.0	4.6	4.0	5.1	4.1	5.1	2.2	3.6
10	4.5	3.9	4.0	4.5	5.6	4.4	5.1	4.8	4.0	3.0	2.4	3.0	4.0	4.8	4.5	4.7	5.0	3.2	3.8	2.4	3.6	4.3	3.3	2.8	5.6	2.4	4.0
11	1.5	2.3	3.2	2.1	2.4	1.7	2.3	2.6	2.4	4.9	5.9	5.2	5.3	4.4	5.9	4.7	3.8	3.4	2.5	6.5	5.8	3.0	2.1	1.8	6.5	1.5	3.6
12	1.7	2.2	2.1	2.6	2.6	3.2	3.7	4.1	4.9	3.4	2.2	3.3	3.2	3.1	3.1	2.2	3.9	6.4	8.4	10.5	11.1	8.7	7.7	5.0	11.1	1.7	4.6
13	6.1	9.4	8.3	4.3	9.7	11.6	13.1	11.8	12.8	13.4	12.9	13.0	13.2	15.6	18.1	17.0	16.9	18.5	16.8	19.1	16.4	16.3	13.6	13.4	19.1	4.3	13.4
14	14.5	13.7	16.0	14.7	13.6	12.6	12.7	12.3	12.4	14.2	13.6	13.2	11.4	10.0	10.2	10.9	11.3	9.8	10.2	8.8	11.9	10.3	11.3	7.1	16.0	7.1	11.9
15	8.5	6.2	9.5	11.0	10.4	11.4	11.1	10.3	6.9	6.3	8.1	7.3	6.4	7.3	8.3	4.5	3.6	3.1	3.4	2.7	3.0	1.6	2.6	2.4	11.4	1.6	6.5
16	2.9	3.0	4.5	4.7	4.6	4.4	5.8	5.8	4.5	3.1	4.0	4.0	5.0	4.2	4.0	3.3	4.2	4.0	4.3	4.0	5.1	4.3	4.6	3.9	5.8	2.9	4.3
17	4.8	6.7	6.5	6.8	5.0	4.6	3.8	4.6	4.9	5.0	4.7	4.4	6.5	6.4	6.1	5.7	5.8	6.1	6.6	6.6	4.5	6.0	7.2	6.5	7.2	3.8	5.7
18	7.5	7.5	6.1	5.9	5.8	4.7	5.0	4.9	4.7	5.3	3.8	4.1	4.3	3.6	3.0	5.8	4.6	4.6	3.5	4.9	4.8	3.2	2.7	3.2	7.5	2.7	4.7
19	2.8	2.9	2.6	6.8	8.1	7.4	6.6	8.0	7.6	10.1	9.4	8.8	6.7	7.7	8.2	8.5	8.5	6.4	7.9	6.1	4.8	2.9	3.7	5.3	10.1	2.6	6.6
20	5.2	2.1	2.4	2.6	8.4	6.6	6.1	7.1	7.4	7.7	7.4	6.6	8.3	6.9	7.2	5.7	6.4	6.3	7.6	6.7	9.3	4.5	4.1	6.8	9.3	2.1	6.2
21	7.1	6.7	4.3	3.3	2.6	5.3	5.9	5.5	8.3	6.6	7.6	8.2	7.7	7.0	7.5	6.1	5.3	2.7	2.9	4.0	5.3	6.0	4.4	3.1	8.3	2.6	5.6
22	2.8	3.4	3.0	2.1	3.5	5.4	6.2	6.2	5.6	7.4	6.3	5.5	5.6	5.2	4.9	3.4	3.3	5.4	5.1	4.5	5.0	5.1	5.7	4.7	7.4	2.1	4.8
23	6.5	4.8	5.7	4.5	4.4	5.2	6.6	6.7	7.3	8.3	9.9	10.3	9.6	10.5	10.0	9.5	10.7	7.1	9.6	9.9	9.9	8.2	7.8	8.2	10.7	4.4	8.0
24	8.0	8.9	8.3	8.0	8.9	8.8	8.9	6.7	6.3	7.1	7.0	6.6	7.4	6.4	3.3	2.6	3.4	3.5	3.8	3.6	3.8	3.4	3.9	6.2	8.9	2.6	6.0
25	5.5	4.6	5.8	6.1	6.6	4.7	3.5	2.9	3.4	2.4	1.5	1.8	1.5	4.6	5.1	4.7	4.9	2.7	1.0	1.4	1.3	1.7	2.0	2.1	6.6	1.0	3.4
26	4.7	3.5	3.2	2.3	2.6	3.2	4.1	7.3	7.4	8.5	9.5	10.2	10.6	8.6	9.8	10.7	11.4	12.5	13.9	14.1	12.7	12.1	11.3	12.6	14.1	2.3	8.6
27	11.3	12.3	12.2	10.7	9.5	8.9	7.2	7.9	6.2	3.3	3.1	3.6	3.2	3.4	4.5	2.8	3.1	3.0	2.8	2.8	4.4	2.8	2.5	5.9	12.3	2.5	5.7
28	7.1	4.8	6.0	9.1	8.0	9.7	10.5	10.5	7.7	6.1	3.1	4.9	6.3	7.0	4.9	4.2	3.9	3.5	3.1	3.5	5.8	12.2	16.5	12.8	16.5	3.1	7.1
29	11.2	10.2	11.6	9.3	15.7	14.7	14.2	20.0	21.7	17.7	18.1	16.3	12.1	15.7	12.7	10.5	8.9	10.6	14.3	10.9	11.6	17.5	18.0	16.6	21.7	8.9	14.2
30	13.7	15.8	13.6	17.9	11.4	14.2	14.6	17.1	14.9	13.6	13.2	10.7	10.2	9.6	10.8	10.5	7.3	7.0	7.0	9.5	5.6	4.1	6.0	10.2	17.9	4.1	11.2
31	11.0	10.2	9.7	9.9	10.1	8.4	8.8	8.8	8.8	9.7	7.6	6.8	9.5	7.6	9.6	8.6	9.6	10.0	9.2	8.2	8.1	8.5	11.9	11.7	11.9	6.8	9.3
Max.	**14.5**	**15.8**	**16.0**	**17.9**	**15.7**	**14.7**	**14.6**	**20.0**	**21.7**	**17.7**	**18.1**	**16.3**	**13.2**	**15.7**	**18.1**	**17.0**	**16.9**	**18.5**	**16.8**	**19.1**	**16.4**	**17.5**	**18.0**	**16.6**	**21.7**		
Min.	**1.5**	**0.8**	**0.9**	**1.0**	**2.1**	**1.4**	**2.3**	**1.6**	**2.4**	**2.2**	**1.5**	**1.8**	**1.5**	**2.9**	**2.9**	**2.2**	**3.0**	**2.7**	**1.0**	**1.4**	**1.3**	**1.6**	**2.0**	**1.8**		**0.8**	
Avg.	**6.0**	**6.0**	**6.1**	**5.9**	**6.1**	**6.3**	**6.5**	**6.9**	**6.7**	**6.6**	**6.4**	**6.2**	**6.3**	**6.4**	**6.6**	**6.2**	**6.0**	**5.7**	**6.1**	**6.3**	**6.4**	**5.8**	**6.1**	**6.0**			**6.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

August 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.5	9.8	10.9	12.8	11.2	9.8	7.4	6.4	3.5	3.4	3.5	3.1	3.0	3.9	3.4	3.6	3.4	2.7	2.4	2.1	2.2	3.1	3.9	3.6	12.8	2.1	5.4
2	4.3	4.6	4.4	4.3	3.6	3.8	4.3	5.0	3.6	4.1	4.0	3.4	4.7	3.3	3.9	3.6	4.9	6.7	6.1	6.1	6.3	6.6	5.7	5.4	6.7	3.3	4.7
3	6.2	5.5	8.7	8.1	8.0	8.5	9.3	8.9	9.0	9.7	11.8	12.5	11.5	12.3	13.5	15.8	15.3	15.4	12.2	12.5	13.9	12.4	13.1	12.7	15.8	5.5	11.1
4	11.3	10.4	10.4	6.5	2.8	1.7	1.3	3.9	7.7	8.1	8.1	5.6	3.7	2.1	2.3	2.8	1.9	1.8	1.4	1.2	1.5	2.1	2.6	2.4	11.3	1.2	4.3
5	2.9	2.4	2.3	1.9	1.5	3.1	2.6	3.1	2.7	1.7	2.8	3.4	3.0	2.2	3.1	7.9	5.6	5.1	6.7	6.3	7.2	6.8	8.0	6.4	8.0	1.5	4.1
6	6.2	5.2	4.6	5.9	4.0	3.4	5.2	6.7	6.2	4.2	3.4	2.4	6.0	4.3	7.4	8.7	8.7	8.7	9.7	9.7	8.5	8.4	7.5	8.2	9.7	2.4	6.4
7	9.2	9.5	9.8	7.8	7.8	6.9	8.2	8.1	7.2	7.8	8.0	8.3	8.9	11.0	12.4	12.3	14.3	15.0	13.9	16.5	14.1	17.7	15.4	14.2	17.7	6.9	11.0
8	13.1	12.9	13.2	13.5	12.5	11.9	12.6	12.2	8.7	5.5	2.8	9.0	4.6	4.9	3.7	2.4	2.5	4.3	5.6	10.9	10.6	10.9	8.5	6.1	13.5	2.4	8.4
9	5.5	4.2	3.0	8.6	6.8	5.0	6.2	6.0	5.3	4.5	2.5	3.8	2.9	2.5	4.0	2.3	3.1	2.0	2.5	4.1	3.7	2.5	4.6	4.4	8.6	2.0	4.2
10	5.2	2.7	2.6	1.8	2.4	2.8	3.0	2.4	4.8	4.8	2.8	3.9	2.4	4.0	4.7	3.9	4.0	7.5	8.8	8.1	6.4	9.7	9.0	6.2	9.7	1.8	4.7
11	7.6	6.2	5.0	4.3	6.5	8.2	6.3	5.5	3.8	4.1	3.3	4.3	3.4	3.7	3.4	4.0	3.1	3.3	5.3	4.6	6.0	7.1	8.2	7.1	8.2	3.1	5.2
12	5.0	3.2	1.4	1.7	1.9	2.2	2.7	2.7	2.6	1.7	2.1	3.2	4.5	5.4	4.9	5.6	4.2	3.3	8.2	9.9	8.4	5.6	5.9	13.9	13.9	1.4	4.6
13	13.6	12.2	10.0	9.3	12.4	10.4	15.0	11.9	10.8	8.6	10.3	9.1	13.5	14.2	13.7	10.5	9.0	10.3	11.9	10.4	5.2	6.8	4.0	2.6	15.0	2.6	10.2
14	4.1	2.4	2.5	3.0	3.4	3.0	3.9	5.2	4.2	3.5	5.3	4.3	5.0	4.1	5.7	6.2	9.5	5.4	5.8	5.9	7.2	7.1	6.2	7.5	9.5	2.4	5.0
15	6.2	7.1	7.0	6.7	7.5	8.0	7.1	6.2	6.2	7.7	7.2	6.2	6.2	5.6	6.7	6.4	5.8	5.6	4.2	3.8	4.1	2.9	2.6	2.9	8.0	2.6	5.8
16	2.5	1.7	1.0	1.2	1.0	1.5	1.9	1.3	1.1	0.9	2.3	3.5	4.6	4.3	3.8	3.8	3.7	3.3	3.1	2.5	2.0	1.7	1.9	2.3	4.6	0.9	2.4
17	1.5	1.3	1.7	1.8	1.9	1.7	1.2	2.3	2.2	1.8	3.4	3.4	3.2	8.2	6.8	9.2	11.2	10.0	10.8	10.5	10.2	12.0	7.7	10.1	12.0	1.2	5.6
18	12.9	11.8	15.4	13.6	10.7	4.5	6.1	4.3	5.8	5.5	3.5	2.1	1.8	1.6	1.2	1.5	4.4	4.4	11.3	9.8	6.1	4.9	4.7	7.1	15.4	1.2	6.5
19	11.6	11.3	8.3	7.9	6.1	12.3	12.5	8.9	8.1	8.4	9.2	15.2	15.7	10.8	8.2	5.7	5.1	2.6	2.9	2.5	4.8	4.8	5.3	4.4	15.7	2.5	8.0
20	2.8	10.8	8.1	6.2	6.3	8.4	7.8	6.3	6.5	5.0	2.4	1.4	7.2	6.0	5.2	4.1	3.7	4.0	5.4	7.5	9.2	8.6	3.1	4.5	10.8	1.4	5.9
21	7.3	6.5	3.4	3.0	1.9	2.7	3.4	3.4	2.6							4.8	4.0	4.7	3.2	4.1	5.4	5.0	6.3	6.6	7.3	1.9	4.4
22	5.5	7.1	5.7	4.2	3.7	7.0	5.2	3.6	4.7	4.7	2.7	8.2	13.9	17.8	16.9	16.7	6.8	12.5	13.2	12.9	12.5	10.8	8.0	7.2	17.8	2.7	8.8
23	5.9	3.5	3.7	2.3	5.9	4.3	4.5	4.4	4.1	3.6	2.3	2.9	4.0	3.7	4.1	3.8	2.7	2.8	3.5	3.1	2.7	2.6	2.3	3.9	5.9	2.3	3.6
24	3.1	4.2	5.5	4.8	6.1	6.8	6.9	6.7	6.6	10.8	10.4	9.1	8.8	7.4	8.1	6.3	3.6	2.8	2.7	5.2	6.3	7.8	8.8	7.7	10.8	2.7	6.5
25	6.8	9.1	5.7	3.7	4.0	3.5	5.1	6.0	10.4	6.9	6.6	6.5	5.4	12.8	13.4	10.3	4.8	6.2	4.3	4.0	2.5	2.7	4.9	4.5	13.4	2.5	6.3
26	4.8	3.2	2.5	2.5	2.6	3.0	5.0	4.6	4.3	7.3	6.4	6.2	6.4	5.0	6.5	6.1	6.8	7.4	6.5	6.5	5.5	4.8	4.3	3.0	7.4	2.5	5.1
27	3.7	3.0	3.0	3.5	3.4	4.0	4.1	5.4	5.1	3.4	2.1	2.4	5.4	8.9	10.5	9.5	8.5	9.7	11.3	7.4	9.6	8.8	8.9	6.9	11.3	2.1	6.2
28	7.4	12.2	13.9	9.9	8.9	10.8	10.7	12.5	12.4	10.3	9.5	8.2	7.1	6.4	2.6	8.3	8.4	9.4	10.2	11.0	12.9	10.1	10.7	10.5	13.9	2.6	9.8
29	10.0	13.2	12.8	12.2	11.3	10.5	7.9	6.9	6.5	5.4	4.0	3.1	3.1	3.5	3.5	3.0	2.7	2.5	3.1	2.7	3.3	3.0	4.4	4.9	13.2	2.5	6.0
30	4.5	5.2	5.9	4.3	8.2	6.8	7.6	8.9	9.0	8.1	8.0	8.9	8.8	9.5	10.6	9.0	10.7	11.0	10.7	11.6	10.2	8.1	8.2	8.5	11.6	4.3	8.4
31	6.5	3.4	0.9	5.2	6.1	7.2	9.1	9.0	6.4	3.6	3.3	2.9	2.4	1.5	2.0	1.9	2.7	2.7	3.4	3.4	3.5	3.5	1.8	1.3	9.1	0.9	3.9
Max.	**13.6**	**13.2**	**15.4**	**13.6**	**12.5**	**12.3**	**15.0**	**12.5**	**12.4**	**10.8**	**11.8**	**15.2**	**15.7**	**17.8**	**16.9**	**16.7**	**15.3**	**15.4**	**13.9**	**16.5**	**14.1**	**17.7**	**15.4**	**14.2**	17.8		
Min.	**1.5**	**1.3**	**0.9**	**1.2**	**1.0**	**1.5**	**1.2**	**1.3**	**1.1**	**0.9**	**2.1**	**1.4**	**1.8**	**1.5**	**1.2**	**1.5**	**1.9**	**1.8**	**1.4**	**1.2**	**1.5**	**1.7**	**1.8**	**1.3**		0.9	
Avg.	**6.7**	**6.6**	**6.2**	**5.9**	**5.8**	**5.9**	**6.3**	**6.1**	**5.9**	**5.5**	**5.1**	**5.6**	**6.0**	**6.4**	**6.5**	**6.4**	**6.0**	**6.2**	**6.8**	**7.0**	**6.8**	**6.7**	**6.3**	**6.4**			6.2

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

September 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.5	3.1	3.3	3.6	3.1	4.0	3.7	3.2	3.7	3.9	3.2	1.0	2.2	3.6	3.5	3.3	3.5	3.2	3.9	3.1	1.9	1.8	3.0	1.8	4.0	1.0	3.0
2	2.6	2.6	3.2	2.5	2.8	4.0	4.3	4.5	5.3	4.0	2.9	2.5	1.8	1.8	5.8	6.4	5.7	3.3	2.9	2.0	2.5	2.6	1.9	2.4	6.4	1.8	3.3
3	3.0	2.8	2.5	2.2	2.3	3.7	3.7	4.2	4.7	2.7	3.3	3.7	4.0	4.1	4.3	4.2	3.9	3.8	3.5	2.4	2.1	2.6	3.0	4.2	4.7	2.1	3.4
4	4.5	4.5	1.1	2.9	3.0	2.7	2.2	2.1	1.7	2.0	2.3	2.3	2.7	3.7	3.4	3.1	3.5	3.5	2.7	3.2	3.2	2.1	2.7	2.3	4.5	1.1	2.8
5	2.2	2.4	2.4	1.4	1.4	1.7	1.8	3.7	2.6	4.8	3.2	3.0	2.8	2.0	3.2	5.2	4.8	3.9	4.5	4.7	3.7	3.9	5.7	5.5	5.7	1.4	3.4
6	5.9	5.8	5.2	4.4	5.2	5.3	4.1	5.8	5.9	5.3	3.8	5.2	6.5	8.4	7.0	7.5	7.1	8.4	8.4	9.0	8.1	8.4	9.8	9.0	9.8	3.8	6.6
7	8.9	8.2	3.9	4.6	4.0	3.6	4.4	6.1	6.2	5.4	6.2	6.2	3.7	3.8	4.1	5.6	5.7	6.9	5.9	6.9	7.9	10.7	11.5	8.8	11.5	3.6	6.2
8	9.4	9.7	7.8	7.9	9.7	10.3	11.6	11.6	11.1	10.1	10.4	10.5	7.4	6.6	6.4	5.2	6.7	5.3	6.9	8.9	7.4	7.7	5.1	5.6	11.6	5.1	8.3
9	3.2	4.6	5.6	6.5	7.4	8.0	6.9	7.2	9.1	8.1	7.7	8.5	9.1	7.9	6.8	5.4	6.5	7.3	3.1	3.3	2.2	1.8	2.9	3.2	9.1	1.8	5.9
10	3.4	2.9	3.6	3.5	3.6	3.5	3.4	3.2	3.5	2.8	1.9	2.1	3.3	3.5	3.3	3.2	3.3	2.8	2.1	2.0	2.0	2.1	2.5	3.4	3.6	1.9	3.0
11	3.6	3.4	3.7	3.4	1.8	2.7	3.0	1.8	3.5	2.5	2.3	3.3	3.4	3.1	3.0	3.8	3.8	3.7	4.2	1.8	1.7	2.1	2.2	2.4	4.2	1.7	2.9
12	2.5	2.4	4.4	4.1	3.5	3.0	3.3	3.3	3.7	3.4	4.4	2.2	2.8	3.2	3.5	3.2	3.2	2.6	2.8	3.4	5.3	5.4	4.9	4.5	5.4	2.2	3.5
13	3.3	2.5	2.8	1.6	1.3	2.2	2.3	3.0	5.8	4.3	3.9	5.0	5.3	6.8	6.7	5.1	4.6	5.0	5.9	4.2	4.1	4.3	4.0	6.8	6.8	1.3	4.2
14	5.2	6.3	12.1	9.8	10.5	10.8	12.2	11.9	12.2	12.1	10.9	11.2	10.3	11.2	12.3	11.5	12.5	11.1	10.9	11.4	12.3	10.9	10.5	10.4	12.5	5.2	10.8
15	11.0	11.4	12.1	10.7	13.3	13.9	12.8	12.8	12.1	11.3	12.8	11.7	11.9	12.2	12.2	11.7	11.1	10.0	10.1	10.3	11.0	10.2	8.0	8.0	13.9	8.0	11.4
16	7.7	7.8	7.8	7.2	7.6	7.8	6.8	5.4	7.4	5.5	6.3	6.2	5.5	6.4	6.3	6.4	5.6	5.2	6.2	7.1	6.8	6.9	6.6	5.4	7.8	5.2	6.6
17	6.7	5.5	4.8	5.2	5.4	4.7	4.1	4.8	4.7	4.8	4.5	4.5	3.6	3.4	3.4	3.1	3.5	4.0	3.6	2.7	2.7	1.5	2.8	4.1	6.7	1.5	4.1
18	4.0	4.6	4.4	5.0	4.9	5.2	6.1	5.9	5.6	6.8	8.3	8.7	10.0	9.3	8.0	8.5	8.4	8.4	9.0	9.4	10.7	10.1	10.9	10.4	10.9	4.0	7.6
19	10.6	11.0	10.4	11.5	11.8	11.8	11.0	11.5	11.8	11.4	11.4	10.5	10.1	9.9	9.9	10.5	11.3	8.1	7.5	5.6	5.1	2.8	3.2	4.0	11.8	2.8	9.3
20	4.1	4.1	4.8	6.2	7.6	8.8	9.9	7.8	10.2	11.4	11.5	10.1	7.6	5.9	11.8	10.4	9.4	6.5	9.7	10.5	9.7	10.5	11.7	10.4	11.8	4.1	8.8
21	9.5	5.9	3.1	4.8	4.5	4.5	4.1	4.1	4.5	6.6	8.0	8.7	9.4	8.6	9.8	10.9	11.3	11.4	13.2	14.5	15.8	14.0	11.7	10.5	15.8	3.1	8.7
22	9.1	4.9	11.7	10.2	9.5	11.4	12.4	10.5	12.7	13.7	15.2	13.4	14.9	14.2	16.0	12.8	13.3	12.1	13.4	14.9	13.7	17.2	17.4	14.7	17.4	4.9	12.9
23	11.0	11.9	10.6	9.6	10.6	10.9	11.5	10.4	10.5	8.2	10.7	11.2	11.0	8.4	7.7	7.6	4.5	3.2	3.2	2.3	1.5	2.4	2.8	2.9	11.9	1.5	7.7
24	3.2	3.1	3.6	3.2	3.1	3.1	4.0	3.3	4.4	4.5	4.3	2.9	4.4	3.5	4.0	4.0	3.7	5.0	6.8	7.5	7.6	4.4	4.1	3.7	7.6	2.9	4.2
25	3.6	3.2	3.7	3.9	4.1	4.4	4.0	3.8	3.6	4.7	4.5	2.6	4.5	6.2	4.6	4.8	5.3	4.6	5.9	7.3	7.3	7.7	8.2	6.9	8.2	2.6	5.0
26	6.7	9.4	10.6	11.5	9.9	11.3	11.5	11.4	11.8	10.3	8.7	8.8	8.8	9.0	8.5	9.0	8.2	8.3	6.9	5.7	5.6	5.3	4.4	3.7	11.8	3.7	8.5
27	1.6	2.0	0.9	1.6	6.5	6.8	6.7	8.8	6.3	4.6	3.0	3.1	3.1	4.9	5.0	5.4	4.8	4.3	3.2	4.3	4.9	5.5	5.9	6.2	8.8	0.9	4.6
28	5.7	5.3	4.1	2.3	3.5	3.1	3.4	3.0	3.4	3.6	3.3	2.0	4.8	5.2	8.0	9.9	9.7	7.2	8.0	13.9	11.2	10.2	15.0	8.7	15.0	2.0	6.4
29	10.8	7.2	8.2	11.4	10.1	6.5	7.1	8.3	6.2	7.7	11.5	9.4	7.3	7.9	9.7	11.0	8.7	11.6	9.3	10.3	8.2	9.2	8.7	8.5	11.6	6.2	9.0
30	8.8	9.9	8.1	9.3	8.7	8.9	10.3	8.1	6.7	6.2	6.0	4.6	4.4	4.9	5.3	5.2	5.9	3.4	5.3	5.9	7.2	6.6	7.1	9.9	10.3	3.4	6.9
Max.	**11.0**	**11.9**	**12.1**	**11.5**	**13.3**	**13.9**	**12.8**	**12.8**	**12.7**	**13.7**	**15.2**	**13.4**	**14.9**	**14.2**	**16.0**	**12.8**	**13.3**	**12.1**	**13.4**	**14.9**	**15.8**	**17.2**	**17.4**	**14.7**	17.4		
Min.	**1.6**	**2.0**	**0.9**	**1.4**	**1.3**	**1.7**	**1.8**	**1.8**	**1.7**	**2.0**	**1.9**	**1.0**	**1.8**	**1.8**	**3.0**	**3.1**	**3.2**	**2.6**	**2.1**	**1.8**	**1.5**	**1.5**	**1.9**	**1.8**		0.9	
Avg.	**5.8**	**5.6**	**5.7**	**5.7**	**6.0**	**6.3**	**6.4**	**6.4**	**6.7**	**6.4**	**6.5**	**6.2**	**6.2**	**6.3**	**6.8**	**6.8**	**6.6**	**6.1**	**6.3**	**6.6**	**6.4**	**6.4**	**6.6**	**6.3**			6.3

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

October 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.6	10.0	9.7	8.9	8.8	10.3	8.9	10.5	10.2	12.2	9.8	9.8	10.4	10.6	9.0	9.5	10.2	8.2	8.9	8.7	9.1	10.1	8.7	9.1	12.2	8.2	9.6
2	8.6	7.9	7.9	8.5	8.7	8.8	8.0	7.4	7.6	6.9	6.5	6.6	6.3	8.0	7.1	6.9	6.7	6.6	8.5	8.9	10.2	7.6	8.5	9.3	10.2	6.3	7.8
3	9.9	8.1	10.7	11.0	11.1	9.8	9.5	9.9	8.5	4.9	4.5	4.6	4.9	3.8	4.8	6.3	3.0	4.9	4.5	3.6	1.8	3.2	4.7	3.2	11.1	1.8	6.3
4	3.6	3.1	11.7	15.1	17.2	14.8	7.7	4.5	4.2	5.3	5.0	4.2	5.1	6.0	6.7	5.8	6.9	5.3	2.6	3.4	3.7	2.5	2.5	3.0	17.2	2.5	6.2
5	3.4	6.2	3.9	3.6	3.9	3.1	9.8	10.4	10.3	11.6	11.1	11.8	12.3	9.3	7.1	9.7	8.7	10.0	8.0	8.2	11.1	7.8	8.2	9.3	12.3	3.1	8.3
6	7.1	6.2	3.1	3.6	3.7	5.9	6.0	5.9	8.1	6.7	7.8	8.4	8.5	8.3	7.9	6.6	6.0	4.8	4.0	2.9	2.7	3.5	5.0	6.0	8.5	2.7	5.8
7	5.7	7.0	7.6	6.6	5.8	5.5	6.1	6.5	4.4	7.4	5.3	3.8	4.9	4.9	5.9	5.3	5.0	5.4	7.7	6.3	5.3	5.6	6.5	8.6	8.6	3.8	6.0
8	8.0	10.0	8.6	9.8	9.3	10.3	9.4	11.0	11.4	11.8	13.6	14.9	15.5	16.0	15.6	15.2	16.0	13.5	13.0	11.7	13.3	15.0	15.3	13.9	16.0	8.0	12.6
9	16.4	17.4	16.4	16.7	14.6	12.8	10.9	16.9	11.8	11.0	15.5	7.5	6.6	5.5	7.3	5.2	5.5	5.5	6.5	12.5	7.2	5.8	5.5	7.4	17.4	5.2	10.3
10	7.7	10.5	9.7	1.9	7.8	8.0	6.9	4.7	3.1	3.7	3.6	3.8	4.0	4.7	10.0	9.5	10.0	9.9	8.4	7.9	9.2	8.6	8.0	7.2	10.5	1.9	7.0
11	4.5	5.2	5.1	3.7	3.1	2.6	2.5	3.6	2.8	4.3	3.3	1.6	4.3	4.1	10.6	11.2	5.3	2.8	2.4	2.5	4.1	3.8	4.3	5.1	11.2	1.6	4.3
12	5.6	5.5	6.4	6.1	4.2	5.7	6.5	6.4	6.2	5.8	4.9	4.0	4.4	2.7	4.9	5.7	5.3	4.5	3.8	4.3	4.8	5.3	5.4	6.1	6.5	2.7	5.2
13	6.6	6.5	6.4	6.6	5.9	6.5	7.5	5.7	6.3	6.1	4.4	4.6	3.5	4.3	5.2	4.7	5.9	5.9	3.5	1.8	3.2	3.1	3.9	3.8	7.5	1.8	5.1
14	5.8	11.2	6.9	8.6	10.0	10.8	6.4	8.8	10.3	9.8	11.7	11.7	14.4	11.0	14.1	14.1	10.2	10.8	10.5	7.5	9.1	7.8	3.6	4.1	14.4	3.6	9.5
15	4.2	4.5	4.7	5.4	3.2	4.8	4.5	2.3	5.4	5.9	8.2	6.6	6.2	6.5	5.7	5.8	5.1	3.6	5.7	6.5	8.7	9.1	7.2	6.7	9.1	2.3	5.7
16	7.4	8.5	7.3	8.4	8.7	7.7	7.2	6.8	6.6	6.6	6.1	6.8	6.4	7.7	6.1	5.9	6.0	6.8	8.0	7.6	7.1	6.5	7.4	6.5	8.7	5.9	7.1
17	7.1	7.2	8.2	9.2	8.2	5.3	6.6	8.2	8.2	6.4	4.9	4.9	4.5	3.1	3.1	3.1	5.1	5.9	5.9	6.2	8.0	7.2	7.7	7.2	9.2	3.1	6.3
18	7.8	9.1	10.0	9.4	7.5	7.5	8.4	10.9	8.5	9.6	9.8	10.4	10.7	10.8	8.3	7.4	6.4	4.3	7.0	7.8	5.1	2.1	8.4	7.1	10.9	2.1	8.1
19	9.3	9.3	12.6	9.4	11.1	10.1	7.7	4.6	4.6	3.7	3.3	4.2	5.2	5.3	3.6	4.1	3.2	5.2	4.8	5.4	4.5	3.2	6.9	7.0	12.6	3.2	6.2
20	9.2	4.1	3.4	9.4	3.8	4.7	3.0	3.0	2.7	6.5	5.6	3.7	3.9	4.1	3.5	2.5	2.0	2.1	3.1	3.5	2.9	3.8	3.3	3.7	9.4	2.0	4.1
21	4.1	4.0	8.0	6.6	9.6	9.4	8.6	8.7	7.3	6.5	12.0	11.3	13.3	13.3	12.1	9.0	10.6	11.4	10.1	12.0	12.4	6.9	5.3	5.2	13.3	4.0	9.1
22	4.0	5.6	5.3	4.4	6.3	5.1	4.5	4.3	4.5	3.1	4.3	3.3	2.9	2.7	6.1	6.1	4.3	5.2	4.0	3.7	3.9	3.5	4.3	6.4	6.4	2.7	4.5
23	7.3	8.7	8.0	10.4	11.5	11.5	10.8	7.4	14.0	13.4	12.1	15.0	11.5	8.0	9.9	8.0	13.6	7.5	8.4	14.8	10.7	10.2	8.9	9.5	15.0	7.3	10.4
24	5.2	3.9	3.8	6.6	5.7	9.1	9.7	10.3	13.2	11.1	11.2	11.1	12.6	12.0	12.6	11.6	12.3	12.7	8.8	4.9	1.3	0.9	0.2	1.0	13.2	0.2	8.0
25	1.3	2.0	11.5	12.7	10.4	11.5	14.9	16.2	17.5	18.1	19.4	16.9	21.8	24.2	14.4	15.1	21.0	22.2	10.9	9.5	10.8	14.2	12.7	13.1	24.2	1.3	14.3
26	14.6	12.0	9.9	10.2	11.8	11.2	10.9	10.1	9.9	9.1	9.0	7.6	7.3	7.4	9.2	10.0	10.7	10.8	8.3	9.3	10.5	11.0	10.5	10.2	14.6	7.3	10.1
27	10.7	9.9	9.8	10.3	7.9	9.7	10.0	9.6	7.9	8.4	7.7	7.5	9.3	10.4	10.9	11.5	9.8	10.1	12.6	11.6	9.5	10.6	8.8	10.5	12.6	7.5	9.8
28	9.8	10.1	11.9	10.0	8.3	8.2	6.0	4.1	5.5	5.8	5.8	5.9	5.6	4.4	4.6	6.4	5.8	5.7	6.2	6.0	7.0	6.9	6.2	6.2	11.9	4.1	6.8
29	6.5	6.1	5.4	6.7	3.5	3.2	2.4	1.7	6.9	13.2	6.4	10.5	15.7	15.2	11.6	12.3	11.9	16.4	15.7	17.2	13.8	17.2	14.8	18.2	18.2	1.7	10.5
30	15.7	12.8	16.1	11.1	11.6	9.1	8.1	4.8	7.4	9.9	11.9	9.2	9.2	9.8	10.2	5.2	4.2	10.3	5.4	9.1	9.1	6.9	3.9	3.2	16.1	3.2	8.9
31	4.4	3.7	3.5	3.4	4.2	3.3	3.9	3.2	3.2	4.4	4.7	4.5	4.7	4.6	3.1	3.1	4.5	4.5	5.1	5.2	5.4	3.8	3.5	3.6	5.4	3.1	4.1
Max.	**16.4**	**17.4**	**16.4**	**16.7**	**17.2**	**14.8**	**14.9**	**16.9**	**17.5**	**18.1**	**19.4**	**16.9**	**21.8**	**24.2**	**15.6**	**15.2**	**21.0**	**22.2**	**15.7**	**17.2**	**13.8**	**17.2**	**15.3**	**18.2**	**24.2**		
Min.	**1.3**	**2.0**	**3.1**	**1.9**	**3.1**	**2.6**	**2.4**	**1.7**	**2.7**	**3.1**	**3.3**	**1.6**	**2.9**	**2.7**	**3.1**	**2.5**	**2.0**	**2.1**	**2.4**	**1.8**	**1.3**	**0.9**	**0.2**	**1.0**		**0.2**	
Avg.	**7.5**	**7.6**	**8.2**	**8.2**	**8.0**	**7.9**	**7.5**	**7.4**	**7.7**	**8.0**	**8.0**	**7.6**	**8.3**	**8.0**	**8.1**	**7.8**	**7.8**	**7.8**	**7.2**	**7.4**	**7.3**	**6.9**	**6.8**	**7.1**			**7.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

November 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.9	3.4	3.6	3.9	3.7	5.4	4.7	4.2	4.0	5.5	6.6	6.3	5.4	2.6	5.1	5.8	6.3	7.3	6.5	6.9	6.3	6.2	5.9	5.8	7.3	2.6	5.2
2	5.5	5.3	5.8	5.6	5.2	5.4	4.7	5.1	5.4	6.6	6.4	6.6	5.7	6.1	4.7	5.2	7.5	6.9	7.3	6.8	6.6	6.1	6.3	5.8	7.5	4.7	5.9
3	4.8	6.8	5.0	6.5	6.4	6.1	6.1	6.2	6.8	6.5	6.4	5.7	5.4	4.6	6.7	5.8	2.9	7.8	7.2	7.2	6.9	7.1	6.3	5.5	7.8	2.9	6.1
4	5.9	6.1	6.3	7.1	7.0	7.4	7.2	6.7	7.2	6.7	6.2	4.2	5.4	4.8	4.4	4.0	3.4	3.5	6.0	5.9	7.5	2.4	4.3	3.9	7.5	2.4	5.6
5	4.6	3.5	4.8	3.9	3.7	4.3	5.9	5.1	4.3	4.6	5.0	5.6	5.6	5.2	4.4	4.2	3.9	4.2	3.9	3.9	3.7	3.7	5.0	4.3	5.9	3.5	4.5
6	6.6	6.6	5.8	5.7	5.9	6.2	5.5	4.5	4.6	5.6	5.9	7.6	7.5	7.7	5.2	8.5	10.4	14.0	14.2	15.6	12.6	12.2	13.5	12.0	15.6	4.5	8.5
7	11.7	10.9	12.9	10.7	14.5	12.3	10.7	14.1	10.5	15.7	22.7	19.2	17.6	11.4	10.3	11.7	13.5	10.1	12.5	11.4	11.6	13.3	12.0	12.0	22.7	10.1	13.1
8	9.8	9.2	8.6	8.8	10.8	12.0	11.0	11.2	5.3	7.5	8.3	7.9	7.3	5.4	4.2	6.5	5.0	8.5	9.4	9.1	8.5	7.6	5.4	5.2	12.0	4.2	8.0
9	5.4	5.1	4.9	5.6	7.3	5.2	7.4	7.0	4.3	8.0	7.9	3.4	4.8	3.8	3.6	7.5	6.8	5.9	6.3	6.5	2.7	2.0	9.1	8.7	9.1	2.0	5.8
10	8.1	8.7	7.6	7.8	8.4	9.9	10.9	12.3	12.0	11.2	4.3	2.3	4.9	10.1	9.3	7.4	10.7	9.6	11.4	11.4	6.9	7.7	7.7	6.5	12.3	2.3	8.6
11	6.5	6.7	9.0	8.3	9.6	10.4	9.7	9.0	10.1	11.3	10.6	9.8	9.7	8.9	8.1	5.0	3.5	9.3	6.5	6.5	7.1	8.7	8.4	8.5	11.3	3.5	8.4
12	7.2	8.1	7.4	7.0	6.7	8.5	9.0	9.9	10.7	12.6	10.6	9.4	8.6	9.9	16.3	15.7	14.4	15.6	14.2	14.9	15.8	19.9	17.1	14.5	19.9	6.7	11.8
13	12.2	8.2	7.8	7.1	8.7	8.1	15.3	9.8	8.9	8.9	7.4	6.0	7.8	7.2	10.8	10.6	11.4	12.7	13.6	12.8	12.6	13.1	11.4	10.2	15.3	6.0	10.1
14	10.2	11.3	9.9	15.8	14.6	7.2	8.3	15.4	13.2	12.2	12.0	8.8	10.4	15.4	13.9	14.6	13.6	13.5	12.3	9.8	11.2	12.6	15.9	15.0	15.9	7.2	12.4
15	10.2	10.0	10.7	10.5	9.7	10.6	11.8	10.3	11.7	11.1	9.8	8.9	6.2	7.7	10.7	11.2	9.9	10.4	12.2	12.2	11.0	11.6	7.5	5.6	12.2	5.6	10.1
16	6.1	6.6	6.0	6.0	6.6	8.7	6.8	8.4	9.2	9.8	10.0	10.1	9.9	9.7	10.2	6.9	10.0	7.4	6.2	7.8	8.6	8.3	8.0	8.6	10.2	6.0	8.2
17	9.0	7.8	8.7	8.5	7.0	7.8	7.0	8.1	8.1	7.0	8.0	7.5	8.3	8.1	8.7	8.7	9.5	7.7	8.0	8.1	7.8	7.7	8.6	8.0	9.5	7.0	8.1
18	8.1	7.8	8.1	8.5	8.4	7.5	6.2	7.1	7.1	7.6	7.4	7.8	8.2	8.7	8.4	8.3	8.3	7.6	8.2	7.7	6.8	8.6	9.2	8.3	9.2	6.2	7.9
19	9.2	10.0	14.2	13.4	11.3	11.5	9.2	10.2	8.6	9.1	10.0	12.1	14.2	16.4	17.0	17.0	16.9	17.3	16.4	13.0	12.1	8.9	8.9	8.9	17.3	8.6	12.3
20	8.4	8.6	11.4	8.9	12.7	11.5	12.2	13.0	9.0	9.4	7.8	7.6	10.2	9.7	8.7	8.6	7.8	8.0	7.6	8.2	7.4	7.7	7.8	7.6	13.0	7.4	9.1
21	8.1	7.8	8.6	8.7	8.8	8.6	9.3	8.8	9.3	9.0	8.2	8.1	9.0	7.2	6.9	9.0	10.6	11.0	12.6	13.7	13.2	10.1	9.9	9.4	13.7	6.9	9.4
22	8.8	7.4	6.6	6.0	4.7	5.4	4.2	4.4	7.3	6.0	7.2	7.1	5.7	7.3	6.8	6.0	7.2	6.9	6.3	4.5	4.1	4.5	4.2	4.1	8.8	4.1	5.9
23	4.4	3.8	5.1	4.8	5.1	4.7	5.9	5.6	5.1	5.5	6.7	6.4	5.1	5.2	4.4	3.4	3.4	4.3	4.5	5.0	4.6	4.2	4.3	3.7	6.7	3.4	4.8
24	4.2	4.2	4.7	5.2	4.3	5.3	5.6	5.3	4.2	4.4	6.1	6.7	6.9	6.5	7.0	8.1	9.1	9.7	11.6	12.9	12.3	11.0	10.3	10.7	12.9	4.2	7.3
25	10.2	9.5	8.7	9.6	8.5	10.1	10.1	8.7	8.5	9.2	7.9	6.8	5.8	7.3	7.1	7.0	7.9	6.9	7.0	7.7	7.3	7.6	7.2	7.5	10.2	5.8	8.1
26	8.4	9.5	9.8	9.9	9.1	8.8	8.5	9.3	11.5	10.2	10.8	10.4	10.1	10.6	9.3	9.8	10.4	10.4	9.7	10.2	9.7	11.0	11.7	11.8	11.8	8.4	10.0
27	13.6	12.7	13.0	13.1	14.0	11.2	10.4	9.5	10.3	8.0	8.5	7.9	8.2	8.4	9.0	8.1	8.6	8.1	8.1	7.9	8.0	8.0	8.2	7.5	14.0	7.5	9.6
28	7.2	7.9	8.3	7.8	7.1	8.3	7.3	7.2	6.3	7.0	6.2	6.4	7.2	8.0	7.5	7.6	7.7	5.8	5.4	4.0	3.5	3.0	1.8	2.4	8.3	1.8	6.3
29	2.5	4.2	6.3	5.4	5.1	4.4	4.9	5.4	5.5	3.0	2.7	5.1	5.1	3.5	4.1	3.9	5.2	5.7	6.2	4.7	7.0	8.0	7.9	8.5	8.5	2.5	5.2
30	7.6	8.9	8.0	9.3	9.1	9.9	10.8	9.9	9.2	9.2	9.3	9.7	9.7	9.5	6.8	5.8	3.3	0.2	0.2	0.2	0.2	0.2	0.2	9.5	10.8	0.2	6.5
Max.	**13.6**	**12.7**	**14.2**	**15.8**	**14.6**	**12.3**	**15.3**	**15.4**	**13.2**	**15.7**	**22.7**	**19.2**	**17.6**	**16.4**	**17.0**	**17.0**	**16.9**	**17.3**	**16.4**	**15.6**	**15.8**	**19.9**	**17.1**	**15.0**	**22.7**		
Min.	**2.5**	**3.4**	**3.6**	**3.9**	**3.7**	**4.3**	**4.2**	**4.2**	**4.0**	**3.0**	**2.7**	**2.3**	**4.8**	**2.6**	**3.6**	**3.4**	**2.9**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**2.4**		**0.2**	
Avg.	**7.6**	**7.6**	**7.9**	**8.0**	**8.1**	**8.1**	**8.2**	**8.4**	**7.9**	**8.3**	**8.2**	**7.7**	**7.9**	**7.9**	**8.0**	**8.1**	**8.3**	**8.5**	**8.7**	**8.6**	**8.1**	**8.1**	**8.1**	**8.0**			**8.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meterological Station - Maximum 1 Minute Wind Speed (m/s)

December 2006

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.0	8.3	8.5	9.7	9.6	11.2	10.3	9.1	7.1	7.6	8.5	4.0	4.0	4.0	4.0	4.3	3.4	4.9	4.0	4.1	4.2	4.4	3.9	3.4	12.0	3.4	6.4
2	3.1	3.8	4.5	3.9	6.3	6.6	7.1	6.1	6.7	9.0	9.0	8.4	10.0	11.0	10.1	11.0	10.2	10.7	9.8	11.5	8.6	8.3	9.2	11.3	11.5	3.1	8.2
3	11.4	7.7	6.8	7.9	7.0	8.7	8.1	8.5	7.4	6.0	2.9	1.7	2.1	1.8	1.4	1.0	0.7	1.3	1.5	2.0	1.7	2.5	2.5	3.0	11.4	0.7	4.4
4	1.5	2.1	2.1	2.2	7.9	8.3	8.5	6.8	7.9	7.4	8.3	7.5	7.1	6.3	6.8	7.2	6.1	6.3	5.2	5.3	4.5	2.8	5.6	6.5	8.5	1.5	5.8
5	8.3	8.5	9.1	8.7	8.1	9.7	9.9	10.3	10.7	10.6	11.1	10.9	11.3	10.7	12.0	12.0	13.1	14.9	13.8	15.6	15.4	15.2	16.9	17.4	17.4	8.1	11.8
6	17.4	12.8	10.3	10.7	10.5	9.6	11.5	13.6	10.4	10.2	8.4	10.9	11.8	8.3	7.9	8.7	7.8	9.5	10.0	9.3	10.8	9.8	8.2	8.1	17.4	7.8	10.3
7	8.9	8.5	7.7	8.1	8.4	7.1	8.6	11.6	11.1	11.3	10.7	10.4	9.3	8.0	8.3	8.3	10.0	10.3	9.7	9.0	8.6	10.0	9.7	9.2	11.6	7.1	9.3
8	11.2	8.5	8.3	8.4	10.7	12.4	12.4	13.4	10.9	7.0	6.9	6.6	7.0	6.5	1.0	5.0	11.0	12.7	15.1	6.3	5.1	5.6	3.8	5.3	15.1	1.0	8.4
9	4.5	6.5	5.6	6.7	7.6	7.7	8.6	7.8	7.7	10.3	10.6	10.2	11.8	9.4	10.5	10.7	11.1	10.3	10.4	9.3	11.9	8.6	10.8	9.9	11.9	4.5	9.1
10	4.5	4.6	5.2	4.8	4.1	6.3	5.7	3.8	4.6	6.8	5.7	6.4	7.0	6.5	5.8	7.6	7.8	7.1	9.9	9.7	7.7	8.2	7.5	7.3	9.9	3.8	6.4
11	7.2	7.1	7.1	6.9	6.8	7.4	7.1	5.5	3.0	2.8	2.7	2.5	1.9	1.4	1.9	3.7	4.1	3.9	5.0	4.7	3.1	3.4	4.0	2.4	7.4	1.4	4.4
12	3.0	2.5	4.2	2.9	2.9	3.2	6.6	6.9	5.2	6.0	7.4	6.1	6.5	5.9	6.4	6.4	5.9	5.5	6.3	5.7	3.5	5.7	4.9	6.3	7.4	2.5	5.2
13	7.4	5.6	6.5	7.6	6.0	9.7	11.0	11.4	11.4	12.2	12.9	14.5	14.3	14.6	15.6	16.4	15.3	15.8	17.3	15.3	17.5	16.3	17.1	17.8	17.8	5.6	12.9
14	16.3	15.9	17.9	19.3	17.5	16.6	15.3	16.2	16.0	15.1	15.7	14.1	17.7	17.5	9.2	16.3	12.9	16.3	13.3	11.0	14.7	17.2	15.0	14.6	19.3	9.2	15.5
15	13.9	13.9	14.0	13.2	14.0	13.4	11.4	8.8	9.9	8.8	7.3	9.1	7.2	6.8	7.6	7.1	6.3	5.6	6.2	6.5	6.9	7.4	8.8	9.6	14.0	5.6	9.3
16	10.5	10.6	9.9	10.9	11.3	11.7	10.3	9.9	9.1	8.2	7.6	8.2	8.0	6.5	6.4	5.5	4.8	3.4	1.1	1.5	2.1	1.0	1.7	1.8	11.7	1.0	6.7
17	2.0	2.9	3.1	1.6	1.4	2.3	2.4	2.6	2.2	2.0	2.6	2.6	2.3	1.6	2.0	1.9	3.1	7.2	10.9	10.1	11.1	9.1	15.6	12.8	15.6	1.4	4.8
18	13.6	17.3	20.6	16.5	16.5	17.5	13.3	12.5	13.6	10.8	10.7	10.6	11.4	15.1	14.7	12.0	10.1	12.8	9.1	7.6	5.4	3.2	4.4	5.7	20.6	3.2	11.9
19	7.0	7.3	7.0	7.7	7.3	8.2	8.5	8.7	9.5	8.9	8.6	8.4	6.0	3.0	2.8	4.0	2.1	2.9	4.2	4.9	6.1	5.1	4.9	4.2	9.5	2.1	6.1
20	7.1	8.9	9.5	8.7	6.7	13.7	14.4	15.8	15.1	15.0	15.8	16.4	15.8	15.6	14.6	15.3	13.9	11.6	8.8	9.6	7.4	8.7	8.0	9.1	16.4	6.7	11.9
21	8.8	8.5	10.2	10.0	13.7	15.1	16.4	16.5	13.7	16.1	13.2	11.7	9.6	11.2	8.4	6.2	6.6	8.1	6.6	8.1	7.7	6.4	6.7	8.4	16.5	6.2	10.3
22	8.6	8.4	8.1	8.4	8.4	2.3	5.6	5.5	5.2	5.1	2.1	2.5	6.9	3.4	7.0	5.8	4.2	3.2	6.8	8.0	6.4	3.1	6.0	6.3	8.6	2.1	5.7
23	6.5	9.7	8.6	7.9	8.5	7.4	8.9	11.5	10.0	7.6	10.2	9.0	9.1	9.2	10.5	10.4	11.5	11.7	10.9	9.2	10.7	11.4	11.8	10.2	11.8	6.5	9.7
24	7.3	7.5	8.2	8.8	7.8	8.1	6.5	4.8	5.0	4.3	4.5	4.3	4.0	4.3	5.2	8.0	8.8	10.1	10.6	11.2	11.3	13.0	13.8	12.0	13.8	4.0	7.9
25	12.8	12.7	13.2	13.0	16.7	16.1	15.4	16.0	16.4	17.0	18.0	16.4	15.5	11.9	11.2	11.1	11.8	10.3	14.0	18.1	15.1	12.3	16.3	15.4	18.1	10.3	14.4
26	13.2	16.3	12.2	8.1	12.5	10.5	10.3	11.4	12.1	7.8	7.9	6.4	6.2	7.1	6.2	4.4	4.0	5.7	7.4	6.5	5.6	7.5	7.7	8.0	16.3	4.0	8.5
27	9.6	8.8	11.4	10.5	12.2	11.6	12.4	14.5	16.5	17.3	18.6	17.2	19.0	19.4	21.2	21.8	22.5	22.2	20.7	18.8	16.2	13.5	10.9	10.7	22.5	8.8	15.7
28	10.4	10.1	10.0	8.0	8.7	8.0	7.3	5.2	5.9	5.3	5.9	4.8	5.0	6.7	7.7	7.0	7.0	6.5	6.7	5.7	7.2	8.1	7.2	4.8	10.4	4.8	7.0
29	4.0	5.3	3.3	4.2	3.4	7.4	8.0	10.6	9.7	8.6	11.2	13.6	11.8	12.7	15.1	18.1	18.3	19.1	19.0	19.7	15.6	17.4	18.3	16.5	19.7	3.3	12.1
30	19.9	21.5	16.1	17.1	14.3	17.5	17.5	17.9	14.4	13.2	14.6	13.5	14.5	13.5	14.2	13.5	12.6	12.9	11.8	11.1	12.3	11.7	10.6	11.8	21.5	10.6	14.5
31	9.3	8.3	5.6	5.3	6.3	6.4	5.3	6.6	6.3	6.5	7.4	8.2	8.8	9.1	9.2	9.4	9.6	10.3	8.9	9.2	7.7	6.7	6.5	4.9	10.3	4.9	7.6
Max.	**19.9**	**21.5**	**20.6**	**19.3**	**17.5**	**17.5**	**17.5**	**17.9**	**16.5**	**17.3**	**18.6**	**17.2**	**19.0**	**19.4**	**21.2**	**21.8**	**22.5**	**22.2**	**20.7**	**19.7**	**17.5**	**17.4**	**18.3**	**17.8**	**22.5**		
Min.	**1.5**	**2.1**	**2.1**	**1.6**	**1.4**	**2.3**	**2.4**	**2.6**	**2.2**	**2.0**	**2.1**	**1.7**	**1.9**	**1.4**	**1.0**	**1.0**	**0.7**	**1.3**	**1.1**	**1.5**	**1.7**	**1.0**	**1.7**	**1.8**		**0.7**	
Avg.	**9.1**	**9.0**	**8.9**	**8.6**	**9.1**	**9.7**	**9.8**	**10.0**	**9.5**	**9.2**	**9.3**	**8.9**	**9.1**	**8.7**	**8.5**	**9.0**	**8.9**	**9.4**	**9.5**	**9.2**	**8.8**	**8.5**	**9.0**	**8.9**			**9.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Appendix E

Validated Manual Particulate Data

Not Applicable.

APPENDIX 26E

2007 Annual Data Report, Pebble Port Station, for the Pebble Project Meteorological Monitoring Program

(Please also note: Pebble Port Station is also called Port Site 1 in the text of this document.)

2007 Annual Data Report
Pebble Port Station

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

April 2008

Pebble Port Station
2007 Annual Data Report

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

April 2008

prepared for

The Pebble Partnership
Anchorage, Alaska

prepared by

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CONTENTS

Executive Summary **1**

1.0 Introduction **4**

1.1 Project Summary 4
1.2 Measurements Method Table 5
1.3 Variations from the Quality Assurance Project Plan 5

2.0 Station Performance Summary **10**

2.1 Significant Project Events 10
2.2 Missing, Invalid, and Adjusted Data 11
2.3 Network Data Completeness 11
2.4 Precision Statistics 13
2.4.1 Monitoring Network Precision Statistics 14
2.4.2 Analytical Laboratory Precision Statistics 14
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 14
2.5 Accuracy Statistics 14
2.5.1 Instrument Calibration Statistics 14
2.5.2 Independent Quality Assurance Audits 14

3.0 Monitoring Data Network Summary **21**

3.1 Air Quality Data Summary 21
3.2 Meteorological Data Summary 21
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 21
3.2.2 Temperature Climatology 33
3.3.3 Other Meteorological Parameters 38

4.0 References **43**

List of Figures

1-1 Map of the Pebble Project Area 7
1-2 Map of the Pebble Port Station 8
1-3 Pebble Port Meteorological Monitoring Station 9
3-1 2007 Pebble Port Wind Roses 23
3-2 Quarterly Pebble Port Wind Roses (Climatronics) 24
3-3 Quarterly Pebble Port Wind Roses (RM Young) 25
3-4 2007 Wind Rose Superimposed on Site Map 32
3-5 Hourly Average 2-Meter and 10-Meter Temperatures 36
3-6 Hourly Average Vertical Temperature Difference 37

3-7 Hourly Average Relative Humidity 40
3-8 Barometric Pressure 41
3-9 Hourly Average Solar Radiation 42

List of Tables

E-1 Meteorological Data Capture – Valid Hours per Month 2
E-2 Meteorological Data Capture – Percent Data Capture 3
1-1 Meteorological Measurement Methods 6
2-1 Chronology of Significant Events 10
2-2 Percentage of Final Data Flagged 12
2-3 Pebble Port Station Percent Data Capture 14
2-4 August 21, 2006 Performance Audit Summary 16
2-5 January 16, 2007 Performance Audit Summary 17
2-6 February 7, 2007 Supplemental Performance Audit Summary 18
2-7 August 29, 2007 Performance Audit Summary (CR10X) 19
2-8 August 30, 2007 Performance Audit Summary (CR1000) 20
3-1 Average and Maximum Wind Speeds 22
3-2 Average and Maximum Wind Speeds at Seldovia Airport 22
3-3 2007 Annual Wind Rose Analysis Table (Climatronics) 26
3-4 Quarter A Wind Rose Analysis Table (Climatronics) 27
3-5 Quarter B Wind Rose Analysis Table (Climatronics) 27
3-6 Quarter C Wind Rose Analysis Table (Climatronics) 28
3-7 Quarter D Wind Rose Analysis Table (Climatronics) 28
3-8 2007 Annual Wind Rose Analysis Table (RM Young) 29
3-9 Quarter A Wind Rose Analysis Table (RM Young) 30
3-10 Quarter B Wind Rose Analysis Table (RM Young) 30
3-11 Quarter C Wind Rose Analysis Table (RM Young) 31
3-12 Quarter D Wind Rose Analysis Table (RM Young) 31
3-13 2-Meter Temperature Summary 34
3-14 10-Meter Temperature Summary 35
3-15 Relative Humidity, Barometric Pressure, and Solar Radiation Summary 39

List of Appendices

A Data Processing Specifications and Statistical Formulae
B Precision Data
C Accuracy Data
D Validated Continuous Data Summaries
E Validated Manual Particulate Data

Executive Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG, Inc., dba. Hoefler Consulting Group, is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration (PSD) quality meteorological monitoring for the Pebble Project began on August 1, 2005 and will be ongoing. This report provides details of the 2007 calendar year of meteorological measurements collected from January 1, 2007 through December 31, 2007 at a possible port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble Port meteorological monitoring station. The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the secondary wind speed sensor, which did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarter A (January 1, 2007 through March 31, 2007) as a result of sensor failure. However, the collocated primary PSD-quality wind speed sensor (Climatronics, model F460) had greater than 90 percent data capture during this same period. Therefore, measurements from the primary PSD-quality instrument will be used to fulfill PSD data capture requirements for Monitoring Quarter A.

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2007	738	712	712	738	738	738	0	0	0	744	744	744
February 2007	666	666	666	672	672	672	512	512	512	666	672	672
March 2007	744	744	744	744	744	744	744	744	744	744	744	744
April 2007	720	720	720	720	720	720	720	720	720	720	720	720
May 2007	744	744	744	744	744	744	744	744	744	744	744	744
June 2007	720	720	720	720	720	720	720	720	720	720	720	720
July 2007	744	744	744	744	744	744	744	744	744	744	744	744
August 2007	688	688	688	688	688	688	688	688	688	688	688	688
September 2007	719	719	719	719	719	719	719	719	719	719	719	719
October 2007	744	744	744	744	744	744	744	744	744	744	744	744
November 2007	720	720	720	720	720	720	720	720	720	720	720	720
December 2007	744	744	744	744	744	744	744	744	744	744	744	744
Monitoring Year	**8,691**	**8,665**	**8,665**	**8,697**	**8,697**	**8,697**	**7,799**	**7,799**	**7,799**	**8,697**	**8,703**	**8,703**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes.

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2007	99.2%	95.7%	95.7%	99.2%	99.2%	99.2%	0.0%	0.0%	0.0%	100%	100%	100%
February 2007	99.1%	99.1%	99.1%	100%	100%	100%	76.2%	76.2%	76.2%	99.1%	100%	100%
March 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.4%**	**98.2%**	**98.2%**	**99.7%**	**99.7%**	**99.7%**	**58.1%**	**58.1%**	**58.1%**	**99.7%**	**100%**	**100%**
April 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
May 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
July 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
August 2007	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%
September 2007	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Quarter C	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**
October 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.2%**	**98.9%**	**98.9%**	**99.3%**	**99.3%**	**99.3%**	**89.0%**	**89.0%**	**89.0%**	**99.3%**	**99.3%**	**99.3%**

[1]CLM = Climatronics wind speed and wind direction sensor.

[2]RMY = R.M. Young wind speed and wind direction sensor.

[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).

[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes.

1.0 Introduction

1.1 Project Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc, dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring program currently consists of three PSD-quality meteorological monitoring stations located at the proposed mill site (Pebble 1), the tailings storage facility (Pebble 4), and port site (Pebble Port). An additional, non-PSD meteorological monitoring station (Pebble 3) is located near the tailings storage facility and is collecting data for engineering and mine design purposes. Of the three PSD-quality meteorological monitoring stations, continuous measurements were made at the Pebble 1 and Pebble Port stations beginning on August 1, 2005. This data report reflects data collected from January 1, 2007 through December 31, 2007 at the Pebble Port station. A separate annual data report has been prepared for each of the Pebble 1 and Pebble 4 stations.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble Port station.

The Pebble Port station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C])
- Air temperature, ten meters above ground level (degrees Celsius [°C])
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]))
- Wind speed (meters per second [m/s])
- Wind direction (degrees [°])
- Wind direction standard deviation (wind sigma [σ_θ])
- Relative humidity (percent [%])
- Solar radiation (Watts per square meter [W/m^2])
- Barometric Pressure (millibar [mb]).

Measurements of these parameters will provide at least one year of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble Port station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble Port station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble Port station.

1.3 Variations from the Quality Assurance Project Plan

During the first monitoring year, there were no variations from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]

[1]Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.
[2]Instantaneous barometric pressure measurements are collected for 1 second during every hour.

Figure 1-1. Map of the Pebble Project Area

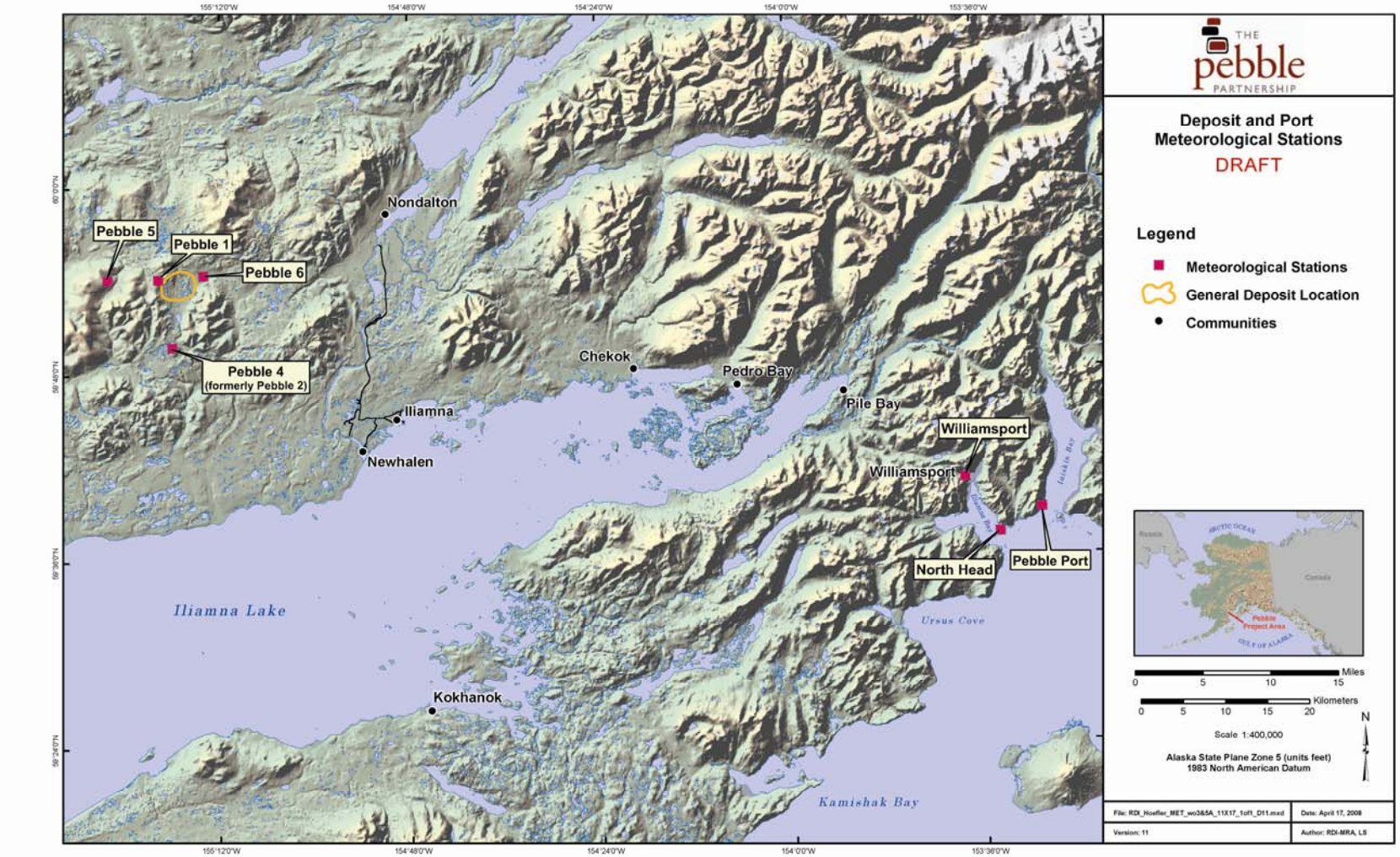


Figure 1-2. Map of the Pebble Port Station

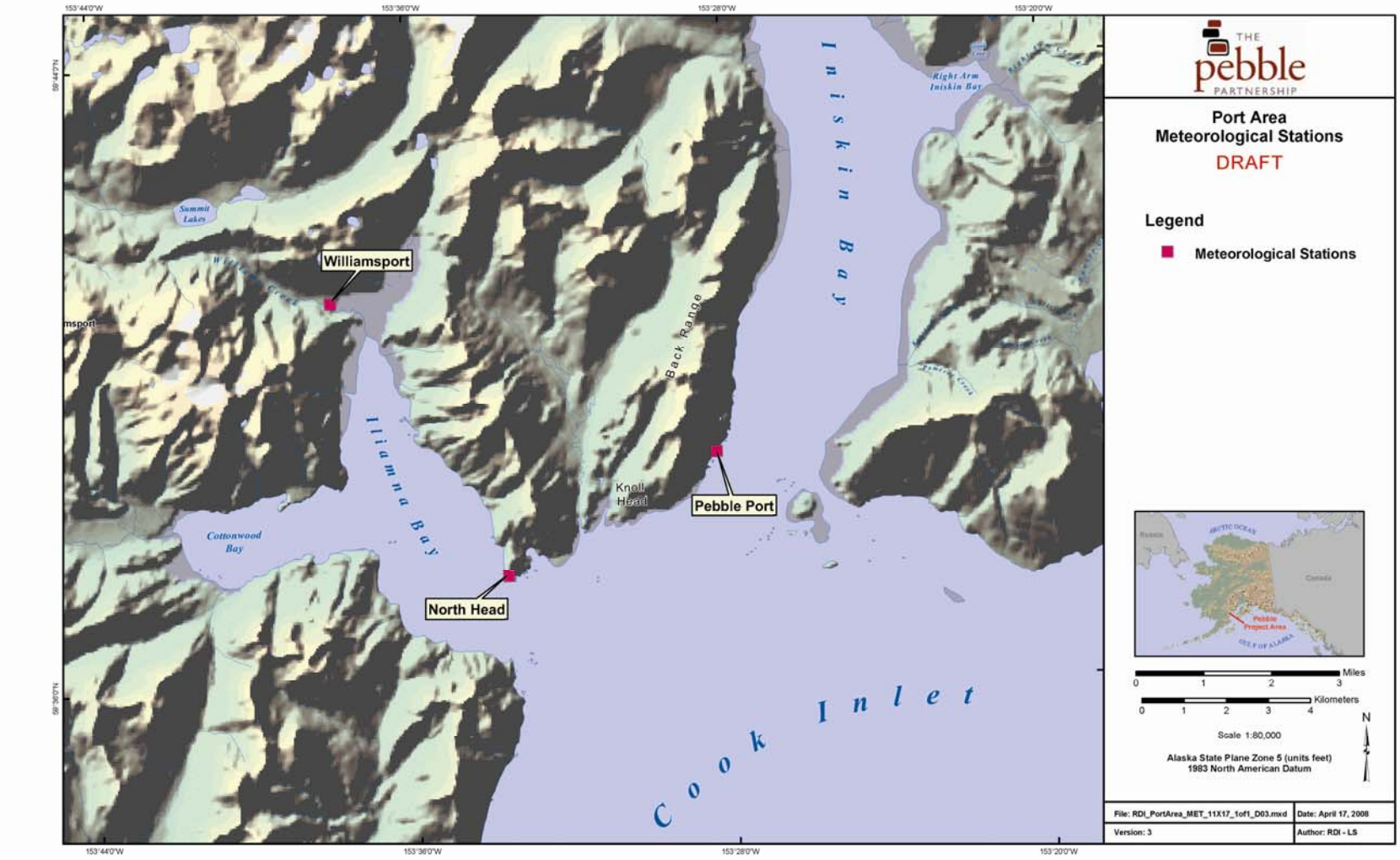


Figure 1-3. Pebble Port Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble Port station relevant to the 2007 meteorological monitoring year.

Table 2-1. Chronology of Significant Events

Date	Event
June 21-25, 2005	Initial site installation and setup.
January 1, 2007	Beginning of 2007 monitoring year.
January 16, 2007	Full audit performed (all parameters passed except R.M. Young torque and linearity). Repaired 10 meter temperature wire. Attempted to repair aspirator fans.
February 6-7, 2007	Replaced R.M. Young and Relative Humidity, repaired 10 meter temperature, rewired temperature sensors for new aspirators, replaced aspirators, supplementary audit performed.
March 22, 2007	Replaced aspirator relay, uploaded new data logger program, installed new clip in aspirator for Met-One thermistor.
June 26, 2007	Site visit to check status of aspirators and other station equipment.
August 29, 2007	Systems performance audit for CR10 data logger.
August 30, 2007	Systems performance audit and calibration for CR1000 data logger.
November 6, 2007	Thermo-electric Generator started.
December 31, 2007	End of 2007 monitoring year.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble Port station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the second monitoring year at the Pebble Port station.

The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the secondary wind speed sensor, which did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarter A (January 1, 2007 through March 31, 2007) as a result of an unknown sensor failure. However, the collocated primary PSD-quality wind speed sensor (Climatronics, model F460) had greater than 90 percent data capture during this same period. Therefore, measurements from the primary PSD-quality instrument will be used to fulfill PSD data capture requirements for Monitoring Quarter A.

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	0.9%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	1.4%
	< 10° variation over 18 consecutive hours	0.8%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	0.8%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	1.3%
	< 10° variation over 18 consecutive hours	0.8%
Temperature (2 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.5%
	Value is > record high, < record low	0.0%
Temperature (10 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.7%
	Value is > record high, < record low	0.0%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	0.3%
	Value is < -0.8°C during the night	0.0%
	Value is > 5°C, < -3°C	0.0%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.0%
	> 5°C variation from previous hour	0.5%
	< 0.5°C variation for 12 consecutive hours	1.7%
	Equals ambient temperature for 12 consecutive hours	0.4%
Solar Radiation	> 0 W/m^2 at night	0.0%
	Greater than the maximum possible value for date and latitude	0.0%
Barometric Pressure	> 1060 mb (sea level)	0.0%
	< 940 mb (sea level)	0.0%
	> 6 mb variation for 3 consecutive hours	0.1%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

Table 2-3. Pebble Port Station Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2007	99.2%	95.7%	95.7%	99.2%	99.2%	99.2%	0.0%	0.0%	0.0%	100%	100%	100%
February 2007	99.1%	99.1%	99.1%	100%	100%	100%	76.2%	76.2%	76.2%	99.1%	100%	100%
March 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.4%**	**98.2%**	**98.2%**	**99.7%**	**99.7%**	**99.7%**	**58.1%**	**58.1%**	**58.1%**	**99.7%**	**100%**	**100%**
April 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
May 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
July 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
August 2007	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%
September 2007	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Quarter C	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**
October 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.2%**	**98.9%**	**98.9%**	**99.3%**	**99.3%**	**99.3%**	**89.0%**	**89.0%**	**89.0%**	**99.3%**	**99.3%**	**99.3%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purposes

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A performance audit of the station was conducted on August 21, 2006. The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. The results of the performance audit are presented in Table 2-4.

Subsequently, a performance audit was conducted on January 16, 2007 and a supplemental performance audit was conducted on February 7, 2007. On January 16, 2007 the RM Young wind instrument failed the audit for an unknown reason. A summary of the results of these audits are presented in Tables 2-5 and 2-6. On August 29, 2007 an annual performance audit was conducted at the Pebble Port station, all sensors passed. A second audit was performed on all station sensors on August 30, 2007 to check sensor operation after upgrading the CR10X data logger with a CR1000 data logger, all sensors passed and the new DAS time was calibrated after the discovery of a 12 hour time difference. The results of these performance audits are presented in Table 2-7 and Table 2.8. All complete performance audit reports are available in Appendix C.

A technical systems audit was performed during both the August 21, 2006 and the August 29-30, 2007 performance audits. During each of these audits, the power supply, DAS, communications system, and audited sensors all worked properly. The systems audit found that the station is well-planned, equipped with PSD quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

Table 2-4. August 21, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	00:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.6	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	Oz-in	< 0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.0	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	Oz-in	0.100	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	0.5	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	0.5	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.0	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	0.125	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	2.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.6	Pass
Barometric Pressure	≤ ±3	Mb	1.0	Pass
Solar Radiation	≤ ±5+Res	% input	5.8	Pass

Table 2-5. January 16, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:13	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass[1]
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	Oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	2.0	Pass
Wind Direction Torque	≤ 0.104	Oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.5	Pass
Wind Direction Linearity	≤ 3	Degree	1.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	.03	Fail
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	10.4	Fail
Wind Direction Accuracy	≤ ±5	Degree	5.9	Fail
Wind Direction Linearity	≤ 3	Degree	3.1	Fail
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	10.5	Fail
Barometric Pressure	≤ ±3	Mb	-1.9	Pass
Solar Radiation	≤ ±5+Res	% input	-1.9	Pass

[1]Two-meter temperature aspirator fan not operating upon arrival.

Table 2-6. February 7, 2007 Supplemental Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:16	Pass
2-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
10-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
Air Temperature Difference (Pre-wire)	≤ ±0.1	°C	0.00	Pass
2-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
10-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
Air Temperature Difference (Post-wire)	≤ ±0.1	°C	0.00	Pass
Relative Humidity –Dew Pt (Pre-wire)[1]	≤ ±1.5	°C	0.3	Pass
Relative Humidity –Dew Pt (Post-wire)	≤ ±1.5	°C	-0.1	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.007	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass

[1]Instruments audited before and after wiring new aspirators.

[2]New RM Young sensor, no in-situ test conducted.

Table 2-7. August 29, 2007 Performance Audit Summary (CR10X)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:33	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.8	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.090	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.5	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.7	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.2	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
Barometric Pressure	≤ ±3	Mbar	0.5	Pass
Solar Radiation	≤ ±5+Res	% input	-6.7[2]	Pass

[1]Not re-tested until after DAS/sensor change.

[2]Max percent error value of 6.7 within limit of 5% input plus resolution, see audit.

Table 2-8. August 30, 2007 Performance Audit Summary (CR1000)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-00:18	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (New bearings)	≤ 0.104	oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.9	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	-6.3[3]	Pass

[1]DAS time 12 hours behind AST on new datalogger, subsequent to audit correctly calibrated.

[2]New DAS/sensor, no as-found value.

[3]Max percent error value of 6.3 within limit of 5% input plus resolution, see audit.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a statistical summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the second year of meteorological monitoring at the Pebble Port station. The mean hourly average wind speed during the monitoring year was 4.85 m/s and 4.46 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 16.57 m/s and 15.39 m/s were measured by the CLM and RMY sensors, on January 7, 2007 and March 13, 2007, respectively. Table 3-2 provides the mean and maximum daily wind speeds at the Seldovia meteorological station, located approximately 100 km from the Pebble Port Station. During the monitoring year the mean daily average wind speed at the Seldovia airport was 1.27 m/s, while the maximum daily average wind speed was 14.30 m/s on November 22, 2007.

Table 3-1 indicates that the RMY statistical values are generally 95 percent of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (>95 percent) when wind sigma values were less than 30 degrees and when winds were blowing from the northern end of Iniskin Bay. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Figure 3-1 shows second year wind roses for the CLM and RMY wind instruments collocated at the Pebble Port station. During the monitoring year, winds were predominantly from the north and northeast with infrequent winds from the south and northwest. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by predominant wind component from the north, with the Quarter A wind roses showing a component

from the northeast. In addition, the Quarter C wind roses display wind components from the south and southwest.

Table 3-1. Average and Maximum Wind Speeds

Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speeds (m/s) (RMY)
Quarter A	5.69	4.89	16.57	15.39
Quarter B	4.13	3.99	14.31	13.97
Quarter C	3.51	3.33	14.28	13.87
Quarter D	6.05	5.79	14.50	13.76
Monitoring Year	**4.85**	**4.46**	**16.57**	**15.39**

Table 3-2. Average and Maximum Wind Speeds at Seldovia Airport

Monitoring Period	Mean Hourly Average Wind Speed (m/s)	Maximum Hourly Average Wind Speed (m/s)
Quarter A	1.77	10.28
Quarter B	0.91	10.28
Quarter C	0.90	9.39
Quarter D	1.50	14.30
Monitoring Year	**1.27**	**14.30**

Tables 3-3 through 3-7 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-8 through 3-12 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the 2007 year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble Port site and vicinity. The wind rose is centered over the Pebble Port station and shows that, on an annual basis, winds at the site predominantly blow to the north, with a lesser northeast component.

Figure 3-1. 2007 Pebble Port Wind Roses

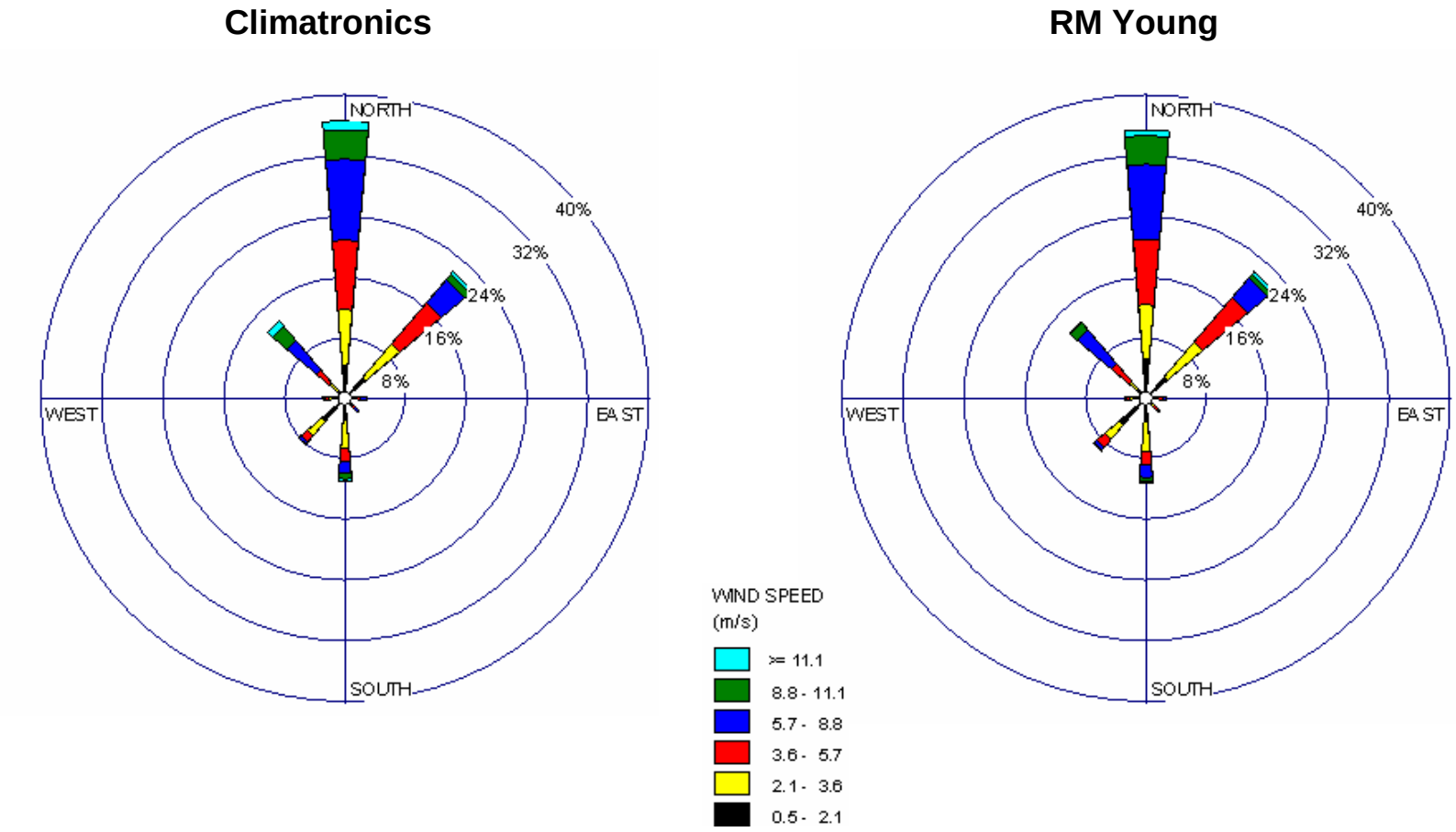
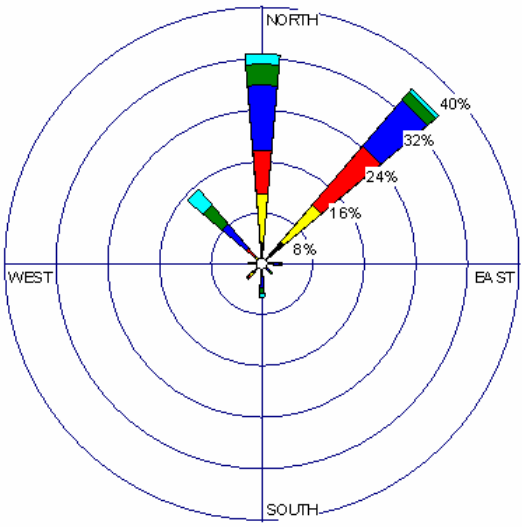
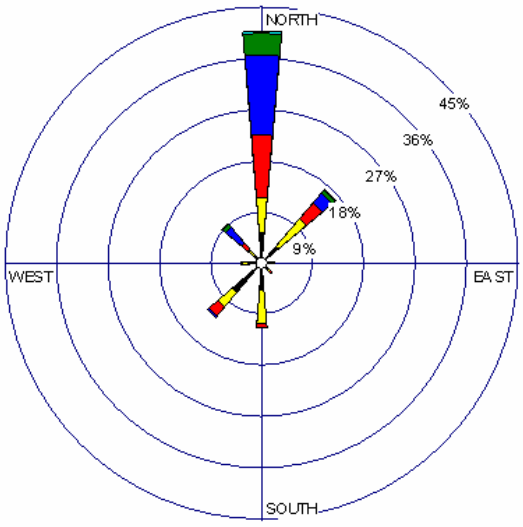


Figure 3-2. Quarterly Pebble Port Wind Roses (Climatronics)

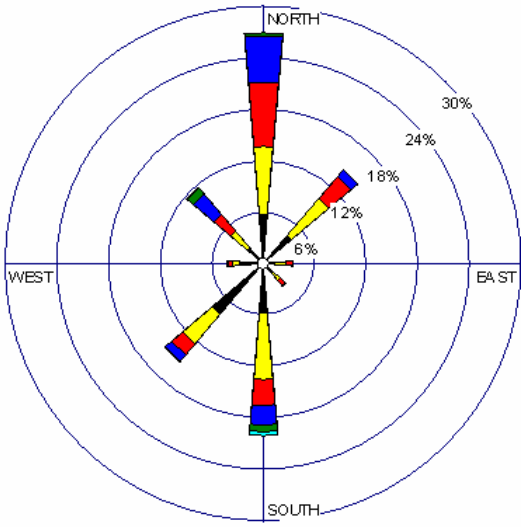
Quarter A (1/1/2007 – 3/31/2007)



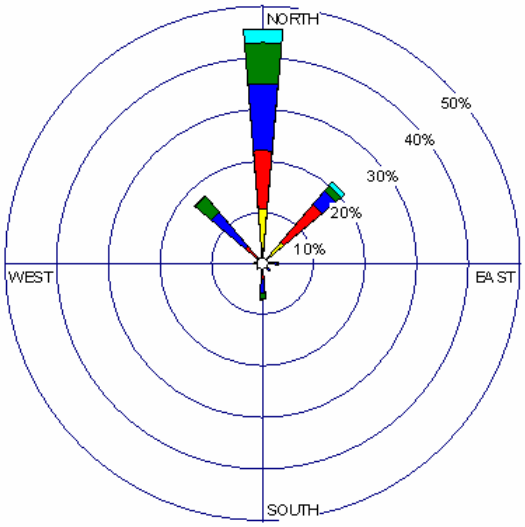
Quarter B (4/1/2007 – 6/30/2007)



Quarter C (7/1/2007 – 9/30/2007)



Quarter D (10/1/2007 – 12/31/2007)



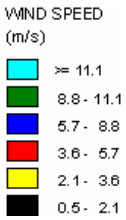
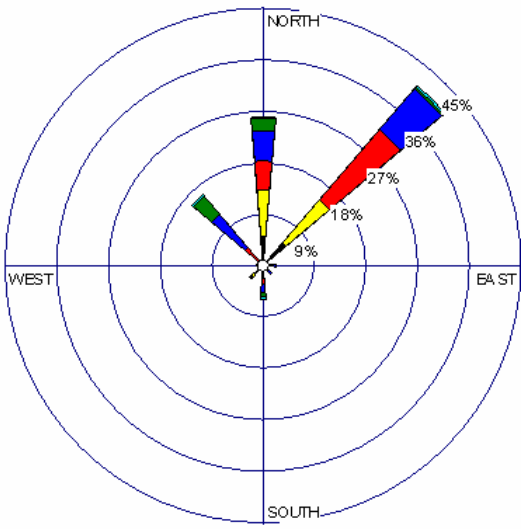
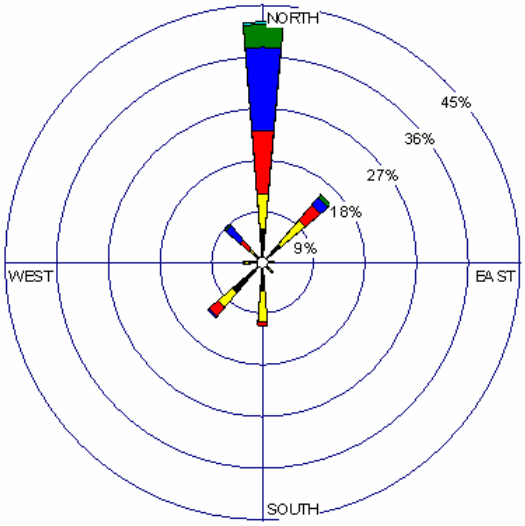


Figure 3-3. Quarterly Pebble Port Wind Roses (RM Young)

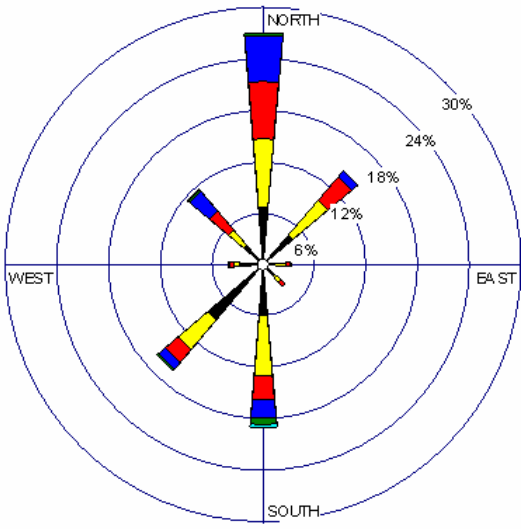
Quarter A (1/1/2007 – 3/31/2007)[1]



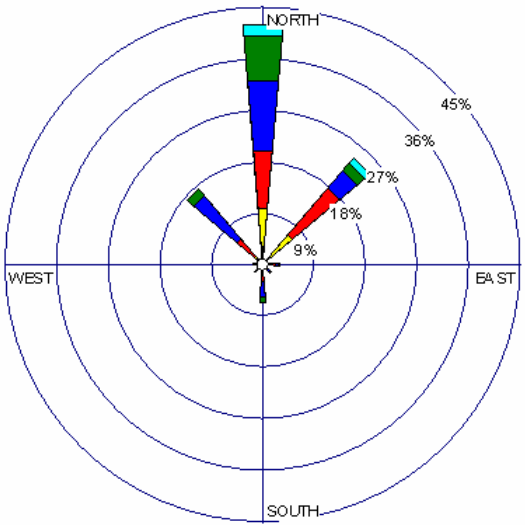
Quarter B (4/1/2007 – 6/30/2007)



Quarter C (7/1/2007 – 9/30/2007)



Quarter D (10/1/2007 – 12/31/2007)



[1] Data invalidated due to sensor failure August 21, 2006 through February 7, 2007

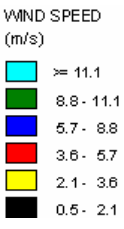


Table 3-3. 2007 Annual Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: 2007
Start Date: January 1, 2007 End Date: December 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.38%	7.31%	9.14%	10.64%	3.86%	1.17%	36.51%
NE	3.59%	5.88%	7.14%	4.02%	0.95%	0.44%	22.02%
E	0.89%	0.61%	0.71%	0.70%	0.14%	0.03%	3.08%
SE	0.83%	0.54%	0.59%	0.55%	0.15%	0.05%	2.70%
S	2.93%	3.70%	1.72%	1.69%	0.66%	0.29%	10.99%
SW	4.12%	2.44%	1.09%	0.38%	0.06%	0.05%	8.13%
W	1.67%	0.66%	0.24%	0.30%	0.07%	0.08%	3.01%
NW	1.43%	1.46%	2.09%	5.07%	2.46%	0.90%	13.41%
Sub-Total:	19.82%	22.59%	22.73%	23.35%	8.35%	3.00%	99.85%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-4. Quarter A Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter A
Start Date: January 1, 2007 End Date: March 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	3.34%	7.57%	6.73%	10.17%	3.25%	1.58%	32.65%
NE	4.55%	7.57%	11.94%	9.43%	1.77%	0.51%	35.76%
E	0.60%	0.56%	0.65%	0.88%	0.42%	0.09%	3.20%
SE	0.19%	0.05%	0.42%	1.11%	0.51%	0.05%	2.32%
S	1.02%	0.56%	0.65%	1.72%	0.79%	0.56%	5.29%
SW	1.53%	1.21%	0.37%	0.00%	0.05%	0.14%	3.30%
W	0.51%	0.70%	0.05%	0.37%	0.23%	0.33%	2.18%
NW	0.79%	0.79%	1.63%	4.97%	3.95%	3.11%	15.23%
Sub-Total:	12.54%	19.00%	22.43%	28.66%	10.96%	6.36%	99.95%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-5. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter B
Start Date: April 1, 2007 End Date: June 30, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.36%	6.23%	10.94%	13.92%	3.85%	0.41%	40.71%
NE	4.03%	6.27%	3.62%	2.24%	0.73%	0.18%	17.08%
E	1.14%	0.18%	0.41%	0.55%	0.05%	0.00%	2.34%
SE	1.56%	0.64%	0.32%	0.18%	0.00%	0.00%	2.70%
S	4.72%	6.04%	0.78%	0.00%	0.00%	0.00%	11.54%
SW	6.87%	3.30%	2.01%	0.32%	0.00%	0.00%	12.50%
W	2.56%	0.82%	0.14%	0.18%	0.00%	0.00%	3.71%
NW	1.97%	1.24%	1.51%	3.53%	0.82%	0.18%	9.25%
Sub-Total:	28.21%	24.73%	19.73%	20.92%	5.45%	0.78%	99.82%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-6. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter C
Start Date: July 1, 2007 End Date: September 30, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.72%	7.95%	7.48%	5.34%	0.37%	0.00%	26.86%
NE	4.32%	5.62%	3.44%	1.02%	0.00%	0.00%	14.41%
E	1.49%	1.21%	0.79%	0.14%	0.00%	0.00%	3.62%
SE	1.53%	1.16%	0.79%	0.14%	0.00%	0.00%	3.62%
S	5.90%	7.67%	2.97%	2.28%	0.79%	0.46%	20.07%
SW	7.85%	4.51%	1.63%	0.93%	0.14%	0.00%	15.06%
W	2.83%	0.79%	0.51%	0.19%	0.00%	0.00%	4.32%
NW	2.51%	2.46%	2.51%	3.21%	0.84%	0.14%	11.66%
Sub-Total:	32.16%	31.37%	20.12%	13.24%	2.14%	0.60%	99.63%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-7. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter D
Start Date: October 1, 2007 End Date: December 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	3.13%	7.52%	11.32%	13.00%	7.88%	2.67%	45.52%
NE	1.49%	4.08%	9.56%	3.44%	1.31%	1.04%	20.92%
E	0.32%	0.50%	1.00%	1.22%	0.09%	0.05%	3.17%
SE	0.05%	0.32%	0.82%	0.77%	0.09%	0.14%	2.17%
S	0.14%	0.59%	2.49%	2.76%	1.04%	0.14%	7.16%
SW	0.27%	0.77%	0.36%	0.27%	0.05%	0.05%	1.77%
W	0.77%	0.32%	0.27%	0.45%	0.05%	0.00%	1.86%
NW	0.45%	1.36%	2.72%	8.51%	4.21%	0.18%	17.44%
Sub-Total:	6.61%	15.44%	28.53%	30.43%	14.72%	4.26%	100.00%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-8. 2007 Annual Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: 2007
Start Date: January 1, 2007 End Date: December 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.27%	7.10%	8.54%	9.87%	3.73%	0.74%	35.26%
NE	3.86%	6.01%	7.60%	3.37%	0.69%	0.42%	21.96%
E	0.87%	0.71%	0.78%	0.40%	0.05%	0.00%	2.81%
SE	1.01%	0.58%	0.68%	0.33%	0.04%	0.03%	2.67%
S	3.32%	3.76%	1.83%	1.59%	0.59%	0.19%	11.28%
SW	4.71%	2.55%	1.24%	0.51%	0.08%	0.06%	9.16%
W	1.81%	0.44%	0.37%	0.17%	0.04%	0.01%	2.83%
NW	1.71%	1.32%	3.05%	5.80%	1.28%	0.09%	13.25%
Sub-Total:	22.55%	22.46%	24.11%	22.04%	6.50%	1.55%	99.22%
Calms (<0.5m/s):							0.70%
Total:							100.00%

Table 3-9. Quarter A Wind Rose Analysis Table (RM Young)[1]

Station ID: Pebble Port (RM Young) Run ID: Quarter A
Start Date: January 1, 2007 End Date: March 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.18%	8.13%	5.02%	5.26%	2.15%	0.24%	25.98%
NE	5.34%	9.88%	16.10%	9.32%	0.32%	0.40%	41.35%
E	0.56%	0.72%	0.72%	0.32%	0.16%	0.00%	2.47%
SE	0.16%	0.16%	0.80%	0.96%	0.08%	0.00%	2.15%
S	1.43%	0.56%	1.27%	1.51%	0.80%	0.56%	6.14%
SW	1.91%	0.88%	0.16%	0.08%	0.00%	0.24%	3.27%
W	0.56%	0.00%	0.08%	0.48%	0.16%	0.08%	1.35%
NW	0.56%	0.32%	3.27%	7.65%	4.22%	0.40%	16.41%
Sub-Total:	15.70%	20.64%	27.41%	25.58%	7.89%	1.91%	99.12%
Calms (<0.5m/s):							0.50%
Total:							100.00%

[1] Data invalidated due to sensor failure August 21, 2006 through February 7, 2007

Table 3-10. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter B
Start Date: April 1, 2007 End Date: June 30, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	5.91%	6.23%	10.94%	14.51%	3.98%	0.46%	42.03%
NE	4.21%	5.68%	3.48%	1.65%	0.60%	0.00%	15.61%
E	1.10%	0.18%	0.50%	0.46%	0.00%	0.00%	2.24%
SE	1.69%	0.55%	0.37%	0.05%	0.00%	0.00%	2.66%
S	4.99%	5.40%	0.73%	0.00%	0.00%	0.00%	11.13%
SW	7.05%	3.34%	2.06%	0.32%	0.00%	0.00%	12.77%
W	2.47%	0.64%	0.37%	0.05%	0.00%	0.00%	3.53%
NW	2.15%	1.01%	2.06%	3.30%	0.41%	0.00%	8.93%
Sub-Total:	29.58%	23.03%	20.51%	20.33%	4.99%	0.46%	98.90%
Calms (<0.5m/s):							0.76%
Total:							100.00%

Table 3-11. Quarter C Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter C
Start Date: July 1, 2007 End Date: September 30, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.69%	7.95%	6.69%	5.30%	0.33%	0.00%	26.95%
NE	4.55%	5.30%	3.58%	0.98%	0.00%	0.00%	14.41%
E	1.39%	1.30%	0.51%	0.09%	0.00%	0.00%	3.30%
SE	1.86%	0.88%	0.70%	0.05%	0.00%	0.00%	3.49%
S	6.04%	7.02%	2.74%	2.14%	0.70%	0.37%	19.01%
SW	8.46%	4.51%	2.00%	1.02%	0.19%	0.00%	16.17%
W	2.88%	0.60%	0.51%	0.09%	0.00%	0.00%	4.09%
NW	2.97%	2.32%	2.88%	3.07%	0.23%	0.09%	11.57%
Sub-Total:	34.85%	29.88%	19.61%	12.73%	1.44%	0.46%	98.98%
Calms (<0.5m/s):							0.71%
Total:							100.00%

Table 3-12. Quarter D Wind Rose Analysis Table (RM Young)

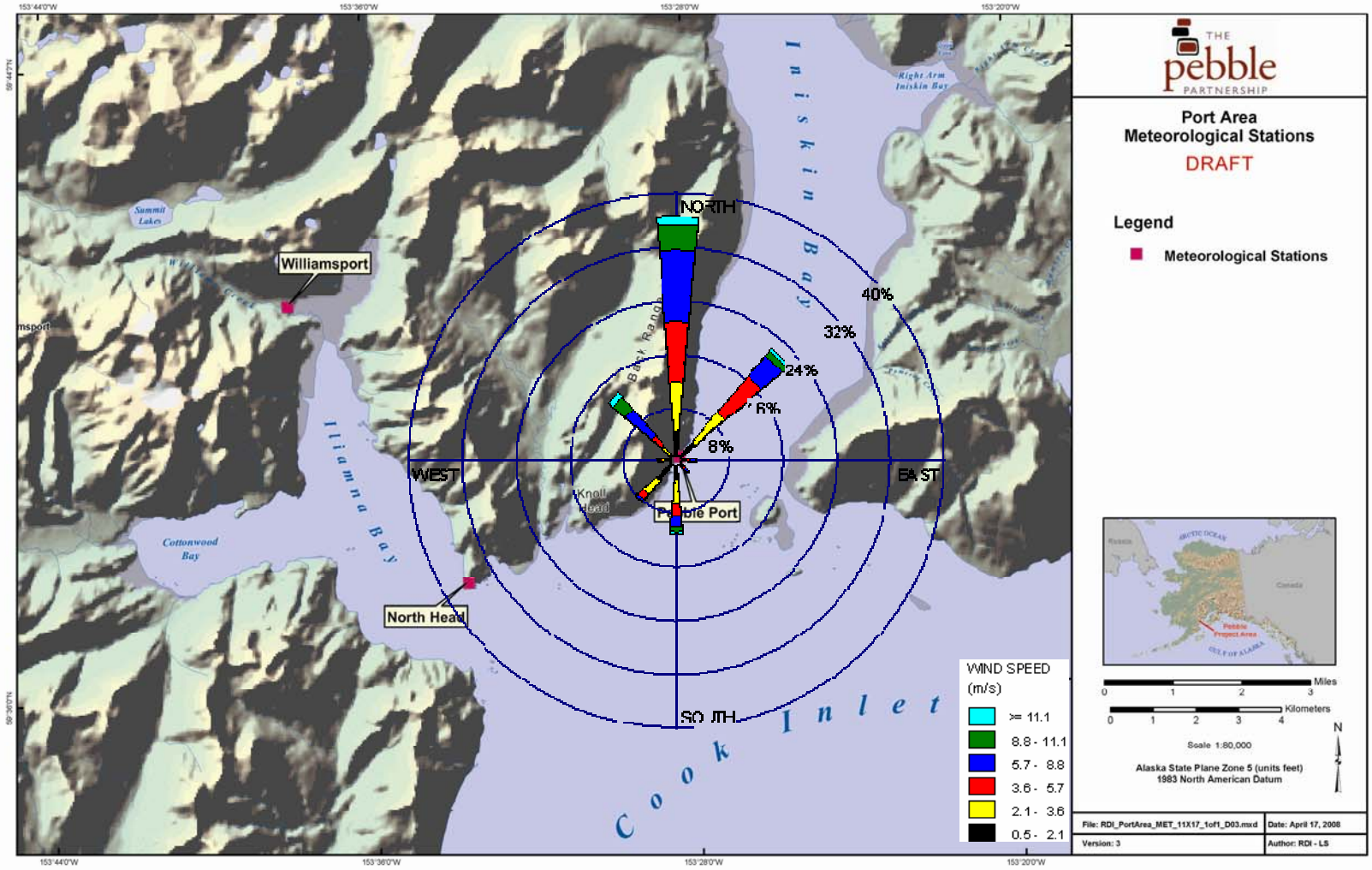
Station ID: Pebble Port (RM Young) Run ID: Quarter D
Start Date: October 1, 2007 End Date: December 31, 2007

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	3.31%	6.57%	9.96%	12.36%	7.70%	2.04%	41.94%
NE	1.99%	4.85%	10.78%	4.03%	1.68%	1.27%	24.59%
E	0.32%	0.63%	1.36%	0.68%	0.09%	0.00%	3.08%
SE	0.00%	0.54%	0.91%	0.54%	0.09%	0.09%	2.17%
S	0.09%	0.77%	2.36%	2.67%	0.95%	0.00%	6.84%
SW	0.32%	0.82%	0.32%	0.45%	0.09%	0.09%	2.08%
W	0.82%	0.32%	0.41%	0.18%	0.05%	0.00%	1.77%
NW	0.68%	1.22%	4.08%	9.87%	1.49%	0.00%	17.35%
Sub-Total:	7.52%	15.72%	30.16%	30.80%	12.14%	3.49%	99.82%
Calms (<0.5m/s):							0.13%
Total:							100.00%

Figure 3-4. 2007[1] Wind Rose Superimposed on Site Map



[1] 2007 monitoring year: January 1, 2007 to December 31, 2007.

3.2.2 Temperature Climatology

Tables 3-13 and 3-14 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The 2007 annual mean temperature was 3.62°C at the 2-meter height. This annual mean temperature is slightly higher in comparison to the annual mean temperature of 3.37°C observed at the Seldovia meteorological station from January 1, 2007 through December 31, 2007. Hourly average temperatures at the Pebble Port station varied from a maximum of 25.2°C on June 20, 2007 to a minimum of -21.3°C on January 7, 2007.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months. Figure 3-5 also includes a plot of average daily temperatures recorded at the meteorological monitoring station in Seldovia, Alaska. Both the Pebble Port station and the Seldovia meteorological monitoring station are located in the Cook Inlet maritime climate zone.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 2.2°C measured on February 5, 2007. The greatest negative temperature difference was -2.2°C measured on May 11, 2007.

Table 3-13. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
January 2007	6.1	-20.4	-6.2	8.6	-21.3
February 2007	8.0	-11.3	-2.8	10.4	-13.4
March 2007	1.3	-15.1	-8.4	3.8	-17.1
Quarter A	**8.0**	**-20.4**	**-5.8**	**10.4**	**-21.3**
April 2007	7.2	1.8	4.3	10.5	0.0
May 2007	9.9	3.7	6.9	14.5	0.9
June 2007	20.3	7.0	10.5	25.2	5.4
Quarter B	**20.3**	**1.8**	**7.3**	**25.2**	**0.0**
July 2007	17.9	10.1	12.4	20.1	7.7
August 2007	19.8	10.9	13.2	22.6	9.6
September 2007	14.6	6.7	10.8	16.6	4.6
Quarter C	**19.8**	**6.7**	**12.1**	**22.6**	**4.6**
October 2007	8.5	1.2	3.7	10.1	-1.8
November 2007	7.3	-4.8	2.4	8.6	-6.0
December 2007	3.9	-12.7	-2.4	7.8	-13.5
Quarter D	**8.5**	**-12.7**	**1.2**	**10.1**	**-13.5**
Monitoring Year	**20.3**	**-20.4**	**3.6**	**25.2**	**-21.3**

Table 3-14. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
January 2007	6.5	-20.4	-6.1	9.0	-21.2
February 2007	8.5	-11.4	-2.7	10.8	-13.4
March 2007	1.5	-15.2	-8.5	3.5	-17.3
Quarter A	**8.5**	**-20.4**	**-5.8**	**10.8**	**-21.2**
April 2007	7.3	1.9	4.4	10.2	0.2
May 2007	10.0	3.5	6.7	13.5	1.4
June 2007	20.4	6.8	10.3	24.6	5.6
Quarter B	**20.4**	**1.9**	**7.2**	**24.6**	**0.2**
July 2007	17.5	9.9	12.3	19.5	7.9
August 2007	20.0	11.0	13.3	23.3	9.2
September 2007	15.4	7.1	11.0	17.8	4.8
Quarter C	**20.0**	**7.1**	**12.2**	**23.3**	**4.8**
October 2007	8.6	1.3	3.9	9.8	-1.2
November 2007	7.5	-4.7	2.5	8.7	-5.7
December 2007	4.2	-12.6	-2.3	8.0	-13.1
Quarter D	**8.6**	**-12.6**	**1.3**	**9.8**	**-13.1**
Monitoring Year	**20.4**	**-20.4**	**3.7**	**24.6**	**-21.2**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

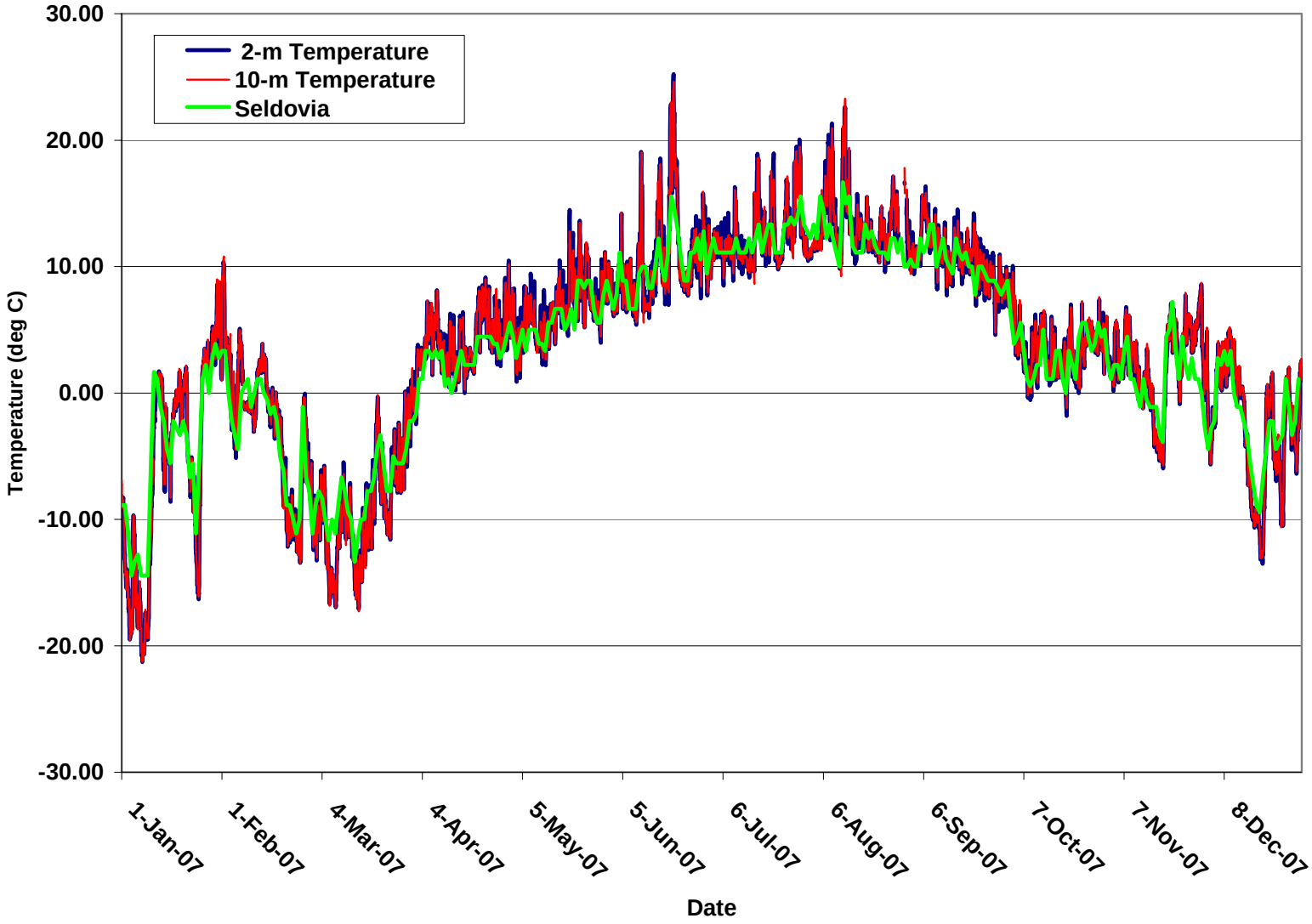
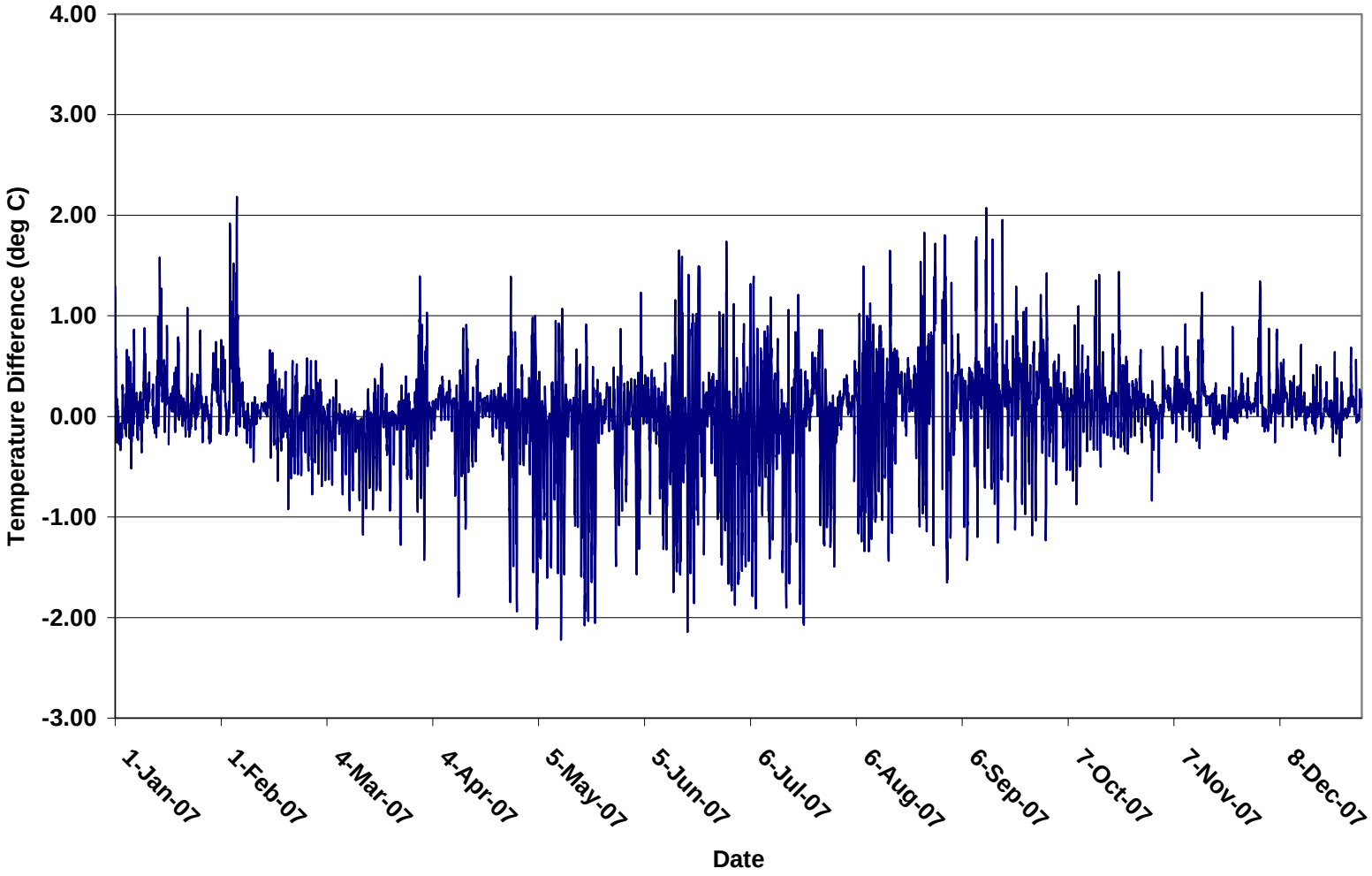


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble Port station include relative humidity, barometric pressure, and solar radiation.

Table 3-15 provides a summary of the relative humidity, barometric pressure, and solar radiation at the Pebble Port station during the 2007 monitoring year.

Figure 3-7 is a plot of the annual hourly average relative humidity. Relative humidity at the Pebble Port site varied from a low of 21.4 percent on February 22, 2007 to a high of 100 percent. The mean relative humidity during the monitoring year was 73.9 percent. The mean relative humidity at the Seldovia meteorological station for the monitoring period was 82 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 964 mbar on October 30, 2007, to a maximum of 1,032 mb observed on November 29, 2007. The mean barometric pressure during the monitoring year was 1,006 mb. The mean barometric pressure at the Seldovia meteorological station for the monitoring period was 1,008 mb.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 779 W/m^2 recorded on June 20, 2007 at 2:00 p.m. The mean hourly average solar radiation for the monitoring year was 86 W/m^2.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Table 3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary

Period	Mean Relative Humidity (%)	Minimum Relative Humidity (%)	Maximum Relative Humidity (%)	Mean Barometric Pressure (mbar)	Minimum Barometric Pressure (mbar)	Maximum Barometric Pressure (mbar)	Mean Solar Radiation (W/m^2)	Maximum Solar Radiation (W/m^2)
January 2007	74.4	33.2	98.2	1,003.0	971.0	1,032.0	15.7	210.3
February 2007	71.3	21.4	100.0	1,008.4	988.0	1,024.0	47.4	361.9
March 2007	56.1	28.0	96.8	1,005.9	972.0	1,032.0	119.2	579.2
Quarter A	**67.1**	**21.4**	**100.0**	**1,005.7**	**971.0**	**1,032.0**	**61.2**	**579.2**
April 2007	70.8	33.4	96.9	1,000.9	968.0	1,030.0	105.8	706.0
May 2007	74.9	30.4	99.4	1,010.7	1,000.0	1,020.0	149.7	776.0
June 2007	77.4	32.2	98.9	1,011.7	996.0	1,025.0	169.9	779.0
Quarter B	**74.4**	**30.4**	**99.4**	**1,007.8**	**968.0**	**1,030.0**	**141.9**	**779.0**
July 2007	83.2	50.2	99.4	1,011.6	1,003.0	1,020.0	149.9	762.0
August 2007	82.4	39.5	99.5	1,013.2	995.0	1,025.0	108.7	701.0
September 2007	79.6	48.2	99.8	1,006.1	985.0	1,021.1	85.2	623.4
Quarter C	**81.7**	**39.5**	**99.8**	**1,010.3**	**985.0**	**1,025.0**	**115.1**	**762.0**
October 2007	71.3	34.5	99.1	996.6	963.6	1,014.7	49.7	437.3
November 2007	75.6	32.6	99.1	997.9	973.6	1,032.3	17.4	266.6
December 2007	70.4	23.5	99.7	999.9	980.8	1,024.2	9.4	172.9
Quarter D	**72.4**	**23.5**	**99.7**	**998.2**	**963.6**	**1,032.3**	**25.6**	**437.3**
Monitoring Year	**73.9**	**21.4**	**100.0**	**1,005**	**964**	**1,032**	**85.7**	**779.0**

Figure 3-7. Hourly Average Relative Humidity

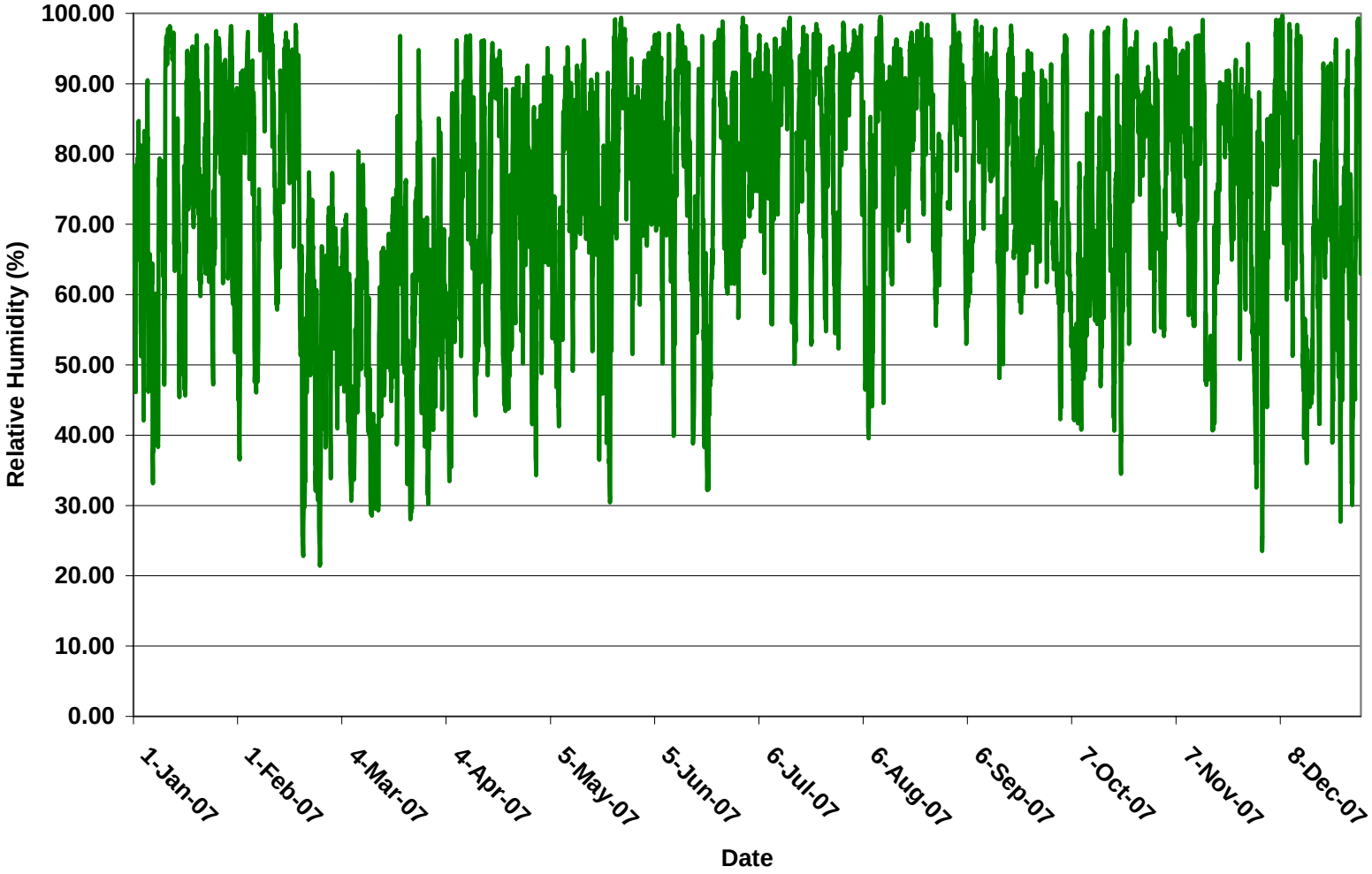


Figure 3-8. Barometric Pressure

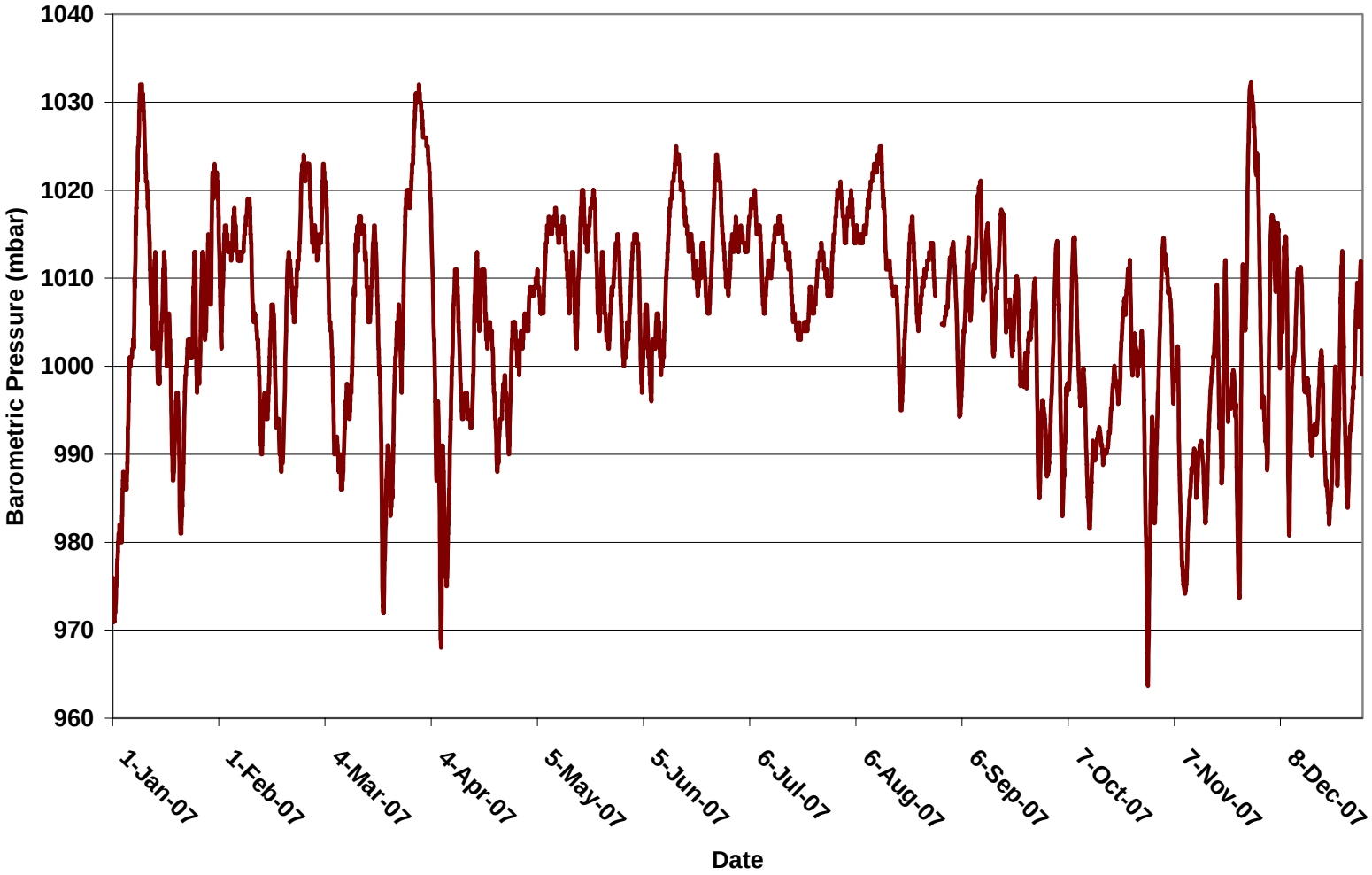
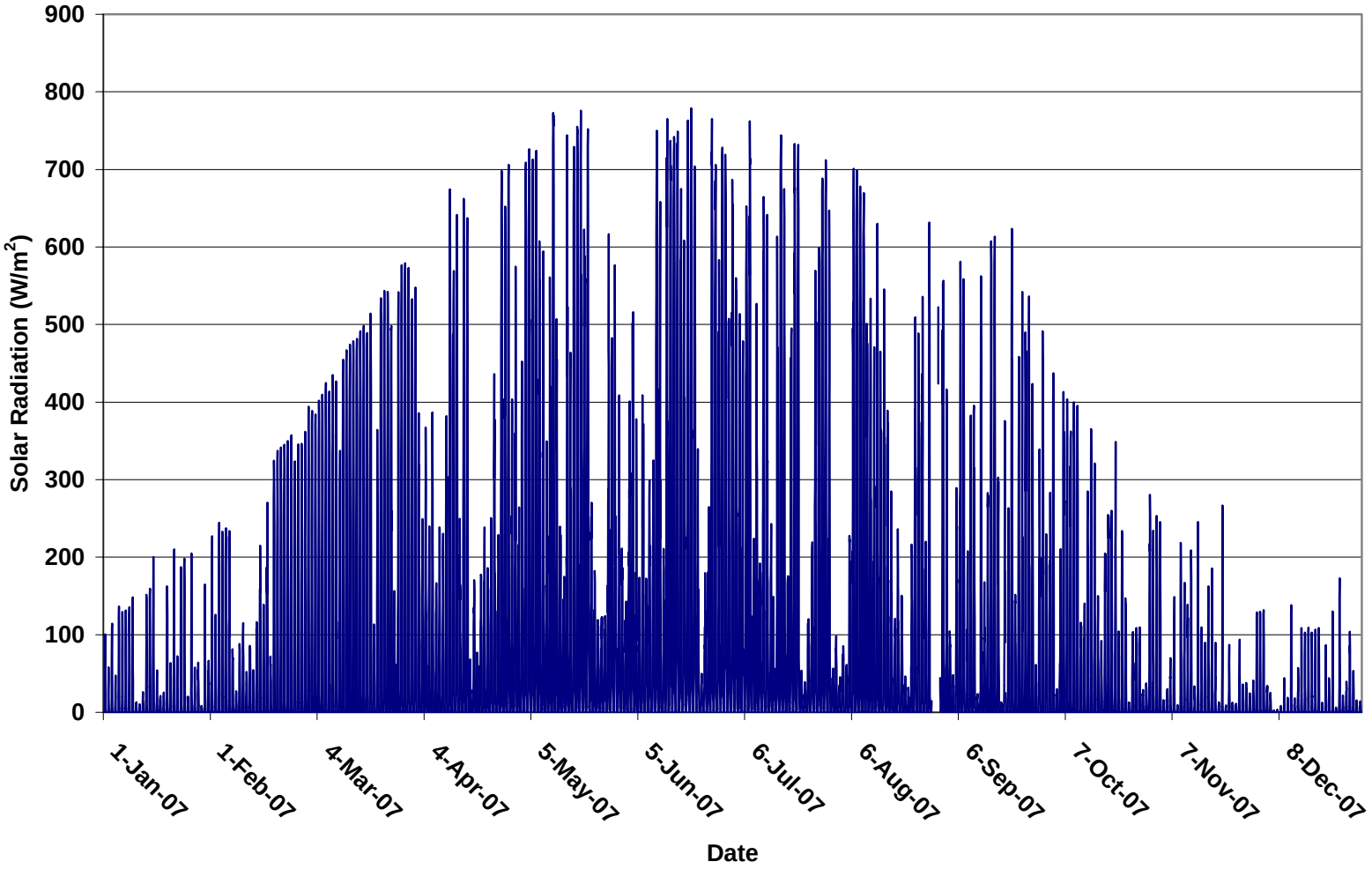


Figure 3-9. Hourly Average Solar Radiation



4.0 References

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Appendix A

Data Processing Specifications and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Table A-1. Station Performance Summary – Data Recovery 2006-2007

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM) [1]	WD (CLM)	Sigma (CLIM)	WS (RMY) [2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2007	99.2%	95.7%	95.7%	99.2%	99.2%	99.2%	0.0%	0.0%	0.0%	100%	100%	100%
February 2007	99.1%	99.1%	99.1%	100%	100%	100%	76.2%	76.2%	76.2%	99.1%	100%	100%
March 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.4%**	**98.2%**	**98.2%**	**99.7%**	**99.7%**	**99.7%**	**58.1%**	**58.1%**	**58.1%**	**99.7%**	**100%**	**100%**
April 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
May 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
July 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
August 2007	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%	92.5%
September 2007	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Quarter C	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**	**97.4%**
October 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2007	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.2%**	**98.9%**	**98.9%**	**99.3%**	**99.3%**	**99.3%**	**89.0%**	**89.0%**	**89.0%**	**99.3%**	**99.3%**	**99.3%**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] Data capture value includes data corrected and flagged according to the recommendations in *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, Section 8-6 and Table 8-3 (EPA-454/R-99-005).
[4] RM Young wind sensor failed January 2007 audit for unknown reason, primary Climatronics sensor passed all data collection objectives for modeling purpose

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

Pebble Port PSD Station

Third Quarter 2006

Quality Assurance Systems Audit and Performance Audit

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

September 2006

Northern Dynasty Mines
Pebble Port PSD Meteorological Monitoring Station
Annual Systems and Performance Audits
(Third Quarter 2006)

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
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September 2006

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station On-Site Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Wind Speed 7
3.1.4 Wind Direction 8
3.1.5 Relative Humidity 9
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port Station August 21, 2006 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port monitoring station located near the proposed mine port site.

The Pebble Port Station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port Station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port Station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port Station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of this document, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question-answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

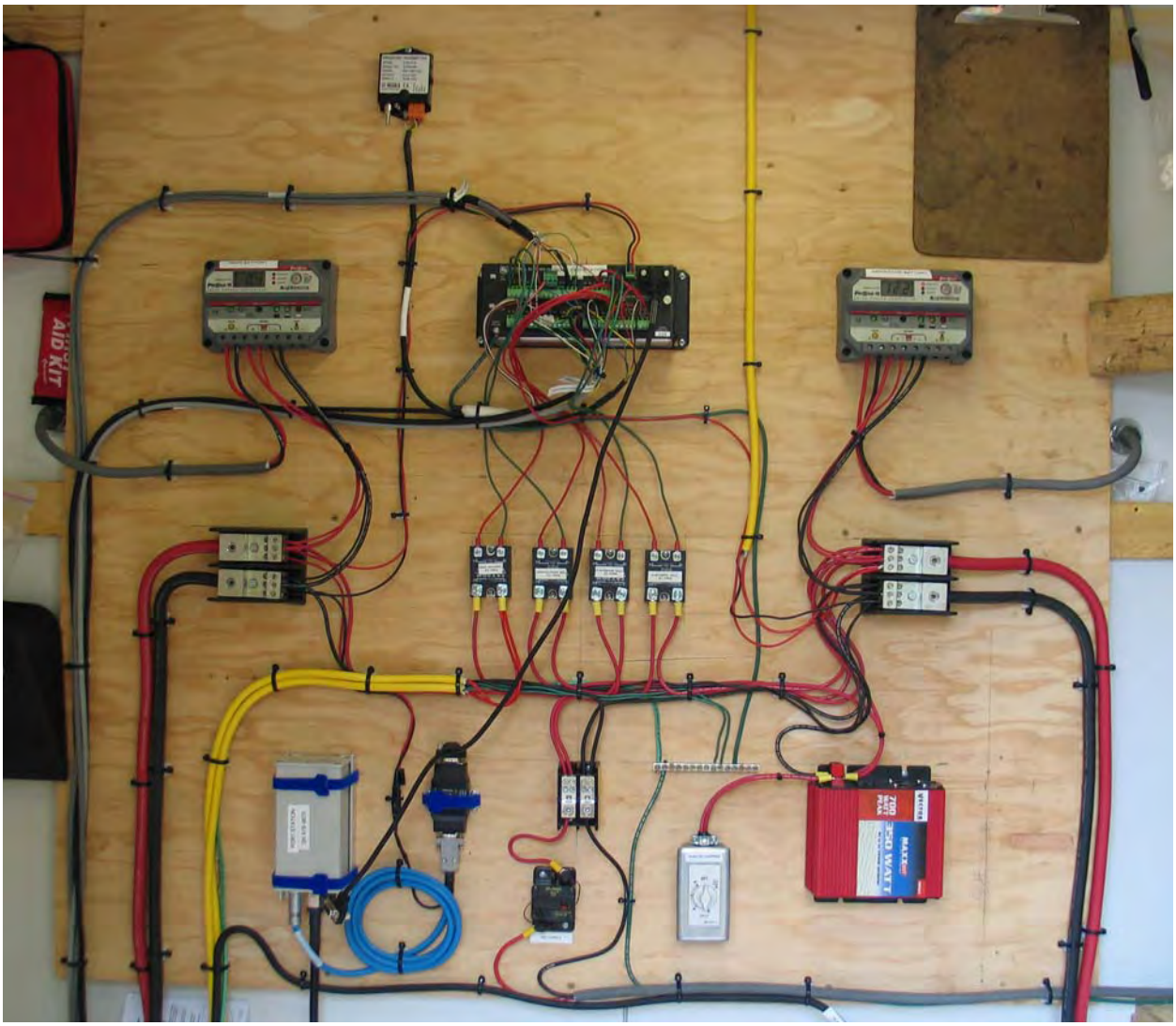
2.2 Meteorological Station On-Site Systems Audit

The on-site systems audit of the Pebble Port Station was conducted on August 21, 2006. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires from animals; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar

controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port Station DAS Wiring Panel



The Campbell Scientific CR10X DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. A Campbell Scientific SC932A interface converts the DAS signal to a RS-232 DCE modem signal. Three FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid near Seldovia, Alaska. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 35-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a 21-Watt Global Thermoelectric Model 5030 Thermo-Electric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three panels are dedicated to the aspirator fans, Climatronics heaters, shelter lighting and 120VAC power; wired through a Morningstar ProStar-15 solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the aspirator/heater power system. Aspirator fans and heaters are controlled through relays connected to the DAS control ports. Logic programmed into the DAS reduces power consumption by limiting heater use to weather conditions conducive to icing and turns fans off at night when voltage is low, considered an upset condition. Also the TEG power is routed through relays which shunt power to the critical DAS/sensor system during upset conditions.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port Station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately

identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Pebble Port Station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port Station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit checklists
- Keep a file on site containing copies of previous checklists.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor’s threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The

instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.4 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital

raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.5 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audit was conducted at the Pebble Port Station on August 21, 2006 with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. The thermistor aspirator fans had failed and were replaced during the audit. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- Set up DAS to read aspirator fan amperage in order to monitor fan status.

Table 3-2 Port Station August 21, 2006 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.21	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 0.104	oz-in	0.100	Pass
Wind Direction Torque (new bearings)	≤ 0.104	oz-in	0.070	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-0.6	Pass
Wind Direction Accuracy	≤ ±5	Degree	-1.3	Pass
Wind Direction Linearity	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass
RM Young Wind System				
Wind Speed Torque[1]	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (old bearings)	≤ 11	g-cm	9.0	Pass
Wind Direction Torque (new bearings)	≤ 11	g-cm	6.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	-4.5	Pass
Wind Direction Linearity	≤ 3	Degree	2.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.7	Pass
Barometric Pressure	≤ ±3	Mbar	1.0	Pass
Solar Radiation	≤ ±5+Res	% input	-5.8	Pass

1. Could not replace RM Young speed bearing due to stripped set screw.

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APPENDIX A
SYSTEMS AUDIT DATA SHEETS

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 3
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 4
3.2.1 Data Acquisition System (DAS) and Communications System 4
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 5
3.3 Station Location and Siting 6
3.3.1 Tower 6
3.3.2 Temperature and Relative Humidity Sensors 6
3.3.3 Wind Speed and Wind Direction Sensors 7
3.3.4 Relative Humidity and Barometric Pressure 7
3.3.5 Solar Radiation 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 12

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port tower is located near the middle of a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

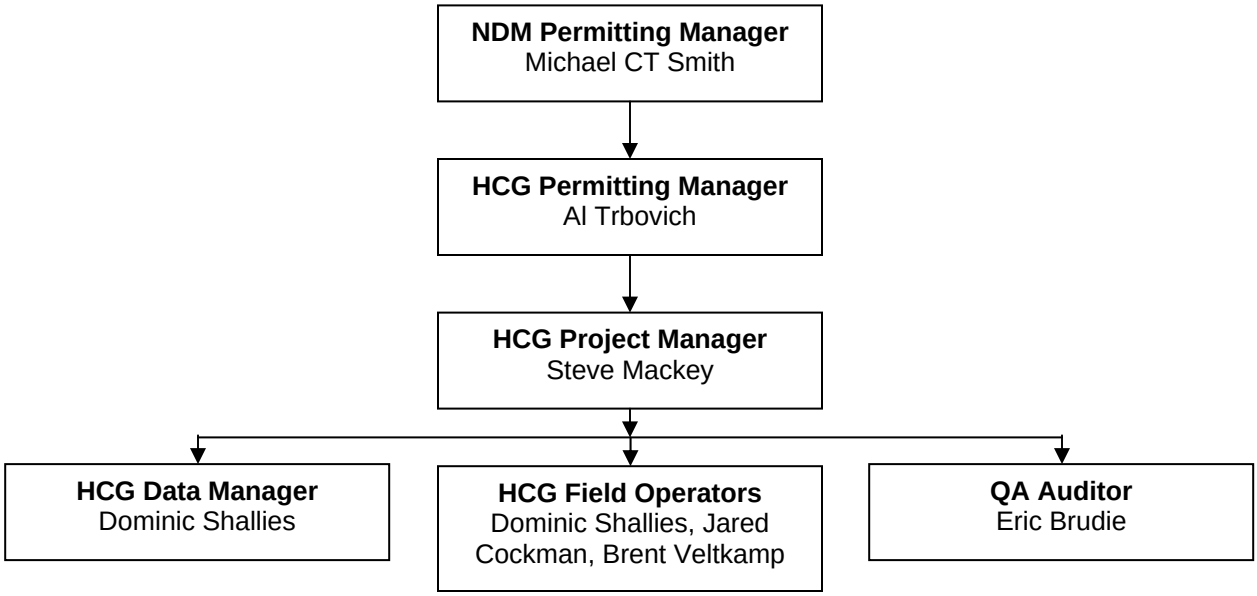
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw diagram indicating the organizational structure of the monitoring program. Include names and titles:



3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR10X	X41611
DAS Wiring Panel	Campbell Scientific	CR10X	31375
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Temperature Aspirators	Met One	076B-4	Unknown
Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	67055
Backup Wind Speed Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	67055
Relative Humidity	Vaisala	HMP45AC	A2120081
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY50763

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS to SC932A interface to FreeWave RF network to SixNet modem.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power?	■ Yes □ No	Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a 21-Watt propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can shunt the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not required.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained?	■ Yes □ No	Comments: None.
Are all sensors operational, online and reporting data?	■ Yes □ No	Comments: None.
Do all sensors meet EPA criteria for PSD quality sensors?	■ Yes □ No	Comments: See table below.
Are spare parts stocked for items which are frequently worn out or broken?	■ Yes □ No	Comments: Spare props, cups and vanes onsite and spare bearings at HCG office.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resol. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A

EPA Recommended Meteorological Instrument Standards (Continued)

Parameter	Instrument Specifications	EPA Standard	Pass?
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Siting

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature and Relative Humidity Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Is the ambient temperature sensor protected from the influence of solar radiation? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.

Are the temperature difference sensors located in identical aspirated shields? ■ Yes □ No Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.4 Relative Humidity and Barometric Pressure

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.
Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on wiring panel.

3.3.5 Solar Radiation

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	□ Yes ■ No	Comments: All operators have one to two years onsite experience.

Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

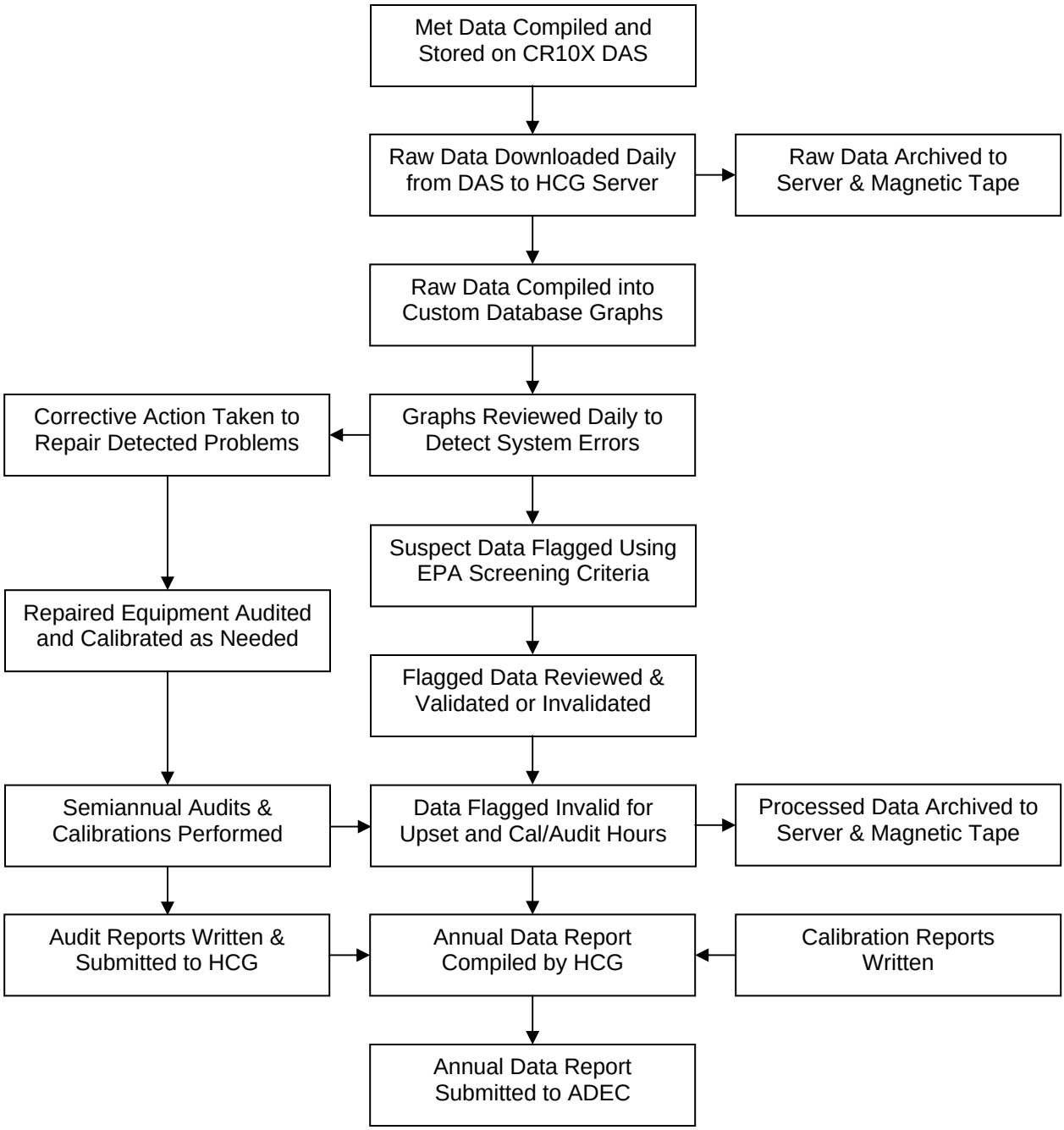
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.

Does the station have an adequate Calibration Report Form and copies of previous calibrations and audits?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Isaac Bertschi
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
16:54:30	16:54:37	**00:07**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 10.0 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220-601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220-604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Begin: 1444
End: 1505

COLLOCATED THERMISTOR TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Very Cold	-35 to -45	-36.44	-36.25	0.19	Pass	-36.25	0.19	Pass	0.00	Pass
Cold	-15 to -25	-16.37	-16.16	0.21	Pass	-16.16	0.21	Pass	0.00	Pass
Ice Bath	0	-0.12	0.03	0.15	Pass	0.03	0.15	Pass	0.00	Pass
Warm	15 to 25	20.49	20.60	0.11	Pass	20.60	0.11	Pass	0.00	Pass
Hot	35 to 45	38.79	38.89	0.10	Pass	38.89	0.10	Pass	0.00	Pass
		Max Abs. Error		0.21	**PASS**		0.21	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** A2120081 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1049	55.0	14.2	5.3	58.1	14.1	6.0	0.7	Pass
1139	52.1	14.8	5.1	54.7	14.6	5.6	0.5	Pass
					Max Abs. Error		0.7	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: $Td=b*ע/(a-ע)$, where $ע=a*Ta/(b + Ta) + \ln(RH)$, and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1530	29.91	29.80	1009.0	1010.0	1.0	Pass
			Max Abs. Error		1.0	**PASS**

Audit Inst Cal Data	
Cal. Date: 05/24/06	
Audit Inst	Offset Amount
24.13	-0.13
26.24	-0.13
28.12	-0.12
30.11	-0.11
Intercept	**-0.22**
Slope	**0.0035**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Spd Sensor: **Make:** Climatronics **Model:** 100075 **S.N.#:** 5008 **Cup #:** 2285 **Range:** 0-60 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1351
End: 1354

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<<0.003	**PASS**
New	0.0049	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22. gm-cm=72*oz-in.
Comments: None.

● *HORIZONTAL WIND SPEED SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Spd Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Prop #:** 63037 **Range:** 0-50 **m/s**
Audit Equipment: **Low Spd:** RM Young **Model:** 18811 **S.N.#:** CA02136 **Torque:** Watters Mdl 366-3 **S.N.#:** 4864
Audit Equipment: **High Spd:** RM Young **Model:** 18801 **S.N.#:** CA06174

Begin: 1150
End: 1155

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	N/A

SYNCHRONOUS MOTOR TEST					
Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Absolute Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Conversions: Model 08254 Prop: m/s = 0.00512*rpm. gm-cm=72*oz-in.
Comments: Could not replace speed bearings because allen set screw on nose cone speed magnet worn.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - CLIMATRONICS*

Height: 11.0 **Meters**

Wind Dir Sensor: **Make:** Climatronics **Model:** 100076 **S.N.#:** 4690 **Vane #:** 1425 **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** Climatronics **Model:** 101984 **S.N.#:** 145 **Torque:** Honeywell Mdl 366-0 **S.N.#:** 5042
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST			
Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.100	**PASS**
New	0.104	0.070	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST				
Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	262.9	-0.3	Pass
Mt Augustine - Peak	356.1	355.5	-0.6	Pass
Mt Eleanor	202.6	202.0	-0.6	Pass
Compass	145.5	145.1	-0.4	Pass
		Max Abs. Error	**0.6**	**PASS**
		Mean Abs. Error	**0.5**	**GOOD**

Time: Begin: 1100 End: 1125

CROSSARM-VANE ACCUR. & LIN. TEST				
Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.9	-1.1	Pass
West	270.0	269.9	-0.1	Pass
North	360.0	0.1	0.1	Pass
East	90.0	90.2	0.2	Pass
North	360.0	0.1	0.1	Pass
West	270.0	270.1	0.1	Pass
South	180.0	178.9	-1.1	Pass
East	90.0	89.7	-0.3	Pass
Max Abs. Error			**1.1**	**PASS**
Mean Abs. Error			**0.4**	**PASS**

Time: Begin: 1320 End: 1324

BENCH STAND ACCURACY & LINEARITY TEST							
Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.9	-0.1	Pass	330.0	330.5	0.5	Pass
60.0	58.7	-1.3	Pass	355.0	354.9	-0.1	Pass
90.0	89.5	-0.5	Pass	30.0	29.5	-0.5	Pass
120.0	119.9	-0.1	Pass	60.0	58.9	-1.1	Pass
150.0	149.2	-0.8	Pass	90.0	89.7	-0.3	Pass
180.0	179.0	-1.0	Pass	120.0	119.9	-0.1	Pass
210.0	209.7	-0.3	Pass	150.0	149.0	-1.0	Pass
240.0	240.0	0.0	Pass	180.0	179.2	-0.8	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	299.7	-0.3	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1328 End: 1331

POST-AUDIT AZIMUTH ALIGNMENT TEST				
Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	354.3	-1.8	Pass
Mt Augustine - East shore	347.1	345.4	-1.7	Pass
Mt Eleanor	202.6	199.8	-2.8	Pass
Compass	129.5	126.8	-2.7	Pass
		Max Abs. Error	**2.8**	**PASS**
		Mean Abs. Error	**2.1**	**GOOD**

Time: Begin: 1530 End: 1555

PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

● *HORIZONTAL WIND DIRECTION SENSOR AUDIT - RM YOUNG*

Height: 10.5 **Meters**

Wind Dir Sensor: **Make:** RM Young **Model:** 05305 AQ **S.N.#:** 67055 **Vane #:** N/A **Range:** 0-360 **Deg**
Audit Equipment: **Linearity:** RMY Mdl 18112 Bench Stand **S.N.#:** None **Torque:** RMY Mdl 18331 Torque Gauge **S.N.#:** None
Compass: Brunton **Model:** 11-F5008 **S.N.#:** 5080799319 **Magnetic Declin:** 18.3 **E of N**

TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	9.0	**PASS**
New	11.0	6.0	**PASS**

IN SITU AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	261.6	-1.6	Pass
Mt Augustine - Peak	356.1	353.8	-2.3	Pass
Mt Eleanor	202.6	202.6	0.0	Pass
Compass	145.5	148.0	2.5	Pass
		Max Abs. Error	**2.5**	**PASS**
Time: Begin: 1100 End: 1125		**Mean Abs. Error**	**1.6**	**GOOD**

BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.9	-1.1	Pass	150.0	148.3	-1.7	Pass	270.0	265.5	-4.5	Pass
60.0	59.0	-1.0	Pass	180.0	177.5	-2.5	Pass	300.0	295.7	-4.3	Pass
90.0	89.3	-0.7	Pass	210.0	207.1	-2.9	Pass	330.0	326.3	-3.7	Pass
120.0	118.9	-1.1	Pass	240.0	236.1	-3.9	Pass	355.0	351.7	-3.3	Pass
								Max Abs. Error		**4.5**	**PASS**
			Time:	Begin: 1140		End: 1144		**Mean Abs. Error**		**2.6**	**PASS**

POST-AUDIT AZIMUTH ALIGNMENT TEST

Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Repeater	263.2	263.2	0.0	Pass
Mt Augustine - East shore	347.1	348.5	1.4	Pass
Mt Eleanor	202.6	203.4	0.8	Pass
Compass	129.5	132.3	2.8	Pass
		Max Abs. Error	**2.8**	**PASS**
Time: Begin: 1530 End: 1555		**Mean Abs. Error**	**1.3**	**GOOD**

PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Absolute Error >5° from True Azimuth (alignment). Max Absolute Error >5° (accuracy). Mean Absolute Error >3° (linearity). Azimuth Mean Absolute Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

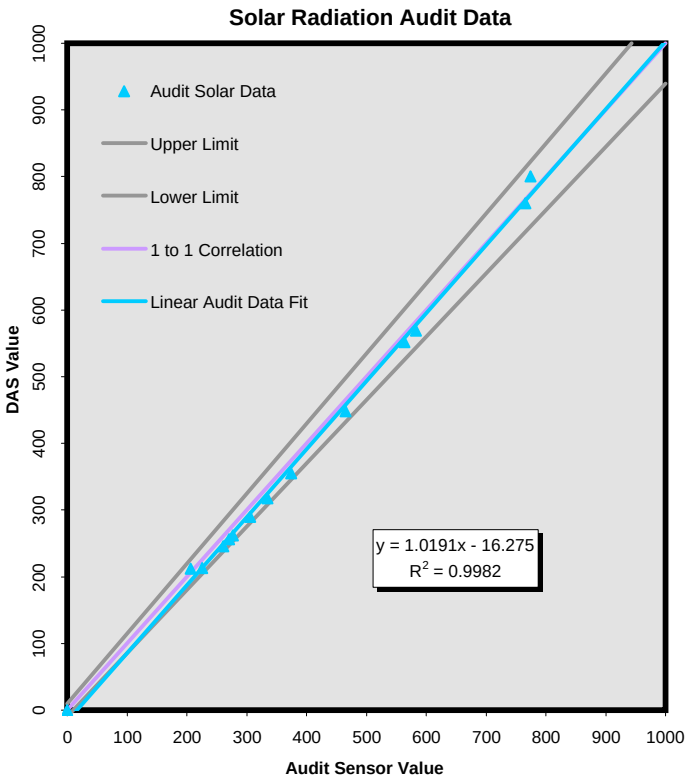
Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Port
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** 21-Aug-06

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.0 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION SENSOR TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
Instantaneous Readings						
1047	276.7	262.3	-14.4	±23.8	-5.2%	Pass
1050	260.6	245.4	-15.2	±23.0	-5.8%	Pass
1310	774.0	800.6	26.6	±48.7	3.4%	Pass
1318	766.0	760.4	-5.6	±48.3	-0.7%	Pass
1402	1025.0	1030.4	5.4	±61.3	0.5%	Pass
1410	374.0	354.7	-19.3	±28.7	-5.2%	Pass
1518	225.4	212.9	-12.5	±21.3	-5.5%	Pass
1623	0.0	0.0	0.0	±10.0	n/a	Pass
1648	306.3	289.9	-16.4	±25.3	-5.4%	Pass
Hourly Averages						
1200	334.8	317.3	-17.5	±26.7	-5.2%	Pass
1300	465.6	447.9	-17.7	±33.3	-3.8%	Pass
1400	583.3	569.3	-14.0	±39.2	-2.4%	Pass
1500	563.3	552.2	-11.1	±38.2	-2.0%	Pass
1600	271.1	256.3	-14.8	±23.6	-5.5%	Pass
1700	206.4	211.9	5.5	±20.3	2.7%	Pass
Corr. Val	**0.9991**	**Max Abs. Percent Error**			**5.8%**	**PASS**
R² Value	**0.9982**	**Intercept**	**-16.3**	**Slope**	**1.0191**	**PASS**



Begin Date: 08/21/06 **End Date:** 08/21/06

PSD Limits: Max Absolute Error <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Comments: Instantaneous data point at 1623 taken with sensors covered.

TOPO! map printed on 08/26/06 from "Pebble_Port_(08-17-06).tpo"
153°36'00" W
153°33'00" W
153°30'00" W
153°27'00" W
153°24'00" W
153°21'00" W
WGS84 153°16'00" W
59°47'00" N
59°45'00" N
59°43'00" N
59°41'00" N
59°39'00" N
59°37'00" N
59°35'00" N
59°33'00" N
MT_ELEANOR
PORT_REPT
INSKN_MET
202.6°TN
263.2°TN
East Flank Mt Augustine - 347.1°TN
Peak Mt Augustine - 356.1°TN
Mt Eleanor
Sugarloaf Mtn
Range Peak
Williamsport
Shark Tooth
Pomeroy
North Head
South Head
Ursus Head
Iniskin Shoal
White Gull I
Turtle Reef
Big Rock
Oil Reef
Mushroom
Knoll Head
AC Point
Scott I
Iliamna Bay
Back Bay
Right Arm
Slippery Creek
Portage Creek
Anthony Creek
Well
Oil Wells
Mud
481
480
Map created with TOPO! ©2006 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
0 1 2 3 4 miles
0 1 2 3 4 5 6 km
TN MN
18½°
08/26/06

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate 1750.01

Calibration complies with ISO/IEC 17025 AND ANSI/NCSL Z540-1

Cert. No.: 4000-1338226

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Dominic Shallies, Anchorage, AK 99503 U.S.A. (RMA:933478)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	12/08/06	A5B28010-1
Thermistor Module	A17118	8/12/06	A5819038
Temperature Calibration Bath TC179	A45240		
Temperature Calibration Bath TC191	A42238		
Temperature Probe	157	9/01/06	A5815063
Thermistor Module	A27129	7/05/06	1000189003

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 6/07/06 **Cal Due: 6/07/07**

Test Conditions: 25.5°C 39.0 %RH 1013 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.000	0.072	N	0.000	-0.004	Y	-0.050	0.050	0.013	3.8:1
°C	25.000	25.020	Y	25.000	24.999	Y	24.950	25.050	0.013	3.8:1
°C	60.002	59.999	Y	60.001	59.999	Y	59.951	60.051	0.013	3.8:1
°C	100.002	100.001	Y	100.002	100.004	Y	99.952	100.052	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company © 2005 Control Company

VAISALA

Certificate of Calibration

Report #: 101705-X0740015-RH **RMA #:** 95-49728 **Calibration Date:** Oct-17-2005
Model #: HMI41/HMP45 **Serial #:** X0650080 / X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH Recommended Calibration Due Date: Oct-17-2006

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH, 33%RH and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% and 97% RH points are not ISO17025 Accredited.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.35	21.50	0.15	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
11.13	11.40	0.27	2.00	0.92
32.70	33.10	0.40	2.00	1.01
75.44	75.00	-0.44	2.00	1.02
97.60	97.50	-0.10	3.00	N/A *

Problem Noted: None
Action Taken: No Adjustment Was Necessary

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number 270953-05, dated Oct. 29, 2004. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 1B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	TW14949	Nov. 24, 2004	Nov. 24, 2006
Fluke 45	7405014	Aug. 16, 2005	Aug. 16, 2006
HMK13B	500004	Sep. 2, 2005	Mar. 5, 2006
HMP233	V4210040	Jul. 21, 2005	Oct. 21, 2005

Ambient Conditions	
Temperature:	21.50 °C
Humidity:	50.00 %RH

Approved By

Technical Operator
Jari Siltavuo

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052406. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 05/24/06 Lab temperature 72.8 °F
Lab pressure 663.1 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.13	0.13	-0.13
26.11	26.24	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.11	0.11	-0.11

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R Sanders Date: 5-24-06

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 RPM - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 24 May 2006

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM - Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 17 November 2005

Tested By EC

Tel: 231-946-3980 Fax: 231-946-4772 Email: met.sales@youngusa.com Website: www.youngusa.com

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 8884 **TRACEABILITY CERTIFICATE NO.** 05090203

ISSUED TO: Hoefler Consulting Group

INSTRUMENT: 366-3, .003-.03 Inch Ounces Torque Watch, Waters Manufacturing, Inc, S/N 4864

DATE DONE: September 02, 2005 **DATE DUE:** September 01, 2006

CERTIFIED BY METROLOGIST: E.P. Young E.P. Young **TEMPERATURE:** 72 °F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

PROCEDURE/LIMITATIONS/ACCURACY STATEMENT: T.O. 33k6-4-2630-1. Accuracy: +/- 10 % of Full Scale.

COMPLIANCE

Alaska Calibration, Inc.'s calibration practices and procedures comply with the requirements of ANSI/SO/Z540-1 and ANS/ ISO/IEC17025: 2000 and relevant requirements of ISO 9002: 1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. This Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	33479
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	12/20/2005
		PO#:	Verbal
Contact:	Chris Lindsey	**Page:**	1
Dept:			
Gage:	.06-.60 oz Torque Watch	**Control:**	5042
Mfg:	Honeywell	**Model:**	.06-.60 oz Torque Watch
Location:		**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Cal-Tech Calibration, INC
Original Certificate (attached) # 1768

Reference HPI S/O # 13385

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
:

Last / Next Cal Dates: -->

Gage Status: PASS

Next Calibration Due: 12/20/2006

Certified By: Jorge Ashook Signature: Jorge A. Ashook

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 21C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994, ISO10012-1, and Houston Precision's Quality manual.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Gary Deterling Lab Manager.
*This Report shall not be reproduced except in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

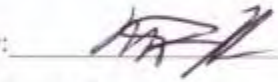
Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 1768
Instrument Make: Honeywell
Model: .06-.60" oz Torque Watch
S/N: None
ID: 5042

Date: 12-20-05
Temp: 74 Deg f
Humidity: 40%
Rec. In Tol.
Due Date: 12-20-06

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: 

Accuracy: +\- 5% of full scale.

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner	**1g-100g**	**822/265036-01**	**3-22-06**

Inch Oz. Range	As Found	After Adjust	Final Reading
.06	.05	none	.05
.18	.17	none	.17
.36	.35	none	.35
.48	.47	none	.47
.60	.59	none	.59

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: Hoefler Consulting Group

Address: 3401 Minnesota Drive Ste. 300

City, State, Zip: Anchorage, Ak 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 12th Day of July 20 05

DESCRIPTION: Pocket Transit

PURCHASE ORDER: S. MacKay

ORDER NUMBER: 176322

LOT NUMBER: 19680

MODEL NUMBER: 11-F5008

SERIAL NUMBER: 5080799319

CALIBRATION DATE: 7/12/05

RECALIBRATION DUE DATE: 7/12/06

Signed: Raelene White
QUALITY CONTROL MANAGER

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.33×10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}.

Shipped to:
Hoefler Consulting Group
Anchorage, AK

Date of Test: October 20, 2005

In Charge of Test: R. T. Eppley

S.O. Number: 60557
Date: January 11, 2006

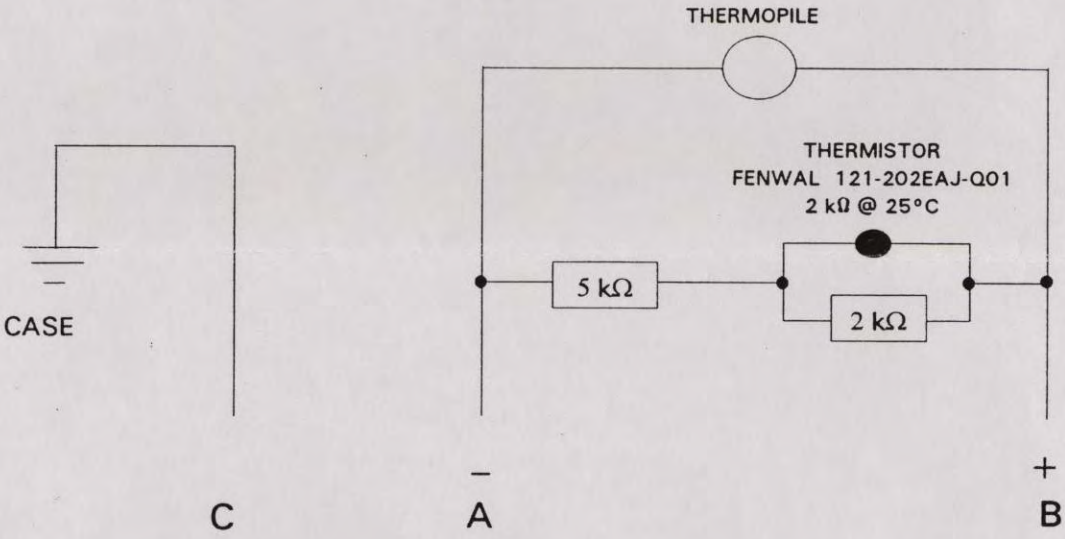
Reviewed by: George L. Eppley

Remarks:

PRECISION SPECTRAL PYRANOMETER
MODEL PSP

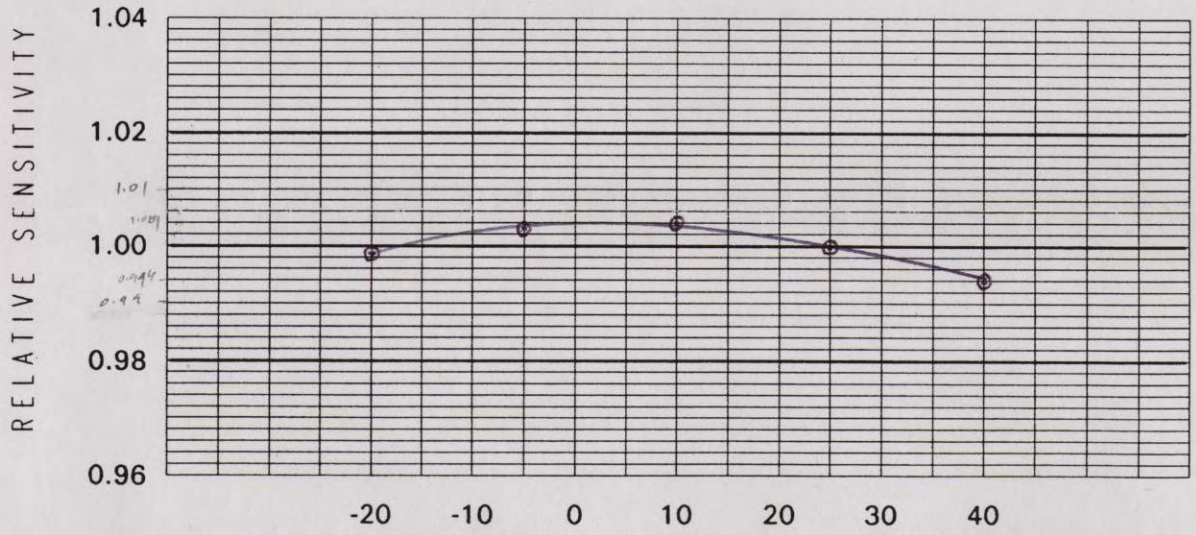
INSTRUMENT SERIAL NUMBER: 34377F3

INTERNAL WIRING



PIN CONNECTIONS ON PLUG

TEMPERATURE DEPENDENCE



EPLAB

TESTED BY: R. Eppeman

DATE: Oct 18, 2005

Pebble Port 1
PSD Meteorological Monitoring Station

January 2007

Quality Assurance Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port 1 PSD Meteorological Monitoring Station
January 2007
Quality Assurance Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Relative Humidity 3
2.1.4 Wind Speed 4
2.1.5 Wind Direction 4
2.1.6 Barometric Pressure 6
2.1.7 Solar Radiation 6

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 9

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Port 1 January 16, 2007 Performance Audit Summary 7
Table 2-3 Port 1 February 7, 2007 Supplemental Performance Audit Summary 8

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential mine port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as a quantitative review of the Pebble Port 1 station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit; instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Port 1 station on January 16, 2007, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and all except the RM Young wind sensor yielded errors below the PSD limits. The 2-meter aspirator fan also was not operating upon arrival at the site, but was repaired during the audit. On February 7, 2007 the RM Young sensor and the aspirators were replaced and a supplemental audit was conducted.

Table 2-2 contains summary data from the January 2007 audit and Table 2-3 summarizes the February 2007 supplemental performance audit. Complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- Set up DAS to monitor aspirator fan amperage.

Table 2-2 Port 1 January 16, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:13	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass[1]
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	Oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	2.0	Pass
Wind Direction Torque	≤ 0.104	Oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.5	Pass
Wind Direction Linearity	≤ 3	Degree	1.5	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.03	Fail
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	10.4	Fail
Wind Direction Accuracy	≤ ±5	Degree	5.9	Fail
Wind Direction Linearity	≤ 3	Degree	3.1	Fail
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	10.5	Fail
Barometric Pressure	≤ ±3	Mbar	-1.9	Pass
Solar Radiation	≤ ±5+Res	% input	-1.9	Pass

1. Two-meter temperature aspirator fan not operating upon arrival.

Table 2-3 Port 1 February 7, 2007 Supplemental Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:16	Pass
2-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
10-m Temperature Accuracy (Pre-wire)[1]	≤ ±0.5	°C	0.15	Pass
Air Temperature Difference (Pre-wire)	≤ ±0.1	°C	0.00	Pass
2-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
10-m Temperature Accuracy (Post-wire)	≤ ±0.5	°C	0.13	Pass
Air Temperature Difference (Post-wire)	≤ ±0.1	°C	0.00	Pass
Relative Humidity –Dew Pt (Pre-wire)[1]	≤ ±1.5	°C	0.3	Pass
Relative Humidity –Dew Pt (Post-wire)	≤ ±1.5	°C	-0.1	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	Oz-in	0.007	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.8	Pass

1. Instruments audited before and after wiring new aspirators.
2. New RM Young sensor, no in-situ test conducted.

3.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

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"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

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"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
12:14:00	12:13:47	**-00:13**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1405
End: 1445

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	45.40	45.53	0.13	Pass	45.53	0.13	Pass	0.00	Pass
Warm	15 to 25	19.48	19.55	0.07	Pass	19.55	0.07	Pass	0.00	Pass
Ice Bath	0	0.00	0.11	0.11	Pass	0.11	0.11	Pass	0.00	Pass
Cold	-15 to -25	-22.85	-22.78	0.07	Pass	-22.78	0.07	Pass	0.00	Pass
Very Cold	-35 to -45	-38.73	-38.59	0.14	Pass	-38.59	0.14	Pass	0.00	Pass
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: 2-meter aspirator fan not operating.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	A2120081	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1545	63.0	-3.7	-9.0	67.1	-3.7	-8.9	0.1	Pass
1600	63.3	-3.6	-8.9	67.5	-3.6	-8.7	0.2	Pass
						Max Abs. Error	0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.2 **E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.76	N/A	0.2	Pass
2000	47.22	48.15	N/A	2.0	Pass
	Max Abs. Error		**0.00**	**2.0**	**PASS**

Time: Begin: 1445 End: 1450

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.2	-2.7	Pass
Compass	4.0	3.1	-0.9	Pass
Compass	99.0	98.1	-0.9	Pass
East Flank Augustine	347.0	344.4	-2.6	Pass
Compass	162.0	162.3	0.3	Pass
Mt Eleanor	202.6	199.1	-3.5	Pass
Max Abs. Error			**3.5**	**PASS**
Mean Abs. Error			**1.8**	**GOOD**

Time: Begin: 1200 End: 1300

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.2	-1.8	Pass
West	270.0	269.3	-0.7	Pass
North	360.0	358.8	-1.2	Pass
East	90.0	88.1	-1.9	Pass
North	360.0	359.0	-1.0	Pass
West	270.0	268.6	-1.4	Pass
South	180.0	177.7	-2.3	Pass
East	90.0	88.9	-1.1	Pass
Max Abs. Error			**2.3**	**PASS**
Mean Abs. Error			**1.4**	**PASS**

Time: Begin: 1400 End: 1402

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	27.5	-2.5	Pass	330.0	329.0	-1.0	Pass
60.0	58.0	-2.0	Pass	355.0	353.6	-1.4	Pass
90.0	89.4	-0.6	Pass	30.0	27.8	-2.2	Pass
120.0	118.7	-1.3	Pass	60.0	58.0	-2.0	Pass
150.0	148.4	-1.6	Pass	90.0	88.5	-1.5	Pass
180.0	178.4	-1.6	Pass	120.0	118.8	-1.2	Pass
210.0	208.6	-1.4	Pass	150.0	148.4	-1.6	Pass
240.0	238.9	-1.1	Pass	180.0	178.3	-1.7	Pass
270.0	268.6	-1.4	Pass	**Max Abs. Error**		**2.5**	**PASS**
300.0	299.1	-0.9	Pass	**Mean Abs. Error**		**1.5**	**PASS**

Time: Begin: 1406 End: 1410

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.080	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	261.9	-1.0	Pass
Compass	5.0	7.8	2.8	Pass
Max Abs. Error			**2.8**	**PASS**
Mean Abs. Error			**1.9**	**GOOD**

Time: Begin: 1530 End: 1545

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 67055	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.2	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1518 End: 1522

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.4	-2.5	Pass
Compass	4.0	13.6	9.6	Fail
Compass	99.0	109.4	10.4	Fail
East Flank Augustine	347.0	349.6	2.6	Pass
Compass	161.0	167.4	6.4	Fail
Pomeroy Repeater	262.9	261.0	-1.9	Pass
Pomeroy Repeater (180°)	82.9	90.2	7.3	Fail
Mt Eleanor	202.6	202.1	-0.5	Pass
Time: Begin: 1200	**Max Abs. Error**		**10.4**	**FAIL**
End: 1300	**Mean Abs. Error**		**5.2**	**ALERT**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.7	-0.3	Pass	150.0	149.2	-0.8	Pass	270.0	264.1	-5.9	Fail
60.0	61.2	1.2	Pass	180.0	177.8	-2.2	Pass	300.0	294.7	-5.3	Fail
90.0	91.8	1.8	Pass	210.0	205.9	-4.1	Pass	330.0	325.4	-4.6	Pass
120.0	120.2	0.2	Pass	240.0	234.1	-5.9	Fail	355.0	350.3	-4.7	Pass
				Time: Begin: 1500				**Max Abs. Error**		**5.9**	**FAIL**
				End: 1505				**Mean Abs. Error**		**3.1**	**FAIL**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.03	**FAIL**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	7.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	261.0	-1.9	Pass
Compass	5.0	15.5	10.5	Fail
Time: Begin: 1530	**Max Abs. Error**		**10.5**	**FAIL**
End: 1545	**Mean Abs. Error**		**6.2**	**ALERT**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Direction sensor failed for unknown reason.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Jan 16, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1547	29.91	29.80	1009.0	1007.1	-1.9	Pass
			Max Abs. Error		1.9	**PASS**

PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

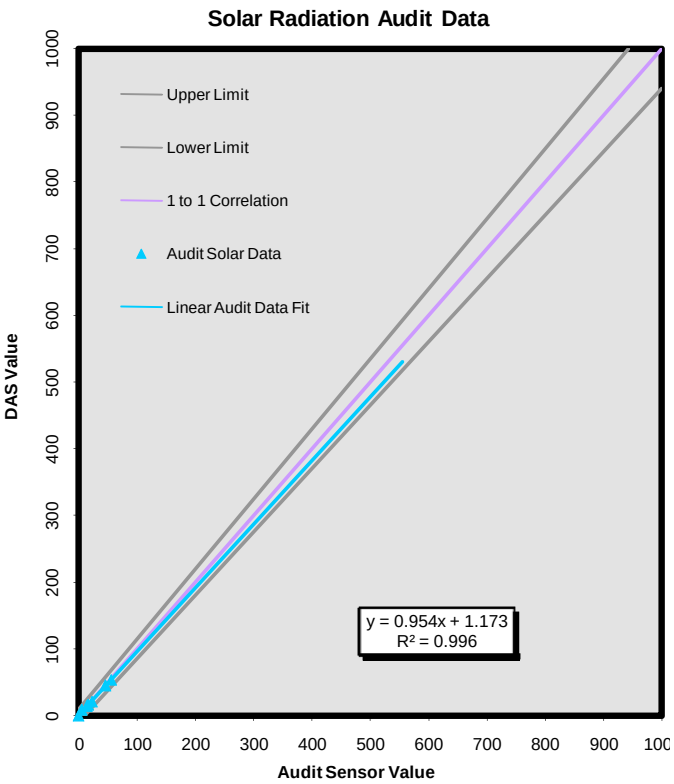
Audit Inst Cal Data	
Cal. Date: 05/24/06	
Audit Inst	Offset Amount
24.13	-0.13
26.24	-0.13
28.12	-0.12
30.11	-0.11
Intercept	**-0.22**
Slope	**0.0035**

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1606	16.4	16.2	-0.2	±10.8	n/a	Pass
1200	4.8	8.4	3.6	±10.2	n/a	Pass
1300	14.2	14.2	0.0	±10.7	n/a	Pass
1400	22.1	21.6	-0.5	±11.1	n/a	Pass
1500	55.2	54.1	-1.1	±12.8	-1.9%	Pass
1600	45.6	44.7	-0.9	±12.3	n/a	Pass
2000	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9980**	**Max Abs. Percent Error**			**1.9%**	**PASS**
R² Value	**0.9960**	**Intercept**	**1.2**	**Slope**	**0.9541**	**PASS**



Begin Date: 01/16/07 **End Date:** 01/16/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Feb 7, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
15:07:00	15:06:44	**-00:16**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

THERMISTOR COLLOCATED STANDARD TEST												
			Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
			Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Time:	Begin:	1110	Warm	15 to 25	30.64	30.79	0.15	Pass	30.79	0.15	Pass	0.00	Pass
	End:	1115	Ice Bath	0	0.05	0.20	0.15	Pass	0.20	0.15	Pass	0.00	Pass
Time:	Begin:	1515	Warm	15 to 25	25.70	25.72	0.02	Pass	25.72	0.02	Pass	0.00	Pass
	End:	1520	Ice Bath	0	0.04	0.17	0.13	Pass	0.17	0.13	Pass	0.00	Pass
					Max Abs. Error	0.15	**PASS**			0.15	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: Thermistors tested before and after wiring into new aspirators.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45ASP **S.N.#:** B4850068 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1120	72.7	1.8	-2.6	74.7	1.7	-2.3	0.3	Pass
1520	90.7	0.2	-1.5	92.4	-0.5	-1.6	-0.1	Pass
					Max Abs. Error		0.3	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: $Td = b*\gamma/(a-\gamma)$, where $\gamma = a*Ta/(b + Ta) + \ln(RH)$, and a = 17.27, b=237.7°C.
Comments: RH sensor tested before and after wiring into new aspirator.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Feb 7, 2007

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 76266	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.2	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
9000	46.08	46.08	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1102 End: 1105

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.5	-0.5	Pass	150.0	149.4	-0.6	Pass	270.0	268.9	-1.1	Pass
60.0	59.9	-0.1	Pass	180.0	178.8	-1.2	Pass	300.0	299.0	-1.0	Pass
90.0	89.9	-0.1	Pass	210.0	209.3	-0.7	Pass	330.0	328.4	-1.6	Pass
120.0	119.7	-0.3	Pass	240.0	239.0	-1.0	Pass	355.0	353.1	-1.9	Pass
				Time: Begin:	1055	**Max Abs. Error**			**1.9**		**PASS**
				End:	1100	**Mean Abs. Error**			**0.8**		**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.007	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

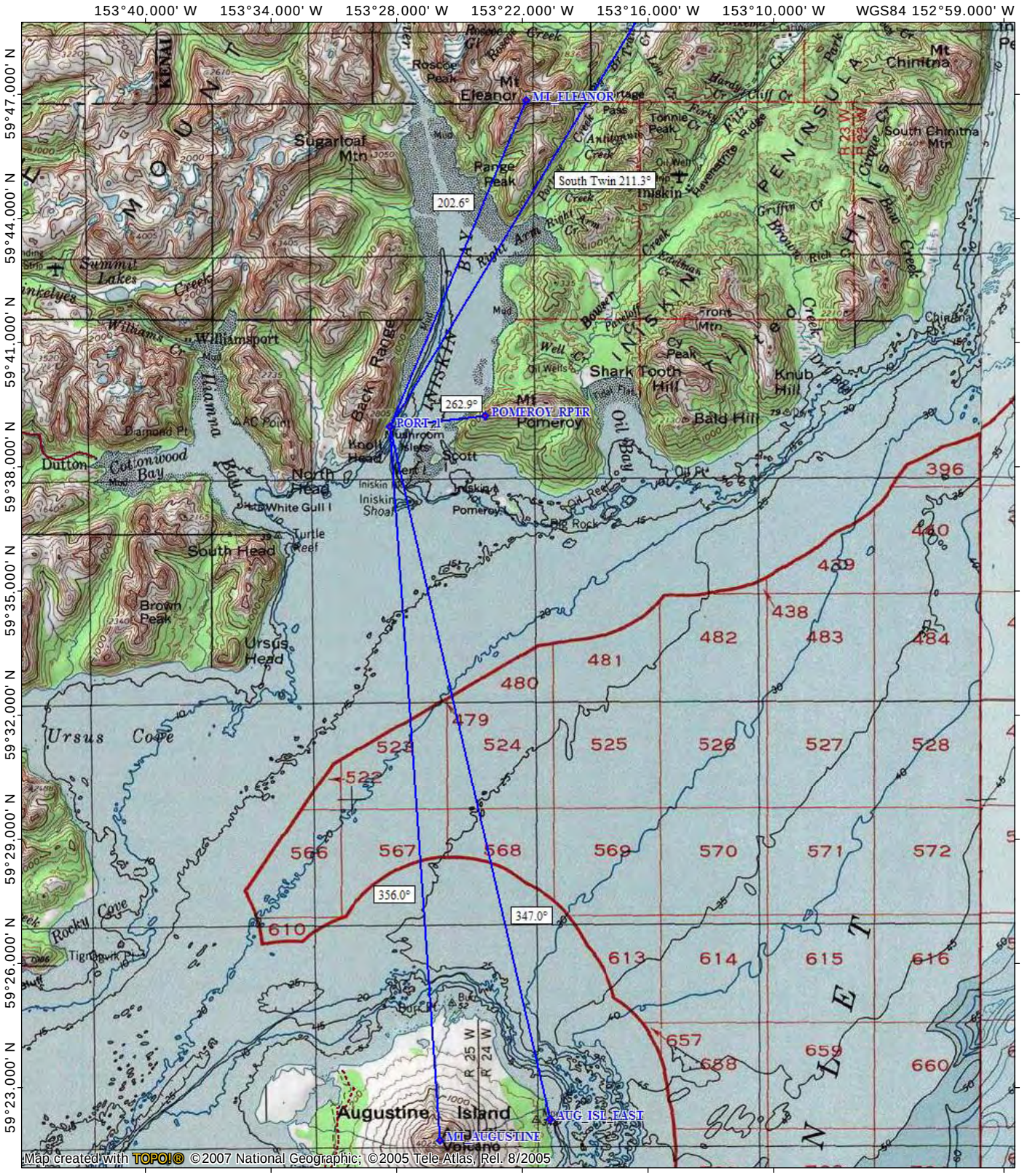
Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	5.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Compass	100.0	99.8	-0.2	Pass
Compass	177.0	176.8	-0.2	Pass
Compass	257.5	254.7	-2.8	Pass
Compass	341.5	340.9	-0.6	Pass
Pomeroy Repeater	262.9	261.4	-1.5	Pass
Time: Begin: 1130	**Max Abs. Error**		**2.8**	**PASS**
End: 1215	**Mean Abs. Error**		**1.1**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: New RM Young sensor SN 76266 replacing SN 67055 which failed the Jan 16, 2007 audit.

Port 1 TOPO Alignment Map - 58°38.949' N, 153°28.294' W WGS84



APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Certificate 1750.01

Calibration complies with ISO/IEC 17025 AND ANSI/NCSL Z540-1

Cert. No.: 4000-1338226

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Dominic Shallies, Anchorage, AK 99503 U.S.A. (RMA:933478)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Probe	128	12/08/06	A5B28010-1
Thermistor Module	A17118	8/12/06	A5819038
Temperature Calibration Bath TC179	A45240		
Temperature Calibration Bath TC191	A42238		
Temperature Probe	157	9/01/06	A5815063
Thermistor Module	A27129	7/05/06	1000189003

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 6/07/06 **Cal Due: 6/07/07**

Test Conditions: 25.5°C 39.0 %RH 1013 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.000	0.072	N	0.000	-0.004	Y	-0.050	0.050	0.013	3.8:1
°C	25.000	25.020	Y	25.000	24.999	Y	24.950	25.050	0.013	3.8:1
°C	60.002	59.999	Y	60.001	59.999	Y	59.951	60.051	0.013	3.8:1
°C	100.002	100.001	Y	100.002	100.004	Y	99.952	100.052	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company © 2005 Control Company

VAISALA

Certificate of Calibration

Report #: 112006-X0740015-RH **RMA #:** 95-56707 **Calibration Date:** Nov-20-2006
Model #: HMI41/HMP45 **Serial #:** X0650080/X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%RH, -20 to 60°C, Temp. Recommended Calibration Due Date: Nov-20-2007

Customer: HOEFLER CONSULTING GROUP
City, State: ANCHORAGE, AK USA

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% RH against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11% and 97%* RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U S Guide to the Expression of Uncertainty in Measurement *Note: the 0% and 97% RH points are not ISO17025 Accredited

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.12	21.20	0.08	0.21	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.30	-0.33	2.00	0.50 *
11.55	11.30	-0.25	2.00	0.92
75.10	74.60	-0.50	2.00	1.02
97.60	96.40	-1.20	3.00	1.50 *
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.57	21.60	0.03	0.21	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.43	11.60	0.17	2.00	0.92
75.10	75.10	0.00	2.00	1.02
97.60	96.70	-0.90	3.00	1.50 *

Problem Noted: None
Action Taken: The Unit Was Calibrated

The results of this calibration are related only to the items being calibrated, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number TN 274176, dated Oct. 2006. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994 This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001.2000 certified.

Calibration Equipment Used: Workstation 3A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	21609085	Nov. 24, 2004	Nov 24, 2006
Fluke 45	7781003	Jan. 12, 2006	Jan. 12, 2007
HMK13B	V324	Oct 13, 2006	Apr. 13, 2007
HMP233	671210	Nov 10, 2006	Feb. 10, 2007
HMT333	B0920004	Sep 27, 2006	Dec 27, 2006
HMI41/HMP45	S1130071	Sep 1, 2006	Dec 1, 2006

Ambient Conditions	
Temperature:	21 80 °C
Humidity:	49 10 %RH

Approved By

Technical Operator
Johnson François

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone: 781 933 4500 • Fax 781 933 8029
www.vaisala.com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18811	Serial Number:	CA02136
Description:	Anemometer Drive - 20 to 990 RPM - Comprised of Models 18820A Control Unit & 18831A Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 24 May 2006

Tested By EJC

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

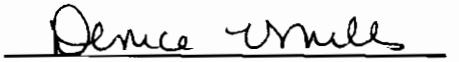
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 052406. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 05/24/06 Lab temperature 72.8 °F
Lab pressure 663.1 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.13	0.13	-0.13
26.11	26.24	0.13	-0.13
28.00	28.12	0.12	-0.12
30.00	30.11	0.11	-0.11

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ **NO** ☒
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R Sanders Date: 5-24-06

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: eplab@mail.bbsnet.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments for Precision Measurements Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Pebble Port 1 PSD Meteorological Monitoring Station

August 2007

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port 1 PSD Meteorological Monitoring Station
August 2007
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 13

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel 2
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port 1 August 29, 2007 Performance Audit Summary (CR10X) 11
Table 3-3 Port 1 August 30, 2007 Performance Audit Summary (CR1000) 12

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential mine port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port 1 station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agenc (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

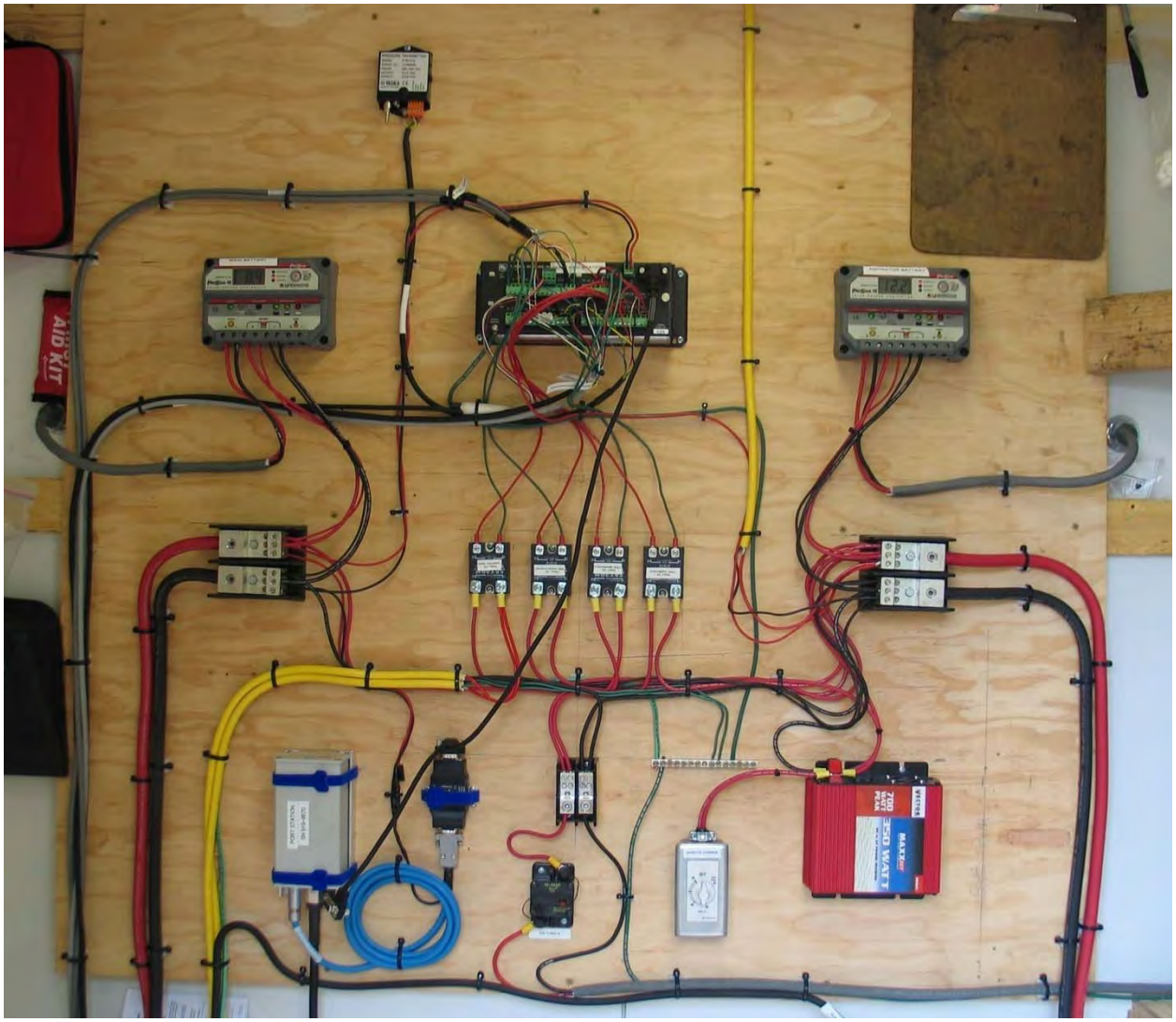
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the Port 1 station was conducted in late August 2007. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port 1 meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4’ by 4’ plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel



The Campbell Scientific CR10X/CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar controller and

buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port 1 station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best

reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Port 1 station is a well designed and operated meteorological monitoring station. During the recent audit the operator upgraded the data acquisition system and added current shunts to the system in order to remotely monitor the aspirator fans. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port 1 station and practices sufficient data review and preventive maintenance to avoid significant data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]
Precipitation	Calibrated water volume	≤ ±10% of input
Evaporation	Measured water level	≤ ±10% of input

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audits were conducted at the Port 1 station on August 29 & 30, 2007, with Dominic Shallies of HCG assisting. The station was audited as found on August 29, 2007. After the initial audit the datalogger was upgraded from a Campbell Scientific CR10X to a CR1000 and the solar radiation sensor was also replaced. After these station modifications the station was re-audited on August 30, 2007. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. The time on the new CR1000 DAS was inadvertently set to AM time rather than PM on startup, a 12 hour error. This error was rectified in the HCG office rather than in the field, in order to continue field solar tests and allow data recovery. Summary audit results are contained in Tables 3-2 and 3-3, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Port 1 August 29, 2007 Performance Audit Summary (CR10X)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:33	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.8	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.090	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.5	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.7	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.2	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
Barometric Pressure	≤ ±3	Mbar	0.5	Pass
Solar Radiation	≤ ±5+Res	% input	-6.7[2]	Pass

1. Not re-tested until after DAS/sensor change.
2. Max % error value of 6.7 within limit of 5% input + resolution, see audit.

Table 3-3 Port 1 August 30, 2007 Performance Audit Summary (CR1000)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-12:00:18	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (New bearings)	≤ 0.104	oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.9	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	-6.3[3]	Pass

1. DAS time 12 hours behind AST on new datalogger, error corrected from office.
2. New DAS/sensor, no as-found value.
3. Max % error value of 6.3 within limit of 5% input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port 1 station is located on a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

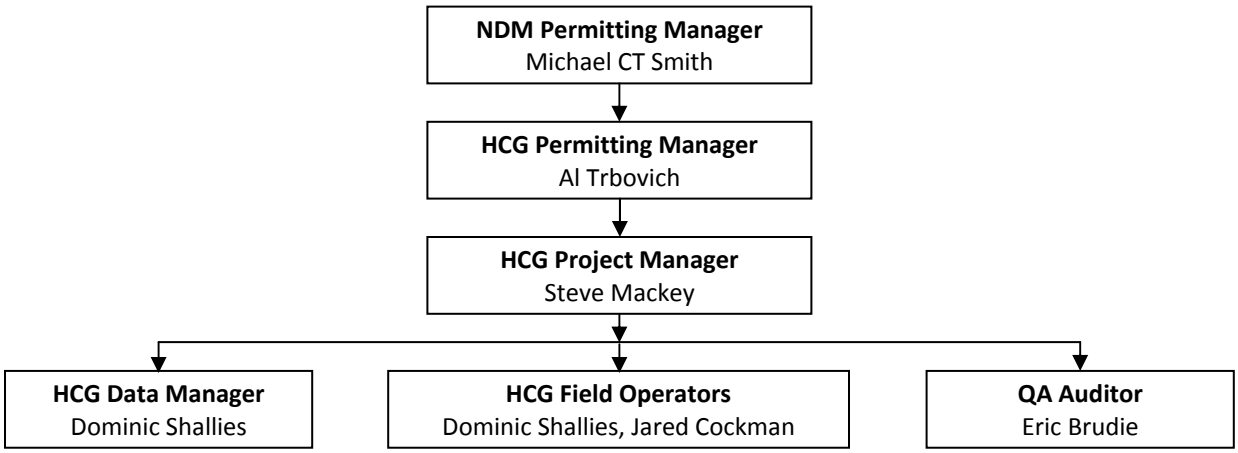
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
Old DAS[1]	Campbell Scientific	CR10X	X41611
Old DAS Wiring Panel	Campbell Scientific	CR10X	31375
New DAS[2]	Campbell Scientific	CR1000	Unknown
New DAS Wiring Panel	Campbell Scientific	CR1000	Unknown
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Relative Humidity	Vaisala	HMP45AC	C0540091
Temperature Aspirators	Met One	076B-4	E3489 & E3490
New Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	76266
Backup Wind Spd Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	76266
Barometric Pressure	Vaisala	PTB101B	A1950006
Old Solar Radiation	LI-COR	Li-200SX	PY50763
New Solar Radiation	LI-COR	Li-200SX	PY51449

1. DAS and some sensors replaced after initial audit on Aug 29, 2007.
2. New DAS and sensors audited on Aug 30, 2007.

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on telephone grid.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: None.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: The lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

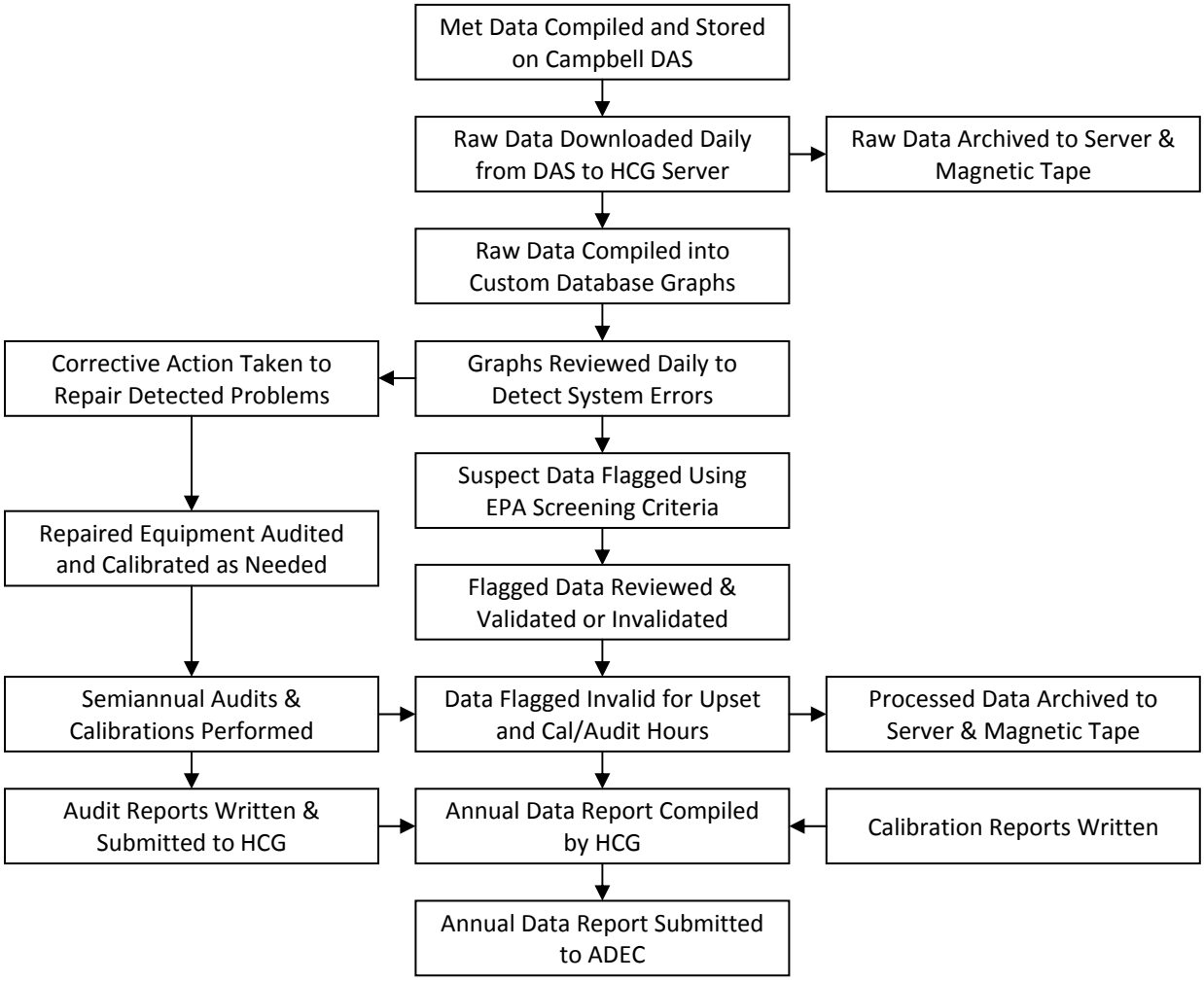
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits & cals?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Audit with CR10X datalogger.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
11:37:00	11:36:27	**-00:33**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1200
End: 1300

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	40.69	40.88	0.19	Pass	40.88	0.19	Pass	0.00	Pass
Warm	15 to 25	20.82	20.94	0.12	Pass	20.94	0.12	Pass	0.00	Pass
Ice Bath	0	-0.05	0.08	0.13	Pass	0.08	0.13	Pass	0.00	Pass
Cold	-15 to -25	-18.83	-18.55	0.28	Pass	-18.55	0.28	Pass	0.00	Pass
Very Cold	-35 to -45	-38.93	-38.53	0.40	Pass	-38.53	0.40	Pass	0.00	Pass
		Max Abs. Error		0.40	**PASS**		0.40	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	C0540091	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1027	71.1	16.2	11.0	76.8	15.9	11.8	0.8	Pass
1048	73.5	15.5	10.7	76.9	15.5	11.5	0.8	Pass
						Max Abs. Error	0.8	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1010 End: 1012

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	262.4	-0.5	Pass
South Twin	211.3	208.8	-2.5	Pass
Mt Eleanor	202.6	201.1	-1.5	Pass
Mt Augustine Peak	356.0	354.8	-1.2	Pass
East Flank Augustine	347.0	346.3	-0.7	Pass
Compass	101.0	100.5	-0.5	Pass
Compass	347.0	347.3	0.3	Pass
Max Abs. Error			**2.5**	**PASS**
Mean Abs. Error			**1.0**	**GOOD**

Time: Begin: 930 End: 1000

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	177.8	-2.2	Pass
West	270.0	269.6	-0.4	Pass
North	360.0	0.1	0.1	Pass
East	90.0	89.5	-0.5	Pass
North	360.0	0.1	0.1	Pass
West	270.0	269.6	-0.4	Pass
South	180.0	178.5	-1.5	Pass
East	90.0	89.2	-0.8	Pass
Max Abs. Error		**2.2**	**PASS**	
Mean Abs. Error		**0.7**	**PASS**	

Time: Begin: 1020 End: 1022

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.8	-1.2	Pass	330.0	329.8	-0.2	Pass
60.0	58.5	-1.5	Pass	355.0	354.7	-0.3	Pass
90.0	89.1	-0.9	Pass	30.0	28.8	-1.2	Pass
120.0	119.6	-0.4	Pass	60.0	58.9	-1.1	Pass
150.0	149.0	-1.0	Pass	90.0	89.0	-1.0	Pass
180.0	178.9	-1.1	Pass	120.0	119.6	-0.4	Pass
210.0	209.4	-0.6	Pass	150.0	149.2	-0.8	Pass
240.0	239.4	-0.6	Pass	180.0	178.9	-1.1	Pass
270.0	269.3	-0.7	Pass	**Max Abs. Error**		**1.5**	**PASS**
300.0	299.6	-0.4	Pass	**Mean Abs. Error**		**0.8**	**PASS**

Time: Begin: 1041 End: 1044

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.090	**PASS**
New	0.104	0.080	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument/DAS Changed-				
No Post-Audit Test				
Max Abs. Error				
Mean Abs. Error				

Time: Begin: End:

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Wind direction sensor bearings replaced.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 76266	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.0	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1307 End: 1310

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.9	-2.0	Pass
South Twin	211.3	208.4	-2.9	Pass
Mt Eleanor	202.6	200.1	-2.5	Pass
Mt Augustine Peak	356.0	356.1	0.1	Pass
East Flank Augustine	347.0	343.3	-3.7	Pass
Compass	101.0	99.0	-2.0	Pass
Compass	347.0	346.5	-0.5	Pass
Time: Begin: 930	**Max Abs. Error**		**3.7**	**PASS**
End: 1000	**Mean Abs. Error**		**2.0**	**GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.6	0.6	Pass	150.0	148.6	-1.4	Pass	270.0	268.9	-1.1	Pass
60.0	60.5	0.5	Pass	180.0	178.9	-1.1	Pass	300.0	299.3	-0.7	Pass
90.0	91.0	1.0	Pass	210.0	208.6	-1.4	Pass	330.0	327.3	-2.7	Pass
120.0	119.1	-0.9	Pass	240.0	238.6	-1.4	Pass	355.0	353.3	-1.7	Pass
					Time: Begin: 1320			**Max Abs. Error**		**2.7**	**PASS**
					End: 1323			**Mean Abs. Error**		**1.2**	**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	8.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument/DAS Changed-				
No Post-Audit Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1237	29.82	29.73	1006.7	1007.2	0.5	Pass
			Max Abs. Error		0.5	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

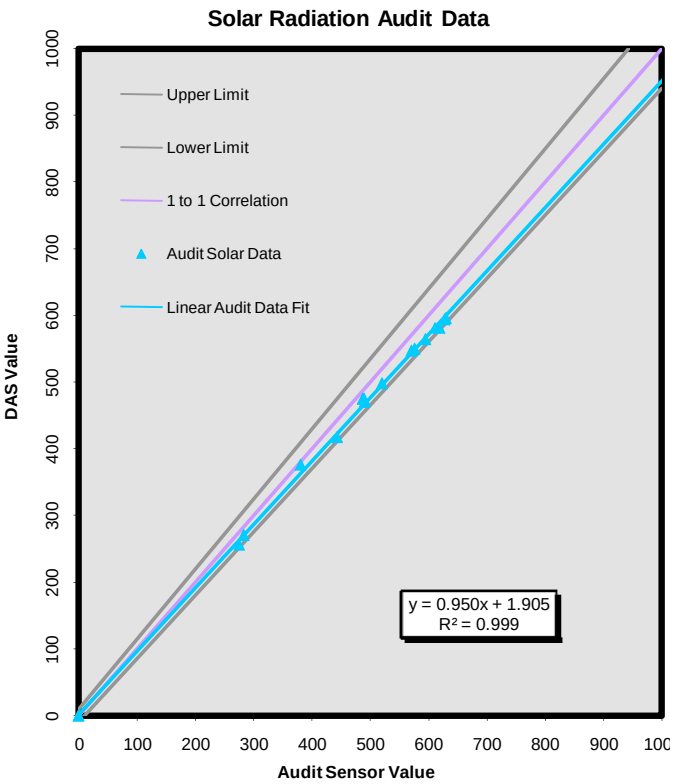
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
837	0.0	0.0	0.0	±10.0	n/a	Pass
842	282.7	270.1	-12.6	±24.1	-4.5%	Pass
1027	489.0	474.9	-14.1	±34.5	-2.9%	Pass
1131	575.5	549.3	-26.2	±38.8	-4.6%	Pass
1212	610.4	581.5	-28.9	±40.5	-4.7%	Pass
1254	629.8	595.5	-34.3	±41.5	-5.4%	Pass
1550	490.5	469.6	-20.9	±34.5	-4.3%	Pass
1629	443.0	417.2	-25.8	±32.2	-5.8%	Pass
900	274.8	256.5	-18.3	±23.7	-6.7%	Pass
1000	380.9	375.6	-5.3	±29.0	-1.4%	Pass
1100	487.4	474.5	-12.9	±34.4	-2.6%	Pass
1200	570.5	546.7	-23.8	±38.5	-4.2%	Pass
1300	618.1	581.0	-37.1	±40.9	-6.0%	Pass
1400	626.9	593.3	-33.6	±41.3	-5.4%	Pass
1500	594.0	563.6	-30.4	±39.7	-5.1%	Pass
1600	519.8	498.0	-21.8	±36.0	-4.2%	Pass
2200	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9996**	**Max Abs. Percent Error**			**6.7%**	**PASS**
R² Value	**0.9991**	**Intercept**	**1.9**	**Slope**	**0.9502**	**PASS**



Begin Date: 08/29/07 **End Date:** 08/29/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Audit with CR1000. Date stamp set 12 hours behind (-18 second).

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
12:17:00	0:16:42	**-12:00:18**	**FAIL**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1435
End: 1450

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	36.66	36.79	0.13	Pass	36.79	0.13	Pass	0.00	Pass
Warm	15 to 25	19.60	19.67	0.07	Pass	19.67	0.07	Pass	0.00	Pass
Ice Bath	0	0.07	0.21	0.14	Pass	0.21	0.14	Pass	0.00	Pass
Cold	-15 to -25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Very Cold	-35 to -45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: No dry ice available to run cold temperature tests after DAS change.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	C0540091	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1630	61.7	18.4	11.4	71.6	16.6	11.4	0.0	Pass
1643	65.9	18.1	11.7	74.1	16.5	11.9	0.2	Pass
						Max Abs. Error	0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0 **E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1515 End: 1518

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	177.4	-2.6	Pass
West	270.0	267.6	-2.4	Pass
North	360.0	357.8	-2.2	Pass
East	90.0	87.5	-2.5	Pass
North	360.0	358.1	-1.9	Pass
West	270.0	268.5	-1.5	Pass
South	180.0	177.8	-2.2	Pass
East	90.0	87.7	-2.3	Pass
	Max Abs. Error		**2.6**	**PASS**
	Mean Abs. Error		**2.2**	**PASS**

Time: Begin: 1502 End: 1507

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.8	-1.2	Pass	330.0	329.3	-0.7	Pass
60.0	58.9	-1.1	Pass	355.0	354.0	-1.0	Pass
90.0	88.9	-1.1	Pass	30.0	29.1	-0.9	Pass
120.0	118.7	-1.3	Pass	60.0	58.9	-1.1	Pass
150.0	148.3	-1.7	Pass	90.0	89.4	-0.6	Pass
180.0	179.0	-1.0	Pass	120.0	119.2	-0.8	Pass
210.0	209.2	-0.8	Pass	150.0	148.6	-1.4	Pass
240.0	239.0	-1.0	Pass	180.0	178.9	-1.1	Pass
270.0	269.0	-1.0	Pass	**Max Abs. Error**		**1.7**	**PASS**
300.0	299.4	-0.6	Pass	**Mean Abs. Error**		**1.0**	**PASS**

Time: Begin: 1510 End: 1513

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.080	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Mt Eleanor	202.6	200.8	-1.8	Pass
Pomeroy Repeater	262.9	262.0	-0.9	Pass
East Flank Augustine	347.0	346.0	-1.0	Pass
Compass	100.5	100.9	0.4	Pass
Time: Begin: 1550	**Max Abs. Error**		**1.8**	**PASS**
End: 1610	**Mean Abs. Error**		**1.0**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	76266	**Prop #:**	63037	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1440 End: 1443

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.4	-0.6	Pass	150.0	147.9	-2.1	Pass	270.0	267.2	-2.8	Pass
60.0	60.1	0.1	Pass	180.0	177.9	-2.1	Pass	300.0	297.6	-2.4	Pass
90.0	89.3	-0.7	Pass	210.0	207.8	-2.2	Pass	330.0	327.1	-2.9	Pass
120.0	118.8	-1.2	Pass	240.0	237.4	-2.6	Pass	355.0	352.3	-2.7	Pass
				Time: Begin:	1450	**Max Abs. Error**		**2.9**			**PASS**
				End:	1455	**Mean Abs. Error**		**1.9**			**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	8.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Mt Eleanor	202.6	202.9	0.3	Pass
Pomeroy Repeater	262.9	263.3	0.4	Pass
East Flank Augustine	347.0	347.2	0.2	Pass
Compass	100.5	101.9	1.4	Pass
Time: Begin: 1550	**Max Abs. Error**		**1.4**	**PASS**
End: 1610	**Mean Abs. Error**		**0.6**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1520	29.77	29.68	1005.0	1005.1	0.1	Pass
			Max Abs. Error		0.1	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

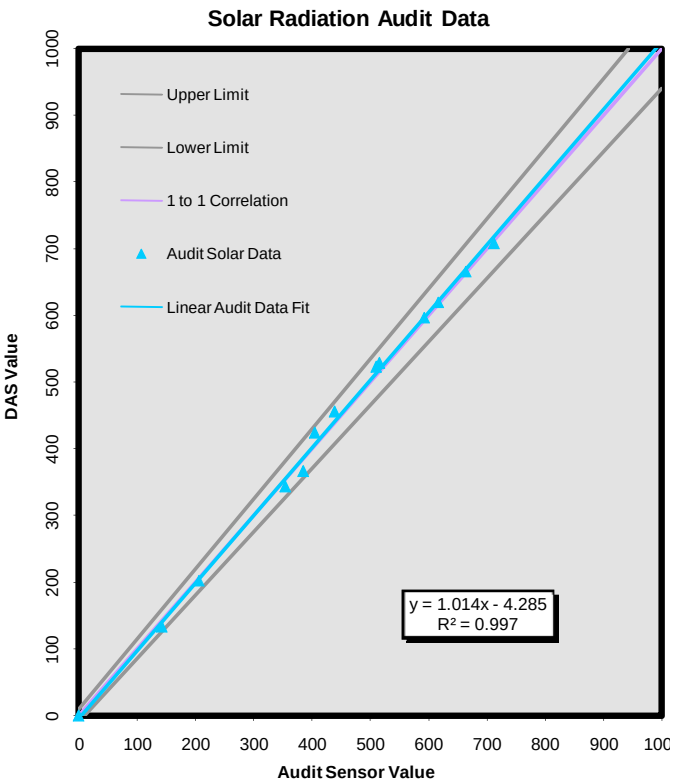
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY51449 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

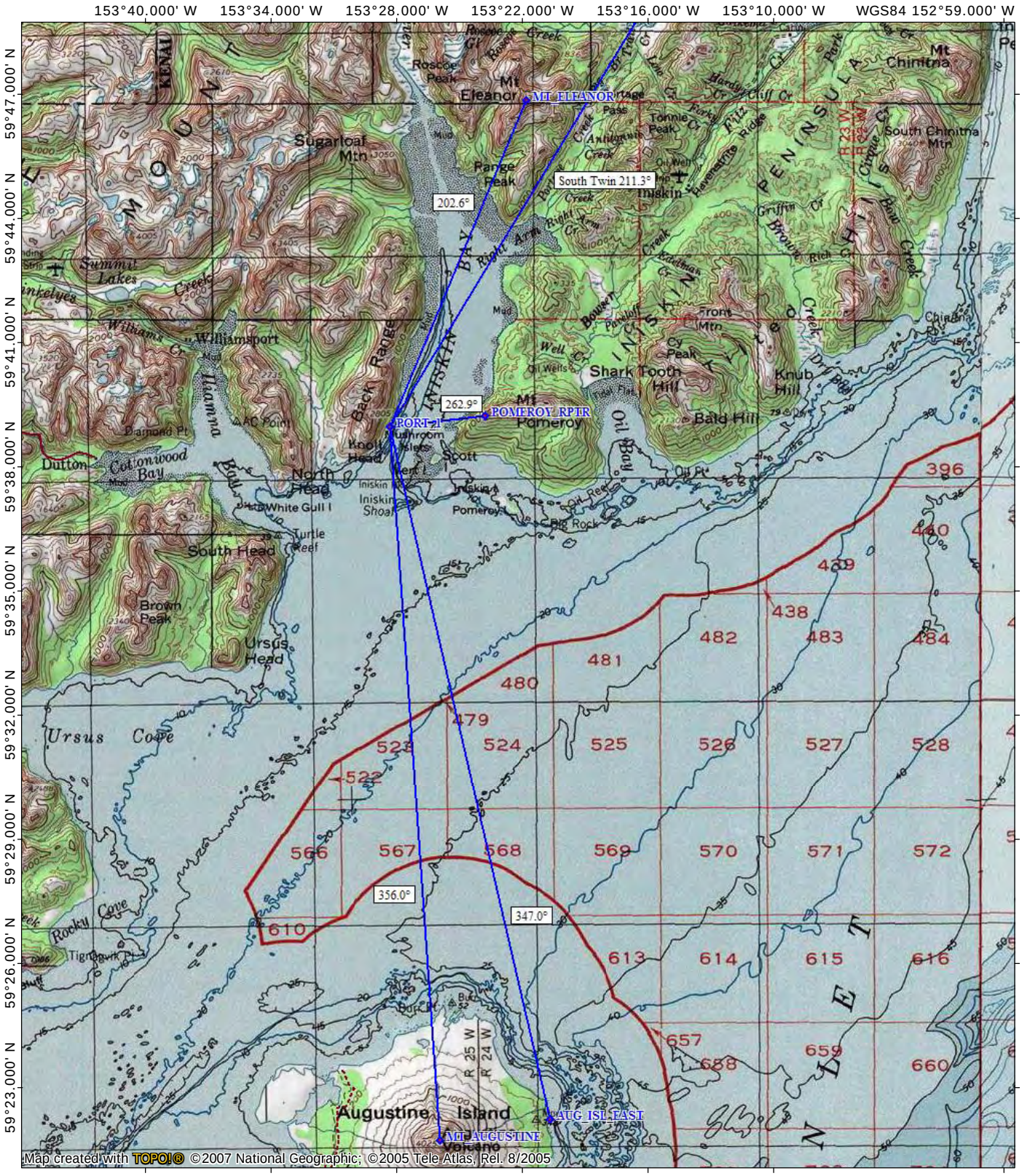
SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1203	142.1	133.1	-9.0	±17.1	-6.3%	Pass
1245	712.4	707.6	-4.8	±45.6	-0.7%	Pass
1412	616.1	620.1	4.0	±40.8	0.6%	Pass
1525	515.2	528.1	12.9	±35.8	2.5%	Pass
1613	438.9	455.7	16.8	±31.9	3.8%	Pass
1651	385.3	366.2	-19.1	±29.3	-5.0%	Pass
1200	206.2	202.7	-3.5	±20.3	-1.7%	Pass
1300	354.5	343.0	-11.5	±27.7	-3.2%	Pass
1400	663.2	666.0	2.8	±43.2	0.4%	Pass
1500	592.1	596.9	4.8	±39.6	0.8%	Pass
1600	509.5	522.4	12.9	±35.5	2.5%	Pass
1700	404.7	423.6	18.9	±30.2	4.7%	Pass
2200	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9987**	**Max Abs. Percent Error**			**6.3%**	**PASS**
R² Value	**0.9973**	**Intercept**	**-4.3**	**Slope**	**1.0146**	**PASS**



Begin Date: 08/30/07 **End Date:** 08/30/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

Port 1 TOPO Alignment Map - 58°38.949' N, 153°28.294' W WGS84



APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Block Unit

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

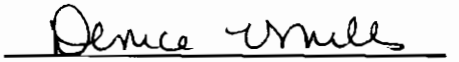
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: eplab@mail.bbsnet.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments for Precision Measurements Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Appendix D

Validated Continuous Data Summaries

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-8.2	-8.4	-8.7	-9.0	-9.1	-9.2	-9.3	-9.1	-9.3	-8.9	-8.7	-8.3	-8.3	-8.8	-9.0	-9.0	-9.7	-10.4	-11.1	-11.8	-12.5	-12.9	-13.1	-12.8	-8.2	-13.1	-9.8
2	-12.8	-13.3	-13.6	-13.7	-14.2	-14.1	-14.5	-14.9	-15.1	-15.4	-15.4	-15.0	-15.2	-14.8	-14.3	-13.9	-14.1	-14.2	-14.5	-14.6	-15.2	-15.6	-16.1	-16.1	-12.8	-16.1	-14.6
3	-15.7	-15.5	-16.2	-17.1	-17.0	-16.6	-17.3	-17.2	-17.7	-18.4	-18.7	-19.5	-19.2	-19.1	-19.4	-19.2	-19.0	-18.5	-18.3	-18.1	-18.2	-18.7	-19.1	-18.7	-15.5	-19.5	-18.0
4	-17.4	-18.5	-18.5	-18.2	-18.4	-18.7	-18.0	-17.9	-17.2	-16.2	-13.8	-11.5	-10.8	-10.3	-9.9	-9.7	-9.7	-10.0	-9.9	-10.3	-10.6	-11.0	-11.3	-11.2	-9.7	-18.7	-13.7
5	-11.8	-13.0	-13.0	-12.9	-13.9	-15.2	-16.2	-16.8	-16.9	-15.2	-14.2	-14.4	-15.0	-14.0	-14.8	-15.4	-15.7	-16.2	-16.4	-17.3	-18.1	-18.4	-18.5	-18.5	-11.8	-18.5	-15.5
6	-18.5	-18.3	-17.9	-17.2	-16.9	-16.7	-17.0	-16.6	-16.3	-16.6	-16.3	-16.1	-15.5	-15.7	-15.5	-15.7	-16.4	-16.6	-16.5	-16.5	-16.9	-18.3	-18.8	-18.9	-15.5	-18.9	-16.9
7	-19.8	-20.4	-20.7	-20.6	-20.7	-20.8	-20.5	-19.9	-20.2	-21.3	-21.0	-20.2	-20.4	-20.4	-20.3	-20.3	-20.7	-20.2	-19.9	-20.1	-20.5	-20.1	-20.4	-20.7	-19.8	-21.3	-20.4
8	-20.3	-19.9	-19.6	-18.8	-18.0	-18.1	-17.9	-17.6	-17.4	-17.9	-18.4	-18.4	-18.2	-18.3	-18.6	-18.1	-18.1	-18.1	-18.3	-18.3	-18.6	-19.2	-19.0	-19.5	-17.4	-20.3	-18.5
9	-19.4	-19.5	-19.5	-19.0	-18.6	-18.3	-18.3	-18.4	-18.0	-17.8	-17.0	-15.2	-14.2	-13.5	-13.1	-12.5	-13.0	-13.4	-13.5	-13.6	-13.4	-13.2	-12.6	-12.0	-12.0	-19.5	-15.7
10	-11.4	-11.4	-11.0	-10.3	-9.6	-8.9	-8.7	-9.0	-8.0	-7.8	-8.2	-8.1	-8.0	-7.6	-6.6	-6.6	-5.3	-5.3	-4.4	-3.8	-3.7	-3.5	-2.6	-2.8	-2.6	-11.4	-7.2
11	-2.3	-1.8	-1.9	-2.0	-2.3	-2.0	-2.3	-1.6	-1.3	-1.3	-1.0	-0.8	-0.7	-0.7	-0.4	-0.3	-0.4	-0.3	0.0	0.1	0.2	0.2	0.3	0.5	0.5	-2.3	-0.9
12	0.5	0.6	0.7	0.9	0.9	1.0	0.7	1.0	1.2	0.8	1.1	1.3	1.4	1.7	1.4	1.5	0.9	0.7	1.1	1.0	1.1	0.8	0.7	0.8	1.7	0.5	1.0
13	1.0	1.2	1.0	1.1	1.1	1.0	1.1	0.7	1.2	0.2	-0.9	-0.3	0.6	-0.1	-0.2	-0.3	-1.5	-1.5	-2.1	-2.6	-4.7	-5.1	-6.1	-5.1	1.2	-6.1	-0.8
14	-5.6	-5.1	-4.7	-6.1	-7.7	-6.8	-6.3	-7.2	-7.7	-7.8	-7.8	-6.6	-5.1	-5.0	-2.4	-1.4	-1.1	-1.5	-2.1	-2.6	-3.1	-3.5	-3.5	-3.7	-1.1	-7.8	-4.8
15	-4.0	-4.3	-4.6	-4.4	-4.4	-4.4	-4.4	-4.5	-4.8	-4.6	-4.5	-4.3	-3.8	-4.5	-4.7	-4.7	-5.3	-5.3	-4.8	-5.1	-5.6	-5.0	-4.7	-5.5	-3.8	-5.6	-4.7
16	-7.2	-7.8	-8.5	-8.6	-7.8	-4.5	-4.0	-3.8	-3.5	-3.1							-3.0	-2.4	-2.4	-2.6	-2.5	-2.2	-1.6	-1.8	-1.6	-8.6	-4.3
17	-1.9	-1.6	-1.7	-1.9	-1.4	-1.3	-1.0	-0.8	-0.7	-0.5	-0.7	-1.1	-0.6	-0.4	-0.8	-0.5	-1.0	-1.4	-0.9	-0.8	-1.1	-0.7	-0.7	-1.0	-0.4	-1.9	-1.0
18	0.2	-0.8	-1.0	-1.1	-1.1	-0.4	-0.4	0.1	0.2	-0.3	-0.2	-0.3	-0.4	-0.5	-0.3	-0.2	-0.3	0.1	-0.6	0.8	1.6	1.6	1.6	1.4	1.6	-1.1	0.0
19	1.3	1.3	0.5	0.3	0.8	0.5	0.4	-0.2	-1.9	-2.8	-2.9	-2.2	-0.8	-1.9	-2.6	-2.9	-2.9	-1.7	-1.9	-1.2	-1.2	-0.5	0.1	0.3	1.3	-2.9	-0.9
20	0.4	0.3	0.1	0.2	0.2	1.0	0.7	0.2	0.1	0.5	0.8	0.8	0.3	0.0	1.3	1.5	0.8	1.1	1.0	0.8	1.6	1.9	2.0	1.7	2.0	0.0	0.8
21	1.5	1.6	1.3	0.7	-0.3	-2.3	-3.7	-4.0	-4.3	-4.5	-5.0	-5.1	-5.5	-5.4	-4.9	-5.0	-5.4	-5.4	-5.5	-5.6	-5.4	-5.4	-5.5	-5.8	1.6	-5.8	-3.7
22	-5.5	-6.0	-5.9	-6.9	-7.4	-7.6	-7.9	-8.3	-7.8	-7.5	-7.1	-6.4	-5.8	-5.8	-5.4	-5.1	-5.2	-5.5	-5.9	-5.9	-6.0	-6.6	-6.7	-6.8	-5.1	-8.3	-6.5
23	-6.8	-6.9	-7.0	-7.6	-8.3	-9.0	-9.4	-9.4	-9.2	-8.5	-8.0	-7.4	-6.6	-8.1	-8.7	-9.2	-9.1	-9.5	-10.2	-10.5	-10.4	-11.7	-12.2	-12.7	-6.6	-12.7	-9.0
24	-12.6	-13.0	-13.2	-13.5	-13.5	-13.5	-14.0	-14.8	-14.9	-15.2	-15.3	-14.8	-14.7	-15.2	-15.9	-15.8	-15.0	-14.9	-15.6	-16.2	-16.3	-15.9	-15.6	-15.3	-12.6	-16.3	-14.8
25	-14.2	-11.2	-10.1	-8.9	-8.9	-8.8	-8.7	-7.8	-6.5	-5.6	-4.9	-4.2	-3.6	-3.3	-2.5	-2.0	-1.7	-1.6	-1.1	-0.6	-0.2	0.5	0.9	1.4	1.4	-14.2	-4.7
26	1.7	1.7	2.1	2.2	2.1	1.8	2.0	2.5	1.8	1.9	2.4	2.8	2.8	2.9	3.5	3.2	2.4	2.0	1.8	1.6	1.6	1.7	2.0	2.5	3.5	1.6	2.2
27	2.8	2.8	2.8	2.9	3.2	2.8	2.5	2.7	2.5	3.1	2.6	2.1	2.6	3.3	3.4	4.0	2.9	1.5	1.4	1.2	1.6	1.4	1.7	1.7	4.0	1.2	2.5
28	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.6	1.9	2.2	2.5	2.6	2.8	2.6	2.6	2.7	2.9	3.1	2.6	3.2	3.6	4.1	4.7	4.8	4.8	1.6	2.6
29	4.8	4.5	4.4	5.3	5.0	3.6	2.5	2.7	3.1	3.5	3.8	4.3	4.6	4.6	4.2	4.5	4.8	4.5	3.8	3.4	2.6	2.2	2.3	2.7	5.3	2.2	3.8
30	3.2	3.7	4.0	4.2	4.8	5.3	5.5	5.2	4.1	6.4	7.0	7.7	8.3	7.6	8.6	8.1	8.0	7.6	6.4	4.7	4.1	6.8	7.3	7.7	8.6	3.2	6.1
31	7.8	8.0	8.1	8.4	8.4	8.4	8.1	8.0	5.1	3.1	3.4	3.8	3.9	3.7	3.3	3.4	3.7	3.1	3.2	1.4	1.4	1.8	1.1	1.4	8.4	1.1	4.6
Max.	**7.8**	**8.0**	**8.1**	**8.4**	**8.4**	**8.4**	**8.1**	**8.0**	**5.1**	**6.4**	**7.0**	**7.7**	**8.3**	**7.6**	**8.6**	**8.1**	**8.0**	**7.6**	**6.4**	**4.7**	**4.1**	**6.8**	**7.3**	**7.7**	**8.6**		
Min.	**-20.3**	**-20.4**	**-20.7**	**-20.6**	**-20.7**	**-20.8**	**-20.5**	**-19.9**	**-20.2**	**-21.3**	**-21.0**	**-20.2**	**-20.4**	**-20.4**	**-20.3**	**-20.3**	**-20.7**	**-20.2**	**-19.9**	**-20.1**	**-20.5**	**-20.1**	**-20.4**	**-20.7**		**-21.3**	
Avg.	**-6.1**	**-6.1**	**-6.1**	**-6.1**	**-6.2**	**-6.1**	**-6.3**	**-6.3**	**-6.4**	**-6.3**	**-6.2**	**-5.8**	**-5.5**	**-5.6**	**-5.4**	**-5.3**	**-5.4**	**-5.5**	**-5.6**	**-5.8**	**-6.0**	**-6.0**	**-5.9**	**-5.9**			**-5.9**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.1	8.3	8.7	8.6	8.6	8.8	8.8	8.5	8.7	8.9	9.3	9.9	10.4	10.2	10.1	9.4	8.6	8.8	8.8	8.2	6.7	5.0	3.4	3.1	10.4	3.1	8.0
2	3.2	3.6	4.4	4.4	4.2	4.4	4.2	4.1	4.1	4.1	4.1	3.8	4.1	4.3	4.4	4.2	3.8	3.7	3.7	3.6	3.4	3.6	3.7	3.8	4.4	3.2	4.0
3	3.6	3.6	3.3	3.6	3.6	2.8	2.6	2.8	2.6	2.8	2.2	2.2	2.1	2.3	2.5	2.9	3.1	0.6	-0.6	-0.5	-1.6	-1.9	-2.2	-2.5	3.6	-2.5	1.7
4	-2.9	-2.7	-2.9	-2.4	-2.1	-2.2	-2.7	-2.5	-2.9	-2.8	-1.8	-0.7	0.7	0.2	0.2	0.2	0.4	-1.9	-2.9	-2.9	-3.4	-3.4	-3.8	-4.2	0.7	-4.2	-2.1
5	-4.4	-2.4	-3.4	-3.8	-4.3	-4.1	-3.2	-4.2	-4.6	-5.2	-3.8	-1.6	0.5	-0.7	-1.1	-0.6	0.6	-2.4	-3.3	-3.2	-3.4	-3.3	-1.2	0.6	0.6	-5.2	-2.6
6	1.4	1.9	2.6	2.5	2.2	2.7	3.3	2.9	2.8	2.9	3.2	4.5	5.1	3.9	4.3	4.5	3.9	4.0	4.1	3.9	3.9	3.8	3.9	3.9	5.1	1.4	3.4
7	3.7	3.8	3.8	3.1	2.9	1.5	1.1	0.8	1.9	0.7							-0.7	-0.9	-1.0	-0.8	-0.9	-1.0	-0.9	-0.9	3.8	-1.0	0.9
8	-1.0	-1.1	-1.1	-1.3	-1.3	-1.3	-1.1	-1.2	-1.1	-1.2	-1.1	-1.0	-0.9	-0.8	-0.8	-0.9	-0.9	-0.8	-0.8	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-1.3	-1.0
9	-0.9	-1.0	-1.0	-1.4	-1.4	-1.4	-1.4	-1.4	-1.5	-1.4	-1.3	-1.2	-0.8	-0.6	-0.3	-0.5	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.3	-1.5	-1.0
10	-0.9	-1.1	-1.5	-1.6	-1.5	-1.2	-1.2	-1.2	-1.2	-1.2	-1.0	-1.1	-1.0	-1.1	-1.5	-1.7	-1.7	-1.9	-2.3	-2.5	-3.0	-3.1	-2.8	-2.6	-0.9	-3.1	-1.7
11	-2.7	-2.8	-2.7	-2.6	-2.5	-2.3	-2.1	-1.7	-1.4	-1.8	-2.0	-1.9	-1.7	-1.2	-0.6	0.4	0.8	0.7	0.5	0.8	0.8	0.9	1.1	1.5	1.5	-2.8	-0.9
12	1.7	1.4	1.7	1.9	1.4	1.5	1.6	2.0	1.8	1.8	1.9	1.9	2.2	2.4	2.5	2.5	2.6	2.6	2.2	2.0	2.0	2.0	2.1	2.3	2.6	1.4	2.0
13	2.4	2.3	2.2	1.6	1.6	1.9	1.9	2.4	2.8	3.1	3.5	3.6	3.9	3.5	2.4	2.6	2.1	1.7	2.1	2.2	1.9	1.6	1.9	2.5	3.9	1.6	2.4
14	3.0	3.0	2.6	2.8	2.5	2.2	1.8	2.1	1.8	2.1	2.2	2.7	2.8	2.7	2.6	2.6	2.3	1.4	0.7	0.4	0.8	0.7	-0.1	-0.2	3.0	-0.2	1.9
15	-0.2	0.2	-0.2	0.4	0.1	-0.5	-1.2	-1.1	-1.5	-1.5	-1.0	-0.7	-0.2	0.0	0.1	0.0	0.0	-0.2	-0.5	-0.8	-1.8	-2.2	-2.6	-2.6	0.4	-2.6	-0.8
16	-2.6	-2.7	-2.5	-2.4	-2.0	-2.7	-2.2	-2.2	-1.7	-0.7	-0.7	-0.6	0.2	0.2	0.1	0.4	0.2	0.0	-0.4	-0.3	-1.0	-1.2	-1.5	-2.1	0.4	-2.7	-1.2
17	-1.7	-1.0	-1.9	-2.0	-1.3	-1.9	-3.0	-3.4	-3.6	-3.3	-2.4	-2.6	-2.3	-1.5	-0.7	-0.5	0.0	-0.7	-1.0	-1.3	-1.7	-1.8	-1.4	-1.7	0.0	-3.6	-1.8
18	-1.4	-0.9	-1.3	-1.9	-2.3	-2.4	-2.5	-2.6	-2.7	-2.5	-2.5	-2.3	-2.0	-1.6	-1.4	-1.3	-1.4	-1.6	-1.8	-2.3	-2.7	-3.0	-3.1	-3.1	-0.9	-3.1	-2.1
19	-3.3	-2.9	-2.4	-2.1	-2.1	-1.9	-2.3	-2.4	-3.2	-3.7	-4.2	-4.2	-4.2	-4.4	-4.6	-4.6	-4.6	-5.9	-6.3	-6.5	-7.3	-7.6	-8.0	-8.3	-1.9	-8.3	-4.5
20	-8.3	-8.6	-9.0	-8.9	-8.4	-7.2	-6.8	-6.7	-6.8	-7.5	-6.8	-6.3	-5.7	-6.9	-6.6	-6.3	-5.1	-7.0	-7.8	-8.5	-8.8	-8.8	-9.6	-9.9	-5.1	-9.9	-7.6
21	-10.2	-10.9	-10.9	-10.8	-10.9	-11.0	-11.1	-11.3	-12.2	-11.8	-11.6	-11.0	-10.3	-9.7	-9.1	-8.8	-8.3	-10.0	-10.5	-11.0	-11.5	-11.7	-11.7	-11.7	-8.3	-12.2	-10.7
22	-11.9	-11.7	-11.2	-11.1	-11.0	-11.0	-11.2	-11.2	-11.1	-10.8	-10.2	-9.7	-8.8	-8.1	-7.9	-7.8	-7.6	-9.4	-9.6	-10.0	-10.4	-10.9	-11.1	-11.4	-7.6	-11.9	-10.2
23	-11.6	-11.5	-11.6	-11.5	-11.4	-11.1	-11.1	-11.4	-11.6	-10.3	-9.9	-9.8	-9.7	-9.4	-9.4	-9.4	-9.2	-10.2	-10.9	-10.9	-11.0	-11.2	-11.2	-11.3	-9.2	-11.6	-10.7
24	-11.6	-11.5	-11.8	-11.7	-11.8	-12.6	-11.8	-12.1	-11.9	-12.3	-12.5	-12.1	-11.0	-10.5	-9.8	-9.7	-9.4	-10.6	-10.3	-10.8	-11.0	-11.2	-11.3	-11.4	-9.4	-12.6	-11.3
25	-12.2	-12.3	-12.6	-12.9	-13.1	-13.4	-13.2	-13.1	-12.8	-13.3	-12.2	-10.7	-9.1	-8.9	-7.9	-7.8	-6.7	-7.0	-7.1	-7.1	-6.7	-6.7	-5.8	-6.2	-5.8	-13.4	-10.0
26	-6.2	-4.9	-4.8	-4.8	-3.8	-2.1	-1.0	-1.0	-1.2	-0.6	-0.3	-0.5	-0.7	-0.7	-0.5	-0.3	-0.1	-1.4	-1.8	-2.2	-2.4	-2.2	-2.0	-2.3	-0.1	-6.2	-2.0
27	-2.7	-2.9	-2.9	-3.0	-2.9	-4.2	-6.3	-6.8	-7.1	-6.5	-5.9	-5.5	-5.2	-4.8	-4.5	-4.2	-4.0	-4.7	-5.7	-6.7	-6.6	-7.1	-7.2	-7.4	-2.7	-7.4	-5.2
28	-7.7	-7.6	-7.8	-7.6	-7.7	-7.7	-7.8	-8.2	-8.5	-8.0	-7.6	-7.0	-6.4	-6.0	-5.5	-5.5	-5.4	-6.2	-7.0	-7.6	-8.4	-9.0	-9.2	-9.5	-5.4	-9.5	-7.4
Max.	**3.7**	**8.3**	**8.7**	**8.6**	**8.6**	**8.8**	**8.8**	**8.5**	**8.7**	**8.9**	**9.3**	**9.9**	**10.4**	**10.2**	**10.1**	**9.4**	**8.6**	**8.8**	**8.8**	**8.2**	**6.7**	**5.0**	**3.9**	**3.9**	**10.4**		
Min.	**-12.2**	**-12.3**	**-12.6**	**-12.9**	**-13.1**	**-13.4**	**-13.2**	**-13.1**	**-12.8**	**-13.3**	**-12.5**	**-12.1**	**-11.0**	**-10.5**	**-9.8**	**-9.7**	**-9.4**	**-10.6**	**-10.9**	**-11.0**	**-11.5**	**-11.7**	**-11.7**	**-11.7**		**-13.4**	
Avg.	**-2.9**	**-2.6**	**-2.7**	**-2.7**	**-2.7**	**-2.7**	**-2.8**	**-2.9**	**-2.9**	**-2.9**	**-2.7**	**-2.3**	**-1.8**	**-1.8**	**-1.6**	**-1.5**	**-1.3**	**-2.1**	**-2.5**	**-2.7**	**-3.1**	**-3.3**	**-3.3**	**-3.3**			**-2.5**

Total Hours in Month 672 **Hours Data Available** 666 **Data Recovery** 99.1%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

March *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-9.7	-10.3	-11.1	-11.1	-11.0	-11.5	-11.9	-12.4	-12.4	-11.1	-10.6	-10.0	-9.6	-9.1	-8.7	-8.3	-8.1	-9.4	-10.4	-11.1	-11.7	-12.2	-12.2	-12.2	-8.1	-12.4	-10.7
2	-12.3	-12.3	-12.0	-11.8	-12.2	-12.6	-12.9	-13.3	-13.1	-12.2	-11.3	-10.6	-9.9	-9.3	-9.1	-8.9	-8.7	-9.6	-10.5	-11.0	-11.1	-11.1	-11.1	-10.9	-8.7	-13.3	-11.1
3	-10.7	-10.8	-10.8	-11.0	-11.0	-11.2	-11.5	-11.7	-11.5	-11.0	-10.2	-8.7	-8.2	-7.6	-7.2	-6.6	-6.1	-7.2	-8.1	-8.9	-9.1	-9.0	-8.8	-8.7	-6.1	-11.7	-9.4
4	-8.7	-8.9	-9.1	-9.3	-9.7	-10.3	-10.0	-10.1	-9.8	-9.2	-8.3	-7.3	-6.5	-6.1	-5.8	-5.8	-5.8	-6.8	-6.9	-7.3	-7.7	-8.1	-8.6	-9.0	-5.8	-10.3	-8.1
5	-9.5	-9.9	-10.2	-10.8	-11.3	-11.9	-12.4	-13.3	-13.5	-13.5	-13.6	-12.5	-11.7	-11.5	-11.4	-11.4	-11.2	-11.9	-12.1	-12.2	-12.4	-12.6	-13.1	-13.4	-9.5	-13.6	-12.0
6	-13.5	-14.2	-14.4	-14.6	-15.2	-15.6	-16.3	-16.7	-16.7	-16.2	-15.8	-16.2	-16.1	-16.1	-15.9	-15.4	-14.8	-14.7	-14.0	-13.8	-13.9	-14.0	-13.9	-14.2	-13.5	-16.7	-15.1
7	-14.3	-14.5	-14.7	-14.8	-15.3	-15.8	-15.8	-15.2	-14.8	-15.2	-15.3	-15.2	-15.1	-14.8	-14.6	-14.4	-14.5	-14.9	-14.7	-14.9	-15.3	-15.7	-16.1	-16.2	-14.3	-16.2	-15.1
8	-16.3	-16.4	-16.7	-16.7	-16.8	-17.0	-16.9	-16.5	-16.4	-15.7	-15.0	-14.5	-14.3	-13.8	-13.0	-13.1	-12.7	-12.2	-12.3	-12.0	-11.6	-11.8	-11.3	-11.2	-11.2	-17.0	-14.3
9	-11.4	-11.4	-11.5	-11.6	-11.8	-12.0	-12.0	-12.3	-12.2	-11.8	-11.1	-10.7	-10.6	-9.4	-9.3	-8.8	-8.6	-9.3	-9.5	-9.5	-9.3	-9.6	-9.4	-9.6	-8.6	-12.3	-10.5
10	-9.7	-10.2	-10.3	-10.5	-10.4	-10.7	-11.0	-10.5	-10.0	-9.3	-9.4	-8.6	-8.0	-7.3	-6.5	-5.5	-6.1	-6.9	-7.6	-8.1	-8.9	-9.2	-9.2	-9.0	-5.5	-11.0	-8.9
11	-9.1	-9.0	-9.4	-10.1	-10.0	-10.9	-11.1	-11.0	-11.1	-11.6	-10.9	-10.6	-10.0	-9.5	-9.2	-9.2	-9.3	-9.9	-10.4	-10.6	-10.7	-10.3	-10.4	-10.9	-9.0	-11.6	-10.2
12	-10.6	-10.8	-10.9	-11.0	-11.1	-11.2	-11.2	-11.4	-11.0	-10.6	-10.2	-9.2	-8.4	-8.0	-7.4	-7.6	-7.1	-8.3	-9.0	-9.2	-9.6	-10.0	-10.1	-10.5	-7.1	-11.4	-9.8
13	-10.7	-10.3	-10.2	-10.7	-11.4	-12.0	-12.5	-13.0	-12.8	-12.2	-11.5	-11.2	-11.6	-11.6	-11.7	-11.4	-11.4	-12.0	-11.9	-12.1	-13.0	-13.3	-13.2	-13.7	-10.2	-13.7	-11.9
14	-14.0	-14.5	-15.1	-15.6	-15.5	-15.2	-15.3	-15.6	-15.6	-16.0	-15.9	-14.5	-13.9	-13.2	-13.0	-12.9	-12.6	-13.3	-13.2	-13.2	-13.3	-13.6	-13.8	-14.0	-12.6	-16.0	-14.3
15	-14.8	-15.2	-15.6	-16.0	-16.2	-16.5	-16.9	-17.1	-16.8	-16.5	-15.7	-14.8	-14.2	-13.7	-13.2	-12.7	-12.5	-13.1	-13.3	-13.6	-13.9	-14.1	-14.2	-14.4	-12.5	-17.1	-14.8
16	-14.5	-14.3	-14.4	-14.3	-14.8	-15.0	-14.9	-14.9	-14.6	-13.9	-13.2	-11.7	-10.6	-10.1	-9.6	-9.1	-9.1	-10.1	-10.3	-10.9	-10.9	-11.1	-11.0	-11.1	-9.1	-15.0	-12.3
17	-11.4	-11.7	-12.0	-12.1	-12.6	-12.5	-13.0	-13.5	-13.6	-13.2	-12.3	-10.5	-9.2	-8.5	-8.2	-7.5	-7.1	-8.0	-8.8	-10.0	-10.9	-11.2	-11.6	-11.9	-7.1	-13.6	-10.9
18	-12.1	-12.2	-12.1	-12.1	-12.2	-12.1	-12.3	-12.4	-11.7	-10.9	-10.7	-9.6	-8.5	-8.1	-7.7	-7.3	-7.4	-8.2	-8.8	-9.4	-10.2	-10.5	-11.1	-11.2	-7.3	-12.4	-10.4
19	-11.7	-11.0	-10.8	-10.6	-10.9	-11.2	-11.6	-12.3	-11.5	-10.8	-9.9	-8.5	-7.6	-6.9	-6.3	-5.9	-5.3	-5.7	-6.7	-7.6	-8.4	-9.1	-9.5	-9.8	-5.3	-12.3	-9.1
20	-10.0	-9.9	-10.4	-10.0	-9.5	-9.7	-8.6	-7.5	-6.2	-5.7	-5.5	-5.3	-5.9	-5.3	-4.7	-3.8	-3.0	-2.5	-2.5	-2.7	-2.5	-2.5	-2.4	-1.9	-1.9	-10.4	-5.7
21	-1.5	-1.1	-0.8	-0.7	-0.4	-0.3	-1.2	-2.5	-2.9	-2.6	-2.0	-1.9	-2.1	-2.9	-3.6	-4.5	-5.3	-5.8	-6.2	-6.4	-6.7	-6.9	-6.9	-6.9	-0.3	-6.9	-3.4
22	-6.6	-6.8	-7.4	-7.8	-7.9	-7.2	-7.9	-8.8	-8.0	-7.5	-6.7	-5.5	-5.1	-5.0	-4.3	-3.9	-4.3	-4.9	-5.0	-6.2	-6.8	-7.1	-7.6	-8.0	-3.9	-8.8	-6.5
23	-8.1	-8.2	-8.6	-8.1	-8.3	-8.9	-9.8	-10.0	-8.7	-8.2	-7.9	-7.9	-8.6	-9.4	-9.1	-8.8	-8.5	-8.8	-9.1	-9.7	-10.0	-10.0	-10.2	-10.3	-7.9	-10.3	-9.0
24	-10.3	-10.1	-10.4	-10.6	-10.5	-11.2	-11.0	-10.6	-10.1	-9.7	-10.1	-9.9	-9.6	-9.6	-9.4	-9.3	-9.5	-9.9	-9.9	-9.6	-9.6	-9.6	-10.0	-10.5	-9.3	-11.2	-10.0
25	-11.1	-11.5	-11.6	-11.5	-10.3	-9.0	-8.3	-8.3	-7.6	-6.9	-6.9	-5.7	-4.9	-4.6	-4.4	-4.8	-4.3	-4.5	-5.0	-5.6	-6.0	-6.7	-6.9	-6.5	-4.3	-11.6	-7.2
26	-5.8	-5.5	-5.5	-5.4	-5.0	-4.8	-4.3	-4.3	-4.3	-3.5	-2.9	-4.4	-6.9	-7.3	-7.3	-7.2	-7.2	-7.1	-7.0	-7.1	-6.7	-6.6	-6.5	-6.4	-2.9	-7.3	-5.8
27	-6.4	-6.5	-6.6	-7.4	-7.4	-7.5	-7.9	-7.7	-7.4	-6.9	-5.9	-5.0	-4.4	-3.8	-3.4	-2.9	-2.3	-2.5	-2.8	-3.0	-3.2	-4.0	-4.8	-5.3	-2.3	-7.9	-5.2
28	-5.6	-5.7	-6.2	-6.7	-7.1	-7.4	-7.7	-7.9	-7.5	-7.3	-6.9	-5.9	-4.6	-4.5	-4.1	-3.8	-3.9	-4.3	-3.6	-3.6	-3.7	-3.7	-3.6	-3.9	-3.6	-7.9	-5.4
29	-5.1	-5.3	-5.3	-4.5	-4.5	-6.7	-7.7	-7.6	-6.2	-5.3	-4.5	-2.3	-2.2	-1.9	-1.3	-1.1	0.1	0.0	-0.2	-1.2	-0.5	-2.1	-3.1	-3.5	0.1	-7.7	-3.4
30	-4.0	-4.3	-4.7	-5.1	-5.5	-5.8	-5.9	-5.4	-4.3	-3.9	-3.0	-1.7	-0.7	0.0	0.1	0.3	0.4	-0.3	-1.3	-1.0	-1.1	-1.5	-2.2	-2.9	0.4	-5.9	-2.6
31	-3.4	-3.0	-2.4	-1.4	-1.8	-2.7	-4.2	-3.5	-2.8	-1.9	-1.2	0.8	1.0	1.0	0.9	0.8	0.9	0.2	0.0	-0.4	1.1	0.3	-0.5	-0.7	1.1	-4.2	-1.0
Max.	**-1.5**	**-1.1**	**-0.8**	**-0.7**	**-0.4**	**-0.3**	**-1.2**	**-2.5**	**-2.8**	**-1.9**	**-1.2**	**0.8**	**1.0**	**1.0**	**0.9**	**0.8**	**0.9**	**0.2**	**0.0**	**-0.4**	**1.1**	**0.3**	**-0.5**	**-0.7**	**1.1**		
Min.	**-16.3**	**-16.4**	**-16.7**	**-16.7**	**-16.8**	**-17.0**	**-16.9**	**-17.1**	**-16.8**	**-16.5**	**-15.9**	**-16.2**	**-16.1**	**-16.1**	**-15.9**	**-15.4**	**-14.8**	**-14.9**	**-14.7**	**-14.9**	**-15.3**	**-15.7**	**-16.1**	**-16.2**		**-17.1**	
Avg.	**-9.8**	**-9.9**	**-10.0**	**-10.1**	**-10.2**	**-10.5**	**-10.8**	**-10.9**	**-10.5**	**-10.0**	**-9.5**	**-8.7**	**-8.3**	**-8.0**	**-7.7**	**-7.4**	**-7.3**	**-7.8**	**-8.1**	**-8.4**	**-8.6**	**-8.9**	**-9.1**	**-9.3**			**-9.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-1.0	-1.1	-1.4	-1.4	-1.7	-1.7	-1.6	-1.7	-0.9	-0.5	0.1	1.7	0.6	0.7	1.0	1.1	1.0	0.4	-0.1	-0.5	-0.5	-1.0	-1.8	-2.2	1.7	-2.2	-0.5
2	-2.5	-2.5	-2.2	-2.2	-2.1	-1.2	-1.0	0.0	1.4	2.9	3.2	3.5	3.7	3.6	3.8	2.4	3.1	2.7	2.0	2.7	2.7	2.9	3.0	2.4	3.8	-2.5	1.3
3	2.7	2.6	2.7	2.5	2.2	2.1	2.2	2.2	1.9	2.3	2.5	2.6	2.8	2.9	3.2	3.6	3.5	3.5	3.1	3.0	2.9	2.9	3.1	3.0	3.6	1.9	2.7
4	2.9	2.8	2.4	2.1	2.0	2.0	2.1	2.3	2.8	3.1	3.0	3.3	3.4	3.5	3.3	3.2	3.5	3.6	3.8	4.0	4.2	4.3	4.3	4.4	4.4	2.0	3.2
5	3.9	2.8	2.7	3.0	3.7	3.5	2.9	3.2	3.8	4.6	5.6	6.4	6.9	7.2	6.7	5.2	4.2	4.1	4.0	4.2	4.4	4.2	4.2	3.9	7.2	2.7	4.4
6	3.9	4.1	4.2	4.8	4.8	5.1	5.3	6.0	6.0	5.8	6.7	7.1	6.9	6.4	5.7	5.2	4.4	4.5	4.3	5.4	6.2	6.8	6.5	5.5	7.1	3.9	5.5
7	4.9	4.9	2.7	1.4	2.3	2.5	2.9	3.3	3.4	3.3	3.9	4.6	4.2	4.2	4.3	4.5	5.0	5.8	6.0	5.1	4.8	5.0	5.8	6.0	6.0	1.4	4.2
8	6.0	6.1	6.1	6.3	6.1	6.4	6.4	5.4	5.5	6.6	7.1	7.7	8.1	7.9	7.6	7.1	6.3	6.1	5.9	5.8	5.9	5.6	4.2	3.7	8.1	3.7	6.2
9	3.7	4.1	3.7	3.0	2.8	2.8	2.7	2.7	3.0	3.7	3.8	4.2	4.8	4.4	4.9	4.4	4.1	3.4	3.2	3.2	2.7	2.2	2.5	2.8	4.9	2.2	3.5
10	1.8	1.5	1.7	1.9	1.8	1.6	1.9	2.1	2.2	2.8	3.3	4.2	4.6	4.6	3.8	4.2	4.7	3.9	3.1	2.8	2.5	2.7	2.4	1.6	4.7	1.5	2.8
11	2.1	1.7	1.3	0.8	0.8	0.8	0.9	1.1	1.8	2.7	2.6	4.4	4.5	4.1	4.2	4.4	4.3	2.9	2.9	3.3	2.1	2.2	2.2	1.7	4.5	0.8	2.5
12	1.3	0.9	1.6	1.2	0.7	0.5	1.3	1.4	1.9	2.7	3.9	5.2	5.4	5.4	5.7	6.3	6.0	5.5	5.3	4.9	3.6	3.0	2.7	4.0	6.3	0.5	3.3
13	3.3	2.7	3.6	3.1	2.1	1.7	1.5	2.0	2.2	2.6	3.2	4.3	5.1	5.2	6.2	5.8	5.8	5.1	3.9	3.7	2.9	2.6	1.8	1.8	6.2	1.5	3.4
14	2.1	1.1	1.2	1.4	1.4	0.7	0.2	0.5	1.8	3.1	3.2	3.2	2.2	1.8	1.5	1.9	2.6	2.6	2.8	2.5	2.4	2.6	2.6	2.5	3.2	0.2	2.0
15	1.6	1.9	1.3	1.1	0.8	0.9	1.2	1.5	2.0	2.3	2.7	3.2	4.5	5.4	5.6	6.1	6.0	6.1	5.9	4.8	5.1	5.3	5.5	5.5	6.1	0.8	3.6
16	5.3	5.2	5.3	5.5	5.6	5.7	5.7	5.5	5.6	6.0	6.1	6.0	6.3	6.4	5.7	4.6	4.5	3.8	3.4	3.3	3.1	2.3	1.2	0.8	6.4	0.8	4.7
17	0.3	0.0	0.0	0.7	1.4	2.3	2.6	3.1	3.6	3.4	2.9	2.2	1.8	1.4	1.2	1.4	1.5	1.3	1.3	1.7	1.6	2.2	2.3	2.3	3.6	0.0	1.8
18	2.4	2.3	2.1	1.9	2.0	1.8	2.1	2.4	2.6	2.7	2.7	2.9	2.9	3.0	3.2	3.4	3.6	3.5	3.3	3.1	3.2	3.2	3.2	3.0	3.6	1.8	2.8
19	3.0	3.0	2.9	2.9	2.8	2.8	3.1	2.9	3.0	2.8	2.9	2.1	2.0	1.9	2.1	1.7	1.7	2.3	1.8	1.8	1.7	2.1	1.5	2.7	3.1	1.5	2.4
20	2.0	2.5	2.3	2.4	2.7	2.6	2.6	2.7	3.3	3.4	3.7	4.0	4.3	4.5	5.0	5.7	5.9	6.0	5.7	5.6	6.1	6.3	6.3	6.3	6.3	2.0	4.2
21	6.3	6.3	6.4	6.4	6.5	6.7	6.9	7.1	7.4	7.3	7.7	7.4	7.1	7.8	8.3	8.3	7.6	6.1	4.1	3.2	3.4	5.0	6.5	6.9	8.3	3.2	6.5
22	6.5	5.5	6.2	6.7	6.7	6.2	6.3	5.6	5.7	6.8	7.3	7.8	8.1	8.4	8.5	8.5	8.4	8.4	8.1	7.9	7.9	7.8	7.6	6.5	8.5	5.5	7.2
23	5.9	5.9	6.0	6.1	5.8	5.9	6.8	6.7	7.3	8.3	7.7	7.3	9.1	8.5	7.6	8.5	7.7	6.6	6.3	5.9	4.9	4.5	4.5	4.5	9.1	4.5	6.6
24	4.4	4.4	4.4	4.7	5.0	5.2	5.2	5.9	6.5	7.5	7.5	7.6	7.9	8.0	8.3	8.4	6.7	6.0	5.4	4.8	4.4	4.1	3.9	3.5	8.4	3.5	5.8
25	3.5	3.8	3.8	4.2	4.4	4.0	3.9	3.8	3.7	4.1	3.7	3.2	3.5	3.2	4.4	5.7	5.4	5.5	5.7	5.8	5.2	5.2	5.2	5.2	5.8	3.2	4.4
26	4.6	4.8	4.9	4.2	3.2	3.4	4.5	4.7	4.2	6.1	7.7	6.9	6.4	6.2	6.9	6.8	7.1	5.9	5.1	4.8	6.6	7.2	6.2	5.7	7.7	3.2	5.6
27	5.1	5.0	3.7	3.2	2.2	2.3	3.5	4.8	4.5	4.9	4.5	5.3	5.9	5.7	6.9	7.3	6.8	6.1	5.6	5.4	5.5	5.3	5.4	5.3	7.3	2.2	5.0
28	4.3	3.5	3.1	2.6	2.1	2.1	3.1	3.4	4.3	5.3	4.3	4.0	4.2	5.1	5.7	5.8	5.7	5.3	4.4	3.9	3.8	4.0	3.7	3.9	5.8	2.1	4.1
29	3.7	3.5	3.6	3.3	3.6	3.5	4.4	5.4	5.7	5.9	6.3	7.5	8.2	8.9	9.1	7.2	7.3	8.7	8.8	8.5	6.0	5.0	5.1	5.0	9.1	3.3	6.0
30	4.6	4.1	3.4	3.4	3.8	3.6	4.0	6.0	7.2	7.7	8.2	8.5	8.4	8.5	9.5	10.2	10.3	10.5	9.2	7.9	8.8	7.3	7.5	6.9	10.5	3.4	7.1
Max.	**6.5**	**6.3**	**6.4**	**6.7**	**6.7**	**6.7**	**6.9**	**7.1**	**7.4**	**8.3**	**8.2**	**8.5**	**9.1**	**8.9**	**9.5**	**10.2**	**10.3**	**10.5**	**9.2**	**8.5**	**8.8**	**7.8**	**7.6**	**6.9**	**10.5**		
Min.	**-2.5**	**-2.5**	**-2.2**	**-2.2**	**-2.1**	**-1.7**	**-1.6**	**-1.7**	**-0.9**	**-0.5**	**0.1**	**1.7**	**0.6**	**0.7**	**1.0**	**1.1**	**1.0**	**0.4**	**-0.1**	**-0.5**	**-0.5**	**-1.0**	**-1.8**	**-2.2**		**-2.5**	
Avg.	**3.3**	**3.1**	**3.0**	**2.9**	**2.9**	**2.9**	**3.1**	**3.4**	**3.8**	**4.3**	**4.6**	**4.9**	**5.1**	**5.1**	**5.3**	**5.3**	**5.2**	**4.9**	**4.5**	**4.3**	**4.1**	**4.1**	**4.0**	**3.8**			**4.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.8	5.7	5.1	5.2	6.6	6.1	4.4	5.2	5.3	5.3	6.8	7.1	6.9	7.0	7.8	7.9	7.7	8.2	8.2	8.1	7.0	6.8	6.8	6.9	8.2	4.4	6.6
2	6.8	6.3	5.2	4.6	5.0	6.6	6.8	7.0	7.6	8.3	8.0	7.8	6.3	4.9	4.0	4.3	5.0	5.0	4.8	4.7	4.7	4.2	3.7	3.1	8.3	3.1	5.6
3	2.4	1.7	1.0	0.9	0.9	1.0	1.7	2.4	3.5	4.5	5.6	5.2	5.1	4.9	5.3	5.6	5.9	5.5	4.8	4.4	4.1	4.1	4.2	3.3	5.9	0.9	3.7
4	2.9	2.7	1.8	1.5	1.2	1.4	2.8	4.7	5.7	6.6	5.8	5.8	6.0	6.8	6.8	6.6	6.5	5.3	5.0	5.6	4.9	4.2	4.0	4.2	6.8	1.2	4.5
5	4.3	4.4	4.1	4.0	4.0	3.2	4.1	4.3	5.3	6.5	6.6	7.1	7.6	7.7	8.5	8.3	7.9	7.2	7.7	7.4	7.8	8.1	8.2	7.8	8.5	3.2	6.3
6	7.8	8.3	6.7	6.3	5.7	4.4	4.8	4.9	5.8	5.3	5.0	5.2	5.9	6.7	6.8	7.2	7.8	7.4	7.1	7.6	7.2	6.9	6.7	6.4	8.3	4.4	6.4
7	6.3	6.2	5.9	5.6	5.6	5.5	5.9	6.3	7.1	7.3	7.5	8.1	9.5	9.0	8.1	7.9	7.5	7.2	6.8	6.7	6.6	6.1	5.8	5.9	9.5	5.5	6.8
8	6.1	6.1	5.8	5.6	5.5	5.5	5.5	5.4	5.4	5.8	6.2	6.9	7.3	8.2	8.7	8.8	7.9	6.7	6.0	5.6	4.7	4.4	4.4	4.5	8.8	4.4	6.1
9	4.4	4.1	3.9	3.9	3.8	4.2	4.0	4.0	3.9	3.9	3.4	3.6	3.8	4.3	4.5	4.6	4.5	4.4	4.4	4.7	4.7	4.1	3.8	3.5	4.7	3.4	4.1
10	3.3	3.3	3.3	3.4	3.6	3.5	3.9	4.3	4.5	4.9	5.1	5.2	5.9	6.5	6.8	6.8	6.9	6.6	5.7	4.9	4.0	4.3	4.1	3.4	6.9	3.3	4.8
11	2.8	3.0	2.6	2.2	2.4	2.6	3.4	3.8	5.1	5.7	6.2	6.5	7.1	7.7	8.1	8.1	7.7	7.2	6.2	6.1	5.4	4.4	4.1	4.3	8.1	2.2	5.1
12	3.4	3.0	2.4	2.2	2.4	2.7	3.4	4.2	5.1	5.1	6.6	6.8	6.1	6.8	6.5	6.3	6.3	6.2	5.9	5.7	5.1	4.4	4.0	3.8	6.8	2.2	4.8
13	3.8	3.9	3.7	3.5	3.6	3.7	3.9	4.1	4.5	5.0	5.3	6.0	6.5	6.3	6.2	6.7	7.0	7.1	7.0	6.8	6.7	6.8	7.0	6.5	7.1	3.5	5.5
14	6.3	6.5	6.5	6.3	6.6	6.6	6.0	5.8	5.6	6.5	7.2	6.7	6.8	6.4	4.9	5.1	5.6	5.7	5.8	5.6	5.5	4.9	4.5	4.3	7.2	4.3	5.9
15	4.0	3.9	3.9	4.0	4.4	4.7	5.7	6.1	6.9	7.4	7.8	8.4	7.6	6.6	6.7	7.2	7.4	7.4	7.0	7.3	7.8	7.8	6.9	8.0	8.4	3.9	6.4
16	8.6	7.3	6.4	6.3	6.6	7.2	7.8	7.9	8.3	8.2	9.3	10.5	9.7	9.6	7.9	7.5	8.0	7.8	7.4	7.1	6.7	6.8	6.7	6.7	10.5	6.3	7.8
17	6.5	6.4	5.4	5.1	5.3	5.3	6.0	6.3	8.1	8.7	9.0	9.7	7.8	7.5	7.9	7.7	6.7	6.5	6.4	6.3	6.1	6.0	6.1	5.9	9.7	5.1	6.8
18	5.8	5.6	5.4	5.2	5.1	5.4	5.4	6.4	7.2	7.7	8.5	7.7	7.4	7.3	7.0	7.4	7.3	7.2	6.2	5.7	5.3	5.1	4.8	4.8	8.5	4.8	6.3
19	4.6	4.5	5.3	5.4	5.6	6.0	7.0	7.2	7.9	9.3	10.8	12.4	13.7	14.5	13.1	12.0	11.6	12.1	12.1	11.4	11.0	10.8	10.8	10.5	14.5	4.5	9.6
20	10.4	10.3	9.5	8.8	8.3	7.6	7.5	8.0	8.9	9.8	10.3	11.4	12.3	12.4	12.6	12.7	10.9	9.6	8.6	8.0	7.3	7.1	8.8	9.9	12.7	7.1	9.6
21	9.8	9.6	9.5	8.6	6.4	6.7	7.3	7.8	8.2	7.5	7.4	7.8	8.8	9.3	10.1	10.6	9.9	10.0	9.4	9.3	8.9	7.9	7.1	6.7	10.6	6.4	8.5
22	6.2	5.7	6.3	6.6	7.8	9.1	9.3	9.4	10.1	10.5	10.6	11.1	11.8	12.1	12.8	13.5	13.6	13.4	12.8	12.2	10.1	8.1	7.3	8.2	13.6	5.7	9.9
23	9.2	9.9	10.3	10.3	10.8	9.9	8.6	8.6	8.9	8.5	8.6	9.0	8.9	9.5	9.2	8.5	7.9	7.7	7.3	7.3	6.4	5.6	5.6	5.7	10.8	5.6	8.4
24	5.7	5.7	5.5	5.3	5.2	5.3	5.6	5.9	7.6	8.6	9.2	9.7	10.0	10.6	11.1	11.2	11.8	11.8	11.3	11.6	11.4	10.5	10.9	10.5	11.8	5.2	8.8
25	10.7	10.9	10.6	10.6	10.3	10.2	10.4	10.5	10.5	10.7	10.5	10.6	8.2	7.8	7.5	7.7	7.7	7.6	7.9	8.0	7.7	8.0	8.2	7.2	10.9	7.2	9.2
26	7.0	7.0	6.9	7.0	6.8	6.7	6.7	6.5	6.7	6.9	7.0	7.1	7.0	7.0	7.1	7.1	7.0	7.0	6.8	6.6	6.4	6.4	6.2	5.8	7.1	5.8	6.8
27	5.9	5.8	5.7	5.9	6.0	6.0	6.2	6.7	6.9	7.1	7.0	7.4	7.5	8.0	9.1	8.9	8.2	8.2	7.5	7.4	6.9	6.6	6.7	6.7	9.1	5.7	7.0
28	6.6	6.5	6.3	6.1	5.5	5.6	6.3	7.4	7.4	7.7	7.4	8.1	7.7	6.9	6.8	6.6	6.7	6.6	6.6	6.6	6.6	6.1	5.4	5.0	8.1	5.0	6.6
29	5.0	4.5	4.1	4.4	4.0	4.9	5.7	7.2	10.0	10.6	9.3	9.1	8.7	9.3	9.4	9.5	10.0	10.0	9.7	9.5	9.3	8.7	7.9	8.2	10.6	4.0	7.9
30	7.4	7.3	7.1	7.3	7.5	8.8	9.4	10.1	10.3	10.5	10.8	11.1	11.2	7.8	7.9	9.1	8.0	8.1	7.8	7.6	7.6	7.4	7.2	7.1	11.2	7.1	8.5
31	8.1	8.3	8.2	7.9	7.8	7.7	7.1	7.1	7.8	8.7	8.8	9.3	10.1	10.4	10.3	10.3	9.2	8.5	8.2	8.0	7.9	8.0	8.1	8.2	10.4	7.1	8.5
Max.	**10.7**	**10.9**	**10.6**	**10.6**	**10.8**	**10.2**	**10.4**	**10.5**	**10.5**	**10.7**	**10.8**	**12.4**	**13.7**	**14.5**	**13.1**	**13.5**	**13.6**	**13.4**	**12.8**	**12.2**	**11.4**	**10.8**	**10.9**	**10.5**	**14.5**		
Min.	**2.4**	**1.7**	**1.0**	**0.9**	**0.9**	**1.0**	**1.7**	**2.4**	**3.5**	**3.9**	**3.4**	**3.6**	**3.8**	**4.3**	**4.0**	**4.3**	**4.5**	**4.4**	**4.4**	**4.4**	**4.0**	**4.1**	**3.7**	**3.1**		**0.9**	
Avg.	**6.1**	**5.9**	**5.6**	**5.5**	**5.5**	**5.6**	**5.9**	**6.3**	**7.0**	**7.4**	**7.7**	**8.0**	**8.0**	**8.1**	**8.0**	**8.1**	**7.9**	**7.7**	**7.4**	**7.2**	**6.8**	**6.5**	**6.3**	**6.2**			**6.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.1	8.0	7.9	8.1	8.8	8.8	8.5	8.5	8.6	9.1	9.6	9.7	9.8	8.3	7.5	7.6	7.8	7.9	7.1	6.9	6.7	6.7	6.7	6.4	9.8	6.4	8.0
2	6.3	6.5	6.4	6.3	6.1	6.1	6.2	6.3	6.6	6.7	6.8	7.0	7.6	8.3	7.8	8.1	8.6	8.7	8.2	7.9	7.5	7.2	7.1	7.2	8.7	6.1	7.1
3	7.0	6.7	6.6	6.3	6.3	6.4	6.6	7.0	7.6	8.5	8.7	8.5	8.6	9.6	9.1	9.9	10.1	9.7	9.4	9.0	8.6	8.9	8.4	8.0	10.1	6.3	8.1
4	9.5	9.8	9.8	9.8	9.4	8.6	8.2	8.3	9.2	8.8	9.8	11.2	14.0	13.1	14.2	11.6	10.1	9.1	8.5	8.0	7.9	8.2	8.1	7.5	14.2	7.5	9.7
5	7.0	6.8	6.6	7.4	7.7	7.9	7.6	7.8	8.3	9.0	10.1	9.6	9.0	8.9	8.5	8.2	7.5	7.3	7.1	7.1	7.1	7.4	7.1	7.8	10.1	6.6	7.9
6	7.6	7.5	6.5	6.7	6.4	6.5	6.6	7.0	8.9	10.4	9.6	10.2	9.4	8.7	8.5	8.1	7.7	7.3	7.4	7.4	7.2	7.2	7.3	7.4	10.4	6.4	7.8
7	8.0	7.9	8.1	9.5	9.9	9.9	10.0	10.2	10.3	10.6	10.2	9.4	8.5	7.5	6.9	7.0	7.3	8.0	8.6	7.0	6.7	7.1	8.0	8.0	10.6	6.7	8.5
8	7.5	7.2	6.5	6.4	6.2	6.1	6.1	6.6	7.7	8.0	8.0	8.6	8.7	8.9	7.6	6.9	6.9	7.1	7.1	6.5	6.3	6.3	6.0	5.8	8.9	5.8	7.0
9	5.7	6.0	5.9	5.4	5.4	5.6	6.2	5.9	6.2	6.5	7.2	7.9	8.5	8.4	9.3	9.7	10.2	10.9	11.3	11.6	11.7	11.8	11.8	11.1	11.8	5.4	8.3
10	9.7	9.5	9.4	10.3	11.5	11.1	10.9	11.3	12.3	12.7	11.7	10.4	13.5	17.2	17.8	18.8	19.1	18.5	18.9	13.8	11.7	14.2	16.5	13.9	19.1	9.4	13.5
11	12.9	12.0	11.1	9.9	9.3	9.4	10.2	9.9	8.4	6.5	6.4	7.3	8.2	7.9	8.4	8.1	8.1	8.2	7.9	7.3	7.3	6.9	6.9	6.7	12.9	6.4	8.5
12	6.7	6.6	6.6	6.6	6.6	6.6	6.6	6.8	6.9	6.9	7.0	7.1	7.4	7.5	7.5	7.5	7.6	7.5	7.5	7.4	7.3	7.3	7.2	7.1	7.6	6.6	7.1
13	6.9	6.4	6.3	6.6	5.9	6.3	7.1	7.7	8.2	7.9	8.5	8.9	8.9	9.2	9.0	9.0	9.8	10.1	10.0	9.3	9.3	9.1	8.7	8.0	10.1	5.9	8.2
14	8.1	8.3	7.0	7.8	8.7	9.0	9.5	10.4	10.0	9.1	9.1	9.2	9.7	10.2	9.9	10.7	11.2	10.5	9.6	9.8	10.0	9.6	9.4	9.3	11.2	7.0	9.4
15	8.5	7.7	8.0	7.9	9.8	11.0	11.7	12.1	9.9	10.1	10.6	10.5	11.5	12.0	12.2	12.1	13.4	14.4	14.0	14.2	14.6	15.2	14.5	14.1	15.2	7.7	11.7
16	14.7	14.0	14.3	14.1	13.1	14.0	15.5	16.7	17.5	17.9	18.1	18.0	18.2	18.2	18.6	18.4	18.2	17.9	16.9	15.8	14.9	14.3	13.7	12.8	18.6	12.8	16.1
17	11.6	10.8	10.2	9.7	9.5	9.8	8.9	8.8	8.7	9.3	10.4	10.9	11.8	13.1	13.2	12.5	12.4	12.5	11.2	10.5	10.3	9.4	8.9	8.4	13.2	8.4	10.5
18	7.9	7.4	7.0	7.7	8.2	8.5	9.3	10.4	10.0	10.0	10.6	10.2	10.1	9.8	9.3	9.3	9.2	9.7	9.3	8.9	8.7	9.0	8.7	8.2	10.6	7.0	9.0
19	7.9	8.2	7.4	7.0	7.1	9.3	10.9	11.8	13.4	14.8	15.6	15.1	12.9	17.1	16.4	20.8	22.3	22.5	22.0	22.5	22.8	18.4	17.8	17.2	22.8	7.0	15.1
20	16.6	16.8	16.7	16.1	15.9	15.8	16.7	16.9	17.4	18.6	20.8	22.4	23.4	23.8	24.5	25.1	25.2	24.0	22.0	21.3	21.3	21.6	21.9	22.2	25.2	15.8	20.3
21	20.5	17.4	16.7	16.3	18.6	17.9	16.9	16.3	17.0	16.8	16.8	16.8	17.2	18.0	18.0	18.0	18.4	18.3	17.4	17.0	16.4	15.8	15.5	14.8	20.5	14.8	17.2
22	13.9	13.5	12.8	12.5	11.8	11.9	11.8	12.0	12.3	11.8	11.6	10.8	9.9	9.9	10.0	10.6	9.9	9.7	9.5	9.4	9.4	9.2	9.0	9.1	13.9	9.0	10.9
23	8.9	8.8	9.0	8.8	8.8	8.7	8.7	8.7	8.6	8.4	8.7	8.9	8.8	8.9	8.8	8.9	8.7	8.5	8.7	8.5	8.8	8.7	8.6	8.1	9.0	8.1	8.7
24	8.0	8.2	8.1	8.0	8.3	8.2	8.3	8.3	8.6	9.0	9.2	9.5	9.5	8.7	9.0	8.8	8.7	8.6	9.2	9.5	9.1	8.5	8.0	7.9	9.5	7.9	8.6
25	8.0	7.8	7.9	7.8	7.7	7.8	7.9	7.9	7.9	8.5	9.3	9.2	9.0	10.0	10.3	10.6	11.2	11.0	10.5	10.3	10.3	10.1	10.0	9.4	11.2	7.7	9.2
26	8.8	8.6	8.5	8.5	8.9	8.9	9.3	10.7	11.7	11.6	12.2	12.1	12.1	11.9	12.2	12.6	12.9	12.5	11.1	10.7	10.4	10.3	10.4	11.1	12.9	8.5	10.7
27	11.5	12.4	11.0	10.0	10.0	10.8	11.7	12.4	11.1	11.6	11.6	11.6	12.2	12.3	12.6	13.2	14.0	13.8	12.4	11.6	10.9	10.0	9.5	9.8	14.0	9.5	11.6
28	9.5	9.1	9.7	10.6	9.7	9.9	10.0	9.8	9.8	10.0	10.3	11.2	12.8	12.6	13.6	13.1	13.1	12.0	11.0	11.4	12.0	11.6	10.4	9.5	13.6	9.1	10.9
29	8.0	8.0	7.7	7.5	8.0	8.9	9.9	10.8	11.4	11.7	11.4	11.7	11.9	12.2	12.5	12.5	13.1	13.3	12.2	13.3	15.8	15.4	14.7	14.2	15.8	7.5	11.5
30	13.8	13.6	13.4	13.2	13.0	13.2	13.6	13.8	14.5	14.8	14.7	13.2	13.1	12.6	11.7	12.1	12.6	12.4	12.0	11.5	11.8	11.5	10.4	9.4	14.8	9.4	12.7
Max.	**20.5**	**17.4**	**16.7**	**16.3**	**18.6**	**17.9**	**16.9**	**16.9**	**17.5**	**18.6**	**20.8**	**22.4**	**23.4**	**23.8**	**24.5**	**25.1**	**25.2**	**24.0**	**22.0**	**22.5**	**22.8**	**21.6**	**21.9**	**22.2**	**25.2**		
Min.	**5.7**	**6.0**	**5.9**	**5.4**	**5.4**	**5.6**	**6.1**	**5.9**	**6.2**	**6.5**	**6.4**	**7.0**	**7.4**	**7.5**	**6.9**	**6.9**	**6.9**	**7.1**	**7.1**	**6.5**	**6.3**	**6.3**	**6.0**	**5.8**		**5.4**	
Avg.	**9.6**	**9.4**	**9.1**	**9.1**	**9.2**	**9.4**	**9.7**	**10.0**	**10.3**	**10.5**	**10.8**	**10.9**	**11.2**	**11.5**	**11.5**	**11.7**	**11.8**	**11.7**	**11.3**	**10.8**	**10.8**	**10.6**	**10.4**	**10.0**			**10.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.3	8.4	8.0	7.7	7.7	8.0	8.3	8.5	8.8	9.9	11.1	12.7	13.1	13.8	12.5	12.1	11.4	11.7	10.4	10.0	9.9	9.7	9.6	9.6	13.8	7.7	10.1
2	9.5	9.2	9.1	9.1	9.0	9.1	9.5	10.0	11.2	11.2	11.3	11.9	11.8	11.7	11.5	11.6	11.5	11.6	11.7	11.4	11.5	11.4	11.2	11.2	11.9	9.0	10.8
3	11.0	10.9	10.5	10.7	11.1	12.7	12.4	12.6	11.7	11.9	13.0	12.7	12.5	12.4	12.4	12.4	12.5	12.6	11.8	11.6	12.5	11.9	11.3	11.6	13.0	10.5	11.9
4	12.0	10.9	10.7	10.8	11.0	11.0	11.2	11.9	13.1	12.9	12.5	12.7	13.0	13.2	12.7	12.0	11.9	11.7	11.5	11.5	11.4	11.8	11.4	11.6	13.2	10.7	11.8
5	11.4	11.3	12.0	11.0	10.7	11.5	11.3	11.6	12.3	12.1	12.7	12.9	13.5	12.9	11.5	10.9	11.0	10.9	11.2	11.4	11.1	10.5	10.3	10.0	13.5	10.0	11.5
6	9.7	9.1	8.7	8.5	8.5	9.1	9.7	10.8	11.6	11.3	11.5	12.0	12.4	13.1	13.9	13.6	13.1	12.6	12.1	11.6	11.4	10.5	10.7	11.1	13.9	8.5	11.1
7	11.1	10.8	10.7	10.5	10.6	11.1	11.6	11.8	11.8	12.2	12.9	12.9	13.1	13.8	14.0	14.3	14.1	12.9	12.4	12.7	12.1	12.2	11.9	11.1	14.3	10.5	12.2
8	10.2	10.2	10.5	10.7	10.5	10.6	10.8	11.1	11.0	11.5	11.9	12.4	11.7	10.9	11.7	11.8	12.2	11.9	11.4	11.0	11.4	11.1	11.0	10.5	12.4	10.2	11.2
9	9.9	9.2	9.1	9.1	8.9	9.2	9.5	9.9	10.3	10.8	11.9	12.5	12.5	13.1	13.9	16.3	16.1	15.9	14.8	14.2	15.1	15.3	14.8	14.0	16.3	8.9	12.3
10	14.8	14.2	12.4	12.3	12.5	12.2	11.9	12.7	13.4	12.4	12.1	12.0	12.2	12.1	12.2	12.2	12.0	11.0	10.7	11.1	10.9	10.7	10.3	10.2	14.8	10.2	12.0
11	10.6	10.6	9.9	10.0	10.2	10.1	11.3	12.0	11.3	11.5	11.5	11.7	11.4	11.6	12.3	12.5	12.0	11.7	10.9	10.8	11.0	10.2	9.4	9.5	12.5	9.4	11.0
12	9.7	9.5	9.8	9.8	10.0	10.2	10.7	11.1	11.4	11.6	11.4	11.1	11.7	12.1	11.9	12.0	12.0	12.0	11.7	11.4	11.3	11.0	10.7	10.4	12.1	9.5	11.0
13	10.4	10.6	10.4	10.4	10.3	10.1	10.0	10.0	10.0	10.2	10.4	10.0	10.2	10.0	10.1	10.4	11.0	10.9	10.6	10.5	10.4	10.2	9.5	9.5	11.0	9.5	10.3
14	9.4	9.7	9.3	9.1	9.3	10.0	10.4	10.3	11.1	11.8	11.9	11.3	11.0	10.7	10.6	10.8	10.5	10.3	10.4	10.4	10.4	10.3	10.1	10.1	11.9	9.1	10.4
15	10.0	9.8	9.8	9.9	9.6	9.8	10.2	10.4	10.2	11.5	11.4	11.7	11.1	10.1	9.8	9.7	9.6	10.5	15.5	15.8	15.4	15.2	15.2	14.9	15.8	9.6	11.5
16	14.7	14.2	13.9	13.6	13.2	13.3	13.4	14.1	14.8	15.9	16.5	17.2	17.5	17.6	18.1	18.6	18.9	18.5	18.2	18.3	18.3	18.3	18.5	18.4	18.9	13.2	16.4
17	17.8	17.0	15.4	13.3	12.9	13.1	13.6	14.1	15.3	14.8	13.9	14.6	13.8	14.1	13.0	12.7	13.1	12.6	12.3	12.0	12.1	12.1	11.9	11.8	17.8	11.8	13.6
18	11.7	11.8	11.9	11.7	11.3	10.9	11.3	11.4	11.6	11.9	12.8	13.7	13.9	11.5	11.3	12.6	13.2	14.0	14.2	14.4	12.2	11.7	11.3	11.3	14.4	10.9	12.2
19	11.4	11.1	11.1	10.9	10.1	10.4	11.2	11.5	11.8	12.8	12.5	12.5	12.6	13.2	13.3	13.0	12.7	12.9	13.0	12.8	12.6	12.3	12.0	11.5	13.3	10.1	12.0
20	11.0	11.0	10.5	10.3	10.4	10.6	11.1	11.5	11.6	11.6	11.9	12.3	13.0	13.3	13.4	13.4	13.4	13.6	12.8	12.5	13.1	17.2	17.2	16.6	17.2	10.3	12.6
21	16.2	15.8	15.3	15.1	14.9	14.8	14.8	14.9	15.4	15.7	16.3	17.2	17.9	18.4	18.5	18.7	19.0	18.0	15.7	14.8	14.4	13.9	13.5	13.4	19.0	13.4	15.9
22	12.9	12.3	11.6	10.9	10.6	10.5	10.8	10.7	10.7	10.8	10.6	10.7	11.0	10.7	11.0	10.8	10.7	10.4	10.6	10.3	10.2	10.2	10.2	10.0	12.9	10.0	10.8
23	9.8	9.8	10.0	10.2	10.2	10.2	10.3	10.3	10.3	10.2	10.2	10.5	10.3	10.4	10.4	10.6	10.6	10.5	10.4	10.3	10.3	10.6	11.0	10.8	11.0	9.8	10.3
24	10.8	10.6	10.6	10.8	11.2	10.9	10.5	10.5	10.9	11.3	11.2	11.4	11.8	11.9	12.2	12.4	12.5	12.6	12.4	12.8	13.0	12.5	12.3	12.6	13.0	10.5	11.7
25	13.1	13.4	13.5	13.7	13.8	14.1	14.4	14.2	14.3	14.5	14.4	15.0	15.3	15.8	16.2	16.9	16.6	16.6	15.7	15.3	16.1	16.4	16.7	14.8	16.9	13.1	15.0
26	12.9	12.5	12.3	11.8	12.4	11.9	12.9	13.3	13.9	14.3	14.0	14.1	14.5	14.0	14.6	14.3	13.5	13.1	13.6	13.1	12.6	13.0	13.1	12.8	14.6	11.8	13.3
27	12.0	11.4	11.6	11.5	11.8	11.4	11.7	11.7	11.7	12.3	12.5	12.0	12.5	12.2	12.2	12.0	11.9	12.5	12.6	12.2	12.4	12.3	12.0	12.9	12.9	11.4	12.1
28	12.3	17.9	18.2	12.9	16.7	16.6	17.0	17.3	17.5	17.7	17.5	16.0	15.6	17.5	18.4	19.2	19.5	18.6	18.2	18.4	18.0	17.3	17.1	17.3	19.5	12.3	17.2
29	16.7	16.2	16.1	16.0	16.0	15.6	16.0	15.7	16.3	17.5	18.6	19.0	19.2	18.9	19.1	19.1	20.1	19.8	19.2	19.0	19.0	18.9	18.7	18.5	20.1	15.6	17.9
30	17.6	15.1	13.1	12.5	12.3	12.4	13.0	13.4	13.3	13.3	13.4	13.6	13.7	14.2	13.9	13.9	13.7	13.4	12.9	12.8	12.6	12.5	12.2	12.0	17.6	12.0	13.4
31	11.6	11.3	11.2	11.2	11.1	11.1	11.1	11.0	10.9	11.1	11.1	11.1	11.5	11.8	12.0	12.3	12.4	12.3	12.3	12.0	11.6	11.3	11.1	10.8	12.4	10.8	11.5
Max.	**17.8**	**17.9**	**18.2**	**16.0**	**16.7**	**16.6**	**17.0**	**17.3**	**17.5**	**17.7**	**18.6**	**19.0**	**19.2**	**18.9**	**19.1**	**19.2**	**20.1**	**19.8**	**19.2**	**19.0**	**19.0**	**18.9**	**18.7**	**18.5**	**20.1**		
Min.	**9.3**	**8.4**	**8.0**	**7.7**	**7.7**	**8.0**	**8.3**	**8.5**	**8.8**	**9.9**	**10.2**	**10.0**	**10.2**	**10.0**	**9.8**	**9.7**	**9.6**	**10.3**	**10.4**	**10.0**	**9.9**	**9.7**	**9.4**	**9.5**		**7.7**	
Avg.	**12.0**	**11.8**	**11.5**	**11.2**	**11.2**	**11.4**	**11.7**	**11.9**	**12.2**	**12.5**	**12.7**	**13.0**	**13.1**	**13.1**	**13.2**	**13.3**	**13.3**	**13.1**	**12.9**	**12.8**	**12.7**	**12.7**	**12.4**	**12.3**			**12.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 2 meters (deg. C)

August *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.9	10.9	10.8	10.7	10.7	10.7	10.5	10.4	10.6	10.8	10.9	11.0	11.0	10.9	10.9	11.0	11.2	11.2	11.2	11.4	11.1	10.9	11.0	10.9	11.4	10.4	10.9
2	10.9	10.7	10.8	10.8	10.9	10.8	10.6	10.8	11.1	11.2	11.2	11.3	11.4	11.3	11.4	11.3	11.4	11.5	11.6	11.6	11.4	11.4	11.3	11.4	11.6	10.6	11.2
3	11.3	11.3	11.3	11.4	11.7	11.7	11.5	11.2	11.4	11.8	12.0	12.1	12.1	12.2	12.3	12.2	12.2	12.0	11.8	11.6	11.6	11.6	11.6	11.5	12.3	11.2	11.7
4	11.5	11.5	11.5	11.6	11.4	11.4	11.3	11.5	11.6	11.5	11.6	11.6	11.7	11.8	11.9	11.8	11.8	11.9	12.3	12.3	12.4	12.3	11.9	12.0	12.4	11.3	11.7
5	12.0	11.9	12.0	11.9	11.9	11.7	11.5	11.4	11.4	12.1	12.4	12.6	13.7	15.5	15.7	15.5	15.3	15.1	14.4	14.2	14.1	14.0	13.6	12.6	15.7	11.4	13.2
6	12.4	13.0	12.8	12.6	12.4	12.3	12.6	12.6	12.8	13.6	14.8	15.6	16.1	16.8	17.5	18.4	18.3	17.0	16.0	15.8	15.3	14.7	14.2	14.9	18.4	12.3	14.7
7	14.7	14.9	14.8	14.7	14.7	14.8	14.7	15.4	16.3	17.1	17.3	18.4	19.9	19.7	19.9	20.4	20.0	19.4	18.5	18.2	18.9	19.0	18.5	14.9	20.4	14.7	17.3
8	13.8	13.1	12.9	12.3	12.1	12.4	13.3	14.2	15.0	16.2	16.6	17.0	18.6	20.0	21.1	21.2	21.3	21.0	20.1	19.7	18.6	19.1	19.1	18.8	21.3	12.1	17.0
9	16.8	15.6	14.7	13.9	13.4	13.4	13.8	15.1	15.0	14.1	14.3	14.5	14.8	14.8	14.8	15.1	15.4	14.4	13.5	13.1	12.6	12.2	12.1	11.8	16.8	11.8	14.1
10	12.0	11.4	11.7	12.0	12.1	12.3	12.5	12.9	13.0	12.8	12.5	12.0	11.7	11.4	11.7	11.7	11.6	11.4	11.7	11.2	10.7	10.9	11.1	10.8	13.0	10.7	11.8
11	10.7	10.8	10.4	9.8	10.5	10.4	10.3	10.3	10.4	10.3	10.2	10.1	10.1	10.4	10.8	11.0	11.7	12.4	12.6	12.8	13.1	15.3	17.0	18.5	18.5	9.8	11.7
12	18.4	19.5	20.9	20.0	18.9	18.5	18.5	19.2	19.2	19.0	19.0	19.2	20.0	21.2	22.4	22.4	22.6	22.6	22.5	22.5	19.5	18.0	16.2	15.7	22.6	15.7	19.8
13	14.7	14.7	14.6	15.0	16.1	13.9	14.1	14.1	15.7	15.8	16.1	16.4	16.1	15.7	16.0	15.5	14.5	14.6	16.7	15.8	15.7	15.2	16.2	19.1	19.1	13.9	15.5
14	18.5	17.1	15.9	14.6	13.5	12.7	12.6	13.0	12.9	13.5	13.4	13.3	13.1	13.3	13.8	14.0	13.7	13.0	12.5	12.6	12.8	12.5	12.7	12.6	18.5	12.5	13.7
15	11.8	11.8	12.2	11.2	11.1	11.0	11.0	11.7	12.3	13.2	13.7	13.8	13.3	12.7	12.2	12.2	12.1	12.3	12.4	11.8	11.0	10.2	10.8	10.6	13.8	10.2	11.9
16	10.6	10.4	11.1	10.8	10.5	10.6	11.4	12.3	13.2	14.4	14.6	15.7	15.8	15.1	15.2	14.7	14.4	14.3	14.0	13.7	12.8	12.2	13.3	13.4	15.8	10.4	13.1
17	12.4	12.5	12.1	12.5	12.5	11.5	11.5	12.1	12.8	13.5	13.6	14.1	14.2	13.9	13.2	12.8	13.1	13.5	13.6	13.3	12.6	12.7	12.8	13.0	14.2	11.5	12.9
18	12.8	13.1	12.1	12.5	11.6	11.5	11.3	11.5	11.6	11.3	11.2	11.3	11.4	11.5	11.6	12.1	12.4	12.5	12.3	12.0	12.2	12.2	12.1	12.3	13.1	11.2	11.9
19	12.0	12.0	12.5	12.7	12.9	13.4	13.2	13.5	13.9	14.0	14.5	15.1	15.5	14.9	14.7	14.6	14.8	14.5	14.1	13.4	12.4	12.1	12.1	11.2	15.5	11.2	13.5
20	11.2	11.4	11.5	11.8	12.1	11.3	11.3	11.8	11.8	11.7	11.4	11.8	13.0	12.8	12.9	13.1	13.3	13.7	13.3	12.8	12.4	12.4	12.3	12.2	13.7	11.2	12.2
21	12.3	12.5	12.2	11.7	11.4	11.1	11.1	11.2	11.3	11.3	11.7	11.6	11.3	11.7	11.9	11.9	11.8	11.7	11.7	11.9	11.7	11.9	11.9	12.1	12.5	11.1	11.7
22	11.8	11.7	11.4	11.2	11.1	10.9	10.9	10.9	11.1	11.2	11.3	11.5	11.5	11.5	11.5	11.7	11.7	11.6	11.5	11.4	11.1	11.5	11.5	11.0	11.8	10.9	11.4
23	11.2	11.2	11.2	11.1	10.8	10.5	10.3	10.3	10.7	11.1	11.3	12.0	12.6	12.6	12.7	12.8	13.3	13.9	13.8	13.9	14.4	14.3	13.9	14.4	14.4	10.3	12.3
24	14.7	14.0	12.8	12.1	11.6	11.4	11.4	12.2	13.1	13.8	13.4	13.1	13.8	13.4	13.6	13.8	13.8	13.5	13.5	12.9	12.2	11.8	12.4	11.2	14.7	11.2	12.9
25	10.3	10.0	9.6	9.6	9.9	10.3	11.3	12.2	12.5	12.2	11.8	11.3	11.5	11.6	11.6	11.7	11.8	11.9	11.9	11.9	11.9	11.3	10.8	10.7	12.5	9.6	11.2
26	10.3	10.5	10.3	10.3	10.5	11.0	11.6	12.2	12.2	13.2	13.3	13.4	13.2	12.9	12.9	13.5	13.7	14.3	14.2	12.9	14.0	14.0	13.6	13.3	14.3	10.3	12.6
27	13.7	13.7	13.9	13.5	13.7	13.1	13.9	14.5	15.2	15.2	15.6	16.4	16.6	16.8	16.7	17.1	16.9	16.8	16.6	16.2	15.8	14.7	14.4	14.0	17.1	13.1	15.2
28	15.0	14.2	13.7	14.5	14.1	12.5	12.4	12.4	12.9	13.7	14.3	13.5	14.0	15.1	15.2	15.6	16.0	14.9	13.2	13.3	13.1	14.8	13.7	12.9	16.0	12.4	14.0
29	12.6	12.3	12.1	12.7	11.5	11.4	12.0	8.6	18.2	17.5	17.3	17.2	16.6	14.4	14.4	11.7	11.0	10.5	10.3	9.5	9.8	9.8	11.3	13.4	18.2	8.6	12.8
30	0.5															16.6	16.5								16.6	0.5	11.2
31						14.7	14.1	15.4	14.1	13.2	12.6	12.1													15.4	12.1	13.7
Max.	**18.5**	**19.5**	**20.9**	**20.0**	**18.9**	**18.5**	**18.5**	**19.2**	**19.2**	**19.0**	**19.0**	**19.2**	**20.0**	**21.2**	**22.4**	**22.4**	**22.6**	**22.6**	**22.5**	**22.5**	**19.5**	**19.1**	**19.1**	**19.1**	**22.6**		
Min.	**0.5**	**10.0**	**9.6**	**9.6**	**9.9**	**10.3**	**10.3**	**8.6**	**10.4**	**10.3**	**10.2**	**10.1**	**10.1**	**10.4**	**10.8**	**11.0**	**11.0**	**10.5**	**10.3**	**9.5**	**9.8**	**9.8**	**10.8**	**10.6**		**0.5**	
Avg.	**12.4**	**12.7**	**12.5**	**12.4**	**12.3**	**12.1**	**12.2**	**12.5**	**13.1**	**13.3**	**13.5**	**13.6**	**13.9**	**14.0**	**14.1**	**14.2**	**14.2**	**14.0**	**13.8**	**13.6**	**13.3**	**13.2**	**13.2**	**13.1**			**13.2**

Total Hours in Month 744 **Hours Data Available** 706 **Data Recovery** 94.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	12.1	11.8	12.1	11.6	11.1	10.4	10.3	10.4	11.2	12.8	13.6	13.1	12.8	13.3	13.6	12.2	12.2	12.3	11.8	11.3	10.5	10.1	10.3	10.4	13.6	10.1	11.7
2	10.1	9.7	9.7	9.8	9.8	9.9	10.0	10.0	10.2	11.1	11.2	11.4	11.6	11.9	12.5	12.7	12.7	12.4	12.1	12.0	11.9	10.9	10.0	10.2	12.7	9.7	11.0
3	10.8	9.9	9.7	9.4	9.8	9.8	9.9	10.0	10.5	10.8	10.9	10.3	10.4	10.6	10.7	11.0	11.3	11.6	11.6	11.2	10.8	11.0	10.9	11.3	11.6	9.4	10.6
4	10.9	11.1	10.9	11.0	11.0	11.1	11.4	11.2	11.4	11.4	11.1	11.1	11.2	11.2	11.2	11.2	11.0	11.0	10.7	10.4	10.5	10.3	10.4	10.3	11.4	10.3	11.0
5	10.0	10.2	10.2	10.1	10.4	10.8	11.2	11.8	12.4	12.8	13.1	14.1	14.4	14.9	15.2	14.8	15.4	15.6	15.3	14.9	14.7	14.9	14.6	15.0	15.6	10.0	13.2
6	14.7	14.6	14.2	14.2	14.6	13.9	13.7	14.4	14.4	14.0	14.2	14.0	13.9	14.5	15.3	16.0	16.3	16.2	15.6	15.1	14.8	14.3	14.2	14.0	16.3	13.7	14.6
7	13.8	13.6	13.4	13.3	13.2	12.8	12.8	12.7	12.9	13.5	14.3	14.4	14.9	14.9	14.1	13.6	13.3	12.8	12.9	12.3	11.7	12.0	11.8	11.4	14.9	11.4	13.2
8	11.1	11.3	11.6	11.8	11.8	12.0	11.9	11.7	11.6	11.3	11.4	11.5	12.0	12.4	11.9	11.8	12.6	13.3	13.3	13.2	12.9	12.5	12.3	12.2	13.3	11.1	12.1
9	12.1	12.1	12.2	12.1	11.7	11.6	11.6	11.7	11.8	11.9	12.3	12.8	13.5	13.7	14.1	14.5	12.9	12.8	12.9	12.7	12.3	11.9	11.2	10.7	14.5	10.7	12.4
10	10.3	9.6	9.0	8.6	8.6	8.2	8.7	8.2	9.4	10.6	11.2	11.7	12.0	13.2	13.3	13.3	13.3	12.7	12.4	12.4	12.1	12.0	12.1	12.0	13.3	8.2	11.0
11	11.7	11.5	11.7	11.9	11.6	11.4	11.4	11.4	11.4	11.4	11.3	11.5	11.5	10.9	10.8	10.4	10.3	10.2	10.2	10.3	10.2	10.2	10.2	10.1	11.9	10.1	11.0
12	10.0	10.1	10.2	10.3	10.4	10.4	10.6	10.9	11.0	11.4	11.4	11.6	12.1	12.9	13.5	13.4	13.5	12.2	11.2	11.0	10.5	10.8	11.0	10.1	13.5	10.0	11.3
13	11.0	10.1	9.7	8.8	8.0	7.7	8.0	9.3	9.4	9.7	10.6	10.9	11.1	11.6	11.4	11.3	11.3	11.0	10.6	10.5	10.0	10.1	10.0	9.8	11.6	7.7	10.1
14	9.5	9.0	9.0	9.2	9.1	9.0	8.8	8.6	8.6	8.8	9.3	9.8	10.2	10.6	10.3	10.5	10.5	10.4	10.2	10.0	10.2	9.0	8.6	9.0	10.6	8.6	9.5
15	8.4	9.8	9.8	10.4	10.2	10.3	10.1	9.8	10.0	10.7	11.3	12.2	12.6	13.6	13.9	13.9	13.4	12.8	12.4	12.1	11.5	11.0	11.0	11.0	13.9	8.4	11.3
16	11.0	10.8	10.5	10.5	10.5	10.4	10.6	10.6	10.7	11.5	12.1	12.8	13.5	14.1	14.5	14.5	14.1	13.5	12.8	12.4	12.4	12.2	11.9	11.3	14.5	10.4	12.0
17	10.7	10.3	10.0	9.9	9.8	9.9	10.1	10.1	10.0	10.1	10.3	10.9	11.4	11.8	12.2	12.2	12.6	12.1	11.4	10.8	9.5	8.7	8.6	8.8	12.6	8.6	10.5
18	9.4	9.9	10.2	9.6	9.0	9.5	10.4	10.6	10.6	10.8	10.9	11.1	11.0	10.9	11.0	11.2	11.5	11.4	10.7	10.5	10.3	10.4	10.5	10.5	11.5	9.0	10.5
19	10.2	10.0	10.0	9.5	10.3	10.4	10.5	10.5	11.2	10.6	11.1	11.7	11.4	12.2	12.5	12.8	12.1		12.1	11.4	11.6	11.7	11.5	11.1	12.8	9.5	11.2
20	11.1	11.1	10.9	10.9	11.0	11.2	11.1	10.8	10.4	10.3	9.4	10.4	10.7	10.4	10.7	11.0	11.2	10.9	11.3	11.1	9.7	10.5	10.2	10.4	11.3	9.4	10.7
21	10.4	10.5	10.6	10.3	10.5	10.5	10.5	10.6	10.6	11.4	11.8	12.7	13.4	14.0	14.2	13.7	14.1	13.9	13.0	11.9	11.1	11.5	12.2	12.7	14.2	10.3	11.9
22	12.5	11.7	10.0	8.7	8.1	7.8	6.9	6.9	7.3	7.7	8.5	9.7	11.4	12.4	12.0	11.7	11.8	11.3	10.4	9.3	9.1	8.4	8.1	8.0	12.5	6.9	9.6
23	8.1	7.8	8.0	8.1	8.1	8.0	7.8	8.2	8.2	9.0	9.7	10.4	11.4	12.0	12.2	11.8	11.8	11.4	11.1	10.7	10.5	9.9	9.2	8.7	12.2	7.8	9.7
24	8.6	8.7	8.2	8.5	8.6	9.9	9.9	9.8	8.8	8.7	9.5	9.8	10.0	11.5	10.2	10.7	11.2	10.5	10.0	9.0	8.5	8.2	7.4	7.3	11.5	7.3	9.3
25	7.5	8.9	8.5	8.4	8.4	8.6	8.5	8.7	8.2	7.7	8.3	10.3	10.9	10.5	10.6	11.2	10.8	9.7	10.0	9.8	9.5	8.9	9.1	8.4	11.2	7.5	9.2
26	8.7	8.7	8.8	8.4	8.3	7.8	7.7	7.5	7.5	8.2	8.6	9.8	10.5	10.8	10.4	10.4	10.6	10.5	10.4	10.2	9.7	9.0	9.0	8.6	10.8	7.5	9.2
27	8.8	8.9	8.7	9.6	9.5	9.6	9.4	8.7	8.6	9.3	9.6	10.3	11.1	10.8	10.9	10.7	10.2	9.8	9.4	9.3	8.8	8.6	8.3	8.5	11.1	8.3	9.5
28	8.5	7.1	7.1	6.7	5.6	4.8	4.6	5.1	5.5	6.1	6.7	7.1	7.3	7.1	6.9	7.2	7.3	7.4	7.6	7.6	7.5	7.6	7.5	7.0	8.5	4.6	6.8
29	6.5	7.2	6.9	6.7	6.8	6.7	6.7	6.4	6.7	7.7	8.1	8.7	9.7	10.2	11.0	10.9	10.5	10.3	10.0	9.7	8.9	8.4	8.1	8.9	11.0	6.4	8.4
30	9.0	9.1	8.8	8.1	8.0	7.8	8.0	7.2	6.7	7.1	7.4	7.6	8.9	8.9	9.2	9.3	9.1	9.0	8.3	7.4	7.1	7.1	6.8	6.8	9.3	6.7	8.0
Max.	**14.7**	**14.6**	**14.2**	**14.2**	**14.6**	**13.9**	**13.7**	**14.4**	**14.4**	**14.0**	**14.3**	**14.4**	**14.9**	**14.9**	**15.3**	**16.0**	**16.3**	**16.2**	**15.6**	**15.1**	**14.8**	**14.9**	**14.6**	**15.0**	**16.3**		
Min.	**6.5**	**7.1**	**6.9**	**6.7**	**5.6**	**4.8**	**4.6**	**5.1**	**5.5**	**6.1**	**6.7**	**7.1**	**7.3**	**7.1**	**6.9**	**7.2**	**7.3**	**7.4**	**7.6**	**7.4**	**7.1**	**7.1**	**6.8**	**6.8**		**4.6**	
Avg.	**10.3**	**10.2**	**10.0**	**9.9**	**9.8**	**9.7**	**9.8**	**9.8**	**9.9**	**10.3**	**10.6**	**11.1**	**11.6**	**11.9**	**12.0**	**12.0**	**12.0**	**11.7**	**11.4**	**11.0**	**10.6**	**10.4**	**10.2**	**10.2**			**10.7**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

October *2007*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.5	7.7	8.1	8.0	7.1	7.5	7.5	8.1	7.8	7.6	8.5	8.6	8.8	9.2	9.5	9.3	9.7	10.0	9.7	9.3	8.9	8.8	8.6	8.4	10.0	7.1	8.5
2	8.4	7.6	7.6	7.4	7.3	7.2	7.1	6.8	6.9	7.1	7.2	7.5	7.8	8.2	8.5	8.8	9.4	9.1	9.1	8.7	8.3	7.8	7.8	7.6	9.4	6.8	7.9
3	7.2	7.1	6.9	6.9	6.6	6.4	6.4	6.4	6.2	6.6	7.1	7.6	8.6	9.3	9.8	9.9	10.1	9.6	8.6	8.2	7.9	7.6	7.6	7.4	10.1	6.2	7.7
4	6.8	5.3	5.1	4.8	4.9	5.6	6.2	7.3	7.0	6.2	5.1	4.2	3.9	3.1	3.0	3.1	3.2	3.3	3.4	3.6	3.6	3.6	3.6	3.5	7.3	3.0	4.6
5	3.4	3.3	3.3	3.3	3.4	3.2	2.7	2.8	3.0	3.0	3.4	3.8	4.0	3.9	3.9	4.4	5.2	6.5	6.9	7.0	6.6	5.9	5.5	5.1	7.0	2.7	4.3
6	4.7	4.4	4.5	4.3	4.1	4.3	4.2	3.9	3.4	3.2	3.6	3.8	4.1	4.6	4.7	5.3	5.2	4.5	3.7	3.4	3.1	3.0	2.9	2.7	5.3	2.7	4.0
7	2.3	2.0	1.9	1.7	1.7	1.7	1.9	1.8	1.6	1.6	1.7	2.5	2.9	3.2	3.7	4.0	3.5	2.6	2.2	1.9	1.7	1.5	1.3	1.6	4.0	1.3	2.2
8	1.7	1.6	1.6	1.6	1.3	1.0	0.5	0.0	-0.4	-0.1	0.9	1.8	2.2	1.9	2.1	2.6	2.3	1.9	1.6	1.4	1.4	1.3	0.7	-0.2	2.6	-0.4	1.3
9	-0.2	-0.3	-0.6	0.0	0.1	0.4	0.6	0.7	0.4	-0.3	1.3	2.0	3.1	3.9	4.1	4.5	5.2	4.7	4.2	3.8	3.9	4.0	3.7	1.5	5.2	-0.6	2.1
10	2.6	2.3	2.1	3.5	4.2	4.2	3.9	3.8	3.8	4.0	4.6	4.8	5.3	5.3	5.7	6.2	6.2	5.6	4.9	4.4	4.0	3.7	3.9	3.8	6.2	2.1	4.3
11	3.6	3.5	2.9	2.0	1.2	0.8	0.4	0.8	1.8	1.8	2.4	3.7	4.3	4.7	4.6	3.1	3.3	3.8	3.9	3.9	3.9	4.2	4.2	4.1	4.7	0.4	3.0
12	4.2	4.5	4.8	5.1	5.2	5.1	4.9	4.5	4.8	4.7	5.4	6.3	5.7	5.9	5.6	5.9	5.7	5.2	4.9	4.8	4.5	3.9	3.5	3.3	6.3	3.3	4.9
13	3.2	3.2	3.4	4.1	6.0	6.3	6.4	6.4	6.2	5.9	6.0	6.2	6.2	6.1	5.5	4.6	4.4	4.0	3.6	3.6	4.2	3.3	3.8	3.3	6.4	3.2	4.8
14	3.8	4.0	3.3	2.4	1.9	1.6	1.4	1.2	1.2	1.0	1.7	2.3	2.5	2.4	2.7	2.9	2.8	2.5	2.2	1.7	1.4	2.1	2.1	1.9	4.0	1.0	2.2
15	0.7	0.6	0.8	1.0	1.0	0.9	1.0	0.9	0.7	1.1	1.7	3.2	4.1	5.3	5.7	6.0	6.0	5.8	5.4	4.6	4.8	4.1	4.2	4.1	6.0	0.6	3.1
16	3.8	3.4	2.2	1.1	1.6	1.0	1.0	1.4	1.7	2.4	3.4	4.1	4.7	5.2	4.9	3.6	3.1	2.7	2.2	1.6	1.6	1.7	1.2	1.0	5.2	1.0	2.5
17	1.3	1.5	1.8	1.8	2.5	2.4	2.5	2.9	2.9	2.9	3.0	3.0	2.5	2.5	1.7	1.4	1.4	1.4	1.3	1.2	1.2	1.6	2.0	2.1	3.0	1.2	2.0
18	2.1	2.0	2.2	2.3	2.3	2.7	2.5	2.6	2.7	2.8	2.9	3.2	3.1	3.3	3.0	3.0	3.0	2.5	2.1	2.0	1.8	1.6	1.4	1.5	3.3	1.4	2.4
19	1.3	1.3	1.1	1.3	1.5	1.6	1.6	1.4	1.3	1.6	2.3	2.8	3.3	3.6	3.3	3.7	4.3	3.7	3.1	3.0	3.1	2.9	2.5	1.4	4.3	1.1	2.4
20	0.8	0.0	-0.3	-0.7	-1.0	-1.3	-1.6	-1.8	-1.6	-0.8	0.1	1.0	2.3	3.6	3.2	2.0	2.9	3.6	4.0	4.3	4.5	4.3	3.1	3.0	4.5	-1.8	1.4
21	4.2	5.0	4.9	4.8	4.3	3.1	4.1	4.5	4.8	4.8	4.9	5.1	5.5	5.9	6.5	7.0	6.8	6.4	5.7	5.3	3.7	2.6	2.5	2.9	7.0	2.5	4.8
22	3.0	2.2	1.9	1.3	1.4	1.9	2.8	1.7	1.9	2.6	3.2	3.3	3.1	2.0	2.1	2.2	1.8	1.8	1.1	0.9	1.3	1.3	0.8	0.8	3.3	0.8	1.9
23	1.1	1.3	1.5	1.7	1.6	1.6	1.5	1.1	0.6	0.4	1.4	2.8	3.2	2.9	2.7	2.8	2.7	2.1	2.1	2.1	2.0	1.9	1.3	0.9	3.2	0.4	1.8
24	0.5	0.0	0.1	0.6	0.8	0.6	0.7	0.5	0.7	1.2	0.4	0.5	1.5	2.2	2.7	3.0	3.3	3.3	3.3	3.2	2.9	3.7	3.9	4.3	4.3	0.0	1.8
25	4.2	6.0	7.1	5.4	4.5	4.2	4.1	3.4	3.5	3.1	3.0	3.5	3.7	3.9	3.6	2.4	2.2	2.5	2.0	2.3	3.7	4.1	4.0	3.9	7.1	2.0	3.8
26	4.0	3.8	3.9	4.1	4.2	4.1	4.1	4.0	3.9	3.7	3.8	4.3	4.8	5.2	5.3	5.5	5.3	5.3	5.0	4.9	5.5	5.1	5.0	5.2	5.5	3.7	4.6
27	5.0	5.0	4.6	5.0	5.2	5.3	5.3	5.7	5.3	4.9	5.1	4.8	4.7	5.2	5.0	5.3	5.6	5.3	5.2	5.2	5.2	4.9	4.2	4.4	5.7	4.2	5.1
28	4.5	4.6	4.6	4.3	5.2	4.7	4.2	3.8	3.8	4.0	4.8	4.1	4.5	4.9	4.7	4.6	4.7	4.7	4.3	4.1	4.1	4.1	3.8	3.7	5.2	3.7	4.4
29	3.7	3.5	3.3	3.3	3.5	3.2	3.6	3.8	3.6	3.7	3.9	3.9	4.0	3.9	3.9	4.1	3.9	3.8	3.6	3.7	4.1	3.9	3.2	3.0	4.1	3.0	3.7
30	3.2	3.7	3.9	4.0	4.0	4.8	5.8	6.2	6.7	6.9	7.4	7.0	6.0	5.3	4.9	4.6	4.1	4.0	3.9	4.5	4.5	4.3	4.2	4.2	7.4	3.2	4.9
31	4.1	3.9	3.6	3.6	3.4	3.4	3.7	3.6	3.9	3.9	4.0	4.5	4.9	5.2	5.9	6.4	5.6	4.4	4.4	3.7	1.9	1.7	1.5	1.6	6.4	1.5	3.9
Max.	**8.4**	**7.7**	**8.1**	**8.0**	**7.3**	**7.5**	**7.5**	**8.1**	**7.8**	**7.6**	**8.5**	**8.6**	**8.8**	**9.3**	**9.8**	**9.9**	**10.1**	**10.0**	**9.7**	**9.3**	**8.9**	**8.8**	**8.6**	**8.4**	**10.1**		
Min.	**-0.2**	**-0.3**	**-0.6**	**-0.7**	**-1.0**	**-1.3**	**-1.6**	**-1.8**	**-1.6**	**-0.8**	**0.1**	**0.5**	**1.5**	**1.9**	**1.7**	**1.4**	**1.4**	**1.4**	**1.1**	**0.9**	**1.2**	**1.3**	**0.7**	**-0.2**		**-1.8**	
Avg.	**3.4**	**3.4**	**3.3**	**3.2**	**3.3**	**3.2**	**3.3**	**3.2**	**3.2**	**3.3**	**3.7**	**4.1**	**4.4**	**4.6**	**4.6**	**4.6**	**4.6**	**4.4**	**4.1**	**4.0**	**3.8**	**3.7**	**3.5**	**3.3**			**3.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.1	2.7	3.3	3.6	4.0	4.0	4.3	4.3	4.1	4.2	4.8	4.6	4.1	5.4	5.1	5.7	6.0	4.6	4.0	3.9	3.7	3.7	3.5	3.0	6.0	2.1	4.1
2	3.0	3.0	2.8	2.8	2.6	2.4	2.4	2.2	2.1	2.1	2.1	2.2	2.5	2.7	2.9	2.9	2.7	2.0	1.6	1.3	1.3	1.5	1.4	1.5	3.0	1.3	2.2
3	1.5	1.5	1.7	1.5	1.5	1.4	1.5	1.4	1.3	1.4	1.5	1.9	2.0	2.2	2.4	2.4	2.1	1.1	0.4	0.1	0.4	0.6	0.8	1.7	2.4	0.1	1.4
4	0.6	1.0	1.4	2.7	3.6	4.8	4.8	4.7	5.0	5.2	5.1	5.5	5.5	5.6	5.4	5.4	5.5	5.6	5.3	5.3	5.1	5.1	5.1	4.8	5.6	0.6	4.5
5	5.0	5.0	4.3	4.0	2.8	1.9	1.9	1.5	1.9	0.8	1.1	1.4	2.0	1.9	1.7	1.8	2.2	2.2	2.0	2.3	2.9	2.8	3.2	3.2	5.0	0.8	2.5
6	3.3	3.3	3.3	3.3	3.0	3.3	3.4	3.3	3.3	3.2	2.3	2.2	2.4	2.3	2.1	1.8	1.7	1.4	1.2	1.2	1.6	2.0	2.2	2.2	3.4	1.2	2.5
7	2.6	2.7	2.6	2.8	3.3	2.7	3.2	2.3	2.4	4.6	5.3	5.8	5.8	6.1	6.2	6.4	6.8	6.4	5.7	5.3	4.9	5.1	4.9	3.6	6.8	2.3	4.5
8	2.8	2.5	2.5	3.2	4.6	5.0	5.7	6.0	4.9	3.0	1.4	1.4	2.7	5.0	6.0	5.5	5.4	6.1	5.7	5.1	4.7	5.3	4.4	3.6	6.1	1.4	4.3
9	4.0	3.4	2.4	2.1	2.4	2.2	2.2	2.2	1.9	1.8	1.8	2.7	3.2	3.5	3.7	3.7	3.7	3.4	3.0	3.4	3.7	3.0	3.3	3.6	4.0	1.8	2.9
10	3.9	3.7	3.7	3.0	2.6	2.4	2.3	2.1	2.0	1.2	1.2	1.2	1.7	2.1	3.5	3.9	3.7	3.7	3.8	4.0	3.6	3.4	3.2	3.0	4.0	1.2	2.9
11	2.9	2.5	1.8	1.9	1.9	1.2	0.6	0.3	0.0	-0.3	-0.5	0.0	0.9	1.4	1.8	2.1	2.0	1.3	1.1	0.9	0.6	0.6	0.9	0.8	2.9	-0.5	1.1
12	0.5	0.2	0.1	0.1	0.7	0.8	0.6	0.6	0.3	-0.5	-0.3	-0.2	0.4	0.7	0.6	0.5	-0.3	-0.5	-0.3	-0.4	-0.5	-1.1	-1.2	-1.1	0.8	-1.2	0.0
13	-0.4	0.2	0.5	0.9	0.6	0.6	0.6	1.2	1.5	1.6	1.7	0.5	0.5	0.7	0.8	0.8	0.5	0.6	0.8	0.5	0.5	1.2	1.1	0.9	1.7	-0.4	0.8
14	0.8	0.8	1.4	3.0	3.5	3.1	2.9	3.3	2.5	1.9	1.6	1.8	1.9	1.6	1.3	1.2	1.3	1.0	0.7	0.6	0.6	0.5	0.3	0.1	3.5	0.1	1.6
15	-0.1	0.1	-0.4	-0.7	-0.9	-0.8	-1.2	-1.4	-1.1	-1.1	-1.4	-1.2	-0.6	-0.5	0.0	0.3	0.5	0.4	0.5	0.2	0.2	-0.3	-0.8	-1.1	0.5	-1.4	-0.5
16	-1.1	-1.5	-1.4	-1.8	-1.9	-2.3	-2.8	-3.1	-3.4	-4.0	-4.3	-3.9	-3.5	-3.3	-3.0	-2.9	-3.3	-3.0	-2.9	-3.3	-3.1	-3.1	-3.3	-3.3	-1.1	-4.3	-2.9
17	-3.6	-3.4	-3.7	-3.9	-3.9	-4.2	-4.4	-4.7	-4.7	-4.5	-4.4	-3.8	-3.7	-4.0	-4.1	-4.2	-4.3	-4.0	-4.0	-3.8	-4.1	-4.7	-4.9	-5.4	-3.4	-5.4	-4.2
18	-4.7	-5.2	-5.3	-4.6	-4.1	-4.1	-4.6	-4.9	-4.9	-5.3	-5.0	-5.4	-5.1	-4.0	-4.1	-4.3	-4.4	-4.8	-4.9	-4.7	-4.7	-4.7	-4.9	-4.9	-4.0	-5.4	-4.7
19	-5.4	-5.7	-5.7	-5.8	-6.0	-5.7	-5.4	-4.8	-4.5	-2.9	-2.8	-1.8	-0.6	-0.3	-0.4	-0.4	-0.5	-0.6	-1.0	-0.8	-0.1	0.9	1.4	1.5	1.5	-6.0	-2.4
20	1.8	1.8	1.7	1.8	2.0	2.6	2.9	2.9	2.9	3.1	3.3	3.4	4.1	5.0	5.4	5.2	5.0	4.9	4.7	4.5	4.7	4.5	4.4	4.3	5.4	1.7	3.6
21	4.4	4.2	4.3	4.2	5.0	6.0	6.2	6.1	5.8	5.7	5.7	6.0	6.0	6.1	7.0	7.1	6.7	6.4	6.3	6.3	6.4	6.6	6.7	6.7	7.1	4.2	5.9
22	6.1	5.1	3.6	3.2	3.8	3.8	4.3	5.2	6.1	6.7	6.3	6.2	5.7	5.3	5.1	4.3	4.0	3.9	4.3	5.1	5.4	5.3	5.0	5.1	6.7	3.2	5.0
23	5.1	5.0	5.2	5.5	5.6	4.5	4.4	4.7	4.8	4.6	4.3	4.2	4.2	4.0	3.7	3.2	2.8	2.6	2.6	2.3	2.3	1.9	1.0	1.0	5.6	1.0	3.7
24	0.9	0.5	0.4	0.5	0.3	-0.5	-0.9	-0.9	-0.8	-0.7	-0.2	0.8	1.6	1.2	1.5	1.7	2.0	1.5	1.5	1.5	1.3	1.5	2.0	2.6	2.6	-0.9	0.8
25	2.8	3.2	3.7	4.4	4.5	4.3	3.7	4.2	4.5	4.4	4.2	4.4	4.5	4.0	3.8	3.6	3.6	4.2	4.6	4.9	5.2	5.2	5.8	6.3	6.3	2.8	4.3
26	6.7	7.2	7.7	7.7	7.3	6.8	6.0	4.5	3.8	4.0	4.5	4.8	4.2	4.4	4.7	5.5	5.5	5.2	5.6	5.8	5.3	5.0	5.6	6.1	7.7	3.8	5.6
27	6.2	6.2	5.9	5.6	6.0	5.7	5.3	5.5	5.8	5.4	5.3	5.3	5.0	5.2	5.4	5.7	6.0	6.0	5.8	5.4	4.9	5.2	4.4	4.2	6.2	4.2	5.5
28	4.3	3.6	3.2	3.6	3.7	3.7	3.9	3.5	3.3	3.2	3.6	3.5	3.5	3.9	4.2	4.6	5.2	4.9	4.6	4.4	4.9	4.9	4.9	4.8	5.2	3.2	4.1
29	4.6	4.0	3.8	4.0	4.3	4.1	4.6	5.6	5.2	5.4	5.7	5.3	5.2	5.3	5.2	5.1	5.0	5.3	5.3	5.3	5.2	5.3	5.5	5.4	5.7	3.8	5.0
30	5.5	6.0	6.4	6.3	6.4	6.6	7.0	7.1	6.9	7.1	7.0	7.1	7.6	7.3	7.3	7.9	7.9	8.1	8.1	8.2	8.2	8.1	6.9	7.8	8.2	5.5	7.2
Max.	**6.7**	**7.2**	**7.7**	**7.7**	**7.3**	**6.8**	**7.0**	**7.1**	**6.9**	**7.1**	**7.0**	**7.1**	**7.6**	**7.3**	**7.3**	**7.9**	**7.9**	**8.1**	**8.1**	**8.2**	**8.2**	**8.1**	**6.9**	**7.8**	**8.2**		
Min.	**-5.4**	**-5.7**	**-5.7**	**-5.8**	**-6.0**	**-5.7**	**-5.4**	**-4.9**	**-4.9**	**-5.3**	**-5.0**	**-5.4**	**-5.1**	**-4.0**	**-4.1**	**-4.3**	**-4.4**	**-4.8**	**-4.9**	**-4.7**	**-4.7**	**-4.7**	**-4.9**	**-5.4**		**-6.0**	
Avg.	**2.2**	**2.1**	**2.0**	**2.2**	**2.3**	**2.2**	**2.2**	**2.2**	**2.1**	**2.0**	**2.0**	**2.2**	**2.5**	**2.7**	**2.8**	**2.9**	**2.8**	**2.7**	**2.5**	**2.5**	**2.5**	**2.5**	**2.4**	**2.4**			**2.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.6	7.8	7.3	7.4	4.9	3.7	3.6	3.7	3.4	3.4	3.9	3.1	2.8	2.6	2.5	2.2	1.9	0.9	0.1	0.0	-0.5	-0.6	0.0	0.8	8.6	-0.6	3.1
2	1.3	1.1	0.8	1.3	1.0	0.6	0.9	1.5	0.7	0.1	-0.1	0.1	0.2	2.0	2.2	3.5	4.9	4.0	2.9	2.0	1.5	0.7	-0.2	-1.6	4.9	-1.6	1.3
3	-1.6	-2.2	-2.6	-3.0	-2.9	-2.9	-3.1	-3.0	-2.8	-3.2	-3.5	-3.6	-3.4	-3.2	-3.1	-3.4	-4.0	-4.4	-5.2	-5.4	-5.7	-5.6	-5.5	-5.2	-1.6	-5.7	-3.7
4	-4.5	-4.7	-4.5	-3.8	-3.2	-3.7	-3.7	-3.2	-2.5	-2.3	-1.7	-1.1	-1.6	-1.7	-1.4	-1.2	-1.2	-1.4	-1.5	-1.7	-2.1	-2.4	-2.4	-2.4	-1.1	-4.7	-2.5
5	-2.8	-2.4	-2.2	-2.1	-2.2	-2.1	-2.4	-2.5	-2.2	-1.8	-1.5	-1.3	-0.3	0.6	0.4	0.8	1.1	1.9	1.7	1.8	1.7	1.5	1.5	2.3	2.3	-2.8	-0.4
6	2.0	2.6	3.2	3.7	3.7	3.9	3.8	3.5	3.1	3.0	3.1	2.7	2.9	3.1	2.3	2.2	1.0	0.8	0.9	0.5	0.6	0.6	1.6	2.5	3.9	0.5	2.4
7	2.6	3.1	2.4	1.2	1.0	1.9	0.5	0.2	0.7	2.9	3.7	2.6	1.8	1.7	2.1	1.3	1.4	1.2	1.5	1.5	1.4	1.4	1.6	1.9	3.7	0.2	1.7
8	1.9	2.1	1.8	1.5	1.8	2.1	2.3	3.0	3.7	3.2	3.6	4.1	3.9	4.1	3.6	1.6	0.5	0.5	0.7	0.6	0.7	2.5	3.3	3.3	4.1	0.5	2.4
9	3.5	3.7	3.8	3.0	3.4	2.1	1.4	1.5	2.6	4.4	4.8	4.5	4.8	4.5	4.5	4.2	4.5	5.0	5.0	4.8	4.5	4.2	4.3	4.1	5.0	1.4	3.9
10	4.3	4.5	4.4	4.2	4.2	4.2	4.2	3.7	2.8	3.3	2.6	2.5	2.5	3.0	2.9	2.9	2.9	2.6	1.8	1.8	2.2	2.5	2.4	2.1	4.5	1.8	3.1
11	1.8	1.8	3.2	4.1	3.1	2.6	2.4	1.9	1.8	1.9	1.7	2.0	2.0	1.8	1.4	1.1	1.3	1.6	1.9	1.4	0.4	-0.1	-0.6	-0.8	4.1	-0.8	1.7
12	-1.1	-0.8	-0.6	-0.2	0.8	0.9	1.3	1.2	1.5	1.7	1.7	1.6	1.8	1.8	1.8	1.8	2.0	1.8	1.5	1.2	0.5	-0.1	0.1	0.0	2.0	-1.1	0.9
13	0.0	-0.1	-0.3	-0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.5	0.5	0.1	0.0	0.0	0.1	0.1	-0.1	-0.2	-0.4	0.5	-0.4	0.0
14	-0.4	-0.4	-0.5	-0.5	-0.7	-0.7	-1.1	-1.2	-1.5	-1.9	-2.3	-2.9	-3.4	-3.5	-3.8	-4.3	-4.1	-4.0	-4.0	-3.8	-4.1	-3.4	-3.2	-3.6	-0.4	-4.3	-2.5
15	-3.7	-3.4	-3.7	-3.9	-3.2	-4.4	-5.1	-5.4	-6.1	-6.2	-6.9	-7.3	-6.8	-6.8	-6.9	-6.8	-6.6	-6.7	-6.7	-6.7	-6.3	-5.9	-6.1	-6.0	-3.2	-7.3	-5.7
16	-6.6	-6.0	-6.9	-7.3	-7.4	-8.0	-8.3	-8.5	-8.4	-8.7	-8.9	-9.0	-9.1	-9.0	-9.3	-9.6	-9.6	-9.9	-9.9	-9.9	-9.8	-9.6	-9.9	-10.1	-6.0	-10.1	-8.7
17	-9.7	-9.8	-9.9	-9.9	-9.7	-10.0	-10.1	-10.2	-10.5	-10.6	-10.6	-10.4	-9.8	-9.1	-9.1	-9.2	-9.5	-9.4	-9.5	-10.3	-9.8	-9.9	-9.7	-9.8	-9.1	-10.6	-9.9
18	-10.1	-9.8	-9.8	-10.0	-10.2	-10.2	-10.2	-10.1	-10.0	-10.1	-10.1	-10.0	-9.7	-9.6	-9.5	-9.4	-9.5	-10.2	-10.5	-10.7	-10.8	-10.6	-10.5	-10.7	-9.4	-10.8	-10.1
19	-10.9	-11.1	-11.5	-11.9	-12.1	-12.5	-13.0	-13.2	-12.9	-13.1	-13.1	-12.8	-12.7	-12.5	-12.7	-12.7	-12.6	-12.8	-12.8	-12.7	-13.1	-13.2	-13.5	-13.4	-10.9	-13.5	-12.6
20	-12.7	-12.8	-12.8	-12.4	-11.1	-10.4	-9.8	-8.7	-8.6	-8.8	-9.1	-9.2	-8.9	-8.5	-8.2	-7.6	-6.8	-6.1	-5.5	-5.1	-4.7	-4.5	-4.3	-3.8	-3.8	-12.8	-8.3
21	-2.4	-1.8	-1.3	-0.7	-0.4	-1.1	0.0	-0.1	0.2	0.6	0.2	-0.1	0.2	0.1	0.2	-0.1	-0.9	-1.2	-1.6	-1.7	-2.0	-1.6	-1.0	-0.8	0.6	-2.4	-0.7
22	-0.5	-0.7	-1.4	-1.1	-0.6	-0.9	-0.8	-1.0	-0.6	-0.2	-0.1	0.2	0.7	0.6	0.6	0.8	0.8	0.6	0.6	1.3	1.1	0.9	1.2	1.6	1.6	-1.4	0.1
23	1.1	0.8	0.6	-1.9	-2.9	-3.7	-4.1	-4.8	-5.2	-5.3	-5.3	-4.8	-4.8	-4.3	-3.5	-4.6	-5.1	-5.5	-6.1	-5.8	-5.8	-5.8	-5.9	-5.9	1.1	-6.1	-4.1
24	-6.1	-6.4	-6.3	-7.0	-6.6	-6.4	-6.3	-5.8	-4.9	-5.5	-6.3	-6.0	-5.6	-5.1	-4.9	-4.8	-4.6	-4.3	-4.0	-3.7	-3.5	-3.9	-4.2	-4.1	-3.5	-7.0	-5.3
25	-4.2	-4.3	-5.5	-6.0	-6.1	-6.1	-5.9	-5.4	-6.5	-6.9	-7.4	-7.6	-8.0	-8.7	-9.3	-10.4	-10.4	-10.3	-10.1	-10.0	-10.0	-9.6	-9.0	-8.1	-4.2	-10.4	-7.7
26	-8.8	-9.4	-9.1	-9.2	-9.6	-10.5	-10.4	-9.0	-8.6	-7.8	-6.9	-5.7	-4.8	-4.4	-3.8	-3.4	-3.2	-3.0	-3.0	-2.9	-2.6	-2.2	-1.7	-1.7	-1.7	-10.5	-5.9
27	-1.0	-1.0	0.0	0.5	0.5	1.0	1.1	1.1	0.9	1.3	1.0	0.8	1.1	1.3	1.2	0.8	0.8	1.0	1.0	1.2	1.0	1.0	1.1	1.2	1.3	-1.0	0.8
28	1.5	2.0	0.8	0.4	0.3	-0.2	-0.6	-0.6	-1.3	-1.5	-0.9	-1.0	-0.8	-0.9	-1.0	-1.3	-1.6	-1.5	-2.6	-3.5	-4.0	-4.3	-4.5	-4.5	2.0	-4.5	-1.3
29	-4.2	-4.1	-4.0	-3.4	-2.5	-1.8	-1.3	-1.3	-1.3	-1.3	-1.4	-1.1	-1.4	-1.3	-1.9	-2.4	-2.5	-2.6	-3.2	-3.5	-3.8	-3.8	-3.8	-4.1	-1.1	-4.2	-2.6
30	-4.2	-4.2	-4.3	-4.6	-4.6	-4.7	-4.6	-4.7	-5.0	-6.4	-6.4	-6.3	-5.9	-5.4	-5.1	-4.5	-4.2	-3.8	-3.8	-3.7	-3.2	-3.0	-2.8	-2.6	-2.6	-6.4	-4.5
31	-2.6	-2.8	-2.6	-2.5	-2.3	-2.2	-2.1	-1.9	-1.7	-1.3	-1.0	-0.1	1.6	1.5	0.9	1.3	2.0	2.4	1.8	1.3	2.0	2.5	2.0	2.0	2.5	-2.8	-0.1
Max.	**8.6**	**7.8**	**7.3**	**7.4**	**4.9**	**4.2**	**4.2**	**3.7**	**3.7**	**4.4**	**4.8**	**4.5**	**4.8**	**4.5**	**4.5**	**4.2**	**4.9**	**5.0**	**5.0**	**4.8**	**4.5**	**4.2**	**4.3**	**4.1**	**8.6**		
Min.	**-12.7**	**-12.8**	**-12.8**	**-12.4**	**-12.1**	**-12.5**	**-13.0**	**-13.2**	**-12.9**	**-13.1**	**-13.1**	**-12.8**	**-12.7**	**-12.5**	**-12.7**	**-12.7**	**-12.6**	**-12.8**	**-12.8**	**-12.7**	**-13.1**	**-13.2**	**-13.5**	**-13.4**		**-13.5**	
Avg.	**-2.2**	**-2.2**	**-2.3**	**-2.4**	**-2.4**	**-2.6**	**-2.6**	**-2.6**	**-2.5**	**-2.5**	**-2.5**	**-2.5**	**-2.3**	**-2.1**	**-2.1**	**-2.3**	**-2.3**	**-2.4**	**-2.5**	**-2.6**	**-2.7**	**-2.7**	**-2.6**	**-2.5**			**-2.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-6.9	-7.3	-8.0	-8.3	-8.4	-8.6	-8.7	-8.8	-9.1	-8.9	-8.7	-8.5	-8.5	-8.8	-8.9	-9.0	-9.6	-10.5	-11.3	-11.8	-12.5	-13.0	-13.2	-12.8	-6.9	-13.2	-9.6
2	-12.8	-13.4	-13.8	-13.9	-14.5	-14.3	-14.7	-15.1	-15.3	-15.6	-15.5	-15.2	-15.5	-15.1	-14.5	-14.1	-14.1	-14.3	-14.6	-14.8	-15.4	-15.7	-16.3	-16.3	-12.8	-16.3	-14.8
3	-15.9	-15.5	-16.3	-16.9	-16.7	-16.3	-17.0	-17.1	-17.6	-18.4	-18.6	-19.6	-19.3	-19.2	-19.5	-19.2	-19.1	-18.5	-18.3	-18.2	-18.2	-18.8	-19.1	-18.6	-15.5	-19.6	-18.0
4	-17.1	-18.4	-18.3	-18.1	-18.6	-18.9	-17.9	-17.7	-17.0	-16.1	-13.2	-11.1	-10.7	-10.3	-10.0	-9.7	-9.7	-9.8	-9.9	-10.2	-10.4	-10.6	-10.7	-10.9	-9.7	-18.9	-13.6
5	-11.8	-12.6	-12.5	-13.1	-14.1	-15.4	-16.3	-17.0	-16.9	-14.8	-14.0	-14.4	-15.1	-13.4	-14.8	-15.7	-16.2	-16.3	-16.5	-17.6	-18.2	-18.3	-18.7	-18.7	-11.8	-18.7	-15.5
6	-18.4	-18.3	-17.8	-16.8	-16.8	-16.6	-17.2	-16.6	-16.1	-16.4	-15.9	-16.1	-15.5	-14.9	-14.9	-15.7	-16.3	-16.4	-16.3	-16.4	-16.8	-18.2	-18.7	-18.7	-14.9	-18.7	-16.7
7	-19.8	-20.3	-20.6	-20.5	-20.6	-20.6	-20.2	-19.8	-20.1	-21.2	-20.9	-20.3	-20.6	-20.2	-20.3	-20.4	-21.0	-20.2	-20.0	-20.1	-20.6	-20.1	-20.5	-20.7	-19.8	-21.2	-20.4
8	-20.2	-19.8	-19.5	-18.7	-17.8	-17.9	-17.7	-17.5	-17.2	-17.8	-18.1	-18.3	-18.3	-18.3	-18.6	-18.3	-18.3	-18.5	-18.5	-18.6	-18.8	-19.2	-19.1	-19.3	-17.2	-20.2	-18.5
9	-19.3	-19.4	-19.4	-18.9	-18.5	-18.4	-18.3	-18.1	-17.7	-17.5	-16.4	-14.8	-14.0	-12.7	-12.2	-12.0	-12.6	-12.9	-13.0	-13.2	-12.8	-12.7	-12.4	-11.8	-11.8	-19.4	-15.4
10	-11.4	-11.2	-10.7	-10.2	-9.5	-8.8	-8.6	-9.0	-7.8	-7.8	-8.2	-8.1		-7.2	-6.5	-6.5	-5.2	-5.2				-3.3	-2.4	-2.4	-2.4	-11.4	-7.5
11	-2.1	-1.6																					0.6	0.6	0.6	-2.1	-0.6
12	0.7	0.8	1.0	1.0	1.0	0.9	0.7	1.1	1.0	0.7	1.0	1.2	1.3	1.6	1.3	1.4	0.8	0.6	1.0	1.0	1.0	0.8	0.8		1.6	0.6	1.0
13		1.0	1.1	1.5	1.5	1.4	1.5	0.9	1.5	0.4	-0.5	0.2	0.7	0.5	0.8	0.1	-1.6	-1.4	-1.8	-2.4	-4.5	-4.8	-5.4	-4.4	1.5	-5.4	-0.6
14	-4.8	-3.5	-3.5	-5.5	-7.2	-5.8	-5.6	-6.6	-7.2	-7.2	-7.1	-5.7	-4.8	-3.7	-1.5	-0.8	-0.8	-1.2	-1.7	-2.5	-3.0	-3.3	-3.2	-3.3	-0.8	-7.2	-4.2
15	-3.6	-4.0	-4.3	-4.2	-4.1	-3.9	-4.1	-4.1	-4.2	-4.1	-4.1	-4.0	-3.9	-4.3	-4.4	-4.7	-5.3	-5.2	-4.5	-4.9	-5.5	-4.6	-4.3	-5.2	-3.6	-5.5	-4.4
16	-7.0	-7.4	-8.0	-8.3	-6.8	-3.7	-3.8	-3.5	-3.3	-2.9							-3.3	-2.5	-2.4	-2.5	-2.3	-2.0	-1.5	-1.6	-1.5	-8.3	-4.1
17	-1.7	-1.5	-1.6	-1.8	-1.2	-1.1	-0.7	-0.6	-0.5	-0.4	-0.6	-1.1	-0.5	-0.4	-0.7	-0.5	-0.9	-1.3	-0.6	-0.6	-1.0	-0.5	-0.4	-0.8	-0.4	-1.8	-0.9
18	0.3	-0.8	-1.0	-1.0	-1.0	-0.3	-0.3	0.3	0.4	-0.1	0.3	-0.3	-0.5	-0.7	-0.4	-0.3	-0.2	0.4	-0.2	1.3	1.9	1.8	1.8	1.8	1.9	-1.0	0.1
19	1.6	1.7	0.9	0.5	1.1	0.8	0.8	0.1	-1.6	-2.3	-2.2	-1.4	-0.8	-1.2	-2.0	-2.7	-2.9	-1.5	-1.6	-1.0	-1.2	-0.3	0.2	0.3	1.7	-2.9	-0.6
20	0.4	0.4	0.2	0.2	0.3	1.2	0.8	0.4	0.3	0.7	1.0	0.9	0.3	0.1	1.5	1.6	0.9	1.0	0.9	1.0	1.5	1.9	2.2	1.9	2.2	0.1	0.9
21	1.5	1.8	1.4	0.8	-0.2	-2.3	-3.7	-3.9	-4.2	-4.5	-4.9	-5.1	-5.5	-5.5	-5.1	-5.2	-5.4	-5.4	-5.5	-5.5	-5.3	-5.4	-5.5	-5.6	1.8	-5.6	-3.7
22	-5.3	-5.7	-5.5	-5.9	-6.3	-6.9	-7.5	-7.9	-7.6	-7.4	-7.1	-6.4	-5.9	-5.9	-5.4	-5.1	-5.3	-5.7	-6.1	-6.0	-6.2	-6.8	-6.8	-6.9	-5.1	-7.9	-6.3
23	-6.8	-6.8	-6.9	-7.5	-8.3	-9.1	-9.5	-9.5	-8.8	-8.1	-7.6	-7.1	-6.6	-7.9	-8.5	-9.1	-8.8	-9.2	-9.9	-10.2	-10.2	-11.6	-12.2	-12.6	-6.6	-12.6	-8.9
24	-12.6	-12.9	-13.1	-13.4	-13.5	-13.5	-14.0	-14.8	-14.8	-15.2	-15.2	-14.9	-14.8	-15.1	-15.7	-15.8	-14.8	-14.6	-15.6	-16.1	-16.1	-15.7	-15.3	-14.9	-12.6	-16.1	-14.7
25	-14.0	-10.8	-9.9	-8.8	-8.9	-8.8	-8.6	-7.8	-6.4	-5.5	-4.8	-4.0	-3.6	-3.2	-2.4	-1.8	-1.4	-1.3	-0.8	-0.3	0.2	1.3	1.6	2.1	2.1	-14.0	-4.5
26	2.3	2.0	2.4	2.3	2.2	2.0	2.2	2.7	1.8	2.0	2.6	2.9	2.7	2.8	3.5	3.0	2.3	2.0	1.9	1.5	1.6	1.7	2.1	2.6	3.5	1.5	2.3
27	2.8	2.9	2.9	3.0	3.3	2.8	2.4	2.8	2.5	3.2	2.7	2.2	2.6	3.4	3.5	4.2	3.0	1.6	1.4	1.3	1.5	1.5	1.8	1.8	4.2	1.3	2.5
28	2.0	2.0	1.9	1.8	1.8	1.9	1.9	1.6	1.9	2.1	2.4	2.4	2.6	2.4	2.3	2.4	2.7	3.1	2.6	3.1	3.6	4.1	4.6	4.7	4.7	1.6	2.6
29	4.6	4.4	4.3	5.2	5.1	3.7	2.6	2.9	3.3	3.8	4.1	4.7	4.9	4.9	4.6	5.0	5.4	5.1	4.4	4.0	3.0	2.7	2.8	3.0	5.4	2.6	4.1
30	3.5	4.0	4.2	4.6	5.4	5.8	6.2	5.7	4.5	6.9	7.6	8.4	9.0	8.0	8.9	8.3	8.3	8.1	6.8	4.9	4.4	7.2	7.5	8.1	9.0	3.5	6.5
31	8.1	8.2	8.4	8.8	8.9	8.8	8.3	8.1	5.2	3.3	3.6	3.7	3.8	3.7	3.2	3.4	3.6	3.0	3.4	1.5	1.2	1.6	1.0	1.5	8.9	1.0	4.8
Max.	**8.1**	**8.2**	**8.4**	**8.8**	**8.9**	**8.8**	**8.3**	**8.1**	**5.2**	**6.9**	**7.6**	**8.4**	**9.0**	**8.0**	**8.9**	**8.3**	**8.3**	**8.1**	**6.8**	**4.9**	**4.4**	**7.2**	**7.5**	**8.1**	**9.0**		
Min.	**-20.2**	**-20.3**	**-20.6**	**-20.5**	**-20.6**	**-20.6**	**-20.2**	**-19.8**	**-20.1**	**-21.2**	**-20.9**	**-20.3**	**-20.6**	**-20.2**	**-20.3**	**-20.4**	**-21.0**	**-20.2**	**-20.0**	**-20.1**	**-20.6**	**-20.1**	**-20.5**	**-20.7**		**-21.2**	
Avg.	**-6.1**	**-5.9**	**-6.1**	**-6.1**	**-6.1**	**-6.1**	**-6.2**	**-6.3**	**-6.4**	**-6.3**	**-6.1**	**-5.9**	**-5.6**	**-5.5**	**-5.4**	**-5.4**	**-5.5**	**-5.6**	**-5.7**	**-6.0**	**-6.2**	**-6.0**	**-5.8**	**-5.9**			**-5.8**

Total Hours in Month 744 **Hours Data Available** 712 **Data Recovery** 95.7%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.8	8.7	9.2	9.1	9.1	9.3	9.1	8.8	9.1	9.3	9.7	10.3	10.7	10.7	10.8	9.8	8.9	9.2	9.2	8.6	7.0	5.3	3.7	3.4	10.8	3.4	8.5
2	3.5	4.0	5.0	4.9	4.7	4.8	4.3	4.2	4.3	4.3	4.3	3.9	4.2	4.1	4.3	4.1	3.8	3.7	3.7	3.6	3.4	3.6	3.7	3.8	5.0	3.4	4.1
3	3.6	3.4	3.2	3.6	3.6	2.9	2.7	2.8	2.7	2.9	2.2	2.2	2.1	2.7	4.4	4.7	3.7	1.2	0.1	0.0	-0.9	-1.4	-1.6	-1.8	4.7	-1.8	2.0
4	-2.4	-2.1	-2.0	-1.6	-1.3	-1.4	-1.8	-1.4	-1.9	-2.1	-1.0	0.5	1.0	0.9	1.4	1.7	0.5	-1.5	-2.1	-2.4	-2.6	-2.8	-3.1	-3.6	1.7	-3.6	-1.3
5	-3.4	-2.0	-2.7	-3.3	-3.6	-3.3	-2.6	-3.5	-4.2	-4.5	-2.4	-0.3	0.3	-0.1	0.8	1.6	0.8	-2.0	-2.6	-2.3	-2.4	-2.3	-0.2	1.2	1.6	-4.5	-1.8
6	2.0	2.3	3.1	2.9	2.3	3.0	3.8	3.2	2.7	3.2	3.6	4.6	5.0	4.0	4.6	4.7	4.0	4.2	4.3	4.1	4.0	3.9	4.1	4.0	5.0	2.0	3.6
7	3.9	4.0	4.0	3.3	3.1	1.7	1.3	1.1	2.2	0.7							-0.6	-1.0	-1.0	-0.9	-1.0	-1.1	-0.9	-1.0	4.0	-1.1	1.0
8	-1.1	-1.2	-1.2	-1.4	-1.3	-1.3	-1.2	-1.2	-1.0	-1.2	-1.1	-1.1	-1.0	-1.0	-1.0	-1.2	-1.1	-0.7	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-1.4	-1.0
9	-0.9	-1.0	-1.1	-1.4	-1.4	-1.5	-1.5	-1.4	-1.5	-1.5	-1.5	-1.3	-1.0	-0.8	-0.5	-0.8	-0.9	-0.8	-0.9	-0.9	-0.9	-0.9	-1.0	-1.0	-0.5	-1.5	-1.1
10	-0.9	-1.1	-1.4	-1.5	-1.4	-1.1	-1.2	-1.3	-1.3	-1.3	-1.2	-1.3	-1.4	-1.5	-1.8	-2.0	-1.9	-2.0	-2.4	-2.5	-2.9	-3.0	-2.7	-2.6	-0.9	-3.0	-1.7
11	-2.7	-2.8	-2.7	-2.7	-2.5	-2.4	-2.2	-1.7	-1.3	-1.8	-2.1	-2.0	-1.7	-1.1	-0.6	0.5	0.9	0.8	0.6	0.8	0.9	1.0	1.2	1.5	1.5	-2.8	-0.9
12	1.7	1.4	1.7	1.9	1.5	1.6	1.6	2.0	1.9	1.8	2.0	1.9	2.2	2.3	2.5	2.5	2.7	2.6	2.3	2.1	2.1	2.2	2.2	2.4	2.7	1.4	2.0
13	2.5	2.4	2.3	1.7	1.7	2.0	2.0	2.5	2.9	3.2	3.6	3.7	3.9	3.5	2.5	2.6	2.2	1.8	2.2	2.3	2.0	1.7	1.9	2.6	3.9	1.7	2.5
14	3.1	3.1	2.7	2.8	2.6	2.3	1.9	2.1	2.0	2.2	2.3	2.7	2.8	2.7	2.7	2.6	2.5	1.6	0.9	0.7	0.9	0.8	0.1	0.0	3.1	0.0	2.0
15	-0.1	0.4	-0.1	0.6	0.3	-0.1	-1.0	-0.5	-1.1	-1.3	-1.1	-1.0	-0.7	-0.3	-0.3	-0.2	-0.2	-0.2	-0.3	-0.4	-1.4	-1.7	-2.1	-2.2	0.6	-2.2	-0.6
16	-2.1	-2.2	-2.0	-1.7	-1.6	-2.5	-2.0	-2.0	-1.4	-0.5	-0.7	-0.8	0.0	-0.1	-0.2	0.3	0.2	0.2	-0.3	-0.2	-0.6	-0.8	-1.1	-1.6	0.3	-2.5	-1.0
17	-1.3	-0.8	-1.9	-1.7	-1.1	-1.8	-2.8	-3.2	-3.5	-3.2	-2.8	-2.9	-2.5	-1.7	-1.3	-0.5	0.1	-0.6	-0.9	-1.2	-1.5	-1.8	-1.3	-1.6	0.1	-3.5	-1.7
18	-1.1	-0.5	-1.3	-1.9	-2.3	-2.4	-2.5	-2.6	-2.6	-2.6	-2.7	-2.5	-2.2	-1.9	-1.7	-1.7	-1.7	-1.7	-1.8	-2.1	-2.4	-2.7	-3.0	-3.1	-0.5	-3.1	-2.1
19	-3.2	-2.9	-2.5	-2.3	-2.3	-2.0	-2.2	-2.2	-3.2	-3.8	-4.3	-4.3	-4.4	-4.5	-4.7	-4.4	-4.4	-5.9	-6.3	-6.4	-6.9	-7.2	-7.5	-8.3	-2.0	-8.3	-4.4
20	-8.2	-8.6	-9.1	-8.8	-8.4	-7.2	-6.8	-6.7	-6.8	-7.5	-6.7	-6.4	-5.9	-7.1	-6.8	-6.6	-6.1	-7.2	-7.9	-8.5	-8.9	-8.9	-9.6	-10.0	-5.9	-10.0	-7.7
21	-10.3	-11.0	-10.9	-10.7	-10.9	-11.1	-11.2	-11.4	-12.1	-11.9	-11.9	-11.4	-10.9	-10.3	-9.6	-9.1	-8.7	-10.0	-10.6	-11.0	-11.2	-11.2	-11.2	-11.4	-8.7	-12.1	-10.8
22	-11.5	-11.7	-11.3	-11.3	-11.3	-11.3	-11.5	-11.2	-11.2	-11.0	-10.5	-10.1	-9.3	-8.6	-8.4	-8.2	-8.1	-9.2	-9.3	-9.7	-10.1	-10.5	-10.8	-11.2	-8.1	-11.7	-10.3
23	-11.3	-11.2	-11.2	-11.1	-10.9	-10.7	-10.8	-11.1	-11.3	-10.5	-10.3	-10.3	-10.3	-10.0	-9.9	-9.7	-9.6	-10.4	-10.9	-11.0	-11.1	-11.3	-11.3	-11.4	-9.6	-11.4	-10.7
24	-11.6	-11.6	-11.8	-11.7	-11.8	-12.6	-11.8	-12.2	-12.0	-12.3	-12.8	-12.6	-11.6	-11.0	-10.0	-9.6	-9.2	-10.6	-10.2	-10.8	-11.0	-11.2	-11.4	-11.5	-9.2	-12.8	-11.4
25	-12.3	-12.3	-12.7	-12.9	-13.2	-13.4	-13.2	-13.1	-12.7	-13.2	-12.1	-10.5	-9.0	-8.9	-8.0	-7.9	-7.1	-7.0	-7.1	-7.1	-6.7	-6.7	-5.7	-6.0	-5.7	-13.4	-9.9
26	-5.9	-4.7	-4.6	-4.4	-3.3	-1.5	-0.7	-0.7	-1.0	-0.4	-0.3	-0.8	-1.1	-1.2	-1.1	-0.6	-0.4	-1.3	-1.7	-2.0	-2.2	-2.0	-1.8	-2.1	-0.3	-5.9	-1.9
27	-2.6	-2.9	-2.8	-2.8	-2.8	-4.2	-5.9	-6.3	-6.6	-6.6	-6.2	-5.9	-5.6	-5.2	-4.9	-4.7	-4.7	-5.1	-5.6	-6.5	-6.4	-6.8	-7.0	-7.3	-2.6	-7.3	-5.2
28	-7.5	-7.5	-7.7	-7.6	-7.6	-7.6	-7.8	-8.1	-8.4	-8.1	-7.8	-7.3	-6.8	-6.4	-5.9	-5.6	-5.6	-6.1	-6.4	-7.1	-8.0	-8.6	-8.9	-9.2	-5.6	-9.2	-7.4
Max.	**3.9**	**8.7**	**9.2**	**9.1**	**9.1**	**9.3**	**9.1**	**8.8**	**9.1**	**9.3**	**9.7**	**10.3**	**10.7**	**10.7**	**10.8**	**9.8**	**8.9**	**9.2**	**9.2**	**8.6**	**7.0**	**5.3**	**4.1**	**4.0**	**10.8**		
Min.	**-12.3**	**-12.3**	**-12.7**	**-12.9**	**-13.2**	**-13.4**	**-13.2**	**-13.1**	**-12.7**	**-13.2**	**-12.8**	**-12.6**	**-11.6**	**-11.0**	**-10.0**	**-9.7**	**-9.6**	**-10.6**	**-10.9**	**-11.0**	**-11.2**	**-11.3**	**-11.4**	**-11.5**		**-13.4**	
Avg.	**-2.7**	**-2.4**	**-2.5**	**-2.5**	**-2.5**	**-2.6**	**-2.6**	**-2.7**	**-2.8**	**-2.8**	**-2.7**	**-2.3**	**-2.0**	**-1.9**	**-1.6**	**-1.4**	**-1.4**	**-2.1**	**-2.3**	**-2.6**	**-2.8**	**-3.0**	**-3.1**	**-3.2**			**-2.4**

Total Hours in Month 672 **Hours Data Available** 666 **Data Recovery** 99.1%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-9.6	-10.1	-10.9	-10.8	-10.9	-11.2	-11.7	-12.1	-12.2	-11.3	-10.9	-10.4	-10.1	-9.7	-9.2	-8.7	-8.3	-9.4	-10.4	-11.1	-11.7	-12.0	-11.9	-12.0	-8.3	-12.2	-10.7
2	-11.9	-11.9	-11.9	-11.8	-12.0	-12.5	-12.7	-13.0	-13.0	-12.4	-11.7	-11.1	-10.5	-10.0	-9.7	-9.4	-8.8	-9.6	-10.6	-11.0	-11.1	-11.1	-11.0	-10.8	-8.8	-13.0	-11.2
3	-10.7	-10.7	-10.8	-11.0	-11.1	-11.2	-11.5	-11.6	-11.4	-11.2	-10.6	-9.1	-8.9	-8.2	-7.7	-6.9	-6.4	-7.3	-8.2	-9.0	-9.1	-9.0	-8.8	-8.7	-6.4	-11.6	-9.5
4	-8.7	-9.0	-9.2	-9.5	-9.7	-10.2	-9.9	-10.0	-9.9	-9.4	-8.7	-7.8	-7.1	-6.7	-6.3	-6.1	-5.8	-6.8	-6.9	-7.2	-7.7	-8.2	-8.7	-9.1	-5.8	-10.2	-8.3
5	-9.7	-10.1	-10.5	-11.0	-11.5	-12.1	-12.6	-13.5	-13.6	-13.8	-13.9	-13.1	-12.4	-12.2	-12.0	-11.8	-11.4	-12.0	-12.1	-12.1	-12.2	-12.5	-13.2	-13.5	-9.7	-13.9	-12.2
6	-13.6	-14.1	-14.4	-14.8	-15.3	-15.6	-16.3	-16.8	-16.9	-16.4	-16.2	-16.5	-16.3	-16.3	-16.0	-15.3	-14.5	-14.8	-14.1	-13.9	-13.9	-14.0	-14.0	-14.2	-13.6	-16.9	-15.2
7	-14.4	-14.5	-14.7	-14.7	-15.2	-15.8	-15.8	-15.2	-14.8	-15.2	-15.3	-15.2	-15.1	-14.8	-14.8	-14.6	-14.4	-15.0	-14.8	-15.0	-15.3	-15.7	-16.1	-16.2	-14.4	-16.2	-15.1
8	-16.3	-16.4	-16.7	-16.7	-16.8	-17.0	-16.9	-16.5	-16.4	-15.9	-15.5	-15.0	-14.9	-14.5	-13.8	-13.4	-12.8	-12.3	-12.4	-12.0	-11.6	-11.9	-11.3	-11.2	-11.2	-17.0	-14.5
9	-11.4	-11.4	-11.5	-11.6	-11.9	-12.0	-11.9	-12.2	-12.3	-12.1	-11.6	-11.2	-11.0	-9.9	-9.8	-9.2	-8.8	-9.4	-9.6	-9.6	-9.4	-9.7	-9.5	-9.7	-8.8	-12.3	-10.7
10	-9.7	-10.2	-10.4	-10.5	-10.3	-10.7	-11.0	-10.6	-10.1	-9.5	-9.7	-8.9	-8.4	-7.9	-7.4	-6.4	-6.5	-7.1	-7.7	-8.1	-8.9	-9.2	-9.1	-9.0	-6.4	-11.0	-9.1
11	-9.1	-8.9	-9.5	-10.1	-10.0	-10.9	-11.1	-11.0	-11.3	-12.0	-11.5	-11.2	-10.7	-10.2	-10.0	-9.7	-9.3	-9.9	-10.5	-10.6	-10.7	-10.3	-10.4	-10.9	-8.9	-12.0	-10.4
12	-10.6	-10.8	-10.8	-11.0	-11.1	-11.1	-11.2	-11.4	-11.1	-11.0	-10.4	-9.4	-8.5	-8.1	-7.5	-7.7	-7.4	-8.4	-9.1	-9.4	-9.7	-10.0	-10.2	-10.5	-7.4	-11.4	-9.9
13	-10.7	-10.3	-10.3	-10.8	-11.5	-12.1	-12.8	-13.2	-13.1	-12.5	-12.1	-12.0	-12.4	-12.4	-12.3	-12.0	-11.6	-12.1	-11.9	-12.1	-13.0	-13.3	-13.3	-13.8	-10.3	-13.8	-12.2
14	-14.0	-14.6	-15.1	-15.6	-15.6	-15.2	-15.4	-15.8	-15.9	-16.4	-16.2	-15.4	-14.8	-14.4	-14.1	-13.7	-13.3	-13.4	-13.2	-13.2	-13.2	-13.6	-13.7	-14.0	-13.2	-16.4	-14.6
15	-15.0	-15.4	-15.8	-16.1	-16.4	-16.7	-17.0	-17.3	-17.2	-17.0	-16.3	-15.6	-15.1	-14.5	-13.9	-13.2	-12.8	-13.1	-13.2	-13.7	-14.0	-14.1	-14.2	-14.2	-12.8	-17.3	-15.1
16	-14.3	-14.1	-14.1	-14.2	-14.7	-14.9	-14.9	-15.0	-14.8	-14.4	-13.7	-12.3	-11.3	-10.8	-10.3	-9.7	-9.5	-10.2	-10.3	-10.9	-10.9	-11.1	-11.0	-11.1	-9.5	-15.0	-12.4
17	-11.4	-11.7	-12.0	-12.1	-12.6	-12.6	-12.9	-13.5	-13.9	-13.7	-12.7	-11.3	-10.1	-9.2	-8.8	-8.0	-7.6	-8.0	-8.5	-9.9	-10.7	-11.1	-11.5	-11.7	-7.6	-13.9	-11.1
18	-11.8	-11.8	-11.8	-11.9	-11.9	-11.9	-12.1	-12.3	-11.9	-11.4	-11.1	-10.2	-9.2	-8.8	-8.3	-7.9	-7.8	-8.3	-8.7	-9.4	-10.2	-10.6	-10.9	-11.1	-7.8	-12.3	-10.5
19	-11.4	-11.0	-10.9	-10.8	-11.2	-11.4	-11.8	-12.3	-11.9	-11.3	-10.4	-9.2	-8.3	-7.5	-7.0	-6.5	-6.0	-6.1	-6.5	-7.2	-7.9	-8.6	-9.1	-9.4	-6.0	-12.3	-9.3
20	-9.5	-9.4	-9.9	-9.7	-9.0	-9.4	-8.5	-7.2	-6.2	-5.8	-5.5	-5.3	-6.0	-5.4	-4.8	-3.9	-3.1	-2.5	-2.5	-2.7	-2.4	-2.5	-2.4	-1.8	-1.8	-9.9	-5.6
21	-1.4	-1.0	-0.8	-0.7	-0.3	-0.2	-1.0	-2.5	-3.0	-2.8	-1.7	-2.0	-2.4	-3.1	-4.0	-4.9	-5.6	-6.1	-6.3	-6.5	-6.7	-7.0	-7.0	-6.9	-0.2	-7.0	-3.5
22	-6.6	-6.8	-7.4	-7.8	-7.9	-7.2	-7.8	-8.8	-8.4	-8.0	-7.4	-6.5	-6.0	-5.7	-5.1	-4.8	-4.8	-5.0	-4.9	-6.2	-6.8	-7.1	-7.6	-8.0	-4.8	-8.8	-6.8
23	-8.1	-8.3	-8.7	-8.1	-8.2	-8.8	-9.8	-10.0	-8.7	-8.2	-7.9	-8.0	-8.7	-9.5	-9.5	-9.3	-8.8	-9.1	-9.3	-9.7	-10.0	-10.1	-10.3	-10.3	-7.9	-10.3	-9.1
24	-10.2	-10.1	-10.4	-10.6	-10.5	-11.3	-11.0	-10.7	-10.1	-9.8	-10.1	-10.0	-9.7	-9.7	-9.5	-9.4	-9.6	-10.0	-9.9	-9.6	-9.5	-9.5	-9.9	-10.4	-9.4	-11.3	-10.1
25	-11.1	-11.4	-11.5	-11.3	-10.3	-8.9	-8.2	-8.2	-8.0	-7.5	-7.6	-6.8	-5.8	-5.8	-5.7	-5.5	-5.2	-4.9	-5.1	-5.4	-5.7	-6.6	-6.8	-6.4	-4.9	-11.5	-7.5
26	-5.7	-5.5	-5.5	-5.4	-5.0	-4.8	-4.3	-4.3	-4.3	-3.6	-2.9	-4.4	-6.8	-7.2	-7.2	-7.1	-7.1	-7.0	-6.9	-7.1	-6.8	-6.7	-6.6	-6.4	-2.9	-7.2	-5.8
27	-6.2	-6.2	-6.5	-7.0	-7.1	-7.3	-7.8	-7.7	-7.7	-7.4	-6.2	-5.6	-5.0	-4.4	-4.0	-3.5	-2.6	-2.4	-2.7	-2.9	-3.1	-3.8	-4.7	-5.1	-2.4	-7.8	-5.3
28	-5.4	-5.6	-6.1	-6.5	-7.0	-7.3	-7.7	-7.9	-7.8	-7.7	-7.2	-6.4	-5.2	-5.0	-4.7	-4.4	-4.2	-4.2	-3.6	-3.6	-3.6	-3.7	-3.5	-3.8	-3.5	-7.9	-5.5
29	-5.1	-5.3	-5.3	-4.4	-4.5	-6.7	-7.7	-7.7	-6.3	-5.6	-4.6	-2.5	-2.3	-1.9	-1.5	-1.3	0.0	0.1	0.0	-0.9	-0.4	-1.9	-2.9	-3.4	0.1	-7.7	-3.4
30	-3.7	-4.1	-4.5	-4.9	-5.2	-5.5	-5.5	-5.2	-4.5	-4.3	-3.3	-2.4	-1.5	-1.0	-0.7	-0.2	-0.1	-0.3	-1.0	-0.4	-0.3	-0.7	-1.5	-2.2	-0.1	-5.5	-2.6
31	-2.8	-2.5	-1.5	-0.5	-0.8	-1.3	-3.6	-2.5	-2.8	-2.3	-1.6	0.4	0.6	0.2	0.2	0.1	0.2	0.2	0.2	0.3	2.0	0.8	-0.1	-0.3	2.0	-3.6	-0.7
Max.	**-1.4**	**-1.0**	**-0.8**	**-0.5**	**-0.3**	**-0.2**	**-1.0**	**-2.5**	**-2.8**	**-2.3**	**-1.6**	**0.4**	**0.6**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**0.3**	**2.0**	**0.8**	**-0.1**	**-0.3**	**2.0**		
Min.	**-16.3**	**-16.4**	**-16.7**	**-16.7**	**-16.8**	**-17.0**	**-17.0**	**-17.3**	**-17.2**	**-17.0**	**-16.3**	**-16.5**	**-16.3**	**-16.3**	**-16.0**	**-15.3**	**-14.5**	**-15.0**	**-14.8**	**-15.0**	**-15.3**	**-15.7**	**-16.1**	**-16.2**		**-17.3**	
Avg.	**-9.7**	**-9.8**	**-10.0**	**-10.1**	**-10.2**	**-10.4**	**-10.7**	**-10.8**	**-10.6**	**-10.3**	**-9.8**	**-9.2**	**-8.8**	**-8.5**	**-8.2**	**-7.9**	**-7.5**	**-7.9**	**-8.1**	**-8.4**	**-8.5**	**-8.9**	**-9.1**	**-9.2**			**-9.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	-0.5	-0.6	-1.0	-0.9	-1.3	-1.3	-1.1	-1.4	-0.9	-0.8	-0.3	0.4	-0.8	-0.5	-0.2	0.2	0.1	0.3	-0.1	-0.4	-0.3	-0.3	-1.2	-1.5	0.4	-1.5	-0.6
2	-1.8	-1.9	-1.6	-2.0	-1.9	-0.8	0.0	0.7	1.7	2.7	2.9	3.1	3.2	3.3	3.5	2.1	2.9	2.7	2.1	2.8	2.8	2.9	3.1	2.5	3.5	-2.0	1.5
3	2.8	2.7	2.8	2.6	2.3	2.1	2.3	2.3	1.9	2.2	2.4	2.5	2.6	2.7	3.0	3.4	3.4	3.5	3.2	3.0	3.0	3.0	3.2	3.2	3.5	1.9	2.7
4	3.1	2.9	2.6	2.3	2.2	2.1	2.2	2.4	2.8	3.0	3.0	3.2	3.3	3.3	3.2	3.2	3.5	3.6	3.9	4.1	4.4	4.5	4.5	4.6	4.6	2.1	3.2
5	4.0	3.0	2.8	3.1	3.9	3.7	3.0	3.3	3.9	4.8	5.8	6.5	7.0	7.3	6.8	5.3	4.5	4.3	4.3	4.4	4.6	4.4	4.4	4.2	7.3	2.8	4.6
6	4.2	4.3	4.5	5.1	5.0	5.3	5.5	6.1	6.1	5.9	6.6	7.0	6.9	6.4	5.8	5.3	4.6	4.7	4.6	5.8	6.5	7.1	6.8	5.8	7.1	4.2	5.7
7	5.2	5.2	2.9	1.5	2.5	2.6	3.0	3.4	3.5	3.4	3.9	4.6	4.2	4.2	4.3	4.6	5.2	6.0	6.2	5.2	5.0	5.2	6.0	6.2	6.2	1.5	4.3
8	6.2	6.3	6.3	6.5	6.3	6.6	6.6	5.6	5.7	6.8	7.2	7.7	8.1	7.9	7.7	7.3	6.6	6.3	6.3	6.2	6.2	5.9	4.6	3.9	8.1	3.9	6.4
9	4.0	4.4	3.9	3.2	3.0	2.9	2.9	2.8	3.1	3.8	3.9	4.2	4.7	4.3	4.7	4.3	4.1	3.5	3.4	3.3	2.8	2.4	2.7	3.0	4.7	2.4	3.6
10	1.9	1.7	1.7	2.0	1.9	1.8	2.1	2.3	2.3	2.8	3.0	3.6	4.1	3.8	3.1	3.8	4.2	3.4	2.9	2.8	2.6	2.9	2.7	1.9	4.2	1.7	2.7
11	2.4	1.8	1.5	0.8	0.9	0.9	1.0	1.0	1.4	2.3	2.0	3.1	2.7	2.5	2.5	2.7	2.6	2.4	2.8	3.2	2.2	2.3	2.4	2.2	3.2	0.8	2.1
12	1.7	1.3	1.8	1.2	0.9	0.9	1.7	1.4	1.8	2.3	3.3	4.9	5.0	5.0	5.3	5.7	5.4	5.2	5.3	5.1	4.3	3.9	3.4	4.2	5.7	0.9	3.4
13	3.6	3.0	3.7	3.2	2.4	1.9	1.7	1.9	2.0	2.3	2.6	3.5	4.5	4.5	5.0	4.7	4.7	5.2	4.3	4.2	3.8	3.4	2.6	2.5	5.2	1.7	3.4
14	2.7	1.8	1.8	2.1	2.0	1.3	0.6	0.6	1.4	2.9	2.6	2.9	1.9	1.5	1.2	1.8	2.6	2.6	2.8	2.5	2.5	2.7	2.7	2.6	2.9	0.6	2.1
15	1.6	1.9	1.4	1.3	0.9	1.1	1.3	1.7	2.1	2.2	2.5	2.9	4.1	4.9	5.2	5.6	5.6	5.8	5.8	5.0	5.4	5.5	5.5	5.5	5.8	0.9	3.5
16	5.3	5.3	5.3	5.6	5.7	5.7	5.8	5.5	5.6	5.9	5.9	5.8	6.0	5.9	5.3	4.2	4.2	3.7	3.4	3.3	3.2	2.7	1.7	1.1	6.0	1.1	4.7
17	0.8	0.5	0.2	1.1	2.0	2.4	2.7	3.1	3.6	3.3	2.7	2.2	1.9	1.4	1.3	1.7	1.7	1.5	1.6	1.9	1.8	2.4	2.5	2.5	3.6	0.2	1.9
18	2.6	2.5	2.3	2.1	2.1	2.0	2.3	2.5	2.7	2.8	2.8	2.9	2.9	3.0	3.1	3.4	3.6	3.5	3.5	3.2	3.3	3.4	3.4	3.2	3.6	2.0	2.9
19	3.2	3.2	3.1	3.0	2.9	2.9	3.3	3.1	3.1	2.8	3.0	2.1	2.0	1.9	2.2	1.7	1.8	2.4	1.9	1.9	1.8	2.1	1.6	2.9	3.3	1.6	2.5
20	2.2	2.7	2.5	2.6	2.8	2.7	2.7	2.8	3.4	3.5	3.8	4.1	4.3	4.5	5.0	5.7	5.9	6.1	5.8	5.7	6.3	6.5	6.5	6.5	6.5	2.2	4.4
21	6.5	6.5	6.6	6.7	6.8	6.9	7.1	7.2	7.3	7.3	7.6	7.3	7.1	7.7	8.1	8.1	7.6	6.1	4.2	3.2	3.5	5.3	6.8	7.2	8.1	3.2	6.6
22	6.6	5.7	6.4	6.8	6.8	6.4	6.5	5.8	5.9	7.0	7.4	7.8	8.0	8.3	8.4	8.4	8.3	8.4	8.1	7.9	8.0	8.0	7.7	6.5	8.4	5.7	7.3
23	6.1	6.1	6.2	6.3	6.0	6.2	7.0	6.9	7.4	8.3	7.7	7.3	9.0	8.5	7.6	8.3	7.7	6.7	6.6	6.1	5.1	4.7	4.8	4.7	9.0	4.7	6.7
24	4.6	4.5	4.6	4.9	5.2	5.4	5.3	5.8	6.3	7.2	7.2	7.2	7.5	7.7	8.1	8.3	6.7	6.0	5.5	5.0	4.6	4.3	4.0	3.6	8.3	3.6	5.8
25	3.7	3.9	4.0	4.4	4.6	4.2	4.0	3.9	3.8	4.1	3.7	3.3	3.4	3.2	4.4	5.6	5.3	5.4	5.7	5.9	5.4	5.4	5.4	5.3	5.9	3.2	4.5
26	4.9	5.1	5.3	4.7	3.6	4.0	5.0	4.6	3.7	5.2	6.8	5.9	4.8	5.2	5.3	5.3	5.2	5.1	5.3	5.6	8.0	8.3	6.8	6.0	8.3	3.6	5.4
27	5.6	5.9	4.4	4.0	2.9	2.6	3.4	4.7	4.3	4.3	3.9	5.0	5.0	4.6	5.5	6.6	6.1	5.8	5.6	5.5	5.5	5.4	5.5	5.5	6.6	2.6	4.9
28	4.6	4.1	4.0	3.2	2.8	2.6	2.9	3.0	3.5	4.0	3.5	3.2	3.1	3.3	3.8	3.9	4.4	4.4	4.3	4.1	4.1	4.2	4.0	4.0	4.6	2.6	3.7
29	3.8	3.5	3.7	3.4	3.8	3.7	4.6	5.4	5.6	5.7	6.1	7.2	7.9	8.4	8.7	6.7	7.1	8.6	8.7	8.6	6.0	5.0	5.2	5.1	8.7	3.4	5.9
30	4.8	4.6	3.8	3.8	4.2	4.0	4.1	6.0	7.0	7.4	7.8	8.1	8.1	8.2	9.0	9.8	9.9	10.2	9.3	8.1	8.9	7.4	7.6	7.0	10.2	3.8	7.0
Max.	**6.6**	**6.5**	**6.6**	**6.8**	**6.8**	**6.9**	**7.1**	**7.2**	**7.4**	**8.3**	**7.8**	**8.1**	**9.0**	**8.5**	**9.0**	**9.8**	**9.9**	**10.2**	**9.3**	**8.6**	**8.9**	**8.3**	**7.7**	**7.2**	**10.2**		
Min.	**-1.8**	**-1.9**	**-1.6**	**-2.0**	**-1.9**	**-1.3**	**-1.1**	**-1.4**	**-0.9**	**-0.8**	**-0.3**	**0.4**	**-0.8**	**-0.5**	**-0.2**	**0.2**	**0.1**	**0.3**	**-0.1**	**-0.4**	**-0.3**	**-0.3**	**-1.2**	**-1.5**		**-2.0**	
Avg.	**3.5**	**3.4**	**3.2**	**3.1**	**3.1**	**3.1**	**3.3**	**3.5**	**3.7**	**4.2**	**4.4**	**4.6**	**4.8**	**4.8**	**4.9**	**4.9**	**4.8**	**4.8**	**4.6**	**4.4**	**4.4**	**4.4**	**4.2**	**4.1**			**4.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	5.9	5.8	5.2	5.3	6.8	6.2	4.4	5.2	5.4	5.0	6.6	7.0	6.8	6.9	7.7	7.8	7.6	8.1	8.2	8.2	7.2	6.9	7.0	7.0	8.2	4.4	6.6
2	6.9	6.5	5.4	4.8	5.3	7.0	7.0	7.0	7.5	7.9	7.4	7.4	6.0	4.7	3.8	4.3	4.7	4.8	4.7	4.7	4.8	4.6	4.2	3.9	7.9	3.8	5.6
3	3.2	2.4	1.6	1.6	1.9	1.6	1.4	1.6	2.4	3.5	4.0	3.9	4.0	4.0	4.4	4.6	5.1	5.2	5.1	4.9	4.7	4.9	4.8	4.2	5.2	1.4	3.5
4	3.9	3.5	2.6	2.1	1.8	1.8	2.5	4.1	4.6	5.3	3.8	3.7	4.0	4.9	4.7	5.2	4.9	4.4	5.0	5.6	5.1	4.6	4.3	4.3	5.6	1.8	4.0
5	4.3	4.5	4.3	4.1	4.1	3.6	3.9	3.8	4.0	5.1	5.4	5.9	6.3	6.6	7.1	7.2	7.0	6.9	7.5	7.3	7.8	8.1	8.3	7.9	8.3	3.6	5.9
6	7.9	8.5	6.8	6.3	5.9	4.4	4.7	4.8	5.4	4.7	4.3	4.6	5.3	5.7	5.8	6.2	6.8	6.9	7.2	7.7	7.5	7.2	6.9	6.6	8.5	4.3	6.2
7	6.4	6.2	6.0	5.6	5.6	5.5	5.8	6.1	6.7	6.9	7.1	7.5	7.9	7.7	7.6	7.5	7.3	7.0	6.7	6.6	6.6	6.1	5.7	5.9	7.9	5.5	6.6
8	6.1	6.1	5.8	5.6	5.5	5.5	5.5	5.3	5.2	5.3	5.5	6.0	6.3	7.0	7.3	7.3	6.4	5.5	5.7	5.4	5.0	4.7	4.6	4.7	7.3	4.6	5.7
9	4.7	4.3	4.1	4.1	4.1	4.3	4.2	4.1	3.9	3.7	3.2	3.3	3.6	3.8	3.9	3.7	3.8	3.8	4.0	4.4	4.7	4.5	4.5	4.5	4.7	3.2	4.1
10	4.2	3.9	3.6	3.7	3.8	3.9	4.0	4.0	4.2	4.3	4.4	4.8	5.0	5.5	5.6	5.4	5.4	5.3	5.3	5.1	4.9	5.1	4.9	4.3	5.6	3.6	4.6
11	3.5	3.9	3.4	3.0	2.9	2.8	3.4	3.7	4.4	5.1	5.1	5.5	5.6	6.0	5.8	6.3	6.4	6.2	6.0	6.0	5.5	5.5	4.8	4.9	6.4	2.8	4.8
12	4.1	3.6	3.0	2.6	2.6	2.9	3.3	4.0	4.8	4.8	5.1	5.2	5.3	5.5	5.3	5.5	5.7	5.7	5.7	5.6	5.1	4.6	4.3	4.0	5.7	2.6	4.5
13	4.0	4.1	3.9	3.6	3.8	3.9	4.0	4.2	4.5	4.9	5.2	5.8	6.4	6.2	6.1	6.5	6.9	7.0	7.0	6.8	6.8	6.9	7.1	6.6	7.1	3.6	5.5
14	6.4	6.6	6.5	6.5	6.7	6.8	6.1	6.0	5.8	6.6	7.3	6.8	6.9	6.5	4.9	4.9	5.3	5.6	5.7	5.5	5.5	5.0	4.5	4.3	7.3	4.3	5.9
15	4.0	3.9	3.9	4.1	4.6	4.8	5.9	6.1	6.8	7.2	7.6	8.1	6.9	5.6	6.1	6.5	6.3	6.6	7.0	7.5	8.0	8.1	7.2	8.4	8.4	3.9	6.3
16	9.1	7.9	7.0	6.9	7.0	7.6	8.3	8.1	8.4	7.9	8.6	9.4	9.5	9.6	7.9	7.4	8.0	7.7	7.3	7.1	6.7	6.9	6.8	6.9	9.6	6.7	7.8
17	6.7	6.7	5.9	5.7	5.8	5.6	6.2	6.5	8.2	7.9	7.6	8.1	6.8	6.6	7.2	6.5	6.2	6.1	6.2	6.1	6.0	6.0	6.1	5.9	8.2	5.6	6.5
18	5.9	5.8	5.5	5.4	5.3	5.4	5.3	5.5	6.0	6.1	7.0	5.6	5.6	5.4	5.2	5.4	5.8	6.0	6.1	5.8	5.7	5.7	5.7	5.5	7.0	5.2	5.7
19	5.3	5.2	5.8	6.0	6.1	6.2	6.6	6.8	7.2	8.3	9.5	10.6	11.7	12.8	12.1	11.0	10.4	11.6	12.2	11.5	10.9	10.8	10.8	10.5	12.8	5.2	9.2
20	10.4	10.3	9.6	8.8	8.4	7.5	7.2	7.4	8.2	8.9	9.4	10.2	10.7	11.1	11.3	11.3	9.8	8.8	8.1	8.1	7.5	7.5	9.0	9.9	11.3	7.2	9.1
21	9.8	9.6	9.5	8.8	6.7	6.7	6.8	7.0	6.9	5.8	6.0	6.1	7.0	7.3	8.6	9.2	8.6	9.3	9.1	9.2	8.9	8.0	7.1	6.7	9.8	5.8	7.9
22	6.3	5.9	6.6	6.8	8.1	9.3	9.4	9.5	10.0	10.4	10.5	10.9	11.5	11.9	12.6	13.2	13.5	13.4	12.8	12.3	10.2	8.3	7.5	8.4	13.5	5.9	10.0
23	9.5	10.1	10.4	10.5	11.0	10.0	8.7	8.7	8.9	8.5	8.6	9.0	8.8	9.3	9.1	8.4	7.9	7.7	7.4	7.4	6.3	5.6	5.6	5.7	11.0	5.6	8.5
24	5.8	5.7	5.6	5.3	5.1	5.2	5.5	5.9	7.8	8.7	9.2	9.7	10.0	10.6	11.1	11.3	11.8	11.9	11.5	11.8	11.6	10.8	11.2	10.8	11.9	5.1	8.9
25	11.0	11.2	10.9	10.9	10.6	10.4	10.6	10.8	10.8	10.9	10.7	10.7	8.1	7.6	7.4	7.6	7.5	7.5	7.9	8.0	7.7	8.1	8.5	7.2	11.2	7.2	9.3
26	7.0	7.0	7.0	7.1	6.9	6.8	6.7	6.6	6.7	6.9	6.9	7.1	7.0	6.9	7.0	7.0	6.9	7.0	6.8	6.6	6.3	6.6	6.5	6.3	7.1	6.3	6.8
27	6.0	5.9	5.8	6.1	6.1	6.1	6.1	6.2	6.3	6.3	6.6	7.0	7.2	7.3	7.7	7.4	7.3	7.4	7.2	7.2	6.7	6.5	6.6	6.7	7.7	5.8	6.7
28	6.6	6.5	6.5	6.5	5.9	5.9	6.1	6.8	6.7	7.3	6.9	7.0	6.8	6.2	6.3	6.2	6.2	6.3	6.4	6.4	6.5	6.4	6.2	5.9	7.3	5.9	6.4
29	5.8	5.3	4.5	4.7	4.5	4.9	5.2	6.7	9.2	9.6	8.8	8.7	8.4	8.9	9.0	9.2	9.6	9.7	9.5	9.5	9.3	8.8	8.1	8.4	9.7	4.5	7.8
30	7.5	7.5	7.2	7.6	7.8	9.0	9.5	10.1	10.3	10.4	10.7	11.1	11.1	7.7	7.8	8.2	7.4	7.5	7.5	7.4	7.5	7.4	7.2	7.3	11.1	7.2	8.4
31	8.5	8.5	8.5	8.2	8.1	8.0	7.3	7.2	7.9	8.6	8.8	9.2	10.1	10.3	10.3	10.3	9.4	8.6	8.4	8.2	8.1	8.2	8.4	8.5	10.3	7.2	8.6
Max.	**11.0**	**11.2**	**10.9**	**10.9**	**11.0**	**10.4**	**10.6**	**10.8**	**10.8**	**10.9**	**10.7**	**11.1**	**11.7**	**12.8**	**12.6**	**13.2**	**13.5**	**13.4**	**12.8**	**12.3**	**11.6**	**10.8**	**11.2**	**10.8**	**13.5**		
Min.	**3.2**	**2.4**	**1.6**	**1.6**	**1.8**	**1.6**	**1.4**	**1.6**	**2.4**	**3.5**	**3.2**	**3.3**	**3.6**	**3.8**	**3.8**	**3.7**	**3.8**	**3.8**	**4.0**	**4.4**	**4.7**	**4.5**	**4.2**	**3.9**		**1.4**	
Avg.	**6.3**	**6.2**	**5.9**	**5.7**	**5.8**	**5.8**	**5.9**	**6.1**	**6.6**	**6.9**	**7.0**	**7.3**	**7.3**	**7.3**	**7.3**	**7.4**	**7.3**	**7.3**	**7.3**	**7.2**	**6.9**	**6.7**	**6.6**	**6.5**			**6.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	8.4	8.3	8.3	8.5	9.1	9.1	8.8	8.7	8.7	9.1	9.6	9.7	9.8	8.3	7.4	7.5	7.7	8.0	7.0	6.9	6.8	6.8	6.8	6.5	9.8	6.5	8.2
2	6.5	6.7	6.8	6.6	6.2	6.2	6.2	6.2	6.3	6.4	6.3	6.5	6.8	7.3	6.9	6.8	7.0	7.5	7.6	7.6	7.4	7.5	7.4	7.5	7.6	6.2	6.8
3	7.3	6.9	6.8	6.5	6.8	6.5	6.4	6.6	6.9	7.4	7.4	7.7	8.0	8.8	8.3	9.3	9.3	9.3	9.4	8.9	8.9	9.7	9.2	9.2	9.7	6.4	8.0
4	10.2	10.3	10.1	10.1	9.8	9.2	8.6	8.5	9.4	8.8	9.9	11.5	14.2	13.4	14.3	11.5	10.1	9.1	8.5	8.1	8.1	8.3	8.2	7.6	14.3	7.6	9.9
5	7.1	6.9	6.7	7.8	8.0	8.3	7.9	8.0	8.5	9.2	10.1	9.6	9.1	8.9	8.5	8.2	7.4	7.3	7.1	7.1	7.1	7.7	7.3	8.2	10.1	6.7	8.0
6	8.0	7.8	6.6	6.8	6.7	6.6	6.5	7.0	9.1	10.2	9.5	9.9	9.4	8.5	7.5	7.2	7.0	7.1	7.1	7.2	7.2	7.4	7.4	7.6	10.2	6.5	7.7
7	8.4	8.2	8.5	10.0	10.3	10.1	10.1	10.3	10.4	10.6	10.3	9.5	8.6	7.6	7.0	6.9	7.1	7.9	8.5	7.2	7.0	7.4	8.4	8.3	10.6	6.9	8.7
8	7.8	7.5	6.7	6.7	6.5	6.3	6.3	6.7	7.6	7.8	7.7	8.3	8.6	8.7	7.6	6.9	6.9	7.1	7.0	6.5	6.4	6.3	6.0	5.9	8.7	5.9	7.1
9	5.9	6.1	6.1	5.7	5.6	5.7	6.4	5.8	5.9	6.3	7.0	7.5	7.7	7.8	8.7	9.0	9.6	10.4	11.1	11.6	11.7	11.9	11.9	11.3	11.9	5.6	8.2
10	9.9	9.8	9.6	10.6	11.6	11.2	10.6	10.7	11.2	11.5	10.9	10.2	13.6	15.8	16.5	17.8	18.1	18.0	19.0	14.1	11.9	14.5	16.7	14.2	19.0	9.6	13.2
11	13.1	12.4	11.7	10.3	9.6	9.2	9.5	9.0	7.5	5.8	5.6	6.0	7.1	7.1	7.5	7.3	7.4	7.5	7.4	7.3	7.3	7.0	7.0	6.8	13.1	5.6	8.2
12	6.7	6.6	6.7	6.6	6.7	6.6	6.6	6.8	6.8	6.8	6.9	6.9	6.8	6.8	6.9	7.0	7.1	6.9	6.9	7.0	7.1	7.1	7.0	6.9	7.1	6.6	6.8
13	6.9	6.7	6.7	6.8	6.5	6.5	6.6	7.0	7.1	6.5	6.9	7.2	7.2	7.5	8.0	8.0	8.5	9.3	9.7	9.2	9.5	9.3	9.6	9.2	9.7	6.5	7.8
14	8.5	9.1	7.7	8.5	9.1	9.1	9.2	9.6	8.8	7.6	7.5	7.8	8.3	8.7	8.9	9.8	9.9	9.7	9.6	10.0	10.3	10.0	10.2	10.6	10.6	7.5	9.1
15	9.7	8.8	9.2	9.5	10.7	11.0	11.0	11.2	8.9	8.6	9.0	9.4	10.5	10.7	10.7	10.8	12.6	13.9	14.3	14.8	15.8	16.7	16.1	15.4	16.7	8.6	11.6
16	15.5	14.9	15.2	15.1	13.8	14.0	15.5	16.3	16.9	17.2	17.6	17.5	17.8	17.8	18.1	17.9	17.9	17.6	16.8	15.8	15.0	14.4	13.9	12.9	18.1	12.9	16.1
17	11.6	10.9	10.2	9.7	9.5	9.8	8.8	8.5	8.4	8.9	9.9	10.3	11.0	11.0	11.1	10.9	11.1	11.3	11.4	11.5	11.5	10.8	9.5	8.9	11.6	8.4	10.3
18	8.5	8.0	7.9	8.3	8.7	9.0	9.3	9.7	9.3	8.8	9.0	8.9	8.6	8.3	8.3	8.3	8.3	8.7	8.6	8.6	8.4	9.0	9.3	9.1	9.7	7.9	8.7
19	8.8	9.0	8.4	8.0	8.0	9.6	11.0	11.6	12.4	13.1	14.2	13.7	11.0	16.1	15.5	20.3	21.7	21.9	22.1	22.6	23.0	19.2	18.6	18.1	23.0	8.0	14.9
20	17.5	17.7	17.4	16.9	16.9	16.0	16.4	16.2	16.5	17.7	20.0	21.8	23.0	23.4	23.9	24.1	24.6	23.7	23.1	22.6	22.8	22.8	22.7	22.5	24.6	16.0	20.4
21	21.0	18.8	18.2	17.6	18.9	18.0	16.9	16.3	16.8	16.7	16.7	16.6	16.9	17.6	17.7	17.6	17.8	17.8	17.5	17.0	16.5	15.9	15.5	14.9	21.0	14.9	17.3
22	13.9	13.6	12.8	12.7	12.1	11.8	11.6	11.3	11.4	10.7	10.2	9.9	9.1	9.1	9.3	9.9	9.7	9.6	9.5	9.5	9.5	9.4	9.2	9.3	13.9	9.1	10.6
23	9.0	8.9	9.1	9.1	9.1	8.9	8.9	8.8	8.6	8.4	8.6	8.8	8.8	9.0	9.0	9.1	8.9	8.6	8.8	8.8	9.2	8.9	8.7	8.1	9.2	8.1	8.8
24	8.1	8.2	8.2	8.3	8.6	8.5	8.6	8.5	8.8	9.2	9.3	9.5	9.6	8.6	8.6	8.6	8.6	8.6	9.1	9.7	9.5	8.6	8.3	8.2	9.7	8.1	8.7
25	8.1	7.9	8.4	8.0	7.8	7.8	8.0	7.9	7.9	8.5	9.1	9.0	8.7	9.7	10.0	10.3	10.6	10.5	10.4	10.2	10.2	10.3	10.3	9.7	10.6	7.8	9.1
26	9.0	8.8	8.7	8.7	9.2	9.1	9.3	10.1	10.7	11.0	11.4	11.1	11.1	11.1	11.2	11.6	12.1	11.7	11.1	11.1	11.1	11.2	11.4	11.8	12.1	8.7	10.6
27	12.1	12.9	11.5	10.6	10.7	11.1	11.1	11.4	10.3	10.3	10.4	10.3	10.8	11.0	11.1	11.7	12.6	13.0	12.2	11.6	10.9	10.4	10.4	10.7	13.0	10.3	11.2
28	10.2	10.1	10.1	11.0	10.0	10.2	10.0	9.8	9.6	9.7	9.9	10.2	11.9	12.0	12.5	12.0	12.4	11.4	10.9	11.4	12.3	12.6	11.6	10.0	12.6	9.6	10.9
29	9.7	9.0	8.4	8.6	8.5	8.5	8.8	9.9	10.5	10.5	10.1	10.2	10.2	10.6	10.9	11.0	12.4	12.6	12.3	13.5	15.9	15.5	14.8	14.3	15.9	8.4	11.1
30	13.9	13.7	13.4	13.2	13.1	13.1	13.0	12.8	13.2	13.2	13.0	11.9	11.4	11.1	10.7	10.8	11.8	11.9	11.7	11.5	11.8	11.4	10.2	9.6	13.9	9.6	12.1
Max.	**21.0**	**18.8**	**18.2**	**17.6**	**18.9**	**18.0**	**16.9**	**16.3**	**16.9**	**17.7**	**20.0**	**21.8**	**23.0**	**23.4**	**23.9**	**24.1**	**24.6**	**23.7**	**23.1**	**22.6**	**23.0**	**22.8**	**22.7**	**22.5**	**24.6**		
Min.	**5.9**	**6.1**	**6.1**	**5.7**	**5.6**	**5.7**	**6.2**	**5.8**	**5.9**	**5.8**	**5.6**	**6.0**	**6.8**	**6.8**	**6.9**	**6.8**	**6.9**	**6.9**	**6.9**	**6.5**	**6.4**	**6.3**	**6.0**	**5.9**		**5.6**	
Avg.	**10.0**	**9.8**	**9.5**	**9.6**	**9.6**	**9.6**	**9.6**	**9.7**	**9.8**	**9.9**	**10.1**	**10.2**	**10.5**	**10.7**	**10.7**	**10.9**	**11.2**	**11.3**	**11.2**	**11.0**	**11.0**	**10.9**	**10.8**	**10.4**			**10.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.5	9.1	9.1	8.8	8.3	7.9	8.0	8.0	8.2	8.8	9.8	10.8	12.1	13.3	12.1	11.7	11.1	11.6	10.3	9.9	9.8	9.7	9.8	9.7	13.3	7.9	9.9
2	9.9	9.7	9.5	9.2	9.0	9.1	9.3	9.6	10.2	10.0	10.2	10.3	10.2	10.1	10.2	10.6	10.9	11.1	11.4	11.2	11.4	11.4	11.2	11.2	11.4	9.0	10.3
3	11.1	11.2	10.5	10.7	11.3	12.9	12.4	12.5	11.0	11.1	11.7	11.2	11.3	11.2	11.1	11.0	11.2	11.6	11.6	11.6	12.7	12.0	11.3	12.3	12.9	10.5	11.5
4	12.5	11.6	11.6	11.5	11.3	11.2	11.2	11.7	12.7	12.2	11.6	11.8	11.8	11.7	11.4	11.0	11.1	11.0	11.2	11.3	11.3	11.8	11.7	11.7	12.7	11.0	11.6
5	11.5	11.3	12.3	11.5	11.1	11.3	11.5	11.4	11.7	11.7	11.6	11.5	12.1	12.3	11.4	10.9	11.0	10.8	11.3	11.4	11.0	11.1	11.3	11.2	12.3	10.8	11.4
6	11.0	10.2	9.6	9.1	9.1	9.3	9.6	10.5	10.8	10.6	10.9	11.0	10.9	11.3	12.1	12.0	11.7	11.3	11.5	11.3	11.6	11.9	12.0	12.2	12.2	9.1	10.9
7	11.8	11.2	11.1	10.8	11.2	11.3	11.3	11.5	11.3	11.4	11.6	12.0	11.7	11.9	12.2	12.4	12.4	12.0	11.9	12.5	12.1	12.2	12.0	11.3	12.5	10.8	11.7
8	10.8	11.1	11.0	11.0	10.8	10.8	10.8	11.0	10.6	11.3	11.8	12.2	11.3	10.6	11.2	11.3	11.5	11.3	11.0	10.7	11.4	11.2	11.1	10.8	12.2	10.6	11.1
9	10.3	9.9	9.6	9.7	9.5	9.5	9.6	9.9	10.2	10.4	11.0	11.5	11.6	12.4	13.3	16.0	16.1	15.9	14.6	14.4	15.5	15.7	15.3	14.6	16.1	9.5	12.3
10	15.3	14.5	12.9	13.1	13.3	12.6	12.2	12.4	12.9	12.0	11.5	11.6	12.0	11.7	12.0	11.8	11.6	10.8	10.6	11.1	10.9	11.0	10.9	11.0	15.3	10.6	12.1
11	11.0	11.5	10.8	10.8	10.5	10.7	10.9	11.1	10.7	10.9	10.6	10.7	10.5	10.4	10.9	11.1	10.7	10.7	10.7	10.8	11.1	10.8	10.6	10.5	11.5	10.4	10.8
12	10.5	10.2	10.4	10.5	10.6	10.7	10.7	11.0	11.1	11.3	11.1	10.7	11.1	10.9	11.0	11.3	11.5	11.5	11.3	11.2	11.2	11.1	10.9	10.7	11.5	10.2	10.9
13	10.8	10.8	10.8	10.8	10.7	10.6	10.3	10.1	10.1	10.2	10.2	10.1	10.1	9.7	9.7	10.1	10.6	10.3	10.3	10.2	10.3	10.2	10.1	10.3	10.8	9.7	10.3
14	10.0	10.0	9.6	9.5	9.7	9.9	10.0	10.2	10.9	11.4	11.8	11.1	10.9	10.7	10.5	10.7	10.4	10.3	10.4	10.4	10.4	10.3	10.1	10.2	11.8	9.5	10.4
15	10.0	9.7	9.8	9.9	9.9	10.0	10.1	10.1	9.7	10.0	10.0	10.2	9.9	9.2	8.9	8.8	8.6	9.9	14.6	15.9	15.5	15.3	15.2	15.0	15.9	8.6	11.1
16	14.7	14.3	14.0	13.7	13.3	13.3	13.3	13.8	13.6	14.2	14.8	15.4	15.6	16.0	16.4	17.8	18.6	18.4	18.2	18.4	18.5	18.4	18.6	18.6	18.6	13.3	15.9
17	17.9	17.1	15.7	14.4	13.6	13.2	13.1	13.2	13.6	13.4	12.8	13.1	12.5	12.8	11.9	11.4	12.6	12.5	12.1	11.9	12.1	12.1	11.8	11.8	17.9	11.4	13.2
18	11.7	11.8	11.9	11.8	11.3	11.2	11.5	11.3	11.2	11.7	12.8	13.8	13.9	11.2	11.2	12.7	13.5	14.3	14.5	14.7	12.3	11.8	11.4	11.4	14.7	11.2	12.3
19	11.5	11.3	11.6	11.3	10.9	10.9	11.2	11.5	11.6	12.0	11.9	12.2	12.0	11.9	12.1	12.0	12.3	12.6	13.0	12.7	12.5	12.4	12.8	12.7	13.0	10.9	11.9
20	12.0	11.9	11.4	11.2	11.0	10.9	11.4	11.5	11.0	11.0	11.0	10.9	11.1	11.5	11.7	11.6	11.9	12.4	12.7	12.4	13.6	17.6	17.3	16.6	17.6	10.9	12.3
21	16.2	15.9	15.3	15.2	14.9	14.8	14.8	14.8	15.2	15.3	15.9	15.9	16.1	16.4	16.4	16.7	16.9	16.6	15.7	14.9	14.5	14.0	13.7	13.5	16.9	13.5	15.4
22	13.2	12.7	12.0	11.3	10.9	10.8	10.7	10.6	10.8	10.8	10.7	10.7	11.0	10.7	11.2	11.0	11.0	10.8	10.9	10.5	10.4	10.5	10.4	10.3	13.2	10.3	11.0
23	9.8	9.9	10.1	10.4	10.3	10.3	10.4	10.4	10.4	10.0	10.1	10.5	10.3	10.5	10.6	10.7	10.7	10.5	10.4	10.4	10.3	10.8	11.2	11.0	11.2	9.8	10.4
24	10.9	10.7	10.8	11.1	11.8	11.3	10.9	10.9	11.3	11.5	11.5	11.7	12.0	12.1	12.5	12.7	12.8	12.9	12.8	13.3	13.5	13.1	12.9	13.2	13.5	10.7	12.0
25	13.6	13.8	13.9	14.1	14.2	14.5	14.8	14.5	14.6	14.7	14.7	15.2	15.5	16.0	16.3	16.9	16.8	16.8	16.1	15.9	16.6	17.0	17.1	15.5	17.1	13.6	15.4
26	13.4	13.2	12.9	12.3	13.3	12.5	13.3	13.5	13.7	14.0	13.6	13.2	13.4	13.6	13.6	13.9	13.0	12.6	13.5	13.0	12.6	13.2	13.3	13.2	14.0	12.3	13.2
27	12.6	12.2	12.2	12.0	12.0	11.6	11.8	11.6	11.3	11.4	11.2	11.1	11.3	11.1	11.0	10.8	10.6	11.7	12.3	11.8	12.3	12.3	12.1	13.4	13.4	10.6	11.7
28	12.4	18.1	18.4	13.2	16.9	16.7	17.0	17.3	17.4	17.2	16.4	15.2	14.6	16.6	17.7	18.3	19.1	18.7	18.3	18.4	18.1	17.3	17.1	17.3	19.1	12.4	17.0
29	16.8	16.3	16.2	16.1	16.1	15.7	15.9	15.4	15.6	16.2	17.3	17.7	18.0	17.6	18.1	18.3	19.1	19.5	19.3	19.1	19.1	18.9	18.8	18.5	19.5	15.4	17.5
30	17.7	15.2	13.3	12.5	12.5	12.5	13.0	13.2	12.9	13.0	12.9	12.8	12.6	12.7	12.6	12.8	12.6	12.8	12.7	12.6	12.5	12.6	12.0	11.7	17.7	11.7	13.0
31	11.4	11.1	11.0	10.9	10.9	10.9	10.9	10.8	10.8	10.9	11.0	10.9	11.6	11.8	12.2	12.4	12.3	12.3	12.4	12.1	11.7	11.5	11.2	10.9	12.4	10.8	11.4
Max.	**17.9**	**18.1**	**18.4**	**16.1**	**16.9**	**16.7**	**17.0**	**17.3**	**17.4**	**17.2**	**17.3**	**17.7**	**18.0**	**17.6**	**18.1**	**18.3**	**19.1**	**19.5**	**19.3**	**19.1**	**19.1**	**18.9**	**18.8**	**18.6**	**19.5**		
Min.	**9.5**	**9.1**	**9.1**	**8.8**	**8.3**	**7.9**	**8.0**	**8.0**	**8.2**	**8.8**	**9.8**	**10.1**	**9.9**	**9.2**	**8.9**	**8.8**	**8.6**	**9.9**	**10.3**	**9.9**	**9.8**	**9.7**	**9.8**	**9.7**		**7.9**	
Avg.	**12.3**	**12.2**	**11.9**	**11.6**	**11.6**	**11.6**	**11.7**	**11.8**	**11.8**	**12.0**	**12.1**	**12.2**	**12.2**	**12.3**	**12.4**	**12.6**	**12.7**	**12.8**	**12.8**	**12.8**	**12.8**	**12.9**	**12.7**	**12.6**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature at 10 meters (deg. C)

August *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.1	11.0	10.9	10.8	10.9	11.0	10.7	10.6	10.8	10.8	10.9	10.9	10.9	10.8	10.8	11.0	11.2	11.2	11.2	11.5	11.2	11.1	11.2	11.0	11.5	10.6	11.0
2	11.0	10.8	10.9	11.0	11.1	11.0	10.8	11.0	11.3	11.5	11.5	11.7	11.7	11.6	11.7	11.6	11.6	11.8	11.9	11.9	11.7	11.6	11.5	11.8	11.9	10.8	11.4
3	11.6	11.5	11.5	11.8	12.0	12.1	11.8	11.3	11.6	12.1	12.2	12.3	12.3	12.4	12.4	12.2	12.4	12.1	11.8	11.7	11.7	11.7	11.7	11.5	12.4	11.3	11.9
4	11.6	11.6	11.6	11.7	11.5	11.4	11.4	11.5	11.6	11.6	11.7	11.6	11.7	11.9	12.0	11.8	11.8	12.0	12.4	12.6	12.6	12.4	12.0	12.1	12.6	11.4	11.8
5	12.1	12.1	12.1	12.1	12.1	11.8	11.7	11.6	11.2	11.4	11.9	12.5	13.5	16.1	16.1	15.8	15.6	15.4	14.8	14.7	14.4	14.2	13.9	13.0	16.1	11.2	13.3
6	12.8	13.5	13.1	12.8	12.6	12.5	12.8	12.8	12.9	13.7	14.7	15.4	15.8	16.5	16.9	17.2	17.1	16.8	16.5	16.4	16.0	15.5	15.2	15.6	17.2	12.5	14.8
7	15.3	15.3	14.9	14.8	14.8	14.8	14.8	15.4	16.1	16.2	16.3	17.5	18.6	18.9	19.2	19.5	19.4	19.1	18.9	18.8	19.3	19.2	18.8	15.6	19.5	14.8	17.1
8	14.6	14.0	14.0	13.8	13.3	13.1	13.3	13.6	13.9	14.9	15.7	16.4	17.7	19.2	20.1	20.4	20.9	20.9	20.5	20.1	19.3	19.5	19.3	19.0	20.9	13.1	17.0
9	17.4	16.1	15.2	14.6	14.3	14.4	14.1	14.4	14.2	13.5	13.6	13.8	13.8	13.7	13.5	13.8	14.0	13.5	13.5	13.4	13.0	13.2	12.4	12.0	17.4	12.0	14.0
10	12.6	12.5	12.4	12.4	12.3	12.4	12.4	12.6	12.1	11.8	11.3	10.8	10.7	10.5	10.6	10.7	10.8	10.9	11.4	11.4	11.4	11.7	11.7	11.7	12.6	10.5	11.6
11	11.6	10.9	10.4	10.1	10.9	10.3	10.1	9.9	9.9	9.8	9.5	9.3	9.2	9.4	9.7	10.2	10.9	11.4	11.9	12.4	13.2	16.0	17.4	19.2	19.2	9.2	11.4
12	18.9	19.8	21.1	20.3	19.3	18.9	18.8	19.1	19.0	18.9	18.9	19.0	19.5	20.8	21.7	22.6	23.0	23.2	23.3	23.3	20.1	18.9	16.6	16.1	23.3	16.1	20.0
13	15.2	15.6	15.5	15.7	16.8	14.7	14.3	14.7	15.4	15.2	15.3	15.6	15.3	14.7	15.1	15.0	14.1	15.3	16.9	16.2	16.4	15.8	16.4	19.4	19.4	14.1	15.6
14	18.7	17.2	16.1	14.7	13.5	12.7	12.6	12.9	12.8	12.9	12.8	12.7	12.7	13.1	13.6	13.7	13.7	13.1	12.7	12.9	13.1	12.9	13.1	13.0	18.7	12.6	13.6
15	12.3	12.1	12.5	11.5	11.5	11.4	11.4	11.5	11.8	12.4	12.4	12.3	12.1	12.0	11.8	11.5	11.7	11.8	12.1	11.9	11.8	11.9	11.7	11.6	12.5	11.4	11.9
16	11.6	11.3	12.4	11.6	11.2	11.3	11.7	12.1	12.6	13.4	13.9	14.6	14.6	14.9	14.7	14.6	14.4	14.2	14.2	13.9	13.4	12.7	13.6	13.7	14.9	11.2	13.2
17	12.5	12.8	12.4	12.8	12.8	12.2	12.1	12.4	12.8	13.4	13.5	13.6	13.8	13.4	13.0	12.9	13.1	13.6	13.9	13.7	13.3	13.2	13.3	13.4	13.9	12.1	13.1
18	13.3	13.4	12.5	12.9	12.2	12.1	11.7	11.9	11.9	11.6	11.5	11.6	11.7	11.8	11.9	12.3	12.6	12.8	12.6	12.4	12.6	12.5	12.3	12.6	13.4	11.5	12.3
19	12.2	12.3	12.9	13.0	13.3	13.8	13.6	13.9	14.2	14.2	14.5	15.2	15.6	14.8	14.7	14.6	14.9	14.5	14.2	13.6	12.4	12.2	12.2	11.2	15.6	11.2	13.7
20	11.3	11.5	11.7	12.1	12.5	11.8	11.6	12.0	11.9	11.7	11.3	11.9	12.9	12.7	12.7	12.9	13.1	13.6	13.4	12.9	12.5	12.7	12.6	12.6	13.6	11.3	12.3
21	12.7	12.8	12.7	12.1	12.0	11.5	11.6	11.7	11.7	11.7	12.1	11.9	11.4	11.9	11.9	11.9	11.9	11.8	11.9	12.0	11.9	12.2	12.3	12.3	12.8	11.4	12.0
22	12.0	11.9	11.5	11.3	11.3	11.2	11.0	11.0	11.2	11.3	11.4	11.6	11.6	11.7	11.6	11.9	12.0	11.9	11.7	11.7	11.5	11.9	11.8	11.1	12.0	11.0	11.5
23	11.7	11.6	11.6	11.6	11.2	10.7	10.4	10.3	10.7	11.1	11.2	11.7	12.2	12.3	12.5	12.6	13.3	14.1	14.0	14.2	14.6	14.5	14.3	14.7	14.7	10.3	12.4
24	14.9	14.3	13.1	12.4	12.2	12.1	12.1	12.3	12.5	12.9	12.6	12.4	12.7	12.8	13.0	13.2	13.3	13.5	13.7	13.6	13.7	12.4	12.9	12.3	14.9	12.1	12.9
25	11.0	10.5	10.2	10.4	11.1	11.5	12.1	12.2	11.9	11.8	10.8	10.6	10.9	10.9	11.0	10.9	10.9	11.4	11.8	11.9	12.5	12.6	12.6	12.0	12.6	10.2	11.4
26	11.1	11.0	10.5	10.7	11.1	11.6	12.1	12.4	12.0	12.6	12.5	12.4	12.4	12.3	12.3	12.3	12.9	14.5	14.4	12.9	14.7	14.6	14.1	13.9	14.7	10.5	12.5
27	14.4	14.3	14.7	14.3	14.4	13.8	14.5	14.9	15.1	15.4	15.8	16.4	16.6	16.9	16.7	17.2	17.1	17.1	17.0	16.8	16.4	15.5	15.3	14.7	17.2	13.8	15.6
28	15.7	14.9	14.5	15.3	14.7	13.0	12.8	12.8	13.3	13.7	14.2	13.2	13.2	13.8	14.4	15.1	15.5	15.0	13.9	14.6	14.5	15.7	14.6	13.8	15.7	12.8	14.3
29	13.6	13.3	13.7	14.4	12.7	13.0	12.9	8.4	17.6	17.0	16.8	16.7	16.1	14.0	14.0	11.5	10.7	10.2	10.0	9.3	9.5	9.5	10.7	12.8	17.6	8.4	12.8
30	0.5															17.8	15.8								17.8	0.5	11.4
31						15.5	15.3	16.1	15.5	15.0	14.1	13.7													16.1	13.7	15.0
Max.	**18.9**	**19.8**	**21.1**	**20.3**	**19.3**	**18.9**	**18.8**	**19.1**	**19.0**	**18.9**	**18.9**	**19.0**	**19.5**	**20.8**	**21.7**	**22.6**	**23.0**	**23.2**	**23.3**	**23.3**	**20.1**	**19.5**	**19.3**	**19.4**	**23.3**		
Min.	**0.5**	**10.5**	**10.2**	**10.1**	**10.9**	**10.3**	**10.1**	**8.4**	**9.9**	**9.8**	**9.5**	**9.3**	**9.2**	**9.4**	**9.7**	**10.2**	**10.7**	**10.2**	**10.0**	**9.3**	**9.5**	**9.5**	**10.7**	**11.0**		**0.5**	
Avg.	**12.8**	**13.1**	**13.0**	**12.9**	**12.7**	**12.6**	**12.5**	**12.6**	**13.0**	**13.1**	**13.2**	**13.3**	**13.5**	**13.6**	**13.8**	**14.0**	**14.0**	**14.0**	**14.0**	**13.9**	**13.7**	**13.7**	**13.6**	**13.6**			**13.3**

Total Hours in Month 744 **Hours Data Available** 706 **Data Recovery** 94.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.7	13.6	13.4	13.0	12.4	11.7	11.5	11.5	11.3	12.1	12.4	11.8	11.7	12.2	12.0	11.0	10.7	10.6	11.2	11.1	10.9	10.4	10.2	10.2	13.7	10.2	11.7
2	9.9	9.4	9.4	9.5	9.5	9.6	9.7	9.7	9.9	10.5	10.9	11.2	11.4	11.4	11.6	11.5	11.6	11.5	11.5	11.8	11.9	11.6	11.3	10.8	11.9	9.4	10.7
3	11.0	10.6	10.5	10.2	10.2	10.4	10.2	10.1	10.4	10.8	10.8	10.2	10.2	10.2	10.3	10.7	10.9	11.4	11.4	11.1	10.7	11.0	11.3	11.6	11.6	10.1	10.7
4	11.2	11.4	11.1	11.5	11.4	11.5	11.6	11.5	11.5	11.5	11.3	11.3	11.5	11.5	11.6	11.6	11.5	11.5	11.4	11.2	11.3	11.1	11.1	10.9	11.6	10.9	11.4
5	10.5	10.7	10.8	10.6	10.8	11.3	11.7	12.2	12.8	13.0	13.3	14.1	14.5	15.0	15.2	14.7	15.4	15.7	15.5	15.1	15.0	15.2	15.1	15.4	15.7	10.5	13.5
6	15.1	14.8	14.4	14.5	14.8	14.3	14.1	14.7	14.6	14.1	14.1	13.9	13.8	14.4	15.0	15.2	15.2	15.6	15.8	15.4	15.1	14.7	14.5	14.3	15.8	13.8	14.7
7	14.1	13.9	13.7	13.5	13.3	12.9	13.0	12.8	12.9	13.4	13.9	13.4	13.5	13.5	12.7	12.5	12.2	12.1	12.9	12.6	12.0	12.2	12.0	11.7	14.1	11.7	12.9
8	11.5	11.7	12.1	12.3	12.3	12.4	12.3	12.0	11.8	11.5	11.5	11.8	12.4	12.8	11.9	11.8	12.6	13.3	13.4	13.3	13.2	13.0	12.7	12.5	13.4	11.5	12.3
9	12.3	12.4	12.5	12.5	12.0	12.0	11.9	12.0	11.9	12.1	12.4	12.8	13.3	13.4	13.8	14.1	12.4	12.5	12.6	12.9	12.6	12.4	11.7	11.3	14.1	11.3	12.5
10	10.7	10.7	10.8	9.7	9.7	10.0	9.7	8.7	9.8	10.0	10.5	10.5	11.1	12.7	13.1	13.1	12.6	12.6	12.6	12.6	12.6	12.5	12.5	12.5	13.1	8.7	11.3
11	12.2	12.0	12.0	12.1	11.8	11.6	11.6	11.5	11.5	11.5	11.5	11.6	11.6	11.0	11.0	10.8	10.4	10.2	10.3	10.7	10.6	10.6	10.5	10.3	12.2	10.2	11.2
12	10.2	10.4	10.5	10.5	10.7	10.7	10.9	11.3	11.4	11.7	11.7	11.8	11.6	12.4	12.9	13.1	12.9	11.5	11.1	11.1	11.4	11.6	11.9	11.6	13.1	10.2	11.5
13	12.2	11.8	11.5	10.9	9.3	8.5	8.4	9.9	9.6	9.8	10.8	10.9	11.1	11.3	11.2	11.3	11.2	11.0	10.6	10.6	10.2	10.6	10.7	10.4	12.2	8.4	10.6
14	10.2	9.4	9.2	9.6	9.3	9.1	8.9	8.7	8.6	8.8	9.3	9.7	9.9	9.9	9.6	9.8	10.0	10.0	10.1	10.2	11.1	10.4	10.4	10.5	11.1	8.6	9.7
15	10.1	11.0	11.1	11.1	10.9	10.7	10.5	10.4	10.5	10.8	11.0	11.5	12.1	12.8	13.0	13.1	12.9	12.7	12.5	12.6	12.0	11.6	11.7	11.9	13.1	10.1	11.6
16	11.9	11.6	11.1	11.1	11.0	10.9	11.0	11.0	10.9	11.2	11.4	11.8	12.3	12.8	13.3	13.6	13.6	13.3	12.9	12.8	12.6	12.4	12.2	11.6	13.6	10.9	12.0
17	10.9	10.4	10.2	10.1	9.9	10.0	10.2	10.2	10.1	10.1	10.3	10.6	10.8	11.4	11.6	11.8	12.1	11.6	11.3	10.9	10.7	10.7	9.4	9.5	12.1	9.4	10.6
18	9.8	10.2	10.6	9.9	9.3	9.8	10.8	11.1	11.0	11.2	11.2	11.2	11.1	11.0	11.1	11.4	11.7	11.8	11.1	10.9	10.6	10.9	11.0	10.9	11.8	9.3	10.8
19	10.4	10.1	10.5	10.3	10.4	10.5	10.7	10.6	11.7	11.0	11.2	11.1	11.2	12.5	12.5	13.1	12.4		12.5	11.6	11.9	11.9	11.8	11.4	13.1	10.1	11.4
20	11.3	11.3	11.1	11.1	11.2	11.4	11.3	11.0	10.6	10.6	9.5	10.3	10.6	10.5	10.6	10.8	11.0	11.0	11.4	11.4	10.5	10.9	10.5	10.6	11.4	9.5	10.9
21	10.9	11.0	10.9	10.8	11.0	10.9	11.1	11.1	11.1	11.4	11.7	12.0	12.6	12.8	13.3	13.2	13.5	13.4	13.2	12.9	12.4	12.5	12.7	12.9	13.5	10.8	12.1
22	12.7	12.1	10.5	9.4	8.8	8.7	7.5	7.5	8.0	7.8	8.5	9.7	11.6	12.4	12.2	11.9	12.0	11.5	10.9	9.8	9.7	8.7	8.5	8.4	12.7	7.5	10.0
23	8.5	8.2	8.4	8.5	8.5	8.4	8.3	8.6	8.8	9.4	9.9	10.4	10.9	11.3	11.3	11.0	11.1	11.2	11.0	10.7	10.7	10.6	10.2	9.6	11.3	8.2	9.8
24	9.1	9.4	9.2	9.1	9.3	10.1	10.2	10.0	9.0	8.9	9.5	9.5	9.8	10.6	10.2	10.8	11.0	10.4	10.4	10.1	9.2	8.5	7.9	7.9	11.0	7.9	9.6
25	8.2	9.1	8.6	8.9	8.7	8.9	8.7	9.1	8.5	7.7	8.4	10.0	10.5	10.2	10.3	10.6	10.5	9.9	10.3	10.0	9.7	9.1	9.3	8.9	10.6	7.7	9.3
26	8.9	9.0	8.8	8.5	8.4	7.8	7.8	7.6	7.6	8.3	8.5	8.9	9.3	9.7	9.9	10.0	10.2	10.3	10.4	10.3	10.0	9.6	9.5	9.3	10.4	7.6	9.1
27	9.5	9.6	9.5	9.7	9.6	9.7	9.5	8.9	8.7	9.2	9.4	9.6	10.1	9.9	9.9	9.7	9.7	9.5	9.6	9.4	9.0	8.9	8.8	8.9	10.1	8.7	9.4
28	8.8	7.4	7.5	7.0	5.8	5.0	4.8	5.4	5.8	6.4	6.8	7.3	7.5	7.5	7.3	7.6	7.8	8.0	8.2	8.1	8.0	7.9	7.8	7.8	8.8	4.8	7.1
29	7.7	7.7	7.4	7.2	7.3	7.4	7.5	7.4	7.2	7.6	7.9	8.4	9.3	10.2	10.7	10.8	10.4	10.2	10.3	10.2	9.7	9.0	8.7	9.2	10.8	7.2	8.7
30	9.3	9.4	9.0	8.4	8.2	8.4	8.4	7.5	7.1	7.2	7.3	7.4	7.7	7.9	8.2	8.5	8.7	8.8	9.0	8.8	8.2	8.1	7.5	7.6	9.4	7.1	8.2
Max.	**15.1**	**14.8**	**14.4**	**14.5**	**14.8**	**14.3**	**14.1**	**14.7**	**14.6**	**14.1**	**14.1**	**14.1**	**14.5**	**15.0**	**15.2**	**15.2**	**15.4**	**15.7**	**15.8**	**15.4**	**15.1**	**15.2**	**15.1**	**15.4**	**15.8**		
Min.	**7.7**	**7.4**	**7.4**	**7.0**	**5.8**	**5.0**	**4.8**	**5.4**	**5.8**	**6.4**	**6.8**	**7.3**	**7.5**	**7.5**	**7.3**	**7.6**	**7.8**	**8.0**	**8.2**	**8.1**	**8.0**	**7.9**	**7.5**	**7.6**		**4.8**	
Avg.	**10.8**	**10.7**	**10.5**	**10.4**	**10.2**	**10.1**	**10.1**	**10.1**	**10.2**	**10.3**	**10.6**	**10.8**	**11.2**	**11.5**	**11.6**	**11.6**	**11.6**	**11.5**	**11.5**	**11.3**	**11.1**	**11.0**	**10.8**	**10.7**			**10.8**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.9	8.1	8.2	8.2	7.4	7.6	7.5	8.2	7.9	7.8	8.4	8.4	8.7	8.9	9.1	9.2	9.4	9.8	9.8	9.5	9.2	9.0	8.8	8.7	9.8	7.4	8.6
2	8.6	7.8	7.8	7.6	7.4	7.2	7.0	6.8	6.8	7.0	7.2	7.4	7.7	8.0	8.4	8.6	8.9	8.8	9.0	8.8	8.6	8.4	8.0	7.7	9.0	6.8	7.9
3	7.3	7.2	7.3	7.4	7.0	6.7	6.8	6.7	6.5	6.7	7.0	7.4	8.2	8.6	9.2	9.6	9.5	9.3	8.8	8.4	8.0	7.7	7.9	7.8	9.6	6.5	7.8
4	7.1	5.8	5.6	5.1	5.3	6.1	6.8	7.7	7.3	6.3	5.4	4.4	4.1	3.2	3.1	3.3	3.3	3.5	3.7	3.9	3.9	3.9	3.8	3.8	7.7	3.1	4.9
5	3.6	3.5	3.4	3.4	3.6	3.4	2.9	3.0	3.2	3.1	3.5	3.8	3.9	4.0	3.9	4.1	4.9	6.5	7.3	7.3	6.8	6.0	5.7	5.6	7.3	2.9	4.4
6	5.1	4.8	4.8	4.4	4.3	4.3	4.3	4.0	3.4	3.3	3.5	3.5	3.8	4.3	4.5	4.8	4.7	4.3	3.6	3.7	3.4	3.1	3.0	2.8	5.1	2.8	4.0
7	2.4	2.1	2.0	1.9	1.8	1.9	2.0	1.9	1.7	1.7	1.6	2.2	2.5	2.8	3.2	3.5	3.2	2.6	2.2	2.0	1.8	1.7	1.6	1.8	3.5	1.6	2.2
8	1.9	1.8	1.8	1.8	1.5	1.1	0.7	0.1	-0.2	0.0	0.5	1.1	1.8	1.6	1.7	2.1	2.0	1.9	1.8	1.6	1.6	1.6	1.3	0.8	2.1	-0.2	1.3
9	0.4	0.3	0.1	0.1	0.3	0.4	0.6	0.8	0.9	0.0	0.7	1.2	2.3	3.0	3.3	3.9	4.8	4.8	4.5	4.1	4.2	4.3	4.1	2.5	4.8	0.0	2.2
10	3.4	3.4	3.1	4.3	4.4	4.3	4.2	4.1	4.0	4.1	4.5	4.6	4.8	5.0	5.4	5.7	5.7	5.2	4.9	4.5	4.3	4.2	4.1	3.8	5.7	3.1	4.4
11	3.8	3.8	3.3	2.4	1.7	1.5	0.8	1.1	2.2	2.1	2.5	3.8	4.3	4.5	4.4	3.0	3.2	3.8	4.0	4.0	4.0	4.3	4.3	4.2	4.5	0.8	3.2
12	4.3	4.6	4.9	5.2	5.4	5.2	5.1	4.8	5.1	5.2	5.6	6.2	5.5	5.9	5.4	5.5	5.4	5.2	5.3	5.4	5.0	4.2	3.9	3.5	6.2	3.5	5.1
13	3.5	3.6	3.7	4.5	6.3	6.5	6.5	6.6	6.3	6.0	6.0	6.1	6.0	5.9	5.3	4.6	4.3	4.0	3.7	3.7	4.4	3.4	4.0	3.6	6.6	3.4	4.9
14	4.0	4.2	3.4	2.3	1.9	1.6	1.4	1.2	1.3	1.0	1.6	2.1	2.2	2.1	2.3	2.6	2.6	2.6	2.4	2.3	2.4	2.3	2.1	2.0	4.2	1.0	2.3
15	1.6	1.2	1.6	1.7	2.3	1.9	1.7	1.4	1.2	1.4	1.8	3.3	4.1	5.1	5.4	5.8	5.9	5.8	5.6	5.0	5.1	4.3	4.5	4.6	5.9	1.2	3.4
16	4.3	3.9	2.7	2.5	2.9	1.9	1.9	1.9	2.0	2.7	3.4	3.9	4.4	4.7	4.7	3.6	3.0	2.6	2.3	1.8	1.8	1.7	1.3	1.2	4.7	1.2	2.8
17	1.5	1.9	2.2	2.3	2.8	3.0	3.1	3.2	3.2	3.0	3.1	3.0	2.4	2.6	1.6	1.2	1.4	1.4	1.2	1.2	1.5	1.9	2.2	2.3	3.2	1.2	2.2
18	2.3	2.1	2.3	2.4	2.4	2.8	2.6	2.8	2.8	2.9	3.0	3.2	3.0	3.1	2.9	2.9	2.9	2.5	2.3	2.1	1.9	1.7	1.5	1.5	3.2	1.5	2.5
19	1.4	1.4	1.2	1.4	1.6	1.8	1.8	1.6	1.4	1.8	2.3	2.7	3.1	3.4	3.1	3.6	4.1	3.7	3.3	3.2	3.3	3.2	2.8	1.7	4.1	1.2	2.4
20	1.2	0.6	0.5	0.1	-0.2	-0.6	-0.9	-1.2	-0.9	-0.4	-0.1	0.7	2.2	3.4	3.1	2.1	3.1	3.8	4.2	4.5	4.7	4.4	3.2	3.3	4.7	-1.2	1.7
21	4.4	5.2	5.1	5.0	4.4	3.2	4.3	4.7	5.0	5.0	5.0	5.2	5.5	5.9	6.4	6.8	6.7	6.5	6.0	5.8	4.4	3.6	3.6	4.3	6.8	3.2	5.1
22	3.8	3.5	2.6	2.1	1.8	2.5	3.3	2.0	2.3	3.1	3.4	3.3	2.8	1.7	2.1	2.1	1.8	1.8	1.3	1.3	1.6	1.7	1.1	1.0	3.8	1.0	2.3
23	1.3	1.8	2.0	2.1	1.8	2.0	1.8	1.4	1.1	0.8	1.3	2.5	2.9	2.7	2.5	2.4	2.5	1.9	2.1	2.1	2.0	1.9	1.4	1.0	2.9	0.8	1.9
24	0.6	0.4	0.7	1.0	1.1	1.2	1.0	0.7	1.0	1.3	0.4	0.3	1.2	1.9	2.3	2.7	3.2	3.3	3.4	3.3	3.0	4.0	4.2	4.5	4.5	0.3	1.9
25	4.2	6.2	7.3	5.5	4.5	4.2	4.2	3.6	3.5	3.0	2.8	3.3	3.5	3.7	3.5	2.4	2.3	2.7	2.1	2.4	3.9	4.3	4.4	4.2	7.3	2.1	3.8
26	4.3	4.1	4.1	4.2	4.3	4.4	4.2	4.3	4.1	3.8	3.8	4.4	4.8	5.1	5.2	5.3	5.3	5.3	5.1	5.0	5.8	5.4	5.3	5.6	5.8	3.8	4.7
27	5.2	5.3	4.9	5.2	5.5	5.5	5.5	6.0	5.5	5.1	5.1	4.9	4.8	5.2	5.0	5.2	5.5	5.4	5.3	5.4	5.3	5.0	4.5	4.6	6.0	4.5	5.2
28	4.9	4.9	4.9	4.4	5.7	5.0	4.8	4.5	4.2	4.3	5.0	3.9	4.4	4.7	4.6	4.4	4.4	4.6	4.4	4.2	4.2	4.2	3.9	3.9	5.7	3.9	4.5
29	3.9	3.7	3.5	3.5	3.6	3.3	3.7	4.0	3.8	3.9	4.1	4.0	4.1	4.0	3.9	4.1	3.9	3.7	3.5	3.7	4.1	3.9	3.2	3.1	4.1	3.1	3.8
30	3.2	3.8	4.0	4.1	4.1	4.9	5.9	6.4	6.9	7.1	7.6	7.2	6.1	5.5	5.0	4.8	4.2	4.1	4.0	4.6	4.6	4.4	4.4	4.3	7.6	3.2	5.0
31	4.2	4.0	3.8	3.7	3.4	3.3	3.6	3.7	3.7	3.9	4.0	4.5	4.8	5.1	5.5	5.5	5.2	4.8	4.6	3.8	2.1	1.8	1.5	1.5	5.5	1.5	3.8
Max.	**8.6**	**8.1**	**8.2**	**8.2**	**7.4**	**7.6**	**7.5**	**8.2**	**7.9**	**7.8**	**8.4**	**8.4**	**8.7**	**8.9**	**9.2**	**9.6**	**9.5**	**9.8**	**9.8**	**9.5**	**9.2**	**9.0**	**8.8**	**8.7**	**9.8**		
Min.	**0.4**	**0.3**	**0.1**	**0.1**	**-0.2**	**-0.6**	**-0.9**	**-1.2**	**-0.9**	**-0.4**	**-0.1**	**0.3**	**1.2**	**1.6**	**1.6**	**1.2**	**1.4**	**1.4**	**1.2**	**1.2**	**1.5**	**1.6**	**1.1**	**0.8**		**-1.2**	
Avg.	**3.7**	**3.7**	**3.6**	**3.5**	**3.6**	**3.5**	**3.5**	**3.5**	**3.5**	**3.4**	**3.7**	**4.0**	**4.2**	**4.4**	**4.4**	**4.4**	**4.4**	**4.4**	**4.3**	**4.2**	**4.1**	**3.9**	**3.7**	**3.6**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.9	2.5	3.0	3.2	3.7	3.9	4.3	4.3	4.1	4.3	4.9	4.7	4.0	5.4	5.0	5.7	6.1	4.6	4.1	4.0	3.8	3.8	3.5	3.0	6.1	1.9	4.1
2	3.0	3.0	2.8	2.8	2.6	2.4	2.4	2.2	2.1	2.1	2.0	2.0	2.2	2.3	2.4	2.4	2.1	1.8	1.7	1.3	1.3	1.5	1.6	1.6	3.0	1.3	2.2
3	1.6	1.6	1.8	1.6	1.5	1.4	1.5	1.5	1.4	1.5	1.6	1.9	1.8	2.0	2.2	2.2	2.0	1.7	1.1	0.6	0.5	0.6	0.8	1.8	2.2	0.5	1.5
4	0.7	1.0	1.5	3.2	3.9	5.3	5.2	5.0	5.4	5.5	5.3	5.7	5.7	5.8	5.6	5.6	5.8	5.8	5.5	5.6	5.3	5.3	5.4	5.0	5.8	0.7	4.8
5	5.1	5.2	4.5	4.1	2.9	2.1	2.1	1.8	2.2	1.0	1.3	1.5	2.2	2.0	1.7	1.9	2.4	2.3	2.2	2.5	3.2	3.0	3.5	3.5	5.2	1.0	2.7
6	3.5	3.5	3.5	3.5	3.1	3.4	3.5	3.4	3.5	3.3	2.3	2.2	2.4	2.3	2.1	1.8	1.6	1.3	1.2	1.2	1.6	2.0	2.3	2.4	3.5	1.2	2.5
7	2.8	2.9	2.9	3.0	3.5	2.9	3.5	2.5	2.8	4.9	5.6	6.1	5.9	6.1	6.3	6.5	6.5	6.6	6.1	6.0	5.4	5.3	5.2	4.3	6.6	2.5	4.7
8	3.4	3.1	3.0	3.6	4.9	5.2	5.8	6.2	5.1	3.1	1.5	1.5	2.8	5.1	6.2	5.7	5.7	6.2	5.8	5.3	4.9	5.4	4.5	3.7	6.2	1.5	4.5
9	4.0	3.5	2.5	2.1	2.5	2.3	2.4	2.4	2.1	2.0	2.1	2.7	3.1	3.4	3.7	3.6	3.6	3.4	3.3	3.6	3.9	3.0	3.5	3.9	4.0	2.0	3.0
10	4.1	3.9	3.8	3.1	2.7	2.6	2.4	2.3	2.4	2.2	1.7	1.6	1.8	2.2	3.6	4.0	3.8	3.9	3.9	4.2	3.8	3.5	3.3	3.2	4.2	1.6	3.1
11	3.1	2.8	2.4	2.3	2.1	1.6	1.0	0.7	0.5	0.1	-0.2	0.2	0.9	1.2	1.7	1.9	1.9	1.5	1.1	0.9	0.7	0.8	1.0	1.0	3.1	-0.2	1.3
12	0.7	0.4	0.2	0.3	0.8	0.9	0.7	0.7	0.5	-0.3	-0.2	-0.2	0.4	0.5	0.4	0.4	-0.2	-0.3	-0.2	-0.4	-0.5	-1.1	-1.3	-1.1	0.9	-1.3	0.0
13	-0.4	0.3	0.6	1.0	0.7	0.6	0.6	1.3	1.6	1.7	1.7	0.5	0.5	0.7	0.7	0.6	0.3	0.4	0.7	0.4	0.5	1.2	1.2	1.1	1.7	-0.4	0.8
14	1.0	1.0	2.0	3.4	3.9	3.9	3.3	3.5	2.8	2.0	1.7	1.8	1.7	1.3	1.1	1.1	1.3	1.0	0.8	0.7	0.7	0.5	0.3	0.2	3.9	0.2	1.7
15	0.1	1.1	0.3	-0.3	-0.2	0.2	0.0	-0.2	-0.4	-0.4	-0.8	-0.5	-0.3	-0.2	0.4	0.6	0.7	0.6	0.8	0.5	0.6	-0.1	-0.6	-0.9	1.1	-0.9	0.0
16	-0.9	-1.2	-1.1	-1.6	-1.7	-2.1	-2.5	-2.9	-3.2	-3.8	-4.1	-3.7	-3.4	-3.2	-2.8	-2.8	-3.2	-2.9	-2.8	-3.2	-2.9	-3.0	-3.1	-3.2	-0.9	-4.1	-2.7
17	-3.4	-3.2	-3.5	-3.7	-3.7	-4.0	-4.2	-4.5	-4.5	-4.3	-4.3	-3.7	-3.7	-3.9	-4.0	-4.1	-4.2	-3.8	-3.9	-3.6	-3.9	-4.5	-4.8	-5.2	-3.2	-5.2	-4.0
18	-4.5	-5.0	-5.1	-4.5	-4.0	-3.9	-4.4	-4.7	-4.6	-5.4	-5.0	-5.2	-5.0	-3.9	-4.2	-4.5	-4.4	-4.8	-4.9	-4.8	-4.8	-4.9	-5.1	-4.9	-3.9	-5.4	-4.7
19	-5.2	-5.6	-5.5	-5.5	-5.7	-5.6	-5.2	-4.4	-4.4	-2.7	-2.7	-1.8	-0.6	-0.4	-0.4	-0.4	-0.5	-0.6	-1.0	-0.8	0.0	1.0	1.5	1.6	1.6	-5.7	-2.3
20	1.9	1.8	1.7	1.7	1.9	2.6	3.0	3.0	3.0	3.2	3.3	3.4	4.0	5.0	5.4	5.2	5.0	4.9	4.6	4.5	4.7	4.5	4.4	4.4	5.4	1.7	3.6
21	4.5	4.2	4.3	4.2	5.1	6.2	6.3	6.2	6.0	5.9	5.9	6.2	6.2	6.3	6.8	6.9	6.7	6.5	6.4	6.5	6.6	6.6	6.7	6.8	6.9	4.2	6.0
22	6.2	5.3	3.8	3.3	3.9	3.8	4.2	5.1	5.9	6.5	6.3	6.2	5.7	5.3	5.0	4.2	3.8	3.8	4.2	5.0	5.3	5.3	5.1	5.2	6.5	3.3	4.9
23	5.2	5.2	5.4	5.7	5.9	4.7	4.7	4.9	4.9	4.7	4.4	4.2	4.2	4.0	3.7	3.2	2.9	2.6	2.7	2.5	2.4	2.0	1.1	1.0	5.9	1.0	3.8
24	0.9	0.6	0.5	0.7	0.6	0.3	-0.4	-0.6	-0.7	-0.7	-0.2	0.9	1.7	1.2	1.6	1.9	2.1	1.5	1.4	1.4	1.3	1.4	1.9	2.5	2.5	-0.7	0.9
25	2.8	3.2	3.8	4.6	4.8	4.4	3.8	4.3	4.6	4.5	4.2	4.4	4.5	4.0	3.8	3.6	3.6	4.2	4.7	5.0	5.3	5.3	5.9	6.4	6.4	2.8	4.4
26	6.9	7.4	7.9	7.9	7.5	7.0	6.0	4.6	3.9	4.2	4.8	5.0	4.2	4.4	4.7	5.7	5.7	5.6	6.0	6.1	5.7	5.5	5.9	6.3	7.9	3.9	5.8
27	6.3	6.3	6.0	5.7	6.3	6.0	5.7	5.7	6.0	5.6	5.5	5.4	5.1	5.3	5.5	5.8	6.1	6.1	5.9	5.6	5.1	5.3	4.5	4.3	6.3	4.3	5.6
28	4.4	3.7	3.2	3.8	3.8	3.8	4.0	3.5	3.4	3.3	3.8	3.7	3.5	4.1	4.3	4.8	5.5	5.3	4.7	4.5	5.1	5.1	5.1	4.9	5.5	3.2	4.2
29	4.7	4.1	3.8	4.1	4.4	4.1	4.8	5.8	5.3	5.5	5.9	5.4	5.3	5.4	5.3	5.1	5.1	5.4	5.4	5.4	5.3	5.4	5.6	5.5	5.9	3.8	5.1
30	5.6	6.1	6.5	6.5	6.6	6.8	7.1	7.2	7.0	7.2	7.1	7.2	7.6	7.3	7.4	8.0	8.0	8.3	8.3	8.3	8.4	8.3	7.2	8.0	8.4	5.6	7.3
Max.	**6.9**	**7.4**	**7.9**	**7.9**	**7.5**	**7.0**	**7.1**	**7.2**	**7.0**	**7.2**	**7.1**	**7.2**	**7.6**	**7.3**	**7.4**	**8.0**	**8.0**	**8.3**	**8.3**	**8.3**	**8.4**	**8.3**	**7.2**	**8.0**	**8.4**		
Min.	**-5.2**	**-5.6**	**-5.5**	**-5.5**	**-5.7**	**-5.6**	**-5.2**	**-4.7**	**-4.6**	**-5.4**	**-5.0**	**-5.2**	**-5.0**	**-3.9**	**-4.2**	**-4.5**	**-4.4**	**-4.8**	**-4.9**	**-4.8**	**-4.8**	**-4.9**	**-5.1**	**-5.2**		**-5.7**	
Avg.	**2.3**	**2.3**	**2.2**	**2.3**	**2.5**	**2.4**	**2.4**	**2.4**	**2.3**	**2.2**	**2.2**	**2.3**	**2.5**	**2.7**	**2.8**	**2.9**	**2.9**	**2.8**	**2.7**	**2.6**	**2.6**	**2.6**	**2.5**	**2.5**			**2.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.7	8.0	7.6	7.6	5.1	3.8	3.7	3.9	3.6	3.5	4.3	3.6	2.9	2.6	2.5	2.3	2.3	1.7	0.9	0.7	-0.1	-0.1	0.5	1.6	8.7	-0.1	3.4
2	2.0	2.0	1.4	2.3	2.1	2.0	1.7	2.6	1.9	1.3	1.2	0.5	0.3	2.2	2.4	3.9	5.2	4.2	3.1	2.2	1.7	0.8	-0.2	-1.7	5.2	-1.7	1.9
3	-1.7	-2.3	-2.6	-3.0	-2.8	-2.9	-3.0	-2.9	-2.8	-3.2	-3.5	-3.6	-3.5	-3.3	-3.3	-3.5	-4.1	-4.5	-5.1	-5.3	-5.6	-5.6	-5.5	-5.2	-1.7	-5.6	-3.7
4	-4.6	-4.7	-4.5	-3.8	-3.2	-3.7	-3.8	-3.2	-2.5	-2.3	-1.8	-1.2	-1.6	-1.9	-1.5	-1.3	-1.2	-1.3	-1.3	-1.3	-1.5	-1.5	-1.6	-2.1	-1.2	-4.7	-2.4
5	-2.3	-2.1	-2.1	-2.0	-1.9	-1.9	-2.2	-2.2	-2.1	-1.9	-1.5	-1.3	-0.3	0.6	0.5	0.9	1.2	2.0	1.8	1.9	1.8	1.6	1.6	2.5	2.5	-2.3	-0.3
6	2.1	2.7	3.3	3.8	3.9	4.1	4.0	3.7	3.2	3.1	3.2	2.8	3.1	3.2	2.3	1.9	1.0	0.8	0.9	0.5	0.7	0.8	1.9	2.6	4.1	0.5	2.5
7	2.7	3.7	3.2	1.9	1.8	2.8	0.8	0.3	0.9	3.3	4.1	3.0	2.1	1.9	2.2	1.4	1.4	1.2	1.6	1.5	1.5	1.4	1.6	1.9	4.1	0.3	2.0
8	2.0	2.3	1.9	1.5	1.9	2.3	2.5	3.3	4.2	3.7	4.1	4.3	4.1	4.2	3.8	1.6	0.6	0.6	0.8	0.8	0.9	2.5	3.2	3.3	4.3	0.6	2.5
9	3.9	4.1	4.2	3.6	4.0	2.3	1.6	1.7	3.0	4.7	5.0	4.8	5.1	4.7	4.7	4.5	4.8	5.2	5.2	5.0	4.7	4.4	4.5	4.4	5.2	1.6	4.2
10	4.6	4.7	4.6	4.4	4.3	4.4	4.3	3.9	2.8	3.4	2.6	2.5	2.5	3.0	3.0	3.0	3.0	2.7	1.8	1.8	2.3	2.7	2.5	2.2	4.7	1.8	3.2
11	2.0	2.0	3.6	4.3	3.3	2.7	2.5	2.0	1.9	2.0	1.9	2.1	2.0	1.7	1.3	1.1	1.3	1.8	2.1	1.6	0.6	0.2	-0.4	-0.6	4.3	-0.6	1.8
12	-0.9	-0.7	-0.5	0.1	1.2	1.2	1.5	1.3	1.6	1.8	1.8	1.7	1.9	1.9	1.9	1.9	2.2	1.9	1.5	1.4	0.5	-0.1	0.2	0.1	2.2	-0.9	1.1
13	0.2	0.0	-0.2	-0.1	0.3	0.3	0.1	0.1	0.2	0.1	0.3	0.3	0.3	0.2	0.5	0.5	0.2	0.1	0.1	0.4	0.3	-0.1	-0.2	-0.3	0.5	-0.3	0.2
14	-0.2	-0.3	-0.5	-0.3	-0.1	0.0	-0.4	-1.1	-1.4	-1.8	-2.1	-2.8	-3.4	-3.4	-3.7	-4.2	-3.9	-3.9	-3.9	-3.7	-4.0	-3.3	-3.1	-3.5	0.0	-4.2	-2.3
15	-3.6	-3.2	-3.5	-3.9	-3.0	-4.4	-5.0	-5.3	-6.1	-6.2	-7.0	-7.4	-6.9	-6.9	-6.9	-6.8	-6.6	-6.8	-6.7	-6.6	-6.2	-5.8	-6.0	-5.9	-3.0	-7.4	-5.7
16	-6.5	-5.9	-6.9	-7.3	-7.3	-8.0	-8.3	-8.4	-8.3	-8.6	-8.8	-8.9	-9.1	-9.0	-9.3	-9.6	-9.6	-9.8	-9.8	-9.8	-9.7	-9.6	-9.8	-9.9	-5.9	-9.9	-8.7
17	-9.6	-9.7	-9.8	-9.8	-9.6	-10.0	-10.0	-10.1	-10.4	-10.6	-10.5	-10.2	-9.7	-9.1	-9.1	-9.2	-9.4	-9.3	-9.5	-9.9	-9.7	-9.7	-9.7	-9.9	-9.1	-10.6	-9.8
18	-9.8	-9.9	-9.9	-10.1	-10.1	-10.2	-10.3	-10.2	-10.1	-10.2	-10.2	-10.2	-9.9	-9.7	-9.6	-9.5	-9.5	-9.9	-10.2	-10.2	-10.3	-10.4	-10.5	-10.6	-9.5	-10.6	-10.1
19	-10.9	-11.1	-11.5	-11.9	-12.0	-12.4	-12.9	-13.1	-12.8	-13.0	-13.0	-12.7	-12.6	-12.5	-12.7	-12.6	-12.5	-12.7	-12.7	-12.6	-12.9	-12.8	-13.0	-13.0	-10.9	-13.1	-12.5
20	-12.6	-12.5	-12.5	-12.3	-11.2	-10.5	-9.8	-8.8	-8.6	-8.9	-9.2	-9.2	-8.9	-8.6	-8.3	-7.7	-6.8	-6.2	-5.5	-5.1	-4.7	-4.6	-4.2	-3.7	-3.7	-12.6	-8.4
21	-2.3	-1.7	-1.2	-0.6	-0.3	-1.0	0.2	0.0	0.4	0.7	0.4	0.1	0.3	0.2	0.3	0.1	-0.6	-0.8	-1.4	-1.5	-1.8	-1.5	-0.9	-0.7	0.7	-2.3	-0.6
22	-0.4	-0.6	-1.4	-1.1	-0.6	-0.8	-0.8	-1.0	-0.5	-0.1	0.0	0.2	0.7	0.6	0.6	0.8	0.8	0.6	0.6	1.5	1.1	1.0	1.3	1.7	1.7	-1.4	0.2
23	1.2	0.9	0.7	-1.8	-2.9	-3.7	-4.1	-4.9	-5.3	-5.4	-5.3	-4.8	-4.8	-4.3	-3.6	-4.9	-5.2	-5.4	-5.9	-5.6	-5.6	-5.8	-5.9	-6.0	1.2	-6.0	-4.1
24	-6.1	-6.1	-5.9	-6.3	-6.5	-6.4	-6.2	-5.6	-4.8	-5.5	-6.3	-6.1	-5.7	-5.3	-5.0	-5.0	-4.7	-4.3	-3.7	-3.4	-3.3	-3.7	-4.1	-4.0	-3.3	-6.5	-5.2
25	-4.2	-4.2	-5.5	-6.0	-6.3	-6.2	-5.9	-5.4	-6.6	-6.9	-7.4	-7.6	-8.2	-8.9	-9.7	-10.6	-10.6	-10.5	-10.2	-10.1	-9.9	-9.5	-8.9	-7.9	-4.2	-10.6	-7.8
26	-8.7	-9.0	-8.8	-9.4	-9.8	-10.3	-10.5	-9.0	-8.3	-7.7	-6.9	-5.6	-4.7	-4.3	-3.8	-3.4	-3.2	-3.0	-3.0	-2.9	-2.6	-2.1	-1.7	-1.6	-1.6	-10.5	-5.9
27	-0.9	-0.9	0.1	0.6	0.6	1.1	1.2	1.1	0.9	1.4	1.1	0.8	1.1	1.3	1.2	0.8	0.9	1.0	1.0	1.2	1.0	1.0	1.1	1.2	1.4	-0.9	0.8
28	1.6	2.1	0.9	0.6	0.5	0.0	-0.4	-0.5	-1.3	-1.5	-0.7	-0.8	-0.7	-0.8	-0.9	-1.2	-1.5	-1.3	-2.4	-3.0	-3.5	-3.7	-4.0	-4.1	2.1	-4.1	-1.1
29	-4.0	-3.8	-3.7	-3.1	-2.4	-1.7	-1.2	-1.1	-1.2	-1.1	-1.2	-1.0	-1.2	-1.1	-1.8	-2.3	-2.4	-2.5	-3.1	-3.5	-3.8	-3.8	-3.8	-4.0	-1.0	-4.0	-2.4
30	-4.1	-4.2	-4.2	-4.5	-4.5	-4.6	-4.5	-4.6	-4.9	-5.8	-6.1	-6.2	-5.9	-5.5	-5.1	-4.5	-4.2	-3.8	-3.8	-3.7	-3.2	-3.0	-2.8	-2.6	-2.6	-6.2	-4.4
31	-2.6	-2.9	-2.7	-2.5	-2.3	-2.2	-2.1	-1.9	-1.7	-1.2	-0.9	0.2	1.8	1.7	1.0	1.5	2.2	2.5	2.0	1.4	2.2	2.7	2.2	2.2	2.7	-2.9	0.0
Max.	**8.7**	**8.0**	**7.6**	**7.6**	**5.1**	**4.4**	**4.3**	**3.9**	**4.2**	**4.7**	**5.0**	**4.8**	**5.1**	**4.7**	**4.7**	**4.5**	**5.2**	**5.2**	**5.2**	**5.0**	**4.7**	**4.4**	**4.5**	**4.4**	**8.7**		
Min.	**-12.6**	**-12.5**	**-12.5**	**-12.3**	**-12.0**	**-12.4**	**-12.9**	**-13.1**	**-12.8**	**-13.0**	**-13.0**	**-12.7**	**-12.6**	**-12.5**	**-12.7**	**-12.6**	**-12.5**	**-12.7**	**-12.7**	**-12.6**	**-12.9**	**-12.8**	**-13.0**	**-13.0**		**-13.1**	
Avg.	**-2.1**	**-2.0**	**-2.1**	**-2.2**	**-2.2**	**-2.4**	**-2.5**	**-2.4**	**-2.4**	**-2.4**	**-2.3**	**-2.4**	**-2.2**	**-2.1**	**-2.1**	**-2.3**	**-2.2**	**-2.3**	**-2.4**	**-2.5**	**-2.6**	**-2.5**	**-2.4**	**-2.4**			**-2.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.29	1.15	0.64	0.67	0.68	0.58	0.59	0.29	0.19	-0.02	-0.08	-0.19	-0.26	0.00	0.17	-0.01	0.11	-0.14	-0.13	0.00	0.06	-0.04	-0.03	0.00	1.29	-0.26	0.23
2	-0.03	-0.12	-0.16	-0.17	-0.28	-0.22	-0.15	-0.18	-0.18	-0.15	-0.16	-0.15	-0.31	-0.34	-0.20	-0.13	-0.07	-0.17	-0.09	-0.17	-0.15	-0.17	-0.15	-0.18	-0.03	-0.34	-0.17
3	-0.22	-0.06	-0.02	0.28	0.31	0.27	0.30	0.16	0.09	0.06	0.05	-0.02	-0.05	-0.02	-0.02	0.00	-0.07	0.00	-0.06	-0.12	0.01	-0.05	0.01	0.16	0.31	-0.22	0.04
4	0.22	0.15	0.20	0.03	-0.15	-0.20	0.03	0.25	0.14	0.10	0.66	0.41	0.08	-0.02	-0.06	-0.02	0.04	0.17	0.07	0.10	0.21	0.43	0.59	0.32	0.66	-0.20	0.16
5	0.00	0.36	0.51	-0.14	-0.13	-0.22	-0.14	-0.19	-0.06	0.40	0.19	0.00	-0.10	0.54	-0.02	-0.27	-0.52	-0.16	-0.03	-0.25	-0.09	0.09	-0.16	-0.16	0.54	-0.52	-0.02
6	0.07	0.01	0.08	0.33	0.15	0.05	-0.19	-0.01	0.23	0.29	0.48	-0.01	-0.08	0.86	0.62	0.00	0.06	0.13	0.18	0.14	0.09	0.05	0.11	0.18	0.86	-0.19	0.16
7	0.05	0.12	0.15	0.15	0.10	0.23	0.24	0.11	0.08	0.06	0.12	-0.09	-0.21	0.15	-0.01	-0.14	-0.24	0.04	-0.07	-0.04	-0.09	0.04	-0.04	0.00	0.24	-0.24	0.03
8	0.07	0.06	0.13	0.05	0.13	0.15	0.19	0.13	0.24	0.14	0.24	0.13	-0.13	0.09	0.04	-0.18	-0.25	-0.36	-0.18	-0.23	-0.25	0.01	-0.04	0.16	0.24	-0.36	0.01
9	0.08	0.07	0.11	0.07	0.07	-0.06	0.07	0.30	0.34	0.30	0.56	0.45	0.17	0.84	0.88	0.55	0.35	0.54	0.52	0.38	0.63	0.46	0.27	0.20	0.88	-0.06	0.34
10	0.06	0.15	0.28	0.17	0.12	0.15	0.07	0.04	0.13	0.01	-0.02	0.01		0.33	0.05	0.09	0.15	0.03				0.14	0.18	0.44	0.44	-0.02	0.13
11	0.18	0.25																					0.27	0.11	0.27	0.11	0.20
12	0.16	0.22	0.32	0.11	0.03	-0.07	0.02	0.09	-0.11	-0.10	-0.06	-0.09	-0.09	-0.07	-0.12	-0.17	-0.02	-0.01	-0.06	-0.03	-0.07	0.01	0.11		0.32	-0.17	0.00
13		-0.21	0.02	0.32	0.40	0.37	0.40	0.14	0.23	0.16	0.46	0.56	0.12	0.60	0.99	0.36	-0.10	0.17	0.30	0.24	0.20	0.32	0.69	0.75	0.99	-0.21	0.32
14	0.79	1.58	1.15	0.59	0.46	0.96	0.71	0.53	0.58	0.63	0.69	0.85	0.30	1.27	0.97	0.54	0.33	0.35	0.32	0.14	0.16	0.24	0.28	0.40	1.58	0.14	0.62
15	0.35	0.28	0.25	0.19	0.35	0.43	0.30	0.45	0.56	0.44	0.44	0.28	-0.16	0.13	0.29	0.01	0.05	0.19	0.24	0.17	0.11	0.38	0.37	0.24	0.56	-0.16	0.26
16	0.12	0.34	0.51	0.32	0.90	0.78	0.29	0.27	0.17	0.18							-0.28	-0.12	-0.01	0.10	0.17	0.18	0.12	0.19	0.90	-0.28	0.23
17	0.12	0.16	0.15	0.08	0.15	0.14	0.22	0.23	0.19	0.16	0.12	0.07	0.09	0.05	0.05	0.07	0.11	0.19	0.27	0.20	0.14	0.23	0.30	0.14	0.30	0.05	0.15
18	0.06	0.05	0.07	0.06	0.06	0.11	0.10	0.14	0.20	0.20	0.44	0.07	-0.12	-0.16	-0.13	-0.14	0.12	0.29	0.37	0.49	0.29	0.17	0.14	0.37	0.49	-0.16	0.13
19	0.31	0.39	0.33	0.25	0.32	0.31	0.39	0.28	0.22	0.49	0.78	0.79	0.00	0.74	0.66	0.23	-0.04	0.26	0.26	0.18	0.02	0.16	0.11	0.03	0.79	-0.04	0.31
20	0.02	0.02	0.04	0.05	0.07	0.21	0.08	0.11	0.16	0.20	0.15	0.07	0.05	0.07	0.16	0.10	0.14	-0.10	-0.05	0.16	-0.05	0.05	0.14	0.14	0.21	-0.10	0.08
21	0.03	0.17	0.18	0.09	0.02	0.01	0.10	0.14	0.07	0.03	0.04	0.07	-0.08	-0.13	-0.16	-0.20	0.00	0.03	0.00	0.07	0.08	-0.02	0.02	0.17	0.18	-0.20	0.03
22	0.22	0.30	0.38	1.04	1.08	0.64	0.40	0.40	0.18	0.07	0.04	0.00	-0.10	-0.14	-0.04	-0.07	-0.12	-0.20	-0.16	-0.13	-0.13	-0.17	-0.12	-0.13	1.08	-0.20	0.14
23	-0.02	0.08	0.12	0.13	-0.06	-0.10	-0.07	-0.04	0.34	0.40	0.43	0.24	0.03	0.27	0.26	0.15	0.28	0.31	0.30	0.26	0.17	0.05	0.09	0.07	0.43	-0.10	0.15
24	0.07	0.05	0.06	0.10	0.00	0.00	0.07	0.05	0.11	0.07	0.09	-0.09	-0.13	0.17	0.25	0.04	0.15	0.28	-0.02	0.12	0.22	0.16	0.32	0.34	0.34	-0.13	0.10
25	0.20	0.42	0.22	0.06	0.01	0.01	0.03	0.02	0.06	0.11	0.14	0.14	0.09	0.07	0.12	0.23	0.31	0.30	0.28	0.32	0.48	0.85	0.73	0.75	0.85	0.01	0.25
26	0.60	0.32	0.28	0.18	0.14	0.13	0.16	0.20	0.08	0.12	0.12	0.11	-0.13	-0.10	0.03	-0.26	-0.15	-0.02	0.07	0.00	0.00	0.00	0.05	0.05	0.60	-0.26	0.08
27	0.01	0.06	0.07	0.10	0.13	0.01	-0.05	0.07	0.03	0.09	0.03	0.04	0.00	0.04	0.09	0.20	0.09	0.02	0.00	0.02	0.00	0.01	0.10	0.09	0.20	-0.05	0.05
28	0.11	0.06	0.07	0.07	0.06	0.01	-0.03	-0.02	0.00	-0.06	-0.11	-0.17	-0.22	-0.20	-0.25	-0.27	-0.14	0.02	0.01	-0.08	-0.05	-0.01	-0.07	-0.14	0.11	-0.27	-0.06
29	-0.25	-0.05	-0.10	-0.11	0.12	0.13	0.11	0.20	0.26	0.28	0.28	0.32	0.32	0.29	0.41	0.49	0.51	0.61	0.63	0.57	0.43	0.48	0.44	0.35	0.63	-0.25	0.28
30	0.31	0.30	0.26	0.43	0.56	0.51	0.63	0.53	0.36	0.53	0.63	0.70	0.74	0.46	0.32	0.28	0.28	0.43	0.46	0.23	0.29	0.38	0.14	0.36	0.74	0.14	0.42
31	0.39	0.28	0.31	0.42	0.47	0.42	0.27	0.13	0.11	0.20	0.14	-0.17	-0.08	-0.05	-0.01	0.00	-0.04	-0.09	0.20	0.14	-0.15	-0.17	-0.08	0.15	0.47	-0.17	0.12
Max.	**1.29**	**1.58**	**1.15**	**1.04**	**1.08**	**0.96**	**0.71**	**0.53**	**0.58**	**0.63**	**0.78**	**0.85**	**0.74**	**1.27**	**0.99**	**0.55**	**0.51**	**0.61**	**0.63**	**0.57**	**0.63**	**0.85**	**0.73**	**0.75**	**1.58**		
Min.	**-0.25**	**-0.21**	**-0.16**	**-0.17**	**-0.28**	**-0.22**	**-0.19**	**-0.19**	**-0.18**	**-0.15**	**-0.16**	**-0.19**	**-0.31**	**-0.34**	**-0.25**	**-0.27**	**-0.52**	**-0.36**	**-0.18**	**-0.25**	**-0.25**	**-0.17**	**-0.16**	**-0.18**		**-0.52**	
Avg.	**0.18**	**0.22**	**0.22**	**0.20**	**0.21**	**0.19**	**0.17**	**0.16**	**0.17**	**0.18**	**0.24**	**0.15**	**-0.01**	**0.20**	**0.18**	**0.05**	**0.03**	**0.10**	**0.13**	**0.10**	**0.09**	**0.14**	**0.16**	**0.19**			**0.15**

Total Hours in Month 744 **Hours Data Available** 712 **Data Recovery** 95.7%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.76	0.37	0.48	0.49	0.49	0.49	0.30	0.27	0.36	0.41	0.44	0.43	0.32	0.58	0.70	0.43	0.33	0.39	0.38	0.40	0.33	0.30	0.24	0.27	0.76	0.24	0.41
2	0.30	0.41	0.56	0.46	0.49	0.45	0.10	0.11	0.13	0.13	0.13	0.05	0.11	-0.19	-0.12	-0.09	-0.03	0.02	0.03	0.00	0.01	0.03	-0.03	-0.03	0.56	-0.19	0.13
3	-0.04	-0.15	-0.13	-0.09	-0.04	0.07	0.05	-0.02	0.07	0.15	0.02	0.01	0.07	0.45	1.92	1.81	0.60	0.59	0.71	0.54	0.67	0.58	0.60	0.66	1.92	-0.15	0.38
4	0.48	0.60	0.98	0.80	0.84	0.83	0.90	1.05	1.01	0.65	0.84	1.15	0.34	0.69	1.24	1.52	0.03	0.37	0.80	0.50	0.89	0.60	0.70	0.60	1.52	0.03	0.77
5	0.98	0.43	0.64	0.52	0.63	0.74	0.56	0.66	0.48	0.65	1.42	1.26	-0.19	0.66	1.89	2.19	0.15	0.41	0.75	0.95	1.01	0.96	1.00	0.59	2.19	-0.19	0.81
6	0.58	0.43	0.49	0.38	0.18	0.34	0.48	0.31	-0.08	0.25	0.39	0.17	-0.10	0.05	0.32	0.21	0.10	0.15	0.18	0.15	0.13	0.12	0.13	0.11	0.58	-0.10	0.23
7	0.13	0.15	0.17	0.13	0.24	0.19	0.24	0.21	0.34	0.00							0.14	-0.11	-0.04	-0.02	-0.07	-0.11	-0.05	-0.11	0.34	-0.11	0.08
8	-0.12	-0.07	-0.05	-0.04	-0.01	-0.03	-0.05	0.04	0.05	0.00	-0.03	-0.08	-0.12	-0.16	-0.26	-0.27	-0.20	0.01	0.03	0.02	0.13	0.07	0.07	0.05	0.13	-0.27	-0.04
9	0.03	0.00	-0.01	-0.04	-0.04	-0.06	-0.03	-0.04	-0.06	-0.08	-0.14	-0.13	-0.18	-0.19	-0.17	-0.31	-0.23	-0.12	-0.09	-0.08	-0.07	-0.03	-0.04	-0.03	0.03	-0.31	-0.09
10	0.01	-0.02	0.09	0.14	0.10	0.05	-0.06	-0.05	-0.06	-0.06	-0.13	-0.19	-0.45	-0.45	-0.33	-0.29	-0.20	-0.15	-0.06	0.05	0.19	0.02	0.07	0.04	0.19	-0.45	-0.07
11	0.01	-0.02	-0.06	-0.08	-0.03	-0.05	-0.04	0.03	0.04	-0.04	-0.07	-0.05	-0.03	0.03	0.00	0.11	0.12	0.08	0.05	0.06	0.06	0.04	0.05	0.04	0.12	-0.08	0.01
12	0.06	0.03	0.04	0.05	0.05	0.05	0.03	0.06	0.06	0.05	0.03	-0.03	-0.02	-0.02	-0.01	0.01	0.03	0.07	0.10	0.11	0.13	0.12	0.11	0.11	0.13	-0.03	0.05
13	0.13	0.12	0.12	0.10	0.12	0.11	0.10	0.11	0.10	0.11	0.10	0.10	0.06	0.05	0.07	0.07	0.07	0.09	0.14	0.14	0.11	0.10	0.07	0.10	0.14	0.05	0.10
14	0.07	0.07	0.10	0.02	0.11	0.09	0.08	0.07	0.12	0.13	0.06	0.00	0.04	0.02	0.04	0.00	0.20	0.15	0.26	0.32	0.14	0.11	0.26	0.14	0.32	0.00	0.11
15	0.09	0.20	0.15	0.22	0.17	0.35	0.14	0.66	0.36	0.22	-0.06	-0.24	-0.41	-0.31	-0.40	-0.25	-0.19	-0.04	0.18	0.40	0.32	0.49	0.49	0.46	0.66	-0.41	0.12
16	0.47	0.49	0.52	0.63	0.36	0.16	0.26	0.17	0.26	0.18	-0.06	-0.25	-0.23	-0.28	-0.28	-0.11	-0.06	0.22	0.16	0.08	0.42	0.41	0.38	0.46	0.63	-0.28	0.18
17	0.36	0.22	0.05	0.35	0.21	0.19	0.23	0.25	0.18	0.04	-0.33	-0.25	-0.21	-0.26	-0.64	-0.02	0.03	0.06	0.12	0.15	0.20	0.08	0.13	0.08	0.36	-0.64	0.05
18	0.25	0.37	0.09	0.05	0.03	0.01	-0.01	0.07	0.07	-0.10	-0.20	-0.25	-0.26	-0.25	-0.29	-0.34	-0.27	-0.16	0.04	0.25	0.26	0.27	0.05	0.01	0.37	-0.34	-0.01
19	0.08	0.03	-0.08	-0.21	-0.18	-0.07	0.06	0.18	0.02	-0.01	-0.02	-0.13	-0.16	-0.11	-0.06	0.16	0.20	-0.01	0.03	0.06	0.44	0.43	0.44	0.01	0.44	-0.21	0.05
20	0.02	0.01	-0.15	0.05	-0.02	-0.01	0.00	-0.01	-0.01	-0.01	0.02	-0.16	-0.21	-0.17	-0.21	-0.25	-0.93	-0.20	-0.07	-0.04	-0.07	-0.08	-0.07	-0.04	0.05	-0.93	-0.11
21	-0.07	-0.05	-0.05	0.01	0.04	-0.11	-0.10	-0.09	0.06	-0.15	-0.30	-0.45	-0.62	-0.59	-0.52	-0.32	-0.41	-0.08	-0.11	0.08	0.29	0.49	0.55	0.32	0.55	-0.62	-0.09
22	0.31	-0.02	-0.04	-0.16	-0.25	-0.39	-0.31	-0.08	-0.10	-0.20	-0.33	-0.35	-0.52	-0.57	-0.46	-0.32	-0.41	0.22	0.31	0.29	0.28	0.40	0.31	0.28	0.40	-0.57	-0.09
23	0.28	0.34	0.36	0.35	0.52	0.42	0.23	0.34	0.27	-0.23	-0.39	-0.49	-0.58	-0.57	-0.52	-0.30	-0.38	-0.18	-0.02	-0.05	-0.13	-0.09	-0.08	-0.04	0.52	-0.58	-0.04
24	-0.02	-0.03	0.01	0.00	0.04	0.02	0.03	-0.02	-0.04	-0.04	-0.33	-0.43	-0.59	-0.53	-0.18	0.10	0.19	0.01	0.06	-0.02	0.01	0.02	-0.02	-0.07	0.19	-0.59	-0.07
25	-0.15	0.07	-0.03	0.03	-0.05	0.00	0.02	0.03	0.06	0.13	0.12	0.21	0.04	0.06	-0.10	-0.05	-0.36	-0.01	0.00	0.02	0.01	-0.02	0.08	0.25	0.25	-0.36	0.01
26	0.30	0.18	0.21	0.45	0.58	0.57	0.33	0.30	0.24	0.14	0.01	-0.24	-0.43	-0.51	-0.54	-0.30	-0.39	0.09	0.18	0.20	0.20	0.20	0.17	0.14	0.58	-0.54	0.09
27	0.03	0.05	0.09	0.12	0.07	0.06	0.31	0.55	0.49	-0.09	-0.27	-0.39	-0.40	-0.43	-0.42	-0.42	-0.78	-0.31	0.10	0.19	0.24	0.26	0.18	0.16	0.55	-0.78	-0.03
28	0.26	0.11	0.14	0.04	0.07	0.10	0.07	0.12	0.09	-0.11	-0.24	-0.34	-0.43	-0.46	-0.40	-0.13	-0.17	0.04	0.55	0.51	0.42	0.38	0.29	0.32	0.55	-0.46	0.05
Max.	**0.98**	**0.60**	**0.98**	**0.80**	**0.84**	**0.83**	**0.90**	**1.05**	**1.01**	**0.65**	**1.42**	**1.26**	**0.34**	**0.69**	**1.92**	**2.19**	**0.60**	**0.59**	**0.80**	**0.95**	**1.01**	**0.96**	**1.00**	**0.66**	**2.19**		
Min.	**-0.15**	**-0.15**	**-0.15**	**-0.21**	**-0.25**	**-0.39**	**-0.31**	**-0.09**	**-0.10**	**-0.23**	**-0.39**	**-0.49**	**-0.62**	**-0.59**	**-0.64**	**-0.42**	**-0.93**	**-0.31**	**-0.11**	**-0.08**	**-0.13**	**-0.11**	**-0.08**	**-0.11**		**-0.93**	
Avg.	**0.20**	**0.15**	**0.17**	**0.17**	**0.17**	**0.16**	**0.14**	**0.19**	**0.16**	**0.08**	**0.03**	**-0.04**	**-0.19**	**-0.13**	**0.01**	**0.10**	**-0.10**	**0.06**	**0.17**	**0.19**	**0.23**	**0.22**	**0.22**	**0.17**			**0.11**

Total Hours in Month 672 **Hours Data Available** 666 **Data Recovery** 99.1%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

March *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.13	0.20	0.28	0.22	0.03	0.30	0.20	0.34	0.23	-0.19	-0.36	-0.37	-0.51	-0.57	-0.45	-0.36	-0.23	0.02	-0.01	-0.03	-0.01	0.20	0.31	0.25	0.34	-0.57	-0.02
2	0.31	0.37	0.07	-0.06	0.15	0.12	0.13	0.25	0.13	-0.25	-0.39	-0.47	-0.63	-0.69	-0.54	-0.42	-0.19	0.03	-0.08	-0.08	0.02	0.04	0.10	0.03	0.37	-0.69	-0.08
3	0.03	0.08	-0.02	0.01	-0.07	0.00	0.06	0.06	0.03	-0.16	-0.33	-0.45	-0.62	-0.64	-0.50	-0.36	-0.34	-0.10	-0.06	-0.08	-0.06	-0.01	-0.06	-0.03	0.08	-0.64	-0.15
4	-0.01	-0.06	-0.06	-0.13	-0.04	0.12	0.07	0.08	-0.01	-0.20	-0.39	-0.47	-0.63	-0.60	-0.53	-0.35	-0.08	0.03	0.09	0.17	-0.02	-0.06	-0.05	-0.10	0.17	-0.63	-0.13
5	-0.21	-0.17	-0.23	-0.18	-0.25	-0.21	-0.25	-0.22	-0.15	-0.30	-0.39	-0.54	-0.68	-0.67	-0.60	-0.39	-0.14	-0.02	0.04	0.12	0.19	0.10	-0.16	-0.10	0.19	-0.68	-0.22
6	-0.11	0.02	0.04	-0.22	-0.14	-0.02	0.02	-0.08	-0.17	-0.27	-0.34	-0.22	-0.25	-0.11	-0.11	0.05	0.36	-0.06	-0.07	-0.04	-0.02	0.00	-0.02	-0.01	0.36	-0.34	-0.07
7	-0.01	0.02	0.02	0.03	0.02	0.00	-0.01	0.00	-0.04	-0.02	0.01	0.00	-0.02	-0.02	-0.18	-0.13	0.12	-0.10	-0.09	-0.06	-0.03	0.00	-0.01	-0.02	0.12	-0.18	-0.02
8	0.03	0.01	-0.01	-0.01	-0.02	-0.01	-0.02	0.01	0.02	-0.18	-0.43	-0.57	-0.61	-0.74	-0.78	-0.31	-0.14	-0.16	-0.09	0.01	-0.04	-0.12	-0.03	0.00	0.03	-0.78	-0.17
9	0.00	-0.02	0.00	0.06	-0.04	-0.04	0.06	0.06	-0.04	-0.23	-0.48	-0.55	-0.41	-0.58	-0.53	-0.44	-0.18	-0.07	-0.08	-0.08	-0.05	-0.10	-0.05	-0.09	0.06	-0.58	-0.16
10	-0.06	0.00	-0.09	-0.01	0.05	0.05	0.03	-0.16	-0.10	-0.19	-0.29	-0.30	-0.42	-0.56	-0.83	-0.94	-0.35	-0.13	-0.13	-0.01	-0.03	0.00	0.03	-0.03	0.05	-0.94	-0.19
11	0.00	0.01	-0.04	0.00	0.04	0.08	0.04	0.01	-0.19	-0.44	-0.53	-0.61	-0.73	-0.73	-0.74	-0.50	-0.08	-0.04	-0.04	-0.02	-0.03	0.01	0.02	-0.06	0.08	-0.74	-0.19
12	0.00	0.03	0.04	0.03	0.03	0.05	0.02	-0.01	-0.06	-0.35	-0.24	-0.25	-0.08	-0.03	-0.07	-0.17	-0.32	-0.10	-0.09	-0.13	-0.08	-0.05	-0.06	-0.05	0.05	-0.35	-0.08
13	-0.05	-0.04	-0.08	-0.09	-0.11	-0.15	-0.22	-0.20	-0.29	-0.39	-0.57	-0.79	-0.81	-0.84	-0.66	-0.63	-0.24	-0.08	-0.03	-0.03	-0.08	-0.09	-0.08	-0.06	-0.03	-0.84	-0.28
14	-0.06	-0.06	-0.05	-0.05	-0.04	-0.02	-0.10	-0.24	-0.33	-0.35	-0.33	-0.81	-0.90	-1.18	-1.12	-0.76	-0.63	-0.09	-0.06	-0.03	0.03	0.03	0.06	0.05	0.06	-1.18	-0.29
15	-0.20	-0.19	-0.20	-0.17	-0.20	-0.21	-0.18	-0.18	-0.34	-0.54	-0.65	-0.83	-0.92	-0.80	-0.69	-0.55	-0.34	-0.08	0.06	-0.10	-0.12	-0.03	0.03	0.15	0.15	-0.92	-0.30
16	0.18	0.21	0.27	0.19	0.11	0.09	0.04	-0.06	-0.23	-0.43	-0.49	-0.64	-0.71	-0.65	-0.64	-0.58	-0.36	-0.09	0.01	-0.03	0.04	0.00	0.00	0.02	0.27	-0.71	-0.16
17	0.03	0.00	0.00	0.01	0.01	-0.06	0.02	0.00	-0.22	-0.44	-0.49	-0.74	-0.93	-0.71	-0.61	-0.56	-0.46	-0.06	0.24	0.08	0.21	0.12	0.14	0.20	0.24	-0.93	-0.18
18	0.23	0.37	0.32	0.22	0.27	0.23	0.16	0.17	-0.24	-0.41	-0.40	-0.66	-0.73	-0.73	-0.68	-0.57	-0.47	-0.09	0.09	0.00	0.00	-0.03	0.17	0.12	0.37	-0.73	-0.11
19	0.31	0.00	-0.08	-0.23	-0.28	-0.23	-0.21	0.00	-0.32	-0.53	-0.53	-0.70	-0.72	-0.66	-0.66	-0.53	-0.74	-0.39	0.27	0.39	0.48	0.41	0.35	0.40	0.48	-0.74	-0.18
20	0.49	0.52	0.50	0.25	0.49	0.29	0.12	0.27	0.05	-0.03	-0.07	-0.08	-0.10	-0.10	-0.10	-0.11	-0.07	-0.02	-0.01	0.00	0.02	0.05	0.04	0.04	0.52	-0.11	0.10
21	0.05	0.06	0.05	0.07	0.09	0.13	0.19	-0.01	-0.10	-0.20	0.23	-0.08	-0.34	-0.28	-0.37	-0.39	-0.35	-0.26	-0.18	-0.07	-0.08	-0.07	-0.07	-0.06	0.23	-0.39	-0.09
22	-0.02	0.01	0.00	-0.01	-0.02	0.01	0.04	-0.01	-0.32	-0.53	-0.75	-0.94	-0.91	-0.76	-0.81	-0.87	-0.56	-0.10	0.04	0.01	-0.01	0.00	-0.03	-0.01	0.04	-0.94	-0.27
23	-0.04	-0.09	-0.07	0.04	0.06	0.02	0.00	-0.03	-0.04	-0.03	0.04	-0.05	-0.12	-0.18	-0.39	-0.48	-0.33	-0.22	-0.11	-0.05	-0.04	-0.02	-0.06	-0.02	0.06	-0.48	-0.09
24	0.02	0.01	0.01	-0.05	-0.04	-0.07	-0.05	-0.04	-0.05	-0.06	-0.02	-0.08	-0.13	-0.08	-0.05	-0.09	-0.08	-0.06	-0.03	0.01	0.01	0.05	0.12	0.08	0.12	-0.13	-0.03
25	-0.01	0.12	0.08	0.15	0.01	0.03	0.13	0.06	-0.32	-0.61	-0.72	-1.12	-0.92	-1.17	-1.28	-0.76	-0.93	-0.40	-0.03	0.29	0.31	0.11	0.09	0.12	0.31	-1.28	-0.28
26	0.09	0.02	0.01	0.00	0.01	0.00	0.01	-0.02	-0.03	-0.13	-0.08	0.06	0.09	0.14	0.16	0.12	0.16	0.13	0.10	-0.03	-0.08	-0.07	-0.05	0.01	0.16	-0.13	0.03
27	0.24	0.27	0.09	0.40	0.30	0.15	0.12	-0.03	-0.35	-0.52	-0.38	-0.59	-0.62	-0.58	-0.53	-0.59	-0.25	0.10	0.12	0.06	0.05	0.16	0.14	0.23	0.40	-0.62	-0.08
28	0.14	0.12	0.12	0.15	0.12	0.10	0.06	0.04	-0.25	-0.38	-0.24	-0.46	-0.61	-0.53	-0.54	-0.63	-0.23	0.02	0.04	0.05	0.05	0.03	0.03	0.06	0.15	-0.63	-0.11
29	0.05	0.04	0.05	0.08	0.06	0.02	-0.01	-0.05	-0.18	-0.30	-0.09	-0.18	-0.10	-0.03	-0.16	-0.23	-0.13	0.06	0.12	0.25	0.13	0.19	0.19	0.15	0.25	-0.30	0.00
30	0.24	0.19	0.20	0.24	0.32	0.28	0.37	0.22	-0.20	-0.37	-0.31	-0.75	-0.81	-0.95	-0.83	-0.51	-0.48	-0.07	0.30	0.61	0.81	0.80	0.75	0.73	0.81	-0.95	0.03
31	0.64	0.53	0.97	0.94	0.96	1.39	0.62	0.93	-0.04	-0.36	-0.42	-0.40	-0.43	-0.81	-0.69	-0.69	-0.63	-0.02	0.17	0.68	0.91	0.48	0.36	0.38	1.39	-0.81	0.23
Max.	**0.64**	**0.53**	**0.97**	**0.94**	**0.96**	**1.39**	**0.62**	**0.93**	**0.23**	**-0.02**	**0.23**	**0.06**	**0.09**	**0.14**	**0.16**	**0.12**	**0.36**	**0.13**	**0.30**	**0.68**	**0.91**	**0.80**	**0.75**	**0.73**	**1.39**		
Min.	**-0.21**	**-0.19**	**-0.23**	**-0.23**	**-0.28**	**-0.23**	**-0.25**	**-0.24**	**-0.35**	**-0.61**	**-0.75**	**-1.12**	**-0.93**	**-1.18**	**-1.28**	**-0.94**	**-0.93**	**-0.40**	**-0.18**	**-0.13**	**-0.12**	**-0.12**	**-0.16**	**-0.10**		**-1.28**	
Avg.	**0.08**	**0.08**	**0.07**	**0.06**	**0.06**	**0.08**	**0.05**	**0.04**	**-0.13**	**-0.30**	**-0.34**	**-0.47**	**-0.53**	**-0.54**	**-0.53**	**-0.44**	**-0.28**	**-0.08**	**0.02**	**0.06**	**0.08**	**0.07**	**0.07**	**0.08**			**-0.11**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.46	0.52	0.43	0.47	0.38	0.42	0.46	0.22	-0.06	-0.29	-0.43	-1.25	-1.43	-1.18	-1.16	-0.96	-0.84	-0.19	-0.08	0.07	0.20	0.65	0.55	0.62	0.65	-1.43	-0.10
2	0.69	0.60	0.60	0.18	0.20	0.40	1.03	0.73	0.25	-0.18	-0.37	-0.41	-0.50	-0.30	-0.35	-0.32	-0.19	0.01	0.11	0.13	0.08	0.07	0.06	0.14	1.03	-0.50	0.11
3	0.09	0.10	0.10	0.10	0.08	0.08	0.07	0.04	-0.01	-0.05	-0.06	-0.12	-0.18	-0.22	-0.23	-0.16	-0.10	-0.02	0.04	0.07	0.08	0.07	0.09	0.13	0.13	-0.23	0.00
4	0.15	0.13	0.13	0.15	0.15	0.15	0.13	0.08	-0.05	-0.08	-0.08	-0.14	-0.12	-0.14	-0.05	-0.02	-0.01	0.04	0.07	0.12	0.15	0.15	0.16	0.17	0.17	-0.14	0.05
5	0.15	0.14	0.14	0.17	0.16	0.15	0.09	0.13	0.15	0.16	0.17	0.15	0.15	0.07	0.13	0.17	0.22	0.20	0.21	0.23	0.25	0.22	0.25	0.29	0.29	0.07	0.17
6	0.24	0.26	0.27	0.31	0.22	0.20	0.19	0.15	0.12	0.07	-0.03	-0.04	-0.02	0.01	0.05	0.09	0.21	0.24	0.27	0.40	0.36	0.37	0.36	0.29	0.40	-0.04	0.19
7	0.28	0.26	0.15	0.10	0.15	0.11	0.09	0.09	0.07	0.04	0.04	0.02	-0.04	0.02	0.01	0.07	0.16	0.17	0.20	0.14	0.14	0.16	0.19	0.20	0.28	-0.04	0.12
8	0.22	0.23	0.23	0.23	0.24	0.24	0.23	0.21	0.23	0.17	0.11	0.05	-0.01	-0.04	0.06	0.18	0.23	0.26	0.35	0.34	0.36	0.34	0.34	0.25	0.36	-0.04	0.21
9	0.27	0.27	0.19	0.14	0.15	0.14	0.14	0.13	0.11	0.10	0.04	0.00	-0.06	-0.12	-0.15	-0.03	0.02	0.07	0.15	0.16	0.16	0.16	0.18	0.17	0.27	-0.15	0.10
10	0.13	0.13	0.08	0.12	0.13	0.14	0.18	0.18	0.07	-0.07	-0.33	-0.58	-0.51	-0.79	-0.72	-0.49	-0.51	-0.55	-0.20	-0.02	0.08	0.19	0.26	0.31	0.31	-0.79	-0.12
11	0.31	0.13	0.11	0.00	0.14	0.08	0.08	-0.18	-0.39	-0.40	-0.57	-1.32	-1.79	-1.55	-1.67	-1.71	-1.76	-0.51	-0.14	-0.05	0.06	0.08	0.20	0.46	0.46	-1.79	-0.43
12	0.44	0.39	0.19	0.03	0.27	0.41	0.40	-0.03	-0.16	-0.42	-0.60	-0.34	-0.36	-0.33	-0.44	-0.57	-0.57	-0.29	-0.02	0.24	0.71	0.88	0.69	0.22	0.88	-0.60	0.03
13	0.26	0.27	0.15	0.15	0.22	0.24	0.19	-0.08	-0.15	-0.35	-0.64	-0.84	-0.57	-0.65	-1.12	-1.09	-1.04	0.16	0.37	0.46	0.91	0.81	0.78	0.74	0.91	-1.12	-0.03
14	0.54	0.61	0.62	0.67	0.67	0.63	0.42	0.06	-0.40	-0.23	-0.55	-0.38	-0.35	-0.31	-0.31	-0.10	-0.03	0.00	0.01	0.04	0.09	0.12	0.14	0.15	0.67	-0.55	0.09
15	0.06	0.08	0.11	0.12	0.09	0.13	0.12	0.12	0.06	-0.09	-0.20	-0.32	-0.38	-0.45	-0.37	-0.50	-0.40	-0.30	-0.08	0.18	0.29	0.16	0.05	0.05	0.29	-0.50	-0.06
16	0.05	0.03	0.03	0.02	0.03	0.04	0.02	0.02	-0.06	-0.15	-0.23	-0.23	-0.26	-0.45	-0.41	-0.33	-0.26	-0.05	-0.02	0.01	0.08	0.35	0.50	0.37	0.50	-0.45	-0.04
17	0.44	0.45	0.25	0.38	0.57	0.18	0.05	0.01	0.00	-0.06	-0.12	0.04	0.11	0.03	0.13	0.22	0.18	0.17	0.21	0.24	0.20	0.19	0.16	0.20	0.57	-0.12	0.17
18	0.18	0.17	0.17	0.17	0.16	0.15	0.16	0.15	0.14	0.12	0.05	0.01	0.00	-0.01	-0.01	0.00	0.03	0.07	0.11	0.13	0.15	0.18	0.18	0.17	0.18	-0.01	0.11
19	0.17	0.17	0.18	0.17	0.17	0.16	0.19	0.13	0.13	0.07	0.05	0.01	0.07	0.07	0.08	0.05	0.08	0.07	0.06	0.12	0.13	0.05	0.09	0.20	0.20	0.01	0.11
20	0.19	0.18	0.19	0.17	0.13	0.11	0.10	0.09	0.11	0.08	0.06	0.07	0.05	0.01	-0.01	0.06	0.07	0.06	0.10	0.13	0.18	0.20	0.21	0.20	0.21	-0.01	0.11
21	0.20	0.21	0.21	0.25	0.26	0.23	0.17	0.09	-0.02	-0.03	-0.15	-0.10	-0.09	-0.14	-0.20	-0.19	0.04	0.08	0.03	0.04	0.14	0.26	0.27	0.26	0.27	-0.20	0.08
22	0.18	0.22	0.21	0.18	0.17	0.14	0.14	0.16	0.20	0.17	0.10	-0.02	-0.11	-0.08	-0.09	-0.12	-0.07	-0.03	-0.01	0.07	0.12	0.13	0.12	0.05	0.22	-0.12	0.08
23	0.13	0.16	0.22	0.22	0.21	0.29	0.27	0.18	0.10	-0.02	0.00	0.02	-0.14	0.01	0.00	-0.26	-0.02	0.13	0.33	0.24	0.19	0.20	0.21	0.20	0.33	-0.26	0.12
24	0.20	0.17	0.17	0.19	0.19	0.18	0.06	-0.09	-0.21	-0.38	-0.31	-0.37	-0.44	-0.22	-0.14	-0.15	-0.02	0.01	0.14	0.14	0.19	0.17	0.11	0.10	0.20	-0.44	-0.01
25	0.16	0.18	0.19	0.22	0.19	0.14	0.12	0.08	0.05	-0.05	0.03	0.01	0.00	0.01	-0.09	-0.10	-0.12	-0.08	-0.02	0.09	0.14	0.16	0.14	0.16	0.22	-0.12	0.07
26	0.24	0.30	0.41	0.51	0.43	0.60	0.45	-0.08	-0.52	-0.93	-0.92	-1.04	-1.64	-0.93	-1.58	-1.53	-1.85	-0.83	0.28	0.73	1.39	1.01	0.62	0.24	1.39	-1.85	-0.19
27	0.55	0.84	0.71	0.77	0.68	0.38	-0.08	-0.06	-0.24	-0.52	-0.60	-0.28	-0.95	-1.11	-1.49	-0.68	-0.68	-0.33	-0.02	0.03	0.05	0.08	0.13	0.22	0.84	-1.49	-0.11
28	0.29	0.60	0.84	0.59	0.68	0.52	-0.22	-0.33	-0.80	-1.26	-0.86	-0.86	-1.11	-1.78	-1.94	-1.84	-1.37	-0.94	-0.08	0.22	0.27	0.23	0.21	0.12	0.84	-1.94	-0.37
29	0.08	0.04	0.09	0.07	0.27	0.26	0.18	-0.04	-0.10	-0.13	-0.17	-0.31	-0.31	-0.48	-0.45	-0.45	-0.25	-0.12	-0.07	0.04	0.02	0.02	0.06	0.06	0.27	-0.48	-0.07
30	0.17	0.51	0.41	0.40	0.46	0.44	0.10	-0.06	-0.17	-0.24	-0.44	-0.34	-0.27	-0.26	-0.45	-0.49	-0.38	-0.33	0.04	0.18	0.11	0.17	0.09	0.05	0.51	-0.49	-0.01
Max.	**0.69**	**0.84**	**0.84**	**0.77**	**0.68**	**0.63**	**1.03**	**0.73**	**0.25**	**0.17**	**0.17**	**0.15**	**0.15**	**0.07**	**0.13**	**0.22**	**0.23**	**0.26**	**0.37**	**0.73**	**1.39**	**1.01**	**0.78**	**0.74**	**1.39**		
Min.	**0.05**	**0.03**	**0.03**	**0.00**	**0.03**	**0.04**	**-0.22**	**-0.33**	**-0.80**	**-1.26**	**-0.92**	**-1.32**	**-1.79**	**-1.78**	**-1.94**	**-1.84**	**-1.85**	**-0.94**	**-0.20**	**-0.05**	**0.02**	**0.02**	**0.05**	**0.05**		**-1.94**	
Avg.	**0.25**	**0.28**	**0.26**	**0.24**	**0.26**	**0.24**	**0.18**	**0.07**	**-0.05**	**-0.17**	**-0.23**	**-0.30**	**-0.37**	**-0.38**	**-0.43**	**-0.38**	**-0.31**	**-0.09**	**0.08**	**0.16**	**0.24**	**0.26**	**0.25**	**0.23**			**0.01**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.09	0.11	0.11	0.14	0.18	0.13	-0.01	0.08	0.04	-0.27	-0.15	-0.08	-0.11	-0.11	-0.17	-0.12	-0.06	-0.03	0.02	0.07	0.15	0.17	0.14	0.12	0.18	-0.27	0.02
2	0.14	0.19	0.12	0.13	0.38	0.38	0.25	0.05	-0.10	-0.39	-0.58	-0.31	-0.23	-0.22	-0.11	-0.06	-0.24	-0.19	-0.08	-0.03	0.07	0.38	0.44	0.80	0.80	-0.58	0.03
3	0.81	0.68	0.58	0.74	0.98	0.61	-0.32	-0.78	-1.07	-1.00	-1.55	-1.29	-1.14	-0.96	-0.94	-1.00	-0.88	-0.37	0.24	0.47	0.61	0.82	0.67	0.90	0.98	-1.55	-0.13
4	1.00	0.82	0.77	0.65	0.59	0.31	-0.26	-0.56	-1.11	-1.30	-1.96	-2.12	-2.05	-1.91	-2.07	-1.46	-1.65	-0.86	0.01	0.08	0.15	0.36	0.32	0.07	1.00	-2.12	-0.51
5	0.06	0.07	0.11	0.09	0.12	0.44	-0.20	-0.51	-1.28	-1.40	-1.20	-1.20	-1.33	-1.13	-1.41	-1.11	-0.89	-0.28	-0.13	-0.07	0.00	0.04	0.14	0.10	0.44	-1.41	-0.46
6	0.07	0.15	0.04	0.02	0.10	-0.03	-0.09	-0.11	-0.34	-0.59	-0.71	-0.62	-0.63	-1.02	-1.03	-0.96	-0.99	-0.46	0.07	0.18	0.30	0.28	0.25	0.14	0.30	-1.03	-0.25
7	0.08	0.04	0.05	-0.01	-0.04	-0.03	-0.13	-0.23	-0.34	-0.32	-0.41	-0.63	-1.61	-1.22	-0.48	-0.36	-0.24	-0.16	-0.08	-0.06	-0.04	-0.04	-0.04	-0.02	0.08	-1.61	-0.26
8	-0.02	-0.01	0.01	0.01	0.01	0.03	-0.01	-0.10	-0.25	-0.48	-0.65	-0.91	-0.96	-1.19	-1.48	-1.51	-1.44	-1.18	-0.33	-0.16	0.28	0.34	0.26	0.26	0.34	-1.51	-0.39
9	0.34	0.25	0.16	0.21	0.26	0.16	0.20	0.10	-0.06	-0.18	-0.22	-0.24	-0.24	-0.42	-0.61	-0.83	-0.70	-0.60	-0.38	-0.21	-0.02	0.38	0.76	0.95	0.95	-0.83	-0.04
10	0.84	0.59	0.37	0.29	0.29	0.35	0.05	-0.24	-0.31	-0.64	-0.67	-0.43	-0.90	-1.03	-1.21	-1.46	-1.56	-1.23	-0.39	0.12	0.93	0.81	0.80	0.85	0.93	-1.56	-0.16
11	0.64	0.91	0.87	0.79	0.52	0.12	0.03	-0.15	-0.68	-0.59	-1.03	-1.05	-1.53	-1.71	-2.22	-1.81	-1.31	-1.06	-0.17	-0.03	0.04	1.07	0.75	0.65	1.07	-2.22	-0.29
12	0.76	0.55	0.59	0.45	0.25	0.16	-0.08	-0.14	-0.32	-0.35	-1.44	-1.57	-0.78	-1.29	-1.23	-0.83	-0.58	-0.46	-0.18	-0.10	-0.01	0.14	0.32	0.20	0.76	-1.57	-0.25
13	0.20	0.18	0.16	0.12	0.18	0.16	0.12	0.04	-0.04	-0.09	-0.13	-0.20	-0.14	-0.12	-0.16	-0.20	-0.12	-0.08	-0.03	0.02	0.04	0.10	0.11	0.13	0.20	-0.20	0.01
14	0.15	0.13	0.09	0.11	0.13	0.17	0.17	0.17	0.14	0.14	0.13	0.06	0.09	0.11	-0.07	-0.17	-0.33	-0.16	-0.15	-0.05	0.02	0.08	0.04	0.02	0.17	-0.33	0.04
15	0.01	0.05	0.07	0.09	0.17	0.16	0.19	0.03	-0.05	-0.22	-0.27	-0.32	-0.78	-0.98	-0.62	-0.62	-1.09	-0.71	0.00	0.19	0.24	0.30	0.33	0.48	0.48	-1.09	-0.14
16	0.49	0.67	0.66	0.57	0.37	0.43	0.50	0.15	0.17	-0.23	-0.68	-1.10	-0.20	0.09	-0.02	-0.08	0.06	-0.05	-0.05	0.00	0.04	0.12	0.12	0.20	0.67	-1.10	0.09
17	0.26	0.27	0.51	0.52	0.44	0.30	0.26	0.18	0.03	-0.89	-1.37	-1.59	-0.99	-0.89	-0.76	-1.21	-0.53	-0.40	-0.26	-0.15	-0.07	0.00	0.03	0.03	0.52	-1.59	-0.26
18	0.04	0.20	0.09	0.13	0.26	0.03	-0.17	-0.84	-1.16	-1.61	-1.55	-2.08	-1.78	-1.91	-1.77	-1.94	-1.48	-1.12	-0.12	0.12	0.44	0.57	0.91	0.75	0.91	-2.08	-0.58
19	0.76	0.72	0.59	0.59	0.44	0.18	-0.41	-0.38	-0.67	-0.98	-1.26	-1.78	-2.04	-1.70	-1.06	-0.97	-1.15	-0.52	0.12	0.03	-0.05	0.00	0.01	-0.01	0.76	-2.04	-0.40
20	0.00	0.02	0.02	0.02	0.13	-0.10	-0.26	-0.60	-0.72	-0.92	-0.90	-1.20	-1.65	-1.26	-1.30	-1.38	-1.11	-0.78	-0.48	0.06	0.23	0.49	0.26	0.05	0.49	-1.65	-0.47
21	0.04	0.05	0.06	0.20	0.28	-0.01	-0.50	-0.84	-1.21	-1.62	-1.32	-1.70	-1.77	-2.06	-1.56	-1.38	-1.30	-0.77	-0.27	-0.14	0.00	0.07	0.01	0.01	0.28	-2.06	-0.65
22	0.04	0.18	0.26	0.19	0.37	0.16	0.10	0.05	-0.12	-0.07	-0.17	-0.21	-0.23	-0.26	-0.20	-0.27	-0.16	-0.04	0.02	0.11	0.19	0.20	0.20	0.23	0.37	-0.27	0.02
23	0.23	0.21	0.18	0.16	0.17	0.14	0.14	0.10	0.04	0.02	0.01	-0.04	-0.09	-0.18	-0.15	-0.11	0.00	-0.02	0.01	0.10	-0.03	0.00	0.03	0.04	0.23	-0.18	0.04
24	0.06	0.05	0.10	-0.02	-0.05	-0.07	-0.06	-0.02	0.17	0.09	0.03	0.00	-0.02	-0.03	-0.02	0.06	0.06	0.15	0.18	0.20	0.24	0.29	0.30	0.30	0.30	-0.07	0.08
25	0.34	0.31	0.29	0.28	0.28	0.27	0.28	0.29	0.28	0.19	0.16	0.12	-0.10	-0.14	-0.12	-0.13	-0.15	-0.13	0.01	0.01	0.04	0.18	0.29	-0.02	0.34	-0.15	0.12
26	0.07	0.03	0.05	0.08	0.07	0.06	0.04	0.03	0.03	0.02	-0.03	-0.05	-0.04	-0.03	-0.09	-0.13	-0.06	0.00	-0.02	-0.01	-0.06	0.17	0.28	0.49	0.49	-0.13	0.04
27	0.09	0.14	0.15	0.28	0.12	0.07	-0.07	-0.50	-0.60	-0.72	-0.46	-0.40	-0.39	-0.68	-1.34	-1.49	-0.92	-0.74	-0.33	-0.19	-0.19	-0.10	-0.03	-0.01	0.28	-1.49	-0.34
28	0.00	0.00	0.15	0.40	0.39	0.36	-0.19	-0.61	-0.66	-0.46	-0.55	-1.08	-0.87	-0.76	-0.53	-0.47	-0.46	-0.35	-0.22	-0.19	-0.12	0.24	0.79	0.87	0.87	-1.08	-0.18
29	0.75	0.87	0.38	0.30	0.51	-0.03	-0.50	-0.55	-0.71	-0.94	-0.59	-0.36	-0.32	-0.37	-0.36	-0.30	-0.38	-0.32	-0.18	-0.07	0.01	0.10	0.24	0.24	0.87	-0.94	-0.11
30	0.11	0.16	0.10	0.33	0.27	0.23	0.09	0.00	-0.02	-0.03	-0.04	-0.09	-0.03	-0.16	-0.20	-0.85	-0.62	-0.69	-0.39	-0.14	-0.05	0.02	0.06	0.25	0.33	-0.85	-0.07
31	0.35	0.29	0.32	0.32	0.25	0.22	0.18	0.17	0.12	-0.08	-0.03	-0.08	-0.08	-0.08	-0.01	0.05	0.15	0.16	0.22	0.22	0.22	0.25	0.26	0.26	0.35	-0.08	0.15
Max.	**1.00**	**0.91**	**0.87**	**0.79**	**0.98**	**0.61**	**0.50**	**0.29**	**0.28**	**0.19**	**0.16**	**0.12**	**0.09**	**0.11**	**-0.01**	**0.06**	**0.15**	**0.16**	**0.24**	**0.47**	**0.93**	**1.07**	**0.91**	**0.95**	**1.07**		
Min.	**-0.02**	**-0.01**	**0.01**	**-0.02**	**-0.05**	**-0.10**	**-0.50**	**-0.84**	**-1.28**	**-1.62**	**-1.96**	**-2.12**	**-2.05**	**-2.06**	**-2.22**	**-1.94**	**-1.65**	**-1.23**	**-0.48**	**-0.21**	**-0.19**	**-0.10**	**-0.04**	**-0.02**		**-2.22**	
Avg.	**0.28**	**0.29**	**0.26**	**0.26**	**0.27**	**0.17**	**-0.02**	**-0.18**	**-0.35**	**-0.51**	**-0.63**	**-0.73**	**-0.74**	**-0.76**	**-0.75**	**-0.74**	**-0.65**	**-0.43**	**-0.11**	**0.01**	**0.12**	**0.25**	**0.29**	**0.30**			**-0.17**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.30	0.34	0.34	0.37	0.35	0.28	0.25	0.19	0.12	0.05	-0.01	0.05	0.01	0.02	-0.11	-0.05	-0.13	0.07	-0.04	0.02	0.07	0.08	0.09	0.11	0.37	-0.13	0.11
2	0.14	0.18	0.37	0.26	0.15	0.10	-0.04	-0.15	-0.28	-0.38	-0.45	-0.49	-0.82	-1.02	-0.92	-1.30	-1.57	-1.19	-0.66	-0.36	-0.03	0.24	0.31	0.30	0.37	-1.57	-0.32
3	0.30	0.27	0.22	0.22	0.44	0.09	-0.18	-0.37	-0.68	-1.02	-1.32	-0.87	-0.63	-0.84	-0.79	-0.53	-0.82	-0.31	-0.03	-0.17	0.31	0.72	0.85	1.23	1.23	-1.32	-0.16
4	0.70	0.41	0.31	0.29	0.35	0.60	0.44	0.20	0.21	0.00	0.11	0.31	0.18	0.31	0.09	-0.08	-0.04	0.07	0.06	0.10	0.14	0.14	0.14	0.15	0.70	-0.08	0.22
5	0.09	0.06	0.07	0.41	0.32	0.38	0.31	0.19	0.18	0.13	0.01	0.02	0.07	-0.06	-0.04	0.00	-0.07	-0.04	-0.02	0.00	0.06	0.27	0.20	0.39	0.41	-0.07	0.12
6	0.38	0.31	0.08	0.12	0.28	0.10	-0.02	0.07	0.16	-0.23	-0.18	-0.34	-0.04	-0.17	-0.97	-0.92	-0.62	-0.27	-0.25	-0.23	0.00	0.20	0.18	0.20	0.38	-0.97	-0.09
7	0.42	0.37	0.44	0.46	0.32	0.22	0.14	0.12	0.05	-0.01	0.07	0.07	0.09	0.12	0.01	-0.06	-0.15	-0.10	-0.02	0.20	0.28	0.33	0.39	0.31	0.46	-0.15	0.17
8	0.31	0.29	0.29	0.29	0.30	0.28	0.24	0.08	-0.09	-0.19	-0.27	-0.26	-0.15	-0.19	-0.02	0.05	0.04	-0.05	-0.04	-0.05	0.06	0.03	0.05	0.10	0.31	-0.27	0.05
9	0.19	0.12	0.26	0.28	0.21	0.10	0.20	-0.14	-0.29	-0.19	-0.24	-0.43	-0.82	-0.59	-0.64	-0.72	-0.66	-0.51	-0.21	-0.01	0.04	0.07	0.09	0.19	0.28	-0.82	-0.15
10	0.22	0.25	0.24	0.24	0.08	0.03	-0.27	-0.61	-1.07	-1.18	-0.81	-0.19	0.12	-1.32	-1.25	-0.96	-0.96	-0.52	0.18	0.27	0.15	0.28	0.17	0.33	0.33	-1.32	-0.27
11	0.26	0.42	0.53	0.37	0.29	-0.20	-0.71	-0.86	-0.87	-0.74	-0.83	-1.32	-1.09	-0.83	-0.89	-0.85	-0.65	-0.61	-0.46	-0.05	0.00	0.06	0.09	0.11	0.53	-1.32	-0.37
12	0.09	0.05	0.04	0.04	0.05	0.00	0.00	-0.03	-0.02	-0.16	-0.14	-0.21	-0.61	-0.68	-0.58	-0.43	-0.53	-0.52	-0.55	-0.33	-0.22	-0.16	-0.14	-0.13	0.09	-0.68	-0.22
13	-0.03	0.32	0.41	0.21	0.61	0.17	-0.41	-0.69	-1.13	-1.39	-1.59	-1.75	-1.74	-1.69	-0.99	-0.95	-1.29	-0.76	-0.28	-0.05	0.24	0.21	0.90	1.16	1.16	-1.75	-0.44
14	0.41	0.79	0.67	0.77	0.43	0.09	-0.22	-0.87	-1.18	-1.52	-1.54	-1.40	-1.36	-1.46	-1.05	-0.93	-1.25	-0.83	-0.03	0.17	0.32	0.44	0.82	1.31	1.31	-1.54	-0.31
15	1.15	1.06	1.23	1.65	0.85	-0.03	-0.66	-0.92	-1.04	-1.54	-1.57	-1.08	-1.04	-1.29	-1.44	-1.28	-0.74	-0.41	0.28	0.62	1.23	1.47	1.59	1.28	1.65	-1.57	-0.03
16	0.80	0.99	0.84	1.03	0.74	0.03	-0.02	-0.40	-0.60	-0.66	-0.45	-0.45	-0.38	-0.41	-0.46	-0.47	-0.37	-0.28	-0.06	0.02	0.06	0.15	0.19	0.12	1.03	-0.66	0.00
17	0.02	0.03	-0.01	-0.01	-0.03	-0.01	-0.11	-0.22	-0.25	-0.43	-0.53	-0.59	-0.87	-2.15	-2.04	-1.55	-1.37	-1.19	0.14	0.95	1.28	1.41	0.61	0.54	1.41	-2.15	-0.27
18	0.61	0.68	0.87	0.62	0.55	0.48	-0.01	-0.71	-0.74	-1.18	-1.56	-1.25	-1.44	-1.41	-1.00	-1.00	-0.90	-1.02	-0.65	-0.34	-0.26	0.01	0.63	0.87	0.87	-1.56	-0.34
19	0.93	0.81	1.02	0.99	0.93	0.26	0.10	-0.21	-1.05	-1.67	-1.41	-1.46	-1.86	-0.94	-0.91	-0.50	-0.62	-0.58	0.07	0.12	0.15	0.79	0.81	0.87	1.02	-1.86	-0.14
20	0.93	0.93	0.70	0.79	1.02	0.20	-0.38	-0.63	-0.93	-0.87	-0.80	-0.66	-0.39	-0.36	-0.53	-1.08	-0.62	-0.30	1.11	1.26	1.50	1.14	0.79	0.35	1.50	-1.08	0.13
21	0.54	1.42	1.49	1.35	0.25	0.07	0.01	-0.01	-0.18	-0.12	-0.15	-0.16	-0.35	-0.36	-0.33	-0.37	-0.60	-0.44	0.03	0.01	0.05	0.07	0.04	0.04	1.49	-0.60	0.09
22	0.01	0.02	-0.01	0.20	0.34	-0.04	-0.17	-0.67	-0.88	-1.09	-1.38	-0.95	-0.81	-0.73	-0.72	-0.75	-0.28	-0.12	-0.03	0.07	0.18	0.17	0.22	0.22	0.34	-1.38	-0.30
23	0.13	0.14	0.16	0.24	0.22	0.15	0.11	0.09	0.05	0.01	-0.08	-0.10	0.02	0.03	0.13	0.17	0.14	0.10	0.15	0.22	0.44	0.21	0.09	0.04	0.44	-0.10	0.12
24	0.03	0.02	0.10	0.31	0.37	0.33	0.29	0.25	0.22	0.21	0.08	0.06	0.07	-0.12	-0.47	-0.24	-0.12	-0.05	-0.04	0.28	0.40	0.08	0.35	0.21	0.40	-0.47	0.11
25	0.12	0.18	0.42	0.21	0.06	-0.08	0.08	-0.01	0.00	0.03	-0.11	-0.22	-0.33	-0.33	-0.24	-0.30	-0.59	-0.41	-0.18	-0.10	-0.05	0.15	0.27	0.30	0.42	-0.59	-0.05
26	0.28	0.22	0.19	0.21	0.36	0.20	-0.01	-0.67	-1.02	-0.67	-0.87	-1.02	-0.97	-0.82	-0.95	-0.97	-0.84	-0.81	-0.01	0.42	0.66	0.88	1.04	0.67	1.04	-1.02	-0.19
27	0.62	0.48	0.51	0.64	0.69	0.34	-0.62	-0.95	-0.79	-1.24	-1.29	-1.29	-1.40	-1.23	-1.42	-1.48	-1.37	-0.79	-0.13	0.03	-0.02	0.37	0.97	0.84	0.97	-1.48	-0.36
28	0.69	1.01	0.47	0.46	0.37	0.26	-0.05	-0.06	-0.12	-0.35	-0.42	-1.00	-0.91	-0.59	-1.13	-1.14	-0.73	-0.58	-0.04	-0.03	0.33	1.05	1.24	0.57	1.24	-1.14	-0.03
29	1.74	1.02	0.78	1.15	0.47	-0.40	-1.05	-0.87	-0.90	-1.12	-1.31	-1.49	-1.65	-1.67	-1.56	-1.46	-0.72	-0.77	0.06	0.25	0.13	0.12	0.13	0.11	1.74	-1.67	-0.38
30	0.06	0.08	0.05	0.05	0.07	-0.06	-0.54	-1.01	-1.30	-1.64	-1.69	-1.26	-1.73	-1.46	-1.02	-1.37	-0.79	-0.47	-0.27	-0.03	-0.09	-0.07	-0.16	0.24	0.24	-1.73	-0.60
Max.	**1.74**	**1.42**	**1.49**	**1.65**	**1.02**	**0.60**	**0.44**	**0.25**	**0.22**	**0.21**	**0.11**	**0.31**	**0.18**	**0.31**	**0.13**	**0.17**	**0.14**	**0.10**	**1.11**	**1.26**	**1.50**	**1.47**	**1.59**	**1.31**	**1.74**		
Min.	**-0.03**	**0.02**	**-0.01**	**-0.01**	**-0.03**	**-0.40**	**-1.05**	**-1.01**	**-1.30**	**-1.67**	**-1.69**	**-1.75**	**-1.86**	**-2.15**	**-2.04**	**-1.55**	**-1.57**	**-1.19**	**-0.66**	**-0.36**	**-0.26**	**-0.16**	**-0.16**	**-0.13**		**-2.15**	
Avg.	**0.41**	**0.44**	**0.43**	**0.47**	**0.38**	**0.13**	**-0.11**	**-0.33**	**-0.48**	**-0.64**	**-0.69**	**-0.66**	**-0.69**	**-0.74**	**-0.74**	**-0.72**	**-0.64**	**-0.46**	**-0.06**	**0.11**	**0.25**	**0.36**	**0.43**	**0.43**			**-0.13**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.20	0.70	1.11	1.12	0.54	-0.02	-0.31	-0.52	-0.63	-1.10	-1.37	-1.88	-0.99	-0.47	-0.48	-0.39	-0.30	-0.09	-0.12	-0.11	-0.02	0.08	0.20	0.08	1.12	-1.88	-0.20
2	0.41	0.58	0.38	0.15	-0.08	-0.06	-0.19	-0.36	-1.04	-1.17	-1.13	-1.67	-1.55	-1.62	-1.30	-0.97	-0.66	-0.49	-0.34	-0.17	-0.06	0.02	0.00	-0.02	0.58	-1.67	-0.47
3	0.08	0.27	-0.03	0.07	0.23	0.20	-0.07	-0.15	-0.68	-0.85	-1.25	-1.54	-1.28	-1.16	-1.37	-1.38	-1.32	-1.01	-0.15	0.04	0.18	0.08	0.07	0.72	0.72	-1.54	-0.43
4	0.49	0.73	0.92	0.67	0.30	0.12	0.02	-0.19	-0.42	-0.74	-0.91	-0.90	-1.20	-1.49	-1.30	-0.94	-0.83	-0.65	-0.34	-0.19	-0.05	0.05	0.34	0.15	0.92	-1.49	-0.26
5	0.10	0.06	0.24	0.49	0.41	-0.17	0.23	-0.22	-0.58	-0.48	-1.07	-1.44	-1.38	-0.57	-0.10	-0.06	0.01	-0.11	0.06	0.01	-0.04	0.67	0.98	1.20	1.20	-1.44	-0.07
6	1.32	1.16	0.93	0.61	0.58	0.20	-0.13	-0.27	-0.76	-0.69	-0.58	-0.99	-1.50	-1.79	-1.77	-1.66	-1.36	-1.34	-0.55	-0.24	0.26	1.31	1.39	1.13	1.39	-1.79	-0.20
7	0.71	0.45	0.34	0.27	0.61	0.11	-0.25	-0.26	-0.54	-0.71	-1.25	-0.83	-1.43	-1.91	-1.83	-1.82	-1.65	-0.93	-0.51	-0.15	-0.04	0.03	0.16	0.20	0.71	-1.91	-0.47
8	0.63	0.87	0.47	0.36	0.35	0.23	0.02	-0.16	-0.35	-0.18	-0.16	-0.19	-0.41	-0.31	-0.47	-0.51	-0.69	-0.60	-0.46	-0.29	-0.02	0.07	0.14	0.26	0.87	-0.69	-0.06
9	0.43	0.68	0.55	0.58	0.64	0.30	0.09	-0.03	-0.10	-0.33	-0.84	-0.99	-0.91	-0.71	-0.53	-0.32	-0.06	0.00	-0.15	0.24	0.40	0.41	0.52	0.56	0.68	-0.99	0.02
10	0.50	0.30	0.49	0.78	0.85	0.44	0.32	-0.28	-0.54	-0.48	-0.61	-0.41	-0.24	-0.31	-0.21	-0.47	-0.39	-0.18	-0.10	-0.04	0.01	0.33	0.61	0.79	0.85	-0.61	0.05
11	0.35	0.90	0.90	0.81	0.38	0.62	-0.41	-0.94	-0.60	-0.64	-0.89	-1.05	-0.90	-1.14	-1.41	-1.35	-1.27	-0.99	-0.21	0.00	0.13	0.62	1.19	1.07	1.19	-1.41	-0.20
12	0.81	0.66	0.58	0.68	0.54	0.49	0.02	-0.15	-0.32	-0.34	-0.33	-0.46	-0.54	-1.23	-0.89	-0.73	-0.52	-0.50	-0.37	-0.29	-0.07	0.07	0.19	0.36	0.81	-1.23	-0.10
13	0.32	0.19	0.41	0.41	0.36	0.43	0.21	0.07	0.03	-0.01	-0.16	0.03	-0.07	-0.30	-0.41	-0.39	-0.49	-0.53	-0.26	-0.25	-0.11	0.00	0.55	0.77	0.77	-0.53	0.03
14	0.60	0.30	0.26	0.38	0.45	-0.16	-0.37	-0.16	-0.26	-0.35	-0.11	-0.16	-0.11	-0.07	-0.11	-0.17	-0.12	-0.05	0.01	-0.05	-0.02	0.02	-0.03	0.07	0.60	-0.37	-0.01
15	-0.08	-0.08	-0.02	0.02	0.27	0.22	-0.12	-0.35	-0.46	-1.55	-1.34	-1.51	-1.25	-0.88	-0.87	-0.96	-0.99	-0.61	-0.91	0.07	0.13	0.09	0.08	0.06	0.27	-1.55	-0.46
16	0.08	0.06	0.07	0.09	0.08	0.05	-0.08	-0.32	-1.24	-1.68	-1.70	-1.75	-1.90	-1.66	-1.63	-0.78	-0.36	-0.10	0.06	0.08	0.12	0.12	0.14	0.14	0.14	-1.90	-0.51
17	0.11	0.14	0.34	1.06	0.70	0.04	-0.51	-0.91	-1.66	-1.37	-1.14	-1.55	-1.35	-1.29	-1.16	-1.28	-0.51	-0.18	-0.15	-0.13	-0.05	-0.03	-0.05	-0.03	1.06	-1.66	-0.46
18	-0.01	0.01	0.01	0.04	-0.02	0.29	0.14	-0.12	-0.37	-0.19	0.05	0.10	-0.02	-0.29	-0.11	0.13	0.26	0.30	0.37	0.37	0.12	0.13	0.04	0.11	0.37	-0.37	0.06
19	0.17	0.22	0.47	0.34	0.84	0.48	-0.01	-0.05	-0.15	-0.75	-0.62	-0.27	-0.63	-1.25	-1.17	-0.93	-0.40	-0.29	-0.04	-0.12	-0.08	0.08	0.71	1.21	1.21	-1.25	-0.09
20	1.05	0.90	0.84	0.89	0.66	0.30	0.33	-0.02	-0.63	-0.68	-0.87	-1.39	-1.87	-1.77	-1.73	-1.76	-1.51	-1.18	-0.14	-0.03	0.46	0.42	0.08	0.04	1.05	-1.87	-0.32
21	0.03	0.06	0.05	0.04	0.02	0.01	-0.01	-0.10	-0.26	-0.40	-0.41	-1.26	-1.79	-2.00	-2.05	-2.00	-2.07	-1.37	0.08	0.06	0.06	0.08	0.12	0.12	0.12	-2.07	-0.54
22	0.28	0.39	0.45	0.44	0.30	0.36	-0.10	-0.03	0.10	0.00	0.03	-0.04	-0.03	0.00	0.22	0.19	0.23	0.36	0.32	0.22	0.21	0.25	0.21	0.23	0.45	-0.10	0.19
23	0.06	0.04	0.16	0.18	0.08	0.04	0.10	0.06	0.05	-0.14	-0.05	0.00	-0.01	0.10	0.13	0.11	0.10	0.06	0.05	0.06	0.09	0.18	0.27	0.16	0.27	-0.14	0.08
24	0.11	0.12	0.14	0.26	0.64	0.42	0.32	0.33	0.32	0.23	0.28	0.27	0.25	0.23	0.31	0.28	0.29	0.32	0.42	0.45	0.52	0.59	0.58	0.57	0.64	0.11	0.34
25	0.45	0.41	0.40	0.43	0.42	0.39	0.39	0.30	0.26	0.23	0.24	0.18	0.17	0.13	0.08	0.00	0.24	0.17	0.32	0.58	0.54	0.53	0.49	0.64	0.64	0.00	0.33
26	0.49	0.71	0.64	0.49	0.86	0.55	0.36	0.18	-0.23	-0.33	-0.34	-0.90	-1.08	-0.48	-1.03	-0.39	-0.50	-0.48	-0.12	-0.07	-0.06	0.14	0.18	0.33	0.86	-1.08	-0.05
27	0.56	0.86	0.58	0.56	0.17	0.17	0.13	-0.08	-0.41	-0.89	-1.26	-0.92	-1.12	-1.00	-1.23	-1.27	-1.29	-0.74	-0.21	-0.42	-0.09	-0.01	0.15	0.47	0.86	-1.29	-0.30
28	0.15	0.27	0.14	0.25	0.20	0.09	0.07	0.02	-0.07	-0.48	-1.10	-0.75	-1.00	-0.89	-0.78	-0.89	-0.35	0.02	0.09	0.05	0.07	0.02	0.03	0.05	0.27	-1.10	-0.20
29	0.08	0.10	0.11	0.11	0.14	0.11	-0.07	-0.28	-0.69	-1.21	-1.30	-1.26	-1.25	-1.24	-1.05	-0.81	-0.93	-0.30	0.09	0.06	0.07	0.08	0.13	0.09	0.14	-1.30	-0.38
30	0.12	0.06	0.11	0.06	0.21	0.06	-0.01	-0.23	-0.34	-0.36	-0.55	-0.86	-1.02	-1.49	-1.32	-1.09	-1.05	-0.59	-0.25	-0.21	-0.11	0.09	-0.13	-0.24	0.21	-1.49	-0.38
31	-0.27	-0.24	-0.22	-0.25	-0.22	-0.19	-0.16	-0.19	-0.12	-0.16	-0.15	-0.14	0.10	0.00	0.19	0.06	-0.09	0.02	0.02	0.10	0.15	0.12	0.12	0.10	0.19	-0.27	-0.06
Max.	**1.32**	**1.16**	**1.11**	**1.12**	**0.86**	**0.62**	**0.39**	**0.33**	**0.32**	**0.23**	**0.28**	**0.27**	**0.25**	**0.23**	**0.31**	**0.28**	**0.29**	**0.36**	**0.42**	**0.58**	**0.54**	**1.31**	**1.39**	**1.21**	**1.39**		
Min.	**-0.27**	**-0.24**	**-0.22**	**-0.25**	**-0.22**	**-0.19**	**-0.51**	**-0.94**	**-1.66**	**-1.68**	**-1.70**	**-1.88**	**-1.90**	**-2.00**	**-2.05**	**-2.00**	**-2.07**	**-1.37**	**-0.91**	**-0.42**	**-0.11**	**-0.03**	**-0.13**	**-0.24**		**-2.07**	
Avg.	**0.33**	**0.38**	**0.38**	**0.40**	**0.37**	**0.20**	**0.00**	**-0.17**	**-0.41**	**-0.57**	**-0.67**	**-0.79**	**-0.85**	**-0.87**	**-0.82**	**-0.73**	**-0.60**	**-0.39**	**-0.11**	**-0.01**	**0.09**	**0.21**	**0.31**	**0.37**			**-0.16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Temperature Difference (deg. C)

August *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0.21	0.16	0.10	0.10	0.19	0.25	0.21	0.15	0.17	0.09	0.01	-0.10	-0.07	-0.13	-0.08	0.01	0.01	0.03	0.06	0.12	0.10	0.17	0.19	0.14	0.25	-0.13	0.09
2	0.15	0.13	0.13	0.18	0.17	0.20	0.23	0.21	0.17	0.31	0.32	0.37	0.27	0.31	0.32	0.27	0.23	0.27	0.30	0.32	0.25	0.23	0.26	0.37	0.37	0.13	0.25
3	0.28	0.21	0.25	0.41	0.32	0.39	0.31	0.10	0.23	0.32	0.19	0.20	0.14	0.12	0.07	0.02	0.23	0.09	0.06	0.07	0.11	0.09	0.08	0.05	0.41	0.02	0.18
4	0.10	0.14	0.14	0.11	0.07	0.09	0.08	0.09	0.03	0.03	0.04	0.00	0.03	0.04	0.07	0.06	0.07	0.11	0.17	0.21	0.20	0.17	0.11	0.13	0.21	0.00	0.10
5	0.16	0.17	0.17	0.17	0.20	0.15	0.18	0.17	-0.22	-0.65	-0.57	-0.10	-0.18	0.55	0.41	0.30	0.25	0.29	0.46	0.46	0.37	0.29	0.30	0.31	0.55	-0.65	0.15
6	0.42	0.44	0.28	0.19	0.22	0.16	0.18	0.16	0.15	0.13	-0.04	-0.16	-0.22	-0.33	-0.61	-1.16	-1.17	-0.13	0.51	0.58	0.70	0.82	1.02	0.72	1.02	-1.17	0.12
7	0.64	0.32	0.08	0.08	0.10	0.05	0.06	-0.07	-0.24	-0.88	-1.00	-0.89	-1.25	-0.85	-0.72	-0.94	-0.61	-0.21	0.41	0.63	0.46	0.25	0.36	0.73	0.73	-1.25	-0.15
8	0.84	0.92	1.12	1.49	1.20	0.71	-0.03	-0.59	-1.15	-1.34	-0.99	-0.69	-0.87	-0.79	-0.96	-0.83	-0.47	-0.03	0.45	0.45	0.75	0.47	0.17	0.24	1.49	-1.34	0.00
9	0.56	0.53	0.52	0.72	0.96	1.00	0.31	-0.71	-0.79	-0.54	-0.67	-0.76	-1.00	-1.09	-1.22	-1.33	-1.34	-0.89	0.08	0.36	0.36	0.97	0.27	0.22	1.00	-1.34	-0.15
10	0.61	1.13	0.78	0.46	0.16	0.09	-0.09	-0.34	-0.91	-1.04	-1.22	-1.19	-0.90	-0.94	-1.03	-0.96	-0.84	-0.52	-0.25	0.17	0.75	0.72	0.59	0.92	1.13	-1.22	-0.16
11	0.84	0.15	0.02	0.23	0.44	-0.05	-0.20	-0.33	-0.44	-0.51	-0.64	-0.83	-0.92	-1.00	-1.05	-0.80	-0.78	-1.01	-0.69	-0.37	0.08	0.67	0.49	0.65	0.84	-1.05	-0.25
12	0.44	0.35	0.19	0.24	0.48	0.41	0.24	-0.15	-0.19	-0.09	-0.12	-0.24	-0.44	-0.44	-0.75	0.21	0.41	0.65	0.81	0.73	0.61	0.90	0.35	0.38	0.90	-0.75	0.21
13	0.51	0.87	0.90	0.72	0.70	0.85	0.28	0.51	-0.22	-0.60	-0.78	-0.79	-0.84	-1.03	-0.86	-0.50	-0.34	0.65	0.23	0.45	0.67	0.61	0.21	0.25	0.90	-1.03	0.10
14	0.14	0.09	0.13	0.08	0.03	0.00	0.01	-0.06	-0.09	-0.61	-0.59	-0.59	-0.43	-0.15	-0.23	-0.30	-0.04	0.05	0.20	0.28	0.27	0.37	0.37	0.46	0.46	-0.61	-0.03
15	0.58	0.37	0.24	0.30	0.42	0.44	0.41	-0.14	-0.55	-0.81	-1.33	-1.44	-1.28	-0.70	-0.37	-0.71	-0.46	-0.51	-0.23	0.09	0.87	1.65	0.90	0.96	1.65	-1.44	-0.05
16	0.97	0.90	1.32	0.77	0.69	0.63	0.23	-0.18	-0.66	-1.05	-0.73	-1.09	-1.16	-0.18	-0.45	-0.09	-0.01	-0.10	0.19	0.19	0.64	0.51	0.28	0.37	1.32	-1.16	0.08
17	0.10	0.34	0.24	0.32	0.32	0.68	0.62	0.27	-0.01	-0.13	-0.10	-0.47	-0.36	-0.46	-0.27	0.10	0.00	0.08	0.24	0.42	0.66	0.48	0.52	0.42	0.68	-0.47	0.17
18	0.46	0.29	0.32	0.42	0.58	0.54	0.41	0.40	0.37	0.31	0.34	0.32	0.30	0.29	0.29	0.22	0.22	0.26	0.32	0.38	0.42	0.34	0.28	0.29	0.58	0.22	0.35
19	0.29	0.28	0.41	0.39	0.43	0.45	0.43	0.33	0.33	0.25	0.00	0.02	0.04	-0.04	0.01	0.10	0.11	0.05	0.04	0.19	0.08	0.11	0.14	0.05	0.45	-0.04	0.19
20	0.15	0.13	0.21	0.34	0.43	0.43	0.21	0.19	0.13	0.00	-0.11	0.14	-0.04	-0.06	-0.16	-0.19	-0.15	-0.11	0.10	0.14	0.14	0.29	0.36	0.47	0.47	-0.19	0.13
21	0.41	0.30	0.44	0.39	0.58	0.40	0.47	0.48	0.39	0.43	0.38	0.22	0.17	0.22	0.06	0.05	0.09	0.09	0.14	0.16	0.19	0.29	0.36	0.20	0.58	0.05	0.29
22	0.15	0.19	0.11	0.06	0.17	0.25	0.15	0.06	0.14	0.11	0.08	0.06	0.11	0.14	0.12	0.26	0.25	0.28	0.24	0.28	0.40	0.42	0.26	0.10	0.42	0.06	0.18
23	0.50	0.39	0.44	0.47	0.38	0.24	0.09	-0.06	0.04	-0.07	-0.08	-0.31	-0.42	-0.33	-0.28	-0.24	-0.01	0.18	0.18	0.29	0.17	0.17	0.43	0.27	0.50	-0.42	0.10
24	0.18	0.23	0.28	0.34	0.56	0.69	0.66	0.10	-0.59	-0.90	-0.74	-0.70	-1.10	-0.61	-0.56	-0.53	-0.46	-0.01	0.22	0.69	1.54	0.66	0.53	1.11	1.54	-1.10	0.07
25	0.70	0.54	0.63	0.79	1.19	1.20	0.84	0.02	-0.54	-0.44	-0.97	-0.74	-0.58	-0.72	-0.65	-0.81	-0.89	-0.45	-0.06	-0.05	0.60	1.21	1.83	1.26	1.83	-0.97	0.16
26	0.73	0.50	0.26	0.35	0.53	0.55	0.50	0.21	-0.23	-0.60	-0.80	-1.01	-0.89	-0.63	-0.64	-1.15	-0.72	0.16	0.14	0.00	0.70	0.61	0.50	0.59	0.73	-1.15	-0.01
27	0.70	0.62	0.73	0.82	0.68	0.76	0.64	0.36	-0.08	0.22	0.16	-0.01	-0.01	0.01	0.03	0.06	0.19	0.30	0.40	0.53	0.64	0.79	0.84	0.74	0.84	-0.08	0.42
28	0.68	0.69	0.74	0.80	0.58	0.42	0.37	0.42	0.42	0.03	-0.11	-0.24	-0.83	-1.28	-0.84	-0.54	-0.42	0.17	0.70	1.26	1.39	0.99	0.90	0.85	1.39	-1.28	0.30
29	0.93	0.99	1.52	1.72	1.13	1.53	0.93	-0.21	-0.61	-0.49	-0.51	-0.52	-0.50	-0.34	-0.41	-0.21	-0.33	-0.31	-0.30	-0.25	-0.32	-0.32	-0.55	-0.61	1.72	-0.61	0.08
30	0.03															1.16	-0.72								1.16	-0.72	0.15
31						0.80	1.25	0.73	1.40	1.80	1.42	1.57													1.80	0.73	1.28
Max.	**0.97**	**1.13**	**1.52**	**1.72**	**1.20**	**1.53**	**1.25**	**0.73**	**1.40**	**1.80**	**1.42**	**1.57**	**0.30**	**0.55**	**0.41**	**1.16**	**0.41**	**0.65**	**0.81**	**1.26**	**1.54**	**1.65**	**1.83**	**1.26**	**1.83**		
Min.	**0.03**	**0.09**	**0.02**	**0.06**	**0.03**	**-0.05**	**-0.20**	**-0.71**	**-1.15**	**-1.34**	**-1.33**	**-1.44**	**-1.28**	**-1.28**	**-1.22**	**-1.33**	**-1.34**	**-1.01**	**-0.69**	**-0.37**	**-0.32**	**-0.32**	**-0.55**	**-0.61**		**-1.44**	
Avg.	**0.45**	**0.43**	**0.44**	**0.46**	**0.48**	**0.48**	**0.33**	**0.07**	**-0.12**	**-0.22**	**-0.31**	**-0.33**	**-0.46**	**-0.36**	**-0.37**	**-0.28**	**-0.26**	**-0.02**	**0.18**	**0.30**	**0.47**	**0.51**	**0.43**	**0.44**			**0.14**

Total Hours in Month 744 **Hours Data Available** 706 **Data Recovery** 94.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.6	1.80	1.36	1.39	1.36	1.38	1.20	1.09	0.19	-0.69	-1.14	-1.31	-1.12	-1.05	-1.65	-1.24	-1.59	-1.62	-0.55	-0.18	0.44	0.29	-0.10	-0.18	1.80	-1.65	-0.01
2	-0.3	-0.30	-0.29	-0.27	-0.32	-0.34	-0.31	-0.26	-0.31	-0.54	-0.35	-0.17	-0.29	-0.49	-0.93	-1.21	-1.14	-0.98	-0.55	-0.25	0.01	0.70	1.33	0.59	1.33	-1.21	-0.29
3	0.3	0.76	0.78	0.80	0.47	0.57	0.28	0.15	-0.04	-0.05	-0.10	-0.08	-0.18	-0.38	-0.36	-0.35	-0.33	-0.18	-0.12	-0.13	-0.10	0.03	0.36	0.32	0.80	-0.38	0.10
4	0.3	0.29	0.19	0.42	0.41	0.34	0.29	0.27	0.15	0.08	0.18	0.21	0.22	0.23	0.31	0.36	0.45	0.44	0.66	0.82	0.82	0.78	0.72	0.60	0.82	0.08	0.40
5	0.4	0.53	0.63	0.55	0.46	0.42	0.43	0.42	0.37	0.26	0.21	0.02	0.13	0.05	0.00	-0.05	0.00	0.11	0.22	0.25	0.28	0.29	0.47	0.43	0.63	-0.05	0.29
6	0.4	0.23	0.19	0.23	0.28	0.38	0.38	0.34	0.17	0.07	-0.04	-0.07	-0.10	-0.12	-0.24	-0.84	-1.10	-0.56	0.23	0.25	0.32	0.36	0.29	0.28	0.38	-1.10	0.05
7	0.3	0.34	0.27	0.18	0.11	0.10	0.17	0.17	0.03	-0.08	-0.40	-0.94	-1.39	-1.43	-1.38	-1.05	-1.08	-0.73	0.03	0.29	0.30	0.24	0.23	0.26	0.34	-1.43	-0.23
8	0.4	0.43	0.45	0.49	0.41	0.42	0.46	0.32	0.26	0.17	0.16	0.27	0.44	0.45	0.04	-0.02	0.04	0.05	0.12	0.17	0.26	0.44	0.33	0.28	0.49	-0.02	0.29
9	0.2	0.28	0.31	0.39	0.33	0.36	0.30	0.21	0.18	0.15	0.10	-0.04	-0.15	-0.21	-0.34	-0.42	-0.50	-0.37	-0.31	0.13	0.26	0.54	0.48	0.58	0.58	-0.50	0.10
10	0.4	1.14	1.75	1.05	1.10	1.78	0.94	0.51	0.45	-0.56	-0.65	-1.20	-0.90	-0.47	-0.21	-0.18	-0.63	-0.15	0.13	0.21	0.54	0.55	0.41	0.45	1.78	-1.20	0.27
11	0.4	0.51	0.33	0.23	0.20	0.20	0.17	0.12	0.11	0.15	0.15	0.15	0.10	0.11	0.20	0.35	0.14	0.08	0.14	0.48	0.47	0.40	0.32	0.22	0.51	0.08	0.24
12	0.2	0.25	0.28	0.28	0.35	0.36	0.38	0.42	0.35	0.33	0.27	0.20	-0.56	-0.50	-0.62	-0.35	-0.56	-0.71	-0.07	0.10	0.86	0.83	0.92	1.56	1.56	-0.71	0.19
13	1.1	1.64	1.80	2.07	1.25	0.75	0.31	0.62	0.23	0.08	0.17	0.02	-0.04	-0.32	-0.25	-0.05	-0.06	0.03	0.03	0.09	0.23	0.59	0.69	0.54	2.07	-0.32	0.48
14	0.6	0.37	0.20	0.37	0.22	0.14	0.09	0.12	0.05	0.04	-0.01	-0.08	-0.27	-0.70	-0.67	-0.72	-0.51	-0.34	-0.03	0.20	0.91	1.45	1.76	1.47	1.76	-0.72	0.20
15	1.7	1.20	1.23	0.66	0.73	0.41	0.34	0.56	0.46	0.07	-0.31	-0.65	-0.44	-0.81	-0.87	-0.77	-0.48	-0.09	0.18	0.44	0.53	0.62	0.63	0.92	1.68	-0.87	0.26
16	0.9	0.81	0.58	0.63	0.51	0.52	0.44	0.43	0.25	-0.24	-0.72	-0.93	-1.26	-1.25	-1.21	-0.89	-0.49	-0.19	0.06	0.32	0.26	0.20	0.24	0.26	0.88	-1.26	-0.03
17	0.2	0.09	0.17	0.22	0.16	0.06	0.07	0.12	0.11	0.04	-0.02	-0.25	-0.62	-0.38	-0.63	-0.41	-0.54	-0.48	-0.10	0.09	1.23	1.96	0.83	0.63	1.96	-0.63	0.11
18	0.4	0.30	0.34	0.32	0.29	0.31	0.41	0.51	0.45	0.33	0.25	0.12	0.14	0.10	0.09	0.20	0.22	0.36	0.36	0.33	0.30	0.44	0.45	0.42	0.51	0.09	0.31
19	0.2	0.12	0.54	0.75	0.15	0.08	0.11	0.13	0.47	0.34	0.07	-0.65	-0.16	0.24	-0.09	0.29	0.35		0.33	0.22	0.29	0.22	0.29	0.27	0.75	-0.65	0.20
20	0.2	0.20	0.18	0.17	0.20	0.20	0.20	0.18	0.14	0.28	0.10	-0.10	-0.12	0.14	-0.11	-0.19	-0.14	0.05	0.14	0.27	0.80	0.40	0.23	0.21	0.80	-0.19	0.15
21	0.5	0.47	0.31	0.49	0.45	0.48	0.56	0.57	0.43	0.07	-0.17	-0.73	-0.89	-1.13	-0.95	-0.43	-0.62	-0.48	0.23	0.94	1.29	1.01	0.52	0.22	1.29	-1.13	0.13
22	0.2	0.35	0.52	0.70	0.72	0.95	0.64	0.60	0.64	0.11	-0.03	-0.02	0.20	0.08	0.18	0.17	0.17	0.23	0.46	0.56	0.58	0.34	0.40	0.39	0.95	-0.03	0.38
23	0.4	0.40	0.41	0.38	0.41	0.44	0.48	0.47	0.53	0.34	0.15	0.02	-0.43	-0.70	-0.87	-0.75	-0.69	-0.25	-0.04	0.04	0.15	0.67	1.01	0.92	1.01	-0.87	0.14
24	0.6	0.76	1.04	0.61	0.75	0.21	0.33	0.23	0.17	0.20	-0.04	-0.35	-0.19	-0.97	-0.01	0.11	-0.20	-0.11	0.40	1.08	0.70	0.26	0.43	0.54	1.08	-0.97	0.27
25	0.7	0.21	0.16	0.45	0.23	0.22	0.19	0.34	0.29	0.06	0.05	-0.28	-0.45	-0.31	-0.27	-0.67	-0.31	0.16	0.20	0.20	0.20	0.20	0.20	0.51	0.70	-0.67	0.10
26	0.2	0.25	-0.05	0.07	0.06	0.01	0.10	0.10	0.11	0.08	-0.14	-0.90	-1.18	-1.08	-0.48	-0.32	-0.37	-0.23	0.00	0.11	0.24	0.64	0.53	0.69	0.69	-1.18	-0.06
27	0.7	0.69	0.74	0.14	0.02	0.07	0.12	0.17	0.14	-0.08	-0.20	-0.71	-1.03	-0.86	-1.04	-0.95	-0.51	-0.29	0.17	0.11	0.23	0.24	0.45	0.39	0.74	-1.04	-0.05
28	0.3	0.35	0.36	0.34	0.18	0.17	0.19	0.25	0.29	0.24	0.18	0.20	0.24	0.32	0.41	0.48	0.49	0.59	0.63	0.50	0.47	0.33	0.36	0.82	0.82	0.17	0.36
29	1.2	0.49	0.44	0.46	0.49	0.68	0.85	0.97	0.50	-0.11	-0.18	-0.35	-0.36	-0.09	-0.24	-0.08	-0.02	-0.04	0.30	0.52	0.76	0.67	0.54	0.34	1.21	-0.36	0.32
30	0.3	0.22	0.16	0.27	0.21	0.64	0.45	0.39	0.36	0.10	-0.02	-0.22	-1.23	-0.99	-0.97	-0.87	-0.48	-0.15	0.67	1.43	1.10	1.00	0.76	0.78	1.43	-1.23	0.16
Max.	**1.7**	**1.80**	**1.80**	**2.07**	**1.36**	**1.78**	**1.20**	**1.09**	**0.64**	**0.34**	**0.27**	**0.27**	**0.44**	**0.45**	**0.41**	**0.48**	**0.49**	**0.59**	**0.67**	**1.43**	**1.29**	**1.96**	**1.76**	**1.56**	**2.07**		
Min.	**-0.3**	**-0.30**	**-0.29**	**-0.27**	**-0.32**	**-0.34**	**-0.31**	**-0.26**	**-0.31**	**-0.69**	**-1.14**	**-1.31**	**-1.39**	**-1.43**	**-1.65**	**-1.24**	**-1.59**	**-1.62**	**-0.55**	**-0.25**	**-0.10**	**0.03**	**-0.10**	**-0.18**		**-1.65**	
Avg.	**0.5**	**0.51**	**0.51**	**0.49**	**0.41**	**0.41**	**0.35**	**0.35**	**0.25**	**0.04**	**-0.08**	**-0.29**	**-0.40**	**-0.42**	**-0.44**	**-0.36**	**-0.35**	**-0.20**	**0.13**	**0.32**	**0.49**	**0.56**	**0.54**	**0.52**			**0.16**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.4	0.36	0.18	0.21	0.37	0.03	0.00	0.10	0.11	0.17	-0.14	-0.14	-0.15	-0.26	-0.39	-0.10	-0.26	-0.19	0.08	0.28	0.24	0.21	0.20	0.29	0.44	-0.39	0.07
2	0.3	0.15	0.19	0.18	0.16	0.02	-0.03	0.00	-0.09	-0.04	-0.06	-0.07	-0.10	-0.17	-0.13	-0.21	-0.45	-0.22	-0.02	0.09	0.36	0.52	0.17	0.14	0.52	-0.45	0.03
3	0.2	0.14	0.43	0.55	0.40	0.26	0.44	0.28	0.29	0.08	-0.08	-0.18	-0.35	-0.68	-0.56	-0.31	-0.54	-0.22	0.23	0.20	0.15	0.16	0.29	0.42	0.55	-0.68	0.06
4	0.3	0.46	0.43	0.24	0.41	0.54	0.62	0.40	0.31	0.13	0.25	0.16	0.17	0.11	0.16	0.14	0.15	0.22	0.24	0.28	0.33	0.32	0.29	0.28	0.62	0.11	0.29
5	0.3	0.13	0.06	0.14	0.17	0.19	0.22	0.22	0.19	0.08	0.07	0.04	-0.02	0.11	-0.09	-0.31	-0.26	0.02	0.42	0.32	0.19	0.12	0.20	0.44	0.44	-0.31	0.12
6	0.3	0.44	0.29	0.06	0.11	0.09	0.08	0.14	0.06	0.01	-0.10	-0.24	-0.30	-0.23	-0.20	-0.53	-0.46	-0.20	-0.03	0.28	0.26	0.17	0.13	0.09	0.44	-0.53	0.01
7	0.1	0.09	0.10	0.13	0.18	0.18	0.14	0.12	0.10	0.06	-0.02	-0.24	-0.31	-0.34	-0.47	-0.53	-0.29	-0.03	0.07	0.12	0.17	0.18	0.23	0.27	0.27	-0.53	0.00
8	0.3	0.20	0.19	0.21	0.19	0.17	0.13	0.13	0.18	0.12	-0.39	-0.64	-0.41	-0.34	-0.40	-0.44	-0.27	-0.05	0.17	0.18	0.24	0.28	0.52	0.91	0.91	-0.64	0.05
9	0.6	0.62	0.68	0.15	0.19	0.05	0.04	0.15	0.50	0.33	-0.51	-0.85	-0.88	-0.83	-0.78	-0.68	-0.42	0.10	0.31	0.30	0.30	0.27	0.42	0.98	0.98	-0.88	0.04
10	0.8	1.10	1.00	0.77	0.17	0.11	0.21	0.28	0.19	0.09	-0.07	-0.27	-0.50	-0.33	-0.31	-0.49	-0.48	-0.32	-0.03	0.11	0.33	0.42	0.13	0.09	1.10	-0.50	0.13
11	0.2	0.29	0.36	0.42	0.57	0.71	0.43	0.34	0.42	0.28	0.10	0.06	-0.08	-0.15	-0.16	-0.13	-0.05	0.03	0.09	0.10	0.11	0.13	0.12	0.10	0.71	-0.16	0.18
12	0.1	0.12	0.11	0.12	0.14	0.15	0.17	0.25	0.30	0.46	0.14	-0.09	-0.16	-0.06	-0.13	-0.35	-0.30	0.01	0.44	0.60	0.51	0.34	0.30	0.23	0.60	-0.35	0.14
13	0.4	0.37	0.33	0.40	0.32	0.22	0.16	0.14	0.13	0.11	0.05	-0.04	-0.15	-0.23	-0.13	-0.04	-0.10	-0.02	0.08	0.07	0.11	0.09	0.19	0.26	0.40	-0.23	0.11
14	0.3	0.15	0.07	-0.01	-0.02	-0.01	0.02	0.01	0.03	0.00	-0.06	-0.20	-0.32	-0.32	-0.33	-0.31	-0.22	0.07	0.24	0.53	0.99	0.22	0.06	0.12	0.99	-0.33	0.04
15	0.9	0.59	0.78	0.70	1.36	0.98	0.79	0.54	0.46	0.24	0.10	0.13	0.01	-0.28	-0.33	-0.22	-0.13	0.03	0.20	0.41	0.28	0.19	0.25	0.49	1.36	-0.33	0.35
16	0.5	0.49	0.53	1.41	1.34	0.96	0.91	0.51	0.29	0.25	-0.01	-0.18	-0.36	-0.50	-0.19	0.02	-0.09	-0.05	0.11	0.21	0.23	0.02	0.11	0.18	1.41	-0.50	0.28
17	0.2	0.40	0.45	0.53	0.30	0.55	0.64	0.32	0.28	0.13	0.05	-0.04	-0.16	0.03	-0.11	-0.12	-0.07	-0.02	-0.04	0.00	0.25	0.29	0.25	0.20	0.64	-0.16	0.18
18	0.2	0.16	0.11	0.18	0.08	0.14	0.13	0.13	0.12	0.08	0.04	-0.01	-0.04	-0.19	-0.09	-0.11	-0.11	0.05	0.12	0.09	0.07	0.07	0.08	0.08	0.18	-0.19	0.06
19	0.1	0.09	0.10	0.13	0.11	0.16	0.21	0.16	0.18	0.15	-0.01	-0.13	-0.20	-0.20	-0.18	-0.16	-0.19	0.04	0.22	0.22	0.22	0.25	0.24	0.33	0.33	-0.20	0.07
20	0.4	0.59	0.82	0.78	0.76	0.68	0.67	0.62	0.68	0.42	-0.17	-0.33	-0.14	-0.21	-0.15	0.10	0.20	0.24	0.23	0.23	0.20	0.14	0.10	0.22	0.82	-0.33	0.29
21	0.2	0.23	0.18	0.16	0.14	0.12	0.19	0.19	0.19	0.20	0.15	0.07	-0.01	-0.06	-0.09	-0.21	-0.07	0.11	0.30	0.52	0.71	0.99	1.06	1.44	1.44	-0.21	0.28
22	0.8	1.28	0.72	0.86	0.46	0.59	0.45	0.33	0.42	0.45	0.17	-0.04	-0.31	-0.28	-0.06	-0.15	0.06	0.01	0.22	0.41	0.29	0.45	0.26	0.21	1.28	-0.31	0.32
23	0.2	0.51	0.44	0.45	0.23	0.36	0.33	0.37	0.51	0.36	-0.11	-0.26	-0.28	-0.16	-0.23	-0.35	-0.20	-0.16	-0.03	0.00	0.02	0.03	0.07	0.11	0.51	-0.35	0.09
24	0.1	0.43	0.59	0.41	0.27	0.55	0.26	0.27	0.27	0.10	-0.03	-0.15	-0.31	-0.36	-0.37	-0.29	-0.15	-0.03	0.08	0.08	0.08	0.32	0.28	0.16	0.59	-0.37	0.11
25	0.1	0.19	0.20	0.10	0.06	0.05	0.10	0.11	0.03	-0.01	-0.13	-0.19	-0.21	-0.14	-0.09	0.00	0.12	0.14	0.17	0.15	0.18	0.26	0.35	0.30	0.35	-0.21	0.07
26	0.3	0.24	0.13	0.13	0.15	0.29	0.17	0.24	0.18	0.04	-0.01	0.05	0.00	-0.12	-0.17	-0.19	0.03	0.09	0.11	0.18	0.28	0.25	0.30	0.37	0.37	-0.19	0.13
27	0.2	0.34	0.31	0.29	0.27	0.25	0.24	0.25	0.19	0.14	0.06	0.07	0.14	0.06	-0.02	-0.05	-0.02	0.09	0.19	0.21	0.18	0.16	0.23	0.26	0.34	-0.05	0.17
28	0.4	0.32	0.27	0.09	0.50	0.22	0.61	0.66	0.43	0.31	0.23	-0.13	-0.11	-0.19	-0.10	-0.21	-0.26	-0.09	0.17	0.12	0.10	0.12	0.15	0.17	0.66	-0.26	0.16
29	0.2	0.19	0.17	0.23	0.17	0.10	0.13	0.18	0.15	0.18	0.16	0.09	0.08	0.07	0.01	-0.01	-0.03	-0.06	-0.09	-0.05	0.03	0.05	0.06	0.07	0.23	-0.09	0.09
30	0.1	0.08	0.06	0.02	0.02	0.10	0.15	0.19	0.21	0.18	0.22	0.13	0.13	0.19	0.13	0.18	0.06	0.02	0.11	0.11	0.10	0.10	0.16	0.10	0.22	0.02	0.12
31	0.1	0.11	0.17	0.09	0.04	-0.14	-0.09	0.07	-0.21	0.00	-0.03	0.03	-0.11	-0.10	-0.39	-0.84	-0.33	0.35	0.22	0.07	0.14	0.10	0.00	-0.16	0.35	-0.84	-0.04
Max.	**0.9**	**1.28**	**1.00**	**1.41**	**1.36**	**0.98**	**0.91**	**0.66**	**0.68**	**0.46**	**0.25**	**0.16**	**0.17**	**0.19**	**0.16**	**0.18**	**0.20**	**0.35**	**0.44**	**0.60**	**0.99**	**0.99**	**1.06**	**1.44**	**1.44**		
Min.	**0.1**	**0.08**	**0.06**	**-0.01**	**-0.02**	**-0.14**	**-0.09**	**0.00**	**-0.21**	**-0.04**	**-0.51**	**-0.85**	**-0.88**	**-0.83**	**-0.78**	**-0.84**	**-0.54**	**-0.32**	**-0.09**	**-0.05**	**0.02**	**0.02**	**0.00**	**-0.16**		**-0.88**	
Avg.	**0.3**	**0.35**	**0.34**	**0.33**	**0.31**	**0.28**	**0.27**	**0.25**	**0.23**	**0.16**	**0.00**	**-0.12**	**-0.18**	**-0.20**	**-0.21**	**-0.22**	**-0.17**	**0.00**	**0.15**	**0.21**	**0.25**	**0.23**	**0.23**	**0.29**			**0.13**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.2	-0.27	-0.32	-0.33	-0.33	-0.06	0.00	0.02	0.07	0.14	0.14	0.07	-0.06	-0.06	-0.07	0.00	0.09	0.05	0.07	0.06	0.11	0.11	0.09	-0.03	0.14	-0.33	-0.03
2	0.0	0.07	0.05	0.05	0.02	0.02	0.00	0.00	-0.01	0.02	-0.05	-0.18	-0.28	-0.39	-0.50	-0.49	-0.56	-0.14	0.04	0.02	0.03	0.06	0.11	0.08	0.11	-0.56	-0.08
3	0.1	0.10	0.12	0.08	0.05	0.07	0.08	0.06	0.08	0.10	0.03	-0.07	-0.17	-0.22	-0.22	-0.14	-0.13	0.56	0.69	0.50	0.13	-0.01	0.07	0.11	0.69	-0.22	0.08
4	0.1	0.04	0.13	0.46	0.39	0.46	0.42	0.34	0.31	0.28	0.28	0.25	0.20	0.20	0.19	0.18	0.24	0.23	0.25	0.25	0.24	0.22	0.24	0.20	0.46	0.04	0.25
5	0.2	0.21	0.21	0.18	0.13	0.17	0.28	0.29	0.31	0.14	0.23	0.08	0.15	0.11	0.06	0.15	0.23	0.18	0.22	0.18	0.26	0.21	0.28	0.26	0.31	0.06	0.20
6	0.2	0.19	0.15	0.14	0.10	0.12	0.12	0.11	0.12	0.09	-0.01	0.01	-0.03	-0.07	-0.03	-0.06	-0.07	-0.06	-0.01	0.03	-0.01	0.02	0.08	0.12	0.19	-0.07	0.05
7	0.2	0.20	0.24	0.22	0.19	0.23	0.28	0.17	0.40	0.27	0.31	0.32	0.12	0.03	0.17	0.07	-0.26	0.17	0.37	0.68	0.45	0.18	0.32	0.70	0.70	-0.26	0.25
8	0.6	0.65	0.47	0.36	0.27	0.24	0.17	0.18	0.18	0.09	0.04	0.08	0.13	0.12	0.24	0.19	0.37	0.16	0.09	0.19	0.19	0.17	0.13	0.10	0.65	0.04	0.22
9	0.1	0.10	0.10	0.02	0.16	0.06	0.15	0.15	0.17	0.22	0.33	0.01	-0.06	-0.11	-0.08	-0.13	-0.10	0.08	0.27	0.20	0.14	0.09	0.17	0.24	0.33	-0.13	0.09
10	0.2	0.18	0.12	0.12	0.14	0.12	0.07	0.20	0.39	0.92	0.48	0.44	0.14	0.05	0.07	0.06	0.09	0.15	0.16	0.20	0.18	0.14	0.13	0.15	0.92	0.05	0.20
11	0.2	0.23	0.60	0.36	0.27	0.31	0.43	0.39	0.45	0.39	0.29	0.20	0.00	-0.15	-0.12	-0.14	-0.05	0.24	0.05	0.04	0.07	0.22	0.17	0.20	0.60	-0.15	0.19
12	0.2	0.15	0.14	0.16	0.16	0.10	0.12	0.10	0.17	0.11	0.12	0.00	-0.06	-0.18	-0.21	-0.09	0.11	0.18	0.07	0.01	-0.01	-0.05	-0.06	-0.04	0.18	-0.21	0.05
13	0.0	0.07	0.10	0.09	0.07	0.03	0.05	0.09	0.11	0.10	0.06	0.01	0.05	0.03	-0.14	-0.25	-0.20	-0.14	-0.06	-0.07	0.00	0.03	0.05	0.18	0.18	-0.25	0.01
14	0.3	0.22	0.58	0.43	0.41	0.76	0.42	0.28	0.24	0.15	0.08	-0.01	-0.17	-0.32	-0.17	-0.02	0.02	0.03	0.07	0.12	0.11	0.04	0.00	0.13	0.76	-0.32	0.15
15	0.2	0.99	0.70	0.46	0.74	0.93	1.23	1.15	0.69	0.78	0.54	0.65	0.30	0.26	0.35	0.35	0.26	0.22	0.29	0.26	0.32	0.21	0.21	0.24	1.23	0.16	0.51
16	0.3	0.30	0.27	0.24	0.26	0.23	0.23	0.20	0.20	0.19	0.16	0.13	0.11	0.13	0.12	0.12	0.13	0.15	0.16	0.16	0.20	0.16	0.15	0.13	0.30	0.11	0.18
17	0.2	0.14	0.17	0.15	0.19	0.16	0.16	0.15	0.17	0.20	0.17	0.06	0.00	0.04	0.04	0.05	0.09	0.11	0.16	0.18	0.20	0.21	0.16	0.18	0.21	0.00	0.14
18	0.2	0.15	0.15	0.14	0.15	0.17	0.22	0.18	0.23	-0.08	-0.03	0.14	0.07	0.06	-0.06	-0.13	-0.06	-0.04	-0.07	-0.06	-0.11	-0.17	-0.13	0.03	0.23	-0.17	0.04
19	0.2	0.10	0.20	0.28	0.24	0.18	0.18	0.33	0.06	0.20	0.11	0.04	0.07	-0.08	0.00	0.02	0.05	0.03	0.01	0.01	0.05	0.10	0.09	0.07	0.33	-0.08	0.11
20	0.1	-0.01	-0.01	-0.07	-0.05	0.04	0.11	0.12	0.09	0.05	0.02	-0.06	-0.09	0.02	0.05	0.04	0.00	0.00	-0.01	-0.02	0.06	0.00	-0.01	0.01	0.12	-0.09	0.01
21	0.1	0.02	0.01	0.04	0.08	0.21	0.17	0.16	0.19	0.18	0.12	0.16	0.21	0.16	-0.20	-0.22	0.00	0.12	0.12	0.14	0.13	0.08	0.09	0.08	0.21	-0.22	0.09
22	0.1	0.21	0.14	0.09	0.08	-0.04	-0.08	-0.11	-0.23	-0.11	-0.03	-0.05	-0.02	-0.07	-0.09	-0.12	-0.13	-0.16	-0.15	-0.11	-0.09	-0.02	0.02	0.09	0.21	-0.23	-0.04
23	0.2	0.21	0.21	0.24	0.29	0.19	0.23	0.15	0.09	0.09	0.07	0.05	0.02	0.01	-0.01	0.00	0.04	0.05	0.10	0.13	0.13	0.12	0.05	0.06	0.29	-0.01	0.11
24	0.1	0.07	0.08	0.14	0.29	0.89	0.50	0.26	0.12	-0.02	0.04	0.10	0.09	0.01	0.14	0.18	0.07	0.00	-0.02	-0.05	-0.04	-0.05	-0.04	-0.04	0.89	-0.05	0.12
25	0.0	0.03	0.06	0.25	0.25	0.13	0.11	0.09	0.03	0.11	0.01	-0.01	0.02	-0.02	-0.07	-0.06	-0.02	0.07	0.10	0.11	0.13	0.12	0.15	0.17	0.25	-0.07	0.07
26	0.2	0.18	0.20	0.19	0.17	0.13	0.08	0.04	0.08	0.19	0.22	0.22	0.04	0.04	0.00	0.16	0.19	0.41	0.42	0.27	0.41	0.43	0.35	0.17	0.43	0.00	0.20
27	0.1	0.08	0.11	0.14	0.24	0.31	0.33	0.21	0.20	0.17	0.20	0.14	0.10	0.09	0.09	0.11	0.13	0.13	0.13	0.12	0.14	0.15	0.10	0.12	0.33	0.08	0.15
28	0.1	0.06	0.06	0.13	0.07	0.11	0.10	0.05	0.07	0.11	0.23	0.23	-0.01	0.13	0.09	0.18	0.26	0.38	0.12	0.09	0.20	0.19	0.14	0.11	0.38	-0.01	0.13
29	0.1	0.08	0.08	0.09	0.09	0.07	0.13	0.14	0.08	0.10	0.12	0.08	0.05	0.04	0.03	0.03	0.05	0.08	0.08	0.09	0.08	0.10	0.09	0.07	0.14	0.03	0.08
30	0.1	0.10	0.12	0.11	0.13	0.13	0.11	0.08	0.08	0.08	0.10	0.06	0.04	0.05	0.11	0.09	0.09	0.14	0.18	0.16	0.18	0.23	0.33	0.21	0.33	0.04	0.12
Max.	**0.6**	**0.99**	**0.70**	**0.46**	**0.74**	**0.93**	**1.23**	**1.15**	**0.69**	**0.92**	**0.54**	**0.65**	**0.30**	**0.26**	**0.35**	**0.35**	**0.37**	**0.56**	**0.69**	**0.68**	**0.45**	**0.43**	**0.35**	**0.70**	**1.23**		
Min.	**-0.2**	**-0.27**	**-0.32**	**-0.33**	**-0.33**	**-0.06**	**-0.08**	**-0.11**	**-0.23**	**-0.11**	**-0.05**	**-0.18**	**-0.28**	**-0.39**	**-0.50**	**-0.49**	**-0.56**	**-0.16**	**-0.15**	**-0.11**	**-0.11**	**-0.17**	**-0.13**	**-0.04**		**-0.56**	
Avg.	**0.1**	**0.16**	**0.17**	**0.17**	**0.18**	**0.22**	**0.21**	**0.19**	**0.17**	**0.18**	**0.15**	**0.11**	**0.03**	**0.00**	**-0.01**	**0.00**	**0.03**	**0.11**	**0.13**	**0.13**	**0.13**	**0.11**	**0.12**	**0.14**			**0.12**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.19	0.21	0.22	0.19	0.10	0.12	0.17	0.23	0.14	0.39	0.43	0.12	0.01	0.06	0.12	0.38	0.73	0.77	0.78	0.41	0.47	0.58	0.80	0.80	0.01	0.32
2	0.8	0.96	0.57	1.02	1.08	1.34	0.81	1.02	1.19	1.14	1.29	0.43	0.13	0.17	0.21	0.40	0.29	0.21	0.16	0.21	0.16	0.11	-0.04	-0.10	1.34	-0.10	0.56
3	-0.1	-0.09	-0.05	0.03	0.05	0.05	0.09	0.05	-0.01	0.01	0.02	-0.04	-0.13	-0.15	-0.15	-0.10	-0.06	-0.06	0.08	0.05	0.06	0.03	0.05	-0.01	0.09	-0.15	-0.01
4	-0.1	-0.02	-0.04	-0.02	-0.02	-0.05	-0.06	0.00	-0.01	-0.01	-0.02	-0.11	-0.08	-0.15	-0.09	-0.10	-0.07	0.08	0.16	0.38	0.58	0.87	0.76	0.37	0.87	-0.15	0.09
5	0.4	0.29	0.10	0.13	0.27	0.19	0.25	0.21	0.03	-0.01	-0.04	-0.07	0.04	0.05	0.01	0.05	0.06	0.07	0.05	0.08	0.05	0.04	0.05	0.12	0.44	-0.07	0.10
6	0.1	0.10	0.11	0.11	0.14	0.22	0.19	0.15	0.12	0.09	0.11	0.13	0.15	0.12	0.06	-0.26	-0.01	0.04	0.00	-0.02	0.06	0.19	0.27	0.14	0.27	-0.26	0.10
7	0.0	0.60	0.83	0.76	0.76	0.86	0.31	0.06	0.25	0.48	0.41	0.33	0.28	0.22	0.12	0.06	0.02	0.05	0.04	0.05	0.07	0.05	0.04	0.03	0.86	0.02	0.28
8	0.1	0.17	0.11	0.04	0.08	0.18	0.22	0.28	0.42	0.53	0.49	0.24	0.24	0.17	0.13	0.04	0.09	0.11	0.11	0.20	0.17	-0.03	-0.10	0.01	0.53	-0.10	0.17
9	0.4	0.42	0.40	0.54	0.57	0.19	0.16	0.14	0.38	0.33	0.20	0.31	0.26	0.23	0.21	0.21	0.21	0.24	0.19	0.24	0.23	0.19	0.21	0.24	0.57	0.14	0.28
10	0.2	0.21	0.22	0.19	0.18	0.18	0.16	0.11	0.01	0.09	0.04	0.01	0.01	0.06	0.11	0.10	0.09	0.07	0.02	0.01	0.06	0.13	0.12	0.16	0.23	0.01	0.11
11	0.2	0.22	0.35	0.18	0.14	0.08	0.13	0.09	0.11	0.10	0.11	0.12	0.04	-0.06	-0.11	-0.01	0.04	0.19	0.19	0.21	0.19	0.34	0.22	0.18	0.35	-0.11	0.13
12	0.2	0.12	0.15	0.37	0.40	0.35	0.24	0.13	0.15	0.12	0.13	0.10	0.07	0.07	0.05	0.08	0.12	0.09	0.09	0.11	0.03	-0.03	0.10	0.06	0.40	-0.03	0.14
13	0.2	0.10	0.14	0.30	0.22	0.20	0.07	0.14	0.21	0.10	0.19	0.15	0.08	0.03	0.05	0.00	0.06	0.11	0.09	0.31	0.23	0.03	0.06	0.10	0.31	0.00	0.13
14	0.2	0.06	0.01	0.15	0.63	0.62	0.71	0.16	0.13	0.12	0.17	0.14	0.05	0.04	0.05	0.05	0.13	0.09	0.14	0.09	0.08	0.09	0.07	0.06	0.71	0.01	0.17
15	0.1	0.21	0.18	0.06	0.24	0.05	0.06	0.07	-0.09	0.02	-0.08	-0.05	-0.06	-0.14	-0.05	-0.06	-0.06	-0.08	-0.01	0.07	0.08	0.09	0.07	0.09	0.24	-0.14	0.03
16	0.1	0.07	0.04	0.05	0.07	-0.01	0.01	0.03	0.07	0.06	0.06	0.04	0.01	0.01	0.02	0.04	0.06	0.08	0.09	0.10	0.08	0.04	0.08	0.13	0.13	-0.01	0.06
17	0.1	0.12	0.09	0.11	0.11	0.09	0.10	0.10	0.08	0.10	0.11	0.12	0.08	-0.07	-0.06	0.04	0.09	0.12	0.05	0.42	0.12	0.13	0.03	-0.08	0.42	-0.08	0.09
18	0.3	-0.10	-0.06	-0.03	0.14	0.08	-0.06	-0.07	-0.14	-0.09	-0.13	-0.14	-0.17	-0.14	-0.11	-0.05	0.03	0.26	0.36	0.51	0.41	0.18	0.09	0.03	0.51	-0.17	0.05
19	0.0	-0.01	0.05	0.06	0.08	0.09	0.11	0.10	0.13	0.10	0.09	0.07	0.03	0.02	0.04	0.05	0.06	0.10	0.12	0.10	0.13	0.40	0.49	0.42	0.49	-0.01	0.12
20	0.1	0.26	0.27	0.07	-0.12	-0.09	0.03	-0.09	-0.05	-0.06	-0.10	-0.05	-0.07	-0.09	-0.07	-0.06	-0.06	-0.01	-0.01	-0.01	-0.01	-0.01	0.01	0.05	0.27	-0.12	-0.01
21	0.1	0.07	0.08	0.10	0.16	0.13	0.18	0.14	0.15	0.16	0.18	0.13	0.10	0.05	0.08	0.19	0.30	0.34	0.19	0.16	0.17	0.15	0.16	0.11	0.34	0.05	0.15
22	0.1	0.04	0.02	0.05	0.04	0.02	0.02	0.05	0.06	0.05	0.06	0.07	0.06	-0.01	0.00	0.02	0.03	0.02	0.05	0.16	0.04	0.07	0.06	0.13	0.16	-0.01	0.05
23	0.1	0.07	0.13	0.16	0.01	-0.01	-0.04	-0.02	-0.11	-0.09	-0.04	-0.04	-0.02	-0.05	-0.11	-0.25	-0.02	0.12	0.11	0.14	0.13	0.05	0.02	-0.04	0.16	-0.25	0.01
24	0.1	0.29	0.45	0.64	0.08	0.03	0.07	0.20	0.10	-0.06	-0.08	-0.05	-0.10	-0.14	-0.17	-0.17	-0.14	-0.07	0.25	0.38	0.24	0.17	0.10	0.04	0.64	-0.17	0.09
25	0.0	0.01	-0.02	-0.04	-0.12	-0.11	-0.03	0.03	-0.03	-0.01	-0.02	-0.03	-0.18	-0.27	-0.39	-0.21	-0.26	-0.14	-0.10	-0.04	0.05	0.06	0.08	0.22	0.22	-0.39	-0.06
26	0.2	0.34	0.27	-0.18	-0.21	0.23	-0.02	0.00	0.26	0.00	0.03	0.08	0.06	0.04	0.02	-0.03	0.00	0.01	0.00	0.01	0.03	0.04	0.04	0.01	0.34	-0.21	0.05
27	0.0	0.01	0.05	0.07	0.06	0.07	0.06	0.05	0.04	0.08	0.05	0.03	0.01	0.02	-0.02	0.01	0.04	0.04	0.03	0.02	0.03	0.03	0.05	0.00	0.08	-0.02	0.04
28	0.1	0.14	0.09	0.18	0.17	0.17	0.17	0.15	0.04	0.04	0.17	0.19	0.13	0.07	0.13	0.09	0.13	0.17	0.21	0.49	0.49	0.69	0.52	0.41	0.69	0.04	0.21
29	0.3	0.29	0.33	0.30	0.14	0.18	0.12	0.12	0.10	0.17	0.20	0.14	0.17	0.19	0.15	0.16	0.16	0.14	0.13	0.08	0.05	0.03	0.02	0.07	0.33	0.02	0.16
30	0.1	0.05	0.04	0.06	0.10	0.10	0.13	0.18	0.15	0.56	0.29	0.10	-0.01	-0.06	0.00	-0.01	-0.01	0.00	0.00	0.02	0.01	0.01	0.00	0.02	0.56	-0.06	0.07
31	0.0	-0.05	-0.04	-0.03	-0.02	-0.03	-0.03	-0.03	-0.02	0.05	0.10	0.27	0.21	0.15	0.13	0.24	0.20	0.18	0.17	0.09	0.16	0.15	0.18	0.16	0.27	-0.05	0.09
Max.	**0.8**	**0.96**	**0.83**	**1.02**	**1.08**	**1.34**	**0.81**	**1.02**	**1.19**	**1.14**	**1.29**	**0.43**	**0.28**	**0.23**	**0.21**	**0.40**	**0.38**	**0.73**	**0.77**	**0.78**	**0.58**	**0.87**	**0.76**	**0.80**	**1.34**		
Min.	**-0.1**	**-0.10**	**-0.06**	**-0.18**	**-0.21**	**-0.11**	**-0.06**	**-0.09**	**-0.14**	**-0.09**	**-0.13**	**-0.14**	**-0.18**	**-0.27**	**-0.39**	**-0.26**	**-0.26**	**-0.14**	**-0.10**	**-0.04**	**-0.01**	**-0.03**	**-0.10**	**-0.10**		**-0.39**	
Avg.	**0.1**	**0.17**	**0.16**	**0.18**	**0.18**	**0.18**	**0.14**	**0.12**	**0.13**	**0.14**	**0.14**	**0.10**	**0.05**	**0.01**	**0.01**	**0.02**	**0.06**	**0.11**	**0.12**	**0.17**	**0.15**	**0.15**	**0.14**	**0.13**			**0.12**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

January 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	61.2	72.2	77.6	78.1	77.7	78.3	78.1	77.4	73.0	71.6	70.8	69.9	67.7	67.0	61.6	52.1	46.1	62.9	65.6	64.7	65.4	67.2	69.8	72.0	78.3	46.1	68.7
2	73.0	75.8	77.4	76.6	78.8	77.3	78.0	79.5	78.4	79.1	80.8	80.9	84.4	84.7	77.5	68.7	71.7	74.6	76.9	74.2	77.3	76.6	79.4	80.9	84.7	68.7	77.6
3	81.3	77.0	64.3	55.8	55.8	54.5	54.2	51.2	52.8	55.3	56.1	58.3	59.2	58.5	59.7	60.1	60.5	61.0	63.2	63.2	61.2	59.4	53.9	48.8	81.3	48.8	59.4
4	42.1	45.1	58.4	77.3	78.2	81.0	83.3	82.5	81.6	79.9	79.3	73.2	71.3	72.5	67.8	66.0	63.4	61.1	68.9	66.5	64.8	67.5	69.0	75.2	83.3	42.1	69.8
5	77.4	78.1	83.8	88.5	90.5	88.5	83.5	82.0	82.3	61.2	49.2	46.2	46.6	46.4	53.3	60.7	61.9	57.5	58.4	57.3	59.6	65.1	65.8	61.6	90.5	46.2	66.9
6	60.6	58.9	55.4	54.9	47.8	51.2	51.4	46.4	54.2	56.2	52.3	62.0	61.5	61.9	64.5	62.8	43.2	37.7	35.3	33.5	33.2	36.7	38.4	37.7	64.5	33.2	49.9
7	40.5	42.6	43.4	42.1	42.4	42.6	41.5	38.9	38.8	41.2	42.9	43.2	51.6	55.8	53.5	53.1	60.2	57.8	47.6	44.8	50.1	53.6	52.8	51.8	60.2	38.8	47.2
8	47.8	51.1	44.9	41.2	39.3	39.3	39.0	38.5	38.3	40.4	43.9	52.7	67.5	70.2	73.4	76.6	75.4	78.9	79.4	75.6	74.3	72.6	74.1	71.3	79.4	38.3	58.6
9	69.5	71.4	69.6	74.5	78.3	78.2	76.3	73.9	75.3	73.8	77.0	77.8	79.0	71.8	66.5	66.2	72.5	68.1	66.8	69.7	62.6	72.8	70.2	65.1	79.0	62.6	71.9
10	66.8	67.3	55.4	58.4	52.0	47.2	53.8	62.1	59.5	59.6	68.3	78.0	91.0	94.1	95.1	95.2	94.9	94.9	96.2	96.6	96.4	96.8	95.6	96.3	96.8	47.2	78.0
11	94.6	92.7	95.2	96.6	97.0	97.3	97.7	97.8	97.5	97.7	97.6	97.0	96.6	96.5	96.1	96.4	97.4	97.9	97.9	98.1	98.2	97.9	98.0	97.8	98.2	92.7	97.0
12	97.5	97.2	97.0	96.5	96.5	96.1	96.9	96.4	95.4	96.5	96.3	95.6	95.0	94.3	94.6	93.4	94.5	95.0	93.4	94.3	95.1	96.6	97.3	95.4	97.5	93.4	95.7
13	81.7	74.2	71.8	69.2	67.1	69.8	68.8	69.5	63.4	73.1	77.6	77.5	75.0	77.0	75.8	76.4	77.2	69.7	67.8	73.7	83.7	83.7	85.0	76.6	85.0	63.4	74.4
14	73.5	73.6	70.8	81.4	85.1	69.5	63.8	72.4	75.6	74.1	74.1	70.2	64.7	67.3	53.1	47.2	45.4	48.0	51.0	54.5	55.9	58.4	58.4	58.6	85.1	45.4	64.4
15	59.5	58.9	60.2	58.9	57.7	56.8	58.1	60.3	61.6	61.8	61.9	61.5	58.8	62.6	62.1	61.8	62.3	59.5	54.4	56.4	57.5	51.8	48.5	60.0	62.6	48.5	58.9
16	71.7	72.9	76.2	78.3	68.0	46.5	56.8	67.1	68.5	52.8	45.7	48.0	61.2	81.2	67.6	68.3	66.0	70.5	79.8	87.3	90.4	89.5	86.7	91.7	91.7	45.7	70.5
17	94.7	94.0	92.6	94.3	90.4	86.0	78.4	75.0	73.2	72.1	76.7	85.1	79.2	77.1	80.0	77.0	80.4	83.5	79.6	78.7	79.9	77.8	78.7	82.5	94.7	72.1	82.0
18	73.0	84.5	90.9	92.5	94.1	93.5	92.5	88.2	85.6	87.3	89.1	92.5	93.8	94.7	95.3	95.0	95.1	91.4	90.2	76.5	70.9	71.2	69.6	88.3	95.3	69.6	87.3
19	89.3	89.6	90.6	85.2	72.8	72.9	72.5	74.2	82.1	86.5	88.7	87.8	79.9	82.7	87.5	87.6	87.2	90.5	91.8	95.1	96.1	96.9	95.3	91.9	96.9	72.5	86.4
20	89.7	87.8	89.0	89.5	90.5	85.5	84.4	88.8	87.4	78.7	74.2	71.3	76.2	78.1	63.4	62.0	67.9	65.0	65.2	66.9	60.9	62.7	59.8	62.2	90.5	59.8	75.3
21	63.1	62.2	61.6	63.1	64.4	68.4	73.2	76.9	73.8	72.9	73.6	72.1	73.0	72.0	67.4	67.2	68.5	69.2	68.9	67.8	69.3	70.7	70.0	69.4	76.9	61.6	69.1
22	67.1	68.5	68.2	69.8	74.6	81.3	81.4	82.4	81.8	77.3	72.9	63.0	77.6	84.4	80.2	85.1	91.0	93.4	94.7	95.5	95.4	94.9	95.2	94.1	95.5	63.0	82.1
23	83.5	77.1	75.1	74.5	84.6	86.1	86.1	85.1	74.7	69.6	65.9	62.2	61.8	68.4	68.7	70.8	66.5	63.4	63.6	66.6	62.2	65.0	67.1	66.6	86.1	61.8	71.5
24	66.0	65.4	64.9	64.5	65.0	63.6	60.3	62.0	60.8	63.3	60.4	55.0	50.0	51.4	51.8	51.3	48.1	47.2	68.4	71.7	72.7	74.8	73.9	73.7	74.8	47.2	61.9
25	70.9	64.3	64.3	65.2	71.0	66.5	76.0	82.4	78.0	86.0	93.0	94.6	96.2	97.3	97.5	96.4	94.6	93.4	93.7	93.1	91.2	92.5	94.5	94.3	97.5	64.3	85.3
26	92.9	92.4	91.3	91.9	90.7	84.1	83.1	80.1	93.1	96.4	96.5	96.3	95.4	95.3	95.0	94.1	92.5	88.1	83.4	85.1	83.1	80.9	78.9	79.2	96.5	78.9	89.2
27	77.2	80.6	83.8	83.9	82.2	84.0	87.4	84.1	86.8	79.6	83.1	87.1	79.8	71.5	67.1	61.6	74.3	88.7	90.0	92.5	91.9	92.6	92.9	92.0	92.9	61.6	83.1
28	91.5	90.5	91.4	91.8	92.7	92.4	91.8	93.4	93.4	91.7	90.9	90.0	88.3	90.1	89.8	89.1	86.6	84.4	86.7	80.5	76.4	74.0	69.9	68.9	93.4	68.9	86.9
29	68.3	69.0	68.0	62.3	63.7	77.1	86.3	86.5	86.7	84.8	84.5	83.7	82.7	83.0	90.1	90.3	87.5	92.6	95.2	95.5	96.1	96.7	96.9	97.4	97.4	62.3	84.4
30	98.1	98.1	98.2	98.0	97.0	96.0	93.4	92.8	93.8	88.1	70.6	63.6	59.5	62.1	58.7	61.1	61.6	66.3	73.9	82.6	83.8	69.8	64.2	61.0	98.2	58.7	78.8
31	58.9	57.0	55.5	53.3	51.9	51.8	52.0	52.3	64.3	74.4	75.8	77.9	85.1	87.8	88.2	88.2	88.6	87.9	82.1	89.4	85.1	81.8	85.8	84.0	89.4	51.8	73.3
Max.	**98.1**	**98.1**	**98.2**	**98.0**	**97.0**	**97.3**	**97.7**	**97.8**	**97.5**	**97.7**	**97.6**	**97.0**	**96.6**	**97.3**	**97.5**	**96.4**	**97.4**	**97.9**	**97.9**	**98.1**	**98.2**	**97.9**	**98.0**	**97.8**	**98.2**		
Min.	**40.5**	**42.6**	**43.4**	**41.2**	**39.3**	**39.3**	**39.0**	**38.5**	**38.3**	**40.4**	**42.9**	**43.2**	**46.6**	**46.4**	**51.8**	**47.2**	**43.2**	**37.7**	**35.3**	**33.5**	**33.2**	**36.7**	**38.4**	**37.7**		**33.2**	
Avg.	**73.6**	**73.9**	**73.8**	**74.5**	**74.1**	**73.0**	**73.5**	**74.2**	**74.6**	**73.6**	**73.2**	**73.4**	**74.5**	**76.1**	**74.3**	**73.6**	**73.6**	**74.2**	**75.2**	**75.7**	**75.5**	**75.8**	**75.3**	**75.7**			**74.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	78.2	56.3	51.1	49.7	47.9	45.0	47.2	47.7	45.9	43.7	41.8	39.4	36.8	37.1	36.5	40.5	47.3	48.1	48.6	54.3	65.6	78.1	91.5	91.0	91.5	36.5	52.9
2	89.2	89.1	83.0	84.7	85.0	84.2	87.9	88.7	89.2	89.8	90.7	91.9	88.0	84.7	87.1	87.3	89.0	90.0	90.2	89.9	89.5	88.7	87.9	86.7	91.9	83.0	88.0
3	86.6	85.8	85.1	80.8	80.1	86.6	89.1	88.9	89.2	87.9	90.1	91.4	91.7	92.2	90.5	89.5	83.4	86.3	91.6	94.4	95.1	95.9	96.4	96.6	96.6	80.1	89.4
4	97.0	97.3	97.4	95.7	89.7	85.9	86.4	85.4	85.6	83.9	81.8	79.3	76.4	81.3	86.6	87.7	81.3	86.1	89.9	90.2	89.9	86.1	88.3	89.3	97.4	76.4	87.4
5	89.9	85.2	85.5	87.3	88.5	90.2	90.6	91.4	91.5	92.5	93.3	86.7	74.2	79.8	83.4	85.0	76.0	82.4	88.8	86.8	84.5	85.2	69.3	56.9	93.3	56.9	84.4
6	52.6	50.2	47.6	48.9	51.5	49.2	48.8	50.0	50.2	50.2	50.2	47.9	46.1	50.2	50.6	49.1	50.2	48.3	48.4	50.7	49.8	49.1	47.6	48.5	52.6	46.1	49.4
7	50.6	50.0	50.5	53.7	56.9	66.4	69.1	72.5	67.6	75.0							94.7	96.7	97.3	98.8	99.6	99.9	98.3	98.5	99.9	50.0	77.6
8	99.7	100.0	100.0	99.5	99.5	99.7	99.8	99.3	97.2	97.7	97.6	97.3	97.3	97.0	97.8	99.4	99.1	95.6	97.8	97.6	97.1	91.5	87.6	86.0	100.0	86.0	97.1
9	83.2	84.5	86.3	93.8	94.9	95.6	97.8	98.5	98.4	99.3	99.2	96.0	95.8	93.7	93.7	95.3	96.3	95.9	96.2	96.8	98.4	96.9	97.3	98.2	99.3	83.2	95.1
10	95.9	96.7	99.6	100.0	100.0	99.5	97.7	95.3	96.5	96.7	93.8	93.2	91.4	90.8	93.2	94.8	95.0	96.3	97.2	97.4	98.6	99.9	97.3	94.8	100.0	90.8	96.3
11	96.2	97.1	97.2	96.2	95.3	91.0	89.1	86.5	81.0	89.4	95.6	92.5	91.3	90.4	87.2	84.8	85.4	86.5	88.7	86.0	83.9	82.3	80.5	77.1	97.2	77.1	88.8
12	75.4	77.3	74.9	71.5	74.8	73.4	72.9	65.6	64.3	63.5	62.0	62.4	60.2	59.1	58.6	59.6	58.2	57.9	58.9	61.4	60.8	58.9	58.8	58.8	77.3	57.9	64.5
13	59.6	62.2	63.9	71.2	72.5	72.4	74.9	72.6	71.3	69.7	65.0	65.4	63.8	70.8	82.6	80.5	86.2	91.9	90.2	89.5	90.3	90.7	87.0	80.4	91.9	59.6	76.0
14	76.6	76.8	84.2	83.6	85.4	85.8	87.6	82.8	82.1	80.3	78.4	74.0	73.1	74.4	75.0	76.9	78.9	84.7	89.2	89.7	86.1	88.1	93.8	95.1	95.1	73.1	82.6
15	92.4	91.3	94.1	91.1	92.1	95.9	96.3	95.5	97.0	97.3	95.4	93.0	90.4	90.9	91.3	89.8	90.5	93.4	94.3	93.0	96.1	94.6	92.6	88.8	97.3	88.8	93.2
16	85.4	85.2	80.7	81.0	80.3	87.1	83.8	86.0	78.8	75.8	81.5	82.3	76.9	77.5	81.7	76.8	80.8	78.5	85.2	88.3	89.5	86.5	90.6	92.2	92.2	75.8	83.0
17	92.8	90.9	91.5	92.6	93.4	92.2	94.9	93.6	94.2	92.3	87.7	88.1	87.3	83.9	82.5	79.2	66.8	70.2	71.5	74.4	79.9	82.0	78.4	79.4	94.9	66.8	85.0
18	79.1	76.4	79.4	87.2	93.0	95.2	97.9	98.4	97.2	97.7	97.1	95.7	93.6	88.9	87.2	88.4	89.4	89.2	88.9	83.9	85.7	89.4	89.2	89.0	98.4	76.4	89.9
19	92.1	93.7	94.1	93.6	93.2	87.0	81.2	77.5	70.5	65.1	64.1	61.3	57.3	55.5	54.6	52.5	52.0	51.4	51.5	52.4	57.9	62.0	62.2	67.0	94.1	51.4	68.7
20	64.0	64.8	65.7	36.1	31.2	26.6	25.7	25.4	24.3	25.5	24.0	23.3	22.8	27.2	28.9	31.6	36.8	38.6	36.4	32.4	32.2	29.7	31.3	32.0	65.7	22.8	34.0
21	32.8	34.7	33.9	33.5	33.7	51.5	56.7	52.8	54.0	52.8	53.7	49.4	48.7	46.0	47.7	51.6	49.9	59.8	63.1	60.9	55.4	55.7	60.2	65.0	65.0	32.8	50.2
22	66.3	70.7	70.2	70.7	73.6	77.4	76.4	74.8	71.1	66.2	65.4	62.1	53.6	50.6	49.6	48.5	48.8	51.1	59.2	60.6	57.3	59.1	65.9	71.2	77.4	48.5	63.3
23	72.3	73.1	72.3	70.0	72.0	73.5	72.7	67.1	66.4	66.9	64.1	64.0	62.3	59.2	59.1	58.7	56.0	59.6	61.8	62.1	61.0	55.6	55.8	48.9	73.5	48.9	63.9
24	44.6	35.9	37.3	34.9	32.1	34.9	32.7	34.4	33.2	40.4	59.3	60.7	51.9	51.0	35.4	33.1	33.3	34.9	33.6	31.4	30.8	31.3	39.7	44.7	60.7	30.8	38.8
25	52.5	41.0	41.7	37.1	40.2	26.9	25.5	25.4	24.8	25.3	23.8	21.4	21.8	24.4	25.8	28.6	34.0	35.6	44.7	51.5	53.6	57.4	59.1	65.7	65.7	21.4	37.0
26	66.9	66.8	65.4	65.0	61.1	52.5	47.5	48.5	47.5	44.7	41.7	42.8	42.7	45.7	44.5	42.5	41.2	44.3	46.0	47.2	45.5	45.8	40.8	41.1	66.9	40.8	49.1
27	43.0	48.1	44.5	38.4	38.2	48.3	56.6	60.4	64.8	65.6	56.5	53.2	53.8	54.0	54.1	51.7	53.7	54.5	52.8	52.3	49.0	57.0	65.4	71.2	71.2	38.2	53.6
28	65.6	67.5	63.4	70.3	72.4	69.3	62.1	63.2	65.3	64.7	61.6	56.1	49.3	47.3	40.4	38.2	33.8	44.9	52.3	62.3	69.1	69.4	70.5	70.7	72.4	33.8	59.6
Max.	**99.7**	**100.0**	**100.0**	**100.0**	**100.0**	**99.7**	**99.8**	**99.3**	**98.4**	**99.3**	**99.2**	**97.3**	**97.3**	**97.0**	**97.8**	**99.4**	**99.1**	**96.7**	**97.8**	**98.8**	**99.6**	**99.9**	**98.3**	**98.5**	**100.0**		
Min.	**32.8**	**34.7**	**33.9**	**33.5**	**31.2**	**26.6**	**25.5**	**25.4**	**24.3**	**25.3**	**23.8**	**21.4**	**21.8**	**24.4**	**25.8**	**28.6**	**33.3**	**34.9**	**33.6**	**31.4**	**30.8**	**29.7**	**31.3**	**32.0**		**21.4**	
Avg.	**74.3**	**73.2**	**72.9**	**72.1**	**72.4**	**73.0**	**73.2**	**72.4**	**71.4**	**71.4**	**70.9**	**69.3**	**66.6**	**66.8**	**66.9**	**66.7**	**67.4**	**69.7**	**71.9**	**72.7**	**73.3**	**73.8**	**74.4**	**74.5**			**71.3**

Total Hours in Month 672 **Hours Data Available** 666 **Data Recovery** 99.1%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	74.4	73.9	73.9	77.3	77.0	68.2	72.4	69.1	70.0	70.1	68.1	61.9	64.7	61.6	58.1	54.3	52.3	52.9	65.1	67.2	69.3	69.3	67.6	68.7	77.3	52.3	67.0
2	63.8	65.8	68.6	69.4	66.3	65.8	66.8	64.5	66.1	65.9	61.4	54.8	46.6	45.0	44.2	42.8	41.0	50.4	62.1	62.8	61.0	60.0	59.3	62.8	69.4	41.0	59.0
3	62.8	61.3	60.6	63.2	63.8	63.0	61.6	62.5	61.7	62.0	60.7	48.5	48.5	47.2	52.0	51.2	49.3	56.9	61.1	61.8	61.9	58.4	58.3	60.0	63.8	47.2	58.2
4	61.3	63.9	65.5	65.1	65.7	64.2	66.7	67.3	69.3	66.3	64.0	59.7	51.3	50.0	50.8	50.1	46.2	50.4	53.7	57.8	60.7	63.0	65.3	64.7	69.3	46.2	60.1
5	67.0	69.8	70.7	70.4	70.9	70.4	69.9	71.4	69.4	67.8	66.8	62.0	59.1	54.7	55.1	52.3	50.8	45.9	41.9	43.7	42.8	53.2	57.2	58.4	71.4	41.9	60.1
6	59.0	43.7	40.2	63.0	59.3	56.0	56.0	60.3	61.6	54.3	46.0	40.0	36.0	35.2	34.5	33.6	32.8	32.5	31.0	30.7	31.3	32.0	32.1	33.1	63.0	30.7	43.1
7	33.2	33.9	34.2	34.9	37.4	39.7	41.7	43.7	46.9	43.0	39.2	37.7	36.7	34.5	33.8	33.7	34.2	35.9	36.5	39.4	42.4	42.6	45.2	47.1	47.1	33.2	38.6
8	53.7	55.1	53.0	51.9	52.6	53.6	54.9	55.4	60.5	60.1	62.2	58.6	56.2	54.7	55.8	46.9	43.2	50.0	53.7	46.8	65.0	80.4	74.0	68.2	80.4	43.2	56.9
9	64.4	63.5	65.1	64.4	66.0	65.9	65.0	64.2	65.7	64.7	58.7	59.0	60.2	53.9	56.1	51.4	49.4	55.3	58.5	62.0	60.8	64.5	62.1	65.8	66.0	49.4	61.1
10	65.3	68.5	73.4	75.5	75.4	75.6	74.9	78.5	75.3	68.9	71.5	66.1	62.9	62.8	64.7	61.1	63.1	68.2	71.6	72.1	72.2	71.9	70.7	68.4	78.5	61.1	69.9
11	66.8	65.7	66.4	61.5	49.8	48.5	48.9	56.2	64.3	64.7	61.3	60.1	56.6	54.8	52.4	50.2	46.6	43.7	42.6	41.1	40.5	43.2	55.2	59.6	66.8	40.5	54.2
12	52.9	43.0	40.1	40.2	40.8	44.0	45.3	40.1	41.9	49.4	42.4	35.6	31.8	29.8	28.9	29.9	34.6	35.4	39.2	39.0	37.4	29.7	28.5	29.3	52.9	28.5	37.9
13	29.9	36.5	37.7	38.1	38.5	39.6	42.1	43.0	42.7	38.8	38.9	37.1	38.4	40.5	41.6	40.0	36.6	36.6	33.1	31.4	31.7	31.0	29.5	31.8	43.0	29.5	36.9
14	34.3	30.1	31.3	31.4	31.6	31.1	37.5	41.2	40.1	34.4	32.7	36.7	35.4	37.5	35.6	34.6	34.5	31.1	30.3	29.3	29.5	30.1	30.0	36.6	41.2	29.3	33.6
15	53.3	54.2	55.3	55.8	58.4	59.9	60.9	61.1	59.7	59.8	56.1	48.0	45.5	45.9	48.3	42.7	43.9	45.9	51.5	60.3	62.2	64.5	66.1	62.2	66.1	42.7	55.1
16	58.3	60.4	59.5	60.5	60.7	63.4	64.6	66.7	66.2	64.9	61.9	56.4	49.3	47.6	47.9	45.6	47.2	56.4	58.1	58.3	58.0	60.2	61.3	63.1	66.7	45.6	58.2
17	61.6	59.1	61.1	62.2	63.3	64.2	65.0	66.1	65.8	65.6	63.8	57.7	52.5	51.8	55.6	51.6	49.7	58.1	61.6	66.6	67.4	68.5	68.7	68.3	68.7	49.7	61.5
18	67.8	67.8	66.3	66.0	65.3	64.5	63.9	62.6	62.3	63.2	62.6	61.4	51.1	49.0	50.5	47.4	44.8	47.3	46.6	56.7	60.1	63.5	62.9	65.5	67.8	44.8	59.1
19	66.7	71.4	69.4	71.1	71.4	72.0	73.7	72.2	70.1	67.4	63.5	55.3	50.0	48.3	50.7	48.7	51.3	58.1	54.1	60.3	67.4	71.0	69.8	69.9	73.7	48.3	63.5
20	68.9	65.1	73.0	70.6	61.1	75.0	65.0	50.5	38.6	39.6	41.6	51.5	81.7	85.4	83.9	75.8	71.2	72.3	73.0	77.8	80.6	84.0	85.2	79.0	85.4	38.6	68.8
21	73.4	68.4	67.3	68.2	63.6	61.5	74.8	89.3	96.6	96.8	80.1	64.0	62.2	66.2	72.4	71.8	72.0	71.6	70.5	67.1	68.5	69.4	70.6	70.9	96.8	61.5	72.4
22	65.3	61.3	60.0	61.7	55.1	50.2	52.7	66.5	67.3	60.3	54.6	49.9	50.0	53.2	51.1	48.9	55.3	55.6	60.4	71.5	73.9	74.6	75.6	76.1	76.1	48.9	60.5
23	75.8	76.3	75.8	52.3	45.6	48.0	46.2	44.8	37.9	34.0	33.0	33.7	36.4	42.4	46.4	48.5	46.7	53.5	52.5	47.9	48.1	49.1	51.1	50.7	76.3	33.0	49.0
24	49.1	48.0	42.9	37.5	34.7	35.7	33.7	31.3	29.5	28.0	29.2	29.7	28.9	29.1	29.1	29.7	32.0	33.3	32.5	30.3	29.5	30.0	34.5	39.5	49.1	28.0	33.6
25	58.3	57.5	62.9	56.2	49.3	52.3	58.5	60.1	59.3	58.0	59.2	53.7	52.6	52.8	54.3	60.3	57.1	61.2	63.3	64.1	69.2	73.4	73.3	65.9	73.4	49.3	59.7
26	60.2	61.7	71.0	74.5	75.0	75.2	73.1	71.1	70.7	66.3	62.0	70.2	81.7	80.9	80.8	76.5	75.9	74.6	78.9	93.3	94.8	93.5	92.5	89.7	94.8	60.2	76.8
27	84.4	83.0	82.2	84.2	84.7	84.1	83.7	82.6	78.4	76.3	68.0	59.4	55.9	56.5	53.6	51.2	45.7	43.1	47.2	45.9	43.8	57.3	66.7	66.2	84.7	43.1	66.0
28	67.3	67.6	68.1	67.0	68.4	70.6	68.5	68.2	67.1	64.2	60.1	54.1	43.9	44.5	41.7	41.5	38.4	41.6	40.6	42.0	42.0	42.2	40.8	46.4	70.6	38.4	54.0
29	62.5	63.6	60.9	48.4	44.6	64.9	70.8	71.0	58.9	56.0	50.8	35.9	31.5	31.8	34.2	34.4	30.2	33.2	36.3	47.9	37.9	49.3	57.6	62.7	71.0	30.2	49.0
30	60.6	62.5	63.5	66.4	64.4	65.6	65.6	62.4	59.1	60.4	58.3	54.4	46.2	50.6	51.6	52.1	50.5	49.7	62.6	48.2	46.8	49.3	51.2	55.0	66.4	46.2	56.5
31	57.4	51.0	52.1	40.7	42.8	49.8	76.6	63.0	79.3	73.3	66.8	56.1	51.3	57.1	59.5	64.1	62.1	67.8	64.0	63.0	44.0	46.3	51.3	50.4	79.3	40.7	57.9
Max.	**84.4**	**83.0**	**82.2**	**84.2**	**84.7**	**84.1**	**83.7**	**89.3**	**96.6**	**96.8**	**80.1**	**70.2**	**81.7**	**85.4**	**83.9**	**76.5**	**75.9**	**74.6**	**78.9**	**93.3**	**94.8**	**93.5**	**92.5**	**89.7**	**96.8**		
Min.	**29.9**	**30.1**	**31.3**	**31.4**	**31.6**	**31.1**	**33.7**	**31.3**	**29.5**	**28.0**	**29.2**	**29.7**	**28.9**	**29.1**	**28.9**	**29.7**	30.2	31.1	**30.3**	**29.3**	**29.5**	**29.7**	**28.5**	**29.3**		**28.0**	
Avg.	**60.6**	**59.8**	**60.4**	**59.7**	**58.2**	**59.4**	**61.3**	**61.5**	**61.4**	**59.5**	**56.3**	**51.9**	**50.2**	**50.2**	**50.8**	**49.1**	**48.0**	**50.6**	**52.7**	**54.4**	**54.9**	**57.3**	**58.5**	**59.2**			**56.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	51.9	51.8	55.7	53.2	55.7	56.3	54.8	55.9	53.3	54.2	53.3	51.3	69.1	64.1	64.2	58.4	63.1	70.1	80.8	85.1	78.7	72.4	71.9	75.6	85.1	51.3	62.5
2	74.8	75.0	75.6	79.6	79.5	73.9	83.1	80.7	75.4	65.6	59.3	55.7	52.5	51.8	49.5	58.4	52.8	57.8	62.1	52.8	43.6	46.6	49.6	56.1	83.1	43.6	63.0
3	53.8	57.1	57.5	57.6	54.6	57.6	60.1	62.2	69.3	62.9	60.3	60.9	60.4	61.5	60.0	56.7	57.0	56.9	58.8	57.6	58.3	58.8	55.8	55.5	69.3	53.8	58.8
4	55.6	56.0	57.6	58.9	60.2	59.9	57.7	56.3	52.7	51.6	51.9	50.7	49.4	49.7	50.0	49.6	47.8	47.3	45.2	42.0	38.4	36.4	34.8	33.4	60.2	33.4	49.7
5	41.9	57.5	60.4	55.9	50.0	57.0	68.1	65.8	61.9	57.5	47.8	42.2	36.7	35.4	42.6	67.3	85.7	87.5	88.6	88.0	87.3	88.4	88.6	88.6	88.6	35.4	64.6
6	86.9	86.2	85.7	78.7	77.7	75.1	71.8	66.4	64.7	65.6	59.4	54.9	53.2	57.7	61.3	66.5	75.1	82.2	85.4	75.7	68.6	64.7	70.3	80.8	86.9	53.2	71.4
7	84.5	85.5	88.2	94.7	96.2	92.1	89.2	85.9	85.1	84.6	78.5	71.0	76.3	79.3	78.4	76.1	70.3	62.7	61.1	70.5	73.8	71.4	61.7	58.3	96.2	58.3	78.1
8	58.0	56.5	56.9	56.5	59.2	56.3	56.8	67.4	67.1	57.2	54.0	52.3	51.2	52.6	56.0	63.5	71.7	74.9	77.6	77.4	75.9	73.8	82.5	85.5	85.5	51.2	64.2
9	84.6	80.1	83.4	88.6	89.3	89.6	89.6	90.4	88.9	83.7	82.1	80.2	77.7	82.6	79.3	82.5	82.6	87.7	89.3	89.0	91.8	95.9	93.1	91.5	95.9	77.7	86.4
10	95.4	96.8	95.7	93.6	92.7	94.4	93.4	92.0	92.0	87.4	85.7	75.5	67.8	67.8	79.9	75.9	69.0	77.9	85.2	86.9	89.9	87.7	88.0	92.3	96.8	67.8	86.0
11	85.7	90.4	93.4	96.9	93.8	91.4	89.8	87.7	82.1	74.8	76.1	67.1	68.8	70.6	72.8	71.1	70.4	78.6	69.3	63.7	75.7	76.2	78.9	79.2	96.9	63.7	79.4
12	81.0	86.4	79.6	86.6	88.1	87.9	76.6	81.6	79.6	71.1	60.2	49.2	46.1	46.2	45.7	43.6	45.6	48.0	42.8	43.5	56.2	60.1	61.4	48.6	88.1	42.8	63.1
13	52.2	58.2	50.9	55.2	62.5	66.2	67.1	67.5	67.7	67.1	64.9	57.8	50.6	55.8	52.6	54.8	56.3	59.0	65.6	62.0	61.5	62.9	68.2	67.4	68.2	50.6	60.6
14	62.1	68.1	68.8	66.1	66.6	69.8	72.5	77.8	68.3	61.8	67.3	74.5	90.4	93.4	96.1	94.2	89.9	89.9	84.9	85.8	85.9	81.6	76.4	75.7	96.1	61.8	77.8
15	86.4	85.0	90.0	92.8	96.2	94.3	92.7	89.3	85.4	86.8	85.8	81.6	69.6	62.5	59.5	56.5	55.5	53.5	53.2	65.0	59.1	54.5	52.8	53.5	96.2	52.8	73.4
16	56.0	56.6	56.5	53.8	52.6	52.5	52.1	53.6	51.7	48.5	48.6	49.9	50.6	52.7	59.8	65.1	60.1	61.1	62.8	62.7	63.6	70.9	78.9	83.0	83.0	48.5	58.5
17	84.9	87.1	88.6	81.4	69.5	68.7	72.5	72.8	73.7	77.8	78.3	84.3	89.2	93.0	93.9	93.6	94.4	95.8	95.6	93.9	94.1	92.2	91.3	91.4	95.8	68.7	85.8
18	90.5	90.6	91.0	92.4	92.5	93.5	91.6	90.3	89.6	88.6	89.5	89.6	90.4	90.4	89.8	89.2	87.9	88.3	89.4	90.4	89.1	88.7	89.2	90.1	93.5	87.9	90.1
19	90.1	90.2	90.0	90.1	91.1	90.9	88.7	90.9	89.6	90.8	89.7	93.0	93.6	92.9	87.5	91.7	90.4	82.5	87.8	88.8	92.4	91.4	94.7	87.1	94.7	82.5	90.2
20	91.8	88.7	91.6	92.2	92.1	92.2	92.1	91.1	87.2	86.7	84.4	83.4	81.9	80.7	75.7	66.3	62.7	58.0	59.3	59.2	53.8	51.4	51.0	50.4	92.2	50.4	76.0
21	51.4	51.6	50.8	50.4	49.1	46.4	45.1	44.3	44.5	48.3	46.3	49.2	55.2	51.5	43.9	43.4	47.1	59.1	81.5	89.2	87.9	71.2	54.6	51.3	89.2	43.4	54.7
22	58.5	67.9	59.3	59.3	57.8	60.4	59.4	67.6	63.5	52.2	46.9	43.8	44.1	46.2	48.9	50.3	50.9	50.0	50.0	50.4	48.6	48.4	49.5	63.7	67.9	43.8	54.1
23	72.5	74.2	75.6	75.1	77.1	73.6	65.1	65.5	58.9	52.1	60.2	66.0	52.4	56.8	70.5	61.5	67.4	73.0	80.6	82.5	87.6	89.3	87.6	87.3	89.3	52.1	71.3
24	87.7	87.1	84.6	82.5	79.0	76.0	76.7	72.3	67.9	61.3	59.5	59.3	57.9	57.2	55.9	57.1	73.6	80.9	83.5	86.8	85.7	87.7	89.6	90.8	90.8	55.9	75.0
25	90.6	88.7	87.6	82.5	79.7	83.9	85.1	86.6	88.5	86.1	88.7	90.2	88.4	90.9	87.3	77.5	78.1	76.5	73.5	71.5	76.7	75.4	75.2	73.6	90.9	71.5	82.6
26	74.5	70.5	67.9	71.3	77.5	74.6	70.7	71.0	75.6	64.4	54.8	62.2	67.3	68.4	68.2	71.1	70.5	79.5	87.8	86.1	59.7	50.2	59.1	70.7	87.8	50.2	69.7
27	76.9	74.8	83.1	84.6	87.9	89.8	84.3	74.4	79.5	77.4	82.7	76.9	71.3	73.5	65.4	64.2	67.7	71.0	74.2	74.8	73.1	73.6	70.5	70.0	89.8	64.2	75.9
28	78.6	85.7	86.8	88.5	91.8	92.6	87.7	84.8	81.0	74.0	79.2	80.9	79.1	72.0	67.9	69.2	66.8	69.1	76.3	80.4	77.1	74.2	76.2	76.4	92.6	66.8	79.0
29	76.3	79.1	78.0	79.5	74.5	75.8	70.0	63.6	63.2	62.7	61.1	53.3	47.6	42.2	41.6	57.5	58.1	43.5	45.3	44.3	62.3	73.7	77.9	78.6	79.5	41.6	62.9
30	80.1	81.5	85.8	86.7	78.9	78.2	78.4	59.4	50.2	49.8	46.9	43.2	45.1	45.1	40.7	37.0	36.2	34.3	43.8	53.3	47.9	59.3	58.0	63.7	86.7	34.3	57.6
Max.	**95.4**	**96.8**	**95.7**	**96.9**	**96.2**	**94.4**	**93.4**	**92.0**	**92.0**	**90.8**	**89.7**	**93.0**	**93.6**	**93.4**	**96.1**	**94.2**	**94.4**	**95.8**	**95.6**	**93.9**	**94.1**	**95.9**	**94.7**	**92.3**	**96.9**		
Min.	**41.9**	**51.6**	**50.8**	**50.4**	**49.1**	**46.4**	**45.1**	**44.3**	**44.5**	**48.3**	**46.3**	**42.2**	**36.7**	**35.4**	**40.7**	**37.0**	36.2	34.3	**42.8**	**42.0**	**38.4**	**36.4**	**34.8**	**33.4**		**33.4**	
Avg.	**73.8**	**75.5**	**75.9**	**76.2**	**75.8**	**75.7**	**74.8**	**73.8**	**71.9**	**68.4**	**66.8**	**65.0**	**64.5**	**64.8**	**64.8**	**65.7**	**66.8**	**68.6**	**71.4**	**72.0**	**71.5**	**71.0**	**71.2**	**72.3**			**70.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	75.3	75.1	81.5	80.6	64.3	68.4	83.5	79.9	80.8	84.8	72.0	68.8	71.4	70.3	63.6	62.5	65.5	61.1	60.4	60.4	71.1	72.0	69.4	68.7	84.8	60.4	71.3
2	69.1	72.9	81.2	86.9	82.7	65.8	63.4	58.7	53.8	48.8	50.7	51.1	63.5	77.2	85.7	79.9	73.1	68.9	69.2	68.4	66.7	65.7	72.2	74.2	86.9	48.8	68.7
3	79.7	85.5	90.9	88.8	85.8	89.7	88.2	84.0	74.9	64.6	67.1	78.1	77.3	78.6	76.7	74.2	69.4	72.4	78.7	79.6	82.9	81.8	83.1	81.3	90.9	64.6	79.7
4	85.0	88.6	91.1	92.2	93.9	95.1	91.0	74.8	66.0	64.2	75.5	75.9	73.2	69.0	69.7	69.1	73.6	83.7	88.3	80.8	83.1	85.5	89.1	87.6	95.1	64.2	81.1
5	87.1	83.9	85.6	86.0	80.8	91.1	84.2	85.0	75.7	66.8	64.6	63.2	60.4	59.6	53.8	54.0	55.5	61.2	64.0	69.4	68.3	67.7	68.2	70.5	91.1	53.8	71.1
6	69.0	61.8	66.4	66.3	68.5	74.0	70.0	70.0	64.5	66.1	69.2	68.1	63.1	59.9	59.1	57.6	53.1	53.9	54.2	48.1	46.8	48.2	48.9	47.8	74.0	46.8	60.6
7	47.7	48.4	48.4	50.0	49.5	49.3	47.6	46.9	44.1	44.3	43.7	43.5	41.3	43.2	46.0	48.0	50.0	52.1	55.4	58.5	62.4	69.5	72.4	68.3	72.4	41.3	51.3
8	64.5	63.5	64.7	64.3	63.4	62.6	62.1	64.7	66.3	65.3	62.9	59.5	62.0	57.7	54.5	53.5	63.8	73.1	75.8	82.1	85.7	86.0	83.5	81.0	86.0	53.5	67.6
9	80.4	82.6	86.3	87.6	84.1	80.7	85.6	87.5	87.6	88.8	92.3	92.2	92.2	91.5	90.9	89.9	88.5	89.6	90.9	90.6	89.1	92.0	91.8	90.9	92.3	80.4	88.5
10	92.3	92.1	94.4	95.2	94.6	93.0	92.3	92.3	88.3	87.8	86.3	84.2	80.2	73.0	71.7	71.9	69.0	70.1	75.6	82.3	85.8	80.7	81.0	83.6	95.2	69.0	84.1
11	86.4	86.0	88.9	90.1	89.7	89.2	84.0	84.0	77.8	71.9	67.6	63.8	59.4	58.1	57.7	52.2	49.1	53.4	60.0	59.4	72.5	67.0	75.3	80.1	90.1	49.1	71.8
12	84.2	85.7	87.7	86.6	85.7	83.2	83.3	82.5	74.7	78.1	72.8	66.6	68.9	68.8	69.0	71.4	71.6	72.2	73.8	76.7	83.3	89.0	92.6	91.4	92.6	66.6	79.2
13	91.0	89.8	90.8	91.5	91.0	91.9	91.2	89.8	88.1	85.6	85.2	81.0	77.0	78.2	79.6	76.0	72.3	72.3	72.2	74.4	72.8	69.5	68.6	73.3	91.9	68.6	81.4
14	74.4	71.6	73.0	74.2	71.3	73.4	80.3	82.9	85.0	79.9	74.3	79.5	80.7	84.2	92.8	92.5	87.6	84.0	79.4	79.2	79.3	87.2	94.7	96.2	96.2	71.3	81.6
15	96.2	95.8	95.0	93.9	90.3	88.1	81.8	81.5	77.8	75.6	72.2	68.9	69.8	73.5	71.1	67.9	69.5	69.3	72.0	73.4	68.9	70.9	77.8	72.2	96.2	67.9	78.1
16	69.5	81.1	85.9	84.3	81.6	79.2	78.8	78.8	79.9	82.6	75.2	68.5	66.0	67.5	74.5	77.0	75.1	76.9	85.0	88.5	88.8	84.2	83.2	81.9	88.8	66.0	78.9
17	82.6	81.5	89.7	90.5	88.8	90.6	86.0	86.3	66.8	62.2	61.0	51.9	64.1	66.0	62.7	64.6	73.6	75.4	75.0	76.1	77.9	78.8	78.0	81.0	90.6	51.9	75.5
18	80.4	79.7	85.1	86.7	88.7	87.4	87.2	81.5	73.2	70.8	65.7	74.5	73.7	72.8	74.5	73.4	72.1	70.4	78.3	85.3	88.7	91.4	82.7	81.8	91.4	65.7	79.4
19	85.2	82.0	75.7	70.4	68.0	69.2	65.5	67.3	68.0	59.9	51.3	48.8	41.8	36.5	45.4	52.2	56.0	51.1	49.7	48.9	48.3	50.3	49.9	50.1	85.2	36.5	58.0
20	53.3	54.2	56.9	61.0	63.1	69.8	72.4	70.1	64.9	61.7	60.6	54.3	48.1	45.9	46.7	46.5	55.8	63.4	73.5	76.2	81.2	80.9	64.5	52.0	81.2	45.9	61.5
21	52.3	54.5	55.7	59.9	74.5	74.0	71.3	70.4	71.7	76.7	79.7	79.6	68.7	64.3	53.3	49.4	49.5	38.9	40.0	40.5	44.8	53.7	70.4	82.6	82.6	38.9	61.5
22	87.3	91.6	84.9	82.4	68.6	54.3	51.7	49.0	45.4	43.3	37.8	36.0	36.6	34.4	33.6	31.6	31.1	30.4	31.7	34.5	56.5	76.6	81.5	71.9	91.6	30.4	53.4
23	63.9	59.2	56.3	55.7	52.0	62.0	74.3	74.4	74.1	78.7	76.8	73.7	75.1	71.3	77.4	83.4	88.3	89.2	89.0	88.3	93.1	96.7	96.4	94.9	96.7	52.0	76.8
24	94.5	94.7	95.6	97.7	98.6	99.1	99.2	97.8	86.4	78.6	77.4	74.6	73.6	70.2	68.6	71.3	68.0	71.2	77.5	74.7	76.9	82.0	78.4	81.0	99.2	68.0	82.8
25	77.9	74.9	77.8	77.5	81.4	82.4	81.6	82.1	83.7	83.6	86.7	87.0	92.5	95.3	96.5	96.7	96.7	97.0	96.7	97.1	98.7	98.8	98.1	98.4	98.8	74.9	89.1
26	99.2	99.2	99.4	99.0	98.2	97.3	93.9	92.6	91.5	90.4	89.7	87.9	86.5	87.2	88.3	88.8	88.8	88.5	91.4	92.9	96.1	93.0	93.4	96.0	99.4	86.5	92.9
27	97.2	97.2	97.8	97.2	95.9	96.5	93.4	90.9	90.4	88.5	87.7	83.7	82.6	78.7	70.7	75.3	79.4	79.9	84.6	85.1	86.1	87.8	85.1	84.2	97.8	70.7	87.3
28	81.5	81.9	82.1	83.2	86.5	86.6	85.3	79.5	79.3	78.1	82.6	76.5	76.7	84.4	84.3	83.6	79.9	81.1	83.9	85.2	84.2	83.1	85.9	88.7	88.7	76.5	82.7
29	90.8	90.9	93.6	92.4	91.9	87.7	84.0	73.1	51.9	51.5	61.6	61.9	66.7	62.4	61.5	63.2	59.3	61.0	64.8	67.1	68.2	73.8	79.0	75.2	93.6	51.5	72.2
30	85.9	86.7	88.2	86.1	85.2	74.3	70.9	67.3	67.6	67.3	65.1	63.7	63.2	84.8	86.2	77.5	84.8	80.2	84.3	86.5	85.6	87.9	88.8	89.6	89.6	63.2	79.5
31	82.4	81.3	80.3	82.6	81.7	82.1	87.7	87.7	82.1	77.7	72.3	67.7	60.6	58.5	59.6	61.0	72.0	79.6	81.8	83.2	83.7	81.5	79.5	77.4	87.7	58.5	76.8
Max.	**99.2**	**99.2**	**99.4**	**99.0**	**98.6**	**99.1**	**99.2**	**97.8**	**91.5**	**90.4**	**92.3**	**92.2**	**92.5**	**95.3**	**96.5**	**96.7**	**96.7**	**97.0**	**96.7**	**97.1**	**98.7**	**98.8**	**98.1**	**98.4**	**99.4**		
Min.	**47.7**	**48.4**	**48.4**	**50.0**	**49.5**	**49.3**	**47.6**	**46.9**	**44.1**	**43.3**	**37.8**	**36.0**	**36.6**	**34.4**	**33.6**	**31.6**	31.1	30.4	**31.7**	**34.5**	**44.8**	**48.2**	**48.9**	**47.8**		**30.4**	
Avg.	**79.6**	**79.8**	**81.6**	**82.0**	**80.6**	**80.3**	**79.7**	**77.8**	**73.6**	**71.7**	**70.6**	**68.9**	**68.3**	**68.5**	**68.6**	**68.3**	**69.1**	**70.0**	**72.8**	**74.0**	**76.7**	**78.5**	**79.5**	**79.2**			**75.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	79.0	79.5	79.0	76.9	69.6	69.6	72.6	72.0	72.2	71.2	68.7	68.4	68.3	78.8	87.5	89.2	87.1	84.1	89.8	91.2	91.8	92.3	91.9	93.3	93.3	68.3	80.2
2	93.2	90.1	89.4	89.1	92.6	91.4	92.2	92.9	90.3	86.9	84.1	82.9	79.2	71.4	75.9	74.3	71.5	66.9	72.0	76.6	80.3	82.8	81.4	76.8	93.2	66.9	82.7
3	79.7	84.5	89.7	92.0	90.8	91.4	94.4	92.6	88.1	78.5	81.0	85.8	85.4	75.3	81.4	73.6	70.9	78.0	75.7	79.9	84.1	79.5	81.6	83.6	94.4	70.9	83.2
4	74.8	70.8	70.0	70.2	73.6	85.2	93.0	93.7	94.8	95.2	94.6	89.4	75.6	83.4	79.8	79.5	82.7	90.1	92.0	91.9	91.1	89.3	88.8	91.0	95.2	70.0	85.0
5	94.2	95.7	97.0	94.1	92.2	89.9	93.0	90.9	88.1	81.7	69.1	73.5	79.8	82.6	86.5	88.9	91.9	92.5	94.0	93.5	94.1	91.3	93.8	84.4	97.0	69.1	88.9
6	86.6	88.0	97.1	95.2	96.5	96.9	97.2	92.9	77.2	70.0	73.7	71.6	74.1	75.6	80.7	83.7	87.0	89.5	90.7	89.8	91.9	93.7	93.4	93.6	97.2	70.0	86.9
7	85.5	85.3	82.1	63.5	59.2	59.8	57.6	54.8	53.2	50.2	54.5	64.2	74.9	79.9	83.5	83.0	81.3	73.7	70.3	83.4	84.5	84.5	72.3	69.0	85.5	50.2	71.3
8	70.5	73.4	81.0	80.8	83.2	84.2	84.0	81.6	74.1	72.1	74.7	69.7	68.9	68.4	81.9	87.2	86.7	85.2	83.5	87.5	86.5	86.9	90.9	90.6	90.9	68.4	80.6
9	91.0	90.3	90.8	95.4	96.5	96.0	91.3	97.1	96.2	93.3	88.8	86.6	86.4	85.7	81.0	76.8	73.4	69.0	66.8	64.0	63.3	61.8	63.4	66.7	97.1	61.8	82.1
10	74.5	75.5	76.9	72.3	65.3	66.9	70.4	70.0	65.6	63.1	66.8	72.6	59.1	45.7	42.7	39.9	40.1	43.8	43.3	63.3	75.3	66.0	52.8	64.0	76.9	39.9	61.5
11	69.1	71.9	75.7	81.1	83.7	84.0	77.7	78.5	82.1	92.0	90.2	81.2	74.0	78.2	76.5	81.2	83.9	83.2	84.2	88.1	90.1	93.5	93.7	95.5	95.5	69.1	82.9
12	96.6	97.6	98.3	98.0	97.1	97.8	97.5	96.1	95.4	96.3	94.8	92.9	92.4	91.6	92.5	92.6	92.1	93.0	92.5	92.1	92.8	93.1	94.2	95.3	98.3	91.6	94.7
13	96.0	97.3	96.9	93.5	95.5	96.4	89.9	86.6	85.6	87.5	85.2	82.2	80.3	79.1	80.6	84.3	80.3	78.2	78.8	86.6	88.2	86.5	85.5	88.5	97.3	78.2	87.1
14	90.5	86.8	95.2	90.7	81.4	81.7	82.5	79.9	80.3	84.4	83.1	81.4	76.7	75.9	74.9	72.9	71.2	77.8	88.2	85.9	83.9	85.4	86.1	84.6	95.2	71.2	82.6
15	87.5	93.0	92.9	92.7	83.6	77.3	74.4	72.2	81.7	81.9	80.4	79.7	71.8	67.3	65.7	66.1	66.0	63.1	69.2	68.4	65.4	61.9	65.4	67.0	93.0	61.9	74.8
16	62.4	63.5	60.5	61.0	66.4	61.7	51.1	43.4	41.0	40.2	38.8	39.8	39.9	41.6	40.7	41.8	42.9	43.2	48.1	55.4	57.9	56.9	61.8	67.8	67.8	38.8	51.1
17	72.6	74.0	71.8	70.7	66.2	61.8	64.6	67.2	65.8	65.2	60.7	59.6	56.7	54.6	55.3	61.7	61.5	59.7	68.9	73.5	74.5	79.2	85.1	87.3	87.3	54.6	67.4
18	89.0	89.9	92.1	88.2	85.8	84.6	82.7	77.3	79.0	79.3	77.1	82.1	80.2	81.0	83.7	84.1	84.2	79.5	82.3	86.6	89.6	87.9	88.4	90.0	92.1	77.1	84.4
19	92.1	89.7	93.0	96.8	96.6	88.7	80.8	75.4	67.9	62.9	60.2	59.9	70.7	53.5	55.0	44.8	39.8	40.7	44.4	41.6	38.3	57.1	61.3	61.7	96.8	38.3	65.5
20	64.1	61.0	61.2	63.4	64.6	65.9	60.7	61.0	59.0	55.2	46.1	38.9	35.6	35.5	34.3	32.7	32.2	35.0	42.6	44.6	41.9	38.0	34.6	32.3	65.9	32.2	47.5
21	38.2	52.4	54.4	55.5	43.2	42.8	47.3	49.5	47.2	47.6	47.1	48.0	48.5	47.0	48.6	49.2	48.0	49.1	54.8	58.9	61.3	62.4	62.9	63.1	63.1	38.2	51.1
22	65.1	64.7	62.3	64.0	66.5	64.3	69.3	69.8	68.5	73.9	76.6	80.7	87.8	87.2	84.3	80.0	82.9	84.7	87.5	89.8	92.2	94.0	95.7	95.1	95.7	62.3	78.6
23	95.9	95.1	93.3	94.1	94.0	93.8	93.9	94.9	95.4	95.8	96.0	95.7	94.4	93.5	91.5	91.1	91.6	92.4	92.0	94.9	90.7	94.2	94.3	96.5	96.5	90.7	94.0
24	96.6	97.3	97.7	96.2	92.6	92.1	92.2	92.3	91.0	88.5	89.8	86.8	88.7	94.2	95.0	95.2	96.3	93.5	87.6	82.3	85.2	92.6	95.0	96.9	97.7	82.3	92.3
25	97.4	97.5	94.6	96.6	98.6	98.9	95.8	97.1	96.6	90.5	83.9	84.6	88.7	76.2	73.2	70.3	67.1	66.5	69.2	71.0	71.8	72.0	72.0	80.2	98.9	66.5	83.8
26	87.9	87.3	87.3	86.2	79.2	81.0	81.0	71.3	64.5	66.4	60.9	65.5	67.9	68.4	68.7	65.7	60.1	65.5	81.8	83.0	83.9	83.8	81.8	78.4	87.9	60.1	75.3
27	69.2	63.8	69.5	76.2	76.7	74.1	68.6	67.4	76.1	76.5	79.7	81.2	74.9	72.2	73.9	68.0	61.6	64.0	76.2	79.1	79.9	85.6	88.9	88.0	88.9	61.6	74.6
28	89.3	90.8	86.7	81.1	86.8	87.9	89.4	91.6	90.9	88.8	89.0	85.9	77.5	76.3	69.5	68.2	61.5	70.7	75.9	73.8	65.1	64.1	69.8	84.5	91.6	61.5	79.8
29	88.7	90.2	91.6	90.9	91.0	89.1	82.1	78.1	74.2	73.1	77.6	78.7	77.8	75.9	76.4	79.6	73.4	71.0	81.6	76.6	58.7	56.7	59.5	64.3	91.6	56.7	77.4
30	67.1	68.0	69.0	70.7	72.1	70.6	70.9	73.5	72.8	67.6	66.8	73.7	72.1	74.8	80.9	74.3	67.4	68.2	74.6	80.0	77.5	80.1	89.1	91.7	91.7	66.8	73.9
Max.	**97.4**	**97.6**	**98.3**	**98.0**	**98.6**	**98.9**	**97.5**	**97.1**	**96.6**	**96.3**	**96.0**	**95.7**	**94.4**	**94.2**	**95.0**	**95.2**	**96.3**	**93.5**	**94.0**	**94.9**	**94.1**	**94.2**	**95.7**	**96.9**	**98.9**		
Min.	**38.2**	**52.4**	**54.4**	**55.5**	**43.2**	**42.8**	**47.3**	**43.4**	**41.0**	**40.2**	**38.8**	**38.9**	**35.6**	**35.5**	**34.3**	**32.7**	32.2	35.0	**42.6**	**41.6**	**38.3**	**38.0**	**34.6**	**32.3**		**32.2**	
Avg.	**81.5**	**82.2**	**83.2**	**82.6**	**81.4**	**80.9**	**79.9**	**78.7**	**77.2**	**75.9**	**74.7**	**74.8**	**73.6**	**72.4**	**73.4**	**72.7**	**71.2**	**71.7**	**75.3**	**77.8**	**77.7**	**78.4**	**79.2**	**80.7**			**77.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	93.6	96.5	98.2	97.8	98.8	99.3	99.4	97.7	94.0	88.2	85.4	75.8	72.9	68.2	78.2	80.5	84.7	81.0	88.7	91.9	92.9	93.7	94.1	94.9	99.4	68.2	89.4
2	94.0	96.0	97.6	98.2	98.2	97.6	95.9	94.7	85.2	86.0	88.4	83.5	82.0	81.6	80.2	77.7	81.1	84.5	85.9	88.9	89.3	91.5	93.5	92.8	98.2	77.7	89.3
3	93.8	92.2	94.2	91.4	87.7	71.1	75.6	73.2	81.0	78.5	72.9	76.0	77.3	79.7	79.6	79.9	77.8	72.8	81.2	83.8	72.3	77.1	85.8	81.0	94.2	71.1	80.7
4	76.7	86.0	88.6	87.6	89.1	90.4	90.6	84.2	76.3	75.5	78.4	78.5	81.2	77.2	74.7	79.7	81.0	83.6	87.1	88.1	89.4	90.1	92.8	90.8	92.8	74.7	84.1
5	91.5	93.5	86.0	91.9	93.0	87.2	86.2	86.2	82.0	82.9	80.2	79.5	74.7	75.3	85.5	92.3	92.8	94.5	89.4	87.8	91.4	93.5	90.7	91.8	94.5	74.7	87.5
6	94.5	96.5	96.9	96.8	96.9	95.9	93.0	88.7	83.6	83.7	83.9	81.4	78.9	74.2	69.0	74.2	76.9	80.2	83.1	86.5	88.7	90.8	90.3	87.2	96.9	69.0	86.3
7	88.7	89.9	89.5	91.5	89.9	88.7	87.3	82.5	84.2	84.3	79.8	77.6	77.2	69.9	66.3	63.0	66.7	75.8	79.5	77.3	79.9	76.6	78.8	87.0	91.5	63.0	80.5
8	93.6	94.5	92.7	93.9	95.1	95.6	94.5	92.5	92.3	89.4	87.1	85.1	92.0	94.9	92.0	86.3	82.3	83.7	86.7	87.8	73.7	75.6	77.4	81.1	95.6	73.7	88.3
9	82.5	88.6	90.4	89.1	90.8	91.2	90.0	87.5	87.4	86.0	80.9	79.1	77.1	76.5	74.9	56.7	55.9	59.4	66.0	71.1	58.1	55.7	58.0	65.0	91.2	55.7	75.7
10	58.0	64.2	79.0	75.8	72.0	78.1	81.8	81.8	70.6	80.3	85.0	85.5	83.4	83.5	85.1	86.3	88.4	96.4	95.7	94.1	95.6	95.2	96.4	96.2	96.4	58.0	83.7
11	94.3	91.1	94.8	92.0	93.4	92.0	88.9	85.6	84.8	80.8	82.3	81.5	80.6	78.2	71.4	71.9	78.7	80.6	86.7	85.5	79.7	85.9	94.5	91.9	94.8	71.4	85.3
12	91.0	92.5	90.9	91.4	91.1	90.9	91.6	89.4	87.6	86.2	91.6	95.1	90.3	84.8	85.7	84.1	84.9	86.7	88.1	90.8	90.6	90.5	92.2	95.1	95.1	84.1	89.7
13	94.9	91.2	92.3	92.3	92.7	94.0	96.6	97.4	97.7	97.8	97.8	96.3	96.3	97.5	96.4	94.4	89.9	90.1	92.0	92.4	91.9	93.6	95.5	93.8	97.8	89.9	94.4
14	93.5	93.1	95.5	96.4	95.0	93.2	90.2	90.5	86.3	83.5	84.2	91.0	93.0	95.0	94.2	92.3	93.2	95.9	95.4	95.4	95.6	96.3	97.8	98.9	98.9	83.5	93.1
15	99.0	98.9	98.9	98.8	98.6	99.4	98.8	96.5	96.0	91.1	87.3	85.6	88.0	93.3	92.8	90.3	90.1	87.8	62.1	57.4	56.4	56.0	56.5	59.6	99.4	56.0	85.0
16	60.6	64.2	64.7	66.1	67.5	67.1	66.6	64.8	66.4	62.7	59.8	57.8	55.9	55.3	51.5	50.2	50.8	53.4	56.6	55.8	55.1	54.3	53.5	53.4	67.5	50.2	58.9
17	56.4	59.6	67.7	79.8	83.0	82.1	80.4	78.3	75.1	75.2	76.6	74.8	73.1	71.7	73.1	75.5	76.3	81.0	83.9	85.8	85.6	85.9	87.3	88.4	88.4	56.4	77.4
18	89.4	88.3	87.7	89.1	91.8	94.0	92.7	91.4	91.7	90.6	86.8	79.9	78.8	91.5	94.1	91.4	87.6	79.6	74.2	73.2	85.6	89.7	93.4	93.6	94.1	73.2	87.8
19	92.3	95.2	93.9	95.0	97.1	98.1	94.9	91.7	88.8	83.2	85.8	87.2	85.9	82.4	82.3	84.9	89.0	85.7	83.4	84.2	85.7	88.2	88.5	90.2	98.1	82.3	88.9
20	93.3	93.5	96.1	96.1	95.8	96.9	95.2	89.7	86.7	87.2	85.0	84.5	80.6	78.5	77.6	78.2	78.8	79.4	89.2	91.8	89.5	69.9	68.9	71.4	96.9	68.9	85.6
21	71.5	70.0	69.2	68.7	69.2	68.8	67.7	66.2	64.2	62.5	59.6	58.6	56.1	52.9	52.9	53.6	53.0	55.1	61.7	63.8	64.6	66.5	67.9	68.3	71.5	52.9	63.0
22	71.6	78.8	87.0	93.3	94.9	96.1	97.1	96.9	94.7	95.4	96.1	96.7	94.3	93.7	89.3	88.4	89.1	91.6	91.8	93.6	93.9	92.3	93.1	94.4	97.1	71.6	91.8
23	97.8	98.5	96.3	94.7	96.0	97.0	95.3	95.6	96.3	97.8	96.8	95.2	96.8	96.0	94.8	93.6	93.7	94.6	95.2	95.2	95.5	93.1	91.1	93.5	98.5	91.1	95.4
24	94.0	97.0	95.6	94.0	87.1	89.5	91.1	90.8	90.1	89.0	89.1	89.3	88.7	87.5	81.7	81.3	82.3	82.6	83.9	81.0	79.9	84.1	85.5	80.8	97.0	79.9	87.3
25	76.7	73.8	72.6	70.7	70.0	68.8	68.1	70.8	70.6	69.7	70.4	67.4	65.4	62.1	60.9	56.6	57.5	57.8	67.4	69.6	61.3	57.5	54.8	66.6	76.7	54.8	66.1
26	82.4	87.9	88.2	92.3	86.8	89.6	83.7	81.0	78.7	75.3	77.8	77.3	75.7	81.8	76.6	78.1	83.6	84.7	82.8	86.7	89.5	86.6	85.9	87.3	92.3	75.3	83.3
27	91.6	93.7	92.7	93.6	93.5	95.1	93.9	94.1	93.6	88.7	86.1	90.1	87.0	88.1	87.3	87.3	87.3	87.1	90.0	92.4	92.7	93.0	95.3	92.1	95.3	86.1	91.1
28	94.2	77.8	71.5	88.5	74.7	71.0	67.0	64.2	61.8	61.4	65.1	71.3	71.6	61.2	57.2	54.5	54.7	59.7	63.1	62.3	63.6	66.8	66.6	65.1	94.2	54.5	67.3
29	66.8	67.1	65.8	66.0	65.6	68.5	67.0	71.7	71.2	67.0	61.1	59.8	57.8	57.2	56.7	56.3	52.3	55.2	61.4	63.0	63.7	64.5	65.6	66.8	71.7	52.3	63.3
30	70.2	79.9	90.4	92.9	94.3	94.0	91.0	87.7	89.0	89.4	88.8	85.3	83.1	78.4	79.9	81.5	82.6	85.5	89.8	90.2	91.9	93.3	94.1	95.8	95.8	70.2	87.5
31	96.9	98.4	98.7	98.0	98.3	98.3	98.4	98.3	97.3	95.9	95.1	95.4	90.6	90.6	88.1	85.7	86.4	82.9	80.7	83.6	85.8	88.1	91.2	93.7	98.7	80.7	92.4
Max.	**99.0**	**98.9**	**98.9**	**98.8**	**98.8**	**99.4**	**99.4**	**98.3**	**97.7**	**97.8**	**97.8**	**96.7**	**96.8**	**97.5**	**96.4**	**94.4**	**93.7**	**96.4**	**95.7**	**95.4**	**95.6**	**96.3**	**97.8**	**98.9**	**99.4**		
Min.	**56.4**	**59.6**	**64.7**	**66.0**	**65.6**	**67.1**	**66.6**	**64.2**	**61.8**	**61.4**	**59.6**	**57.8**	**55.9**	**52.9**	**51.5**	**50.2**	**50.8**	**53.4**	**56.6**	**55.8**	**55.1**	**54.3**	**53.5**	**53.4**		**50.2**	
Avg.	**85.3**	**86.7**	**87.9**	**89.1**	**88.6**	**88.4**	**87.4**	**85.9**	**84.0**	**82.7**	**82.1**	**81.4**	**80.2**	**79.3**	**78.4**	**77.6**	**78.4**	**79.6**	**81.4**	**82.3**	**81.6**	**81.8**	**83.1**	**84.1**			**83.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Relative Humidity (%)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	92.7	93.4	94.0	94.2	92.1	91.5	92.9	92.7	93.0	92.3	91.9	91.0	91.1	92.3	93.0	90.2	88.4	88.7	88.8	85.5	88.8	90.7	89.8	91.7	94.2	85.5	91.3
2	92.7	93.9	92.7	92.2	92.5	93.2	94.4	93.3	92.2	92.0	92.1	91.4	90.9	92.0	90.9	91.7	92.2	90.8	91.1	91.1	93.2	94.5	95.1	93.9	95.1	90.8	92.5
3	95.1	95.1	95.6	94.1	93.1	92.4	94.9	97.6	96.8	92.8	93.7	92.9	93.1	91.9	91.9	93.6	93.2	93.7	95.0	95.8	95.4	95.1	95.1	96.7	97.6	91.9	94.4
4	96.6	94.8	94.0	93.9	95.6	95.7	95.2	94.1	93.9	94.2	94.3	94.4	93.7	93.1	93.2	93.9	93.8	93.4	91.8	92.0	91.8	92.5	93.6	93.7	96.6	91.8	93.9
5	93.4	93.3	93.5	93.8	93.8	94.6	94.4	97.1	98.3	97.0	93.6	91.3	89.6	80.1	76.5	73.2	71.3	72.2	77.1	76.9	77.9	75.8	73.9	84.5	98.3	71.3	86.0
6	87.5	80.7	79.8	78.0	77.3	77.7	75.6	76.4	76.8	72.6	66.2	61.1	57.0	52.7	49.6	46.5	47.9	54.5	60.0	59.0	59.6	61.0	61.0	53.7	87.5	46.5	65.5
7	53.2	51.0	52.1	52.7	52.4	52.4	54.5	52.4	50.3	51.8	53.0	47.6	41.2	40.7	40.4	39.5	42.7	46.4	51.8	53.0	48.5	48.1	50.5	70.2	70.2	39.5	49.8
8	77.2	81.7	81.0	84.3	85.3	82.6	80.0	76.0	73.8	69.2	67.5	63.3	55.6	48.3	45.8	45.1	44.1	44.5	49.2	50.0	54.8	51.8	52.1	52.7	85.3	44.1	63.2
9	62.6	70.4	74.9	78.8	81.0	80.6	82.7	74.7	74.1	75.6	77.7	77.6	76.6	75.6	74.5	72.6	72.4	81.6	90.2	92.0	94.1	94.5	95.4	96.5	96.5	62.6	80.3
10	95.2	95.3	95.7	95.3	94.9	92.4	90.3	87.2	84.6	85.2	86.8	88.1	90.5	89.4	88.4	89.3	90.6	94.1	96.7	97.5	98.2	99.1	99.1	98.8	99.1	84.6	92.6
11	99.2	99.5	99.5	99.5	98.2	99.3	99.4	99.2	98.5	97.3	95.0	92.5	90.9	89.0	87.7	89.3	88.2	86.3	89.6	91.4	92.7	81.1	68.1	59.4	99.5	59.4	91.3
12	59.6	51.4	44.6	57.4	65.0	70.9	74.4	72.7	72.7	75.8	76.9	76.4	74.9	69.8	64.2	64.0	63.6	64.5	67.7	69.7	75.0	80.3	83.2	81.9	83.2	44.6	69.0
13	86.8	90.1	88.8	87.9	80.9	90.3	88.8	88.1	82.6	80.4	80.0	77.2	76.7	76.4	76.7	79.5	86.7	86.9	80.3	86.9	92.4	92.1	89.0	72.7	92.4	72.7	84.1
14	69.6	74.5	74.6	72.7	67.1	66.6	65.9	62.6	64.1	65.7	67.5	69.1	69.3	65.5	61.4	63.0	65.9	73.1	78.5	78.4	76.9	80.7	80.0	81.3	81.3	61.4	70.6
15	88.3	87.7	82.2	93.4	94.4	95.1	94.5	94.1	86.8	83.2	80.3	79.3	78.6	82.9	87.4	85.9	85.2	86.1	87.0	91.5	94.2	96.3	95.1	96.2	96.3	78.6	88.6
16	95.4	96.2	93.1	92.8	93.5	93.5	91.9	88.5	84.7	78.0	77.5	71.7	69.1	69.6	69.6	72.9	75.5	76.7	81.3	81.6	87.4	92.4	88.8	92.2	96.2	69.1	83.9
17	94.9	94.2	94.9	87.4	84.9	93.3	93.8	91.8	84.5	80.7	75.9	73.4	70.4	71.6	76.0	81.2	81.6	75.4	73.0	75.2	80.5	77.6	74.9	73.6	94.9	70.4	81.7
18	75.2	72.3	81.1	77.2	86.4	86.7	88.2	86.1	87.5	89.4	89.4	90.3	90.8	90.3	89.7	87.2	86.0	86.6	88.9	89.6	88.4	87.7	88.5	86.0	90.8	72.3	86.2
19	88.7	88.1	83.7	82.2	80.4	76.4	78.7	76.8	75.1	77.2	75.8	70.6	67.6	73.8	76.5	78.8	77.7	79.7	82.6	88.6	93.7	94.9	94.5	95.9	95.9	67.6	81.6
20	95.2	94.4	92.5	89.3	87.8	94.2	96.6	94.2	94.2	95.6	97.3	92.9	86.6	87.9	87.0	85.2	83.6	80.5	81.7	84.5	87.6	84.8	86.3	85.5	97.3	80.5	89.4
21	84.4	81.9	82.5	87.8	90.3	92.3	92.8	92.4	93.0	93.4	90.6	92.2	95.5	93.4	92.8	93.5	94.1	94.4	94.6	93.1	92.3	86.5	87.4	88.4	95.5	81.9	90.8
22	91.3	92.3	96.1	97.5	97.0	95.5	95.4	96.5	95.9	95.1	95.9	95.8	95.1	94.4	94.2	92.7	91.5	91.3	91.3	92.4	94.7	92.9	92.7	96.8	97.5	91.3	94.3
23	94.9	94.5	93.8	93.8	94.9	96.9	98.1	98.6	97.4	95.8	94.7	90.3	86.7	86.1	87.9	87.6	81.2	73.4	76.3	78.2	75.4	76.3	79.5	74.3	98.6	73.4	87.8
24	71.4	75.8	85.8	92.0	95.7	96.3	95.6	94.0	89.7	84.8	85.5	88.0	82.5	84.6	83.2	81.2	79.9	82.9	88.1	90.2	92.8	96.6	93.1	96.0	96.6	71.4	87.7
25	98.0	98.4	98.4	98.4	97.8	96.0	94.8	91.7	91.3	89.6	91.2	93.5	93.8	92.3	93.7	92.1	91.0	92.8	95.2	91.4	87.1	88.3	91.7	91.2	98.4	87.1	93.3
26	94.4	96.3	96.2	95.7	95.0	93.0	90.1	87.9	88.9	83.6	80.7	81.1	83.3	83.9	84.8	80.7	81.9	77.2	74.5	88.5	70.4	66.2	69.9	74.4	96.3	66.2	84.1
27	69.2	68.9	67.4	70.8	67.9	73.0	65.3	63.8	64.6	62.3	62.1	59.3	61.0	56.8	56.6	55.6	56.7	57.3	59.4	58.8	59.5	67.9	68.4	73.0	73.0	55.6	63.6
28	62.0	69.3	72.2	62.1	66.3	79.6	77.4	78.8	79.0	73.7	70.0	82.9	81.0	71.4	66.4	61.8	61.3	67.6	81.6	80.0	78.2	68.4	71.0	73.3	82.9	61.3	72.3
29	73.8	76.5	77.7	74.4	80.0	81.8	79.1																		81.8	73.8	77.6
30																72.3	73.2								73.2	72.3	72.7
31						81.9	82.9	72.2	79.8	83.2	87.1	88.9													88.9	72.2	82.3
Max.	**99.2**	**99.5**	**99.5**	**99.5**	**98.2**	**99.3**	**99.4**	**99.2**	**98.5**	**97.3**	**97.3**	**95.8**	**95.5**	**94.4**	**94.2**	**93.9**	**94.1**	**94.4**	**96.7**	**97.5**	**98.2**	**99.1**	**99.1**	**98.8**	**99.5**		
Min.	**53.2**	**51.0**	**44.6**	**52.7**	**52.4**	**52.4**	**54.5**	**52.4**	**50.3**	**51.8**	**53.0**	**47.6**	**41.2**	**40.7**	**40.4**	**39.5**	**42.7**	**44.5**	**49.2**	**50.0**	**48.5**	**48.1**	**50.5**	**52.7**		**39.5**	
Avg.	**84.1**	**84.5**	**84.8**	**85.2**	**85.6**	**86.9**	**86.6**	**85.2**	**84.3**	**83.0**	**82.4**	**81.5**	**79.8**	**78.4**	**77.9**	**77.2**	**77.3**	**78.3**	**80.8**	**82.2**	**82.9**	**82.6**	**82.4**	**83.0**			**82.4**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	88.9	89.7	88.7	90.3	92.6	93.4	94.0	94.1	95.3	88.8	84.4	89.6	92.4	89.4	88.4	94.4	93.9	92.7	93.4	96.3	98.0	99.0	99.8	99.8	99.8	84.4	92.8
2	99.5	98.9	98.6	98.5	97.6	97.0	96.3	95.6	93.4	89.1	87.0	86.9	85.6	83.9	83.3	82.7	82.0	83.5	83.5	79.3	77.6	82.5	89.2	90.4	99.5	77.6	89.2
3	91.2	94.3	94.3	93.7	92.7	91.7	93.1	92.9	92.8	89.5	89.4	95.2	97.1	97.3	97.0	95.6	93.4	90.3	91.1	94.1	95.6	93.1	91.3	85.5	97.3	85.5	93.0
4	90.2	86.6	91.1	86.6	87.8	86.1	82.7	85.1	88.1	87.1	92.7	92.7	91.0	90.1	90.0	88.7	87.6	87.2	88.0	88.1	84.3	85.1	85.1	86.9	92.7	82.7	87.9
5	90.1	87.3	86.5	86.7	82.3	77.4	73.4	68.8	65.8	65.7	64.2	60.0	57.3	56.8	56.6	63.2	58.0	53.0	53.6	55.1	56.4	58.3	60.6	59.3	90.1	53.0	66.5
6	60.5	59.5	61.0	60.2	58.3	62.7	64.1	58.9	59.5	63.2	63.5	65.9	67.6	64.0	60.7	61.9	62.5	62.5	61.3	60.2	61.4	66.8	66.2	65.5	67.6	58.3	62.4
7	65.2	65.1	67.4	71.0	72.8	73.2	70.7	71.1	69.8	66.1	63.3	67.8	67.9	67.4	77.7	79.9	79.4	77.0	67.8	68.6	72.7	68.5	75.3	81.4	81.4	63.3	71.1
8	90.9	90.1	89.1	88.3	89.9	90.6	93.5	95.2	96.0	98.0	97.8	97.4	94.9	93.2	97.6	99.0	97.0	91.4	89.6	89.5	89.7	90.9	92.1	93.1	99.0	88.3	93.1
9	94.0	92.5	87.7	85.0	88.4	88.0	89.7	89.9	91.2	89.9	88.3	87.3	83.1	82.9	80.8	78.8	86.8	87.4	85.9	86.3	88.6	87.2	91.9	93.9	94.0	78.8	87.7
10	95.7	95.3	96.4	97.3	96.6	97.6	98.1	97.5	93.9	91.0	90.0	87.3	85.1	79.5	80.3	80.8	75.1	71.7	69.4	69.7	70.5	69.4	69.4	70.8	98.1	69.4	84.5
11	73.5	75.7	74.7	76.1	81.4	82.0	81.0	84.5	86.5	85.9	84.3	81.1	81.6	84.5	84.8	88.1	92.2	94.3	94.2	88.2	88.5	89.4	90.0	92.2	94.3	73.5	84.8
12	92.1	92.0	91.9	92.1	91.4	92.2	91.7	89.7	89.2	86.9	86.9	87.0	87.1	82.7	78.6	77.5	78.2	85.4	89.3	85.0	83.9	83.2	81.6	82.6	92.2	77.5	86.6
13	76.1	79.1	79.8	84.2	88.2	93.7	92.7	83.3	85.2	86.9	83.5	86.4	86.6	85.8	82.3	76.9	81.0	84.5	89.9	89.9	91.4	91.4	85.9	89.3	93.7	76.1	85.6
14	91.2	93.1	94.8	92.1	93.7	95.9	96.9	96.9	97.8	97.1	94.0	88.8	87.8	86.9	90.7	88.1	88.7	89.9	90.6	89.3	77.6	87.9	86.7	81.0	97.8	77.6	90.7
15	80.8	69.5	68.5	64.4	66.2	65.0	64.4	64.4	62.6	60.0	57.7	55.9	51.8	48.2	49.7	48.2	51.1	52.8	56.6	57.5	59.9	63.1	61.6	60.3	80.8	48.2	60.0
16	60.5	64.8	69.8	70.9	71.2	70.9	67.8	66.8	66.2	61.3	59.8	57.7	54.5	53.5	52.2	50.1	50.4	55.1	59.2	61.0	63.0	64.6	67.2	69.8	71.2	50.1	62.0
17	72.1	73.7	71.0	70.3	69.6	68.6	68.4	70.7	72.8	73.4	71.6	69.6	70.8	67.3	66.4	67.9	67.1	75.7	80.1	82.9	85.5	84.0	87.7	88.9	88.9	66.4	74.0
18	84.9	81.2	81.5	89.2	94.0	94.3	89.9	86.6	87.8	85.3	84.4	88.4	93.0	94.4	95.0	92.6	90.7	90.2	92.1	93.2	93.6	92.9	92.6	93.9	95.0	81.2	90.1
19	96.9	98.3	96.5	97.1	96.4	96.4	96.7	96.3	87.5	93.9	91.3	91.9	92.0	78.3	78.9	71.6	70.2		65.3	66.2	65.8	65.2	65.4	68.2	98.3	65.2	83.7
20	68.4	67.1	68.8	69.3	68.1	66.0	66.4	68.7	72.6	75.5	88.0	81.6	77.8	75.4	73.5	73.6	74.1	77.2	74.8	75.2	82.4	76.5	77.5	75.3	88.0	66.0	73.9
21	73.8	72.3	71.0	71.7	70.9	71.7	70.3	69.3	69.2	66.7	66.3	64.4	62.2	61.0	59.0	59.9	58.9	60.3	63.6	68.8	70.2	67.9	63.0	58.5	73.8	58.5	66.3
22	57.4	61.5	75.1	83.3	84.8	83.4	87.8	85.5	83.5	86.0	83.0	81.4	67.8	60.1	61.0	62.0	61.2	65.4	74.8	84.9	84.8	91.4	90.4	91.1	91.4	57.4	77.0
23	90.5	87.9	84.9	85.6	85.0	84.4	82.6	79.4	79.7	74.0	71.4	68.8	64.9	63.0	66.5	69.4	67.4	70.0	71.0	74.3	72.3	76.2	82.7	90.5	90.5	63.0	76.8
24	94.7	90.0	92.1	91.5	88.3	73.0	66.8	66.3	74.0	76.7	76.8	81.5	80.3	73.5	82.7	72.6	71.2	79.4	81.1	86.3	89.1	93.8	94.0	94.3	94.7	66.3	82.1
25	90.6	77.1	78.5	74.6	74.2	74.3	77.8	79.0	84.1	91.7	88.1	72.6	67.3	69.7	70.8	67.7	68.7	72.8	68.1	69.0	70.8	73.4	70.5	76.2	91.7	67.3	75.3
26	72.4	71.4	72.7	74.5	73.9	74.1	73.7	74.3	77.9	74.7	72.3	68.2	65.9	61.1	62.7	64.0	64.0	67.4	66.2	67.4	69.4	75.3	77.4	79.6	79.6	61.1	70.8
27	76.5	75.9	77.0	75.1	76.1	73.7	74.5	78.5	78.0	73.6	71.0	68.0	64.7	65.4	70.5	75.0	77.1	80.6	76.3	78.4	79.7	77.3	78.1	78.8	80.6	64.7	75.0
28	80.2	85.9	89.6	88.0	91.9	91.4	91.4	90.4	88.6	86.0	83.9	81.6	82.5	87.0	88.6	87.9	88.2	89.5	86.2	85.6	83.9	83.4	82.2	85.4	91.9	80.2	86.6
29	86.8	82.3	88.1	90.5	88.9	88.8	89.2	89.7	87.7	84.5	83.0	80.4	73.2	66.0	61.8	61.8	62.6	63.2	64.8	66.3	73.9	80.0	82.5	73.0	90.5	61.8	77.9
30	72.8	70.4	73.3	74.5	72.1	72.7	73.7	81.9	84.5	83.6	86.0	87.0	79.4	74.4	74.1	75.1	78.0	80.7	83.7	87.3	85.7	85.8	92.8	89.6	92.8	70.4	80.0
Max.	**99.5**	**98.9**	**98.6**	**98.5**	**97.6**	**97.6**	**98.1**	**97.5**	**97.8**	**98.0**	**97.8**	**97.4**	**97.1**	**97.3**	**97.6**	**99.0**	**97.0**	**94.3**	**94.2**	**96.3**	**98.0**	**99.0**	**99.8**	**99.8**	**99.8**		
Min.	**57.4**	**59.5**	**61.0**	**60.2**	**58.3**	**62.7**	**64.1**	**58.9**	**59.5**	**60.0**	**57.7**	**55.9**	**51.8**	**48.2**	**49.7**	**48.2**	**50.4**	52.8	53.6	**55.1**	**56.4**	**58.3**	**60.6**	**58.5**		**48.2**	
Avg.	**81.9**	**80.9**	**82.0**	**82.4**	**82.8**	**82.3**	**82.0**	**81.7**	**82.0**	**81.1**	**80.1**	**79.1**	**77.1**	**74.8**	**75.4**	**75.2**	**75.2**	**76.9**	**77.1**	**78.1**	**78.9**	**80.1**	**81.0**	**81.5**			**79.6**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	81.5	75.6	75.5	77.0	83.2	78.8	80.1	72.2	73.0	71.5	67.1	67.7	67.2	65.0	65.6	66.9	67.8	65.2	63.6	66.2	68.8	71.1	70.8	68.5	83.2	63.6	71.2
2	68.1	71.3	71.3	72.0	72.1	71.2	72.2	73.0	73.1	70.2	68.9	67.5	66.4	65.3	63.7	63.0	61.2	63.2	62.6	61.8	63.9	62.9	61.0	60.1	73.1	60.1	66.9
3	62.3	61.4	59.4	58.7	60.2	61.7	62.2	63.6	64.3	61.5	59.1	57.1	53.1	51.1	45.5	42.3	42.6	45.4	48.1	50.0	47.7	47.7	43.9	44.9	64.3	42.3	53.9
4	51.7	67.8	69.9	72.3	66.6	64.0	61.7	57.5	60.9	79.1	86.3	91.6	92.8	93.6	94.1	94.2	93.4	92.8	91.5	90.3	91.4	91.3	92.3	93.9	94.2	51.7	80.9
5	95.7	96.5	96.9	96.0	95.5	94.9	94.6	94.5	95.0	96.6	95.9	95.8	96.3	93.6	94.1	93.8	90.9	82.1	75.8	73.0	70.2	70.2	63.0	63.5	96.9	63.0	88.1
6	63.0	65.4	64.0	67.8	70.2	68.3	66.6	65.9	63.8	63.3	62.6	62.9	61.4	57.7	58.0	59.3	59.0	59.0	60.2	60.4	56.7	56.2	53.4	52.6	70.2	52.6	61.6
7	54.2	53.7	53.6	55.1	55.3	54.8	53.9	52.1	51.0	51.7	50.8	47.8	47.9	47.7	44.6	42.9	42.4	42.4	42.2	42.1	42.6	44.3	47.3	48.0	55.3	42.1	48.7
8	49.6	49.2	49.4	46.5	45.3	47.0	48.3	52.9	53.6	53.1	55.9	54.4	50.4	49.7	47.8	47.0	45.1	45.3	45.3	45.1	43.0	41.7	48.2	59.7	59.7	41.7	48.9
9	66.0	64.4	64.5	62.7	70.2	73.1	74.9	75.4	75.1	78.7	73.8	71.4	66.8	59.6	57.0	55.4	49.9	47.1	46.9	50.6	45.9	40.8	43.2	64.5	78.7	40.8	61.6
10	58.8	62.6	62.9	55.0	53.5	55.8	59.3	63.7	65.0	62.1	56.4	55.4	53.4	51.1	48.0	48.9	51.3	53.4	54.5	55.0	55.2	54.3	50.1	50.5	65.0	48.0	55.7
11	50.3	49.2	61.1	71.5	73.8	76.8	76.2	69.8	61.3	65.4	70.5	54.1	54.5	55.7	66.9	85.8	81.9	72.6	69.8	69.9	67.1	61.4	61.1	63.5	85.8	49.2	66.3
12	65.5	64.5	62.8	59.6	57.8	59.9	60.8	65.7	61.2	64.4	63.6	57.0	67.8	64.0	70.4	68.1	76.2	82.7	85.4	83.7	88.0	93.8	95.3	97.0	97.0	57.0	71.5
13	97.1	97.1	97.5	93.0	74.7	72.9	71.9	70.6	70.3	69.5	65.6	64.7	61.6	59.4	61.6	63.2	61.3	61.8	61.7	60.9	58.2	61.0	56.8	59.6	97.5	56.8	69.7
14	56.7	56.3	57.4	64.0	68.5	67.7	69.1	66.9	64.4	63.9	60.2	57.8	58.0	58.1	57.0	55.9	55.8	56.5	57.7	60.7	65.2	69.5	71.0	72.6	72.6	55.8	62.1
15	75.5	76.9	77.7	78.2	77.5	78.6	75.8	81.2	85.2	81.0	77.9	64.1	59.3	53.6	49.5	46.9	47.9	48.2	56.9	54.7	49.6	60.1	56.3	52.4	85.2	46.9	65.2
16	54.2	56.4	71.7	68.1	63.5	76.0	72.8	68.2	71.2	65.9	63.5	60.7	59.6	58.0	56.7	68.9	81.1	90.4	92.9	95.5	95.7	95.1	97.4	97.1	97.4	54.2	74.2
17	96.6	94.8	91.0	90.1	87.2	86.2	84.6	81.1	79.8	79.1	77.9	80.0	84.3	84.2	93.5	97.3	97.4	96.9	98.0	98.0	94.7	92.2	87.3	85.9	98.0	77.9	89.1
18	83.9	83.6	82.5	82.0	80.8	78.7	78.0	70.7	71.9	72.8	69.2	65.9	65.0	63.4	63.5	63.9	63.5	65.7	66.5	66.0	66.0	65.8	65.6	64.2	83.9	63.4	70.8
19	63.4	64.1	64.4	63.7	61.9	60.4	57.7	57.3	56.7	54.3	50.0	47.2	44.5	42.5	47.1	45.4	40.6	44.3	47.7	47.4	47.3	49.0	52.2	69.4	69.4	40.6	53.3
20	74.0	75.3	75.9	76.5	76.2	77.3	75.7	68.0	66.2	62.1	69.3	70.8	64.7	62.6	75.2	91.2	82.6	72.3	68.8	64.9	61.5	66.8	81.4	80.4	91.2	61.5	72.5
21	70.6	62.9	64.9	65.1	72.3	84.0	70.4	63.2	60.1	58.3	57.4	54.6	51.3	47.8	43.4	39.9	36.0	34.5	40.1	39.2	55.6	54.7	53.1	50.5	84.0	34.5	55.4
22	56.0	63.1	69.9	66.5	68.9	57.5	58.1	71.8	63.7	61.9	66.0	66.7	75.9	90.0	85.3	86.8	89.8	93.5	96.7	98.6	97.3	97.8	98.3	99.1	99.1	56.0	78.3
23	98.1	98.0	97.2	91.6	93.7	83.0	77.8	73.5	76.3	80.4	77.0	70.1	68.5	66.2	67.4	68.1	67.1	73.0	73.8	73.3	75.1	67.4	64.2	58.5	98.1	58.5	76.6
24	59.4	57.1	53.0	53.2	53.9	59.1	64.5	68.6	73.7	77.5	89.3	95.0	95.0	94.4	94.3	94.0	93.0	94.3	94.8	95.0	95.0	87.3	83.1	80.7	95.0	53.0	79.4
25	87.0	80.1	73.3	76.5	83.2	84.0	86.5	89.6	88.4	89.4	91.0	89.6	89.4	89.4	91.1	92.6	92.6	91.6	93.6	93.5	89.2	88.1	89.4	93.2	93.6	73.3	88.0
26	94.2	95.5	96.1	95.8	94.2	91.4	94.6	94.1	95.6	97.4	96.7	91.5	88.8	88.4	88.5	88.7	89.4	88.4	88.9	88.9	83.0	86.0	86.6	85.3	97.4	83.0	91.2
27	85.5	84.7	87.6	88.5	84.8	80.6	79.9	74.2	79.3	82.9	82.0	85.8	87.8	83.8	83.5	82.1	79.2	81.3	81.6	78.4	78.5	83.6	86.0	83.3	88.5	74.2	82.7
28	80.7	82.2	81.0	87.2	76.9	86.8	85.2	85.5	85.7	85.0	79.4	88.8	84.1	82.4	85.1	87.4	86.5	85.6	88.6	87.3	83.7	82.4	86.6	88.7	88.8	76.9	84.7
29	88.9	89.4	90.0	89.5	89.6	90.8	90.3	88.9	89.3	87.4	85.4	86.0	86.7	87.3	88.5	88.9	90.0	91.3	92.4	91.4	90.4	90.1	91.6	91.6	92.4	85.4	89.4
30	89.8	88.1	87.8	87.0	87.1	81.4	76.3	71.8	67.8	67.4	63.7	66.8	76.2	86.3	86.8	80.3	82.5	81.6	79.9	75.6	76.2	78.6	78.1	78.4	89.8	63.7	79.0
31	77.2	77.8	77.6	77.1	79.3	80.4	78.9	83.3	80.0	77.9	72.0	65.8	59.4	56.7	54.7	57.6	60.6	62.0	61.9	73.1	91.8	95.7	95.3	94.3	95.7	54.7	74.6
Max.	**98.1**	**98.0**	**97.5**	**96.0**	**95.5**	**94.9**	**94.6**	**94.5**	**95.6**	**97.4**	**96.7**	**95.8**	**96.3**	**94.4**	**94.3**	**97.3**	**97.4**	**96.9**	**98.0**	**98.6**	**97.3**	**97.8**	**98.3**	**99.1**	**99.1**		
Min.	**49.6**	**49.2**	**49.4**	**46.5**	**45.3**	**47.0**	**48.3**	**52.1**	**51.0**	**51.7**	**50.0**	**47.2**	**44.5**	**42.5**	**43.4**	**39.9**	**36.0**	34.5	40.1	**39.2**	**42.6**	**40.8**	**43.2**	**44.9**		**34.5**	
Avg.	**72.8**	**73.1**	**73.8**	**73.8**	**73.5**	**73.7**	**72.9**	**72.1**	**71.7**	**72.0**	**71.1**	**69.5**	**69.0**	**68.0**	**68.7**	**69.9**	**69.6**	**69.8**	**70.6**	**70.7**	**70.8**	**71.2**	**71.3**	**72.6**			**71.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	93.4	90.8	88.6	88.5	87.4	88.6	87.3	87.1	88.8	87.0	83.7	85.5	90.6	82.7	85.7	78.9	74.5	77.7	68.6	66.6	70.0	69.2	72.0	75.4	93.4	66.6	82.0
2	71.6	68.3	67.3	66.5	66.9	66.4	68.6	68.8	66.9	62.8	61.0	60.2	57.7	57.0	55.3	57.4	61.2	64.2	66.5	68.7	67.0	64.3	63.3	62.2	71.6	55.3	64.2
3	61.8	60.6	59.6	60.4	59.9	59.7	58.4	58.3	58.1	57.8	57.0	54.1	55.6	54.8	54.8	57.4	60.4	65.3	71.0	73.7	75.0	72.7	72.3	67.9	75.0	54.1	61.9
4	94.3	96.2	96.0	86.5	82.6	77.0	80.0	82.3	83.0	82.1	82.5	82.3	82.4	80.1	82.2	84.9	83.6	82.6	84.2	81.9	84.1	83.5	84.1	86.1	96.2	77.0	84.4
5	85.6	84.1	87.3	85.5	89.2	94.2	93.5	94.6	93.6	97.9	97.8	96.4	94.3	94.4	95.8	96.5	94.1	93.9	94.7	94.0	89.3	89.5	84.3	83.1	97.9	83.1	91.8
6	81.2	80.0	78.3	77.6	79.6	78.0	75.0	72.6	71.8	72.0	82.1	86.9	88.3	87.9	89.9	91.3	92.6	93.9	94.7	95.0	92.1	89.7	89.0	88.6	95.0	71.8	84.5
7	86.7	86.6	85.9	84.1	78.0	88.3	86.7	90.6	91.0	83.3	87.2	84.7	81.7	80.5	80.7	79.2	77.2	71.1	75.3	77.6	78.0	71.0	70.2	78.0	91.0	70.2	81.4
8	85.3	83.9	82.5	80.1	73.5	69.9	72.9	71.2	78.4	90.0	94.1	94.2	92.1	89.9	88.4	89.2	85.5	83.1	86.0	87.7	89.7	89.7	90.5	91.7	94.2	69.9	85.0
9	91.3	92.5	92.7	94.7	91.5	93.8	92.6	91.6	93.1	93.2	90.0	88.0	84.7	84.0	83.8	85.8	84.8	84.6	83.4	84.4	81.5	89.4	84.2	79.3	94.7	79.3	88.1
10	76.7	76.7	78.1	85.8	86.3	88.2	90.1	92.1	91.4	94.2	95.2	95.8	94.5	90.3	71.5	67.5	67.0	65.7	63.0	57.1	59.5	61.3	62.3	63.5	95.8	57.1	78.1
11	62.5	67.2	74.2	73.4	70.3	75.2	80.2	80.7	81.1	82.7	83.7	80.7	78.3	75.9	71.4	67.7	66.2	74.1	76.9	78.0	78.8	73.8	68.9	67.6	83.7	62.5	74.6
12	67.5	67.8	67.5	64.7	56.6	56.5	57.7	55.5	57.5	64.3	63.6	64.4	55.5	58.1	63.4	66.0	62.3	60.9	63.5	69.2	73.7	85.3	93.3	96.8	96.8	55.5	66.3
13	89.8	82.5	80.8	79.1	83.7	83.3	81.9	74.4	70.5	71.8	75.4	92.3	96.3	93.3	91.8	91.1	93.7	92.6	93.9	96.3	96.9	91.0	92.0	93.4	96.9	70.5	87.0
14	93.8	94.2	89.5	83.7	79.7	78.6	79.0	78.8	79.1	85.0	87.8	86.0	86.3	92.0	92.5	92.5	90.2	90.3	90.5	90.2	91.7	93.2	97.8	98.8	98.8	78.6	88.4
15	99.1	89.1	92.0	94.4	90.0	87.1	87.7	86.2	89.2	86.8	89.9	86.0	86.9	84.9	82.6	81.6	80.3	78.7	68.5	62.9	47.7	57.5	57.1	54.5	99.1	47.7	80.0
16	52.6	48.6	47.2	48.3	47.7	47.9	48.5	48.9	49.7	51.8	52.3	50.5	49.8	49.4	49.0	48.4	49.4	48.0	48.0	50.1	50.2	49.1	48.6	48.4	52.6	47.2	49.3
17	49.5	49.7	51.2	51.9	50.6	51.0	51.9	53.3	53.0	54.2	52.9	52.3	51.8	49.2	48.8	51.0	49.5	48.0	48.5	42.9	40.8	43.5	44.6	44.7	54.2	40.8	49.4
18	40.7	44.8	45.6	42.8	41.2	40.8	44.5	45.6	48.7	69.7	63.2	50.0	48.7	41.7	48.4	59.6	57.2	66.3	67.7	66.9	69.0	71.0	70.9	67.1	71.0	40.7	54.7
19	64.7	74.7	71.6	68.0	69.9	64.6	61.7	65.4	67.9	63.0	75.7	75.8	69.6	69.9	67.1	67.3	69.3	76.2	84.0	87.0	82.6	77.3	74.7	80.3	87.0	61.7	72.0
20	80.9	83.0	87.8	89.7	90.2	87.1	86.5	87.6	89.5	89.9	90.0	89.8	87.8	87.5	87.8	87.6	87.6	87.6	88.0	87.5	86.1	86.5	87.1	87.3	90.2	80.9	87.5
21	87.4	88.8	89.1	89.4	89.9	88.9	88.5	88.8	87.9	84.1	86.7	89.4	89.7	89.4	86.0	81.1	79.5	81.4	83.0	83.2	84.2	83.3	81.8	83.2	89.9	79.5	86.0
22	82.4	85.8	91.8	91.6	90.1	90.2	89.1	87.6	84.5	84.6	86.7	86.3	87.0	87.7	88.4	89.9	90.4	90.8	91.9	91.3	90.6	91.3	90.0	87.6	91.9	82.4	88.7
23	88.6	89.2	87.1	85.5	80.6	88.6	77.1	74.0	72.8	70.1	69.9	69.2	67.7	67.3	67.3	66.8	65.0	66.9	68.5	71.2	71.2	72.9	75.9	73.1	89.2	65.0	74.4
24	71.9	72.7	71.1	67.8	68.4	74.2	79.3	81.9	79.8	82.3	81.9	81.1	77.3	86.3	88.2	89.9	88.2	91.4	92.5	92.7	93.4	93.3	91.6	88.9	93.4	67.8	82.8
25	88.9	87.5	84.1	78.4	75.8	81.8	87.0	84.1	83.3	80.6	81.0	81.8	81.9	84.9	85.4	86.0	85.0	80.2	75.9	73.0	70.4	69.8	64.2	60.6	88.9	60.6	79.6
26	57.3	53.5	50.8	53.9	58.1	61.6	70.4	83.4	90.0	88.8	85.5	83.9	92.1	91.3	91.6	83.9	84.3	84.2	79.4	78.3	85.1	88.0	85.8	80.8	92.1	50.8	77.6
27	80.4	81.2	83.6	88.3	82.1	79.9	80.2	76.5	70.6	74.1	73.7	71.1	68.6	67.7	64.5	62.6	59.5	57.9	58.2	63.1	70.0	67.7	76.8	78.7	88.3	57.9	72.4
28	77.3	84.7	89.5	86.7	87.3	85.4	82.3	88.1	89.8	93.4	91.3	93.9	95.7	91.7	88.3	83.9	78.3	80.2	82.2	84.9	77.0	76.3	73.9	74.4	95.7	73.9	84.9
29	74.2	80.1	83.5	86.5	85.1	87.7	82.9	74.2	74.6	69.4	62.8	65.5	62.3	57.3	59.2	62.5	63.9	61.9	59.4	54.4	55.0	54.8	55.3	55.9	87.7	54.4	67.8
30	55.5	52.7	52.0	52.3	51.5	50.6	50.0	49.2	48.3	46.3	46.2	46.1	44.4	47.2	46.9	42.2	40.6	38.5	37.5	36.4	35.9	35.9	43.4	36.4	55.5	35.9	45.2
Max.	**99.1**	**96.2**	**96.0**	**94.7**	**91.5**	**94.2**	**93.5**	**94.6**	**93.6**	**97.9**	**97.8**	**96.4**	**96.3**	**94.4**	**95.8**	**96.5**	**94.1**	**93.9**	**94.7**	**96.3**	**96.9**	**93.3**	**97.8**	**98.8**	**99.1**		
Min.	**40.7**	**44.8**	**45.6**	**42.8**	**41.2**	**40.8**	**44.5**	**45.6**	**48.3**	**46.3**	**46.2**	**46.1**	**44.4**	**41.7**	**46.9**	**42.2**	**40.6**	38.5	37.5	**36.4**	**35.9**	**35.9**	**43.4**	**36.4**		**35.9**	
Avg.	**76.4**	**76.6**	**76.9**	**76.2**	**74.8**	**75.5**	**75.7**	**75.8**	**76.1**	**77.1**	**77.7**	**77.5**	**76.7**	**75.8**	**75.2**	**75.0**	**74.0**	**74.6**	**74.8**	**74.9**	**74.5**	**74.7**	**74.9**	**74.5**			**75.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	32.6	36.3	37.4	36.0	64.1	80.1	83.2	77.3	79.1	72.3	55.9	64.6	76.9	80.1	79.7	81.3	81.4	85.3	88.8	87.3	86.7	83.4	74.6	63.6	88.8	32.6	70.3
2	60.0	61.7	65.3	59.6	60.5	62.3	60.4	54.3	63.0	69.6	73.8	79.1	81.6	70.0	66.8	47.8	23.5	23.7	25.6	29.2	31.9	34.7	42.9	59.6	81.6	23.5	54.5
3	56.0	64.3	66.4	68.9	60.2	60.9	61.5	63.1	61.4	56.2	51.1	53.6	54.9	54.2	53.4	49.5	50.3	53.3	47.3	48.5	46.9	49.3	46.5	46.9	68.9	46.5	55.2
4	49.7	46.1	44.0	45.5	49.8	73.7	85.0	74.5	70.7	68.4	65.2	67.8	74.6	81.3	82.1	77.3	76.2	75.5	74.4	73.5	74.2	75.7	76.9	78.7	85.0	44.0	69.2
5	80.4	79.1	82.0	80.7	78.8	79.7	77.8	78.6	80.3	85.5	82.9	84.0	81.1	81.5	85.3	84.4	84.0	77.8	79.8	79.1	78.8	80.7	84.0	79.4	85.5	77.8	81.1
6	83.1	82.0	77.9	75.7	78.5	81.7	81.9	83.9	88.2	89.0	89.3	90.1	90.0	88.8	90.6	89.4	95.7	97.4	96.7	99.0	98.8	99.1	91.3	82.9	99.1	75.7	88.4
7	83.9	75.5	79.0	87.0	86.9	79.7	92.2	94.0	89.9	82.3	78.1	84.0	91.1	92.1	89.4	93.7	93.2	94.4	91.9	92.7	93.8	94.1	93.0	92.2	94.4	75.5	88.5
8	92.5	92.8	96.5	99.2	97.6	94.3	93.6	90.9	88.3	89.1	87.8	87.6	86.7	85.8	91.6	96.2	99.2	99.7	99.4	99.4	98.5	85.5	79.5	78.4	99.7	78.4	92.1
9	74.3	70.6	69.8	73.7	67.3	82.5	88.8	85.5	74.1	73.0	70.0	71.6	70.2	73.2	77.8	80.2	77.3	77.7	77.0	72.6	73.3	74.0	68.4	65.3	88.8	65.3	74.5
10	61.2	59.3	61.5	63.8	62.8	61.2	60.9	68.1	79.2	74.2	84.3	86.0	87.4	85.4	86.9	87.5	88.1	91.8	97.4	98.5	97.3	95.9	96.3	97.5	98.5	59.3	80.5
11	97.6	97.6	83.9	70.6	75.0	77.7	76.1	78.2	77.1	75.3	75.3	70.2	67.8	69.0	72.3	69.9	63.9	55.7	51.3	58.7	73.4	73.4	78.9	81.8	97.6	51.3	73.8
12	81.6	79.2	77.2	74.8	73.5	76.0	74.7	78.6	74.0	69.2	68.1	67.7	62.7	62.2	64.9	67.8	62.8	67.7	73.8	77.0	87.2	96.3	95.4	96.4	96.4	62.2	75.4
13	96.4	98.3	98.4	96.9	94.5	95.2	95.1	95.1	93.1	92.9	89.2	87.7	88.1	88.5	83.9	83.0	86.8	87.0	91.2	83.4	86.1	92.3	92.3	93.3	98.4	83.0	91.2
14	93.8	96.5	96.8	95.8	92.6	81.7	81.3	72.5	69.1	66.8	64.6	65.5	65.5	63.1	61.7	61.6	56.6	59.5	53.9	49.6	51.5	47.3	46.9	49.3	96.8	46.9	68.5
15	47.8	48.5	46.3	47.5	39.6	48.4	51.8	54.0	56.6	54.0	56.5	53.9	47.9	49.2	49.6	52.3	52.6	54.3	53.0	51.2	43.3	37.7	36.0	37.2	56.6	36.0	48.7
16	44.1	36.4	45.2	52.1	52.2	49.3	49.7	49.8	47.8	45.6	46.1	47.3	49.9	47.2	50.1	50.0	48.0	50.3	47.8	46.0	45.4	44.0	46.1	50.2	52.2	36.4	47.5
17	46.8	45.6	46.2	47.7	45.8	44.5	44.7	44.6	46.1	49.4	47.6	47.0	45.8	47.2	53.6	53.4	49.3	49.0	59.0	60.2	66.2	67.6	68.6	69.8	69.8	44.5	51.9
18	67.1	69.2	70.0	72.6	70.7	73.5	75.9	77.1	77.4	78.4	79.0	78.4	75.8	72.5	71.3	67.6	66.0	69.5	70.1	70.7	68.6	68.9	69.2	70.1	79.0	66.0	72.1
19	67.9	67.2	67.0	65.9	64.6	61.3	58.0	58.7	61.4	61.0	58.4	57.0	52.6	47.7	43.3	41.6	43.2	44.6	41.6	45.5	48.5	50.7	56.8	65.5	67.9	41.6	55.4
20	65.7	71.8	72.0	74.8	74.7	75.0	78.8	71.1	70.3	70.0	79.4	79.6	78.3	81.4	79.1	81.4	83.8	85.1	86.6	90.5	92.6	92.9	92.0	92.1	92.9	65.7	80.0
21	87.4	83.0	80.9	76.2	75.9	76.4	65.5	65.5	64.3	62.4	65.2	67.4	65.9	68.4	66.4	67.0	72.4	73.3	78.4	79.5	80.0	77.8	72.3	70.5	87.4	62.4	72.6
22	68.4	73.3	87.4	87.5	84.9	87.9	88.0	92.5	87.9	84.3	81.8	79.7	78.2	83.1	83.4	82.1	84.0	85.7	88.4	84.3	86.6	88.4	87.0	84.8	92.5	68.4	84.2
23	87.8	90.6	92.9	82.0	74.9	72.8	67.6	70.8	72.1	67.8	62.7	56.5	55.4	46.6	38.9	49.2	50.0	46.9	44.9	44.8	49.7	56.2	66.1	64.0	92.9	38.9	63.0
24	60.1	58.3	52.2	62.2	60.9	61.5	59.5	62.1	57.5	73.6	91.7	94.0	94.8	94.2	95.5	96.3	95.6	93.8	80.6	80.7	75.1	72.2	69.5	67.7	96.3	52.2	75.4
25	66.4	62.9	62.7	63.8	63.3	62.1	60.2	51.9	53.2	49.7	48.3	49.9	55.3	57.0	60.2	57.0	58.0	55.4	52.2	46.4	41.7	34.3	31.2	27.7	66.4	27.7	52.9
26	35.1	46.3	42.7	64.6	72.4	58.3	62.6	67.5	65.9	71.8	68.0	45.9	45.0	45.4	50.1	57.7	60.8	62.4	64.7	63.6	63.2	65.2	67.8	77.1	77.1	35.1	59.3
27	75.5	78.1	67.5	64.0	67.3	66.0	66.7	70.1	73.8	69.6	75.9	80.1	78.7	78.0	82.6	87.0	89.0	89.5	89.4	88.0	89.8	90.6	89.6	87.6	90.6	64.0	78.9
28	83.1	78.3	91.4	94.7	79.3	75.3	76.3	73.7	72.3	71.1	63.4	61.8	58.7	56.8	56.6	63.2	64.9	57.5	70.2	73.0	74.0	74.9	77.2	76.8	94.7	56.6	71.9
29	76.7	75.3	74.5	68.8	60.8	47.5	39.1	35.2	33.1	33.5	34.6	30.1	32.6	33.2	39.3	43.0	42.6	42.8	48.3	50.3	51.4	48.8	47.7	49.1	76.7	30.1	47.4
30	48.8	48.9	49.1	51.1	49.0	48.9	46.3	45.1	51.6	61.4	64.3	65.6	68.2	67.6	69.2	86.1	89.3	85.8	86.7	90.5	93.2	93.8	92.4	92.6	93.8	45.1	68.6
31	95.8	98.6	99.0	98.8	98.0	98.3	98.7	99.2	99.3	98.5	97.8	96.3	90.5	89.9	94.2	91.2	86.8	81.6	82.8	83.4	75.5	68.1	70.4	66.8	99.3	66.8	90.0
Max.	**97.6**	**98.6**	**99.0**	**99.2**	**98.0**	**98.3**	**98.7**	**99.2**	**99.3**	**98.5**	**97.8**	**96.3**	**94.8**	**94.2**	**95.5**	**96.3**	**99.2**	**99.7**	**99.4**	**99.4**	**98.8**	**99.1**	**96.3**	**97.5**	**99.7**		
Min.	**32.6**	**36.3**	**37.4**	**36.0**	**39.6**	**44.5**	**39.1**	**35.2**	**33.1**	**33.5**	**34.6**	**30.1**	**32.6**	**33.2**	**38.9**	**41.6**	**23.5**	23.7	25.6	**29.2**	**31.9**	**34.3**	**31.2**	**27.7**		**23.5**	
Avg.	**69.9**	**70.0**	**70.4**	**71.0**	**70.2**	**70.8**	**71.0**	**70.4**	**70.3**	**69.9**	**69.6**	**69.4**	**69.4**	**69.0**	**70.0**	**70.8**	**70.2**	**70.1**	**70.7**	**70.9**	**71.7**	**71.4**	**71.2**	**71.4**			**70.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

January 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	10	62	100	85	70	31	3	0	0	0	0	0	0	0	100	0	15
2	0	0	0	0	0	0	0	0	0	0	5	27	46	58	43	18	3	0	0	0	0	0	0	0	58	0	8
3	0	0	0	0	0	0	0	0	0	0	16	69	110	114	59	24	3	0	0	0	0	0	0	0	114	0	16
4	0	0	0	0	0	0	0	0	0	0	5	16	30	47	38	19	4	0	0	0	0	0	0	0	47	0	7
5	0	0	0	0	0	0	0	0	0	0	21	76	121	137	94	40	5	0	0	0	0	0	0	0	137	0	21
6	0	0	0	0	0	0	0	0	0	0	20	79	121	130	100	45	5	0	0	0	0	0	0	0	130	0	21
7	0	0	0	0	0	0	0	0	0	1	21	81	122	132	100	38	5	0	0	0	0	0	0	0	132	0	21
8	0	0	0	0	0	0	0	0	0	1	23	82	126	136	108	53	5	0	0	0	0	0	0	0	136	0	22
9	0	0	0	0	0	0	0	0	0	1	21	70	133	148	63	40	7	0	0	0	0	0	0	0	148	0	20
10	0	0	0	0	0	0	0	0	0	0	1	6	11	8	13	7	1	0	0	0	0	0	0	0	13	0	2
11	0	0	0	0	0	0	0	0	0	0	1	5	8	10	8	4	1	0	0	0	0	0	0	0	10	0	2
12	0	0	0	0	0	0	0	0	0	0	6	13	26	15	14	5	1	0	0	0	0	0	0	0	26	0	3
13	0	0	0	0	0	0	0	0	0	0	15	91	152	146	116	59	7	0	0	0	0	0	0	0	152	0	24
14	0	0	0	0	0	0	0	0	0	1	33	105	152	160	132	65	9	0	0	0	0	0	0	0	160	0	27
15	0	0	0	0	0	0	0	0	0	2	44	117	192	200	141	78	12	0	0	0	0	0	0	0	200	0	33
16	0	0	0	0	0	0	0	0	0	0	4	8	14	22	54	45	8	0	0	0	0	0	0	0	54	0	6
17	0	0	0	0	0	0	0	0	0	0	7	14	19	20	21	14	4	0	0	0	0	0	0	0	21	0	4
18	0	0	0	0	0	0	0	0	0	0	5	16	19	26	22	12	3	0	0	0	0	0	0	0	26	0	4
19	0	0	0	0	0	0	0	0	0	2	46	117	163	157	124	21	3	0	0	0	0	0	0	0	163	0	26
20	0	0	0	0	0	0	0	0	0	1	16	51	64	52	46	31	8	0	0	0	0	0	0	0	64	0	11
21	0	0	0	0	0	0	0	0	0	2	60	95	88	115	210	99	12	1	0	0	0	0	0	0	210	0	28
22	0	0	0	0	0	0	0	0	0	1	15	43	72	69	35	13	2	0	0	0	0	0	0	0	72	0	10
23	0	0	0	0	0	0	0	0	0	4	62	147	187	188	146	79	13	1	0	0	0	0	0	0	188	0	34
24	0	0	0	0	0	0	0	0	0	6	67	150	190	198	169	112	25	2	0	0	0	0	0	0	198	0	38
25	0	0	0	0	0	0	0	0	0	0	7	20	16	12	11	20	6	0	0	0	0	0	0	0	20	0	4
26	0	0	0	0	0	0	0	0	0	0	6	24	44	78	205	100	29	2	0	0	0	0	0	0	205	0	20
27	0	0	0	0	0	0	0	0	0	0	7	18	46	58	42	18	5	1	0	0	0	0	0	0	58	0	8
28	0	0	0	0	0	0	0	0	0	1	23	54	42	64	48	37	9	1	0	0	0	0	0	0	64	0	12
29	0	0	0	0	0	0	0	0	0	1	5	8	7	8	6	6	3	0	0	0	0	0	0	0	8	0	2
30	0	0	0	0	0	0	0	0	0	11	51	165	90	60	59	21	4	0	0	0	0	0	0	0	165	0	19
31	0	0	0	0	0	0	0	0	0	13	42	54	39	47	67	36	38	1	0	0	0	0	0	0	67	0	14
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**67**	**165**	**192**	**200**	**210**	**112**	**38**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**210**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**7**	**8**	**6**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**22**	**61**	**82**	**87**	**76**	**38**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**16**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	10	45	123	148	227	189	86	31	6	0	0	0	0	0	0	227	0	36
2	0	0	0	0	0	0	0	0	0	4	11	21	71	86	126	36	17	3	0	0	0	0	0	0	126	0	16
3	0	0	0	0	0	0	0	0	0	4	21	68	102	196	244	164	65	5	0	0	0	0	0	0	244	0	36
4	0	0	0	0	0	0	0	0	0	24	114	187	224	233	210	158	62	5	0	0	0	0	0	0	233	0	51
5	0	0	0	0	0	0	0	0	0	20	102	180	224	237	214	162	67	5	0	0	0	0	0	0	237	0	51
6	0	0	0	0	0	0	0	0	0	15	110	121	227	98	234	142	49	6	0	0	0	0	0	0	234	0	42
7	0	0	0	0	0	0	0	0	0	6	36	81	82	68	70	50	23	9	0	0	0	0	0	0	82	0	18
8	0	0	0	0	0	0	0	0	0	2	10	19	26	27	24	15	9	2	0	0	0	0	0	0	27	0	6
9	0	0	0	0	0	0	0	0	0	6	31	54	88	88	80	73	33	4	0	0	0	0	0	0	88	0	19
10	0	0	0	0	0	0	0	0	0	10	36	62	97	115	83	68	45	7	0	0	0	0	0	0	115	0	22
11	0	0	0	0	0	0	0	0	0	9	17	30	37	43	52	32	16	7	0	0	0	0	0	0	52	0	10
12	0	0	0	0	0	0	0	0	0	41	42	73	86	85	81	63	47	10	0	0	0	0	0	0	86	0	22
13	0	0	0	0	0	0	0	0	0	9	27	33	54	54	40	41	15	5	0	0	0	0	0	0	54	0	12
14	0	0	0	0	0	0	0	0	0	7	51	108	91	116	112	83	50	14	1	0	0	0	0	0	116	0	26
15	0	0	0	0	0	0	0	0	1	23	159	160	215	155	163	111	68	19	1	0	0	0	0	0	215	0	45
16	0	0	0	0	0	0	0	0	1	19	54	103	139	139	109	75	54	17	1	0	0	0	0	0	139	0	30
17	0	0	0	0	0	0	0	0	3	79	187	155	152	233	270	204	83	22	1	0	0	0	0	0	270	0	58
18	0	0	0	0	0	0	0	0	2	23	50	71	72	60	61	49	38	14	1	0	0	0	0	0	72	0	18
19	0	0	0	0	0	0	0	0	3	48	107	275	311	324	299	239	134	14	2	0	0	0	0	0	324	0	73
20	0	0	0	0	0	0	0	0	7	83	190	272	321	337	310	250	144	15	3	0	0	0	0	0	337	0	80
21	0	0	0	0	0	0	0	0	6	89	195	277	325	342	316	255	150	14	2	0	0	0	0	0	342	0	82
22	0	0	0	0	0	0	0	0	11	96	201	282	330	345	318	256	150	14	3	0	0	0	0	0	345	0	84
23	0	0	0	0	0	0	0	0	10	98	200	298	333	350	298	219	156	41	3	0	0	0	0	0	350	0	84
24	0	0	0	0	0	0	0	0	9	105	212	293	341	357	330	266	162	16	4	0	0	0	0	0	357	0	87
25	0	0	0	0	0	0	0	0	15	102	203	278	314	274	323	267	162	19	4	0	0	0	0	0	323	0	82
26	0	0	0	0	0	0	0	0	13	97	197	283	329	345	316	253	159	27	5	0	0	0	0	0	345	0	84
27	0	0	0	0	0	0	0	0	12	99	188	277	314	346	328	262	133	30	6	0	0	0	0	0	346	0	83
28	0	0	0	0	0	0	0	0	13	49	128	218	259	302	362	247	128	21	6	0	0	0	0	0	362	0	72
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**105**	**212**	**298**	**341**	**357**	**362**	**267**	**162**	**41**	**6**	**0**	**0**	**0**	**0**	**0**	**362**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**10**	**19**	**26**	**27**	**24**	**15**	**9**	**2**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**42**	**104**	**157**	**190**	**199**	**199**	**147**	**80**	**13**	**2**	**0**	**0**	**0**	**0**	**0**			**47**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

March *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	27	138	246	329	378	394	361	297	183	22	7	0	0	0	0	0	394	0	99
2	0	0	0	0	0	0	0	0	29	141	242	327	376	389	362	295	182	26	8	0	0	0	0	0	389	0	99
3	0	0	0	0	0	0	0	0	31	143	247	324	369	384	349	293	182	40	11	0	0	0	0	0	384	0	99
4	0	0	0	0	0	0	0	1	34	146	252	337	386	402	373	310	192	23	8	0	0	0	0	0	402	0	103
5	0	0	0	0	0	0	0	1	33	166	261	345	394	410	383	319	197	23	9	0	0	0	0	0	410	0	106
6	0	0	0	0	0	0	0	1	45	169	276	361	409	425	397	332	206	22	9	0	0	0	0	0	425	0	110
7	0	0	0	0	0	0	0	1	12	70	262	325	336	414	393	337	211	37	35	1	0	0	0	0	414	0	101
8	0	0	0	0	0	0	0	1	29	113	171	308	346	435	413	203	101	57	8	0	0	0	0	0	435	0	91
9	0	0	0	0	0	0	0	1	37	150	350	359	283	427	364	348	218	35	13	0	0	0	0	0	427	0	108
10	0	0	0	0	0	0	0	1	25	69	117	95	117	175	289	337	265	45	11	1	0	0	0	0	337	0	64
11	0	0	0	0	0	0	0	3	75	199	308	391	439	455	427	362	228	21	11	1	0	0	0	0	455	0	122
12	0	0	0	0	0	0	0	3	81	208	318	404	451	467	440	372	234	22	12	1	0	0	0	0	467	0	126
13	0	0	0	0	0	0	0	4	89	217	327	414	460	474	446	379	242	25	13	1	0	0	0	0	474	0	129
14	0	0	0	0	0	0	0	5	96	224	333	418	463	479	450	382	247	25	14	2	0	0	0	0	479	0	131
15	0	0	0	0	0	0	0	6	102	229	337	421	467	482	452	386	253	32	13	2	0	0	0	0	482	0	133
16	0	0	0	0	0	0	0	5	104	234	344	430	475	492	462	396	259	23	13	2	0	0	0	0	492	0	135
17	0	0	0	0	0	0	0	8	120	245	354	439	484	499	468	401	265	24	14	2	0	0	0	0	499	0	138
18	0	0	0	0	0	0	0	11	138	216	321	440	486	489	436	381	282	25	15	3	0	0	0	0	489	0	135
19	0	0	0	0	0	0	0	12	136	259	368	453	499	514	483	417	279	25	16	3	0	0	0	0	514	0	144
20	0	0	0	0	0	0	0	10	53	54	79	88	114	95	96	82	51	36	13	2	0	0	0	0	114	0	32
21	0	0	0	0	0	0	0	5	24	38	131	239	364	261	280	204	155	118	35	4	0	0	0	0	364	0	77
22	0	0	0	0	0	0	0	21	154	281	396	483	520	534	504	430	296	59	19	3	0	0	0	0	534	0	154
23	0	0	0	0	0	0	0	22	154	273	398	487	530	544	510	431	298	28	18	5	0	0	0	0	544	0	154
24	0	0	0	0	0	0	1	28	168	292	403	487	530	542	512	444	311	27	18	5	0	0	0	0	542	0	157
25	0	0	0	0	0	0	1	32	171	300	429	495	493	498	439	235	260	83	31	6	0	0	0	0	498	0	145
26	0	0	0	0	0	0	0	7	35	156	93	23	23	28	48	62	61	48	14	1	0	0	0	0	156	0	25
27	0	0	0	0	0	0	0	14	61	98	121	152	226	484	542	464	335	28	19	7	0	0	0	0	542	0	106
28	0	0	0	0	0	0	2	46	192	321	434	519	562	576	543	470	339	31	21	8	0	0	0	0	576	0	169
29	0	0	0	0	0	0	2	50	204	333	445	529	570	579	547	473	352	32	21	8	0	0	0	0	579	0	173
30	0	0	0	0	0	0	3	55	204	332	439	525	567	573	537	462	335	56	33	11	0	0	0	0	573	0	172
31	0	0	0	0	0	0	3	54	188	299	372	508	521	533	473	381	319	74	36	11	0	0	0	0	533	0	157
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**55**	**204**	**333**	**445**	**529**	**570**	**579**	**547**	**473**	**352**	**118**	**36**	**11**	**0**	**0**	**0**	**0**	**579**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**38**	**79**	**23**	**23**	**28**	**48**	**62**	**51**	**21**	**7**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**92**	**197**	**296**	**369**	**408**	**434**	**412**	**345**	**237**	**38**	**17**	**3**	**0**	**0**	**0**	**0**			**119**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	0	3	48	169	289	411	484	525	548	511	426	287	114	55	15	0	0	0	0	548	0	162
2	0	0	0	0	0	0	2	33	129	272	338	385	386	307	318	249	176	113	40	6	0	0	0	0	386	0	115
3	0	0	0	0	0	0	1	13	42	88	96	149	190	249	225	158	135	85	42	6	0	0	0	0	249	0	62
4	0	0	0	0	0	0	4	54	117	154	182	295	367	287	166	121	127	71	44	7	0	0	0	0	367	0	83
5	0	0	0	0	0	0	2	15	60	62	133	168	171	240	174	76	37	30	27	10	0	0	0	0	240	0	50
6	0	0	0	0	0	0	4	69	81	163	387	368	279	223	145	111	67	25	12	12	0	0	0	0	387	0	81
7	0	0	0	0	0	0	3	29	23	46	57	125	135	156	167	132	79	67	28	11	0	0	0	0	167	0	44
8	0	0	0	0	0	0	2	12	38	81	122	180	238	237	176	95	72	46	23	13	0	0	0	0	238	0	56
9	0	0	0	0	0	0	2	14	57	74	96	140	199	231	215	143	99	62	25	5	1	0	0	0	231	0	57
10	0	0	0	0	0	0	4	17	59	123	246	317	364	382	294	235	205	126	68	17	1	0	0	0	382	0	102
11	0	0	0	0	0	0	8	111	304	236	206	537	674	636	605	560	410	84	54	20	2	0	0	0	674	0	185
12	0	0	0	0	0	0	21	112	236	407	487	376	302	294	526	569	428	178	80	27	3	0	0	0	569	0	169
13	0	0	0	0	0	0	24	99	144	297	474	576	637	641	628	554	449	111	33	14	3	0	0	0	641	0	195
14	0	0	0	0	0	0	17	73	202	167	249	145	164	156	107	86	59	50	38	10	2	0	0	0	249	0	64
15	0	0	0	0	0	0	13	53	81	155	219	331	549	662	399	496	229	160	70	34	4	0	0	0	662	0	144
16	0	0	0	0	0	1	25	76	120	207	328	402	509	603	637	528	456	94	28	17	4	0	0	0	637	0	168
17	0	0	0	0	0	1	20	20	37	61	68	35	26	25	29	25	19	14	12	7	0	0	0	0	68	0	17
18	0	0	0	0	0	0	5	22	38	58	110	135	128	144	171	155	145	83	50	23	4	0	0	0	171	0	53
19	0	0	0	0	0	1	10	23	43	77	75	58	56	49	46	37	48	60	34	9	2	0	0	0	77	0	26
20	0	0	0	0	0	0	9	34	53	77	104	115	122	178	175	119	102	98	43	6	2	0	0	0	178	0	52
21	0	0	0	0	0	2	17	67	110	107	169	125	128	179	239	208	104	55	33	25	5	0	0	0	239	0	66
22	0	0	0	0	0	1	6	22	24	39	65	144	186	164	163	156	129	111	77	33	5	0	0	0	186	0	55
23	0	0	0	0	0	1	12	52	112	159	154	173	251	94	238	224	89	59	29	16	2	0	0	0	251	0	69
24	0	0	0	0	0	3	66	163	265	436	302	378	376	194	156	179	123	102	46	25	10	0	0	0	436	0	118
25	0	0	0	0	0	1	10	30	94	131	67	72	95	100	194	229	188	139	89	29	4	0	0	0	229	0	61
26	0	0	0	0	0	8	83	215	343	475	579	654	686	698	669	593	494	154	24	18	8	0	0	0	698	0	238
27	0	0	0	0	0	9	86	129	260	404	379	387	564	620	652	542	415	155	39	39	9	0	0	0	652	0	195
28	0	0	0	0	0	11	106	125	295	398	540	658	688	706	674	618	470	165	32	27	13	0	0	0	706	0	230
29	0	0	0	0	0	7	22	56	75	101	150	253	230	404	382	340	177	92	77	37	7	0	0	0	404	0	100
30	0	0	0	0	0	9	64	164	199	290	360	357	221	236	542	575	393	188	120	59	25	1	0	0	575	0	158
Max.	**0**	**0**	**0**	**0**	**0**	**11**	**106**	**215**	**343**	**475**	**579**	**658**	**688**	**706**	**674**	**618**	**494**	**188**	**120**	**59**	**25**	**1**	**0**	**0**	**706**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12**	**23**	**39**	**57**	**35**	**26**	**25**	**29**	**25**	**19**	**14**	**12**	**5**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**2**	**22**	**65**	**127**	**188**	**238**	**284**	**315**	**321**	**321**	**285**	**207**	**96**	**46**	**19**	**4**	**0**	**0**	**0**			**106**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	2	17	35	67	176	187	171	216	174	264	163	125	79	52	27	6	0	0	0	264	0	73
2	0	0	0	0	0	3	32	71	170	354	452	167	173	128	105	86	161	103	65	49	17	1	0	0	452	0	89
3	0	0	0	0	0	21	116	240	368	492	594	668	697	709	662	632	509	191	29	21	12	1	0	0	709	0	248
4	0	0	0	0	0	28	128	246	375	497	599	674	707	726	689	614	514	197	30	25	20	2	0	0	726	0	253
5	0	0	0	0	0	19	127	258	407	507	486	567	713	636	636	579	504	288	116	52	21	1	0	0	713	0	246
6	0	0	0	0	1	41	84	69	325	438	594	711	723	724	635	516	509	215	40	27	17	3	0	0	724	0	236
7	0	0	0	0	1	23	115	238	405	430	410	593	607	522	557	384	241	134	65	28	9	1	0	0	607	0	198
8	0	0	0	0	0	9	37	70	124	169	223	336	329	489	512	594	434	216	86	44	17	4	0	0	594	0	154
9	0	0	0	0	0	5	14	43	78	107	122	164	146	162	270	349	240	184	118	79	36	3	0	0	349	0	88
10	0	0	0	0	1	14	60	73	112	176	227	179	467	561	423	379	420	285	85	33	17	4	0	0	561	0	146
11	0	0	0	0	1	14	40	92	264	364	712	733	773	756	770	669	552	281	64	55	26	4	0	0	773	0	257
12	0	0	0	0	1	21	59	83	141	220	504	507	339	456	395	208	189	106	35	13	5	0	0	0	507	0	137
13	0	0	0	0	0	7	20	67	129	171	156	239	156	156	202	229	150	103	70	51	21	3	0	0	239	0	80
14	0	0	0	0	1	7	17	27	46	112	115	146	118	56	55	112	175	133	93	38	16	2	0	0	175	0	53
15	0	0	0	0	0	9	34	73	143	200	184	258	532	744	433	523	517	246	79	67	20	3	0	0	744	0	169
16	0	0	0	0	2	10	37	62	102	180	395	464	262	182	288	278	206	146	72	38	10	2	0	0	464	0	114
17	0	0	0	0	2	17	40	78	162	488	640	703	638	729	719	597	193	121	92	34	15	2	0	0	729	0	220
18	0	0	0	0	3	17	63	240	423	562	642	755	746	751	715	646	546	251	36	28	19	6	0	0	755	0	269
19	0	0	0	0	6	65	190	146	265	387	635	714	776	747	372	564	526	231	36	25	16	6	0	0	776	0	238
20	0	0	0	0	6	63	180	312	342	434	522	623	596	498	589	499	362	224	123	38	21	7	0	0	623	0	227
21	0	0	0	0	7	65	168	296	422	559	554	679	729	752	722	630	526	280	137	88	45	7	0	0	752	0	278
22	0	0	0	0	2	12	15	43	128	142	163	232	222	252	224	270	167	129	80	43	10	1	0	0	270	0	89
23	0	0	0	0	1	9	39	61	115	131	110	132	117	182	167	138	81	62	36	17	3	1	0	0	182	0	58
24	0	0	0	0	1	6	20	31	64	83	119	114	89	109	111	84	62	55	38	22	11	2	0	0	119	0	42
25	0	0	0	0	1	5	15	26	43	82	80	96	122	122	95	115	123	82	61	36	24	11	0	0	123	0	48
26	0	0	0	0	1	13	15	21	44	64	106	106	101	107	124	111	105	75	58	48	23	4	1	0	124	0	47
27	0	0	0	0	3	18	79	163	129	237	272	287	280	425	616	468	444	251	83	57	18	4	0	0	616	0	160
28	0	0	0	0	7	39	138	236	146	128	211	383	483	370	147	126	187	137	65	47	29	13	1	0	483	0	120
29	0	0	0	0	12	78	188	302	447	577	319	190	197	228	186	228	253	186	106	63	37	8	1	0	577	0	150
30	0	0	0	0	4	21	38	82	74	71	60	96	120	170	198	409	207	202	104	67	29	7	1	0	409	0	82
31	0	0	0	0	1	8	32	37	110	211	164	180	178	171	186	138	94	80	44	37	28	6	0	0	211	0	71
Max.	**0**	**0**	**0**	**0**	**12**	**78**	**190**	**312**	**447**	**577**	**712**	**755**	**776**	**756**	**770**	**669**	**552**	**288**	**137**	**88**	**45**	**13**	**1**	**0**	**776**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**14**	**21**	**43**	**64**	**60**	**96**	**89**	**56**	**55**	**84**	**62**	**55**	**29**	**13**	**3**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**2**	**22**	**70**	**123**	**199**	**282**	**341**	**383**	**398**	**413**	**389**	**366**	**301**	**170**	**71**	**42**	**19**	**4**	**0**	**0**			**150**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	2	14	23	32	57	74	119	77	80	89	103	94	143	84	48	24	6	4	0	0	143	0	45
2	0	0	0	0	3	22	51	84	136	162	206	189	288	278	268	362	401	279	161	92	24	5	0	0	401	0	125
3	0	0	0	0	5	25	60	90	230	308	295	308	279	502	335	516	487	273	169	80	31	20	3	0	516	0	167
4	0	0	0	0	3	10	27	38	54	66	125	95	181	93	378	246	118	79	85	30	9	3	0	0	378	0	68
5	0	0	0	0	2	6	20	53	76	110	168	173	155	152	140	80	58	57	35	34	15	5	0	0	173	0	56
6	0	0	0	0	5	22	31	83	116	409	237	247	131	139	333	372	229	113	106	43	22	12	1	0	409	0	110
7	0	0	0	0	3	18	55	78	114	152	130	173	159	78	103	98	88	138	91	40	40	29	2	0	173	0	66
8	0	0	0	0	2	11	36	175	255	269	299	278	189	215	139	88	75	65	57	49	33	17	1	0	299	0	94
9	0	0	0	0	4	20	40	81	123	159	209	246	302	271	325	232	223	199	141	99	50	20	2	0	325	0	114
10	0	0	0	1	17	71	187	320	467	543	616	690	691	726	750	684	589	320	34	30	49	15	2	0	750	0	283
11	0	0	0	1	19	85	200	321	417	184	298	545	658	225	298	187	97	81	43	18	6	1	0	0	658	0	153
12	0	0	0	0	1	4	12	31	44	56	77	130	211	192	183	124	144	118	116	38	31	12	1	0	211	0	64
13	0	0	0	1	17	88	214	325	448	562	686	715	625	765	407	357	375	304	150	78	39	21	3	0	765	0	258
14	0	0	0	1	11	45	93	274	372	545	627	676	737	685	705	663	577	319	41	33	31	20	5	0	737	0	269
15	0	0	0	1	24	95	207	310	439	586	646	706	718	742	732	672	579	321	34	26	20	12	3	0	742	0	286
16	0	0	0	2	23	103	202	331	446	557	601	669	734	700	749	666	390	300	147	85	48	18	2	0	749	0	282
17	0	0	0	0	6	23	55	77	176	392	581	583	558	561	675	520	443	302	40	24	19	12	4	0	675	0	210
18	0	0	0	1	10	44	85	221	263	463	609	339	406	365	254	230	211	226	165	90	53	18	4	0	609	0	169
19	0	0	0	1	16	58	61	129	379	565	655	722	739	763	744	685	595	334	28	24	19	13	4	0	763	0	272
20	0	0	0	1	21	92	199	309	418	518	649	728	760	779	751	687	581	312	43	31	20	14	3	0	779	0	288
21	0	0	0	1	12	51	105	150	363	353	531	630	704	681	644	580	465	311	77	86	47	16	3	0	704	0	242
22	0	0	0	1	18	113	129	170	202	255	339	270	196	148	155	159	65	47	27	16	5	2	1	0	339	0	97
23	0	0	0	0	0	5	9	14	11	27	35	38	38	50	44	27	25	24	23	17	13	3	0	0	50	0	17
24	0	0	0	0	2	12	23	35	73	87	82	110	93	85	180	97	48	73	129	57	33	13	2	0	180	0	51
25	0	0	0	0	2	11	21	26	35	89	181	98	176	245	167	217	265	195	115	78	49	14	3	0	265	0	83
26	0	0	0	0	8	36	93	230	336	498	722	706	765	714	699	665	589	343	27	22	18	12	3	0	765	0	270
27	0	0	0	2	22	74	208	288	386	534	582	602	685	648	706	702	610	356	40	33	26	12	3	0	706	0	272
28	0	0	0	1	5	17	45	49	94	141	169	434	491	213	583	529	348	212	39	86	54	24	3	0	583	0	147
29	0	0	0	1	19	99	201	320	442	555	645	704	717	728	719	669	585	344	26	22	17	12	4	0	728	0	285
30	0	0	0	1	14	101	208	329	464	572	719	688	655	624	404	505	361	182	96	56	57	16	2	0	719	0	252
Max.	**0**	**0**	**0**	**2**	**24**	**113**	**214**	**331**	**467**	**586**	**722**	**728**	**765**	**779**	**751**	**702**	**610**	**356**	**169**	**99**	**57**	**29**	**5**	**0**	**779**		
Min.	**0**	**0**	**0**	**0**	**0**	**4**	**9**	**14**	**11**	**27**	**35**	**38**	**38**	**50**	**44**	**27**	**25**	**24**	**23**	**16**	**5**	**1**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**1**	**10**	**46**	**97**	**166**	**248**	**326**	**395**	**419**	**437**	**415**	**422**	**390**	**325**	**210**	**78**	**48**	**29**	**13**	**2**	**0**			**170**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	1	7	29	89	180	288	441	486	508	302	270	209	177	149	88	74	56	27	8	2	0	508	0	141
2	0	0	0	0	8	30	83	216	516	473	502	687	610	655	596	464	330	201	120	73	51	24	1	0	687	0	235
3	0	0	0	0	5	43	105	172	287	346	467	560	408	513	529	518	543	334	44	45	48	18	4	0	560	0	208
4	0	0	0	0	5	14	69	155	224	257	253	266	348	514	449	400	359	282	158	106	35	5	1	0	514	0	163
5	0	0	0	1	18	97	189	138	213	215	432	432	479	123	67	48	49	65	80	79	48	16	2	0	479	0	116
6	0	0	0	0	8	51	89	162	241	432	445	563	610	653	620	596	521	384	149	71	40	10	3	0	653	0	235
7	0	0	0	0	5	52	153	270	288	374	640	564	762	707	714	561	356	204	138	96	39	13	2	0	762	0	247
8	0	0	0	0	5	20	57	70	119	106	118	104	125	102	165	207	222	224	124	102	36	8	0	0	224	0	80
9	0	0	0	0	4	18	58	95	104	180	415	361	527	341	308	245	152	168	137	66	31	15	3	0	527	0	135
10	0	0	0	0	5	30	61	132	172	165	192	145	180	177	138	180	155	25	64	53	29	12	1	0	192	0	80
11	0	0	0	0	8	34	167	246	263	299	423	594	543	665	651	548	386	258	28	23	19	15	2	0	665	0	216
12	0	0	0	0	2	16	43	73	127	131	118	216	333	642	317	325	177	166	109	57	34	6	0	0	642	0	120
13	0	0	0	0	1	7	7	19	25	37	51	35	44	128	170	194	243	221	103	89	45	15	1	0	243	0	60
14	0	0	0	0	9	94	137	108	149	147	61	34	37	40	46	56	39	17	16	25	8	3	0	0	149	0	43
15	0	0	0	0	6	23	50	94	151	360	514	614	460	354	411	470	434	213	32	25	19	10	1	0	614	0	177
16	0	0	0	0	7	65	166	282	404	520	619	692	725	744	720	660	569	348	27	22	17	9	1	0	744	0	275
17	0	0	0	0	6	65	167	283	403	515	590	675	663	639	522	434	217	65	34	18	9	2	0	0	675	0	221
18	0	0	0	0	1	12	28	66	74	64	63	118	165	173	76	176	163	128	89	68	23	3	0	0	176	0	62
19	0	0	0	0	4	24	57	106	229	457	329	154	354	486	495	306	167	143	94	85	41	13	1	0	495	0	148
20	0	0	0	0	3	19	35	99	323	399	592	540	733	670	676	636	545	329	31	24	16	8	1	0	733	0	237
21	0	0	0	0	4	56	162	287	375	504	608	680	714	732	695	645	558	329	69	49	44	11	0	0	732	0	272
22	0	0	0	0	0	2	6	12	31	31	26	34	54	36	35	24	16	23	9	8	3	1	0	0	54	0	15
23	0	0	0	0	0	2	5	10	10	28	35	39	22	19	20	30	26	20	21	13	5	1	0	0	39	0	13
24	0	0	0	0	0	3	17	41	79	115	82	106	120	120	108	90	88	72	40	43	12	2	0	0	120	0	47
25	0	0	0	0	1	10	35	49	59	81	106	156	140	160	212	219	84	110	109	40	27	7	0	0	219	0	67
26	0	0	0	0	1	23	68	85	187	266	293	530	569	314	504	232	244	194	113	56	28	5	0	0	569	0	155
27	0	0	0	0	0	6	16	40	174	359	503	344	517	427	599	544	472	270	78	79	49	9	0	0	599	0	187
28	0	0	0	0	2	35	139	221	297	453	579	597	674	689	683	630	544	303	33	28	18	5	0	0	689	0	247
29	0	0	0	0	1	30	158	184	308	387	597	656	691	712	681	617	531	288	47	43	22	6	0	0	712	0	248
30	0	0	0	0	1	27	71	224	221	182	266	367	431	647	571	498	414	191	70	35	19	5	0	0	647	0	177
31	0	0	0	0	0	4	8	13	27	33	36	44	44	36	43	49	51	54	57	19	7	1	0	0	57	0	22
Max.	**0**	**0**	**0**	**1**	**18**	**97**	**189**	**287**	**516**	**520**	**640**	**692**	**762**	**744**	**720**	**660**	**569**	**384**	**158**	**106**	**51**	**24**	**4**	**0**	**762**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**10**	**10**	**28**	**26**	**34**	**22**	**19**	**20**	**24**	**16**	**17**	**9**	**8**	**3**	**1**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**4**	**30**	**80**	**133**	**205**	**269**	**337**	**368**	**399**	**403**	**388**	**348**	**284**	**184**	**74**	**51**	**27**	**9**	**1**	**0**			**150**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Solar (Watts/m^2)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	0	0	0	0	0	2	9	27	25	37	63	82	79	98	79	62	53	32	18	9	2	0	0	0	98	0	28
2	0	0	0	0	0	1	7	12	22	27	32	28	35	34	27	32	45	40	21	15	4	0	0	0	45	0	16
3	0	0	0	0	0	1	10	16	34	40	72	51	60	75	67	85	64	31	11	5	2	0	0	0	85	0	26
4	0	0	0	0	0	1	4	15	22	30	57	56	56	61	60	37	48	38	29	21	7	0	0	0	61	0	22
5	0	0	0	0	0	1	7	25	105	228	220	223	189	145	113	194	165	108	36	20	12	4	0	0	228	0	75
6	0	0	0	0	0	24	100	208	167	267	495	465	529	437	639	701	568	182	42	21	21	3	0	0	701	0	203
7	0	0	0	0	0	18	111	228	352	470	570	648	683	699	671	609	517	252	20	16	11	3	0	0	699	0	245
8	0	0	0	0	0	17	107	222	344	460	561	638	678	672	664	599	499	259	80	64	26	2	0	0	678	0	245
9	0	0	0	0	0	16	102	215	338	449	552	612	633	670	628	587	486	232	25	18	11	2	0	0	670	0	232
10	0	0	0	0	0	17	126	228	332	456	501	426	355	446	476	394	305	159	25	19	10	1	0	0	501	0	178
11	0	0	0	0	0	13	66	173	249	324	330	466	466	533	441	279	273	201	102	51	14	1	0	0	533	0	166
12	0	0	0	0	0	5	63	193	194	149	129	167	296	381	471	265	291	186	41	27	14	1	0	0	471	0	120
13	0	0	0	0	0	9	84	198	307	412	531	600	630	629	516	327	213	169	117	51	15	1	0	0	630	0	200
14	0	0	0	0	0	4	65	174	163	465	378	272	190	157	364	361	143	41	13	12	4	0	0	0	465	0	117
15	0	0	0	0	0	2	24	138	236	369	545	546	503	180	147	346	190	186	97	32	8	0	0	0	546	0	148
16	0	0	0	0	0	4	47	129	237	355	240	386	389	216	372	166	170	155	50	40	6	0	0	0	389	0	123
17	0	0	0	0	0	2	18	36	124	117	114	242	285	178	148	156	155	104	57	21	4	0	0	0	285	0	73
18	0	0	0	0	0	0	2	15	22	44	36	46	67	72	99	121	97	108	32	16	3	0	0	0	121	0	32
19	0	0	0	0	0	0	10	31	65	118	236	181	161	158	120	117	100	89	68	33	2	0	0	0	236	0	62
20	0	0	0	0	0	0	1	10	19	30	35	65	150	98	150	135	147	94	47	13	4	0	0	0	150	0	42
21	0	0	0	0	0	0	3	6	14	33	36	26	21	37	46	38	33	18	10	8	3	0	0	0	46	0	14
22	0	0	0	0	0	0	2	8	10	20	23	32	26	23	22	17	19	16	8	3	1	0	0	0	32	0	10
23	0	0	0	0	0	0	10	58	61	106	150	216	207	192	149	141	139	86	46	22	3	0	0	0	216	0	66
24	0	0	0	0	0	1	29	110	245	351	391	375	509	254	316	296	190	56	57	23	4	0	0	0	509	0	134
25	0	0	0	0	0	1	51	159	274	391	489	370	298	410	296	374	323	85	19	13	4	0	0	0	489	0	148
26	0	0	0	0	0	0	11	32	92	356	303	436	331	294	350	536	277	95	53	24	3	0	0	0	536	0	133
27	0	0	0	0	0	0	12	122	185	95	131	199	188	220	217	200	122	82	48	21	4	0	0	0	220	0	77
28	0	0	0	0	0	0	5	28	47	102	157	212	470	632	578	503	411	65	20	16	4	0	0	0	632	0	135
29	0	0	0	0	0	1	14																		14	0	2
30																522	424								522	424	473
31						45	24	15	3	0	0	0													45	0	12
Max.	**0**	**0**	**0**	**0**	**0**	**45**	**126**	**228**	**352**	**470**	**570**	**648**	**683**	**699**	**671**	**701**	**568**	**259**	**117**	**64**	**26**	**4**	**0**	**0**	**701**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**3**	**0**	**0**	**0**	**21**	**23**	**22**	**17**	**19**	**16**	**8**	**3**	**1**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**6**	**37**	**98**	**148**	**217**	**254**	**278**	**303**	**286**	**294**	**283**	**223**	**113**	**43**	**23**	**7**	**1**	**0**	**0**			**109**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	16	85	258	383	493	397	481	553	521	557	429	56	24	11	2	0	0	557	0	178
2	0	0	0	0	0	0	0	4	24	47	55	64	87	164	349	416	368	279	145	72	22	1	0	0	416	0	87
3	0	0	0	0	0	0	0	8	38	45	60	83	92	105	96	97	85	87	41	15	4	0	0	0	105	0	36
4	0	0	0	0	0	0	0	1	6	20	19	30	48	43	32	34	32	22	10	5	2	0	0	0	48	0	13
5	0	0	0	0	0	0	0	7	43	118	147	289	208	227	240	167	171	152	94	49	21	1	0	0	289	0	81
6	0	0	0	0	0	0	0	7	40	100	239	232	273	289	366	581	497	300	82	48	17	0	0	0	581	0	128
7	0	0	0	0	0	0	0	11	109	239	360	474	549	559	525	425	357	243	104	48	10	0	0	0	559	0	167
8	0	0	0	0	0	0	0	1	7	12	15	24	23	44	107	67	169	208	119	74	16	0	0	0	208	0	37
9	0	0	0	0	0	0	0	2	29	56	82	169	219	252	368	383	152	116	115	44	7	0	0	0	383	0	83
10	0	0	0	0	0	0	0	5	87	244	262	371	387	395	232	189	315	165	117	60	6	0	0	0	395	0	118
11	0	0	0	0	0	0	0	0	4	10	18	20	16	19	24	13	12	9	6	4	0	0	0	0	24	0	7
12	0	0	0	0	0	0	0	1	7	25	27	51	261	390	562	507	456	301	45	20	4	0	0	0	562	0	111
13	0	0	0	0	0	0	0	5	43	78	63	96	94	122	168	91	109	49	40	18	7	0	0	0	168	0	41
14	0	0	0	0	0	0	0	1	16	36	82	99	136	283	265	280	167	109	36	21	6	0	0	0	283	0	64
15	0	0	0	0	0	0	0	2	58	196	321	439	546	585	608	577	337	162	86	39	5	0	0	0	608	0	165
16	0	0	0	0	0	0	0	5	75	242	344	426	515	581	614	506	304	174	83	35	5	0	0	0	614	0	163
17	0	0	0	0	0	0	0	1	6	22	75	152	245	165	303	234	298	184	75	39	4	0	0	0	303	0	75
18	0	0	0	0	0	0	0	0	1	7	13	7	7	8	11	8	7	8	11	4	0	0	0	0	13	0	4
19	0	0	0	0	0	0	0	1	35	52	112	376	127	166	181	133	90		25	15	1	0	0	0	376	0	57
20	0	0	0	0	0	0	0	0	6	32	74	178	194	164	263	193	165	82	67	27	1	0	0	0	263	0	60
21	0	0	0	0	0	0	0	1	49	186	205	498	623	600	619	369	454	248	39	13	2	0	0	0	623	0	163
22	0	0	0	0	0	0	0	2	24	76	129	144	141	152	95	90	89	37	10	3	0	0	0	0	152	0	41
23	0	0	0	0	0	0	0	0	8	43	112	164	326	423	459	312	305	126	55	15	1	0	0	0	459	0	98
24	0	0	0	0	0	0	0	0	11	87	108	236	283	542	105	199	226	88	30	5	0	0	0	0	542	0	80
25	0	0	0	0	0	0	0	0	19	61	107	407	490	403	285	466	220	104	49	15	0	0	0	0	490	0	109
26	0	0	0	0	0	0	0	0	13	40	143	439	537	485	309	193	185	144	66	29	1	0	0	0	537	0	108
27	0	0	0	0	0	0	0	0	25	121	213	352	410	423	327	254	137	66	33	5	0	0	0	0	423	0	99
28	0	0	0	0	0	0	0	0	4	30	47	57	61	60	38	38	21	19	13	3	0	0	0	0	61	0	16
29	0	0	0	0	0	0	0	0	12	93	120	198	196	179	339	188	148	199	48	14	0	0	0	0	339	0	72
30	0	0	0	0	0	0	0	0	8	48	67	179	491	415	455	366	139	73	22	3	0	0	0	0	491	0	94
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**109**	**258**	**383**	**498**	**623**	**600**	**619**	**581**	**557**	**429**	**145**	**74**	**22**	**2**	**0**	**0**	**623**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**13**	**7**	**7**	**8**	**11**	**8**	**7**	**8**	**6**	**3**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**30**	**87**	**133**	**225**	**266**	**291**	**296**	**263**	**219**	**144**	**57**	**26**	**5**	**0**	**0**	**0**			**85**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	7	77	201	177	219	230	223	115	190	150	63	18	0	0	0	0	230	0	70
2	0	0	0	0	0	0	0	0	15	40	77	99	139	195	162	181	283	107	65	13	0	0	0	0	283	0	57
3	0	0	0	0	0	0	0	0	10	109	222	324	399	433	437	398	323	123	17	5	0	0	0	0	437	0	117
4	0	0	0	0	0	0	0	0	1	4	20	23	21	24	23	30	27	19	9	1	0	0	0	0	30	0	8
5	0	0	0	0	0	0	0	0	1	15	36	54	61	65	101	116	210	106	26	3	0	0	0	0	210	0	33
6	0	0	0	0	0	0	0	0	4	79	201	310	390	413	254	362	240	96	27	6	0	0	0	0	413	0	99
7	0	0	0	0	0	0	0	0	4	53	92	272	271	325	404	357	247	82	15	3	0	0	0	0	404	0	89
8	0	0	0	0	0	0	0	0	4	53	156	285	317	240	352	362	295	101	16	3	0	0	0	0	362	0	91
9	0	0	0	0	0	0	0	0	3	40	190	290	363	398	400	358	283	101	14	3	0	0	0	0	400	0	102
10	0	0	0	0	0	0	0	0	4	76	191	287	354	394	395	354	278	99	15	2	0	0	0	0	395	0	102
11	0	0	0	0	0	0	0	0	2	20	70	58	93	116	84	86	111	49	7	0	0	0	0	0	116	0	29
12	0	0	0	0	0	0	0	0	1	20	81	96	78	69	90	140	114	59	18	1	0	0	0	0	140	0	32
13	0	0	0	0	0	0	0	0	1	32	92	170	237	285	232	139	213	108	26	1	0	0	0	0	285	0	64
14	0	0	0	0	0	0	0	0	1	43	149	255	327	365	364	323	248	84	10	1	0	0	0	0	365	0	90
15	0	0	0	0	0	0	0	0	1	21	59	81	141	293	321	134	106	73	18	1	0	0	0	0	321	0	52
16	0	0	0	0	0	0	0	0	0	16	71	102	131	150	87	74	62	34	4	0	0	0	0	0	150	0	30
17	0	0	0	0	0	0	0	0	0	7	38	46	92	51	50	37	33	13	3	0	0	0	0	0	92	0	15
18	0	0	0	0	0	0	0	0	0	14	48	90	122	204	155	201	204	53	19	0	0	0	0	0	204	0	46
19	0	0	0	0	0	0	0	0	0	33	129	222	255	236	224	253	228	108	18	0	0	0	0	0	255	0	71
20	0	0	0	0	0	0	0	0	0	27	134	260	121	179	102	80	75	32	8	0	0	0	0	0	260	0	42
21	0	0	0	0	0	0	0	0	0	7	21	70	144	201	231	349	221	90	10	0	0	0	0	0	349	0	56
22	0	0	0	0	0	0	0	0	0	8	31	78	104	78	57	73	20	13	2	0	0	0	0	0	104	0	19
23	0	0	0	0	0	0	0	0	0	21	128	215	234	172	155	155	76	41	3	0	0	0	0	0	234	0	50
24	0	0	0	0	0	0	0	0	0	11	30	103	147	136	139	135	86	39	3	0	0	0	0	0	147	0	35
25	0	0	0	0	0	0	0	0	0	1	5	13	12	13	7	4	2	1	0	0	0	0	0	0	13	0	2
26	0	0	0	0	0	0	0	0	0	3	22	42	72	70	90	104	46	18	4	0	0	0	0	0	104	0	20
27	0	0	0	0	0	0	0	0	0	8	63	64	41	83	84	109	59	20	2	0	0	0	0	0	109	0	22
28	0	0	0	0	0	0	0	0	0	2	18	70	88	97	73	110	99	25	2	0	0	0	0	0	110	0	24
29	0	0	0	0	0	0	0	0	0	1	10	23	21	25	28	29	13	7	1	0	0	0	0	0	29	0	7
30	0	0	0	0	0	0	0	0	0	1	7	19	37	35	28	22	12	6	1	0	0	0	0	0	37	0	7
31	0	0	0	0	0	0	0	0	0	3	64	133	217	208	280	247	166	29	2	0	0	0	0	0	280	0	56
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**109**	**222**	**324**	**399**	**433**	**437**	**398**	**323**	**150**	**65**	**18**	**0**	**0**	**0**	**0**	**437**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**13**	**12**	**13**	**7**	**4**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**27**	**86**	**140**	**169**	**187**	**182**	**175**	**147**	**61**	**14**	**2**	**0**	**0**	**0**	**0**			**50**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	3	38	12	167	235	78	58	23	12	3	0	0	0	0	0	235	0	26
2	0	0	0	0	0	0	0	0	0	5	72	180	231	253	251	219	158	36	3	0	0	0	0	0	253	0	59
3	0	0	0	0	0	0	0	0	0	5	59	156	213	246	237	181	116	24	2	0	0	0	0	0	246	0	52
4	0	0	0	0	0	0	0	0	0	0	2	7	11	16	13	8	4	1	0	0	0	0	0	0	16	0	3
5	0	0	0	0	0	0	0	0	0	0	6	16	14	21	24	30	16	7	0	0	0	0	0	0	30	0	6
6	0	0	0	0	0	0	0	0	0	1	15	46	44	70	40	20	12	3	0	0	0	0	0	0	70	0	10
7	0	0	0	0	0	0	0	0	0	0	2	42	49	67	67	100	149	35	1	0	0	0	0	0	149	0	21
8	0	0	0	0	0	0	0	0	0	0	0	2	2	2	8	9	5	1	0	0	0	0	0	0	9	0	1
9	0	0	0	0	0	0	0	0	0	1	19	144	192	219	218	139	97	20	1	0	0	0	0	0	219	0	44
10	0	0	0	0	0	0	0	0	0	1	7	24	67	81	108	167	74	17	0	0	0	0	0	0	167	0	23
11	0	0	0	0	0	0	0	0	0	1	16	47	108	139	97	122	53	11	0	0	0	0	0	0	139	0	25
12	0	0	0	0	0	0	0	0	0	1	29	104	135	209	174	121	29	9	0	0	0	0	0	0	209	0	34
13	0	0	0	0	0	0	0	0	0	0	6	4	8	34	16	25	17	3	0	0	0	0	0	0	34	0	5
14	0	0	0	0	0	0	0	0	0	0	18	84	188	245	116	98	35	10	0	0	0	0	0	0	245	0	33
15	0	0	0	0	0	0	0	0	0	0	5	31	81	100	110	94	77	16	0	0	0	0	0	0	110	0	21
16	0	0	0	0	0	0	0	0	0	0	7	60	79	82	90	57	36	6	0	0	0	0	0	0	90	0	17
17	0	0	0	0	0	0	0	0	0	0	19	97	163	124	100	73	51	18	0	0	0	0	0	0	163	0	27
18	0	0	0	0	0	0	0	0	0	0	10	40	70	107	186	163	57	11	0	0	0	0	0	0	186	0	27
19	0	0	0	0	0	0	0	0	0	0	5	24	30	90	44	46	16	1	0	0	0	0	0	0	90	0	11
20	0	0	0	0	0	0	0	0	0	0	0	3	8	10	13	11	5	1	0	0	0	0	0	0	13	0	2
21	0	0	0	0	0	0	0	0	0	0	1	7	7	59	267	208	62	7	0	0	0	0	0	0	267	0	26
22	0	0	0	0	0	0	0	0	0	0	0	1	3	6	7	8	9	2	0	0	0	0	0	0	9	0	1
23	0	0	0	0	0	0	0	0	0	0	3	15	30	57	87	63	27	7	0	0	0	0	0	0	87	0	12
24	0	0	0	0	0	0	0	0	0	0	2	8	12	11	9	9	4	1	0	0	0	0	0	0	12	0	2
25	0	0	0	0	0	0	0	0	0	0	1	5	6	11	10	7	6	1	0	0	0	0	0	0	11	0	2
26	0	0	0	0	0	0	0	0	0	0	1	25	37	50	94	50	26	3	0	0	0	0	0	0	94	0	12
27	0	0	0	0	0	0	0	0	0	0	2	15	13	36	32	25	11	4	0	0	0	0	0	0	36	0	6
28	0	0	0	0	0	0	0	0	0	0	1	8	38	35	24	30	13	1	0	0	0	0	0	0	38	0	6
29	0	0	0	0	0	0	0	0	0	0	0	8	22	25	23	16	7	0	0	0	0	0	0	0	25	0	4
30	0	0	0	0	0	0	0	0	0	0	0	10	20	41	31	25	13	1	0	0	0	0	0	0	41	0	6
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**72**	**180**	**231**	**253**	**267**	**219**	**158**	**36**	**3**	**0**	**0**	**0**	**0**	**0**	**267**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**2**	**7**	**7**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12**	**41**	**68**	**89**	**86**	**73**	**40**	**9**	**0**	**0**	**0**	**0**	**0**	**0**			**17**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	3	27	89	125	129	89	33	2	0	0	0	0	0	0	129	0	21
2	0	0	0	0	0	0	0	0	0	0	3	35	93	130	127	92	33	3	0	0	0	0	0	0	130	0	21
3	0	0	0	0	0	0	0	0	0	0	2	21	86	126	132	84	29	2	0	0	0	0	0	0	132	0	20
4	0	0	0	0	0	0	0	0	0	0	2	15	23	34	26	34	19	2	0	0	0	0	0	0	34	0	6
5	0	0	0	0	0	0	0	0	0	0	1	9	16	25	17	17	3	0	0	0	0	0	0	0	25	0	4
6	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	2	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	1	0	0	0	0	0	0	0	3	0	1
8	0	0	0	0	0	0	0	0	0	0	0	2	6	8	8	5	1	0	0	0	0	0	0	0	8	0	1
9	0	0	0	0	0	0	0	0	0	0	0	4	18	44	13	9	4	0	0	0	0	0	0	0	44	0	4
10	0	0	0	0	0	0	0	0	0	0	0	2	10	19	10	9	4	0	0	0	0	0	0	0	19	0	2
11	0	0	0	0	0	0	0	0	0	0	1	30	84	131	138	87	24	2	0	0	0	0	0	0	138	0	21
12	0	0	0	0	0	0	0	0	0	0	1	9	12	17	18	13	6	1	0	0	0	0	0	0	18	0	3
13	0	0	0	0	0	0	0	0	0	0	0	7	24	30	57	43	16	1	0	0	0	0	0	0	57	0	7
14	0	0	0	0	0	0	0	0	0	0	1	21	71	109	109	72	23	2	0	0	0	0	0	0	109	0	17
15	0	0	0	0	0	0	0	0	0	0	1	23	68	103	97	32	16	2	0	0	0	0	0	0	103	0	14
16	0	0	0	0	0	0	0	0	0	0	1	17	66	105	109	72	24	2	0	0	0	0	0	0	109	0	16
17	0	0	0	0	0	0	0	0	0	0	1	7	36	103	62	19	22	2	0	0	0	0	0	0	103	0	10
18	0	0	0	0	0	0	0	0	0	0	1	17	65	103	107	73	24	2	0	0	0	0	0	0	107	0	16
19	0	0	0	0	0	0	0	0	0	0	0	11	59	104	109	75	24	2	0	0	0	0	0	0	109	0	16
20	0	0	0	0	0	0	0	0	0	0	0	2	10	12	11	8	3	0	0	0	0	0	0	0	12	0	2
21	0	0	0	0	0	0	0	0	0	0	0	6	23	55	87	36	10	1	0	0	0	0	0	0	87	0	9
22	0	0	0	0	0	0	0	0	0	0	0	8	26	44	30	21	6	1	0	0	0	0	0	0	44	0	6
23	0	0	0	0	0	0	0	0	0	0	0	6	18	32	130	93	27	2	0	0	0	0	0	0	130	0	13
24	0	0	0	0	0	0	0	0	0	0	0	1	4	6	6	4	1	0	0	0	0	0	0	0	6	0	1
25	0	0	0	0	0	0	0	0	0	0	0	7	35	146	173	102	39	3	0	0	0	0	0	0	173	0	21
26	0	0	0	0	0	0	0	0	0	0	0	3	16	22	21	15	7	0	0	0	0	0	0	0	22	0	4
27	0	0	0	0	0	0	0	0	0	0	0	5	26	29	40	27	8	1	0	0	0	0	0	0	40	0	6
28	0	0	0	1	0	0	0	0	0	0	0	30	85	76	104	80	27	2	0	0	0	0	0	0	104	0	17
29	0	0	0	0	0	0	0	0	0	0	0	6	25	53	54	46	25	4	0	0	0	0	0	0	54	0	9
30	0	0	0	0	0	0	0	0	0	0	0	4	12	16	12	10	5	0	0	0	0	0	0	0	16	0	2
31	0	0	0	0	0	0	0	0	0	0	0	1	5	8	9	14	8	2	0	0	0	0	0	0	14	0	2
Max.	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**35**	**93**	**146**	**173**	**102**	**39**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**173**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**	**36**	**59**	**63**	**41**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**			**9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

January 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	976	975	974	974	973	972	972	971	971	971	971	971	971	971	971	972	972	972	972	972	972	973	973	974	976	971	972.3
2	975	975	975	975	976	976	976	976	977	978	978	978	979	979	979	980	980	980	981	981	981	981	981	981	981	975	978.3
3	982	982	981	981	980	981	981	981	982	981	982	982	982	981	982	981	980	981	982	983	983	986	986	986	986	980	982.0
4	987	987	988	988	988	988	987	987	987	987	987	987	987	987	986	986	986	986	986	986	986	986	986	986	988	986	986.8
5	987	986	987	987	987	988	988	989	989	990	991	993	993	993	994	994	996	997	996	998	999	999	1000	1001	1001	986	992.6
6	1001	1001	1000	1001	1001	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1002	1002	1002	1000	1001.1
7	1003	1002	1003	1003	1002	1003	1003	1004	1005	1006	1008	1010	1009	1010	1011	1012	1012	1013	1015	1017	1015	1016	1018	1018	1018	1002	1009.1
8	1019	1019	1021	1021	1022	1021	1021	1022	1022	1024	1025	1025	1025	1025	1026	1026	1026	1027	1027	1029	1029	1029	1030	1031	1031	1019	1024.7
9	1031	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1031	1031	1031	1031	1030	1031	1030	1030	1030	1030	1032	1030	1031.3
10	1030	1029	1029	1028	1028	1028	1027	1027	1026	1026	1025	1024	1024	1024	1023	1022	1022	1022	1021	1021	1021	1021	1021	1021	1030	1021	1024.6
11	1021	1021	1020	1020	1020	1019	1019	1018	1018	1019	1018	1018	1018	1017	1016	1016	1016	1015	1015	1014	1014	1013	1012	1011	1021	1011	1017.0
12	1011	1010	1009	1009	1008	1008	1007	1007	1007	1008	1008	1008	1007	1006	1006	1005	1004	1003	1002	1002	1002	1002	1003	1003	1011	1002	1006.0
13	1005	1006	1008	1010	1010	1011	1012	1012	1012	1012	1012	1013	1012	1012	1011	1010	1009	1009	1008	1007	1007	1006	1005	1003	1013	1003	1009.3
14	1002	1002	1001	1000	999	998	998	998	998	998	998	998	998	998	998	999	998	999	1001	1001	1001	1001	1001	1002	1002	998	999.5
15	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	1008	1009	1010	1011	1011	1011	1011	1011	1011	1003	1006.7
16	1012	1013	1013	1012	1012	1012	1012	1011	1010	1010	1010	1009	1009	1007	1005	1004	1003	1002	1001	1000	1000	1000	1000	1000	1013	1000	1007.0
17	1001	1002	1003	1003	1003	1003	1004	1004	1005	1006	1006	1006	1006	1006	1005	1005	1004	1003	1003	1003	1003	1002	1001	1000	1006	1000	1003.6
18	999	998	997	996	995	994	993	992	991	990	990	990	989	988	988	987	987	987	987	987	988	988	988	989	999	987	990.8
19	990	990	990	991	991	992	992	993	994	994	995	996	996	996	996	996	997	997	997	997	997	997	997	997	997	990	994.5
20	997	997	996	996	996	995	994	994	993	992	991	990	989	987	985	984	983	983	982	981	981	981	981	981	997	981	988.7
21	981	981	982	982	982	983	983	985	984	986	986	986	987	986	987	988	989	989	990	991	992	993	994	995	995	981	986.8
22	995	996	997	997	998	998	999	999	999	999	999	1000	1000	1000	1000	1000	1000	1000	1001	1001	1002	1002	1002	1003	1003	995	999.5
23	1003	1003	1003	1003	1003	1003	1002	1002	1002	1003	1002	1002	1003	1002	1001	1001	1001	1001	1001	1002	1002	1002	1002	1001	1003	1001	1002.1
24	1003	1002	1002	1001	1001	1001	1001	1002	1002	1002	1002	1005	1007	1007	1008	1009	1008	1009	1009	1011	1011	1012	1013	1012	1013	1001	1005.8
25	1012	1013	1013	1012	1010	1009	1007	1004	1003	1002	1002	1001	999	999	998	997	999	999	998	999	998	998	999	999	1013	997	1002.9
26	999	999	999	999	999	999	998	998	998	999	1000	1000	1000	1000	1001	1002	1003	1004	1005	1006	1006	1008	1009	1009	1009	998	1001.7
27	1010	1011	1011	1012	1012	1012	1013	1013	1012	1012	1013	1012	1011	1010	1009	1008	1007	1006	1006	1005	1004	1004	1003	1003	1013	1003	1009.1
28	1003	1003	1004	1004	1004	1004	1004	1004	1005	1006	1007	1008	1009	1010	1010	1010	1011	1012	1012	1013	1013	1014	1014	1015	1015	1003	1008.3
29	1014	1013	1013	1012	1012	1011	1011	1010	1009	1008	1009	1009	1009	1008	1007	1007	1007	1007	1009	1009	1011	1012	1014	1016	1016	1007	1010.3
30	1017	1018	1020	1021	1022	1022	1021	1022	1021	1020	1019	1020	1021	1020	1021	1021	1021	1022	1023	1022	1021	1021	1022	1021	1023	1017	1020.8
31	1021	1021	1020	1020	1020	1020	1020	1020	1021	1021	1021	1022	1021	1021	1021	1021	1019	1019	1019	1019	1019	1018	1018	1017	1022	1017	1020.0
Max.	**1031**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1031**	**1031**	**1031**	**1031**	**1030**	**1031**	**1030**	**1030**	**1030**	**1031**	**1032**		
Min.	**975**	**975**	**974**	**974**	**973**	**972**	**972**	**971**	**971**	**971**	**971**	**971**	**971**	**971**	**971**	**972**	**972**	**972**	**972**	**972**	**972**	**973**	**973**	**974**		**971**	
Avg.	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1004**	**1004**			**1003.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1017	1015	1014	1013	1013	1012	1011	1010	1009	1009	1008	1008	1007	1006	1005	1004	1003	1003	1002	1004	1004	1006	1005	1006	1017	1002	1008.1
2	1007	1007	1008	1009	1009	1009	1009	1010	1011	1011	1012	1013	1013	1014	1014	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1007	1012.3
3	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1016	1013	1014.4
4	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1012	1013.0
5	1015	1015	1015	1015	1015	1016	1017	1017	1017	1017	1017	1017	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1018	1015	1016.4
6	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1013	1013	1013	1012	1013	1013	1015	1012	1013.0
7	1013	1013	1013	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012.7
8	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1017	1017	1017	1013	1014.7
9	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1019	1019	1019	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1017	1018.2
10	1018	1018	1018	1017	1017	1016	1016	1015	1015	1015	1014	1014	1013	1012	1011	1010	1010	1009	1009	1008	1008	1007	1007	1007	1018	1007	1012.7
11	1007	1007	1006	1006	1006	1005	1005	1005	1006	1006	1006	1006	1005	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1007	1005	1005.5
12	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1002	1003	1002	1002	1001	1001	1000	1000	999	999	999	998	997	996	1004	996	1001.4
13	996	995	994	993	992	992	991	991	991	991	990	990	990	990	990	990	991	991	992	993	993	994	994	995	996	990	992.0
14	995	996	996	996	996	996	996	996	996	997	996	996	996	996	995	995	995	994	994	995	995	995	995	995	997	994	995.5
15	995	995	994	994	994	994	995	995	995	995	996	996	997	997	997	998	998	999	999	1000	1000	1001	1001	1002	1002	994	997.0
16	1002	1003	1003	1004	1004	1004	1005	1005	1005	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1007	1002	1005.7
17	1006	1006	1006	1005	1004	1004	1003	1002	1001	1001	1000	1000	999	998	997	996	995	995	994	993	993	993	993	993	1006	993	999.0
18	994	994	994	994	994	994	994	994	994	994	994	994	994	993	993	992	991	991	990	990	990	990	990	990	994	990	992.6
19	990	990	989	989	989	989	988	988	989	989	989	989	989	989	989	989	989	989	990	990	991	992	992	993	993	988	989.6
20	993	994	994	995	995	996	996	997	999	1000	1001	1001	1002	1002	1003	1003	1004	1004	1007	1007	1008	1008	1010	1010	1010	993	1001.2
21	1010	1011	1011	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1013	1010	1012.0
22	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1008	1008	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1005	1005	1011	1005	1008.0
23	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1008	1008	1008	1008	1009	1009	1009	1009	1010	1011	1011	1011	1011	1011	1011	1005	1007.8
24	1012	1012	1012	1011	1012	1012	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1011	1013.7
25	1019	1020	1021	1021	1022	1022	1022	1022	1022	1022	1023	1022	1022	1023	1023	1022	1022	1022	1022	1022	1024	1022	1022	1022	1024	1019	1021.9
26	1022	1022	1022	1022	1022	1022	1021	1022	1022	1022	1023	1023	1023	1023	1023	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1021	1022.4
27	1023	1023	1022	1023	1022	1023	1023	1023	1023	1023	1023	1022	1022	1021	1021	1020	1020	1019	1019	1019	1018	1018	1018	1017	1023	1017	1021.0
28	1017	1017	1016	1016	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1014	1014	1014	1015	1015	1016	1017	1013	1014.7
Max.	1023	1023	1022	1023	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1023	1023	1024	1023	1023	1023	1024		
Min.	990	990	989	989	989	989	988	988	989	989	989	989	989	989	989	989	989	989	990	990	990	990	990	990		988	
Avg.	1009	1009	1009	1009	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009			1008.4

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1013	1013	1012	1012	1012	1013	1013	1013	1013	1013	1016	1012	1014.2
2	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1013	1014.0
3	1015	1016	1017	1017	1018	1019	1019	1020	1021	1021	1022	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1021	1021	1021	1023	1015	1020.5
4	1021	1021	1021	1021	1020	1020	1019	1019	1019	1019	1019	1019	1018	1018	1017	1016	1015	1014	1014	1013	1013	1012	1011	1010	1021	1010	1017.0
5	1010	1009	1008	1007	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1003	1003	1010	1003	1005.2
6	1002	1002	1001	1001	1000	1000	999	999	998	997	996	996	995	994	993	992	991	990	990	990	990	990	990	990	1002	990	995.3
7	990	990	990	990	990	991	991	991	991	992	992	992	992	992	991	991	991	991	990	990	990	990	990	989	992	989	990.7
8	989	989	988	989	988	989	989	989	990	990	990	990	990	989	989	988	987	986	987	987	986	986	986	986	990	986	988.2
9	986	986	987	987	987	987	987	988	988	989	990	990	990	990	991	991	992	992	993	993	994	994	995	995	995	986	990.1
10	996	996	996	996	996	996	997	997	997	998	998	998	998	997	997	997	997	997	996	996	996	996	995	995	998	995	996.6
11	995	995	994	994	994	994	995	995	995	996	996	997	997	997	997	997	997	997	998	999	999	999	1000	1000	1000	994	996.5
12	1001	1001	1002	1003	1004	1005	1005	1006	1006	1007	1008	1008	1009	1008	1009	1009	1009	1008	1010	1010	1010	1012	1013	1013	1013	1001	1007.3
13	1014	1013	1014	1015	1015	1015	1014	1015	1015	1015	1015	1015	1016	1013	1014	1015	1015	1014	1015	1016	1016	1016	1017	1017	1017	1013	1015.0
14	1017	1017	1017	1017	1017	1017	1017	1016	1017	1017	1016	1017	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1017	1015	1016.1
15	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1016	1015	1015	1015	1014	1013	1013	1012	1012	1013	1013	1013	1012	1012	1016	1012	1014.2
16	1012	1011	1010	1010	1010	1009	1009	1009	1009	1009	1008	1008	1008	1007	1006	1006	1005	1005	1005	1005	1005	1006	1005	1005	1012	1005	1007.6
17	1005	1006	1006	1005	1006	1006	1006	1006	1006	1007	1008	1008	1009	1009	1009	1009	1009	1010	1010	1011	1011	1012	1013	1013	1013	1005	1008.3
18	1014	1014	1014	1014	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1014	1014	1013	1013	1013	1016	1013	1014.6
19	1012	1012	1011	1010	1010	1009	1008	1008	1007	1007	1006	1006	1005	1004	1003	1002	1002	1001	1001	1000	1000	1000	1000	999	1012	999	1005.1
20	1000	999	999	997	997	997	996	995	994	993	992	991	989	987	984	982	980	978	976	975	974	974	973	973	1000	973	987.3
21	972	972	973	972	973	974	974	975	976	977	978	978	979	979	981	981	982	982	982	983	985	985	986	987	987	972	978.6
22	987	988	988	989	988	989	990	990	991	991	991	991	991	991	990	990	990	989	988	988	987	987	986	986	991	986	989.0
23	985	985	984	984	983	984	984	984	984	984	984	985	985	985	986	985	985	986	987	988	989	989	990	991	991	983	985.7
24	992	993	994	995	996	997	997	998	998	999	999	1000	1000	1001	1001	1001	1001	1001	1002	1002	1003	1003	1003	1004	1004	992	999.2
25	1004	1004	1005	1004	1005	1004	1005	1005	1005	1005	1006	1006	1006	1007	1006	1007	1006	1006	1006	1006	1006	1005	1005	1005	1007	1004	1005.4
26	1004	1003	1002	1001	1000	1000	998	998	997	997	998	1000	1001	1002	1002	1002	1003	1003	1004	1005	1006	1007	1008	1008	1008	997	1002.0
27	1009	1010	1011	1012	1013	1013	1014	1014	1015	1016	1016	1017	1017	1018	1018	1018	1019	1019	1019	1020	1020	1020	1020	1020	1020	1009	1016.2
28	1020	1020	1020	1020	1020	1019	1020	1020	1019	1019	1019	1019	1019	1019	1019	1018	1019	1019	1018	1018	1019	1019	1019	1019	1020	1018	1019.2
29	1020	1020	1020	1020	1020	1021	1021	1021	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1024	1024	1025	1025	1026	1027	1027	1020	1022.5
30	1027	1027	1027	1027	1028	1028	1028	1029	1029	1029	1030	1030	1030	1031	1030	1030	1030	1030	1030	1030	1031	1031	1031	1031	1031	1027	1029.3
31	1031	1031	1031	1031	1031	1031	1031	1031	1031	1031	1032	1032	1032	1031	1031	1031	1031	1031	1030	1030	1030	1030	1030	1030	1032	1030	1030.9
Max.	**1031**	**1031**	**1031**	**1031**	**1031**	**1031**	**1031**	**1031**	**1031**	**1031**	**1032**	**1032**	**1032**	**1031**	**1031**	**1031**	**1031**	**1031**	**1030**	**1030**	**1031**	**1031**	**1031**	**1031**	**1032**		
Min.	**972**	**972**	**973**	**972**	**973**	**974**	**974**	**975**	**976**	**977**	**978**	**978**	**979**	**979**	**981**	**981**	**980**	**978**	**976**	**975**	**974**	**974**	**973**	**973**		**972**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1006**	**1006**	**1006**	**1006**	**1005**	**1005**	**1006**	**1006**	**1006**	**1006**	**1006**			**1005.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

April 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1030	1030	1029	1029	1029	1029	1028	1029	1028	1028	1028	1028	1027	1027	1027	1027	1026	1026	1026	1026	1026	1026	1026	1026	1030	1026	1027.5
2	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1025	1025	1025	1025	1025	1025	1025	1025	1026	1025	1025.7
3	1025	1025	1024	1024	1024	1023	1023	1023	1023	1023	1023	1022	1022	1022	1021	1021	1020	1020	1019	1019	1019	1019	1018	1018	1025	1018	1021.7
4	1017	1016	1015	1015	1014	1013	1013	1012	1012	1011	1011	1010	1010	1009	1008	1007	1006	1005	1004	1004	1003	1003	1003	1002	1017	1002	1009.3
5	1001	1001	999	998	996	996	995	993	992	991	990	989	988	987	987	991	992	992	992	993	994	995	996	995	1001	987	993.5
6	996	995	995	994	994	993	992	991	990	989	987	985	983	981	979	976	974	972	971	969	969	969	968	969	996	968	982.5
7	970	973	977	981	984	986	988	989	990	991	991	990	990	990	989	988	988	987	986	986	985	984	983	982	991	970	985.3
8	982	981	980	979	978	978	978	977	976	976	976	975	975	975	975	976	976	976	977	977	979	980	981	981	982	975	977.7
9	982	982	982	983	984	984	985	986	986	987	989	990	991	991	992	992	993	994	994	995	996	997	997	998	998	982	989.6
10	999	999	1000	1000	1001	1001	1002	1002	1003	1004	1005	1005	1006	1007	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1010	999	1005.0
11	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1009	1009	1009	1008	1008	1008	1007	1007	1006	1011	1006	1009.8
12	1005	1005	1004	1004	1003	1003	1002	1002	1001	1001	1000	1000	999	999	998	998	997	997	997	996	996	996	995	995	1005	995	999.7
13	995	994	994	994	994	994	994	994	994	994	994	995	995	995	995	995	995	995	995	996	996	996	996	996	996	994	994.8
14	997	997	997	997	997	997	996	997	996	997	997	997	996	996	996	995	995	995	995	994	995	995	995	995	997	994	996.0
15	995	995	995	994	994	994	994	994	994	994	994	994	993	993	993	993	993	993	993	993	994	994	994	995	995	993	993.8
16	995	995	996	996	997	997	998	999	999	1000	1002	1003	1003	1004	1005	1006	1007	1007	1008	1008	1009	1010	1010	1010	1010	995	1002.7
17	1011	1011	1011	1011	1011	1011	1011	1011	1012	1013	1012	1012	1011	1011	1010	1009	1008	1007	1006	1005	1005	1005	1005	1005	1013	1005	1009.3
18	1005	1005	1004	1004	1005	1005	1005	1005	1006	1006	1007	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1011	1011	1011	1011	1004	1007.6
19	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1011	1010	1010	1009	1009	1008	1008	1006	1006	1006	1005	1006	1011	1005	1009.2
20	1005	1004	1003	1003	1003	1003	1003	1003	1003	1002	1003	1003	1004	1003	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1002	1003.7
21	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1003	1004	1004	1004	1004	1003	1002	1002	1002	1002	1005	1002	1003.9
22	1002	1001	1000	1000	999	998	998	998	997	997	997	997	996	996	996	995	995	994	994	994	994	993	993	992	1002	992	996.5
23	992	991	990	989	989	989	989	988	988	988	989	989	989	990	989	989	989	989	990	991	992	992	992	993	993	988	989.8
24	993	993	993	994	994	994	994	994	994	994	994	994	994	994	994	994	994	995	995	996	996	997	997	997	997	993	994.5
25	997	998	998	997	997	997	997	997	998	998	999	999	999	999	999	999	998	997	997	997	997	997	997	997	999	997	997.7
26	997	996	996	995	995	995	994	994	993	993	992	992	992	992	991	991	990	990	990	991	991	991	993	994	997	990	992.8
27	994	995	995	996	996	996	997	998	999	999	1000	1001	1002	1002	1002	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	994	1000.4
28	1005	1005	1005	1005	1005	1005	1004	1005	1005	1005	1005	1005	1005	1004	1004	1004	1003	1003	1003	1002	1002	1002	1002	1002	1005	1002	1004.0
29	1002	1002	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	999	1000	1001	1002	1002	1003	1003	999	1000.5
30	1003	1003	1003	1003	1003	1003	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1003	1003	1003	1003	1004	1004	1004	1002	1003.0
Max.	**1030**	**1030**	**1029**	**1029**	**1029**	**1029**	**1028**	**1029**	**1028**	**1028**	**1028**	**1028**	**1027**	**1027**	**1027**	**1027**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1030**		
Min.	**970**	**973**	**977**	**979**	**978**	**978**	**978**	**977**	**976**	**976**	**976**	**975**	**975**	**975**	**975**	**976**	**974**	**972**	**971**	**969**	**969**	**969**	**968**	**969**		**968**	
Avg.	**1002**	**1002**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1000**	**1001**	**1001**	**1001**			**1000.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1004	1004	1004	1004	1004	1005	1006	1006	1005	1005	1005	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1004	1004.9
2	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1006	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1004	1006.1
3	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1008	1009	1008	1008.3
4	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1009	1009	1009	1010	1010	1009	1010	1010	1010	1010	1009	1009.3
5	1011	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1007	1007	1007	1006	1007	1011	1006	1008.6
6	1006	1006	1006	1007	1006	1007	1007	1006	1007	1007	1007	1008	1007	1007	1007	1007	1007	1007	1006	1006	1007	1008	1008	1009	1009	1006	1006.9
7	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1015	1015	1016	1016	1015	1016	1010	1013.0
8	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1017	1015	1015.8
9	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1015	1015.9
10	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1015	1015	1018	1015	1016.8
11	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1014	1014.7
12	1016	1016	1015	1015	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1015	1017	1015	1016.1
13	1015	1015	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1012	1012	1011	1011	1011	1010	1010	1010	1010	1010	1010	1015	1010	1012.3
14	1009	1009	1008	1008	1007	1007	1007	1007	1007	1006	1007	1007	1008	1009	1010	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1006	1009.0
15	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1011	1010	1009	1008	1008	1008	1008	1007	1006	1013	1006	1011.0
16	1006	1005	1005	1004	1003	1003	1003	1003	1003	1003	1003	1003	1002	1005	1004	1005	1005	1006	1007	1007	1008	1009	1009	1010	1010	1002	1005.0
17	1010	1010	1011	1011	1011	1011	1012	1012	1013	1013	1014	1014	1015	1015	1016	1017	1017	1017	1018	1018	1018	1018	1019	1019	1019	1010	1014.5
18	1020	1020	1020	1019	1020	1020	1019	1020	1020	1020	1020	1020	1019	1019	1019	1018	1017	1017	1017	1016	1016	1016	1015	1015	1020	1015	1018.4
19	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1014	1014	1014	1014	1014	1015	1015	1015	1015	1013	1014.0
20	1015	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1015	1017.3
21	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1018	1018	1018	1018	1018	1017	1020	1017	1019.0
22	1016	1016	1014	1014	1013	1013	1012	1012	1012	1011	1011	1010	1009	1009	1008	1007	1006	1006	1006	1006	1006	1006	1005	1005	1016	1005	1009.7
23	1005	1005	1004	1004	1004	1005	1005	1005	1006	1006	1007	1008	1008	1008	1009	1010	1010	1011	1011	1011	1013	1013	1013	1013	1013	1004	1008.1
24	1013	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1010	1009	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1005	1013	1005	1009.2
25	1005	1005	1004	1004	1004	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1003	1003	1002	1002	1002	1002	1002	1003	1005	1002	1003.4
26	1003	1003	1004	1004	1004	1005	1005	1006	1006	1006	1006	1007	1007	1008	1008	1008	1008	1008	1009	1008	1008	1008	1009	1009	1009	1003	1006.5
27	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1009	1011.1
28	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1013	1013	1013	1012	1015	1012	1014.1
29	1012	1011	1010	1010	1009	1009	1009	1008	1008	1007	1007	1007	1006	1006	1005	1005	1004	1004	1003	1003	1003	1003	1003	1002	1012	1002	1006.4
30	1002	1001	1001	1001	1001	1001	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1000	1001.0
31	1002	1002	1002	1002	1003	1004	1005	1004	1004	1004	1004	1004	1004	1003	1003	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1002	1004.0
Max.	**1020**	**1020**	**1020**	**1019**	**1020**	**1020**	**1019**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1019**	**1019**	**1019**	**1019**	**1018**	**1018**	**1018**	**1019**	**1019**	**1019**	**1020**		
Min.	**1002**	**1001**	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1002**	**1002**		**1000**	
Avg.	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**			**1010.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1007	1007	1007	1007	1008	1008	1008	1009	1009	1009	1010	1010	1011	1011	1012	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1007	1010.4
2	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1015	1014	1014.6
3	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1011	1011	1010	1010	1009	1008	1007	1006	1015	1006	1012.3
4	1006	1005	1004	1003	1002	1001	1000	1000	999	998	998	998	998	998	997	998	999	1000	1000	1000	1000	1001	1001	1001	1006	997	1000.3
5	1002	1002	1002	1002	1002	1002	1003	1003	1003	1004	1004	1005	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1002	1004.8
6	1007	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1002	1001	1002	1001	1001	1001	1000	1000	999	999	999	999	998	1007	998	1002.1
7	998	998	997	997	997	997	997	996	997	997	998	999	1001	1002	1003	1003	1003	1002	1003	1002	1002	1002	1002	1002	1003	996	999.8
8	1002	1002	1002	1002	1003	1003	1003	1002	1002	1003	1002	1002	1002	1003	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1002	1003.5
9	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1004	1003	1003	1002	1001	1001	1001	1001	1006	1001	1004.3
10	1001	1000	1000	1000	999	1000	1000	1000	1000	1000	1000	1001	1000	1000	1001	1000	1001	1001	1001	1001	1002	1001	1002	1003	1003	999	1000.6
11	1003	1003	1004	1004	1004	1005	1005	1005	1006	1007	1008	1008	1009	1009	1010	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1003	1007.9
12	1013	1013	1013	1013	1014	1014	1014	1015	1015	1016	1016	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1013	1016.2
13	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1019	1020.3
14	1022	1022	1022	1022	1023	1023	1023	1023	1024	1024	1024	1024	1025	1025	1025	1024	1024	1024	1024	1024	1024	1024	1024	1024	1025	1022	1023.6
15	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1023	1023	1023	1023	1023	1022	1022	1022	1021	1021	1021	1021	1020	1020	1024	1020	1022.5
16	1020	1020	1020	1020	1021	1021	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1018	1018	1021	1017	1019.4
17	1017	1017	1018	1017	1016	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1018	1015	1016.2
18	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1014	1014	1014	1014	1015	1015	1015	1015	1013	1014.1
19	1015	1015	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1011	1011	1011	1010	1010	1010	1011	1011	1011	1015	1010	1012.5
20	1011	1011	1011	1011	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1009	1008	1008	1008	1008	1008	1009	1012	1008	1010.0
21	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1010	1011	1011	1010	1011	1011	1011	1010	1010	1012	1012	1012	1012	1013	1013	1009	1010.4
22	1013	1013	1014	1013	1014	1014	1013	1014	1013	1014	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1014	1011	1012.9
23	1010	1010	1010	1009	1009	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1006	1007	1007	1010	1006	1007.5
24	1007	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1010	1010	1011	1011	1012	1012	1012	1006	1008.3
25	1012	1013	1013	1013	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1019	1019	1019	1020	1020	1021	1021	1021	1022	1022	1022	1012	1017.5
26	1022	1022	1022	1023	1023	1023	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1024	1022	1023.0
27	1022	1022	1022	1021	1022	1022	1021	1021	1021	1021	1021	1020	1020	1020	1020	1019	1019	1018	1017	1017	1017	1016	1016	1016	1022	1016	1019.6
28	1016	1015	1015	1015	1014	1015	1015	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1016	1011	1013.3
29	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1009	1009	1009	1009	1010	1008	1009.1
30	1009	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1009	1012.5
Max.	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1025**	**1025**	**1025**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1025**		
Min.	**998**	**998**	**997**	**997**	**997**	**997**	**997**	**996**	**997**	**997**	**998**	**998**	**998**	**998**	**997**	**998**	**999**	**1000**	**1000**	**999**	**999**	**999**	**999**	**998**		**996**	
Avg.	**1012**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**1011.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1015	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1014	1014	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1013	1014.4
2	1017	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1014	1014	1014	1014	1013	1013	1013	1014	1013	1014	1014	1014	1017	1013	1014.6
3	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1014	1015.0
4	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1014	1013	1013	1014	1014	1014	1014	1014	1014	1013	1013.9
5	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1015	1015	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1013	1014.7
6	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1019	1019	1018	1018	1019	1019	1019	1018	1019	1019	1019	1019	1019	1017	1018.1
7	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1016	1020	1016	1018.7
8	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1015	1016	1016	1016	1016	1016	1016	1015	1015.5
9	1016	1015	1015	1015	1014	1014	1014	1013	1013	1013	1013	1012	1012	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1016	1007	1011.4
10	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1006	1007.3
11	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1012	1012	1012	1011	1012	1012	1011	1011	1011	1011	1011	1011	1011	1012	1010	1010.9
12	1011	1011	1011	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1010	1011.5
13	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1014	1014.8
14	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1017	1016	1017	1017	1017	1016	1016	1017	1017	1017	1017	1017	1015	1016.0
15	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1017	1014	1015.4
16	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1012	1013	1013	1012	1012	1012	1014	1012	1013.4
17	1012	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1012	1012	1012	1013	1013	1012	1012	1012	1012	1011	1011	1011	1011	1013	1011	1011.8
18	1011	1010	1010	1009	1009	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1006	1006	1005	1006	1006	1006	1006	1006	1006	1011	1005	1007.3
19	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1006	1004	1004.8
20	1004	1004	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1004	1005	1003	1003.8
21	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1004	1004.1
22	1005	1005	1005	1004	1005	1005	1005	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1004	1005	1005	1004	1005	1005	1005	1005	1004	1004.7
23	1005	1005	1005	1005	1005	1006	1006	1006	1006	1007	1007	1008	1008	1008	1009	1009	1008	1008	1008	1009	1009	1009	1009	1008	1009	1005	1007.2
24	1008	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1006	1006.5
25	1007	1007	1007	1007	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1010	1010	1010	1010	1011	1011	1011	1011	1011	1012	1012	1007	1009.0
26	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1012	1012.6
27	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1014	1011	1012.3
28	1011	1011	1011	1011	1010	1010	1011	1010	1011	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1008	1009	1009	1008	1009	1011	1008	1009.9
29	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1008	1008	1009	1008	1008	1008	1008	1009	1009	1009	1010	1010	1010	1008	1008.4
30	1011	1012	1012	1012	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1011	1014.0
31	1016	1016	1017	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1016	1018.6
Max.	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**		
Min.	**1004**	**1004**	**1003**	**1003**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1003**	**1003**	**1003**	**1004**		**1003**	
Avg.	**1012**	**1012**	**1012**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**1011.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Barometric Pressure (mbar)

August *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1021	1021	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1021	1019	1019.8
2	1019	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1015	1015	1014	1014	1014	1014	1015	1015	1015	1019	1014	1016.2
3	1015	1015	1015	1014	1014	1015	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1014	1016.5
4	1018	1018	1018	1018	1017	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1020	1019	1019	1019	1019	1019	1019	1019	1018	1020	1017	1018.6
5	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1015	1014	1014	1015	1014	1015	1014	1014	1015	1015	1018	1014	1015.4
6	1014	1015	1015	1015	1016	1015	1015	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1016	1014	1014.8
7	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1014	1014.2
8	1015	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1014	1015.2
9	1016	1016	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1018	1019	1018	1018	1018	1018	1018	1018	1018	1019	1019	1020	1020	1016	1017.7
10	1020	1020	1020	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1020	1020.8
11	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1023	1023	1022	1022.5
12	1022	1022	1022	1022	1023	1023	1023	1023	1023	1024	1024	1023	1024	1024	1024	1023	1023	1023	1023	1024	1024	1024	1024	1025	1025	1022	1023.3
13	1025	1025	1025	1025	1025	1025	1025	1025	1025	1025	1025	1024	1024	1023	1023	1022	1022	1021	1021	1020	1020	1020	1019	1019	1025	1019	1023.0
14	1020	1019	1018	1019	1018	1019	1018	1018	1017	1017	1017	1016	1016	1015	1014	1014	1013	1013	1013	1012	1012	1012	1011	1011	1020	1011	1015.5
15	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1012	1011	1011	1011	1012	1011	1011.3
16	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1009	1011	1008	1009.5
17	1009	1009	1009	1008	1008	1008	1008	1008	1008	1009	1008	1009	1008	1009	1009	1009	1008	1009	1008	1008	1008	1008	1008	1008	1009	1008	1008.4
18	1008	1007	1007	1007	1006	1006	1005	1005	1004	1004	1003	1003	1002	1001	1000	1000	999	999	998	998	998	998	997	997	1008	997	1002.2
19	997	996	996	995	995	995	995	995	995	995	996	996	996	996	997	997	998	998	998	999	1000	1000	1001	1001	1001	995	997.0
20	1001	1002	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1001	1004.8
21	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1009	1012.0
22	1015	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1014	1014	1014	1013	1017	1013	1015.7
23	1013	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1008	1008	1007	1007	1006	1006	1006	1005	1005	1013	1005	1009.3
24	1005	1005	1005	1005	1005	1004	1004	1004	1004	1005	1005	1005	1006	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1004	1005.4
25	1007	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1009	1009	1009	1010	1010	1010	1010	1010	1010	1007	1009.0
26	1010	1011	1011	1011	1010	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1010	1010.9
27	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1012	1012.7
28	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1012	1012	1011	1011	1010	1010	1010	1010	1009	1014	1009	1012.7
29	1009	1009	1009	1008	1008	1008	1008																		1009	1008	1008.4
30																1005	1005								1005	1005	1004.8
31						1005	1005	1005	1005	1005	1005	1005													1005	1005	1004.9
Max.	1025	1025	1025	1025	1025	1025	1025	1025	1025	1025	1025	1024	1024	1024	1024	1023	1023	1023	1023	1024	1024	1024	1024	1025	1025		
Min.	997	996	996	995	995	995	995	995	995	995	996	996	996	996	997	997	998	998	998	998	998	998	997	997		995	
Avg.	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013			1013.2

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1005	006.4
2	1009	1009	1009	1010	1010	1010	1010	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1009	011.3
3	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1012	1012	1012	1012	1011	1011	1011	1014	1011	013.0
4	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1006	1006	1005	1005	1004	1003	1002	1002	1001	1000	1000	999	998	1011	998	005.1
5	997	997	996	996	996	995	995	994	994	995	995	994	994	995	995	995	995	995	996	997	997	997	997	997	997	994	995.6
6	998	998	999	999	1001	1000	1001	1001	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1006	998	002.5
7	1006	1007	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1006	011.1
8	1007	1007	1006	1006	1007	1007	1007	1007	1007	1007	1007	1006	1005	1006	1006	1006	1006	1006	1006	1007	1007	1008	1009	1009	1009	1005	006.7
9	1009	1010	1010	1010	1011	1010	1011	1011	1011	1011	1011	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1009	010.9
10	1012	1013	1013	1013	1014	1014	1015	1015	1016	1017	1017	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1012	016.9
11	1020	1020	1020	1020	1020	1020	1020	1020	1020	1021	1021	1021	1021	1020	1019	1019	1018	1017	1015	1014	1014	1013	1012	1012	1021	1012	018.3
12	1011	1011	1010	1009	1009	1008	1008	1007	1008	1008	1008	1009	1009	1009	1008	1009	1009	1010	1010	1011	1011	1012	1013	1013	1013	1007	009.6
13	1014	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1014	1014	1016	1014	015.1
14	1013	1013	1013	1013	1012	1012	1011	1011	1010	1010	1010	1009	1009	1009	1008	1007	1007	1006	1006	1005	1004	1004	1004	1003	1013	1003	008.7
15	1003	1002	1002	1002	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1004	1004	1005	1005	1005	1006	1006	1007	1007	1007	1001	003.2
16	1008	1008	1009	1009	1009	1009	1009	1009	1009	1010	1010	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1008	010.4
17	1014	1014	1014	1015	1015	1016	1017	1016	1016	1017	1017	1017	1018	1018	1018	1018	1017	1018	1018	1018	1017	1017	1017	1017	1018	1014	016.6
18	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1013	1012	1011	1010	1008	1007	1006	1005	1005	1004	1004	1017	1004	012.3
19	1004	1004	1005	1004	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006		1007	1008	1008	1008	1008	1008	1008	1004	006.0
20	1008	1008	1008	1007	1006	1006	1005	1005	1004	1004	1004	1003	1003	1002	1002	1002	1001	1001	1001	1002	1002	1002	1002	1002	1008	1001	003.7
21	1003	1003	1003	1003	1004	1004	1005	1005	1006	1006	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1010	1010	1010	1010	1003	006.7
22	1010	1010	1010	1010	1010	1010	1010	1009	1010	1009	1009	1008	1008	1007	1006	1006	1005	1005	1004	1003	1003	1002	1001	1000	1010	1000	006.8
23	1000	999	999	998	998	998	998	998	998	998	999	999	999	999	999	999	999	999	998	998	999	998	998	998	1000	998	998.6
24	998	998	998	998	998	998	998	999	1000	1000	1001	1001	1001	1002	1001	1001	1001	999	999	998	998	998	997	998	1002	997	999.1
25	998	998	999	1000	1000	1001	1002	1001	1003	1003	1003	1003	1003	1003	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1004	998	002.1
26	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1008	1008	1008	1003	005.5
27	1009	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1009	1009	1008	1007	1007	1006	1005	1004	1003	1002	1000	999	998	1010	998	006.8
28	997	996	995	992	991	990	989	988	987	986	986	986	985	985	985	985	985	985	985	986	986	987	988	989	997	985	988.1
29	990	990	991	992	992	993	993	994	994	995	995	996	996	996	996	996	996	996	995	995	995	995	995	995	996	990	994.2
30	995	995	995	995	994	994	994	994	994	994	993	993	992	992	991	990	990	989	988	988	988	987	988	988	995	987	991.6
Max.	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1021**	**1021**	**1020**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1020**	**1020**	**1021**		
Min.	**990**	**990**	**991**	**992**	**991**	**990**	**989**	**988**	**987**	**986**	**986**	**986**	**985**	**985**	**985**	**985**	**985**	**985**	**985**	**986**	**986**	**987**	**988**	**988**		**985**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1007**	**1007**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**			**006.1**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	988	988	988	988	988	988	988	989	988	989	989	989	990	990	990	991	991	991	992	992	993	993	994	994	994	988	990.0
2	995	995	996	996	996	997	997	997	998	998	999	1000	1000	1001	1001	1001	1002	1003	1003	1004	1005	1006	1006	1007	1007	995	000.1
3	1007	1008	1008	1009	1010	1010	1010	1011	1012	1012	1013	1013	1013	1013	1014	1014	1013	1014	1014	1014	1014	1014	1014	1014	1014	1007	012.0
4	1013	1013	1012	1011	1010	1009	1008	1007	1006	1007	1006	1005	1004	1003	1002	1000	999	997	996	995	994	993	993	993	1013	993	003.2
5	992	991	990	989	988	987	986	985	984	983	983	983	984	984	985	986	986	987	987	988	988	987	989	990	992	983	986.9
6	991	991	991	991	991	991	992	994	994	995	996	996	997	998	997	997	997	997	998	998	998	998	998	998	998	991	995.2
7	998	998	998	997	997	997	997	998	998	998	999	999	1000	1000	1000	1000	1001	1001	1002	1003	1003	1004	1005	1006	1006	997	999.9
8	1007	1008	1008	1009	1010	1010	1011	1012	1012	1013	1013	1014	1014	1014	1014	1015	1014	1014	1014	1014	1014	1015	1014	1014	1015	1007	012.5
9	1014	1013	1013	1012	1012	1011	1011	1010	1010	1010	1009	1009	1008	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1001	1014	1001	007.7
10	1001	1000	1000	999	999	999	998	998	998	997	997	996	996	997	996	996	996	995	996	996	997	997	997	997	1001	995	997.5
11	998	998	998	998	999	999	999	999	999	999	999	1000	1000	1000	1000	999	999	998	998	998	998	997	997	996	1000	996	998.5
12	996	995	994	994	993	992	991	991	990	990	990	989	989	988	988	987	987	986	986	985	985	985	985	984	996	984	989.1
13	984	984	983	983	982	982	982	982	982	982	982	982	983	983	984	984	985	985	986	986	987	987	987	988	988	982	983.8
14	988	989	990	990	990	991	991	992	991	991	991	991	991	991	991	991	990	990	990	989	989	989	989	990	992	988	990.2
15	990	990	990	990	990	990	990	990	991	991	991	992	992	992	992	992	992	992	992	992	992	992	993	992	993	990	991.3
16	993	993	993	993	993	993	993	993	993	992	992	992	992	992	992	992	991	991	991	991	991	991	991	991	993	991	992.0
17	991	990	990	990	990	989	989	989	989	989	989	990	990	990	990	990	990	990	990	990	990	990	990	990	991	989	989.9
18	990	990	990	990	990	990	990	990	990	990	991	991	991	991	991	991	991	991	991	991	992	992	992	992	992	990	990.8
19	993	993	993	992	992	993	993	993	993	994	994	994	995	995	995	995	995	995	996	996	996	996	997	997	997	992	994.3
20	997	997	998	998	998	998	998	998	999	999	999	1000	1000	1000	1000	1000	999	999	999	999	998	998	998	998	1000	997	998.6
21	998	998	998	998	998	998	998	998	998	997	997	998	997	997	996	996	996	996	996	996	996	996	996	996	998	996	997.0
22	996	997	997	997	998	998	998	999	999	1000	1001	1002	1002	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	996	001.1
23	1005	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1007	1007	1008	1005	006.7
24	1008	1008	1008	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1008	010.0
25	1011	1012	1011	1011	1010	1009	1008	1008	1006	1005	1004	1003	1002	1002	1001	1001	1000	1000	999	999	999	999	1000	1001	1012	999	004.3
26	1001	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1004	1004	1004	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1004	1001	002.5
27	1002	1001	1001	1001	1000	1000	999	999	999	1000	1000	1001	1000	1001	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	999	000.4
28	1001	1001	1001	1002	1001	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1003	1003	1003	1002	1002	1002	1001	1001	1000	1004	1000	002.2
29	1000	999	998	998	996	995	994	993	992	991	989	988	987	986	985	983	982	982	981	980	979	979	977	975	1000	975	987.9
30	973	971	970	968	967	965	965	964	964	964	965	967	968	969	971	972	973	975	975	976	977	979	979	980	980	964	970.7
31	981	982	983	984	985	985	987	988	990	991	991	993	994	994	994	994	994	993	993	993	992	990	988	987	994	981	989.4
Max.	**1014**	**1013**	**1013**	**1012**	**1012**	**1011**	**1011**	**1012**	**1012**	**1013**	**1013**	**1014**	**1014**	**1014**	**1014**	**1015**	**1014**	**1014**	**1014**	**1014**	**1014**	**1015**	**1014**	**1014**	**1015**		
Min.	**973**	**971**	**970**	**968**	**967**	**965**	**965**	**964**	**964**	**964**	**965**	**967**	**968**	**969**	**971**	**972**	**973**	**975**	**975**	**976**	**977**	**979**	**977**	**975**		**964**	
Avg.	**997**	**997**	**997**	**997**	**997**	**996**	**996**	**996**	**996**	**996**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**	**997**			**996.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	986	986	984	983	982	983	982	982	982	983	983	984	984	984	985	986	987	988	989	990	991	991	992	993	993	982	985.8
2	993	994	994	995	995	996	997	997	997	998	998	999	1000	1000	1000	1001	1002	1002	1003	1003	1004	1004	1005	1006	1006	993	999.3
3	1007	1007	1008	1009	1009	1010	1010	1011	1011	1011	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1014	1015	1015	1015	1007	011.7
4	1014	1014	1014	1013	1012	1012	1012	1012	1012	1012	1013	1013	1013	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1014	1011	012.1
5	1011	1010	1010	1010	1009	1009	1009	1008	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1011	1008	008.6
6	1007	1007	1006	1006	1005	1005	1004	1003	1003	1002	1001	1001	1000	999	997	997	996	996	996	996	996	997	997	998	1007	996	000.6
7	999	1000	999	1000	1000	1000	999	998	999	998	999	998	999	999	999	999	999	999	999	1000	1001	1001	1002	1002	1002	998	999.5
8	1002	1002	1002	1002	1001	1000	999	996	994	994	992	991	989	989	988	987	986	986	985	985	984	984	983	983	1002	983	991.7
9	982	981	981	980	980	979	978	978	977	978	977	977	977	976	976	976	975	975	975	975	975	975	975	975	982	975	977.2
10	975	974	974	974	974	974	974	975	975	975	975	975	975	975	975	975	976	977	977	978	979	979	980	981	981	974	975.9
11	981	981	982	982	982	983	983	983	984	984	984	985	985	985	985	985	985	986	986	986	987	987	987	988	988	981	984.4
12	988	988	988	988	988	989	988	988	989	989	989	990	989	990	990	990	990	990	990	991	991	990	990	990	991	988	989.3
13	990	990	990	989	989	989	989	988	988	987	986	985	986	986	987	987	987	987	987	987	987	988	988	989	990	985	987.7
14	989	990	990	990	990	990	990	990	990	990	991	991	991	991	991	991	991	991	991	991	991	991	992	991	992	989	990.6
15	991	991	990	990	990	990	990	990	989	989	989	989	989	988	988	988	987	986	986	985	985	985	984	984	991	984	988.0
16	983	983	983	982	982	982	983	983	983	984	984	984	985	985	985	986	986	986	988	988	989	990	990	991	991	982	985.2
17	992	992	992	993	993	993	994	995	995	995	996	996	997	997	997	997	997	998	998	998	998	999	999	999	999	992	995.8
18	999	1000	1000	1000	1000	999	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1002	1002	1003	1003	1004	1004	1005	1005	999	001.1
19	1006	1006	1006	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1009	1008	1008	1007	1006	1005	1003	1002	1001	1000	999	1009	999	006.2
20	998	997	996	995	994	994	993	993	993	994	994	994	994	993	993	991	991	990	990	988	987	987	987	987	998	987	992.1
21	988	988	988	989	991	993	994	996	998	999	999	999	1000	1002	1004	1006	1007	1008	1010	1011	1012	1012	1012	1012	1012	988	000.6
22	1012	1011	1009	1008	1007	1006	1005	1003	1003	1003	1001	1000	999	998	997	995	994	994	994	994	995	996	996	996	1012	994	000.7
23	997	997	997	996	996	996	996	996	995	995	996	995	996	995	996	996	996	996	996	997	997	997	998	998	998	995	996.2
24	998	999	999	999	999	999	1000	1000	999	999	999	999	999	998	998	997	996	995	995	995	994	994	995	995	1000	994	997.6
25	996	996	995	994	992	990	989	988	986	985	984	983	982	981	980	979	978	977	976	976	975	975	974	974	996	974	983.5
26	974	974	974	975	976	978	981	983	986	988	990	992	994	996	998	1000	1001	1003	1005	1006	1008	1008	1009	1010	1010	974	991.9
27	1011	1012	1012	1011	1011	1010	1010	1009	1009	1009	1008	1008	1007	1006	1005	1004	1004	1004	1004	1004	1004	1004	1005	1006	1012	1004	007.4
28	1006	1007	1008	1009	1010	1011	1013	1014	1016	1017	1018	1020	1021	1022	1023	1024	1025	1025	1027	1027	1027	1029	1029	1030	1030	1006	019.1
29	1030	1031	1031	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1032	1031	1031	1030	1030	1031	1030	1030	1030	1030	1030	1032	1030	031.1
30	1030	1030	1030	1029	1029	1028	1027	1027	1027	1027	1027	1026	1026	1026	1025	1024	1023	1023	1022	1022	1022	1022	1022	1022	1030	1022	025.7
Max.	**1030**	**1031**	**1031**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1032**	**1031**	**1031**	**1030**	**1030**	**1031**	**1030**	**1030**	**1030**	**1030**	**1030**	**1032**		
Min.	**974**	**974**	**974**	**974**	**974**	**974**	**974**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**975**	**974**	**974**		**974**	
Avg.	**998**	**998**	**998**	**998**	**997**	**997**	**997**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**			**997.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1022	1022	1023	1023	1024	1024	1024	1023	1023	1023	1023	1022	1021	1021	1020	1019	1018	1018	1017	1016	1015	1013	1012	1011	1024	1011	019.9
2	1010	1009	1008	1007	1006	1005	1003	1003	1002	1001	1000	999	998	998	997	995	995	996	996	996	996	996	996	996	1010	995	000.4
3	997	996	996	996	996	996	995	995	994	994	994	994	993	993	992	992	991	991	991	991	991	991	991	991	997	991	993.5
4	990	990	990	990	989	988	989	989	990	991	992	993	995	997	998	999	1001	1002	1003	1004	1005	1007	1008	1009	1009	988	996.1
5	1011	1012	1013	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1017	1017	1011	015.6
6	1016	1015	1015	1014	1014	1013	1012	1012	1011	1010	1010	1010	1009	1009	1009	1008	1009	1009	1009	1011	1012	1012	1013	1014	1016	1008	011.5
7	1015	1015	1016	1016	1016	1016	1016	1016	1016	1015	1015	1016	1015	1013	1012	1010	1008	1006	1005	1003	1001	1000	1000	1000	1016	1000	010.9
8	1001	1001	1002	1002	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1006	1007	1008	1008	1009	1011	1011	1001	004.4
9	1011	1012	1014	1014	1014	1013	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1014	1014	1013	1012	1011	1010	1008	1015	1008	013.1
10	1006	1005	1002	1000	997	994	992	990	988	986	985	983	982	981	981	981	981	983	984	985	986	987	989	990	1006	981	989.0
11	991	992	992	993	994	995	996	997	997	998	998	999	999	1000	1001	1001	1000	1000	1000	1000	1001	1001	1001	1001	1001	991	997.8
12	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1004	1004	1005	1005	1006	1006	1007	1007	1008	1008	1009	1009	1010	1010	1010	1001	004.8
13	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	010.9
14	1011	1011	1011	1010	1010	1009	1009	1009	1008	1008	1007	1007	1006	1005	1004	1003	1001	1001	1000	1000	999	998	998	998	1011	998	005.1
15	997	998	997	997	998	998	998	998	998	999	999	998	998	997	998	997	997	997	998	998	998	998	998	999	999	997	997.9
16	998	998	998	998	998	998	998	997	997	996	996	996	996	995	995	994	993	993	992	991	992	991	990	990	998	990	994.9
17	990	991	990	990	990	990	990	990	990	991	991	992	992	992	992	992	993	993	993	993	993	993	993	993	993	990	991.6
18	993	993	993	993	993	992	992	992	992	992	992	992	992	992	992	992	993	993	993	993	994	994	994	995	995	992	992.9
19	995	996	996	996	997	997	997	998	998	998	999	999	1000	1000	1000	1000	1000	1000	1001	1001	1001	1002	1002	1002	1002	995	998.8
20	1002	1002	1001	1001	1001	1000	1000	999	999	998	998	998	996	995	994	993	992	991	991	990	990	990	990	990	1002	990	995.9
21	990	990	990	989	988	988	987	987	986	986	987	987	987	987	987	987	986	986	986	985	985	985	985	984	990	984	986.8
22	984	984	983	983	983	983	982	982	983	983	983	984	984	984	984	984	985	985	985	985	985	986	986	986	986	982	984.0
23	987	987	987	988	989	990	990	990	990	991	992	992	993	993	994	994	995	995	996	997	998	998	999	1000	1000	987	992.7
24	1000	1000	999	998	998	997	997	995	995	993	992	991	990	989	988	987	986	987	987	988	989	990	990	991	1000	986	992.4
25	992	993	995	995	995	997	997	998	999	1000	1002	1003	1004	1005	1007	1008	1007	1008	1009	1010	1011	1011	1011	1012	1012	992	002.9
26	1012	1013	1012	1012	1012	1011	1010	1008	1007	1006	1004	1004	1002	1000	998	997	997	996	995	994	994	993	992	992	1013	992	002.7
27	991	991	990	990	988	988	987	987	986	986	986	985	985	985	984	984	984	984	984	985	985	986	986	987	991	984	986.4
28	987	988	990	991	991	992	992	992	993	993	993	993	993	993	993	993	993	993	993	994	994	994	995	995	995	987	992.4
29	995	996	996	996	996	996	997	997	998	997	998	999	999	999	1000	1000	1000	1001	1001	1002	1002	1003	1004	1004	1004	995	999.0
30	1005	1006	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1009	1009	1008	1007	1007	1006	1005	1005	1004	1005	1005	1006	1009	1004	006.8
31	1007	1008	1008	1009	1009	1010	1010	1010	1011	1011	1011	1011	1012	1011	1011	1010	1009	1007	1006	1005	1004	1003	1002	1000	1012	1000	008.2
Max.	**1022**	**1022**	**1023**	**1023**	**1024**	**1024**	**1024**	**1023**	**1023**	**1023**	**1023**	**1022**	**1021**	**1021**	**1020**	**1019**	**1018**	**1018**	**1017**	**1017**	**1017**	**1016**	**1016**	**1017**	**1024**		
Min.	**984**	**984**	**983**	**983**	**983**	**983**	**982**	**982**	**983**	**983**	**983**	**983**	**982**	**981**	**981**	**981**	**981**	**983**	**984**	**985**	**985**	**985**	**985**	**984**		**981**	
Avg.	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**			**000.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

January 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	1.0	2.1	3.1	2.7	2.8	3.3	3.0	4.6	4.9	7.6	8.6	9.1	9.3	8.9	8.0	8.5	8.3	8.6	7.7	5.5	6.3	7.3	7.3	7.1	9.3	1.0	6.1
2	8.1	7.4	7.2	8.1	8.9	8.4	8.6	9.0	9.7	9.9	8.9	8.4	10.0	9.9	6.0	4.1	3.8	7.0	7.3	7.3	8.4	9.5	9.9	10.7	10.7	3.8	8.2
3	10.1	8.0	10.2	13.8	15.7	14.7	15.3	13.7	13.7	15.1	16.2	16.0	14.4	14.2	12.8	12.5	12.9	11.1	10.2	9.2	9.1	8.7	6.7	10.2	16.2	6.7	12.3
4	10.6	8.9	7.1	5.4	6.3	6.4	5.0	2.6	2.9	5.7	4.5	4.2	5.0	5.9	6.3	6.1	5.1	5.3	4.8	5.2	3.8	3.1	3.0	3.0	10.6	2.6	5.3
5	3.0	2.4	4.2	7.0	7.4	7.8	9.4	8.3	6.7	7.8	6.8	8.4	7.2	7.0	10.5	8.6	14.5	10.0	7.7	11.3	7.1	4.4	7.7	7.4	14.5	2.4	7.6
6	5.0	7.6	7.5	4.3	5.2	6.5	6.8	6.6	4.9	3.8	3.7	5.7	4.4	2.7	5.1	4.9	6.8	8.0	9.4	10.4	9.8	11.6	10.7	11.5	11.6	2.7	6.8
7	12.8	11.7	10.5	10.7	11.3	14.2	15.0	13.4	13.6	16.6	13.2	9.6	9.2	8.5	7.5	9.2	9.7	8.2	11.7	9.7	14.2	9.7	11.7	9.8	16.6	7.5	11.3
8	9.1	8.3	9.9	12.2	10.5	11.2	12.3	9.9	10.6	11.2	8.8	7.2	7.7	8.7	9.9	9.2	9.4	9.3	7.5	7.5	7.8	4.7	5.3	3.7	12.3	3.7	8.8
9	4.6	5.9	4.6	5.7	6.1	6.3	4.7	3.6	4.2	3.6	3.7	3.7	3.7	4.0	2.7	2.8	2.7	3.3	3.7	3.4	3.2	3.2	3.4	3.3	6.3	2.7	4.0
10	3.6	1.9	2.6	4.9	6.4	7.7	8.2	8.3	7.4	8.9	9.9	9.0	9.4	9.2	9.3	9.1	9.3	8.7	8.5	8.2	8.3	7.8	8.0	7.9	9.9	1.9	7.6
11	8.4	7.6	7.8	7.4	8.1	7.5	7.0	6.8	6.2	5.5	6.1	6.0	5.9	5.5	5.9	5.2	5.0	5.5	6.0	5.1	5.5	5.9	5.6	5.0	8.4	5.0	6.3
12	5.2	5.9	5.8	6.7	7.1	6.4	6.4	6.6	6.6	5.9	6.2	6.4	6.5	6.3	6.5	6.6	7.3	7.2	7.6	7.0	6.2	5.8	4.1	7.7	7.7	4.1	6.4
13	15.0	15.8	13.1	11.2	10.4	8.9	7.1	4.8	3.6	2.3	1.7	3.3	3.3	3.5	2.7	3.3	3.6	4.4	3.9	2.3	3.3	2.8	1.2	2.0	15.8	1.2	5.6
14	1.5	1.7	1.8	2.6	2.4	3.0	3.2	3.3	3.2	3.7	3.1	3.0	2.7	4.4	6.2	10.7	12.8	15.6	14.7	11.3	7.2	7.6	6.4	5.8	15.6	1.5	5.7
15	6.4	4.7	6.8	9.7	6.9	5.9	7.5	6.2	3.7	4.8	4.5	4.4	5.2	8.2	8.3	7.8	8.8	7.0	8.5	8.6	9.6	9.6	6.5	5.2	9.7	3.7	6.9
16	5.0	3.7	3.5	6.1	5.1	5.5	6.8	6.6	6.1	7.0							11.0	11.0	11.3	11.3	11.4	11.0	10.0	10.5	11.4	3.5	7.9
17	9.3	8.3	7.1	6.2	6.5	5.6	6.0	5.8	5.7	6.2	5.4	6.3	6.5	7.1	7.0	6.4	6.6	6.6	6.2	4.7	5.8	4.4	4.5	5.5	9.3	4.4	6.2
18	7.8	7.5	7.4	8.4	7.7	7.8	6.7	7.2	5.9	4.0	2.3	2.2	1.7	2.5	1.7	1.4	1.9	2.6	2.1	6.0	7.5	5.9	6.7	6.2	8.4	1.4	5.0
19	5.6	4.0	3.2	3.3	4.8	3.8	5.1	4.3	2.6	2.3	2.2	1.9	2.2	2.9	5.2	5.5	6.3	5.9	5.7	5.1	5.2	4.6	5.4	5.4	6.3	1.9	4.3
20	5.2	5.8	6.0	5.7	5.3	4.7	5.5	5.3	6.6	6.1	6.5	7.1	6.4	5.7	7.4	7.0	5.7	4.9	2.9	1.3	3.8	4.6	5.6	6.4	7.4	1.3	5.5
21	7.8	8.2	8.4	5.8	5.5	7.0	5.8	9.2	9.2	9.4	8.6	8.0	8.4	8.6	7.6	6.8	7.1	7.5	6.3	5.4	6.4	7.1	6.3	2.3	9.4	2.3	7.2
22	3.2	1.7	1.8	1.4	2.4	3.4	4.4	4.4	5.3	5.7	5.8	5.1	5.3	5.7	3.2	1.3	1.7	3.6	3.6	4.0	4.0	5.2	5.1	4.1	5.8	1.3	3.8
23	4.9	5.4	5.0	5.2	6.7	6.8	6.7	7.3	8.8	8.6	9.2	10.5	9.6	10.5	10.9	12.2	13.4	13.7	13.3	13.7	11.7	9.6	12.6	11.5	13.7	4.9	9.5
24	8.7	8.9	9.4	8.9	9.7	8.9	8.6	7.8	7.9	8.6	9.3	9.6	11.3	8.1	8.3	10.2	9.1	6.7	6.4	4.4	4.0	5.8	3.5	5.4	11.3	3.5	7.9
25	5.7	5.3	5.4	7.8	9.7	11.4	12.5	14.0	13.1	13.4	14.7	14.1	15.3	14.1	13.7	14.1	12.9	11.0	10.1	10.1	9.0	10.3	9.5	9.0	15.3	5.3	11.1
26	8.4	8.7	8.8	7.2	6.5	7.7	7.3	5.6	6.4	4.8	3.8	2.7	3.2	3.5	2.6	2.1	2.9	2.1	2.9	1.8	2.0	1.9	2.8	3.0	8.8	1.8	4.5
27	2.4	2.0	2.5	2.5	2.7	2.8	3.5	3.9	4.9	4.6	4.0	5.0	7.7	7.8	7.4	7.6	8.9	11.2	11.9	10.8	10.0	9.5	9.0	8.9	11.9	2.0	6.3
28	8.9	8.2	8.1	7.1	6.6	6.1	6.6	6.6	5.1	5.3	5.3	5.2	4.4	4.6	4.1	4.6	3.8	3.5	4.1	4.0	5.1	4.6	6.4	5.8	8.9	3.5	5.6
29	6.5	7.2	7.1	8.7	10.6	11.1	11.0	11.4	11.6	13.8	14.7	12.2	11.2	11.4	11.9	11.5	10.7	10.5	10.9	10.6	9.5	9.9	8.3	6.5	14.7	6.5	10.4
30	5.9	5.4	4.0	3.9	3.6	4.4	5.8	6.4	7.3	8.4	10.4	11.0	9.0	6.8	9.3	9.5	7.8	6.3	4.5	2.8	3.1	5.3	5.5	5.1	11.0	2.8	6.3
31	6.1	7.4	7.0	7.8	6.6	6.9	6.1	4.7	3.6	2.8	3.1	3.6	2.4	3.6	4.5	3.2	2.8	3.3	5.1	2.3	3.8	3.3	4.2	3.3	7.8	2.3	4.5
Max.	**15.0**	**15.8**	**13.1**	**13.8**	**15.7**	**14.7**	**15.3**	**14.0**	**13.7**	**16.6**	**16.2**	**16.0**	**15.3**	**14.2**	**13.7**	**14.1**	**14.5**	**15.6**	**14.7**	**13.7**	**14.2**	**11.6**	**12.6**	**11.5**	**16.6**		
Min.	**1.0**	**1.7**	**1.8**	**1.4**	**2.4**	**2.8**	**3.0**	**2.6**	**2.6**	**2.3**	**1.7**	**1.9**	**1.7**	**2.5**	**1.7**	**1.3**	**1.7**	**2.1**	**2.1**	**1.3**	**2.0**	**1.9**	**1.2**	**2.0**		**1.0**	
Avg.	**6.6**	**6.4**	**6.3**	**6.7**	**7.0**	**7.2**	**7.4**	**7.0**	**6.8**	**7.2**	**7.0**	**7.0**	**7.0**	**7.0**	**7.1**	**7.1**	**7.5**	**7.4**	**7.3**	**6.8**	**6.8**	**6.6**	**6.5**	**6.4**			**6.9**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.3	6.8	7.5	7.8	6.6	6.6	6.6	8.1	10.1	9.9	8.7	8.4	8.1	8.4	7.5	10.5	12.5	11.1	11.7	9.8	9.6	7.6	7.7	9.2	12.5	4.3	8.5
2	7.7	7.3	7.3	4.5	3.2	3.5	3.8	3.4	3.6	3.4	3.1	2.4	2.3	2.8	2.3	2.4	2.5	2.3	2.1	2.7	2.3	2.4	2.5	2.5	7.7	2.1	3.4
3	2.4	2.9	2.9	3.3	2.1	2.6	3.1	3.4	2.7	3.1	3.7	3.8	3.5	2.4	1.5	0.8	0.9	0.9	1.0	1.0	0.9	1.0	0.8	0.6	3.8	0.6	2.1
4	0.7	1.4	1.6	2.5	1.1	2.2	1.7	1.1	2.1	3.1	2.8	1.9	2.9	3.1	1.8	1.4	1.7	1.4	1.3	0.7	2.2	1.5	2.4	1.1	3.1	0.7	1.8
5	1.5	1.9	2.4	2.5	1.5	1.6	1.3	2.8	2.1	0.8	1.5	2.4	2.7	2.4	1.5	0.8	0.8	0.9	0.9	1.2	0.7	1.5	3.6	4.3	4.3	0.7	1.8
6	5.5	7.1	7.8	6.8	6.5	7.6	6.2	6.2	6.6	6.5	6.1	6.7	6.3	5.4	5.1	5.4	5.6	6.1	5.6	5.5	7.2	7.6	8.4	6.9	8.4	5.1	6.4
7	6.8	4.7	4.3	3.3	3.0	1.6	1.5	1.7	2.6	3.0	3.3	4.1	3.9	3.4	2.3	3.0	2.9	2.8	3.8	0.8	1.2	0.7	1.4	1.3	6.8	0.7	2.8
8	1.0	0.7	0.5	0.8	0.9	0.6	0.6	0.7	1.9	2.0	2.0	3.2	1.8	1.0	0.6	0.7	0.9	0.8	1.1	0.6	0.4	2.2	2.4	3.0	3.2	0.4	1.3
9	3.2	3.0	4.1	3.2	3.0	3.6	2.1	2.0	3.6	3.0	3.5	4.1	3.5	3.0	1.6	0.7	1.5	1.3	1.7	1.7	1.3	1.0	1.0	1.4	4.1	0.7	2.4
10	0.7	1.4	0.6	0.9	0.7	0.7	1.4	1.6	2.0	0.6	1.1	1.6	1.3	1.3	1.9	2.0	1.6	1.4	1.5	1.9	2.3	2.1	1.2	1.1	2.3	0.6	1.4
11	1.1	1.2	1.6	1.9	1.8	4.9	5.9	5.8	4.6	4.8	6.7	7.2	7.5	7.0	6.8	6.7	6.6	6.5	6.8	7.3	7.8	7.6	7.6	7.5	7.8	1.1	5.5
12	8.2	7.6	8.4	8.0	6.8	7.6	7.7	7.6	6.8	5.7	6.3	6.5	5.6	5.9	6.6	6.2	6.5	7.6	8.1	7.5	7.5	9.1	9.5	8.9	9.5	5.6	7.3
13	10.1	10.6	11.8	12.1	11.2	11.6	11.6	11.3	10.9	9.9	9.6	10.2	10.9	10.5	9.8	9.3	8.7	8.0	8.3	7.6	7.2	7.3	7.7	7.0	12.1	7.0	9.7
14	5.5	5.5	5.0	5.5	4.9	5.2	5.1	5.0	4.3	4.0	4.3	4.5	3.8	4.4	4.4	3.8	2.3	1.1	1.4	1.1	3.5	2.2	0.7	1.6	5.5	0.7	3.7
15	4.4	4.3	4.1	3.7	2.2	1.0	1.8	1.5	0.5	1.2	2.9	2.1	1.5	2.7	2.2	2.3	2.3	1.8	1.2	0.9	1.1	1.9	2.7	2.8	4.4	0.5	2.2
16	2.9	2.9	2.8	1.6	1.3	2.4	1.8	1.8	2.4	2.4	0.9	0.7	1.5	1.1	2.2	1.7	1.7	0.9	1.2	1.3	0.9	1.1	1.5	1.4	2.9	0.7	1.7
17	0.7	1.2	2.1	1.4	1.1	1.6	2.4	2.5	2.6	2.5	2.3	3.6	2.9	2.5	1.3	2.8	3.4	3.9	4.0	3.2	3.9	4.2	3.4	3.7	4.2	0.7	2.6
18	2.8	2.2	1.9	1.5	1.1	1.7	0.8	1.1	1.3	1.8	3.0	3.3	2.2	0.6	1.1	1.8	2.3	1.3	0.8	1.8	1.8	1.6	2.0	1.4	3.3	0.6	1.7
19	0.6	1.0	2.9	5.9	6.5	5.2	2.5	2.6	5.7	6.4	5.9	5.6	5.9	6.3	7.6	7.7	7.1	7.4	7.3	4.9	2.3	1.9	2.3	6.2	7.7	0.6	4.9
20	5.4	5.8	8.7	10.0	8.6	10.1	7.2	7.0	6.7	9.5	8.4	7.2	5.4	8.7	7.0	5.6	5.7	7.3	7.1	8.1	10.5	11.4	10.7	11.8	11.8	5.4	8.1
21	10.7	11.2	9.1	6.2	6.1	5.3	5.3	4.9	4.1	3.8	4.4	3.7	3.9	2.9	1.8	3.3	2.8	4.5	5.2	3.7	2.5	1.0	1.2	2.6	11.2	1.0	4.6
22	2.6	4.7	5.0	6.4	6.8	7.1	5.9	5.5	4.8	5.3	5.6	5.7	4.0	3.0	3.4	2.7	3.0	1.8	2.4	2.7	2.6	2.3	2.7	3.0	7.1	1.8	4.1
23	2.6	2.9	3.2	2.9	2.4	2.9	3.5	3.1	3.0	4.3	5.2	5.8	5.2	4.4	4.2	3.8	3.2	3.5	3.5	4.0	4.5	4.5	6.0	5.4	6.0	2.4	3.9
24	5.6	6.6	6.5	7.2	9.1	8.0	8.1	7.7	7.8	6.1	5.9	7.0	4.1	4.5	6.3	6.0	5.4	4.8	5.1	8.2	9.1	7.8	6.0	6.4	9.1	4.1	6.6
25	7.9	3.8	5.0	5.6	6.7	10.6	10.9	12.1	12.5	13.5	13.4	13.6	10.8	12.1	9.1	7.5	5.1	5.7	7.5	11.7	8.4	7.8	6.4	3.2	13.6	3.2	8.8
26	1.9	3.6	3.7	2.2	2.7	2.9	4.4	5.2	5.1	4.8	5.1	4.6	4.3	6.0	4.9	5.1	6.1	8.8	13.1	12.4	11.3	10.2	8.1	7.4	13.1	1.9	6.0
27	9.5	9.3	9.1	6.7	4.9	4.2	2.1	1.4	1.7	2.8	3.3	3.3	3.6	3.5	2.9	1.3	2.7	2.5	2.3	3.6	3.3	2.9	2.6	2.5	9.5	1.3	3.8
28	2.5	2.5	2.8	2.5	2.0	2.2	2.6	3.3	3.7	4.1	4.6	4.9	3.8	2.7	2.6	2.1	1.3	1.5	1.8	1.9	2.5	2.9	3.6	3.7	4.9	1.3	2.8
Max.	**10.7**	**11.2**	**11.8**	**12.1**	**11.2**	**11.6**	**11.6**	**12.1**	**12.5**	**13.5**	**13.4**	**13.6**	**10.9**	**12.1**	**9.8**	**10.5**	**12.5**	**11.1**	**13.1**	**12.4**	**11.3**	**11.4**	**10.7**	**11.8**	**13.6**		
Min.	**0.6**	**0.7**	**0.5**	**0.8**	**0.7**	**0.6**	**0.6**	**0.7**	**0.5**	**0.6**	**0.9**	**0.7**	**1.3**	**0.6**	**0.6**	**0.7**	**0.8**	**0.8**	**0.8**	**0.6**	**0.4**	**0.7**	**0.7**	**0.6**		**0.4**	
Avg.	**4.2**	**4.4**	**4.7**	**4.5**	**4.1**	**4.5**	**4.2**	**4.3**	**4.5**	**4.6**	**4.8**	**4.9**	**4.4**	**4.4**	**3.9**	**3.8**	**3.8**	**3.9**	**4.2**	**4.2**	**4.2**	**4.1**	**4.1**	**4.2**			**4.3**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.0	3.7	3.3	3.9	4.6	3.9	3.6	3.0	3.4	4.2	5.5	5.7	4.7	3.8	3.4	3.0	2.5	1.7	4.9	4.9	4.4	3.1	2.4	2.9	5.7	1.7	3.8
2	2.8	2.8	4.4	4.7	3.8	3.3	3.8	2.4	3.3	5.5	5.5	4.4	3.2	2.7	2.8	2.5	1.7	1.8	5.7	6.1	4.6	4.3	4.0	5.0	6.1	1.7	3.8
3	4.9	4.1	5.3	4.7	5.3	4.7	4.3	3.7	3.8	6.5	6.0	3.4	2.9	3.1	4.5	3.2	2.6	4.0	5.7	7.4	7.1	6.3	8.3	6.7	8.3	2.6	4.9
4	6.1	6.2	5.8	6.0	4.8	3.2	4.1	4.0	4.2	4.3	4.8	4.3	2.9	2.8	2.7	2.8	1.4	1.0	2.5	3.4	5.7	6.1	5.6	6.7	6.7	1.0	4.2
5	7.9	7.0	7.3	7.1	7.5	7.6	8.4	8.2	6.9	7.4	7.3	5.1	4.0	3.4	3.5	3.1	2.6	2.9	4.0	2.5	2.4	4.1	6.9	6.7	8.4	2.4	5.6
6	6.3	5.6	5.3	6.5	5.1	4.2	4.1	5.0	5.0	5.1	4.3	6.1	6.3	8.3	9.2	9.2	8.3	8.3	8.8	9.5	8.9	8.7	8.2	8.2	9.5	4.1	6.9
7	8.4	8.1	9.2	8.8	8.8	10.0	10.6	7.6	5.0	9.0	11.3	11.1	11.6	12.0	11.1	10.2	10.5	10.7	9.9	10.5	10.7	12.3	12.5	11.8	12.5	5.0	10.1
8	11.5	10.1	10.5	9.0	8.8	8.2	7.0	5.3	1.9	1.6	3.1	3.2	3.7	3.1	3.7	4.3	5.4	4.4	6.1	8.0	5.2	4.1	3.1	4.9	11.5	1.6	5.7
9	5.2	4.5	5.8	4.2	6.5	5.4	4.1	3.7	5.1	5.1	6.2	5.8	6.1	5.1	5.2	3.7	2.7	2.0	3.6	4.4	3.0	5.4	3.6	5.3	6.5	2.0	4.7
10	4.2	4.9	5.9	5.0	4.4	3.6	3.6	5.8	3.6	3.2	4.0	2.1	2.0	1.9	2.3	1.8	5.7	5.1	6.9	5.8	5.8	5.9	6.6	8.1	8.1	1.8	4.5
11	7.8	7.7	7.9	7.6	8.2	11.1	8.5	5.2	6.0	7.9	6.3	6.2	4.6	3.3	3.2	3.5	4.2	7.7	9.4	9.0	9.3	6.4	4.8	6.7	11.1	3.2	6.8
12	5.2	6.5	7.5	7.1	6.8	5.1	6.2	7.6	5.5	5.9	5.9	6.0	9.4	11.7	10.8	9.0	7.1	8.8	12.2	14.2	12.0	11.4	10.8	10.2	14.2	5.1	8.4
13	10.8	8.1	7.3	7.9	7.5	9.2	12.2	12.7	12.5	6.5	5.8	6.2	6.4	9.3	16.5	8.7	9.5	9.9	9.0	8.9	11.3	13.1	13.1	10.0	16.5	5.8	9.7
14	7.6	7.5	5.7	6.3	7.3	7.8	6.5	5.6	5.6	6.2	7.0	5.1	4.7	4.6	4.2	3.9	4.4	5.1	6.4	6.9	5.8	6.1	4.8	4.5	7.8	3.9	5.8
15	6.9	6.4	6.9	6.2	6.8	7.3	7.3	6.7	7.0	7.2	5.8	3.9	3.5	3.2	4.3	3.1	3.0	1.4	2.6	5.7	6.1	4.9	4.3	3.5	7.3	1.4	5.2
16	3.0	3.2	3.0	3.7	3.9	4.1	4.6	6.0	7.0	7.1	6.8	5.9	4.6	4.4	4.0	3.0	2.9	5.3	4.6	6.4	5.3	6.1	6.4	5.9	7.1	2.9	4.9
17	5.4	5.7	5.5	5.0	4.9	6.4	5.7	4.9	5.8	6.5	5.6	4.3	2.6	3.9	4.7	2.8	1.7	1.2	2.4	3.3	2.4	3.2	2.9	3.0	6.5	1.2	4.2
18	3.1	2.6	2.7	3.1	3.0	3.1	3.3	3.4	3.8	5.2	6.2	5.0	3.8	3.3	3.7	3.5	2.8	2.4	2.4	5.0	5.0	5.7	3.4	3.8	6.2	2.4	3.7
19	2.7	4.7	5.0	6.4	6.8	6.8	6.4	4.2	5.3	5.9	5.2	3.8	3.7	3.9	3.7	3.7	2.8	4.9	1.8	2.3	2.0	2.8	2.6	2.2	6.8	1.8	4.2
20	2.7	3.0	3.4	4.0	3.6	3.6	5.8	5.3	6.1	6.7	7.8	9.1	9.0	9.0	9.3	9.8	9.9	10.8	11.9	12.0	11.5	10.8	10.2	9.8	12.0	2.7	7.7
21	8.2	8.1	7.2	6.4	5.5	3.4	2.1	1.6	1.2	0.6	8.0	4.7	5.9	10.2	7.2	6.8	5.7	5.0	7.5	10.3	5.9	8.2	8.5	7.7	10.3	0.6	6.1
22	13.4	9.6	5.8	5.2	8.4	11.3	6.8	5.9	5.9	4.4	3.1	2.6	2.8	3.4	1.7	1.3	2.3	1.2	1.7	5.1	5.6	5.6	7.2	7.3	13.4	1.2	5.3
23	7.7	7.7	7.9	7.6	7.1	7.4	8.0	9.9	11.7	11.5	12.2	12.2	11.6	12.8	10.2	9.7	9.3	9.8	9.1	11.5	10.3	10.3	11.2	8.9	12.8	7.1	9.8
24	6.8	6.5	6.9	9.6	9.7	9.0	12.3	10.9	11.2	11.3	10.0	9.8	9.2	10.2	10.9	10.3	9.8	9.2	9.7	8.5	7.7	6.6	5.7	6.5	12.3	5.7	9.1
25	6.1	3.7	4.3	2.9	3.8	4.6	5.2	4.5	2.5	3.8	5.8	3.6	4.2	3.1	3.2	3.6	1.8	2.1	1.2	1.9	2.8	4.5	5.9	5.5	6.1	1.2	3.8
26	5.9	7.5	7.6	7.5	7.4	7.8	8.9	9.8	9.5	9.8	8.2	7.6	9.1	9.7	8.3	8.6	8.5	8.0	5.5	1.0	1.6	3.0	3.0	1.8	9.8	1.0	6.9
27	1.4	1.7	3.5	2.3	3.4	5.1	4.4	5.7	6.7	6.6	4.7	3.9	3.6	3.4	2.6	3.2	5.0	6.1	3.4	6.0	6.5	3.9	5.1	4.3	6.7	1.4	4.3
28	5.7	5.9	5.8	4.9	5.4	6.2	7.0	6.3	8.5	8.5	8.0	6.7	4.4	4.0	3.5	3.3	5.5	6.9	7.3	8.7	8.5	9.7	9.6	6.7	9.7	3.3	6.5
29	8.0	8.2	8.0	7.4	7.6	8.7	8.6	7.7	7.0	7.1	6.6	6.1	7.8	8.5	6.2	6.6	7.1	5.0	4.3	3.2	5.2	4.3	4.4	5.1	8.7	3.2	6.6
30	3.9	4.5	4.8	3.9	3.1	3.4	3.0	2.9	4.7	5.4	4.6	3.1	1.4	1.1	1.3	1.3	1.6	2.4	1.4	2.4	2.2	0.8	1.8	1.9	5.4	0.8	2.8
31	1.9	2.5	1.6	2.5	1.6	0.9	1.3	0.6	1.6	1.4	0.9	2.5	3.0	2.8	3.0	3.0	2.9	2.0	1.2	1.1	2.4	3.3	3.4	3.0	3.4	0.6	2.1
Max.	**13.4**	**10.1**	**10.5**	**9.6**	**9.7**	**11.3**	**12.3**	**12.7**	**12.5**	**11.5**	**12.2**	**12.2**	**11.6**	**12.8**	**16.5**	**10.3**	**10.5**	**10.8**	**12.2**	**14.2**	**12.0**	**13.1**	**13.1**	**11.8**	**16.5**		
Min.	**1.4**	**1.7**	**1.6**	**2.3**	**1.6**	**0.9**	**1.3**	**0.6**	**1.2**	**0.6**	**0.9**	**2.1**	**1.4**	**1.1**	**1.3**	**1.3**	**1.4**	**1.0**	**1.2**	**1.0**	**1.6**	**0.8**	**1.8**	**1.8**		**0.6**	
Avg.	**6.0**	**5.7**	**5.8**	**5.7**	**5.8**	**6.0**	**6.1**	**5.7**	**5.7**	**6.0**	**6.2**	**5.5**	**5.2**	**5.6**	**5.5**	**4.9**	**4.9**	**5.1**	**5.6**	**6.3**	**6.0**	**6.2**	**6.1**	**6.0**			**5.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.0	2.8	3.0	2.9	2.7	2.9	3.3	3.2	3.1	3.7	2.8	1.3	1.6	1.8	2.3	2.0	1.8	2.0	1.2	1.2	1.3	0.9	1.7	1.1	3.7	0.9	2.2
2	2.1	3.0	3.0	3.6	3.0	2.0	1.8	1.7	2.0	2.2	1.6	2.1	1.6	1.7	1.6	2.0	1.2	1.6	1.4	4.1	5.1	5.0	5.0	3.9	5.1	1.2	2.6
3	5.0	4.7	4.3	3.9	4.7	5.1	5.6	5.0	5.2	4.8	5.3	4.7	4.6	5.1	4.9	3.8	4.3	4.4	4.8	5.0	4.8	4.6	3.9	3.1	5.6	3.1	4.6
4	4.0	4.5	5.4	5.5	5.3	5.0	5.5	5.2	4.7	5.0	6.7	6.9	7.5	6.9	6.7	6.3	6.5	6.4	7.8	7.3	7.7	8.2	8.2	10.0	10.0	4.0	6.4
5	12.0	11.3	11.3	11.8	9.9	11.4	12.1	13.2	13.7	11.4	10.0	10.8	11.0	11.6	13.2	14.3	9.5	8.6	8.5	8.3	8.0	8.2	6.2	5.7	14.3	5.7	10.5
6	7.8	8.0	8.3	7.9	8.5	7.8	8.0	7.7	8.8	9.1	8.5	9.3	8.7	9.7	9.0	9.0	7.4	6.7	5.7	6.5	8.8	7.7	9.1	9.1	9.7	5.7	8.2
7	7.8	8.4	8.3	4.9	3.1	3.4	4.3	2.8	4.3	4.2	4.3	5.2	6.0	7.0	7.1	7.0	6.6	7.0	7.5	8.3	9.5	9.7	9.9	9.9	9.9	2.8	6.5
8	10.3	10.5	10.4	10.2	10.1	9.8	10.0	10.6	10.0	9.0	9.2	9.5	10.1	9.5	8.9	9.2	8.3	7.6	6.8	7.5	7.4	5.6	4.5	6.3	10.6	4.5	8.8
9	6.9	7.5	8.0	8.2	8.5	8.6	8.8	8.2	7.4	7.5	7.6	6.7	6.5	6.3	5.9	6.4	6.7	6.4	5.8	5.3	3.5	3.2	4.6	4.6	8.8	3.2	6.6
10	2.7	1.5	1.6	3.3	3.3	2.8	3.1	2.7	2.2	2.5	2.3	1.4	1.0	1.4	1.7	1.5	1.7	2.4	2.6	2.3	2.4	1.9	2.1	2.7	3.3	1.0	2.2
11	2.5	3.1	3.0	3.9	3.6	4.0	3.1	3.9	4.4	3.1	1.8	1.0	2.3	1.7	1.9	2.3	2.7	2.1	1.6	1.8	1.8	1.4	0.9	1.5	4.4	0.9	2.5
12	1.6	2.1	2.4	1.7	1.3	1.3	3.2	4.3	5.1	4.6	3.7	5.1	6.5	6.2	6.0	6.2	5.8	4.0	2.3	2.5	1.2	1.6	2.3	4.0	6.5	1.2	3.5
13	3.7	4.2	4.8	4.3	3.5	3.7	3.4	3.9	4.8	4.3	3.7	3.3	3.6	2.8	1.4	0.9	0.8	0.5	0.8	0.4	1.3	1.2	1.7	1.3	4.8	0.4	2.7
14	2.6	2.4	2.0	1.9	0.6	2.1	2.1	2.5	3.1	3.4	2.2	2.0	2.5	2.3	2.0	3.6	3.2	3.7	4.1	4.1	3.6	2.2	2.1	2.8	4.1	0.6	2.6
15	3.1	2.9	3.5	4.6	4.8	5.3	5.8	6.1	6.0	6.0	6.3	5.8	6.9	7.2	6.5	5.5	3.6	2.8	2.5	1.1	2.5	4.1	6.4	6.9	7.2	1.1	4.8
16	7.8	7.9	8.3	8.8	8.1	9.4	9.1	6.4	5.8	6.3	6.3	8.0	8.4	6.0	6.1	8.0	10.0	8.9	8.0	7.0	4.4	2.6	1.7	2.5	10.0	1.7	6.9
17	2.4	2.6	3.7	4.4	3.4	3.4	3.7	4.9	4.7	3.6	3.9	5.6	5.6	4.6	4.9	5.6	5.4	7.0	8.3	8.7	8.8	8.6	8.8	8.7	8.8	2.4	5.5
18	9.1	9.8	9.7	9.0	8.8	8.4	9.2	9.3	9.5	8.8	9.0	8.4	8.0	7.7	7.8	7.7	7.6	7.3	6.7	6.9	7.1	7.0	6.9	6.9	9.8	6.7	8.2
19	6.4	6.6	7.5	7.7	7.0	7.2	7.2	7.2	8.0	7.3	6.3	4.2	4.0	3.1	5.7	4.0	4.8	4.2	4.6	5.4	6.9	4.3	4.3	5.6	8.0	3.1	5.8
20	4.8	6.1	5.5	9.1	8.8	8.9	8.7	9.1	9.1	9.6	9.6	8.8	9.5	9.1	8.4	7.2	7.7	8.3	8.6	7.2	7.0	7.3	7.6	7.3	9.6	4.8	8.0
21	7.0	7.1	6.6	6.4	6.2	6.7	6.7	6.9	7.2	6.3	6.0	7.2	7.2	6.6	6.0	7.3	6.3	6.6	7.8	7.9	7.2	7.2	6.2	5.7	7.9	5.7	6.8
22	6.1	6.4	6.4	6.3	7.2	8.6	7.8	10.1	9.8	8.8	8.3	9.2	8.7	9.4	8.6	8.9	8.9	8.3	8.5	8.1	9.2	8.8	8.5	9.6	10.1	6.1	8.4
23	9.9	9.5	8.8	9.2	9.3	9.4	8.6	8.2	8.3	8.2	8.8	7.8	7.2	7.1	4.3	2.7	3.4	2.3	3.8	6.6	5.8	4.8	5.2	5.8	9.9	2.3	6.9
24	6.3	7.1	7.7	6.9	6.8	6.7	6.5	5.9	7.1	8.1	8.6	8.8	7.8	7.6	7.5	7.4	8.3	6.0	5.9	5.0	6.0	5.9	6.7	6.7	8.8	5.0	7.0
25	7.4	7.7	7.8	7.8	8.2	8.3	8.5	8.6	8.2	8.0	6.3	5.8	6.5	5.4	6.1	6.4	7.0	7.1	5.8	7.2	6.8	6.9	7.1	6.2	8.6	5.4	7.1
26	4.2	4.3	3.5	2.9	3.6	2.3	1.1	2.1	3.7	1.3	1.5	1.6	3.1	3.6	2.6	2.8	2.1	1.9	0.8	1.0	2.0	2.4	2.7	2.2	4.3	0.8	2.5
27	2.0	1.4	1.0	1.5	2.5	4.3	3.1	2.0	0.9	1.0	2.0	2.4	2.5	2.2	2.5	6.0	6.1	6.0	5.7	5.8	5.2	4.0	3.6	3.0	6.1	0.9	3.2
28	2.0	1.5	1.0	1.7	2.0	1.8	2.3	3.1	2.6	1.4	3.2	3.4	3.0	1.9	2.0	1.6	1.6	1.5	1.0	1.0	1.2	1.4	2.1	2.1	3.4	1.0	1.9
29	3.1	2.9	3.3	4.7	4.1	4.4	4.5	5.4	5.2	6.0	6.3	6.0	5.1	5.0	6.1	3.0	2.4	3.9	5.0	4.4	4.2	3.6	2.6	2.2	6.3	2.2	4.3
30	1.7	1.2	3.6	4.1	3.9	3.9	3.7	5.0	6.3	7.1	7.4	7.3	5.8	6.3	5.5	5.1	3.7	2.3	1.6	1.9	5.5	4.2	4.3	5.1	7.4	1.2	4.4
Max.	**12.0**	**11.3**	**11.3**	**11.8**	**10.1**	**11.4**	**12.1**	**13.2**	**13.7**	**11.4**	**10.0**	**10.8**	**11.0**	**11.6**	**13.2**	**14.3**	**10.0**	**8.9**	**8.6**	**8.7**	**9.5**	**9.7**	**9.9**	**10.0**	**14.3**		
Min.	**1.6**	**1.2**	**1.0**	**1.5**	**0.6**	**1.3**	**1.1**	**1.7**	**0.9**	**1.0**	**1.5**	**1.0**	**1.0**	**1.4**	**1.4**	**0.9**	**0.8**	**0.5**	**0.8**	**0.4**	**1.2**	**0.9**	**0.9**	**1.1**		**0.4**	
Avg.	**5.2**	**5.3**	**5.4**	**5.6**	**5.4**	**5.6**	**5.7**	**5.8**	**6.0**	**5.8**	**5.7**	**5.6**	**5.8**	**5.6**	**5.4**	**5.5**	**5.2**	**4.9**	**4.9**	**5.0**	**5.2**	**4.8**	**4.9**	**5.1**			**5.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.8	5.2	4.1	5.2	5.8	4.1	2.7	3.8	3.3	2.2	4.6	6.5	6.8	6.1	5.0	6.1	6.0	5.5	5.6	5.8	4.8	5.2	5.3	5.7	6.8	2.2	5.0
2	5.4	6.5	5.7	5.2	3.4	3.9	3.7	4.8	5.3	5.6	7.2	7.0	6.7	5.4	2.7	2.9	2.8	2.0	2.0	2.2	2.1	1.8	2.1	1.7	7.2	1.7	4.1
3	0.8	2.5	2.8	2.0	1.3	1.5	2.5	2.7	1.6	1.0	1.5	3.9	4.2	4.7	4.2	4.4	4.1	3.3	2.0	1.1	0.8	0.6	0.5	0.9	4.7	0.5	2.3
4	0.6	0.8	1.7	2.0	1.7	0.7	2.3	2.9	2.3	1.9	2.2	2.8	2.8	2.7	2.4	2.4	2.4	2.4	2.6	2.9	1.5	1.6	1.8	1.8	2.9	0.6	2.0
5	2.0	1.2	0.8	1.9	3.0	1.0	2.2	1.2	1.1	1.8	3.0	3.3	3.6	3.7	1.8	2.6	3.8	6.3	7.1	8.5	6.8	6.1	5.5	6.5	8.5	0.8	3.5
6	6.4	5.1	8.5	8.1	5.7	6.3	7.6	8.6	7.8	5.4	6.5	8.1	7.2	7.9	6.2	6.3	5.8	5.6	4.2	5.6	3.6	5.0	5.1	5.1	8.6	3.6	6.3
7	5.7	5.5	5.9	7.1	7.8	7.2	6.4	7.2	5.6	5.2	4.6	4.1	3.0	3.8	5.6	5.7	5.9	5.8	6.6	7.3	6.7	7.7	7.4	8.2	8.2	3.0	6.1
8	7.6	7.7	7.2	6.8	6.4	5.5	4.3	2.7	2.9	2.2	2.2	1.5	2.5	2.0	1.2	2.0	2.9	2.6	3.9	3.8	1.3	1.7	1.9	1.4	7.7	1.2	3.5
9	0.8	2.1	2.3	2.5	2.2	2.7	2.4	2.4	2.9	3.5	3.7	4.3	2.5	1.1	1.5	2.0	1.7	1.6	1.7	1.8	1.3	0.5	0.5	0.8	4.3	0.5	2.0
10	1.5	1.1	1.7	1.5	0.5	0.7	0.8	0.6	1.1	1.5	2.3	2.9	3.6	3.8	3.0	2.5	2.5	2.4	2.1	1.2	0.8	0.9	0.7	1.2	3.8	0.5	1.7
11	2.0	0.9	1.4	1.9	2.4	3.6	3.8	3.1	1.6	1.2	1.3	1.9	1.5	1.7	1.7	1.4	1.4	1.5	1.3	1.2	1.0	1.6	1.0	1.0	3.8	0.9	1.7
12	1.7	2.6	2.9	3.3	2.9	2.5	2.5	2.7	2.6	1.8	2.2	1.5	1.4	1.6	1.3	1.5	1.2	1.5	1.4	1.8	1.5	2.0	1.6	3.2	3.3	1.2	2.1
13	3.9	4.2	4.1	4.6	4.8	4.6	4.2	4.6	4.9	5.8	5.3	5.4	5.0	5.7	5.9	6.3	7.0	6.8	7.1	7.3	7.6	7.4	7.9	7.7	7.9	3.9	5.8
14	7.5	8.1	8.9	9.5	8.4	10.3	9.1	8.6	8.2	9.7	9.9	8.6	7.8	5.1	2.9	1.6	1.5	2.0	2.0	1.1	1.4	2.6	2.6	2.6	10.3	1.1	5.8
15	3.6	4.6	4.7	4.3	4.5	4.6	4.6	4.4	4.4	4.3	4.0	4.1	2.4	4.1	3.7	3.9	3.9	3.3	2.7	1.3	2.4	2.3	1.2	2.5	4.7	1.2	3.6
16	1.4	1.1	0.9	1.3	1.3	1.2	1.3	1.2	1.7	2.2	1.1	1.2	1.6	2.4	4.3	2.9	4.0	3.9	4.3	4.3	2.4	4.3	4.0	3.0	4.3	0.9	2.4
17	1.9	1.9	1.0	0.6	1.9	2.9	3.6	3.8	3.5	2.5	1.9	1.5	3.9	4.1	3.6	2.8	2.5	2.0	1.9	1.4	1.5	1.3	1.8	1.4	4.1	0.6	2.3
18	1.0	1.4	1.2	0.8	0.8	0.9	1.5	1.3	1.1	1.5	1.6	3.0	2.8	3.1	3.2	3.3	3.9	3.6	3.0	1.6	0.7	0.5	1.5	1.7	3.9	0.5	1.9
19	1.4	2.0	3.7	4.1	3.7	3.2	3.3	3.0	2.9	0.9	0.9	1.1	1.3	3.5	2.4	3.3	2.6	2.1	3.1	5.1	7.8	7.1	6.7	7.5	7.8	0.9	3.4
20	7.3	7.1	7.9	6.9	4.4	4.0	5.1	4.7	3.4	3.4	3.2	2.1	1.1	1.1	0.9	1.0	2.0	1.4	1.7	2.4	0.9	1.0	3.5	6.0	7.9	0.9	3.4
21	6.6	6.2	5.6	3.9	3.3	2.2	2.6	2.8	2.1	2.1	2.9	3.2	2.8	3.3	3.2	2.1	1.8	1.6	1.7	1.4	1.3	1.7	1.9	1.8	6.6	1.3	2.8
22	1.4	0.9	2.0	4.2	4.0	4.9	6.5	6.8	6.0	6.5	7.9	8.8	8.1	7.6	8.1	8.5	8.4	8.2	7.8	7.4	10.2	9.9	8.7	8.0	10.2	0.9	6.7
23	8.2	8.9	9.4	9.2	10.2	11.1	9.8	8.6	8.7	8.5	8.4	9.0	7.8	7.6	7.2	6.2	5.6	4.4	4.6	4.4	2.8	3.8	2.8	2.4	11.1	2.4	7.1
24	1.8	1.6	1.2	1.9	1.4	1.8	1.0	2.0	5.1	5.0	4.8	5.1	6.2	6.4	6.5	5.8	5.5	5.6	5.7	6.2	5.6	5.5	6.1	5.6	6.5	1.0	4.3
25	5.9	5.9	5.6	6.0	6.5	6.6	5.7	5.6	5.1	5.6	4.8	3.9	2.2	2.9	2.8	3.3	3.8	3.3	2.7	1.7	1.3	4.0	3.0	1.7	6.6	1.3	4.2
26	1.9	1.7	2.4	2.6	1.5	3.8	4.1	3.1	2.6	2.5	2.4	2.1	2.4	2.7	1.9	1.4	2.6	2.3	1.5	1.2	0.8	1.3	1.4	1.4	4.1	0.8	2.2
27	2.6	1.5	1.5	1.2	1.6	1.3	2.2	1.5	0.9	1.1	2.9	3.0	3.0	2.6	2.0	2.8	3.8	3.6	3.3	4.5	2.6	1.3	1.6	1.5	4.5	0.9	2.3
28	1.9	1.9	1.6	0.9	2.1	1.9	3.0	3.2	1.0	1.8	3.7	3.1	2.5	2.8	2.6	3.3	3.0	3.8	4.0	4.4	3.3	2.5	1.8	1.1	4.4	0.9	2.6
29	1.3	1.4	3.1	4.1	2.6	3.8	3.6	3.6	4.5	5.6	6.8	5.8	4.7	3.6	2.7	3.0	3.6	5.1	5.0	4.6	5.0	3.9	4.5	4.2	6.8	1.3	4.0
30	5.4	5.2	5.3	4.1	2.3	4.7	5.8	6.0	6.0	4.6	3.6	3.3	3.2	3.7	2.8	2.0	2.6	2.4	2.8	3.2	3.7	2.5	2.2	1.8	6.0	1.8	3.7
31	4.0	4.5	5.1	5.1	6.1	6.2	5.4	5.9	5.9	6.3	8.8	8.0	8.4	8.7	9.7	9.8	8.2	8.0	7.8	7.9	7.3	7.3	7.0	7.8	9.8	4.0	7.1
Max.	**8.2**	**8.9**	**9.4**	**9.5**	**10.2**	**11.1**	**9.8**	**8.6**	**8.7**	**9.7**	**9.9**	**9.0**	**8.4**	**8.7**	**9.7**	**9.8**	**8.4**	**8.2**	**7.8**	**8.5**	**10.2**	**9.9**	**8.7**	**8.2**	**11.1**		
Min.	**0.6**	**0.8**	**0.8**	**0.6**	**0.5**	**0.7**	**0.8**	**0.6**	**0.9**	**0.9**	**0.9**	**1.1**	**1.1**	**1.1**	**0.9**	**1.0**	**1.2**	**1.4**	**1.3**	**1.1**	**0.7**	**0.5**	**0.5**	**0.8**		**0.5**	
Avg.	**3.5**	**3.6**	**3.9**	**4.0**	**3.7**	**3.9**	**4.0**	**4.0**	**3.7**	**3.7**	**4.1**	**4.2**	**4.0**	**4.0**	**3.7**	**3.6**	**3.8**	**3.7**	**3.6**	**3.7**	**3.3**	**3.4**	**3.3**	**3.5**			**3.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.2	6.9	6.1	5.2	5.7	6.2	6.2	6.7	6.4	5.9	6.5	5.6	4.5	3.5	2.5	2.0	1.6	2.9	2.3	2.6	2.3	2.0	2.1	1.6	7.2	1.6	4.4
2	1.3	1.4	1.7	1.1	1.0	0.9	2.6	3.3	3.3	3.2	3.3	1.7	1.5	0.9	1.6	1.9	1.7	1.3	1.6	1.6	1.0	0.3	0.2	0.2	3.3	0.2	1.6
3	0.6	1.3	0.6	0.7	1.0	1.6	1.1	0.8	1.1	1.1	2.0	3.1	2.9	2.7	1.9	2.5	2.9	3.1	3.0	1.6	0.6	0.8	1.1	1.4	3.1	0.6	1.6
4	2.7	2.4	2.7	2.7	2.1	1.0	1.2	2.1	1.1	4.9	7.1	7.3	6.4	5.3	5.7	5.8	5.2	4.6	6.2	6.6	4.7	3.8	3.8	3.5	7.3	1.0	4.1
5	4.0	2.8	1.5	3.3	4.1	3.9	3.5	4.8	4.8	4.7	4.0	4.6	5.5	4.1	3.8	3.1	1.4	2.4	2.7	2.4	1.2	2.7	1.5	3.7	5.5	1.2	3.4
6	4.0	3.0	0.9	1.8	0.8	3.6	5.2	4.8	3.9	3.5	2.8	2.6	4.7	3.5	3.0	3.8	3.5	3.2	2.0	0.8	1.0	1.2	3.8	3.5	5.2	0.8	3.0
7	3.4	3.3	3.8	5.1	6.3	7.5	7.0	8.2	9.4	9.4	10.6	10.3	7.4	5.8	3.6	2.8	2.3	4.3	4.5	5.6	5.7	4.6	6.2	6.6	10.6	2.3	6.0
8	7.2	8.1	9.2	8.4	8.3	7.9	8.3	8.5	8.5	8.9	7.2	7.5	6.6	7.6	6.1	4.1	3.4	2.3	1.3	1.7	2.1	2.2	2.8	2.7	9.2	1.3	5.9
9	2.1	3.8	2.2	1.6	2.2	3.4	3.2	2.6	1.7	1.0	1.0	0.5	0.8	0.9	0.6	0.7	1.2	0.8	2.0	5.3	5.4	6.8	8.2	5.6	8.2	0.5	2.6
10	4.3	4.0	4.0	5.3	5.9	4.9	3.9	3.2	3.2	2.0	1.5	1.7	0.9	1.1	1.1	3.6	2.1	1.6	4.0	2.7	2.3	4.0	5.4	2.8	5.9	0.9	3.1
11	4.4	3.3	3.3	3.9	3.1	2.3	2.1	3.2	3.6	3.6	2.9	2.2	2.6	1.6	2.0	2.1	1.9	2.7	2.3	1.2	1.4	2.3	1.9	2.2	4.4	1.2	2.6
12	2.0	1.8	0.5	1.0	1.0	0.6	0.8	1.1	0.8	0.5	1.1	1.3	1.3	1.9	2.5	3.0	2.5	2.6	2.0	2.1	2.0	2.1	2.2	1.7	3.0	0.5	1.6
13	0.9	0.6	0.9	1.3	1.2	1.2	1.2	1.1	2.0	2.9	3.2	3.1	2.4	2.6	2.6	2.5	2.2	2.5	2.4	2.1	1.5	1.1	0.7	1.2	3.2	0.6	1.8
14	1.5	1.8	1.1	1.6	2.3	2.2	2.1	2.2	2.3	3.1	3.2	3.1	3.0	3.5	3.3	3.3	3.1	3.1	3.2	3.2	3.4	1.1	0.9	1.2	3.5	0.9	2.4
15	1.3	1.2	0.9	2.0	2.2	2.3	2.8	1.9	2.1	3.0	3.2	3.3	3.0	2.7	2.0	2.4	3.1	2.6	2.1	0.9	0.9	2.5	1.5	2.6	3.3	0.9	2.2
16	4.1	4.1	3.7	3.0	2.9	2.2	2.7	4.1	4.6	5.5	6.0	7.1	7.9	7.6	6.9	6.0	5.5	5.1	6.8	8.6	9.1	5.9	4.5	3.9	9.1	2.2	5.3
17	4.5	4.8	7.6	8.2	9.1	10.4	9.5	9.5	9.1	6.6	5.1	4.3	2.8	1.4	1.8	2.1	0.7	0.8	0.9	1.0	0.9	1.2	2.6	2.8	10.4	0.7	4.5
18	2.7	3.2	1.8	1.9	1.6	1.6	2.0	2.5	1.6	2.4	2.7	3.5	3.2	2.6	2.6	2.0	1.8	1.7	1.4	2.4	1.6	0.5	1.1	0.7	3.5	0.5	2.1
19	0.5	0.7	1.0	0.9	2.1	1.9	2.6	1.8	2.2	2.5	1.0	1.9	2.8	3.0	1.9	2.8	4.0	2.6	5.4	5.3	4.5	3.1	3.9	3.7	5.4	0.5	2.6
20	3.1	4.1	4.4	3.4	2.4	2.5	3.3	3.3	4.7	4.9	4.2	5.1	7.5	8.0	6.4	4.8	3.9	2.0	2.3	1.7	2.0	2.5	4.5	4.5	8.0	1.7	4.0
21	2.8	1.4	1.5	2.3	6.7	11.3	11.5	11.4	9.4	9.7	10.1	10.9	9.7	9.0	9.8	8.0	6.6	7.3	6.6	6.8	7.5	6.9	8.2	8.3	11.5	1.4	7.7
22	11.5	10.3	7.5	4.3	3.2	6.1	2.8	1.7	1.9	3.6	4.1	3.5	3.6	2.6	1.4	1.1	1.6	1.9	2.2	2.4	1.5	1.1	1.1	1.6	11.5	1.1	3.4
23	1.2	1.2	2.0	2.5	2.3	1.8	2.1	2.3	2.9	2.6	2.0	2.3	2.3	2.7	3.1	2.6	3.1	3.1	2.7	3.3	4.3	2.3	2.3	1.8	4.3	1.2	2.4
24	1.7	1.4	1.2	2.2	5.5	5.3	5.3	6.0	5.5	5.7	5.2	5.6	4.3	1.6	0.9	2.4	1.9	2.8	3.3	2.6	1.9	2.0	2.5	2.3	6.0	0.9	3.3
25	3.0	2.9	3.8	2.3	1.7	2.0	2.2	1.5	1.6	3.5	2.8	1.3	1.5	2.6	1.6	2.0	1.9	1.6	1.8	1.7	1.2	2.0	1.8	2.6	3.8	1.2	2.1
26	2.8	3.6	3.3	3.3	2.8	2.5	2.4	2.0	1.2	2.0	2.9	3.4	4.5	5.4	4.7	4.9	5.6	5.0	3.1	1.4	1.4	1.3	1.3	3.8	5.6	1.2	3.1
27	3.8	4.6	4.5	3.8	2.7	1.4	2.6	1.9	2.3	2.2	2.6	3.1	3.2	2.9	2.6	3.1	2.6	2.3	1.9	2.6	4.0	2.0	1.3	1.7	4.6	1.3	2.7
28	0.8	1.0	3.3	1.9	1.9	1.5	1.5	1.9	1.8	1.0	0.8	2.2	4.7	3.7	4.5	2.8	1.8	1.8	1.8	1.4	1.3	1.0	0.8	1.8	4.7	0.8	2.0
29	1.1	2.4	2.2	1.4	2.2	2.6	2.2	1.0	1.6	3.1	3.5	4.0	3.5	3.6	3.7	4.1	5.2	4.5	2.0	3.0	5.4	6.5	6.9	7.3	7.3	1.0	3.5
30	7.9	7.2	7.0	6.7	5.4	4.9	3.2	2.6	1.2	1.9	2.6	3.6	2.1	1.9	2.1	2.0	2.6	1.9	1.5	1.3	1.3	1.8	2.6	1.9	7.9	1.2	3.2
Max.	**11.5**	**10.3**	**9.2**	**8.4**	**9.1**	**11.3**	**11.5**	**11.4**	**9.4**	**9.7**	**10.6**	**10.9**	**9.7**	**9.0**	**9.8**	**8.0**	**6.6**	**7.3**	**6.8**	**8.6**	**9.1**	**6.9**	**8.2**	**8.3**	**11.5**		
Min.	**0.5**	**0.6**	**0.5**	**0.7**	**0.8**	**0.6**	**0.8**	**0.8**	**0.8**	**0.5**	**0.8**	**0.5**	**0.8**	**0.9**	**0.6**	**0.7**	**0.7**	**0.8**	**0.9**	**0.8**	**0.6**	**0.3**	**0.2**	**0.2**		**0.2**	
Avg.	**3.3**	**3.3**	**3.1**	**3.1**	**3.3**	**3.6**	**3.6**	**3.6**	**3.5**	**3.8**	**3.8**	**4.0**	**3.9**	**3.5**	**3.2**	**3.1**	**2.9**	**2.8**	**2.9**	**2.9**	**2.8**	**2.6**	**2.9**	**3.0**			**3.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.1	1.2	1.0	1.0	2.1	2.5	1.1	1.7	2.7	1.9	2.0	1.7	1.1	1.2	2.1	2.2	2.2	2.3	2.9	2.0	1.7	1.3	1.2	1.5	2.9	1.0	1.8
2	0.8	0.6	1.0	1.2	1.0	0.8	0.6	0.6	1.4	2.5	3.2	3.4	3.9	3.9	3.8	3.8	3.8	2.7	1.7	1.8	0.8	1.0	0.9	1.4	3.9	0.6	1.9
3	1.1	0.8	1.2	1.9	1.3	1.7	1.1	1.1	1.4	2.0	2.5	3.4	3.1	3.2	3.2	3.2	3.4	2.6	2.1	2.0	1.4	2.0	1.3	0.9	3.4	0.8	2.0
4	1.1	0.8	1.3	1.7	2.2	1.6	2.7	3.8	2.0	1.2	1.8	1.7	1.8	2.5	3.1	3.4	3.7	3.6	3.7	3.9	3.0	1.9	1.0	1.5	3.9	0.8	2.3
5	1.4	1.5	2.6	1.2	1.7	0.9	3.3	1.9	1.2	2.4	2.8	2.6	2.8	1.9	2.2	1.9	1.7	0.7	2.1	1.5	0.7	1.5	1.9	1.4	3.3	0.7	1.8
6	0.9	1.5	1.9	2.0	2.2	3.2	2.7	0.8	1.3	2.9	3.2	3.0	3.1	3.3	3.2	3.3	3.2	3.1	2.6	1.6	0.9	0.9	1.1	1.1	3.3	0.8	2.2
7	0.9	1.5	3.1	3.3	1.1	2.6	1.8	0.8	1.5	1.8	2.6	4.0	3.1	2.1	3.7	1.7	2.0	2.6	2.3	3.4	2.2	2.2	1.7	1.4	4.0	0.8	2.2
8	0.4	1.0	0.4	0.5	0.9	1.9	2.8	1.7	1.8	4.4	4.6	2.8	2.0	1.7	1.0	1.8	1.3	1.4	1.6	2.5	2.3	2.0	1.7	1.5	4.6	0.4	1.8
9	2.0	2.0	3.0	2.6	2.9	3.2	3.4	4.5	4.2	3.5	4.6	3.4	2.9	3.0	2.3	5.3	5.1	3.9	3.1	3.0	4.7	4.1	3.6	2.4	5.3	2.0	3.4
10	3.1	1.8	0.9	1.5	1.3	1.0	1.3	1.1	1.0	1.2	1.5	2.0	2.7	2.5	2.1	1.3	2.4	2.3	3.2	1.3	1.0	1.1	0.8	0.5	3.2	0.5	1.6
11	1.5	0.9	1.6	2.2	3.0	1.8	2.5	1.9	1.6	1.7	2.0	2.6	2.7	2.7	2.6	2.9	3.1	3.2	3.0	3.1	2.8	1.4	1.0	0.4	3.2	0.4	2.2
12	1.1	0.4	0.4	0.5	0.6	1.3	1.2	0.9	1.2	1.0	1.4	2.1	2.7	2.8	2.7	2.8	2.8	2.4	2.5	1.7	1.5	1.4	1.4	0.5	2.8	0.4	1.6
13	0.6	2.2	1.0	1.2	1.0	1.4	1.7	2.8	2.3	1.8	1.8	2.0	1.3	0.8	1.6	1.2	1.5	2.5	2.4	2.7	2.4	1.9	1.0	0.5	2.8	0.5	1.6
14	2.6	2.9	2.6	2.3	2.3	3.6	5.0	4.7	3.1	3.3	2.8	2.7	1.8	1.8	1.9	1.0	1.7	2.4	2.5	2.0	1.3	0.9	1.2	0.5	5.0	0.5	2.4
15	1.4	1.2	0.8	0.8	0.9	1.3	1.3	1.4	1.7	1.4	1.9	2.4	3.5	3.8	3.6	4.0	3.9	2.9	4.6	5.4	6.0	7.9	8.1	8.3	8.3	0.8	3.3
16	8.8	8.9	8.5	8.3	8.0	7.0	6.9	5.1	3.8	3.0	2.5	2.8	3.0	2.2	1.5	4.4	6.6	6.7	6.9	6.5	6.1	6.6	5.6	5.5	8.9	1.5	5.6
17	7.4	6.5	4.2	2.2	2.8	3.0	3.6	4.4	2.9	2.2	2.6	2.6	3.0	3.1	3.0	2.0	2.9	2.4	1.4	1.4	2.0	1.6	2.5	2.2	7.4	1.4	3.0
18	1.5	2.2	1.8	1.2	0.8	0.7	1.0	2.1	0.8	2.2	4.9	5.1	3.8	3.4	3.0	3.2	4.1	4.0	4.3	4.1	2.3	1.8	2.2	2.1	5.1	0.7	2.6
19	1.9	1.2	0.5	0.9	0.8	0.6	0.5	1.0	1.0	1.8	2.9	3.3	3.8	3.2	3.8	3.0	2.8	1.9	2.8	1.9	1.1	1.0	1.2	1.5	3.8	0.5	1.9
20	2.2	1.5	1.2	0.7	0.4	0.7	1.1	2.3	1.2	2.3	3.1	2.7	3.1	3.5	3.5	3.3	2.8	2.1	2.4	2.6	2.9	4.7	8.3	8.8	8.8	0.4	2.8
21	9.3	9.9	10.9	9.3	9.9	11.0	11.1	9.2	7.7	7.5	6.6	4.4	2.8	2.5	1.7	2.0	2.2	3.0	6.1	7.7	6.8	6.4	5.6	4.5	11.1	1.7	6.6
22	2.3	1.7	2.5	2.6	2.4	0.7	1.5	1.0	0.7	1.7	1.0	1.5	1.8	1.7	1.9	1.9	1.4	2.0	2.5	2.1	1.9	2.6	1.7	2.0	2.6	0.7	1.8
23	1.2	3.4	2.7	2.7	2.1	1.8	2.4	1.6	2.0	1.4	2.0	1.9	2.1	2.0	1.7	2.0	2.5	2.4	2.9	2.8	4.0	4.0	3.6	2.8	4.0	1.2	2.4
24	3.0	1.9	2.4	2.2	5.4	6.2	6.5	6.2	5.7	6.2	5.7	6.3	6.5	6.7	6.4	6.1	6.1	6.8	6.3	6.4	6.1	6.1	7.3	7.3	7.3	1.9	5.7
25	7.0	7.0	7.3	6.7	6.1	6.3	5.9	6.0	6.3	6.5	6.1	6.8	6.4	6.4	5.7	6.6	5.9	5.7	5.0	3.7	4.1	4.9	4.7	2.5	7.3	2.5	5.8
26	2.9	1.8	2.4	1.2	1.0	1.7	2.2	1.9	1.9	1.3	1.3	1.5	2.1	2.6	2.5	3.0	3.2	3.8	4.2	3.3	1.8	1.8	1.9	1.2	4.2	1.0	2.2
27	1.7	1.4	2.3	2.9	3.6	1.3	3.3	1.4	2.0	2.0	2.5	3.1	3.3	3.4	3.8	4.2	4.0	3.0	2.2	1.6	1.6	2.0	1.5	3.3	4.2	1.3	2.6
28	2.1	7.5	6.8	2.3	6.4	7.7	6.8	6.4	5.8	5.0	3.3	1.7	1.3	1.3	1.6	2.4	5.3	7.2	8.1	9.2	11.3	13.4	13.3	9.1	13.4	1.3	6.0
29	8.7	8.7	8.5	8.2	7.5	5.6	6.5	4.5	5.4	3.1	2.2	2.3	1.9	1.3	1.4	1.4	1.4	4.5	7.6	8.8	9.1	8.7	7.5	7.4	9.1	1.3	5.5
30	6.3	3.0	2.0	2.1	2.8	2.1	2.3	7.2	7.9	6.1	7.2	4.5	3.2	2.9	3.5	3.7	3.1	3.3	3.4	3.4	2.7	2.8	3.4	3.3	7.9	2.0	3.8
31	2.4	2.2	2.2	2.2	2.1	1.9	1.3	1.9	1.2	1.6	0.9	0.8	1.2	1.1	1.8	1.9	1.4	1.5	2.0	1.4	2.2	1.9	2.9	2.9	2.9	0.8	1.8
Max.	**9.3**	**9.9**	**10.9**	**9.3**	**9.9**	**11.0**	**11.1**	**9.2**	**7.9**	**7.5**	**7.2**	**6.8**	**6.5**	**6.7**	**6.4**	**6.6**	**6.6**	**7.2**	**8.1**	**9.2**	**11.3**	**13.4**	**13.3**	**9.1**	**13.4**		
Min.	**0.4**	**0.4**	**0.4**	**0.5**	**0.4**	**0.6**	**0.5**	**0.6**	**0.7**	**1.0**	**0.9**	**0.8**	**1.1**	**0.8**	**1.0**	**1.0**	**1.3**	**0.7**	**1.4**	**1.3**	**0.7**	**0.9**	**0.8**	**0.4**		**0.4**	
Avg.	**2.9**	**2.9**	**2.9**	**2.6**	**2.8**	**2.8**	**3.1**	**3.0**	**2.7**	**2.8**	**3.0**	**2.9**	**2.8**	**2.7**	**2.8**	**2.9**	**3.1**	**3.2**	**3.5**	**3.4**	**3.2**	**3.3**	**3.3**	**2.9**			**3.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (Climatronics) (m/s)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.2	4.4	3.0	2.9	3.5	3.1	2.8	4.1	2.4	2.2	2.0	1.7	1.9	1.8	1.9	2.3	1.9	1.8	2.1	2.0	3.0	3.3	2.8	2.8	4.4	1.7	2.6
2	2.5	2.4	3.2	3.4	2.9	3.4	3.4	3.3	3.4	3.8	3.7	3.1	3.6	3.5	3.9	3.5	3.7	4.4	4.9	5.1	4.7	3.3	3.1	2.7	5.1	2.4	3.5
3	2.8	2.7	2.4	4.3	4.0	3.7	3.0	2.7	3.5	4.0	3.7	3.6	3.4	2.9	3.2	3.5	3.6	2.6	2.4	3.2	3.2	3.5	3.6	2.7	4.3	2.4	3.3
4	2.9	3.8	4.0	4.2	4.2	3.8	4.6	4.5	5.6	4.6	4.5	5.0	4.4	4.5	4.5	2.9	3.8	4.6	3.4	3.2	2.8	3.1	3.5	4.8	5.6	2.8	4.0
5	3.8	3.5	3.2	2.9	2.4	2.0	2.5	1.9	2.2	2.8	1.5	3.7	3.4	9.0	8.5	11.9	10.5	9.7	13.0	13.2	13.5	10.9	4.1	3.3	13.5	1.5	6.0
6	5.6	9.7	6.1	7.6	4.7	4.9	12.2	14.3	12.1	10.6	8.4	6.9	9.0	7.1	5.6	4.6	3.8	3.7	3.4	4.7	3.2	3.3	3.2	5.1	14.3	3.2	6.7
7	4.5	4.9	8.6	8.0	8.0	8.2	6.8	5.3	4.4	1.9	2.1	2.3	3.2	4.6	5.6	5.0	6.7	5.7	3.5	2.6	4.2	5.4	4.3	3.8	8.6	1.9	5.0
8	2.7	2.1	2.1	1.5	2.9	2.8	2.7	3.2	3.4	1.8	1.5	0.9	0.7	1.9	4.2	5.0	7.0	7.1	7.1	6.7	2.1	3.5	5.3	5.5	7.1	0.7	3.5
9	4.2	4.0	4.2	3.4	2.9	2.3	1.6	2.6	1.7	2.6	3.2	2.9	2.9	3.3	3.0	3.5	3.3	3.3	3.0	2.0	1.1	0.9	2.1	1.8	4.2	0.9	2.7
10	1.0	0.9	0.8	1.1	1.8	1.8	1.1	1.1	1.7	2.4	2.7	2.8	3.0	2.9	3.1	3.2	3.0	3.5	2.4	1.2	0.8	0.3	0.4	0.6	3.5	0.3	1.8
11	0.6	0.8	1.4	1.3	1.9	2.2	1.4	2.5	2.9	4.2	3.5	3.7	3.6	3.4	3.3	3.4	2.7	1.7	1.5	1.6	1.2	2.8	2.9	4.6	4.6	0.6	2.5
12	3.4	4.6	9.5	6.1	4.0	2.6	3.8	5.4	2.4	4.0	3.0	4.2	4.1	4.7	3.0	6.7	8.9	9.2	7.1	4.3	2.1	1.7	3.2	2.8	9.5	1.7	4.6
13	1.7	1.5	1.7	1.9	1.9	1.1	0.6	0.7	0.7	1.8	2.8	3.1	3.4	3.4	3.2	3.0	2.6	1.7	0.8	1.0	0.9	1.8	2.9	7.1	7.1	0.6	2.1
14	6.7	6.7	6.9	7.4	8.4	10.2	9.7	8.1	8.2	6.3	5.7	4.8	5.2	7.6	10.5	8.9	9.8	9.0	8.0	8.0	7.4	6.7	5.2	4.0	10.5	4.0	7.5
15	2.0	3.4	2.8	1.7	1.3	1.7	1.5	1.4	1.4	1.2	2.1	3.1	3.5	3.4	2.3	2.7	2.6	2.1	2.4	1.4	1.0	0.9	0.9	2.5	3.5	0.9	2.1
16	2.0	1.5	2.6	3.1	2.7	3.3	3.1	2.9	3.3	3.0	1.5	1.1	1.4	3.1	3.9	3.2	3.5	2.4	1.6	2.1	1.0	1.1	2.4	1.8	3.9	1.0	2.4
17	1.5	1.5	1.6	2.7	2.3	0.9	1.1	1.2	2.5	0.9	1.4	0.9	1.5	1.1	2.0	4.1	3.6	3.1	2.7	1.8	3.0	3.7	3.8	3.4	4.1	0.9	2.2
18	3.4	5.2	4.3	4.8	4.1	4.5	5.3	5.2	5.8	7.2	7.0	6.8	6.6	7.9	8.5	8.7	7.6	7.3	7.9	8.0	8.1	7.6	7.4	7.9	8.7	3.4	6.6
19	7.5	7.7	7.0	7.6	6.8	7.4	8.0	8.3	8.2	8.7	8.6	8.0	7.5	8.0	7.2	6.6	5.9	5.9	6.2	5.9	3.8	3.3	1.9	1.5	8.7	1.5	6.6
20	2.9	3.7	4.2	4.1	3.6	3.7	2.4	1.9	1.4	1.8	2.1	2.5	1.8	2.1	1.7	3.0	1.8	1.2	1.6	1.7	1.8	1.7	1.5	1.8	4.2	1.2	2.3
21	1.8	2.7	2.8	2.1	3.3	3.8	3.3	3.7	2.8	2.8	3.5	2.8	3.5	2.2	1.9	1.6	1.9	1.5	1.5	1.8	1.4	1.7	1.8	1.8	3.8	1.4	2.4
22	2.4	1.7	1.5	1.5	2.1	1.7	1.5	1.6	1.5	1.5	1.7	1.5	1.6	2.0	2.3	2.7	2.7	2.5	2.8	1.7	3.7	3.3	1.8	2.6	3.7	1.5	2.1
23	4.5	4.7	4.8	3.7	3.9	3.7	2.7	2.4	1.2	1.5	1.8	1.0	1.0	0.5	0.9	1.1	2.2	4.1	4.2	3.6	5.8	5.2	3.9	5.3	5.8	0.5	3.1
24	5.9	4.5	3.5	2.7	1.3	1.0	1.4	1.9	3.0	2.4	1.5	1.8	2.2	2.7	2.9	2.9	2.0	1.3	1.6	2.0	0.6	1.2	2.0	1.2	5.9	0.6	2.2
25	2.2	2.3	1.6	1.1	1.3	1.9	2.4	1.8	1.1	1.2	2.4	2.8	3.2	3.1	3.3	3.2	2.6	2.0	2.2	2.0	1.9	1.6	0.8	1.3	3.3	0.8	2.1
26	1.7	1.5	2.1	1.5	1.0	1.1	1.3	0.8	1.2	1.2	1.6	2.1	2.1	2.5	2.9	3.3	3.7	1.7	1.9	1.2	4.4	5.0	5.2	5.7	5.7	0.8	2.4
27	5.2	4.4	3.9	3.8	4.1	4.3	4.4	5.2	5.9	6.0	5.2	4.0	3.6	5.1	5.3	4.7	4.7	4.4	4.0	4.3	4.2	2.2	2.3	2.2	6.0	2.2	4.3
28	3.9	3.2	3.0	3.7	4.3	4.1	2.1	1.4	1.2	1.3	1.8	3.1	2.1	2.3	3.5	4.9	5.4	3.9	1.4	0.9	2.0	4.3	3.1	4.8	5.4	0.9	3.0
29	3.6	3.5	2.0	2.8	2.5	2.5	3.2																		3.6	2.0	2.9
30																1.0	2.1								2.1	1.0	1.6
31						0.8	0.9	1.7	1.7	1.2	2.1	2.1													2.1	0.8	1.5
Max.	**7.5**	**9.7**	**9.5**	**8.0**	**8.4**	**10.2**	**12.2**	**14.3**	**12.1**	**10.6**	**8.6**	**8.0**	**9.0**	**9.0**	**10.5**	**11.9**	**10.5**	**9.7**	**13.0**	**13.2**	**13.5**	**10.9**	**7.4**	**7.9**	**14.3**		
Min.	**0.6**	**0.8**	**0.8**	**1.1**	**1.0**	**0.8**	**0.6**	**0.7**	**0.7**	**0.9**	**1.4**	**0.9**	**0.7**	**0.5**	**0.9**	**1.0**	**1.8**	**1.2**	**0.8**	**0.9**	**0.6**	**0.3**	**0.4**	**0.6**		**0.3**	
Avg.	**3.3**	**3.6**	**3.6**	**3.6**	**3.4**	**3.3**	**3.4**	**3.5**	**3.3**	**3.3**	**3.2**	**3.2**	**3.3**	**3.8**	**4.0**	**4.2**	**4.3**	**4.0**	**3.7**	**3.5**	**3.3**	**3.3**	**3.1**	**3.4**			**3.5**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.1	1.3	0.8	0.9	0.6	0.9	1.3	0.5	1.4	3.0	2.5	2.3	3.2	3.8	3.8	3.8	3.6	3.3	3.1	2.0	1.1	1.4	1.7	2.4	3.8	0.5	2.1
2	2.8	2.6	1.8	1.6	1.7	1.7	1.4	1.1	1.0	1.1	1.0	0.8	1.4	0.9	1.7	1.8	1.9	1.9	1.5	1.6	1.6	1.5	1.3	1.5	2.8	0.8	1.6
3	1.9	1.4	0.9	1.9	2.2	2.0	2.4	2.5	2.8	2.3	2.4	2.6	1.8	1.3	0.9	0.9	1.3	1.6	1.5	2.5	2.2	2.5	1.4	1.8	2.8	0.9	1.9
4	2.5	2.7	2.0	2.2	2.2	2.7	2.8	2.3	2.3	2.6	2.5	3.3	2.9	2.9	3.7	3.2	3.8	3.9	4.0	4.3	4.2	4.9	5.8	6.6	6.6	2.0	3.3
5	6.9	6.8	5.9	6.2	6.7	6.9	6.9	7.1	7.8	6.6	6.2	6.3	4.1	3.3	2.2	1.4	2.1	3.9	5.0	5.5	4.5	5.2	3.6	4.0	7.8	1.4	5.2
6	6.1	8.3	6.7	6.2	6.8	6.7	5.8	6.3	6.2	8.6	8.2	8.2	8.4	6.5	5.3	2.6	1.3	1.8	3.5	3.9	4.4	4.9	5.9	6.0	8.6	1.3	5.8
7	5.7	4.9	6.5	5.8	4.9	5.5	7.5	7.2	5.7	5.9	3.8	1.8	1.9	2.1	5.6	3.0	1.4	1.7	2.3	1.9	2.3	2.4	1.8	1.6	7.5	1.4	3.9
8	7.9	8.2	8.0	7.6	6.5	5.6	3.9	4.7	4.8	5.1	5.1	5.4	5.3	4.6	5.0	3.4	4.4	5.5	5.7	4.6	5.0	3.4	3.6	5.1	8.2	3.4	5.3
9	5.8	5.8	5.5	5.1	5.1	4.3	3.9	4.3	4.8	5.0	5.2	4.6	4.6	4.7	4.9	4.6	4.1	2.5	1.0	3.3	3.1	4.0	4.5	3.1	5.8	1.0	4.3
10	3.9	1.2	0.8	1.5	0.9	0.9	1.6	3.5	3.1	2.4	2.0	1.6	4.8	6.2	5.5	4.8	3.6	2.9	3.6	3.4	2.7	3.0	2.9	3.4	6.2	0.8	2.9
11	3.1	2.6	3.9	6.0	5.6	3.1	3.2	3.7	3.5	3.7	4.0	3.4	4.2	4.0	4.3	3.7	4.5	3.1	2.8	6.4	6.8	7.5	7.8	8.8	8.8	2.6	4.6
12	9.1	8.8	8.9	9.1	8.0	7.6	7.5	7.7	6.5	4.9	4.1	3.4	2.6	3.8	4.4	5.0	3.5	2.7	3.5	3.2	1.5	2.8	3.8	2.1	9.1	1.5	5.2
13	2.1	1.4	1.6	1.2	2.1	3.3	4.5	4.3	4.9	4.2	3.2	2.5	2.7	1.7	2.1	2.5	3.1	5.0	3.6	2.7	1.3	2.1	1.5	1.2	5.0	1.2	2.7
14	2.2	4.2	3.3	2.3	3.4	3.7	3.6	3.5	4.1	3.6	3.5	3.0	2.4	1.5	2.6	3.2	3.2	3.9	3.7	3.4	2.1	1.4	1.2	1.2	4.2	1.2	2.9
15	1.7	2.3	2.3	3.8	3.5	6.1	5.5	4.1	4.6	5.8	5.6	5.2	8.6	4.7	4.8	5.1	4.0	3.5	3.4	3.8	3.9	3.4	2.8	3.0	8.6	1.7	4.2
16	3.5	3.7	3.2	2.8	3.2	3.0	4.9	4.1	5.8	7.4	4.1	3.1	3.2	3.4	3.6	2.7	3.5	5.1	5.8	3.7	6.0	7.2	5.0	5.4	7.4	2.7	4.3
17	5.7	7.3	5.6	5.3	6.1	6.4	6.4	3.5	2.9	4.7	3.7	2.4	2.3	1.6	2.2	1.9	1.6	3.0	2.3	2.0	0.9	1.1	3.1	3.5	7.3	0.9	3.6
18	4.4	5.0	4.1	5.1	4.6	4.5	3.3	3.3	2.5	4.5	3.2	3.5	3.5	3.4	3.3	4.0	4.2	4.7	7.2	6.7	6.6	5.7	5.7	4.9	7.2	2.5	4.5
19	3.4	3.6	1.7	1.0	4.0	5.0	5.6	3.2	5.7	2.4	1.4	1.6	4.0	7.0	4.0	7.8	11.1		13.6	11.0	8.6	10.3	9.4	7.2	13.6	1.0	5.8
20	7.8	8.3	7.6	7.5	7.1	6.5	7.4	4.7	3.5	5.1	2.2	2.0	3.7	9.2	6.4	4.8	3.4	5.2	6.2	4.3	1.6	5.4	6.6	5.3	9.2	1.6	5.5
21	2.5	3.5	4.3	3.3	3.4	2.5	3.2	3.1	3.2	2.9	4.1	4.1	4.8	4.7	5.6	8.5	7.1	5.0	3.2	2.1	1.6	2.3	4.5	6.8	8.5	1.6	4.0
22	7.3	4.4	3.7	3.4	3.4	2.8	3.6	4.1	3.8	3.8	4.3	2.8	4.5	4.5	5.3	6.3	5.3	5.2	4.7	5.8	5.7	5.6	5.7	5.5	7.3	2.8	4.6
23	6.8	7.6	7.7	6.4	6.4	6.2	6.3	6.2	5.6	6.2	5.9	4.4	2.9	2.0	2.5	4.6	3.1	3.3	3.1	2.8	2.5	2.0	1.7	0.8	7.7	0.8	4.5
24	1.7	1.4	1.3	1.7	3.1	11.3	10.1	9.3	5.8	2.1	1.6	2.4	2.8	2.1	3.9	7.8	4.4	1.7	0.9	1.8	3.5	4.1	3.1	2.0	11.3	0.9	3.7
25	2.0	6.3	3.9	4.5	5.7	6.0	5.0	8.2	4.8	2.1	1.6	5.5	5.5	7.7	7.0	4.6	4.7	6.4	7.3	6.9	6.5	7.8	6.1	2.8	8.2	1.6	5.4
26	5.6	4.8	8.4	7.3	6.0	4.9	5.6	6.3	3.8	6.4	2.9	4.5	4.3	4.0	5.5	4.3	2.8	5.6	6.2	7.3	4.7	2.0	1.7	1.7	8.4	1.7	4.9
27	1.4	1.3	2.0	4.6	7.7	9.2	6.8	3.4	3.2	2.3	4.0	3.3	2.2	2.4	2.9	3.3	3.0	2.7	2.1	2.1	1.6	2.3	4.3	5.0	9.2	1.3	3.5
28	5.4	4.7	5.1	5.8	7.5	8.9	9.4	9.4	8.6	8.6	8.3	7.9	7.1	6.4	5.3	4.9	4.1	2.8	2.9	3.8	4.5	4.3	2.6	1.3	9.4	1.3	5.8
29	1.5	3.1	2.6	2.6	2.4	2.1	1.9	2.3	3.0	3.6	3.4	4.2	1.7	5.1	5.6	4.6	3.7	4.4	3.1	2.2	1.2	2.2	2.2	4.0	5.6	1.2	3.0
30	5.1	7.4	6.1	3.4	3.8	1.9	2.7	2.6	2.3	2.3	0.8	2.6	3.3	2.5	2.5	2.3	2.3	1.4	1.6	2.1	3.1	1.7	1.9	1.9	7.4	0.8	2.8
Max.	**9.1**	**8.8**	**8.9**	**9.1**	**8.0**	**11.3**	**10.1**	**9.4**	**8.6**	**8.6**	**8.3**	**8.2**	**8.6**	**9.2**	**7.0**	**8.5**	**11.1**	**6.4**	**13.6**	**11.0**	**8.6**	**10.3**	**9.4**	**8.8**	**13.6**		
Min.	**1.4**	**1.2**	**0.8**	**0.9**	**0.6**	**0.9**	**1.3**	**0.5**	**1.0**	**1.1**	**0.8**	**0.8**	**1.4**	**0.9**	**0.9**	**0.9**	**1.3**	**1.4**	**0.9**	**1.6**	**0.9**	**1.1**	**1.2**	**0.8**		**0.5**	
Avg.	**4.3**	**4.5**	**4.2**	**4.2**	**4.5**	**4.7**	**4.8**	**4.6**	**4.3**	**4.3**	**3.7**	**3.6**	**3.8**	**3.9**	**4.1**	**4.0**	**3.7**	**3.6**	**4.0**	**3.9**	**3.5**	**3.8**	**3.8**	**3.7**			**4.1**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.3	3.1	8.4	7.9	3.1	7.0	7.3	7.6	7.5	5.9	3.0	6.9	8.3	5.6	4.1	3.4	3.7	3.9	4.0	3.3	3.8	3.4	3.2	4.1	8.4	3.0	5.1
2	4.9	6.0	4.5	5.2	4.0	5.7	6.1	4.9	11.5	9.7	8.2	9.7	10.4	9.9	8.6	6.5	5.0	6.1	7.4	4.8	4.0	3.4	6.6	7.3	11.5	3.4	6.7
3	8.5	10.1	4.0	3.7	5.0	4.3	4.1	5.3	4.4	6.3	8.3	10.2	7.6	4.9	4.8	5.2	4.9	4.6	4.3	5.5	7.1	6.9	5.3	4.7	10.2	3.7	5.8
4	4.5	3.1	3.5	4.5	4.0	3.6	3.7	4.2	4.2	4.1	2.7	4.6	5.3	6.8	5.6	5.1	5.3	5.6	5.7	6.0	4.9	4.8	4.1	3.3	6.8	2.7	4.6
5	3.2	3.1	4.1	4.7	4.7	5.6	5.8	5.8	5.9	6.1	6.0	5.3	5.4	4.2	2.0	0.7	1.6	2.9	3.5	5.4	8.7	9.6	6.1	4.0	9.6	0.7	4.8
6	5.9	4.6	4.8	7.4	3.9	5.2	6.3	6.4	9.6	8.7	6.5	6.6	7.7	9.1	8.1	9.7	8.1	6.8	7.8	6.1	7.6	6.5	8.0	8.8	9.7	3.9	7.1
7	8.7	8.6	8.5	9.0	8.1	7.8	7.9	8.9	8.5	7.5	6.6	6.2	5.5	4.4	4.5	4.4	4.6	4.0	5.7	4.8	6.1	5.8	5.5	4.9	9.0	4.0	6.5
8	4.6	6.6	7.6	7.1	8.6	9.6	9.1	8.0	6.6	6.0	3.5	3.0	4.5	5.4	5.4	3.7	5.3	4.3	4.5	6.0	5.9	4.5	3.6	2.5	9.6	2.5	5.7
9	3.3	3.6	3.4	4.5	4.4	4.6	4.4	3.9	3.8	3.3	3.2	2.8	2.9	1.6	1.6	1.4	2.6	2.7	3.2	4.2	4.2	4.5	4.3	2.3	4.6	1.4	3.4
10	2.5	2.1	2.0	3.7	5.6	7.1	6.3	4.5	5.5	7.2	6.8	7.9	5.7	6.4	6.6	7.9	4.4	8.6	7.3	6.4	5.4	5.7	5.3	6.0	8.6	2.0	5.7
11	4.8	5.5	4.1	3.7	3.4	3.2	4.5	4.4	4.1	3.6	4.7	4.7	4.9	5.4	6.4	6.4	6.3	5.8	5.9	6.5	6.9	6.3	5.8	7.0	7.0	3.2	5.2
12	6.8	6.8	6.6	7.0	6.9	6.0	5.4	4.4	4.1	2.2	2.9	2.5	2.4	2.5	1.9	0.8	1.4	1.4	1.9	0.9	2.1	2.6	1.8	1.5	7.0	0.8	3.4
13	1.2	1.3	1.6	2.9	7.4	8.2	7.7	8.5	9.0	8.7	9.9	9.5	8.5	6.7	7.8	8.1	8.6	9.6	10.6	8.8	4.4	4.7	6.0	3.9	10.6	1.2	6.8
14	5.4	4.7	7.8	7.7	6.4	6.6	6.3	8.2	7.1	8.2	8.9	7.8	6.8	7.5	6.8	6.1	5.7	5.0	4.5	3.2	1.2	3.8	3.5	2.9	8.9	1.2	5.9
15	2.1	2.9	1.8	2.0	1.7	2.9	3.4	4.4	4.8	4.5	4.8	5.2	5.4	5.6	4.2	3.0	3.1	2.8	3.4	3.9	4.4	4.3	4.5	3.9	5.6	1.7	3.7
16	4.0	3.9	3.3	2.5	2.6	3.1	3.2	3.5	3.2	2.6	2.4	2.7	3.3	2.2	3.4	2.8	1.8	2.0	2.0	1.1	2.0	4.9	3.2	1.1	4.9	1.1	2.8
17	2.9	2.2	2.4	2.4	3.4	2.4	2.4	4.7	4.5	4.3	4.6	1.8	5.6	4.2	4.7	2.9	3.1	3.9	4.2	2.8	2.1	2.9	4.0	3.8	5.6	1.8	3.4
18	4.4	4.5	5.2	4.1	5.2	4.1	4.1	5.5	4.8	4.1	4.8	6.4	7.3	6.8	8.3	8.9	8.3	7.9	8.7	9.1	9.6	10.2	10.9	10.3	10.9	4.1	6.8
19	10.9	10.9	10.9	9.6	9.2	9.9	8.6	7.8	7.6	7.9	7.3	7.9	7.4	5.1	6.4	6.2	5.6	6.1	5.7	7.0	7.3	7.6	5.4	3.5	10.9	3.5	7.6
20	3.6	2.8	2.5	2.9	2.8	3.3	3.2	3.8	3.8	4.7	5.7	5.4	4.7	5.4	5.5	5.9	5.9	6.7	7.4	7.8	8.9	9.8	10.2	9.4	10.2	2.5	5.5
21	9.4	9.0	8.9	9.5	9.9	9.9	9.3	9.3	8.3	8.6	8.6	8.3	9.1	9.0	8.8	9.1	7.3	5.2	5.2	3.9	2.5	2.4	1.7	1.4	9.9	1.4	7.3
22	1.0	0.9	1.9	2.7	2.9	2.8	3.5	2.6	2.9	3.2	3.3	4.2	7.4	6.0	3.5	3.7	2.8	1.9	1.2	1.0	1.4	1.0	1.8	2.3	7.4	0.9	2.7
23	0.9	1.6	1.5	1.8	2.9	3.4	3.0	2.9	2.6	2.6	3.3	2.3	4.6	3.5	4.5	2.8	4.6	2.5	7.6	8.7	7.8	8.7	4.2	4.3	8.7	0.9	3.9
24	5.4	2.0	1.6	2.2	1.5	1.7	1.6	1.9	1.6	1.2	2.0	4.2	3.4	2.8	2.7	3.2	3.6	3.9	3.4	5.3	5.3	5.4	6.1	7.0	7.0	1.2	3.3
25	8.0	5.5	2.8	5.3	6.4	7.2	8.1	8.7	9.9	10.7	10.2	11.6	10.7	10.5	10.4	9.6	8.7	8.0	7.8	8.1	8.1	8.1	6.2	5.0	11.6	2.8	8.2
26	3.6	3.6	4.0	3.9	4.0	3.3	3.7	4.1	4.1	4.9	5.2	4.4	4.3	3.9	4.6	4.6	5.2	5.4	6.0	5.8	4.8	5.1	5.4	5.2	6.0	3.3	4.5
27	6.0	6.3	5.4	5.5	4.7	5.3	5.5	7.4	7.8	7.3	7.1	6.6	5.9	6.2	5.7	6.0	5.5	4.7	5.7	5.3	5.6	5.6	5.3	5.1	7.8	4.7	5.9
28	4.7	4.7	4.6	4.4	3.4	1.9	1.7	2.5	2.7	2.8	2.2	2.5	2.8	2.1	2.2	3.5	2.5	1.2	1.9	3.7	5.2	5.9	5.6	6.2	6.2	1.2	3.4
29	6.2	6.4	6.5	6.1	6.8	7.7	7.9	8.0	8.8	9.4	10.2	11.0	11.6	11.6	12.0	12.2	11.6	11.6	12.0	10.9	9.5	9.9	9.4	9.7	12.2	6.1	9.5
30	10.7	11.2	12.0	13.1	12.9	12.2	12.2	11.8	12.7	11.2	7.1	2.7	5.3	2.0	2.6	5.1	6.2	6.9	3.8	5.3	6.0	6.1	4.8	6.1	13.1	2.0	7.9
31	6.8	9.2	3.6	3.7	7.2	12.4	9.7	7.4	10.9	9.1	12.4	10.3	7.7	8.4	3.7	2.5	1.6	3.0	4.2	5.6	6.0	6.6	9.5	9.0	12.4	1.6	7.1
Max.	**10.9**	**11.2**	**12.0**	**13.1**	**12.9**	**12.4**	**12.2**	**11.8**	**12.7**	**11.2**	**12.4**	**11.6**	**11.6**	**11.6**	**12.0**	**12.2**	**11.6**	**11.6**	**12.0**	**10.9**	**9.6**	**10.2**	**10.9**	**10.3**	**13.1**		
Min.	**0.9**	**0.9**	**1.5**	**1.8**	**1.5**	**1.7**	**1.6**	**1.9**	**1.6**	**1.2**	**2.0**	**1.8**	**2.4**	**1.6**	**1.6**	**0.7**	**1.4**	**1.2**	**1.2**	**0.9**	**1.2**	**1.0**	**1.7**	**1.1**		**0.7**	
Avg.	**5.1**	**5.1**	**4.8**	**5.2**	**5.3**	**5.7**	**5.7**	**5.8**	**6.2**	**6.0**	**5.9**	**6.0**	**6.2**	**5.7**	**5.4**	**5.2**	**5.0**	**5.0**	**5.4**	**5.4**	**5.5**	**5.7**	**5.4**	**5.1**			**5.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.1	9.9	9.7	9.3	10.4	10.8	10.2	10.7	9.8	8.0	6.3	8.0	6.6	7.1	4.7	2.3	2.7	6.0	8.4	7.3	4.8	5.1	5.9	8.2	10.8	2.3	7.6
2	9.9	8.3	10.2	11.4	11.0	10.5	11.1	8.2	10.1	8.8	9.5	8.9	8.1	7.9	6.0	5.2	5.1	5.9	5.4	5.3	6.8	7.0	7.7	8.0	11.4	5.1	8.2
3	8.4	8.1	8.7	9.3	8.9	8.6	8.2	8.0	8.0	8.4	8.9	8.4	7.1	6.5	4.9	2.8	2.4	1.9	2.0	2.7	4.2	4.9	5.1	4.6	9.3	1.9	6.3
4	5.3	4.4	4.8	3.2	2.7	4.4	5.1	5.8	5.6	6.0	6.1	5.3	5.7	5.5	4.5	4.6	5.4	5.3	5.3	5.5	6.4	5.7	5.2	3.6	6.4	2.7	5.1
5	4.2	3.6	2.9	2.4	4.2	5.5	5.5	5.4	5.1	4.0	4.7	5.6	5.6	5.7	5.2	5.2	4.9	5.0	5.1	5.0	5.2	5.3	5.4	5.0	5.7	2.4	4.8
6	5.9	6.2	6.6	7.2	8.4	8.0	8.7	8.8	9.0	10.2	10.4	9.7	10.5	11.1	10.2	10.9	10.7	11.5	11.1	10.3	9.6	9.5	8.8	7.9	11.5	5.9	9.2
7	7.0	6.3	6.4	5.8	6.1	5.8	6.6	7.4	6.0	4.2	2.7	2.4	2.6	2.4	3.3	2.2	1.3	2.6	3.3	1.3	2.4	4.1	3.8	1.6	7.4	1.3	4.1
8	2.8	3.0	3.5	3.9	3.7	5.4	4.8	6.6	7.8	8.5	11.4	10.0	9.8	7.9	3.0	2.5	3.3	3.4	3.4	3.5	2.3	3.8	3.1	3.7	11.4	2.3	5.0
9	3.2	1.9	1.9	3.9	4.7	4.2	4.5	4.5	4.4	4.1	4.1	5.8	5.7	5.2	5.0	4.2	4.1	3.5	4.3	4.2	4.2	3.9	4.2	3.6	5.8	1.9	4.1
10	4.0	4.4	3.9	4.0	4.1	3.6	3.2	2.6	1.7	1.3	2.0	1.1	1.5	2.5	3.6	4.3	4.6	4.9	4.0	3.6	4.2	5.0	5.0	4.3	5.0	1.1	3.5
11	3.6	3.0	2.3	2.9	3.3	2.9	2.7	3.3	3.1	3.2	3.0	2.5	3.2	3.9	2.5	2.0	1.1	3.0	4.9	5.4	5.2	4.1	5.7	4.8	5.7	1.1	3.4
12	5.8	6.5	6.4	6.5	6.6	5.5	7.2	6.5	8.7	8.5	7.5	7.5	6.0	3.9	3.5	3.8	3.7	3.5	4.4	4.2	4.3	5.7	6.2	5.6	8.7	3.5	5.7
13	6.6	6.8	6.3	6.9	8.5	7.6	8.5	8.5	8.4	9.5	10.2	10.1	8.8	8.7	6.9	5.9	5.3	4.9	4.5	4.8	4.4	4.7	4.0	3.6	10.2	3.6	6.9
14	3.4	4.0	3.2	3.6	3.7	1.9	1.7	2.7	2.9	3.8	3.7	4.2	4.9	4.8	4.8	4.7	4.7	5.0	5.5	5.0	5.1	4.5	3.3	3.0	5.5	1.7	3.9
15	4.0	4.0	4.2	3.9	2.3	1.3	1.7	2.1	2.7	2.0	2.3	1.8	2.6	2.4	3.2	3.8	4.3	4.6	4.8	5.5	7.0	4.9	6.0	6.2	7.0	1.3	3.7
16	7.5	10.1	9.7	10.7	10.5	10.2	9.8	9.8	9.9	10.4	11.3	10.1	9.3	9.3	8.5	9.3	10.4	9.1	7.3	8.3	7.1	7.6	8.0	7.8	11.3	7.1	9.2
17	6.4	6.0	8.0	9.0	8.8	8.0	8.7	9.1	8.6	6.9	8.0	6.3	7.4	9.5	9.4	8.7	9.6	9.9	9.5	8.9	9.0	10.4	9.8	10.9	10.9	6.0	8.6
18	11.1	10.8	10.5	11.1	10.7	10.0	8.0	9.7	7.1	7.4	5.3	7.6	9.8	8.1	6.2	5.1	5.4	5.3	6.4	6.7	7.7	7.8	7.1	5.7	11.1	5.1	7.9
19	4.5	4.8	4.7	4.5	4.8	4.9	5.2	4.5	5.5	5.1	5.5	5.3	5.4	6.6	5.8	7.0	7.6	8.5	9.1	9.2	9.7	9.3	9.2	9.2	9.7	4.5	6.5
20	10.6	10.6	10.3	11.1	10.9	11.1	10.4	10.8	10.0	10.1	10.1	10.7	11.2	9.4	9.2	10.3	10.9	11.7	11.5	11.7	10.9	11.7	12.3	12.0	12.3	9.2	10.8
21	11.3	10.8	10.0	8.6	5.5	2.8	2.8	3.5	3.5	3.3	2.4	4.8	3.1	2.6	2.5	1.9	2.4	2.6	2.2	2.6	3.3	3.0	3.1	3.8	11.3	1.9	4.3
22	2.4	2.5	5.5	7.9	9.0	10.2	10.4	10.3	11.7	10.8	9.4	8.8	8.7	9.2	9.1	10.4	11.3	11.9	11.1	9.8	8.8	6.5	5.9	6.1	11.9	2.4	8.6
23	5.4	4.7	5.3	5.2	4.2	2.7	5.2	6.8	7.1	7.9	7.0	7.5	6.0	6.4	5.8	8.0	8.0	9.7	7.5	5.8	6.6	6.3	5.6	6.9	9.7	2.7	6.3
24	7.9	8.0	8.3	6.9	2.9	1.5	2.3	3.7	3.7	4.5	4.6	5.2	6.2	5.6	4.8	5.9	8.0	8.9	10.0	10.5	10.1	10.5	9.6	9.0	10.5	1.5	6.6
25	8.5	8.9	9.3	8.2	8.5	9.7	10.3	12.2	14.0	12.8	13.3	13.0	12.6	13.0	13.8	13.7	13.3	13.4	13.5	13.5	12.9	12.3	12.4	12.7	14.0	8.2	11.9
26	13.2	14.1	13.7	12.8	13.5	12.4	11.5	9.8	8.3	6.2	6.3	5.5	3.9	4.3	4.2	3.4	2.8	1.8	1.5	2.1	1.8	1.7	2.8	2.8	14.1	1.5	6.7
27	2.0	2.6	3.3	3.7	3.0	4.0	4.9	5.6	5.5	6.5	6.0	7.5	7.5	8.4	7.6	8.6	8.4	7.5	8.3	8.6	8.5	8.7	8.7	7.6	8.7	2.0	6.4
28	8.0	7.6	6.0	6.8	6.9	6.3	6.3	6.1	5.6	4.7	3.9	4.0	4.0	3.7	3.9	2.9	3.1	3.8	5.0	4.8	5.5	5.1	4.7	5.2	8.0	2.9	5.2
29	5.6	5.1	5.0	4.8	4.6	4.0	4.5	5.6	6.7	6.3	6.3	6.4	6.8	7.4	7.6	7.3	7.2	7.9	8.0	7.9	8.4	8.3	7.9	7.9	8.4	4.0	6.6
30	8.1	8.5	7.1	7.7	7.6	7.3	8.3	8.6	9.1	8.8	8.2	9.1	8.3	6.9	7.0	8.7	9.0	9.2	8.6	10.0	8.6	7.7	7.2	8.7	10.0	6.9	8.3
Max.	**13.2**	**14.1**	**13.7**	**12.8**	**13.5**	**12.4**	**11.5**	**12.2**	**14.0**	**12.8**	**13.3**	**13.0**	**12.6**	**13.0**	**13.8**	**13.7**	**13.3**	**13.4**	**13.5**	**13.5**	**12.9**	**12.3**	**12.4**	**12.7**	**14.1**		
Min.	**2.0**	**1.9**	**1.9**	**2.4**	**2.3**	**1.3**	**1.7**	**2.1**	**1.7**	**1.3**	**2.0**	**1.1**	**1.5**	**2.4**	**2.5**	**1.9**	**1.1**	**1.8**	**1.5**	**1.3**	**1.8**	**1.7**	**2.8**	**1.6**		**1.1**	
Avg.	**6.5**	**6.5**	**6.6**	**6.8**	**6.7**	**6.4**	**6.6**	**6.9**	**7.0**	**6.7**	**6.7**	**6.8**	**6.6**	**6.5**	**5.9**	**5.8**	**6.0**	**6.4**	**6.5**	**6.5**	**6.5**	**6.5**	**6.5**	**6.3**			**6.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.1	6.8	6.0	5.9	3.6	4.9	4.7	3.7	2.9	3.5	2.1	1.0	3.7	4.6	3.7	2.1	0.6	0.8	1.8	2.2	3.3	2.2	2.1	2.6	9.1	0.6	3.5
2	2.1	2.5	3.3	1.6	0.7	1.9	2.9	2.5	1.1	1.1	1.1	2.4	1.7	2.6	2.9	6.7	9.6	13.4	10.4	7.5	10.6	10.0	12.9	12.8	13.4	0.7	5.2
3	12.7	11.2	9.7	9.7	8.9	8.6	8.4	10.0	10.8	10.9	10.6	11.9	12.3	11.7	12.1	10.6	11.6	10.6	8.1	9.2	8.7	9.7	10.1	10.1	12.7	8.1	10.3
4	11.6	10.6	10.0	9.5	8.9	11.2	12.1	9.8	10.3	10.4	9.4	8.3	5.4	2.3	2.7	3.6	3.6	2.4	2.2	2.2	2.3	2.1	2.0	2.4	12.1	2.0	6.5
5	2.6	2.3	2.8	2.3	2.1	2.6	3.1	3.8	5.6	6.8	7.0	7.4	7.1	7.3	8.1	8.4	7.7	6.1	6.1	5.7	6.1	6.8	7.7	7.3	8.4	2.1	5.5
6	7.2	6.4	6.6	5.9	5.2	3.6	4.8	4.7	4.7	4.7	4.6	5.1	4.4	4.4	6.0	7.1	5.5	5.4	5.8	3.9	1.4	0.8	2.2	2.7	7.2	0.8	4.7
7	3.0	2.6	1.8	2.1	1.7	1.3	3.4	5.4	4.9	3.7	3.1	2.5	4.0	5.1	5.6	6.8	8.4	9.3	10.8	10.7	10.8	11.1	10.5	9.0	11.1	1.3	5.7
8	7.4	5.9	6.0	6.4	6.1	6.6	6.9	6.1	4.6	4.8	3.8	3.9	4.4	4.8	3.5	2.2	0.7	0.6	1.4	2.0	2.3	4.4	6.8	7.9	7.9	0.6	4.6
9	6.1	4.7	4.9	2.0	1.8	2.8	4.0	5.4	4.3	3.2	3.1	4.3	4.3	4.6	4.4	4.6	4.4	3.7	3.7	4.5	5.2	5.7	5.8	6.4	6.4	1.8	4.3
10	6.8	9.1	10.8	11.0	10.5	12.0	12.0	12.3	11.4	11.8	11.6	12.0	11.9	11.6	9.0	9.2	9.2	8.4	7.6	7.1	6.6	5.6	2.5	0.9	12.3	0.9	9.2
11	2.0	1.4	4.7	7.7	6.3	8.9	5.3	5.5	4.4	5.4	5.6	7.8	9.7	7.8	6.4	7.1	5.7	8.5	7.4	4.6	4.0	3.1	3.6	4.5	9.7	1.4	5.7
12	3.3	3.1	4.1	3.7	3.9	4.1	4.8	5.0	5.0	5.3	4.4	4.5	5.4	5.4	4.8	3.6	3.8	3.6	3.1	3.2	3.6	3.6	2.8	1.8	5.4	1.8	4.0
13	0.7	0.8	1.7	1.9	0.9	1.6	3.0	2.6	2.6	3.8	3.8	4.0	4.3	3.6	3.8	3.5	3.1	2.2	2.2	1.3	0.8	2.1	1.3	0.9	4.3	0.7	2.4
14	0.7	0.8	1.6	1.3	1.2	1.9	2.5	6.6	8.3	8.9	7.0	5.9	7.2	7.2	7.5	7.5	6.6	5.5	6.3	8.6	8.3	7.6	7.7	7.8	8.9	0.7	5.6
15	5.5	4.5	4.5	6.1	4.9	6.5	5.4	5.9	6.9	6.1	8.1	7.0	7.5	6.5	10.0	9.2	10.2	9.3	7.0	4.8	6.4	6.3	5.5	7.0	10.2	4.5	6.7
16	4.8	7.9	6.9	5.1	5.9	7.0	8.2	9.2	8.9	9.3	10.7	9.6	9.0	9.8	10.6	11.1	9.5	8.7	7.4	8.9	8.7	8.6	8.2	6.3	11.1	4.8	8.3
17	6.6	8.9	10.2	10.4	9.0	9.4	10.0	9.7	9.5	8.2	8.1	7.3	6.2	4.2	4.2	3.5	5.9	4.6	4.3	2.7	4.3	4.7	4.7	6.1	10.4	2.7	6.8
18	3.8	6.7	6.2	5.5	4.3	4.7	5.7	5.7	6.1	6.1	6.3	6.7	7.8	6.7	5.7	4.3	3.6	3.3	2.8	2.2	2.4	2.3	2.5	2.9	7.8	2.2	4.8
19	4.1	4.8	5.8	6.9	5.8	6.6	7.2	7.6	5.4	7.8	6.9	6.2	7.6	7.8	9.3	9.1	8.1	8.2	8.7	8.8	6.4	2.4	2.5	2.8	9.3	2.4	6.5
20	3.1	3.3	4.0	5.5	5.2	5.2	4.9	5.9	7.0	8.1	7.6	7.4	8.0	8.4	8.9	9.1	9.0	9.9	9.2	9.2	8.6	9.3	8.8	8.1	9.9	3.1	7.2
21	8.0	7.5	6.9	6.8	5.8	6.2	7.2	7.2	6.8	5.9	5.4	4.6	3.6	3.7	3.7	3.9	3.8	4.7	5.7	6.5	6.6	6.9	6.5	7.3	8.0	3.6	5.9
22	7.5	7.4	7.2	8.4	7.8	7.4	7.4	7.6	6.9	7.0	7.0	6.7	6.2	6.1	6.0	6.5	6.1	5.5	6.2	6.2	6.5	5.9	6.1	4.7	8.4	4.7	6.7
23	4.9	5.3	3.3	10.1	9.3	10.1	7.7	6.9	8.1	7.3	5.7	5.1	3.9	6.4	6.2	5.9	4.3	4.9	5.2	4.7	4.5	4.0	3.3	6.9	10.1	3.3	6.0
24	4.1	2.1	2.3	2.1	3.8	4.4	2.8	2.5	4.5	6.6	5.4	3.4	3.3	3.0	3.4	4.5	3.6	4.0	10.4	10.7	11.0	11.6	12.0	9.1	12.0	2.1	5.4
25	7.7	7.3	8.2	9.3	10.8	11.3	6.1	5.8	7.2	7.1	7.8	7.2	10.1	12.3	14.5	10.5	11.5	8.9	8.7	8.5	7.4	8.3	10.5	8.2	14.5	5.8	9.0
26	5.7	3.6	4.4	8.0	6.6	4.6	5.5	4.6	3.6	4.4	5.3	5.8	8.2	9.6	9.2	9.6	8.6	8.7	9.8	9.7	8.5	9.4	9.7	8.9	9.8	3.6	7.2
27	9.1	10.1	10.0	10.5	10.4	10.2	11.3	11.4	10.7	10.7	11.1	10.5	10.8	10.3	10.0	10.1	10.0	10.1	9.8	9.4	8.9	8.6	8.7	8.8	11.4	8.6	10.1
28	7.4	6.6	3.7	3.8	4.8	4.8	4.0	4.5	5.8	8.0	7.2	6.0	7.5	5.9	6.3	4.9	4.6	5.4	3.7	3.0	3.1	2.4	3.0	2.8	8.0	2.4	5.0
29	3.5	3.5	2.5	3.0	4.0	6.1	6.2	8.3	8.0	5.0	4.3	5.8	6.8	7.8	8.3	7.0	7.1	7.0	6.7	7.5	6.3	7.2	5.8	6.3	8.3	2.5	6.0
30	6.2	6.5	5.3	6.0	6.9	7.7	7.4	6.8	4.5	2.7	3.1	4.2	4.8	5.2	4.4	5.8	6.4	7.6	9.6	10.1	8.8	8.7	7.7	6.5	10.1	2.7	6.4
31	5.9	5.0	4.8	4.6	5.0	5.0	5.2	5.0	5.7	5.6	5.0	4.5	4.1	4.6	5.0	5.0	6.0	6.0	5.7	6.0	7.3	7.9	6.9	7.9	7.9	4.1	5.6
Max.	**12.7**	**11.2**	**10.8**	**11.0**	**10.8**	**12.0**	**12.1**	**12.3**	**11.4**	**11.8**	**11.6**	**12.0**	**12.3**	**12.3**	**14.5**	**11.1**	**11.6**	**13.4**	**10.8**	**10.7**	**11.0**	**11.6**	**12.9**	**12.8**	**14.5**		
Min.	**0.7**	**0.8**	**1.6**	**1.3**	**0.7**	**1.3**	**2.5**	**2.5**	**1.1**	**1.1**	**1.1**	**1.0**	**1.7**	**2.3**	**2.7**	**2.1**	**0.6**	**0.6**	**1.4**	**1.3**	**0.8**	**0.8**	**1.3**	**0.9**		**0.6**	
Avg.	**5.6**	**5.4**	**5.5**	**5.9**	**5.6**	**6.1**	**6.1**	**6.4**	**6.3**	**6.5**	**6.2**	**6.1**	**6.5**	**6.5**	**6.7**	**6.5**	**6.4**	**6.4**	**6.4**	**6.2**	**6.1**	**6.1**	**6.1**	**6.1**			**6.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	318.9	2.5	12.9	4.8	3.9	6.4	5.3	27.9	30.7	51.6	53.7	53.1	57.2	55.4	32.7	24.2	13.5	43.1	40.0	22.2	31.1	38.6	38.6	43.0
2	48.0	44.9	40.1	41.9	44.5	45.2	43.6	42.7	51.8	54.4	54.8	54.3	54.6	53.9	42.7	23.3	29.2	41.1	44.9	47.3	51.0	52.3	53.7	56.0
3	54.5	39.1	343.8	311.6	310.6	311.5	312.4	304.9	303.7	302.1	302.4	292.5	281.7	283.1	299.0	21.7	61.4	97.8	155.1	165.9	175.9	200.0	62.6	301.9
4	311.7	311.9	1.9	58.0	47.4	44.4	33.6	353.1	11.5	28.7	4.7	6.5	13.2	10.5	12.6	19.3	9.8	7.6	19.0	16.8	12.7	11.8	10.9	25.7
5	18.9	2.6	20.8	51.3	56.6	45.3	57.5	48.6	35.7	344.8	290.8	295.2	326.8	71.5	59.1	65.2	41.2	64.1	75.0	44.2	57.4	131.2	178.7	169.1
6	88.8	51.2	47.5	77.5	63.0	153.7	146.1	41.8	82.2	66.9	47.8	46.1	44.5	45.3	53.8	31.1	339.9	317.7	313.5	310.7	307.5	310.1	316.2	315.6
7	316.6	309.0	306.7	307.7	309.8	307.1	310.7	306.4	305.0	313.4	287.8	309.0	102.6	108.2	155.7	116.1	136.1	118.6	49.1	25.8	62.5	98.8	98.8	111.4
8	88.3	115.3	295.2	304.1	304.5	308.6	310.0	310.6	314.9	310.3	313.8	3.4	46.0	49.3	54.1	47.7	48.4	48.8	45.6	44.7	43.1	30.5	32.6	9.0
9	17.3	30.0	10.2	26.8	36.8	38.8	23.7	12.6	16.8	19.2	24.3	32.2	33.3	34.4	33.1	29.0	24.9	22.0	26.8	26.6	22.1	26.3	30.4	30.9
10	29.0	25.8	19.2	27.6	25.6	25.6	25.7	16.8	14.1	7.3	12.9	22.7	23.0	22.8	17.3	19.2	17.6	18.3	17.8	17.2	17.4	17.2	13.3	18.6
11	13.1	8.0	12.0	17.1	16.8	17.1	18.4	13.6	14.6	16.1	12.4	17.5	15.5	19.6	16.4	13.3	19.2	9.7	1.3	359.3	341.1	350.7	341.8	321.6
12	327.8	327.9	322.8	322.2	319.8	330.7	1.6	333.5	349.0	355.2	352.7	359.4	2.3	352.6	346.5	337.6	357.7	355.8	344.4	343.3	348.0	5.7	18.1	155.1
13	189.6	194.2	197.5	193.7	196.5	200.3	195.1	188.8	214.5	218.2	351.1	20.0	19.8	11.0	11.9	17.6	9.7	12.2	17.9	322.3	35.2	22.6	277.1	327.6
14	357.6	264.8	10.6	28.0	21.9	18.7	11.6	8.7	8.6	9.7	6.6	20.5	23.4	27.5	348.3	313.2	309.7	310.9	307.7	303.2	348.8	160.3	169.8	102.9
15	91.4	206.0	199.5	155.1	155.0	129.3	150.7	128.1	49.8	31.5	56.2	89.4	96.8	171.5	164.8	172.0	182.5	66.0	82.1	159.8	290.6	309.3	317.7	14.6
16	32.0	18.2	16.3	29.1	20.5	8.6	7.3	6.6	9.5	1.9							11.6	18.8	15.5	11.2	11.0	11.5	10.6	12.3
17	17.1	15.5	19.6	21.2	11.5	18.1	13.1	10.1	10.2	8.2	16.5	15.8	11.6	4.7	11.5	8.9	26.8	26.4	26.4	33.7	31.9	27.0	26.5	26.3
18	10.1	22.7	17.3	22.4	26.9	25.4	30.7	21.4	23.1	22.6	265.1	218.4	31.0	25.5	20.8	30.6	34.3	333.7	26.2	326.5	310.3	323.2	311.9	311.8
19	1.9	46.1	318.7	1.0	321.9	324.2	345.9	357.2	21.4	13.9	17.9	31.3	33.8	33.9	33.3	34.3	29.7	29.7	30.5	24.4	33.5	21.4	21.9	12.0
20	4.2	5.2	5.0	5.2	4.1	334.6	1.0	360.0	356.9	2.8	10.4	14.7	28.9	29.9	20.0	19.2	21.3	17.7	12.5	220.3	317.4	307.3	308.6	308.0
21	314.2	316.2	309.8	306.1	23.4	313.2	87.7	89.8	33.1	41.2	329.7	309.1	77.8	90.3	99.8	154.9	159.4	160.9	100.0	75.9	151.4	166.3	168.1	40.9
22	180.5	244.3	199.2	345.7	3.6	16.0	13.1	14.6	26.0	28.3	26.5	23.6	28.2	28.5	25.8	260.8	26.6	38.3	52.4	41.9	44.1	57.7	55.9	42.9
23	335.0	344.6	340.4	355.4	55.8	53.3	51.2	53.5	320.5	326.1	318.2	314.6	307.8	294.0	288.7	274.3	306.1	311.8	311.1	311.2	300.0	291.0	291.2	296.0
24	274.7	50.5	126.4	109.3	128.9	136.6	102.5	131.9	123.2	170.6	161.3	80.3	307.0	281.3	300.9	275.5	305.4	321.8	52.9	45.3	21.4	40.4	20.5	25.4
25	28.5	21.2	24.2	9.0	10.6	14.7	17.0	21.3	14.2	13.1	12.4	10.3	10.6	9.9	9.8	6.8	5.4	7.1	12.2	7.8	355.7	346.5	342.0	343.0
26	351.5	356.2	346.3	354.5	350.6	353.7	339.6	354.3	351.1	352.0	330.0	8.3	272.4	278.3	282.0	286.8	234.1	248.4	7.6	331.8	303.9	312.4	299.2	308.5
27	320.1	352.5	347.2	312.4	349.2	352.9	344.2	347.7	333.6	9.3	13.0	357.6	352.6	7.8	8.5	19.4	19.9	7.1	9.7	9.2	4.6	0.4	359.6	356.7
28	347.5	347.4	350.1	354.3	359.7	0.1	1.4	14.1	10.8	2.8	359.5	11.8	6.9	6.7	6.5	1.0	1.9	17.5	17.3	10.0	5.5	5.5	340.1	349.8
29	355.5	17.6	13.1	4.9	14.9	13.8	12.8	10.9	10.7	9.9	12.3	6.6	7.7	12.5	11.5	7.0	1.5	3.1	2.2	3.3	7.1	354.9	6.4	22.8
30	9.0	358.0	346.8	328.0	348.3	318.3	348.6	14.1	15.0	353.5	5.9	11.3	3.8	11.0	8.4	10.3	358.8	5.8	18.7	308.6	300.5	348.8	355.4	355.6
31	1.5	0.6	2.2	357.9	354.9	358.3	353.2	350.9	253.2	246.4	265.1	267.4	266.7	260.9	219.1	262.9	307.8	26.0	31.3	209.1	220.8	219.7	210.0	204.7

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	338.3	355.5	347.8	359.7	4.3	0.4	4.0	8.8	7.8	7.5	3.1	6.3	5.4	10.3	11.4	16.5	17.3	12.8	20.2	27.2	22.9	26.5	357.1	345.6
2	348.6	341.2	335.6	356.4	12.2	23.7	345.2	324.0	293.1	291.7	48.2	355.6	344.2	24.9	10.8	38.5	96.5	91.8	102.5	18.5	99.7	93.3	289.0	352.4
3	280.3	298.5	284.9	316.0	304.1	339.1	346.2	347.5	342.5	346.6	26.1	30.3	34.4	32.5	111.9	76.8	22.7	40.7	252.1	301.4	16.5	20.9	334.4	217.2
4	19.6	25.4	23.7	17.6	358.0	22.4	17.9	10.7	26.0	27.8	34.8	55.2	204.6	204.4	195.5	110.6	32.0	25.6	24.7	126.6	31.0	30.1	32.1	23.1
5	212.3	235.3	26.4	31.0	19.3	222.8	310.8	32.0	20.2	9.9	54.5	187.8	73.2	44.0	45.0	61.4	54.9	23.4	186.1	209.1	210.7	31.0	10.4	12.6
6	357.2	353.7	342.3	355.2	7.5	351.1	351.4	357.8	358.4	356.3	5.2	344.8	348.9	14.6	18.2	11.2	8.8	1.7	0.3	11.9	11.0	10.7	11.4	8.9
7	10.6	0.6	10.4	19.2	351.9	210.0	226.8	25.2	14.0	210.9	211.3	208.3	207.7	206.2	204.6	206.3	206.9	210.4	212.3	26.3	50.8	171.6	203.7	206.4
8	141.7	43.8	185.8	48.6	8.5	3.8	221.4	11.3	2.8	23.4	14.9	31.2	25.2	80.4	76.4	159.6	193.3	224.7	31.6	14.6	245.7	14.0	6.6	30.0
9	22.3	26.6	27.2	31.2	22.4	30.3	15.2	15.3	31.8	46.0	38.7	33.0	35.2	31.7	42.0	174.0	205.3	204.6	210.0	211.6	206.7	29.2	28.2	26.6
10	17.8	31.0	25.0	30.1	14.5	218.7	194.0	209.6	202.8	166.5	38.5	25.3	86.1	74.0	59.7	52.4	35.4	4.4	7.8	10.2	13.6	13.3	8.8	14.2
11	26.9	28.7	24.2	29.4	29.0	26.0	28.4	21.3	17.0	24.8	28.2	28.8	27.2	23.6	27.6	13.3	5.5	6.2	5.3	2.1	4.5	0.2	0.3	347.9
12	347.3	354.3	347.5	347.7	355.2	357.5	350.3	344.3	352.2	0.9	351.9	354.1	9.0	12.2	9.0	14.6	6.8	4.4	7.3	17.4	20.3	19.9	21.1	20.6
13	23.8	25.9	27.2	31.9	33.3	31.3	29.1	26.9	23.0	18.6	19.4	18.7	14.7	17.9	12.8	16.5	17.7	9.0	354.3	350.7	351.6	351.9	343.8	343.7
14	331.8	336.9	350.4	323.6	345.9	353.1	358.1	355.1	6.9	4.0	2.9	1.7	7.5	18.5	21.8	29.5	22.0	274.9	233.7	17.6	28.5	55.6	248.2	29.0
15	32.2	26.7	27.8	15.9	256.9	327.9	30.5	18.3	11.0	33.4	34.2	38.5	192.4	206.4	201.6	207.1	204.8	205.0	214.6	345.3	33.2	27.3	29.3	27.2
16	27.7	28.5	26.4	28.8	24.4	28.7	28.5	36.0	22.2	359.1	200.3	75.8	194.6	29.2	201.8	197.2	34.9	223.7	227.3	219.9	347.2	16.1	352.0	16.4
17	36.8	255.1	31.2	343.6	253.5	339.5	29.0	30.7	30.5	34.3	54.1	36.8	35.4	51.6	91.3	34.8	10.0	10.6	19.9	26.8	29.5	29.6	28.3	29.2
18	21.5	11.7	24.8	26.1	25.0	21.8	38.0	17.4	6.8	34.4	36.3	36.0	36.7	29.3	42.7	199.2	206.0	188.6	335.8	0.3	14.4	20.6	22.7	20.1
19	30.8	201.4	215.8	192.8	197.4	194.0	331.4	72.2	288.6	310.1	311.7	315.3	316.5	314.1	312.4	313.8	311.9	312.9	314.3	338.8	358.1	352.5	11.4	51.7
20	49.1	45.9	37.8	315.3	307.7	306.8	299.2	295.3	301.9	297.8	310.4	297.6	307.6	289.6	315.4	347.3	192.8	154.5	119.5	293.2	309.4	308.9	299.6	312.2
21	313.4	311.0	308.6	306.6	312.9	35.9	49.3	41.1	27.9	41.3	46.2	44.5	43.0	48.6	67.0	49.2	26.3	55.8	61.0	30.9	2.6	321.5	330.7	21.2
22	17.2	40.0	45.8	51.9	49.6	47.9	41.2	40.2	34.1	49.5	45.0	39.1	42.3	47.3	45.6	50.0	35.2	3.1	6.7	18.7	19.2	17.6	12.0	16.4
23	8.0	11.3	13.1	7.6	3.2	11.6	19.6	7.8	16.4	36.0	39.2	39.9	38.7	41.4	44.0	42.5	54.4	37.8	45.6	41.1	43.5	21.0	45.5	9.5
24	354.8	338.7	346.9	325.6	310.6	311.3	317.0	320.8	313.5	339.1	44.4	54.7	45.8	60.3	324.0	317.9	312.7	317.4	322.4	309.8	314.2	315.2	3.8	32.4
25	57.7	31.8	24.1	351.9	10.5	312.8	313.2	318.6	314.6	313.7	319.8	316.3	320.9	312.7	336.8	0.7	137.6	22.8	287.1	285.4	292.0	100.1	104.7	72.7
26	325.5	3.4	11.2	6.0	344.8	321.8	174.9	175.2	181.8	189.0	200.6	157.6	195.5	157.7	149.4	129.4	191.2	208.2	203.4	204.1	204.6	193.5	174.8	179.8
27	177.4	191.8	183.3	135.8	323.1	14.0	11.9	4.3	12.3	29.1	34.4	36.0	32.3	32.7	38.2	69.5	198.1	202.5	310.1	9.6	7.6	12.3	19.9	18.8
28	21.2	20.3	22.7	21.3	10.5	12.2	13.2	16.9	17.4	22.2	26.7	30.7	33.3	37.7	39.5	40.9	352.4	287.6	327.9	354.7	353.7	359.0	18.5	18.1

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

March *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	25.3	21.0	11.1	23.9	34.6	29.2	25.5	16.5	22.8	33.6	37.6	33.8	35.4	42.4	39.7	49.5	43.7	28.6	51.9	45.9	39.6	18.9	3.2	18.2
2	2.4	17.9	32.5	40.7	25.2	18.3	21.2	1.9	15.2	49.7	51.9	46.3	44.8	45.6	44.5	39.6	54.0	32.3	59.3	51.5	42.3	35.6	27.6	31.6
3	35.1	28.9	36.1	28.1	41.8	30.4	23.7	21.7	22.4	50.8	53.0	39.1	42.0	40.8	40.1	38.7	72.8	61.4	47.6	51.9	59.7	54.6	53.0	38.4
4	42.5	51.7	52.9	53.2	38.0	9.4	27.7	24.4	33.1	37.4	48.1	50.2	47.9	38.4	44.9	42.8	38.4	328.6	340.2	43.1	57.0	53.1	47.1	51.0
5	52.1	54.0	54.6	58.7	58.1	58.5	56.6	57.0	57.9	61.2	62.7	52.6	54.1	41.9	37.8	30.1	31.4	346.2	320.5	2.7	0.3	43.2	56.4	62.3
6	49.3	329.1	320.5	56.8	43.9	38.6	31.0	47.0	49.0	35.6	9.5	343.6	321.8	317.3	318.2	317.2	319.2	316.4	312.1	314.3	316.0	316.0	314.1	317.1
7	312.3	312.7	316.2	315.6	315.7	315.9	315.2	314.0	298.9	312.7	315.9	316.5	315.3	314.7	306.6	297.8	301.2	303.2	308.9	310.2	312.2	314.9	314.2	311.2
8	313.7	314.4	318.0	316.0	317.7	314.7	312.0	317.6	14.4	1.2	49.8	44.7	39.4	45.7	55.1	351.7	329.4	18.1	1.0	309.9	355.9	58.1	58.7	55.9
9	54.7	44.1	43.6	44.9	62.7	58.2	62.6	84.7	54.2	72.3	53.2	57.0	61.9	48.4	55.3	47.1	49.9	18.5	47.7	61.9	80.4	57.7	35.7	52.3
10	42.6	40.6	43.1	32.8	29.4	19.9	22.1	44.1	24.1	39.3	50.3	54.4	75.5	71.7	166.2	184.2	56.1	46.2	51.5	54.2	44.8	42.2	51.4	55.0
11	54.4	53.9	57.4	24.4	322.1	314.9	318.8	11.2	64.0	60.6	53.4	52.4	59.8	50.4	52.5	53.0	15.0	311.3	316.3	317.8	316.3	328.7	54.9	58.6
12	42.4	334.4	315.6	312.5	316.0	331.3	339.4	317.2	332.4	38.3	354.2	323.1	317.0	315.9	315.2	25.2	147.9	150.6	162.7	176.1	162.3	295.1	302.6	304.6
13	318.5	145.0	175.0	173.1	186.7	179.4	172.0	166.5	161.6	102.8	138.5	131.5	143.9	167.1	172.9	163.2	118.0	71.1	55.1	330.8	309.0	317.0	319.3	26.6
14	78.4	313.9	65.3	319.2	355.7	43.1	125.9	188.7	133.6	69.6	30.1	89.9	90.1	126.6	118.2	84.3	145.0	296.1	312.6	319.2	314.9	312.3	312.1	343.3
15	56.5	52.7	54.4	51.7	54.3	54.8	54.2	52.2	55.1	58.7	57.4	48.7	47.4	44.0	38.5	33.0	30.0	359.2	24.1	56.9	52.9	39.4	38.0	21.2
16	9.8	16.1	6.2	16.1	13.5	17.1	23.4	35.2	49.8	53.6	53.7	48.4	41.5	36.7	40.9	44.0	41.8	57.6	50.1	51.7	41.6	44.5	45.0	39.9
17	34.8	36.3	38.7	42.9	34.6	50.6	44.6	34.7	39.3	50.6	48.2	53.5	49.4	38.7	35.5	45.6	50.8	15.5	25.0	30.7	12.6	19.6	12.3	5.2
18	2.9	353.6	359.2	1.5	2.6	4.0	3.7	3.7	22.7	43.3	51.5	52.3	36.5	39.1	42.6	43.5	42.8	39.8	30.1	51.8	45.6	44.0	24.5	24.3
19	9.5	35.2	37.6	45.9	49.1	44.1	46.6	26.3	42.0	48.7	51.9	41.2	33.9	34.8	40.9	39.0	89.5	205.2	4.2	13.0	13.2	16.5	16.9	27.9
20	31.1	29.3	32.1	31.8	32.0	29.9	23.5	17.3	5.8	6.9	9.8	7.3	11.7	17.2	16.5	17.7	19.3	19.8	19.1	14.5	16.8	19.8	21.2	26.5
21	18.4	11.7	9.0	10.6	7.6	4.0	8.1	30.1	38.1	58.6	192.6	175.0	104.6	180.3	187.1	183.6	167.3	104.6	180.3	189.7	166.1	172.9	177.0	192.7
22	190.6	178.5	167.7	199.0	290.8	310.2	319.1	45.8	55.9	40.6	39.0	40.1	41.6	42.1	63.8	62.8	34.7	1.6	218.4	47.9	46.2	49.9	50.2	49.9
23	54.8	52.1	52.4	330.6	320.3	333.2	310.7	310.2	315.1	308.1	312.4	309.8	301.2	281.1	291.9	151.8	27.5	162.8	141.4	13.9	9.5	86.3	140.0	161.2
24	162.0	139.2	71.5	300.6	305.0	305.4	313.6	310.5	312.0	312.7	310.7	311.0	313.7	315.0	313.5	312.1	310.6	312.8	315.9	308.8	311.4	317.5	338.2	355.7
25	41.4	30.6	31.4	11.9	23.7	55.8	84.1	87.7	46.2	150.9	172.2	127.1	63.4	105.7	179.5	179.2	170.8	136.4	356.7	349.2	13.9	26.0	29.1	25.7
26	20.6	8.9	5.5	10.4	11.0	13.7	16.9	11.1	8.3	20.5	16.6	324.8	299.6	306.9	314.0	312.0	313.6	312.5	319.6	178.6	189.7	63.8	73.5	240.6
27	332.7	11.2	37.1	9.1	27.6	41.4	37.7	47.1	52.4	49.6	41.2	33.2	33.3	36.7	39.8	52.6	2.5	313.8	349.0	322.5	320.4	19.8	41.0	27.3
28	37.3	38.7	38.3	31.8	35.2	41.1	43.2	40.3	51.0	52.1	56.9	63.9	45.4	43.9	44.2	53.5	327.7	317.7	317.2	316.4	316.0	314.8	314.5	356.7
29	55.8	56.4	52.6	356.5	346.0	51.8	50.9	44.1	24.2	39.6	50.0	344.7	323.4	313.6	335.9	346.4	288.9	327.1	342.4	38.8	349.9	12.7	28.7	37.8
30	21.1	28.4	30.7	21.4	11.0	11.1	12.1	11.1	33.6	41.9	45.6	49.5	41.1	62.3	57.0	50.8	52.2	209.1	48.4	21.2	19.1	30.9	25.3	26.6
31	22.7	21.4	3.3	24.2	23.5	9.9	155.2	245.3	34.0	40.2	175.8	199.9	202.8	202.3	200.4	201.2	202.6	203.9	213.0	348.4	5.8	16.8	12.2	9.0

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	7.2	16.9	15.3	13.1	12.6	4.4	13.4	13.8	24.9	32.2	36.1	113.8	191.6	198.6	199.2	203.3	203.9	204.2	203.3	210.3	214.8	243.8	27.3	15.5
2	30.2	31.4	26.3	28.3	29.4	32.4	11.3	353.9	354.0	306.9	284.7	267.9	211.4	232.8	257.5	210.7	227.3	272.1	355.4	7.0	351.0	344.9	344.8	7.2
3	357.3	358.2	359.6	2.8	3.9	5.1	355.2	5.1	3.4	7.6	16.2	18.9	19.2	20.3	7.2	8.4	14.0	18.8	20.0	9.3	2.0	355.9	349.2	355.2
4	358.3	354.3	359.2	3.2	9.0	11.2	6.8	11.3	7.5	15.8	18.9	26.8	35.3	24.0	21.6	16.0	15.1	12.6	12.1	12.3	14.2	15.3	16.6	18.5
5	20.3	26.4	25.7	22.3	19.8	21.9	20.4	21.9	23.7	22.2	23.3	24.5	21.3	18.8	21.6	23.2	6.6	4.5	6.8	3.3	358.1	358.2	5.2	3.9
6	359.0	358.8	1.6	358.0	7.5	3.0	6.1	5.2	10.2	11.9	17.8	20.6	22.1	25.0	24.1	22.1	22.2	17.0	12.0	16.4	18.5	15.2	16.8	16.7
7	15.5	11.7	19.8	307.8	273.9	269.8	349.1	346.9	358.1	343.5	11.3	9.6	9.0	6.6	12.7	12.3	6.2	7.5	13.0	10.0	12.1	13.0	13.4	16.3
8	19.0	20.1	20.1	19.0	16.5	17.3	17.3	19.6	18.3	18.6	21.2	20.3	21.2	22.5	17.9	13.1	5.9	8.9	5.8	4.5	7.4	17.5	19.0	13.6
9	4.8	8.9	13.1	11.4	14.2	13.4	11.7	12.2	7.6	9.4	14.7	10.6	14.7	15.5	17.0	10.9	4.9	359.4	357.3	346.0	16.3	35.7	9.0	357.1
10	73.6	232.9	295.6	305.4	331.6	357.2	358.7	359.9	3.2	346.1	28.0	34.8	12.2	196.7	199.6	212.5	60.0	118.2	28.7	25.6	14.1	5.9	359.0	23.8
11	12.6	28.5	30.3	32.4	28.2	29.3	26.3	33.4	34.6	36.3	51.0	94.4	161.3	198.3	193.1	187.6	178.0	212.1	292.0	323.0	306.0	197.9	231.5	18.4
12	52.7	29.8	31.5	223.3	224.9	45.7	12.7	32.8	30.1	41.0	57.4	24.6	22.1	22.5	27.3	30.7	34.4	26.0	357.1	347.3	1.8	13.4	10.7	332.4
13	3.3	19.6	345.5	0.1	358.7	3.7	11.5	32.0	43.0	46.6	56.3	50.0	37.0	40.8	117.4	138.5	167.1	209.7	353.7	121.0	21.6	8.8	25.4	15.1
14	12.5	26.2	16.7	12.4	346.1	22.2	27.0	27.3	33.9	37.3	52.9	160.8	159.5	183.2	89.7	26.2	16.9	5.2	2.3	359.0	6.5	346.8	358.9	355.2
15	354.0	330.1	10.6	3.5	12.0	10.9	9.0	7.1	9.2	11.9	14.8	11.7	21.8	23.3	24.3	24.2	17.9	2.6	0.1	130.1	304.6	329.8	310.2	309.8
16	311.9	310.3	309.2	309.7	312.6	315.0	313.2	333.5	330.2	314.3	314.1	316.4	315.8	305.5	291.8	302.3	307.8	316.0	316.2	317.7	319.1	6.5	1.6	10.1
17	14.7	23.2	25.3	24.1	3.9	343.8	347.1	346.9	354.7	38.9	13.7	352.8	346.8	313.1	347.6	356.3	2.6	4.3	356.9	353.6	353.2	342.6	345.3	344.9
18	342.1	346.9	352.1	1.1	4.8	5.9	7.3	5.8	8.3	7.2	12.8	16.3	13.4	11.1	10.3	12.5	10.2	8.1	5.4	4.6	1.8	1.8	3.2	0.7
19	1.4	1.5	358.6	355.1	1.5	359.6	356.1	2.8	357.9	352.9	344.9	106.6	348.2	356.6	340.1	36.4	349.7	6.5	3.3	347.6	351.9	328.3	332.4	348.7
20	356.5	343.5	2.5	359.9	9.5	10.5	12.1	13.4	13.9	14.2	18.3	15.8	19.8	19.3	21.6	18.3	17.7	15.2	18.1	13.8	16.9	16.6	15.9	10.7
21	8.4	7.5	6.6	4.2	1.1	0.7	4.9	8.3	14.0	5.6	11.3	19.0	21.3	15.5	25.6	22.0	38.1	33.8	19.1	14.9	11.9	0.5	4.5	14.6
22	17.8	13.5	358.1	4.7	10.3	13.5	11.8	19.5	15.0	15.6	16.1	16.9	19.4	24.6	22.8	21.4	22.2	19.3	13.0	12.3	15.2	17.6	13.7	13.5
23	11.4	16.0	16.5	15.5	12.2	11.2	11.3	12.0	15.6	16.1	19.9	10.7	19.1	18.3	5.2	46.4	11.0	321.2	14.5	12.7	6.9	1.2	2.3	7.0
24	9.7	15.2	11.5	9.1	9.8	10.9	14.0	16.5	18.7	21.7	21.8	24.1	26.0	25.6	22.9	24.3	20.8	12.7	5.4	2.1	357.7	2.0	14.9	12.3
25	8.0	9.6	5.9	358.4	8.9	8.9	6.3	11.8	8.2	9.9	7.1	353.5	351.7	359.3	3.0	11.4	22.4	19.3	13.2	24.0	16.6	11.8	11.9	17.6
26	15.9	15.3	19.6	20.3	26.5	29.8	31.6	30.1	34.8	122.1	169.9	141.1	186.1	199.8	186.5	187.4	185.6	197.0	208.6	227.7	12.9	19.6	27.5	227.9
27	223.0	322.0	24.4	28.2	31.0	31.6	28.4	33.7	121.7	160.7	197.4	196.5	201.0	190.4	188.0	211.7	211.4	210.7	214.5	212.3	218.6	218.5	224.5	220.0
28	222.2	227.3	307.4	22.2	18.0	3.0	33.8	55.8	60.0	91.4	200.9	202.6	202.5	184.7	185.2	204.2	217.9	196.6	235.1	270.2	329.0	335.7	0.8	359.4
29	6.4	23.9	12.8	26.8	13.9	22.4	5.7	351.7	2.7	11.3	15.5	19.6	16.9	20.6	24.3	282.3	224.3	25.0	15.1	8.3	236.9	231.6	246.0	230.4
30	239.9	351.8	28.5	27.7	20.8	26.5	34.1	31.2	25.9	25.8	28.5	25.9	23.6	22.6	22.3	25.5	26.1	353.5	17.4	211.5	24.6	26.2	17.7	18.2

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	10.5	18.7	27.9	25.3	13.3	2.6	231.7	4.6	1.6	32.2	14.3	18.6	21.0	20.0	24.6	24.6	20.7	20.2	16.4	18.8	18.7	9.3	10.5	6.7
2	8.6	12.3	19.9	26.3	28.7	14.1	19.2	17.1	23.4	32.0	32.7	25.5	34.2	70.1	30.7	14.7	55.6	54.4	14.9	9.0	343.1	1.6	6.9	349.5
3	26.0	29.7	26.6	21.8	10.7	50.9	35.6	42.0	51.3	149.4	157.4	198.2	206.1	206.0	202.8	204.3	204.7	202.3	204.7	190.1	221.6	225.2	272.3	23.3
4	277.9	18.4	26.6	28.5	26.9	30.3	34.5	34.9	43.4	58.9	177.0	186.0	186.5	188.5	185.2	200.3	197.2	198.1	207.5	212.1	215.4	223.1	217.2	252.6
5	266.7	269.6	318.7	355.8	311.4	314.1	186.9	191.5	184.3	56.8	45.6	44.1	44.3	51.2	59.7	38.2	7.6	310.9	305.5	303.1	41.6	336.4	107.1	154.2
6	294.9	339.9	316.9	304.6	94.2	72.1	51.2	87.5	51.6	54.9	74.7	345.9	19.9	98.0	129.2	147.8	142.8	140.2	143.0	185.3	183.8	169.8	162.7	72.4
7	302.6	288.5	284.8	297.2	307.6	312.8	314.3	311.5	310.8	293.1	301.1	294.2	132.6	72.6	312.8	314.6	293.3	305.1	296.3	305.4	297.0	304.4	300.1	311.0
8	307.1	313.5	313.1	316.8	318.6	319.8	325.9	14.5	38.9	48.5	46.8	51.4	41.4	44.6	123.2	51.4	163.0	187.3	211.3	205.8	190.1	228.2	232.1	240.8
9	317.4	19.9	25.1	16.5	24.4	19.2	356.7	349.6	13.6	28.3	28.9	31.0	34.2	122.7	198.8	205.9	199.3	198.5	202.5	201.7	212.5	225.2	276.7	288.9
10	21.9	15.1	20.6	13.1	247.5	209.1	40.6	56.8	175.3	169.3	185.6	188.6	191.0	203.3	197.3	190.6	192.8	191.7	200.8	212.9	222.4	240.2	261.8	13.1
11	29.5	355.5	29.0	25.5	25.0	27.7	35.1	36.5	64.3	216.7	218.1	213.1	204.3	174.8	176.6	166.4	201.3	216.2	329.9	32.3	196.9	341.0	286.5	272.4
12	11.1	28.4	28.7	28.0	27.9	29.1	31.1	28.1	29.9	279.1	159.2	169.8	222.0	181.5	197.8	196.0	209.4	195.8	243.8	236.6	220.6	292.4	352.6	6.5
13	10.3	16.4	15.0	16.8	14.5	15.9	13.4	7.9	2.1	4.0	10.3	17.0	16.2	20.3	20.3	20.9	22.7	21.7	22.6	17.9	13.6	12.4	19.5	17.9
14	16.9	19.9	24.6	27.7	22.3	25.4	21.6	19.2	17.3	18.9	21.8	17.0	13.5	11.5	143.6	135.8	17.2	327.0	248.5	291.0	284.2	17.1	27.9	30.6
15	24.5	25.1	25.6	25.5	23.1	22.6	11.7	15.9	8.2	15.5	12.0	19.8	180.0	205.3	218.3	214.2	195.1	205.3	206.3	28.6	27.8	24.6	208.8	14.2
16	8.1	28.5	4.4	351.7	240.2	221.6	264.7	12.7	214.7	64.2	70.6	179.1	207.7	210.7	211.8	197.0	208.7	209.3	213.8	220.0	208.9	217.6	222.0	224.6
17	207.1	210.3	44.1	34.3	20.2	31.7	28.4	33.1	18.6	138.4	172.0	176.8	201.9	205.4	236.3	215.6	215.0	209.0	220.2	210.1	213.7	237.6	250.4	248.9
18	8.0	356.9	223.4	320.1	286.8	339.0	28.9	57.5	128.1	164.0	158.9	193.6	203.3	192.8	194.3	183.9	196.2	184.8	175.1	174.6	249.3	285.0	24.8	15.9
19	34.5	30.7	32.0	19.5	12.8	31.4	32.2	41.4	48.8	75.9	115.2	147.4	142.6	166.8	115.7	168.7	189.2	139.2	25.1	298.3	312.0	306.9	309.5	309.6
20	308.6	304.7	311.6	313.1	342.2	10.2	53.9	57.4	41.2	40.4	46.0	56.0	128.3	88.1	146.7	86.6	106.9	141.8	148.5	189.2	219.5	221.0	293.1	313.4
21	313.4	312.7	314.2	352.9	23.8	18.6	33.5	42.8	80.2	193.9	199.5	196.5	199.7	190.6	201.6	214.1	210.6	216.0	330.7	332.0	321.0	236.9	240.1	229.8
22	225.9	242.9	28.1	29.8	10.6	356.0	10.2	18.3	12.4	26.3	21.9	24.6	26.3	28.8	30.2	26.7	23.9	27.3	27.0	29.3	32.8	22.3	15.0	20.5
23	18.6	18.0	17.6	18.1	21.1	20.7	18.1	19.1	18.4	16.6	14.7	20.8	19.4	20.1	20.3	16.1	7.1	14.9	352.5	355.7	162.6	3.0	0.5	336.1
24	263.4	270.8	74.6	224.1	230.6	216.7	222.2	20.3	1.3	354.4	9.7	6.0	0.1	2.8	3.6	5.6	8.2	13.8	11.1	8.1	2.8	8.8	9.9	6.0
25	3.8	8.5	6.9	6.9	6.5	8.1	1.2	0.6	5.9	356.3	5.3	357.2	209.9	207.2	208.4	206.6	205.6	209.4	208.2	202.9	39.2	31.0	51.1	197.5
26	202.4	204.4	200.2	208.6	179.4	215.5	236.8	235.1	238.1	241.9	249.2	249.4	273.9	273.6	296.2	358.6	327.5	331.5	308.3	264.3	136.0	233.3	225.7	7.3
27	27.3	21.9	27.8	217.9	214.8	215.4	202.3	179.7	86.8	157.6	202.4	207.3	205.2	206.1	202.8	190.0	202.4	201.2	174.1	198.8	179.6	206.6	237.5	225.8
28	248.6	232.5	232.3	348.3	14.7	20.2	29.0	37.2	117.6	145.2	137.9	152.7	210.4	206.5	197.9	190.5	205.3	209.6	204.0	203.2	200.2	301.1	340.0	3.7
29	266.9	3.3	21.4	25.2	20.8	31.6	36.0	29.9	27.4	34.8	39.4	32.1	31.4	24.8	27.8	17.0	24.6	22.3	26.4	27.1	20.9	20.4	11.2	12.3
30	24.6	25.6	29.0	21.3	163.8	12.1	0.8	6.8	16.2	11.9	2.6	5.9	14.7	228.9	197.1	206.6	185.4	182.6	160.9	204.7	204.4	213.7	211.8	218.5
31	13.0	8.2	7.7	6.3	10.7	10.5	2.3	0.3	11.5	17.8	21.6	20.0	19.8	21.3	21.5	19.8	17.1	14.4	12.8	14.1	12.9	12.9	10.5	10.0

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	10.1	9.5	7.0	5.6	3.9	11.4	10.1	12.6	12.1	17.5	19.5	19.7	3.5	179.7	237.6	326.1	314.2	12.0	273.5	274.8	307.5	309.7	271.9	293.8
2	337.3	316.9	323.1	1.5	344.1	348.8	31.3	28.7	36.2	36.8	37.1	44.7	47.7	94.6	184.7	182.5	173.4	182.0	195.7	190.9	203.2	212.8	242.3	356.6
3	331.1	27.7	240.2	206.7	25.7	29.7	35.4	50.7	58.4	168.2	191.5	197.4	198.9	197.1	191.5	202.6	204.0	204.3	200.8	180.3	228.0	294.4	21.2	21.1
4	6.2	9.3	7.5	359.4	13.1	2.0	14.5	17.8	276.7	29.9	24.6	11.8	10.0	360.0	5.7	215.3	224.9	215.0	215.1	215.9	231.3	235.3	247.8	225.6
5	215.2	214.1	221.8	6.4	20.0	6.7	18.4	21.2	13.2	4.1	6.0	19.4	4.2	8.8	1.6	36.1	220.4	270.8	310.2	274.3	292.0	9.0	27.3	359.9
6	359.3	2.1	251.2	224.5	327.6	31.2	32.6	27.7	28.0	39.6	204.4	203.3	209.4	239.6	173.2	197.7	198.1	205.2	188.4	70.2	210.7	10.2	27.0	17.3
7	20.9	18.2	20.5	7.2	11.3	17.6	16.2	18.3	23.2	23.5	29.7	29.5	31.8	37.2	20.5	332.2	53.1	4.9	12.4	14.6	356.0	17.1	13.8	13.6
8	3.5	13.8	10.7	11.7	8.7	9.0	15.8	14.1	15.7	25.3	20.0	20.5	20.4	22.9	23.6	14.2	3.0	345.1	281.6	245.8	282.9	235.6	231.1	228.7
9	217.1	211.3	332.0	8.7	16.8	21.3	19.5	34.1	49.2	217.4	221.9	160.0	78.8	76.8	95.9	104.2	78.3	51.6	260.1	310.0	313.3	316.4	314.9	346.4
10	2.6	4.4	356.2	12.0	358.2	8.4	18.0	21.4	33.8	73.2	189.8	202.3	150.6	70.7	114.5	309.1	26.4	17.6	317.2	222.8	206.9	262.3	311.9	13.2
11	356.7	357.4	3.3	20.1	18.5	28.7	56.8	99.2	164.4	183.3	201.0	186.2	213.0	196.5	168.2	155.7	106.3	114.1	105.2	326.6	46.5	8.3	352.6	15.0
12	13.3	13.1	56.6	236.8	256.5	289.8	318.8	237.0	280.0	331.8	256.3	226.6	193.0	189.7	166.1	148.9	154.4	158.4	182.1	176.0	195.2	203.2	159.6	163.5
13	191.7	274.1	353.3	324.9	254.9	190.7	145.6	155.3	166.9	167.0	161.4	171.0	180.5	186.0	203.2	190.4	193.3	203.4	205.9	207.6	213.7	235.4	264.3	1.8
14	28.8	351.6	11.0	1.1	12.8	11.7	34.6	38.0	139.6	190.4	197.6	201.0	200.9	195.3	209.4	199.6	198.4	197.2	199.4	201.3	205.3	211.2	225.6	1.7
15	32.5	26.6	16.4	28.4	17.2	24.4	34.4	48.3	196.2	191.9	196.7	199.8	199.8	191.4	202.7	206.9	203.2	202.7	220.6	234.2	348.5	23.2	13.5	21.8
16	25.2	21.1	15.2	9.2	22.5	17.9	351.8	15.5	359.4	333.8	317.6	317.8	314.2	308.3	301.4	281.2	357.5	49.2	90.8	73.6	70.8	86.2	100.8	139.8
17	153.1	75.0	22.3	335.8	303.0	313.1	308.4	313.9	316.8	317.1	320.9	317.7	329.7	126.9	61.5	48.2	144.5	90.3	233.9	246.4	322.3	343.4	9.0	12.0
18	6.0	13.5	17.6	14.4	12.9	19.4	25.8	37.3	158.4	195.0	192.7	159.6	171.8	191.9	197.4	183.7	177.7	170.2	196.6	204.2	203.7	117.4	11.3	239.2
19	20.0	273.2	53.9	11.2	23.1	15.1	18.0	34.1	36.4	40.9	152.1	190.0	196.1	290.9	160.4	289.7	323.7	23.5	313.8	316.9	315.5	28.1	15.3	16.4
20	16.1	17.0	9.8	6.3	8.9	20.2	20.3	17.0	30.9	40.5	24.3	315.6	314.3	316.0	321.3	144.8	186.9	1.2	356.0	359.2	6.7	134.7	63.6	358.5
21	350.5	250.5	266.7	359.0	295.7	312.9	308.7	311.0	309.1	312.3	310.1	308.9	304.4	298.9	300.5	295.9	90.2	70.8	85.0	95.3	80.7	269.5	297.2	303.0
22	313.1	308.3	300.7	31.3	28.7	330.6	12.7	56.3	35.3	93.0	119.9	167.4	162.3	177.8	184.3	175.4	244.5	281.1	268.2	281.8	311.0	81.3	347.3	16.4
23	1.1	348.4	341.9	17.0	42.3	14.1	8.8	20.7	344.3	333.2	203.8	121.0	289.2	325.4	336.7	3.8	331.2	330.4	3.2	25.6	359.6	359.0	308.8	337.4
24	271.6	233.2	70.7	357.8	359.5	8.9	5.1	0.9	5.4	359.8	7.1	1.1	359.7	220.0	175.7	187.5	214.2	278.9	314.8	344.4	347.0	124.6	16.4	22.0
25	24.0	19.5	11.8	28.5	41.1	172.3	334.2	17.8	332.8	274.4	288.6	202.0	187.4	311.2	297.6	296.0	354.0	316.9	294.2	254.6	292.9	286.7	284.7	7.6
26	28.1	27.8	23.5	31.2	17.9	25.9	29.6	33.9	52.7	190.0	204.6	203.0	204.6	210.0	209.0	207.4	211.8	201.0	195.1	241.8	221.3	336.2	27.0	30.7
27	20.1	4.0	24.9	15.7	15.0	12.7	31.7	53.7	186.1	185.7	188.5	187.7	196.3	201.0	200.1	201.6	202.3	207.7	214.1	213.2	210.7	228.2	8.1	321.0
28	177.3	224.1	15.8	350.4	28.7	163.6	218.9	209.1	210.6	183.3	163.6	153.3	31.4	49.3	73.6	132.6	219.3	206.0	211.2	213.0	230.0	228.2	234.0	225.1
29	246.1	16.8	12.0	23.9	348.9	33.9	40.7	51.2	178.9	194.4	186.0	187.8	187.5	183.0	188.1	189.2	196.2	189.4	212.5	234.6	311.0	313.5	312.6	314.5
30	315.5	313.1	311.8	309.0	312.5	316.6	19.2	49.9	91.1	179.3	191.4	205.1	197.8	197.5	204.2	196.9	244.0	218.3	199.4	202.3	201.0	196.1	198.5	217.4

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	222.2	224.3	269.8	13.2	9.1	20.9	41.6	182.7	198.2	171.0	186.8	192.0	193.7	213.3	184.6	201.5	197.3	201.3	218.9	192.6	200.7	229.5	238.2	196.6
2	250.1	353.5	13.9	14.0	203.0	225.4	186.5	171.2	164.7	181.2	190.6	192.4	190.2	191.8	201.8	209.5	211.3	207.7	203.3	200.4	213.1	201.3	193.4	211.3
3	206.7	230.1	208.7	211.0	208.4	244.8	318.7	204.3	183.2	202.3	190.8	194.5	196.2	198.9	194.2	190.7	196.3	204.9	207.0	203.4	225.9	204.8	209.0	217.4
4	217.7	35.0	20.1	27.4	29.8	28.7	32.8	35.5	45.9	190.8	196.0	193.6	191.5	185.7	190.6	206.0	211.2	209.9	210.6	207.4	203.0	239.6	224.2	215.3
5	222.9	225.3	226.9	357.4	23.6	68.4	188.4	144.5	139.1	177.2	178.7	186.6	193.2	198.0	268.3	253.7	243.0	143.0	248.0	213.5	206.8	8.2	4.1	359.0
6	355.6	20.1	19.9	26.1	27.6	27.9	34.4	36.6	42.5	192.5	207.9	205.7	199.9	199.6	197.5	199.0	200.5	194.5	201.4	222.6	345.0	7.5	6.0	332.0
7	28.5	26.1	26.7	24.8	282.7	206.5	183.3	174.3	194.8	182.0	185.2	205.5	204.2	190.8	191.1	179.1	153.4	167.8	184.1	220.6	200.1	216.5	233.4	206.0
8	238.2	10.2	289.3	73.6	126.7	16.6	26.1	247.6	186.7	27.5	29.2	31.7	90.4	186.1	182.7	181.0	188.2	173.6	201.8	210.2	178.4	233.6	247.9	257.7
9	279.4	7.9	24.5	10.6	17.5	17.4	24.7	28.9	32.7	37.5	37.8	63.8	203.5	203.1	193.3	27.6	22.2	18.9	184.5	8.4	8.3	7.8	11.3	12.9
10	7.8	4.1	20.5	24.3	18.2	271.5	28.7	32.7	47.8	180.8	180.6	189.3	190.4	180.1	169.8	176.0	192.2	196.8	214.6	215.2	194.8	237.9	351.4	253.6
11	239.0	275.6	10.2	220.3	147.6	348.8	28.6	55.1	163.1	180.8	197.9	192.7	204.6	206.5	200.3	204.6	189.0	199.6	204.4	208.8	218.3	211.5	234.5	304.2
12	16.0	11.9	5.0	287.6	334.8	10.3	17.9	174.5	191.0	177.0	168.9	195.9	199.3	180.6	184.9	197.7	194.8	182.2	194.4	194.6	205.0	229.7	243.0	285.8
13	248.7	271.9	332.2	294.1	316.3	343.3	19.0	22.4	22.7	18.7	70.5	323.7	238.0	204.0	198.4	186.0	195.0	201.5	208.9	205.8	203.5	208.6	215.2	342.1
14	13.4	20.0	22.1	18.2	26.3	29.6	28.0	26.1	22.5	31.2	44.4	124.4	223.3	218.2	218.6	196.7	215.9	223.2	245.7	208.5	217.8	216.2	218.5	27.8
15	189.3	210.1	213.1	201.5	208.3	29.8	33.7	117.6	196.9	123.3	173.1	195.9	198.6	198.5	198.6	203.1	205.5	204.9	304.2	288.0	290.2	301.3	311.7	312.1
16	313.7	313.8	314.0	315.0	313.0	316.1	316.8	343.1	42.8	49.5	57.9	57.7	58.9	67.8	86.2	328.3	313.2	313.3	312.1	309.8	304.2	294.7	305.1	302.9
17	312.0	322.2	352.0	13.3	5.4	8.8	34.8	46.9	61.9	137.9	196.2	194.9	198.9	187.9	204.8	164.0	250.4	267.8	230.4	227.0	262.8	236.2	232.9	246.4
18	280.1	288.9	283.6	204.8	209.6	300.7	287.1	207.0	83.6	31.2	26.1	16.3	29.9	210.2	228.1	10.4	11.6	18.6	17.5	10.7	210.2	205.1	204.7	208.1
19	211.1	37.9	18.5	224.3	252.2	342.8	269.9	201.7	190.6	187.0	200.5	204.4	204.4	196.5	191.5	186.6	200.2	192.7	210.1	179.9	204.3	244.4	5.6	22.4
20	27.6	28.1	29.8	16.1	197.7	323.9	208.3	206.3	188.5	180.2	202.1	185.8	170.1	169.5	170.8	182.8	198.9	198.5	214.7	197.3	194.4	350.9	296.4	302.7
21	307.5	312.6	311.6	309.1	308.3	309.8	312.5	315.6	317.3	318.8	319.6	32.4	68.2	93.4	144.1	79.2	51.7	22.6	311.6	313.8	314.0	314.7	314.4	315.6
22	350.4	2.8	20.7	14.6	9.3	333.1	155.5	213.4	236.5	40.2	17.9	34.6	169.0	249.6	287.7	291.6	285.3	318.8	345.2	316.3	323.0	299.3	282.2	310.2
23	23.8	29.9	329.6	323.7	319.9	311.4	299.5	267.4	349.1	140.9	241.1	87.8	57.8	62.6	16.3	322.8	319.5	318.1	309.1	321.5	340.1	332.7	339.2	311.1
24	257.1	134.1	267.7	267.9	343.4	0.1	11.1	6.1	1.1	358.4	2.8	5.4	8.0	11.0	9.0	9.2	9.4	14.1	9.0	7.0	7.0	6.5	8.5	10.2
25	16.7	17.1	23.2	25.1	20.6	19.0	18.9	26.0	26.0	25.1	27.0	27.4	23.1	23.6	22.9	22.4	22.9	20.0	16.3	16.3	9.6	1.2	359.4	14.1
26	221.6	268.5	19.1	32.6	274.6	15.2	19.4	18.9	34.1	171.2	190.2	192.6	193.0	181.7	193.4	199.9	193.5	186.6	199.4	205.3	211.8	244.6	236.1	294.9
27	14.4	20.0	23.5	26.3	34.8	25.8	30.9	202.5	197.5	177.0	178.9	185.0	185.3	193.1	201.9	204.5	206.3	206.8	203.4	200.0	212.9	204.8	223.1	24.6
28	220.0	325.6	311.7	151.9	311.2	305.6	307.1	311.9	314.4	345.7	56.4	188.4	154.5	152.3	179.5	273.3	316.0	312.9	309.2	308.2	312.1	314.0	310.7	305.6
29	308.5	312.4	314.0	313.7	314.4	344.3	338.9	26.6	52.1	45.9	48.0	50.8	53.8	182.2	188.8	179.2	159.2	318.2	315.7	313.3	312.9	313.8	316.2	313.8
30	313.2	242.9	226.6	209.6	13.8	91.7	354.7	208.7	210.7	208.1	209.2	190.7	165.8	182.9	181.2	193.1	178.7	192.0	184.6	175.9	185.7	164.7	196.4	183.0
31	183.9	155.2	161.0	177.2	168.5	150.3	160.1	155.9	209.0	164.1	172.4	227.5	289.4	340.2	327.9	28.5	78.9	321.8	17.6	356.1	352.7	15.0	343.0	336.9

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (Climatronics) (Degrees)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	345.4	342.3	324.2	312.7	331.9	353.3	358.0	338.8	357.6	20.9	328.8	54.6	29.2	334.4	67.5	325.1	318.0	22.9	323.9	325.8	340.6	349.1	334.5	326.5
2	312.9	321.0	304.6	340.6	309.4	342.4	353.7	341.9	327.5	0.4	4.6	13.8	355.2	354.3	340.7	348.4	347.3	343.2	343.6	340.9	350.2	10.7	6.1	357.4
3	346.4	341.3	353.9	350.5	351.6	348.8	10.8	32.8	13.7	342.1	6.8	347.2	339.1	346.8	326.7	343.7	3.9	339.8	329.0	335.9	323.7	332.4	345.5	343.5
4	341.5	319.3	334.3	314.4	337.1	341.1	319.4	293.9	289.2	282.1	286.4	280.4	304.2	279.6	293.0	311.0	283.2	266.9	288.9	271.3	273.9	284.7	278.2	273.4
5	310.3	310.6	300.1	296.7	295.3	293.9	333.7	5.4	41.0	37.1	92.5	195.0	38.2	200.1	188.5	199.3	189.8	195.0	191.5	186.7	199.9	208.2	216.0	168.1
6	208.6	196.6	213.0	214.0	214.3	212.5	199.6	197.6	198.1	198.7	196.7	195.2	196.5	193.8	186.6	106.5	83.3	96.4	110.8	47.8	34.1	106.6	60.7	50.4
7	62.1	303.1	306.4	302.1	308.6	308.0	290.0	311.8	322.5	68.3	115.4	90.7	117.9	183.1	190.7	183.6	191.7	196.2	211.4	244.6	332.4	300.2	320.9	34.5
8	12.8	16.8	10.4	6.2	10.1	2.8	19.3	32.1	44.5	51.7	69.0	172.8	143.1	60.8	105.6	175.8	181.5	184.3	193.1	177.7	169.7	53.1	298.1	327.5
9	8.5	24.8	21.2	18.3	8.0	4.3	14.8	34.4	118.9	198.7	202.4	205.6	205.2	205.3	207.7	208.0	205.0	202.4	204.0	203.5	210.4	211.7	205.4	219.0
10	253.4	349.5	224.0	217.2	256.4	229.8	206.1	187.6	181.7	199.3	186.3	193.0	197.9	191.6	195.1	196.1	198.8	209.2	196.7	202.9	212.0	220.7	294.6	228.6
11	230.3	359.2	9.4	16.8	19.6	213.0	194.8	203.7	201.6	200.4	194.8	197.1	199.5	202.1	202.9	203.4	204.0	202.6	204.8	205.5	155.0	17.1	29.8	35.8
12	19.2	347.5	317.1	203.5	48.7	66.4	35.8	49.3	186.2	145.9	77.1	67.9	59.8	59.4	96.3	180.0	177.4	189.2	185.7	185.9	211.6	238.5	217.3	220.4
13	218.9	216.9	226.5	217.7	224.4	217.7	200.3	184.3	165.3	193.5	198.8	194.8	194.7	198.9	205.5	204.1	201.8	205.8	212.6	23.5	8.3	199.0	169.4	7.7
14	299.8	34.3	136.4	99.4	292.0	296.0	327.7	332.6	44.9	147.8	147.3	161.8	160.4	180.0	185.3	185.4	189.9	194.0	182.6	188.9	186.5	177.7	188.8	202.1
15	269.1	8.9	342.5	257.1	299.3	22.6	3.5	22.5	150.1	119.5	164.1	161.7	188.7	163.6	198.8	212.0	205.5	205.1	206.5	204.3	221.9	226.2	32.4	19.0
16	27.1	17.9	14.4	14.0	17.9	15.3	21.9	30.5	37.6	45.2	51.0	78.7	146.3	208.5	209.0	208.5	205.6	206.8	221.3	213.4	218.1	205.6	230.3	226.0
17	273.9	224.5	209.2	223.4	223.7	247.9	21.9	214.9	211.3	73.6	343.0	44.5	318.1	205.5	235.7	307.7	16.4	352.0	342.1	356.4	339.1	340.7	350.3	352.5
18	358.9	340.3	354.3	341.7	346.0	343.4	355.3	356.9	356.6	3.1	356.1	356.2	358.9	0.9	2.0	3.4	353.3	350.3	358.0	355.9	359.4	354.3	6.8	7.7
19	4.7	3.8	357.9	7.8	4.6	12.8	18.8	12.7	15.0	16.7	16.2	15.9	18.4	5.7	3.1	348.8	6.7	2.8	1.0	350.3	107.6	333.2	195.8	253.1
20	319.3	319.3	314.0	317.3	330.6	25.8	20.0	267.9	258.9	256.1	214.9	280.1	236.2	213.2	225.5	129.9	158.1	11.7	45.8	311.3	276.1	290.3	213.0	329.3
21	331.7	333.5	349.5	10.9	0.4	11.9	14.0	9.0	6.4	12.8	359.0	8.4	10.3	353.8	115.9	186.3	76.2	66.4	22.5	89.6	321.1	336.1	347.1	154.3
22	26.9	68.5	84.1	81.0	93.2	61.5	359.8	35.5	280.6	307.1	53.3	74.6	287.3	70.2	319.5	329.7	327.3	337.1	310.5	318.0	9.7	339.5	311.4	20.9
23	3.9	17.2	9.0	3.1	19.5	27.2	26.2	29.8	352.8	25.4	29.9	36.8	33.6	53.3	64.2	53.0	119.7	316.1	309.2	310.7	309.6	315.9	55.8	340.1
24	334.6	1.1	16.0	10.7	9.6	349.8	8.4	29.2	37.3	41.8	167.9	198.2	184.2	196.9	201.8	204.9	208.8	177.7	33.6	13.2	232.6	225.9	227.4	11.1
25	28.3	28.1	31.7	25.6	22.8	20.7	15.4	42.6	136.8	151.3	177.0	194.4	193.6	199.4	202.0	199.4	200.1	211.5	209.3	216.9	224.1	227.7	234.9	2.6
26	25.6	27.9	26.4	25.0	22.8	15.7	353.1	286.7	57.7	167.1	204.0	198.1	191.1	210.3	215.6	202.1	207.2	239.8	250.8	199.2	4.1	356.9	10.8	2.0
27	358.4	5.0	0.9	14.5	10.6	8.4	339.8	11.2	26.7	11.7	16.7	22.7	21.0	21.9	20.7	16.8	16.7	9.7	7.8	7.5	2.8	21.7	16.2	22.6
28	10.6	19.4	21.4	3.3	10.5	28.8	357.0	23.5	15.6	23.3	192.9	198.7	168.5	167.4	198.2	207.8	208.5	208.6	215.5	306.6	22.5	30.1	24.5	19.8
29	19.3	18.6	14.7	15.5	25.7	18.8	21.2																	
30																166.0	48.4							
31						248.9	314.9	292.4	0.8	354.7	15.5	13.9												

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	13.9	4.0	12.0	13.2	25.5	11.6	15.5	349.2	38.4	39.6	69.4	176.1	197.7	198.8	203.1	191.8	204.2	206.0	211.6	211.0	219.8	212.0	227.5	191.8
2	165.7	169.4	163.9	146.9	151.6	137.8	163.6	220.9	279.4	219.9	213.9	210.0	169.0	186.2	167.7	179.4	173.9	171.4	189.7	220.2	219.9	225.5	241.1	229.5
3	159.4	182.2	2.0	9.3	19.4	9.7	23.4	23.0	35.4	34.2	29.2	28.5	39.0	55.0	42.9	61.8	199.5	214.7	193.0	144.4	131.7	122.4	2.0	320.4
4	16.4	359.2	149.2	328.9	11.0	24.7	357.2	9.6	61.3	65.9	45.2	41.3	17.5	349.5	360.0	357.7	0.7	342.8	1.7	9.2	351.6	339.1	344.1	351.9
5	359.8	0.4	11.3	6.9	5.8	6.5	12.1	15.3	18.9	17.4	20.7	24.7	18.8	15.4	24.8	200.5	288.0	303.7	312.3	295.6	341.0	292.1	123.9	37.7
6	313.8	309.8	301.7	337.6	30.6	81.2	77.5	45.2	295.7	297.1	297.6	305.2	310.7	316.1	317.4	12.9	82.0	19.4	318.5	316.9	310.2	312.5	311.3	311.8
7	313.2	311.9	313.5	301.9	291.9	299.4	305.6	301.8	337.9	303.5	316.4	128.9	75.3	49.7	208.6	196.8	178.4	216.8	329.5	77.9	356.6	322.3	356.5	245.5
8	10.1	5.4	349.9	356.4	10.1	15.3	8.5	27.9	20.4	26.1	27.1	27.2	13.6	13.1	31.8	44.9	24.6	23.8	21.2	21.8	26.8	25.7	18.8	31.1
9	24.5	21.3	18.6	18.3	23.1	20.9	21.6	19.1	21.6	23.2	19.8	22.5	24.8	24.4	25.2	23.9	108.7	91.4	270.1	22.0	17.4	14.4	14.4	9.8
10	17.0	349.4	268.0	28.9	309.4	229.4	4.3	28.2	21.1	52.1	128.3	69.5	37.6	26.6	19.2	19.2	98.5	61.7	0.1	358.6	353.8	348.6	337.2	341.8
11	350.2	3.6	18.7	28.6	28.7	30.3	27.0	43.0	312.3	4.6	7.4	353.8	341.0	352.1	357.6	343.3	317.4	191.4	272.1	352.3	357.0	356.2	354.5	3.0
12	2.3	3.2	0.7	1.6	2.0	2.5	3.1	354.6	351.8	3.2	9.4	18.6	64.9	31.1	28.9	27.5	35.7	222.0	234.2	233.8	271.7	16.1	8.2	352.7
13	342.0	317.5	325.9	318.5	25.3	30.7	27.2	17.9	19.4	22.0	18.3	30.6	38.5	62.4	173.3	46.1	63.1	184.9	158.3	179.9	302.7	48.7	297.4	216.0
14	0.4	19.9	18.4	1.0	20.5	29.4	27.1	26.6	29.4	28.4	26.5	34.0	40.3	108.6	195.0	194.4	200.4	200.0	199.0	216.2	337.7	313.9	1.1	313.4
15	326.0	232.7	194.7	154.4	138.7	161.0	166.4	150.7	147.3	65.6	62.0	82.4	180.7	157.3	139.3	171.2	95.2	197.4	66.5	77.8	54.9	50.9	90.6	102.2
16	51.8	73.1	43.7	94.3	66.8	183.2	157.8	127.6	48.2	44.8	80.9	118.1	99.6	97.9	102.8	69.0	155.4	198.6	191.8	126.7	165.5	189.0	122.0	46.4
17	162.0	172.2	104.4	153.7	116.1	348.5	310.6	109.0	160.2	178.8	141.2	138.3	79.6	138.1	157.6	31.2	42.4	204.9	179.8	212.7	270.1	334.4	24.7	25.7
18	21.6	9.5	8.9	13.3	24.4	10.3	336.2	0.6	13.6	27.7	10.5	337.7	322.9	295.8	249.4	312.4	327.1	344.4	2.1	5.3	6.9	10.5	11.0	15.7
19	37.6	18.0	356.5	233.6	215.3	163.0	162.2	188.9	185.1	23.2	18.5	164.9	207.5	194.9	114.2	191.9	187.4		194.2	189.1	201.8	209.2	203.7	220.2
20	220.7	216.7	216.4	216.4	215.7	212.6	203.9	218.9	232.7	209.3	20.8	65.6	178.5	201.4	203.3	204.8	208.4	188.3	194.8	198.5	252.2	203.2	208.5	205.0
21	165.4	82.9	158.8	175.5	44.0	112.7	160.8	138.6	184.1	157.0	69.5	141.6	160.0	136.5	189.6	191.2	192.3	170.6	159.8	89.9	285.9	175.5	166.8	292.1
22	305.7	333.6	9.3	5.6	8.2	11.3	22.2	28.6	32.5	33.3	38.9	32.2	14.0	356.9	1.5	4.5	12.6	20.4	5.0	354.7	346.3	4.2	360.0	6.7
23	13.3	9.2	1.6	14.1	15.0	17.1	9.0	10.1	10.2	7.4	5.4	14.7	31.3	37.2	82.8	211.8	214.9	213.7	220.6	227.4	241.9	270.9	358.0	15.8
24	358.4	359.0	355.1	267.4	312.4	188.5	162.2	186.6	189.6	198.1	222.2	19.5	185.8	71.1	78.1	199.9	181.6	185.0	280.6	333.1	8.1	26.9	17.3	356.3
25	263.5	178.6	212.6	90.4	184.3	198.6	202.4	197.2	212.2	11.1	35.0	184.5	196.7	189.7	195.0	187.9	170.9	194.7	190.7	190.2	194.7	195.1	204.0	35.3
26	183.2	165.9	191.3	208.4	196.9	180.1	153.8	163.4	204.1	195.1	144.8	51.2	86.0	141.9	184.0	166.4	109.4	193.1	178.3	180.1	172.7	213.6	213.5	7.6
27	332.8	82.5	211.6	183.6	175.0	174.6	177.3	201.2	177.8	133.3	199.5	129.7	136.8	56.4	89.5	135.3	130.0	110.6	46.1	90.0	5.4	5.3	23.0	22.3
28	34.7	8.5	14.2	6.7	2.8	11.9	10.9	11.0	5.9	13.0	18.1	20.2	22.0	18.9	13.0	12.3	4.6	358.1	354.2	9.1	20.0	17.1	10.4	1.2
29	9.9	9.5	14.7	12.0	7.0	1.5	351.5	359.1	2.7	32.2	49.3	51.9	36.6	305.2	318.5	319.3	321.2	317.6	343.7	241.7	8.7	20.3	353.0	207.4
30	201.8	203.7	199.3	324.9	334.0	321.1	82.5	16.4	3.3	24.1	49.6	35.5	40.6	45.8	42.3	45.0	59.1	262.3	304.2	324.4	6.1	359.5	355.7	2.7

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	204.2	143.4	201.4	201.1	224.1	186.8	190.4	174.0	173.6	42.3	147.5	160.6	187.0	191.7	145.6	54.3	105.8	167.5	184.0	109.5	155.9	137.4	152.9	64.1
2	51.2	39.1	58.7	66.3	69.2	194.1	190.0	170.0	177.1	167.9	171.5	169.8	179.5	183.6	183.5	181.6	165.4	175.9	181.5	170.0	96.5	88.5	175.1	171.8
3	185.1	187.5	168.8	144.1	166.3	177.3	185.5	192.6	186.7	179.2	178.2	186.9	190.8	161.5	68.6	62.1	113.7	167.9	168.7	161.9	311.3	297.9	305.8	316.4
4	342.1	12.9	15.8	29.0	27.7	16.5	7.0	346.0	354.2	159.8	24.9	1.2	3.6	1.4	2.2	5.9	3.5	7.0	359.6	0.9	1.0	3.0	13.2	23.4
5	19.8	21.9	26.0	26.8	32.0	25.4	17.5	17.1	23.9	25.5	24.9	24.7	27.2	21.7	30.2	78.1	27.5	59.9	77.4	186.9	205.8	192.6	190.2	111.8
6	64.3	50.7	109.8	150.1	129.2	161.2	164.1	98.2	310.9	292.3	14.2	27.4	24.9	338.4	47.3	175.9	182.2	171.1	167.2	72.2	48.4	107.2	335.0	300.8
7	307.9	305.1	307.5	308.8	312.9	312.5	314.7	315.2	308.9	311.5	309.8	310.3	310.4	1.0	21.7	77.9	53.8	342.7	288.6	293.2	305.6	305.1	307.4	309.8
8	318.5	312.2	313.2	314.9	314.3	313.5	310.7	310.8	314.9	312.8	42.9	43.1	319.7	320.0	317.4	321.6	310.0	289.5	306.3	313.5	311.0	309.8	338.4	4.3
9	12.9	11.0	7.0	18.1	18.5	23.7	21.8	22.1	15.0	21.3	33.6	38.7	46.7	53.5	52.2	56.8	63.4	67.7	312.9	319.6	315.3	307.8	357.4	314.0
10	313.4	165.5	289.9	95.5	172.2	167.4	157.3	143.9	174.3	188.3	188.0	180.3	84.9	358.2	339.8	135.0	108.6	174.5	169.8	175.7	82.5	47.1	313.0	281.7
11	318.6	316.9	4.6	25.2	3.4	3.4	24.1	27.0	26.2	24.2	25.9	14.8	19.9	16.8	27.2	20.6	11.3	8.4	12.0	14.0	11.9	14.2	14.8	10.7
12	6.1	12.0	14.1	14.8	7.6	11.7	18.1	18.9	22.2	19.6	11.7	12.4	28.6	13.8	68.8	202.2	78.2	8.3	352.3	339.8	10.8	7.9	5.5	6.3
13	18.9	21.6	16.3	19.4	312.9	312.3	311.6	310.7	311.6	309.3	311.9	309.3	313.0	312.8	314.5	317.3	315.8	314.4	313.5	315.0	37.0	338.0	13.2	163.8
14	352.5	179.7	338.6	291.9	25.9	25.8	57.7	17.3	321.6	296.4	309.8	314.1	315.0	313.0	309.6	312.9	311.3	315.0	315.4	319.9	302.2	39.8	39.9	30.8
15	353.0	18.3	25.7	24.2	332.4	5.5	8.3	15.4	17.3	21.3	24.3	24.8	21.7	25.5	30.1	19.4	25.4	14.5	23.3	6.1	11.8	18.8	13.9	14.7
16	8.5	9.6	22.3	23.5	21.0	20.4	22.3	20.9	17.9	16.0	24.4	21.2	47.3	53.7	345.5	316.3	42.7	85.0	55.4	271.4	4.0	56.0	30.5	306.2
17	22.2	12.0	2.7	12.3	38.8	358.8	7.3	52.3	41.9	50.4	53.9	108.3	59.8	57.5	53.3	43.1	42.5	44.2	46.4	32.0	357.3	11.9	35.2	32.2
18	40.2	49.3	52.9	50.1	50.3	47.6	27.8	322.1	357.4	14.7	333.5	314.6	314.7	319.7	316.2	317.7	317.3	316.8	316.4	314.5	313.3	311.1	312.6	311.9
19	309.8	314.3	312.7	313.8	313.4	316.1	315.9	313.5	313.2	312.9	314.8	314.7	315.1	318.6	318.0	319.8	311.2	317.6	322.4	315.2	314.0	315.3	331.2	26.3
20	28.8	11.7	353.5	12.5	10.7	17.1	20.1	25.4	32.0	31.1	34.1	34.0	28.8	17.4	28.9	12.3	11.0	8.3	15.4	22.5	19.3	22.0	19.0	13.4
21	15.0	15.5	12.8	13.3	17.3	13.1	14.0	16.3	18.9	20.9	22.5	22.4	23.3	29.1	30.5	26.1	16.1	13.7	9.1	358.3	23.8	26.9	16.6	16.4
22	25.2	349.9	19.9	26.9	26.5	19.3	17.0	23.1	26.7	21.8	17.0	15.9	35.2	33.4	16.6	25.4	7.6	13.5	354.1	350.1	26.4	8.2	20.4	20.1
23	322.0	7.2	355.3	4.0	26.8	42.4	42.4	36.5	2.9	8.0	38.2	66.0	188.7	205.6	68.0	94.3	180.9	180.1	204.8	195.9	204.9	207.6	211.3	220.0
24	218.1	253.4	268.7	334.5	276.7	346.2	348.0	351.4	261.4	273.7	26.7	25.2	26.8	38.4	33.4	32.9	30.0	25.4	27.2	27.2	26.9	15.4	16.2	14.9
25	15.8	0.7	172.6	356.9	4.8	3.5	358.2	356.9	347.0	350.5	356.8	354.1	354.4	357.0	4.8	359.7	356.6	0.6	5.0	9.2	1.6	3.1	11.9	16.3
26	22.8	14.4	24.3	26.4	24.3	22.0	26.4	18.8	25.6	31.3	31.2	24.7	24.0	29.4	27.2	24.9	18.3	24.7	29.1	28.0	5.9	3.1	0.7	356.0
27	354.7	343.0	359.0	0.5	0.3	2.8	13.6	9.5	19.0	13.7	12.3	13.3	6.4	7.4	3.0	8.2	12.5	19.2	11.3	11.5	13.2	30.1	6.2	20.3
28	14.7	20.5	23.4	27.4	358.8	26.0	12.2	17.9	23.4	17.3	11.9	27.9	37.3	31.2	21.6	26.7	30.6	27.0	8.9	2.7	4.5	0.8	5.1	357.0
29	353.0	358.1	352.5	348.4	352.4	354.6	2.1	4.7	10.3	10.6	13.6	13.8	19.3	17.7	19.0	20.8	17.0	14.4	15.0	11.6	5.0	9.6	14.6	12.6
30	13.1	14.7	17.6	20.7	20.7	25.0	29.0	23.4	21.5	20.6	15.9	299.7	288.7	280.3	285.5	213.8	203.1	196.3	212.6	179.9	176.7	187.0	175.7	189.8
31	211.3	204.1	201.2	207.2	202.0	201.9	191.3	200.4	192.5	201.5	203.2	189.7	164.6	178.0	171.8	150.8	74.9	345.6	358.7	7.1	7.0	12.9	9.1	2.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	9.9	5.5	9.9	15.5	20.7	24.5	35.1	34.1	22.8	19.9	23.9	34.3	23.8	22.9	21.0	357.9	269.5	265.1	311.6	337.4	100.2	122.7	147.3	167.2
2	182.7	182.4	175.4	183.4	176.6	173.0	184.1	183.3	178.4	168.4	165.9	166.2	174.0	170.0	151.9	159.3	160.5	146.5	130.8	10.1	304.7	305.4	316.1	314.8
3	310.2	313.2	314.3	312.3	303.8	308.6	306.2	306.3	302.9	313.6	312.8	310.8	312.3	316.9	328.1	13.4	28.9	3.3	359.0	8.3	21.9	32.1	21.0	19.2
4	23.7	34.3	36.8	28.3	235.7	189.7	185.3	183.8	184.4	179.0	181.7	172.8	176.6	178.2	175.7	170.6	181.4	176.9	172.3	179.6	190.4	182.8	181.5	173.9
5	162.8	162.0	315.0	315.1	349.1	21.9	16.8	21.1	11.2	30.1	19.5	26.8	21.7	20.1	23.4	18.8	11.6	18.4	18.8	16.1	4.7	9.0	357.8	5.1
6	1.6	5.7	2.8	10.2	10.5	19.1	21.8	15.8	20.1	18.7	13.2	13.4	17.0	17.8	12.4	9.5	9.6	12.0	10.7	8.6	3.8	5.6	9.4	359.4
7	359.6	358.4	9.7	10.1	1.3	13.6	2.8	5.6	7.1	318.1	308.2	220.8	319.9	323.6	207.3	192.7	267.7	330.9	24.4	314.9	243.3	223.7	194.5	40.9
8	8.9	12.9	10.8	7.6	335.4	345.9	355.1	27.5	13.6	8.6	1.7	0.2	356.9	347.1	188.8	188.6	304.0	296.5	183.0	110.3	270.0	162.1	123.6	3.3
9	99.4	89.6	300.5	22.3	14.2	20.1	18.6	28.9	27.0	24.5	20.8	27.4	24.2	28.9	26.7	30.8	30.3	23.4	8.1	2.6	2.8	29.1	26.6	7.0
10	358.6	10.1	13.8	20.9	17.3	16.2	24.6	16.8	24.4	13.5	19.1	16.1	23.1	34.5	21.1	58.9	37.8	48.5	330.9	348.7	319.7	316.2	313.5	318.9
11	321.5	2.4	13.0	26.5	2.0	10.4	4.8	4.3	8.2	14.4	12.2	14.3	36.6	49.6	35.4	30.8	15.2	44.1	55.2	53.9	46.7	4.7	317.4	313.7
12	316.9	314.1	314.6	315.7	318.9	331.0	306.9	310.1	312.9	314.3	314.5	315.2	338.0	52.6	42.4	47.6	6.9	16.1	25.6	22.3	18.6	24.7	24.4	29.0
13	20.6	9.9	7.8	10.5	5.8	12.4	10.3	10.2	8.8	19.7	27.3	17.5	11.5	1.5	353.3	352.2	8.3	9.4	24.9	14.1	11.2	10.7	11.9	22.2
14	22.2	23.0	11.9	183.2	167.0	206.5	249.2	166.7	337.5	19.9	25.2	23.3	27.6	29.3	29.3	15.4	22.6	18.9	19.7	13.4	16.4	22.3	27.9	18.1
15	26.1	11.7	23.0	24.4	20.2	18.4	17.1	19.2	19.9	10.4	22.1	24.1	29.5	25.4	24.1	28.2	46.1	42.8	21.6	1.9	322.6	5.7	350.9	345.8
16	326.1	314.0	313.0	312.6	314.8	315.8	315.8	314.2	315.9	316.3	313.7	313.2	313.8	313.4	311.8	312.1	315.1	316.3	313.6	314.2	312.3	312.4	315.4	314.0
17	312.8	303.7	316.1	314.9	315.3	310.8	314.1	314.3	315.8	312.8	314.9	310.8	314.1	314.2	314.2	314.7	317.3	314.5	317.0	318.3	315.2	314.6	312.6	311.3
18	310.2	308.3	310.6	309.9	311.3	316.1	318.2	310.1	317.2	50.5	44.4	317.8	314.2	317.7	0.0	38.4	25.1	52.1	54.2	49.5	57.7	54.3	54.6	32.8
19	24.5	27.1	22.7	24.9	24.5	31.6	32.9	30.0	31.2	22.3	24.2	25.8	18.4	33.7	17.7	10.6	13.5	15.2	14.6	12.1	15.2	13.3	11.3	11.8
20	13.8	17.5	10.5	5.6	11.2	15.0	15.3	14.6	11.4	6.9	4.6	360.0	358.8	359.6	1.4	4.8	7.6	13.0	14.6	15.7	15.9	11.9	12.6	18.1
21	17.4	11.8	10.7	4.8	338.0	311.6	249.9	214.7	206.1	217.9	331.5	334.0	355.6	236.0	241.1	5.9	304.7	218.5	263.2	351.5	3.6	333.5	315.3	339.7
22	323.1	347.6	8.9	12.1	10.0	12.4	4.3	1.5	349.6	11.3	13.8	16.4	14.3	7.6	10.3	9.3	9.1	4.1	1.4	2.7	359.3	356.5	357.0	349.4
23	353.5	357.8	351.3	345.9	349.0	356.5	317.1	306.5	305.5	303.7	301.0	301.3	286.6	26.0	31.9	324.5	316.7	18.3	75.5	100.8	179.8	109.0	73.9	332.4
24	309.9	310.0	311.2	316.6	319.8	336.4	10.1	28.1	24.0	29.1	17.3	3.4	349.7	1.7	342.5	337.6	351.2	3.3	6.8	8.0	8.0	2.9	356.9	349.3
25	348.5	350.1	345.6	2.2	8.4	18.1	16.2	16.5	18.6	15.6	14.3	16.2	17.2	17.9	19.7	18.7	19.3	20.3	20.0	20.9	22.1	21.8	24.6	24.3
26	22.1	22.9	20.7	22.7	22.8	22.5	26.2	28.4	32.6	24.1	357.2	0.8	25.2	29.9	31.5	22.3	23.1	25.5	231.6	245.1	259.4	31.9	315.0	301.3
27	317.4	267.3	261.0	287.5	324.0	351.3	346.9	352.4	355.9	357.5	2.1	4.0	0.7	12.2	13.8	12.1	15.0	13.8	14.0	14.0	13.8	14.3	14.0	13.4
28	17.8	24.5	22.8	22.3	28.5	15.3	14.7	21.7	20.6	27.6	17.9	30.3	34.8	31.8	30.1	26.0	10.0	6.5	27.8	25.6	16.2	12.6	5.5	13.3
29	7.4	20.3	27.0	24.0	11.2	11.4	15.3	2.3	0.7	358.1	350.3	4.1	357.4	353.4	355.6	358.7	3.2	5.9	7.0	7.0	6.0	9.0	9.0	2.8
30	354.8	350.6	351.4	357.4	354.1	357.1	351.7	350.1	351.2	349.3	357.7	348.2	345.9	2.6	8.8	349.1	345.4	342.5	350.0	349.0	347.6	356.4	17.8	345.5

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	340.1	353.1	2.4	7.4	144.1	146.8	160.1	151.2	182.9	227.0	264.6	352.5	24.2	33.7	35.5	47.3	142.6	38.8	28.6	22.2	27.8	21.4	18.3	12.0
2	9.7	17.4	16.1	6.1	27.1	10.3	17.1	14.1	223.3	29.1	260.8	34.3	31.2	46.2	35.3	22.4	19.4	22.8	24.9	30.8	30.6	25.6	27.4	26.5
3	27.7	25.0	14.9	16.2	19.2	20.5	19.8	25.7	28.3	22.3	18.5	22.6	29.4	33.2	35.9	33.7	34.1	36.0	14.0	21.2	16.3	20.9	19.0	26.2
4	32.7	23.3	22.6	25.8	24.0	24.3	24.5	21.5	21.7	20.9	23.1	30.6	20.9	30.6	29.8	34.9	39.8	21.5	2.2	346.6	343.5	339.4	352.3	8.0
5	17.8	22.5	23.2	19.5	25.3	23.4	18.7	24.2	25.7	29.0	26.4	27.5	21.6	19.3	12.6	13.8	0.8	350.0	1.9	4.0	6.0	6.2	358.7	354.0
6	5.6	344.2	0.3	10.5	18.2	309.9	254.0	299.2	303.8	305.9	299.1	359.3	12.2	7.4	341.8	343.6	9.0	14.4	21.0	27.0	9.4	34.1	22.1	202.0
7	217.8	83.9	353.0	21.9	359.2	279.0	30.9	30.7	28.2	345.2	328.7	353.4	332.3	352.5	328.3	10.5	0.6	2.9	353.8	353.4	358.0	356.1	357.2	359.6
8	4.2	11.5	27.2	28.5	23.8	19.6	20.1	17.6	11.0	18.9	11.3	350.9	313.1	243.3	227.2	236.3	250.7	230.2	168.1	9.0	25.5	175.0	169.2	183.4
9	166.3	182.4	175.8	235.6	261.7	27.5	30.0	32.3	17.5	332.2	327.9	2.8	346.0	3.7	353.3	3.9	358.7	7.3	338.3	6.3	354.1	356.7	0.7	8.7
10	9.6	12.9	19.2	17.6	17.6	20.3	15.9	17.4	15.3	19.4	20.7	22.4	22.0	22.1	16.8	15.4	17.0	18.7	22.2	21.0	21.7	24.2	8.2	11.9
11	17.9	0.8	338.0	309.7	342.7	182.3	72.9	51.3	53.9	52.6	129.2	168.1	165.6	146.5	128.5	17.7	329.0	313.6	306.5	342.9	37.1	18.6	24.2	27.1
12	22.4	24.3	28.6	22.6	12.1	13.2	8.8	16.3	16.6	11.7	12.3	19.5	9.1	7.5	22.5	19.8	12.4	18.3	22.9	11.2	27.5	28.7	18.2	20.6
13	310.0	18.6	25.6	19.6	8.9	24.7	20.3	16.9	16.9	21.3	15.4	18.9	24.3	20.7	24.1	24.9	15.0	12.6	13.3	11.3	16.3	27.1	21.4	12.0
14	357.1	3.4	19.7	18.7	332.9	347.8	345.1	313.8	314.6	312.3	312.3	309.4	313.2	318.6	315.5	310.1	309.5	348.3	306.5	303.0	296.9	308.2	295.2	293.2
15	300.0	151.7	162.6	188.9	60.6	171.5	82.0	69.7	148.6	72.0	53.5	56.6	57.4	73.0	56.7	58.0	58.5	50.7	61.6	77.1	73.4	50.4	79.6	56.3
16	82.5	55.2	58.1	105.6	75.7	287.9	303.0	309.6	315.0	311.8	312.5	314.5	317.5	316.1	314.1	314.2	316.8	314.8	312.4	314.3	312.4	311.1	315.2	315.4
17	308.3	315.1	314.8	312.2	313.6	313.3	313.1	314.1	315.9	317.4	316.6	314.8	315.5	326.4	30.7	353.0	315.2	317.4	35.3	4.4	41.9	40.9	44.0	54.9
18	21.2	55.8	50.3	49.6	26.5	45.5	52.0	49.8	48.7	54.0	56.2	57.0	56.7	55.7	52.1	49.1	40.2	22.5	15.0	10.7	10.3	14.8	15.6	23.5
19	330.7	314.4	314.4	317.5	316.7	316.4	319.3	318.0	325.5	316.0	316.6	315.8	314.4	315.4	315.1	311.4	308.9	314.6	315.6	314.8	321.6	355.8	344.4	356.8
20	19.2	10.3	11.1	24.3	31.9	27.9	21.3	32.9	22.0	14.8	17.5	6.5	6.9	15.8	11.7	14.2	18.5	19.0	14.5	18.0	18.8	17.4	18.9	19.2
21	11.9	8.5	9.9	5.7	16.2	14.9	3.2	15.2	9.5	9.2	8.6	5.0	8.6	22.0	18.2	4.4	18.9	12.2	21.3	18.9	19.9	18.2	14.4	10.5
22	3.9	8.6	11.8	1.0	358.4	3.8	6.6	2.8	358.4	2.3	10.7	7.7	5.2	9.1	7.8	6.3	6.5	6.7	7.6	7.7	3.4	353.4	354.6	3.8
23	11.9	10.4	354.4	310.2	298.3	293.0	284.0	102.1	167.0	155.9	133.8	127.4	105.3	89.7	67.6	181.9	126.5	51.3	21.0	66.2	304.7	180.3	77.3	187.6
24	92.8	270.6	357.3	7.0	19.1	22.6	28.8	12.4	21.9	21.5	22.6	8.2	15.7	216.6	94.8	67.0	69.1	43.0	312.3	312.2	312.2	308.9	304.6	303.4
25	272.8	72.1	17.0	81.6	65.5	68.8	127.8	107.0	122.7	97.2	75.3	117.8	150.8	149.5	154.5	89.5	147.3	146.2	144.9	128.4	94.6	290.6	285.5	306.5
26	332.4	6.5	7.1	47.4	37.8	20.0	25.1	27.8	22.5	32.6	26.5	8.0	1.2	6.4	17.9	26.4	15.4	13.3	13.1	12.3	7.8	10.1	16.5	18.0
27	19.1	14.7	17.0	17.9	14.1	14.9	16.6	18.9	17.7	22.3	22.3	19.0	19.6	20.0	18.6	16.7	17.2	17.3	17.7	17.9	15.8	11.1	9.6	7.4
28	15.4	12.3	18.3	259.8	305.2	36.9	134.7	63.9	51.8	70.0	315.2	315.5	304.7	310.4	319.8	14.9	11.7	345.7	8.0	357.8	12.7	17.5	13.5	7.5
29	14.1	13.5	352.7	5.0	14.0	318.0	307.8	304.9	297.2	136.7	148.3	74.8	104.1	130.2	157.6	111.8	72.2	72.0	115.0	75.7	86.7	298.6	272.4	332.6
30	358.1	332.2	349.6	340.9	302.5	309.3	306.8	314.5	354.3	357.3	4.0	20.4	23.4	27.1	23.7	18.8	15.0	4.9	5.9	5.5	13.1	14.2	13.5	18.5
31	26.6	31.3	30.5	24.3	24.0	27.2	29.4	30.3	32.4	29.3	29.5	16.1	319.7	342.3	15.2	4.8	355.2	358.7	23.0	25.3	24.2	21.8	26.7	25.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

January 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	32.8	19.5	7.8	9.8	11.4	8.6	18.4	19.0	20.5	8.7	7.8	7.4	7.8	11.4	21.6	26.3	24.7	13.6	19.5	29.1	24.7	13.8	17.3	17.9	32.8	7.4	16.6
2	13.1	25.2	18.6	17.6	11.8	14.9	15.9	13.3	8.8	11.0	11.0	12.4	7.4	8.7	16.9	23.6	40.3	20.0	18.9	24.9	13.8	12.7	12.4	7.8	40.3	7.4	15.9
3	10.0	34.0	28.4	13.9	12.0	13.3	12.8	19.2	21.1	23.0	24.0	29.5	37.6	41.0	54.3	61.4	70.0	52.5	55.9	49.9	44.5	33.2	68.3	45.2	70.0	10.0	35.6
4	22.2	16.5	27.2	29.2	22.2	25.4	37.2	44.0	38.3	7.0	12.9	12.4	11.3	10.3	10.1	10.9	9.9	8.2	9.6	7.4	6.3	6.3	6.5	10.6	44.0	6.3	16.7
5	15.1	17.3	23.8	10.7	13.9	25.4	13.0	15.4	19.4	35.7	48.2	21.9	50.7	58.5	23.7	37.4	11.1	32.4	57.9	16.8	30.1	65.2	28.1	31.0	65.2	10.7	29.3
6	59.2	29.5	25.8	56.9	48.6	47.7	44.2	26.4	42.0	39.1	57.4	16.6	17.4	41.7	14.8	24.5	28.6	18.5	16.0	15.2	23.5	15.5	14.0	16.7	59.2	14.0	30.8
7	15.0	12.4	16.1	15.6	14.6	14.7	12.2	19.3	21.5	17.7	28.2	64.7	34.6	51.5	71.3	59.2	46.1	43.4	38.1	52.9	39.7	38.0	34.4	55.9	71.3	12.2	34.0
8	52.1	50.3	69.6	38.0	24.8	19.8	15.1	17.6	16.2	14.8	27.9	33.5	12.2	8.5	6.7	13.1	17.1	7.6	19.7	11.9	12.0	20.1	15.5	19.0	69.6	6.7	22.6
9	19.0	18.8	19.2	19.2	15.6	17.1	19.4	16.0	10.8	10.5	20.9	8.3	5.9	4.3	8.2	7.1	6.4	7.1	6.5	6.9	6.1	6.5	6.4	6.5	20.9	4.3	11.4
10	5.7	25.5	14.8	7.7	6.8	6.8	6.9	8.1	8.8	9.2	9.2	7.5	8.0	7.8	8.3	7.8	7.8	8.0	7.8	8.1	7.9	8.0	8.6	7.8	25.5	5.7	8.9
11	8.2	9.4	7.7	7.4	7.5	7.9	8.0	8.4	9.6	8.1	9.8	14.0	9.9	9.0	11.0	12.2	10.2	14.0	13.5	17.9	21.9	13.3	20.0	22.3	22.3	7.4	11.7
12	22.8	22.5	22.3	20.0	18.9	24.7	17.7	27.8	20.4	10.6	16.3	12.0	16.1	14.5	19.0	22.8	22.1	17.3	24.7	20.8	20.7	8.3	9.9	27.3	27.8	8.3	19.1
13	21.4	11.4	12.2	15.2	12.6	11.9	48.3	47.9	29.7	49.0	64.7	18.1	10.5	14.2	10.6	8.9	9.8	8.3	6.7	63.5	27.6	41.4	65.5	70.3	70.3	6.7	28.3
14	50.3	46.0	64.0	13.0	18.9	6.7	9.9	9.7	9.2	8.0	11.2	11.8	12.4	22.9	45.4	17.2	12.9	9.8	17.2	37.2	75.8	53.5	54.6	50.6	75.8	6.7	27.8
15	38.4	63.6	52.5	48.2	40.6	51.2	36.8	37.3	36.7	26.4	51.1	46.9	39.1	27.8	33.8	31.7	57.4	64.3	58.1	50.8	32.1	14.5	15.6	33.4	64.3	14.5	41.2
16	20.1	24.2	28.6	5.4	8.1	6.6	6.9	7.8	8.5	8.9							8.6	9.3	8.4	7.9	8.7	9.1	8.1	8.0	28.6	5.4	10.7
17	7.8	8.3	8.5	7.1	8.1	7.5	7.7	8.3	8.2	7.5	8.1	8.3	9.3	8.8	8.4	8.8	6.5	6.0	5.9	6.3	6.3	7.2	8.2	7.0	9.3	5.9	7.7
18	8.6	8.2	9.0	7.6	6.6	6.8	7.9	7.3	7.0	11.0	43.1	23.8	25.5	10.9	18.8	44.4	55.2	49.8	61.9	20.6	20.4	47.3	35.7	45.4	61.9	6.6	24.3
19	50.6	58.1	78.2	66.0	27.1	67.4	30.0	27.3	16.4	12.2	9.5	12.7	11.6	6.5	3.5	4.9	8.9	5.7	5.5	19.8	8.1	20.6	7.6	9.1	78.2	3.5	23.6
20	8.0	9.6	10.0	9.4	11.2	20.4	13.2	16.4	9.4	9.2	8.3	8.2	8.2	8.5	8.9	9.4	10.0	9.2	9.2	48.3	24.5	20.3	15.1	14.0	48.3	8.0	13.3
21	11.8	11.0	22.9	50.8	66.1	66.3	53.9	45.6	66.3	51.1	48.7	73.9	55.6	51.4	54.4	41.3	49.1	45.9	65.5	60.8	40.3	29.7	23.4	48.0	73.9	11.0	47.2
22	53.3	46.6	39.0	36.4	27.0	12.9	9.0	8.2	7.2	6.2	7.6	8.6	7.5	5.5	14.2	69.7	14.9	11.1	11.6	8.8	10.7	8.1	7.4	16.6	69.7	5.5	18.7
23	27.9	26.7	33.8	28.2	8.8	9.7	11.3	16.7	17.9	21.1	17.7	14.2	24.7	27.1	28.6	24.4	20.9	11.5	12.7	16.4	24.5	50.3	33.5	41.7	50.3	8.8	22.9
24	75.8	82.6	76.3	58.3	57.3	57.8	63.2	60.3	42.1	45.6	51.0	61.2	35.9	67.0	54.5	23.6	18.4	24.4	18.6	20.3	19.0	26.9	32.8	12.5	82.6	12.5	45.2
25	5.7	7.9	8.8	8.5	8.8	8.7	8.9	7.6	8.8	9.4	8.9	9.6	9.6	8.9	9.0	8.7	8.3	8.7	8.6	8.9	11.7	10.3	13.2	11.0	13.2	5.7	9.1
26	10.1	9.0	11.7	14.8	20.7	12.1	15.2	21.8	19.1	34.8	55.6	63.7	50.5	53.1	48.2	65.1	30.8	56.3	55.1	73.1	61.4	61.5	37.9	38.4	73.1	9.0	38.3
27	33.0	59.9	41.4	51.4	71.3	64.0	54.6	47.6	41.9	44.8	31.9	25.8	13.0	9.9	9.2	11.2	11.2	9.2	8.5	9.4	9.4	8.3	9.6	9.3	71.3	8.3	28.6
28	10.1	12.3	9.6	10.0	9.9	9.4	9.4	7.9	10.1	10.6	9.2	8.6	10.2	9.0	8.7	8.4	12.2	11.6	8.0	13.6	15.6	14.4	8.3	12.2	15.6	7.9	10.4
29	9.4	10.1	9.9	9.7	9.5	9.5	8.8	9.2	10.2	9.8	9.6	9.6	10.1	9.7	10.4	9.4	9.8	8.7	11.0	9.3	8.9	10.6	10.1	13.7	13.7	8.7	9.9
30	10.2	10.1	35.8	38.4	32.4	23.1	15.0	12.0	8.1	10.5	8.3	9.1	10.6	52.6	13.4	10.3	14.2	29.2	22.0	51.7	36.7	9.9	9.7	10.9	52.6	8.1	20.2
31	9.8	9.7	9.8	11.5	10.3	9.9	8.5	14.9	40.0	42.7	44.6	26.7	44.3	15.6	8.2	28.5	48.0	41.7	9.2	29.4	16.5	15.4	9.6	41.5	48.0	8.2	22.8
Max.	**75.8**	**82.6**	**78.2**	**66.0**	**71.3**	**67.4**	**63.2**	**60.3**	**66.3**	**51.1**	**64.7**	**73.9**	**55.6**	**67.0**	**71.3**	**69.7**	**70.0**	**64.3**	**65.5**	**73.1**	**75.8**	**65.2**	**68.3**	**70.3**	**82.6**		
Min.	**5.7**	**7.9**	**7.7**	**5.4**	**6.6**	**6.6**	**6.9**	**7.3**	**7.0**	**6.2**	**7.6**	**7.4**	**5.9**	**4.3**	**3.5**	**4.9**	**6.4**	**5.7**	**5.5**	**6.3**	**6.1**	**6.3**	**6.4**	**6.5**		**3.5**	
Avg.	**23.8**	**25.7**	**27.2**	**23.7**	**21.4**	**22.2**	**20.6**	**20.9**	**20.4**	**19.8**	**25.4**	**22.7**	**20.2**	**22.5**	**21.8**	**24.4**	**22.6**	**21.4**	**22.3**	**26.4**	**22.9**	**22.6**	**20.9**	**24.6**			**22.8**

Total Hours in Month 744 **Hours Data Available** 738 **Data Recovery** 99.2%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	40.2	9.1	8.7	8.3	9.1	9.6	10.2	9.0	9.3	9.3	8.6	10.3	9.9	10.0	12.5	10.9	10.5	11.5	12.8	14.0	16.0	17.9	12.6	10.7	40.2	8.3	12.1
2	14.1	14.8	24.5	37.6	20.2	61.1	54.5	80.7	65.9	71.8	69.5	54.3	76.3	51.3	77.5	60.4	73.8	80.7	79.7	72.2	70.7	66.1	73.8	82.0	82.0	14.1	59.7
3	89.0	71.4	52.2	33.1	57.3	21.1	38.8	38.3	26.2	22.2	9.2	5.4	5.0	5.5	15.4	33.5	40.3	61.7	37.8	24.8	52.3	36.1	58.2	64.3	89.0	5.0	37.5
4	32.4	12.3	14.9	7.7	24.3	10.6	13.9	22.1	7.5	9.6	8.9	28.9	4.7	4.1	4.6	15.3	6.7	11.8	46.9	47.9	6.7	32.2	16.9	59.8	59.8	4.1	18.8
5	38.6	26.6	6.1	43.3	12.4	27.0	25.3	5.8	58.4	42.4	42.5	55.0	41.8	7.5	13.6	35.3	20.6	35.2	66.2	35.3	68.2	37.0	33.1	10.7	68.2	5.8	32.8
6	11.9	8.7	8.5	9.3	8.1	9.2	12.0	11.5	9.0	11.2	10.4	10.1	9.7	10.1	9.9	11.2	10.2	10.3	10.9	9.5	9.7	8.1	8.8	8.8	12.0	8.1	9.9
7	8.1	9.5	11.2	10.4	42.5	22.9	40.7	57.4	31.5	8.9	6.5	5.1	4.8	6.2	5.9	5.6	6.5	6.5	8.3	39.1	50.0	62.5	11.8	15.3	62.5	4.8	19.9
8	23.5	35.9	56.4	26.9	16.7	48.3	36.8	26.1	9.5	10.1	12.3	7.9	10.7	29.5	20.3	15.0	11.4	30.7	6.9	32.4	40.9	10.6	10.1	9.4	56.4	6.9	22.4
9	10.0	7.8	7.3	6.3	13.0	6.1	10.8	14.4	6.3	5.3	5.6	6.2	6.8	6.9	21.1	25.6	16.2	6.2	5.8	9.9	39.1	42.6	34.5	8.7	42.6	5.3	13.4
10	62.8	13.7	23.0	11.3	20.5	40.3	8.4	6.8	14.8	42.8	20.6	20.9	19.9	19.1	10.6	12.9	26.4	25.2	14.2	11.9	9.1	10.6	16.7	14.1	62.8	6.8	19.9
11	14.0	10.7	17.1	11.1	11.4	8.2	6.8	7.1	8.7	7.1	6.4	5.5	5.9	7.7	7.1	8.9	9.2	9.3	9.2	9.6	9.0	9.3	9.7	11.4	17.1	5.5	9.2
12	10.3	10.7	12.1	11.9	10.6	11.2	9.6	10.3	11.0	10.5	11.3	10.1	10.7	10.9	10.2	9.6	9.0	9.0	8.5	8.7	9.3	9.9	9.0	10.0	12.1	8.5	10.2
13	9.3	10.0	9.8	8.3	7.6	8.2	8.9	9.1	9.5	9.5	9.1	9.6	9.0	9.4	8.7	9.7	9.2	9.7	10.0	10.1	10.7	9.3	10.4	9.8	10.7	7.6	9.4
14	15.6	22.8	16.1	18.4	23.7	18.3	12.5	16.4	12.0	13.9	11.3	12.6	15.2	10.6	12.4	5.8	35.6	67.3	46.4	55.1	8.1	47.3	60.9	36.1	67.3	5.8	24.8
15	5.4	6.0	6.0	6.9	44.4	64.8	35.9	19.6	46.2	47.6	4.9	10.7	37.6	5.1	5.8	4.5	5.0	9.0	14.2	32.7	27.7	11.7	5.5	7.3	64.8	4.5	19.4
16	8.9	6.4	9.7	42.6	43.8	7.0	9.5	36.1	16.9	45.3	52.5	48.6	43.0	39.7	16.1	43.1	16.8	44.6	50.0	14.8	46.0	11.9	24.2	18.8	52.5	6.4	29.0
17	53.6	20.8	8.2	31.2	20.0	16.8	7.8	5.5	8.1	13.4	48.5	3.3	3.9	32.1	21.5	16.2	9.5	11.2	8.1	7.5	6.6	7.2	7.1	9.7	53.6	3.3	15.7
18	13.1	15.3	8.3	8.2	11.8	8.7	32.0	9.6	8.4	7.2	3.8	3.8	8.7	17.5	11.4	19.2	5.5	16.4	37.5	16.8	10.3	11.2	9.0	9.7	37.5	3.8	12.6
19	35.1	40.9	37.0	6.2	5.4	13.5	36.8	67.1	47.9	18.4	18.3	43.2	19.9	17.7	15.1	16.1	16.5	14.7	12.8	23.8	35.9	54.7	47.5	27.1	67.1	5.4	28.0
20	27.0	28.9	25.2	15.8	19.2	15.3	25.7	30.3	26.7	24.3	17.3	25.9	38.4	32.1	51.8	62.9	26.2	42.7	66.4	29.0	21.7	22.1	26.5	16.6	66.4	15.3	29.9
21	16.8	15.5	17.8	18.7	17.1	42.1	21.4	17.2	24.7	16.1	12.5	9.3	7.6	10.5	36.3	17.3	25.8	39.7	35.0	37.5	16.5	43.1	37.4	41.2	43.1	7.6	24.0
22	45.2	15.8	20.2	7.8	8.9	8.6	12.0	16.2	17.7	7.8	5.4	5.8	6.4	8.4	8.5	10.5	16.8	19.0	35.0	22.9	17.7	18.9	19.8	11.9	45.2	5.4	15.3
23	11.9	8.7	7.8	9.4	18.6	21.1	16.6	11.2	14.4	8.6	5.9	5.9	5.8	6.7	8.5	11.4	14.6	12.3	19.4	45.7	23.5	29.4	16.5	30.3	45.7	5.8	15.2
24	30.5	28.3	28.2	28.9	13.8	16.6	18.3	20.3	16.8	27.0	23.8	7.0	9.6	13.7	25.2	14.6	15.8	18.8	25.3	14.9	14.0	18.2	35.8	35.4	35.8	7.0	20.8
25	11.0	34.0	25.1	37.8	31.9	13.6	14.8	13.0	13.9	14.8	13.3	10.5	15.0	13.9	43.8	52.0	56.4	70.4	51.6	17.1	52.9	46.5	47.5	64.4	70.4	10.5	31.9
26	55.2	37.9	18.3	39.4	42.4	45.8	64.4	35.6	37.1	56.9	46.1	46.7	28.0	35.9	42.7	52.4	33.9	16.2	9.2	6.9	6.5	12.4	17.7	17.6	64.4	6.5	33.5
27	23.3	12.4	20.2	54.5	49.2	34.6	17.0	14.3	16.3	7.9	4.4	4.8	6.5	7.7	7.4	26.4	17.6	13.8	22.5	6.5	7.5	12.9	8.2	6.7	54.5	4.4	16.8
28	7.9	7.6	6.6	10.2	9.5	7.7	9.5	7.8	8.2	8.2	7.1	7.6	5.7	6.7	7.0	6.5	24.4	23.3	10.6	26.8	11.6	10.9	15.8	12.0	26.8	5.7	10.8
Max.	**89.0**	**71.4**	**56.4**	**54.5**	**57.3**	**64.8**	**64.4**	**80.7**	**65.9**	**71.8**	**69.5**	**55.0**	**76.3**	**51.3**	**77.5**	**62.9**	**73.8**	**80.7**	**79.7**	**72.2**	**70.7**	**66.1**	**73.8**	**82.0**	**89.0**		
Min.	**5.4**	**6.0**	**6.0**	**6.2**	**5.4**	**6.1**	**6.8**	**5.5**	**6.3**	**5.3**	**3.8**	**3.3**	**3.9**	**4.1**	**4.6**	**4.5**	**5.0**	**6.2**	**5.8**	**6.5**	**6.5**	**7.2**	**5.5**	**6.7**		**3.3**	
Avg.	**25.9**	**19.4**	**18.1**	**20.1**	**21.9**	**22.1**	**21.8**	**22.1**	**20.8**	**20.6**	**17.7**	**17.0**	**16.7**	**15.6**	**19.0**	**21.9**	**20.4**	**26.0**	**27.2**	**24.4**	**24.9**	**25.4**	**24.5**	**23.6**			**21.5**

Total Hours in Month 672 **Hours Data Available** 672 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	14.9	13.6	14.1	15.8	15.8	9.9	16.0	13.2	9.6	7.9	6.3	6.7	5.8	7.2	9.3	12.7	15.8	35.7	26.6	16.7	22.0	23.2	34.5	34.5	35.7	5.8	16.2
2	22.6	24.6	20.9	15.7	26.5	20.1	21.8	22.8	31.5	8.5	10.1	10.0	10.6	10.7	11.5	13.1	50.9	29.6	13.2	14.4	21.1	20.8	21.5	17.6	50.9	8.5	19.6
3	19.9	25.7	19.7	24.1	17.3	22.4	19.7	24.4	23.4	8.7	8.7	10.0	9.0	8.3	7.6	8.5	36.6	35.0	26.1	11.0	16.4	15.9	11.7	18.2	36.6	7.6	17.8
4	25.7	14.5	19.4	12.5	19.7	21.1	20.7	19.7	17.6	13.5	8.3	8.6	9.4	13.0	14.2	12.3	34.1	18.3	34.7	36.5	11.3	8.8	11.1	8.3	36.5	8.3	17.2
5	6.5	7.9	8.0	10.1	9.7	7.2	9.1	12.3	13.1	11.3	11.4	12.0	17.7	13.5	9.5	14.7	13.2	28.8	24.2	29.2	35.7	29.1	9.9	12.1	35.7	6.5	14.8
6	28.8	29.2	29.3	21.6	36.3	27.4	22.1	19.2	30.3	27.7	38.9	28.3	22.0	13.3	13.9	15.3	16.3	21.2	17.7	16.5	15.0	14.2	13.4	12.6	38.9	12.6	22.1
7	14.3	15.7	14.9	14.7	14.7	13.4	12.0	17.4	34.2	18.3	14.1	13.9	15.2	17.5	28.3	29.5	29.3	29.2	24.0	21.0	19.3	15.1	14.0	15.9	34.2	12.0	19.0
8	12.7	14.7	13.2	13.1	13.2	13.1	16.3	17.4	29.2	29.7	20.2	18.7	26.3	15.9	18.6	38.9	40.3	45.9	37.6	18.1	24.2	21.1	44.0	25.2	45.9	12.7	23.6
9	19.8	33.4	37.4	34.3	22.9	23.3	52.0	54.0	26.7	30.7	18.3	13.9	14.8	12.0	11.7	13.5	37.1	48.3	30.6	23.9	52.8	16.7	40.5	17.9	54.0	11.7	28.6
10	46.5	21.0	14.3	19.7	23.2	23.5	22.0	13.6	22.8	14.6	20.3	32.8	35.4	43.3	42.9	45.9	12.4	13.0	9.8	19.2	14.0	17.9	17.6	10.3	46.5	9.8	23.2
11	10.2	13.8	11.4	33.6	22.0	14.0	17.1	47.2	15.0	10.2	11.0	10.6	17.5	17.5	15.5	16.0	27.1	17.9	14.8	14.1	12.7	23.8	28.0	22.6	47.2	10.2	18.5
12	30.5	31.4	15.3	16.4	15.2	51.5	37.2	19.0	37.4	29.4	42.5	34.8	16.7	15.2	26.3	72.1	44.1	47.0	39.9	30.2	47.6	37.5	53.1	43.3	72.1	15.2	34.7
13	42.9	46.2	36.6	30.2	33.3	27.9	26.0	32.2	25.6	51.3	47.6	50.2	45.8	32.5	26.1	47.1	43.6	39.6	56.8	60.9	28.4	17.7	15.5	34.7	60.9	15.5	37.4
14	50.6	65.6	80.9	63.2	44.6	43.1	44.4	31.4	38.8	60.1	46.2	53.1	46.2	39.8	46.0	32.8	52.0	40.2	18.2	12.2	14.5	14.2	14.8	36.8	80.9	12.2	41.2
15	7.0	9.6	8.6	10.3	7.3	6.9	6.8	8.7	6.9	7.0	11.7	14.1	12.3	12.0	9.5	12.9	14.4	30.5	29.5	10.7	8.8	15.9	20.3	23.6	30.5	6.8	12.7
16	20.5	26.8	22.4	24.5	21.4	20.0	21.6	18.3	13.5	10.5	10.1	8.2	10.2	8.1	7.8	29.0	37.1	18.3	18.1	11.3	29.8	18.6	14.5	17.7	37.1	7.8	18.2
17	22.3	19.0	17.1	23.8	25.4	15.4	20.0	21.7	16.2	12.8	12.5	14.6	13.3	8.3	4.5	7.7	11.4	54.4	25.7	21.3	25.0	21.6	20.5	19.6	54.4	4.5	18.9
18	15.3	28.5	17.9	12.8	13.9	14.6	17.2	16.5	16.4	13.7	11.5	12.8	9.5	8.8	8.2	20.6	11.2	16.3	24.5	19.6	17.6	15.3	25.9	20.2	28.5	8.2	16.2
19	24.4	18.3	20.8	11.0	7.6	12.8	11.7	17.2	13.9	9.6	11.1	9.4	6.8	6.7	6.3	6.8	32.8	6.3	19.8	12.0	10.3	8.2	11.8	15.6	32.8	6.3	13.0
20	6.7	5.3	5.6	5.4	11.2	8.1	8.7	7.7	8.1	8.6	8.5	9.1	9.3	8.8	8.5	9.0	9.3	9.6	9.6	10.0	9.6	8.9	8.1	7.9	11.2	5.3	8.4
21	9.1	9.3	9.2	8.8	8.9	8.6	17.9	11.9	6.9	45.0	29.6	56.0	57.6	19.5	27.3	28.1	37.6	59.6	37.2	36.0	41.0	39.0	33.9	32.3	59.6	6.9	27.9
22	14.9	26.1	58.2	41.7	49.1	18.1	27.6	23.8	12.0	13.6	12.1	13.1	10.1	8.5	26.7	21.3	11.1	23.8	47.0	15.2	16.7	12.7	9.9	12.7	58.2	8.5	21.9
23	7.3	8.0	11.7	27.1	27.6	31.2	18.2	17.3	14.6	15.2	14.0	18.0	25.3	24.8	64.4	71.8	73.9	50.8	71.6	63.7	73.7	64.8	51.3	42.2	73.9	7.3	37.0
24	47.0	39.3	59.0	32.1	23.4	22.1	14.9	16.6	15.5	14.0	14.7	14.2	16.3	14.3	12.9	13.5	13.0	13.6	12.9	15.8	14.2	17.1	34.5	22.3	59.0	12.9	21.4
25	19.0	47.1	24.4	37.3	42.7	31.4	31.4	48.2	53.4	29.5	27.5	43.8	30.7	46.5	42.1	25.6	40.2	33.8	57.9	18.6	16.3	6.1	5.0	6.0	57.9	5.0	31.9
26	8.3	8.8	8.8	9.2	8.7	8.6	9.0	8.8	9.5	8.8	12.3	21.8	31.2	17.6	12.9	14.2	11.7	12.4	25.0	52.5	33.5	26.1	26.5	30.4	52.5	8.3	17.4
27	47.4	35.9	17.0	25.6	26.9	16.6	22.1	12.1	6.6	6.4	9.5	9.9	8.2	7.3	13.7	16.3	21.3	13.6	38.4	23.5	21.0	29.4	16.6	21.0	47.4	6.4	19.4
28	16.3	16.0	19.2	18.2	17.9	15.5	13.1	15.9	6.8	7.6	11.4	11.0	9.4	8.0	11.7	9.9	26.1	15.9	16.2	15.1	14.3	13.6	13.2	31.9	31.9	6.8	14.8
29	8.8	9.4	20.5	26.4	33.4	13.0	11.0	22.0	22.9	25.9	46.4	36.0	27.5	19.1	27.6	33.4	56.8	50.5	64.1	59.2	39.9	23.8	19.4	16.8	64.1	8.8	29.7
30	23.6	20.6	15.1	21.9	15.0	15.2	15.8	25.1	12.2	9.8	9.5	7.8	10.1	19.8	13.8	12.5	26.8	6.5	42.9	6.1	10.9	64.7	10.2	24.3	64.7	6.1	18.3
31	44.8	39.8	19.4	8.6	14.2	31.7	31.9	34.5	5.2	16.5	29.5	4.9	4.5	4.3	4.4	4.4	4.4	4.6	20.5	63.9	10.9	7.1	9.8	8.9	63.9	4.3	17.9
Max.	**50.6**	**65.6**	**80.9**	**63.2**	**49.1**	**51.5**	**52.0**	**54.0**	**53.4**	**60.1**	**47.6**	**56.0**	**57.6**	**46.5**	**64.4**	**72.1**	**73.9**	**59.6**	**71.6**	**63.9**	**73.7**	**64.8**	**53.1**	**43.3**	**80.9**		
Min.	**6.5**	**5.3**	**5.6**	**5.4**	**7.3**	**6.9**	**6.8**	**7.7**	**5.2**	**6.4**	**6.3**	**4.9**	**4.5**	**4.3**	**4.4**	**4.4**	**4.4**	**4.6**	**9.6**	**6.1**	**8.8**	**6.1**	**5.0**	**6.0**		**4.3**	
Avg.	**22.2**	**23.4**	**22.3**	**21.6**	**21.6**	**19.6**	**20.5**	**21.6**	**19.2**	**18.6**	**18.9**	**19.6**	**18.9**	**16.2**	**18.8**	**22.9**	**28.8**	**28.1**	**30.1**	**25.1**	**23.5**	**21.6**	**21.3**	**21.4**			**21.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.4	9.6	7.5	10.5	11.8	8.9	8.0	9.4	8.1	5.8	8.6	19.0	7.6	5.3	4.1	5.5	4.9	4.1	10.2	10.0	8.7	25.7	7.3	47.2	47.2	4.1	10.7
2	7.4	11.1	15.9	12.2	17.6	32.6	55.4	62.7	51.0	38.5	60.2	62.2	74.6	52.0	44.6	35.2	40.0	35.3	66.0	8.7	10.9	13.8	11.5	18.2	74.6	7.4	34.9
3	10.3	9.8	9.8	12.4	8.9	9.1	9.4	10.1	9.0	10.4	9.8	10.0	10.8	9.1	11.4	15.2	12.3	11.5	10.8	9.7	9.3	10.0	10.6	20.5	20.5	8.9	10.8
4	10.7	9.8	7.6	8.5	7.9	9.0	8.8	9.3	11.1	11.7	10.3	11.4	10.6	9.9	9.9	10.4	11.6	10.9	10.3	10.1	10.7	10.5	11.0	11.1	11.7	7.6	10.1
5	11.4	10.1	10.1	11.4	11.1	10.4	9.9	9.7	9.1	9.6	10.3	10.4	9.9	10.6	9.5	10.4	11.8	9.5	9.2	9.8	11.1	10.0	10.3	21.9	21.9	9.1	10.7
6	9.8	10.0	10.6	9.4	8.6	9.2	8.8	9.3	9.7	9.9	9.9	9.8	9.8	10.4	10.1	9.7	9.7	10.8	11.9	12.2	10.0	10.2	10.0	9.7	12.2	8.6	10.0
7	9.6	11.1	15.0	56.7	58.8	45.3	58.2	69.3	70.3	58.4	30.0	19.7	10.3	10.0	10.5	11.3	11.0	12.8	12.6	10.2	10.2	9.8	10.1	10.7	70.3	9.6	26.3
8	9.9	10.2	9.7	10.1	9.8	10.6	10.5	10.5	10.3	9.9	9.9	10.1	9.7	9.2	10.1	10.8	10.6	10.4	11.5	11.2	11.8	13.5	13.4	11.2	13.5	9.2	10.6
9	11.7	10.2	10.9	9.9	9.8	10.1	9.8	9.9	10.4	9.8	10.6	10.0	9.5	9.3	10.0	9.6	9.6	9.6	10.2	10.4	26.4	11.6	9.9	12.4	26.4	9.3	10.9
10	31.0	56.1	65.5	19.2	29.7	44.2	33.5	35.3	31.1	32.6	17.2	54.9	60.2	40.2	22.0	49.6	35.9	29.0	24.4	13.3	28.0	36.9	25.4	15.5	65.5	13.3	34.6
11	10.1	9.1	7.4	6.4	8.8	6.3	8.7	6.3	4.0	8.8	9.9	22.3	21.7	17.4	17.6	18.6	12.0	20.9	27.7	46.9	59.3	50.9	72.5	20.9	72.5	4.0	20.6
12	32.0	38.7	10.4	45.4	25.2	45.3	15.5	6.8	5.7	6.4	10.8	11.9	8.5	9.2	9.2	10.0	8.6	11.1	14.1	13.5	25.5	11.4	16.7	28.0	45.4	5.7	17.5
13	23.9	19.6	25.9	22.6	16.4	16.3	13.2	11.2	8.8	9.1	7.7	7.0	3.7	3.6	31.5	29.1	38.3	56.3	56.8	69.0	15.3	26.2	7.7	40.3	69.0	3.6	23.3
14	6.2	7.6	10.3	12.5	57.9	8.4	6.8	8.6	7.7	11.4	11.3	33.5	29.7	38.5	28.4	10.1	12.9	14.9	11.3	9.8	12.5	56.4	49.1	28.0	57.9	6.2	20.2
15	45.3	42.4	12.3	10.6	9.1	10.0	8.9	8.7	9.1	9.6	9.9	12.1	9.3	8.2	7.2	8.7	13.1	12.9	15.9	62.9	40.9	23.1	12.5	13.0	62.9	7.2	17.3
16	11.8	13.1	11.2	10.7	11.0	10.0	14.3	22.1	22.9	14.4	14.9	12.9	15.1	54.6	58.3	36.3	22.4	13.4	13.5	12.5	26.4	57.0	31.0	20.5	58.3	10.0	22.1
17	19.6	11.3	14.5	11.5	24.3	26.5	22.8	22.4	28.6	59.6	63.9	34.6	49.4	40.5	18.7	10.8	12.8	10.4	9.3	11.4	11.3	12.4	13.8	10.2	63.9	9.3	22.9
18	13.0	11.0	10.6	10.4	11.4	10.1	9.7	10.0	9.8	10.0	9.2	9.9	9.3	9.6	9.3	9.2	8.9	8.8	8.9	9.3	8.7	9.1	9.3	8.8	13.0	8.7	9.8
19	9.3	9.0	9.0	10.0	9.4	9.4	11.3	10.4	9.2	10.0	9.6	49.3	29.6	58.3	34.3	48.4	51.5	43.0	14.1	14.7	16.1	33.3	52.1	26.0	58.3	9.0	24.0
20	20.0	21.9	15.4	10.9	8.6	9.0	9.3	9.8	10.7	10.0	9.8	11.0	10.9	10.9	9.9	12.4	11.1	10.2	11.2	10.5	11.7	13.3	10.9	10.9	21.9	8.6	11.7
21	9.7	10.3	9.4	10.3	9.6	9.8	10.3	9.5	9.9	10.4	10.2	9.6	10.0	10.6	13.4	13.7	19.4	14.3	10.3	10.1	9.9	11.8	11.3	15.0	19.4	9.4	11.2
22	11.8	10.2	9.7	13.1	12.5	10.1	10.6	11.0	10.2	11.2	11.1	11.2	11.0	10.7	10.7	10.5	10.5	11.5	11.3	10.6	10.2	10.2	10.2	10.6	13.1	9.7	10.9
23	10.5	10.0	10.0	10.2	10.6	10.4	11.4	10.2	10.6	10.5	10.4	11.5	10.2	11.3	15.3	43.2	35.7	42.0	16.1	11.1	10.0	9.1	10.0	9.5	43.2	9.1	14.6
24	10.1	9.6	9.6	9.5	9.4	9.7	9.7	10.3	10.1	9.0	8.4	9.1	9.2	8.9	9.1	10.2	9.9	10.3	10.7	9.8	10.2	9.9	9.4	9.2	10.7	8.4	9.6
25	9.2	9.7	9.7	9.2	9.7	9.6	9.6	9.7	8.8	9.8	10.0	11.8	10.4	13.4	12.7	10.4	9.3	9.8	9.4	10.4	10.3	9.7	10.0	9.7	13.4	8.8	10.1
26	11.0	10.0	10.6	12.2	10.0	57.1	64.1	22.5	12.1	57.3	31.4	35.8	8.4	4.5	10.0	11.6	8.0	14.7	51.6	50.6	53.6	17.4	29.7	54.4	64.1	4.5	27.0
27	36.2	45.8	34.0	14.7	8.4	5.1	13.9	9.9	60.5	41.8	11.6	17.8	15.6	11.1	9.6	8.1	5.6	6.4	8.9	8.0	10.8	10.0	10.2	9.7	60.5	5.1	17.2
28	18.5	17.1	36.7	16.1	7.4	10.3	14.9	12.0	8.6	28.9	5.1	4.4	6.3	20.5	16.7	17.4	20.3	12.6	20.8	30.7	40.2	39.3	14.5	15.5	40.2	4.4	18.1
29	10.6	8.8	9.1	5.8	13.8	11.3	12.9	10.6	10.4	9.5	9.0	9.4	11.8	18.2	11.1	46.6	47.7	13.2	10.9	10.8	18.2	19.6	23.8	26.4	47.7	5.8	15.8
30	18.3	38.7	6.5	7.3	6.6	7.2	9.8	8.3	8.8	9.0	9.0	9.6	10.7	10.9	10.5	10.6	13.9	20.3	47.8	53.8	14.9	13.1	11.7	11.5	53.8	6.5	15.4
Max.	**45.3**	**56.1**	**65.5**	**56.7**	**58.8**	**57.1**	**64.1**	**69.3**	**70.3**	**59.6**	**63.9**	**62.2**	**74.6**	**58.3**	**58.3**	**49.6**	**51.5**	**56.3**	**66.0**	**69.0**	**59.3**	**57.0**	**72.5**	**54.4**	**74.6**		
Min.	**6.2**	**7.6**	**6.5**	**5.8**	**6.6**	**5.1**	**6.8**	**6.3**	**4.0**	**5.8**	**5.1**	**4.4**	**3.7**	**3.6**	**4.1**	**5.5**	**4.9**	**4.1**	**8.9**	**8.0**	**8.7**	**9.1**	**7.3**	**8.8**		**3.6**	
Avg.	**15.3**	**16.7**	**14.5**	**14.0**	**15.1**	**16.0**	**16.7**	**15.5**	**16.2**	**18.1**	**15.0**	**18.4**	**16.8**	**17.9**	**16.2**	**18.1**	**17.6**	**16.7**	**18.6**	**19.1**	**18.4**	**19.8**	**17.9**	**18.5**			**17.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	9.7	10.4	8.3	9.6	9.9	43.3	41.2	10.5	11.1	57.8	11.6	13.0	10.1	9.9	11.5	10.3	10.7	9.7	11.2	11.0	11.1	9.7	9.9	9.8	57.8	8.3	15.1
2	10.0	9.3	9.4	8.6	8.8	13.5	12.8	10.0	10.8	10.5	9.9	9.9	13.5	16.0	46.8	25.0	33.3	49.8	63.8	22.1	27.2	26.1	8.8	19.1	63.8	8.6	19.8
3	47.3	15.2	7.2	11.4	26.9	49.9	8.0	3.9	14.3	16.1	14.9	6.1	5.8	4.5	4.4	4.6	4.8	5.3	9.1	27.8	16.3	20.9	53.3	36.2	53.3	3.9	17.2
4	70.9	61.5	15.1	9.2	10.6	30.0	11.4	5.6	4.6	20.3	7.6	8.1	8.0	8.3	7.7	6.3	5.6	7.4	7.2	12.0	17.4	12.8	27.8	31.2	70.9	4.6	16.9
5	31.6	51.7	39.9	33.6	31.9	73.2	45.3	37.1	15.8	14.9	7.9	6.5	5.2	6.8	22.5	33.8	46.7	17.1	23.7	33.4	72.7	66.5	59.4	67.2	73.2	5.2	35.2
6	68.7	72.5	23.2	28.3	48.9	59.4	62.6	28.9	48.1	83.2	69.4	72.0	58.0	52.0	52.1	49.0	38.5	40.7	38.5	28.9	57.7	46.5	44.6	65.3	83.2	23.2	51.5
7	62.1	36.1	34.5	30.6	19.6	16.7	19.9	15.6	29.3	36.0	43.2	59.4	34.2	47.5	22.3	17.8	28.9	28.8	32.6	25.7	27.3	26.2	26.1	17.9	62.1	15.6	30.8
8	20.6	14.8	15.2	13.5	13.3	15.9	24.9	28.3	26.1	9.7	7.6	16.2	6.2	6.0	21.8	16.6	37.2	11.5	8.7	6.2	53.4	24.0	9.5	31.8	53.4	6.0	18.3
9	50.4	18.1	11.6	7.9	7.0	8.6	18.9	16.6	15.8	9.7	7.7	6.5	10.4	21.8	20.5	10.6	12.4	12.7	10.4	11.3	29.6	58.5	36.8	39.0	58.5	6.5	18.9
10	8.2	20.9	34.8	36.2	14.9	50.2	59.0	15.8	30.0	11.0	11.4	9.1	5.5	4.9	5.6	8.5	6.9	6.2	6.8	13.0	11.1	27.9	29.7	16.9	59.0	4.9	18.5
11	7.8	23.5	17.8	14.4	11.3	6.9	4.6	4.9	16.7	38.3	21.3	31.4	39.6	56.2	31.6	54.5	40.7	46.9	59.6	24.6	30.2	26.1	44.4	32.5	59.6	4.6	28.6
12	24.6	5.6	5.7	5.2	9.2	9.2	9.9	16.5	21.4	46.8	16.5	24.2	46.8	41.4	19.0	22.7	41.6	28.8	53.5	31.3	26.4	19.5	42.0	6.7	53.5	5.2	23.9
13	7.7	12.0	10.7	9.2	7.8	9.7	8.1	10.0	11.0	8.9	10.4	10.9	11.4	9.3	8.3	7.8	8.4	9.0	9.8	9.3	9.8	9.0	10.5	10.3	12.0	7.7	9.5
14	10.3	9.5	9.5	8.8	9.9	10.0	9.9	9.6	9.4	9.6	9.3	10.2	10.3	21.7	25.8	60.2	61.3	39.5	52.0	30.6	55.8	28.7	10.3	8.8	61.3	8.8	21.7
15	7.2	6.1	6.0	7.0	8.0	7.1	9.4	11.8	11.7	12.2	12.5	11.9	60.4	15.9	17.9	10.0	7.6	6.3	7.3	46.1	16.0	29.5	43.6	47.9	60.4	6.0	17.5
16	39.9	77.3	57.8	44.5	60.6	47.9	65.3	61.3	60.4	45.2	28.3	30.0	24.7	45.6	19.5	8.5	5.4	6.9	12.3	9.2	17.5	9.1	8.9	13.5	77.3	5.4	33.3
17	71.0	57.0	83.0	59.7	11.9	15.1	11.0	4.6	11.1	43.4	27.9	34.9	6.0	6.5	25.6	19.4	21.1	25.9	33.4	45.5	22.1	25.3	21.6	21.5	83.0	4.6	29.3
18	62.6	22.6	53.7	41.7	42.5	15.5	15.2	17.2	21.4	12.2	15.1	9.4	8.2	6.6	4.9	6.5	6.6	10.2	16.3	43.1	42.2	55.5	19.0	40.3	62.6	4.9	24.5
19	45.7	39.8	12.8	7.5	8.6	8.2	7.6	10.3	10.1	21.0	32.7	24.6	32.6	36.5	33.9	22.0	23.6	52.9	55.9	35.3	13.5	21.1	18.4	16.5	55.9	7.5	24.6
20	14.4	20.7	12.5	14.1	27.2	30.5	8.8	11.8	9.0	7.0	5.0	14.0	21.4	24.7	20.4	23.8	25.3	34.3	33.9	19.8	57.6	69.5	53.3	12.5	69.5	5.0	23.8
21	12.8	13.2	15.7	38.2	13.3	10.6	6.7	8.2	28.1	8.6	7.8	6.1	13.1	12.0	23.3	43.7	23.6	68.8	32.8	23.6	80.0	33.9	29.9	25.2	80.0	6.1	24.1
22	24.2	65.4	47.7	11.0	14.9	16.2	13.4	9.8	12.5	13.5	10.6	10.1	9.6	9.6	10.7	11.1	11.3	11.7	10.4	10.8	11.5	10.9	10.0	9.7	65.4	9.6	15.7
23	10.6	10.6	10.5	11.2	10.6	10.7	10.2	10.3	10.7	11.1	10.6	9.8	9.3	9.1	9.6	9.3	9.9	9.2	9.3	12.4	55.8	16.9	26.5	63.8	63.8	9.1	15.3
24	85.2	60.2	56.4	13.8	20.1	16.1	52.0	24.4	12.0	13.9	10.3	11.7	12.6	12.8	12.4	11.1	10.9	10.2	9.9	10.2	9.0	8.9	11.5	10.1	85.2	8.9	21.1
25	10.5	10.4	11.2	9.8	10.5	9.8	10.3	12.8	14.2	12.2	9.5	11.4	19.0	8.5	6.4	6.6	5.5	5.8	6.0	46.4	52.8	5.0	39.9	21.3	52.8	5.0	14.8
26	10.4	9.3	7.7	10.0	52.3	7.4	11.2	11.7	11.5	11.5	15.3	18.6	40.5	20.5	34.4	63.5	35.4	41.5	45.1	35.7	26.3	12.0	13.6	23.6	63.5	7.4	23.7
27	36.7	48.3	37.1	31.9	13.0	10.7	8.6	18.5	19.5	17.9	5.1	5.6	6.0	12.7	25.0	8.5	5.0	5.7	9.8	10.3	13.1	15.8	19.2	23.2	48.3	5.0	17.0
28	17.9	11.0	15.0	35.6	9.6	10.1	7.5	6.2	33.1	27.4	17.2	24.3	43.0	11.5	15.6	10.0	7.0	5.7	7.7	6.4	6.4	29.9	29.5	23.1	43.0	5.7	17.1
29	18.8	33.6	8.6	10.2	44.8	10.2	8.4	14.0	10.6	9.3	7.4	9.5	9.5	11.1	10.8	15.0	11.1	9.1	10.1	9.6	10.9	12.2	10.0	9.8	44.8	7.4	13.1
30	8.1	9.1	5.9	13.3	66.6	11.1	11.5	13.2	11.0	12.3	13.3	12.5	47.2	20.8	18.1	19.2	8.8	14.3	10.1	5.5	6.0	14.9	11.0	27.5	66.6	5.5	16.3
31	12.5	9.6	9.7	10.1	9.5	11.8	9.2	10.5	9.4	11.0	10.2	10.3	10.8	11.0	10.5	10.3	11.0	11.0	10.9	10.2	11.0	11.2	10.6	11.1	12.5	9.2	10.5
Max.	**85.2**	**77.3**	**83.0**	**59.7**	**66.6**	**73.2**	**65.3**	**61.3**	**60.4**	**83.2**	**69.4**	**72.0**	**60.4**	**56.2**	**52.1**	**63.5**	**61.3**	**68.8**	**63.8**	**46.4**	**80.0**	**69.5**	**59.4**	**67.2**	**85.2**		
Min.	**7.2**	**5.6**	**5.7**	**5.2**	**7.0**	**6.9**	**4.6**	**3.9**	**4.6**	**7.0**	**5.0**	**5.6**	**5.2**	**4.5**	**4.4**	**4.6**	**4.8**	**5.3**	**6.0**	**5.5**	**6.0**	**5.0**	**8.8**	**6.7**		**3.9**	
Avg.	**29.6**	**27.9**	**22.4**	**19.2**	**21.1**	**20.8**	**19.4**	**15.1**	**18.1**	**21.4**	**15.7**	**17.4**	**20.6**	**18.8**	**19.3**	**20.2**	**19.6**	**20.7**	**22.8**	**21.5**	**28.9**	**25.3**	**25.5**	**25.6**			**21.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.7	10.2	9.9	10.5	11.0	10.2	10.5	9.8	11.2	12.1	10.9	11.1	11.5	37.6	39.9	57.4	66.1	32.5	29.8	43.1	49.1	56.9	20.7	27.4	66.1	9.8	25.0
2	44.4	45.9	17.7	37.3	35.0	30.6	8.6	5.7	4.3	3.9	3.8	4.7	6.0	19.3	13.4	5.4	6.3	7.7	6.2	7.9	10.7	56.2	46.9	23.2	56.2	3.8	18.8
3	23.4	14.3	39.2	47.5	40.2	8.8	41.0	28.9	17.2	15.2	4.9	4.4	4.8	7.3	13.7	8.2	4.6	5.4	9.8	54.3	50.8	43.5	60.5	22.5	60.5	4.4	23.8
4	9.8	9.9	9.3	11.1	18.1	57.7	55.1	28.7	42.9	6.4	7.9	9.0	12.1	10.0	10.6	44.9	13.4	7.6	7.5	8.0	11.8	13.1	12.3	11.8	57.7	6.4	17.9
5	7.2	7.8	34.0	21.9	10.8	9.9	8.3	7.9	9.0	10.6	21.1	14.8	11.2	14.1	12.0	30.2	55.9	20.7	42.2	56.1	43.0	21.9	38.1	20.6	56.1	7.2	22.0
6	13.2	46.4	57.5	15.5	30.6	13.6	4.8	7.4	7.2	28.1	30.4	12.9	9.1	26.2	10.3	7.1	7.4	9.5	39.7	55.4	34.9	59.7	11.6	13.2	59.7	4.8	23.0
7	8.7	9.1	9.7	11.9	10.0	10.3	10.4	10.5	10.9	11.0	11.4	10.2	11.3	25.7	54.1	68.7	35.3	12.8	13.0	10.5	12.6	13.0	11.4	10.5	68.7	8.7	16.8
8	10.8	11.9	10.7	11.1	11.2	11.1	11.6	11.8	12.3	10.4	11.2	12.1	11.4	10.4	10.2	11.6	14.0	19.9	58.4	42.6	18.5	12.7	13.3	12.2	58.4	10.2	15.5
9	9.0	7.5	38.2	19.1	8.2	10.3	12.1	7.0	11.6	44.4	22.8	40.9	18.9	48.9	42.5	47.0	48.3	48.7	65.6	15.1	20.9	15.9	13.4	28.5	65.6	7.0	26.9
10	20.0	20.7	19.3	25.7	27.8	30.0	24.1	23.5	20.0	24.2	23.7	19.4	51.9	38.5	53.1	54.5	36.8	32.9	18.0	28.0	24.2	30.3	12.7	27.6	54.5	12.7	28.6
11	13.7	18.8	13.8	13.4	17.2	8.7	22.8	29.6	13.7	11.8	13.5	22.1	24.6	46.8	40.4	22.4	30.7	13.4	16.7	35.8	35.7	30.1	26.6	9.9	46.8	8.7	22.2
12	9.9	9.1	62.3	40.7	40.4	54.6	70.8	33.8	28.1	56.7	43.8	37.0	12.5	8.0	20.3	7.0	7.5	8.0	7.9	8.1	5.5	9.5	8.2	7.2	70.8	5.5	24.9
13	35.3	41.9	19.0	12.3	19.9	21.8	20.2	23.5	12.9	8.9	7.7	9.4	9.7	16.3	10.8	14.1	8.6	8.7	7.7	6.9	8.9	12.8	58.5	54.0	58.5	6.9	18.7
14	25.1	58.3	62.9	46.7	12.4	11.5	10.9	9.1	32.5	6.0	3.6	5.2	5.7	5.8	6.0	5.4	5.0	3.9	5.6	6.9	14.1	35.5	58.3	49.7	62.9	3.6	20.2
15	58.9	65.8	68.2	11.9	12.2	6.9	4.4	29.4	7.9	5.5	4.3	3.2	4.2	8.5	8.3	9.9	8.9	10.3	34.4	30.9	49.4	32.1	33.7	25.1	68.2	3.2	22.3
16	8.6	8.2	8.6	9.8	17.4	23.5	66.8	39.4	38.9	23.1	14.9	15.6	14.2	25.7	34.0	47.7	52.5	78.0	42.6	38.3	37.6	44.0	54.8	62.3	78.0	8.2	33.6
17	72.3	66.2	60.7	51.0	31.5	16.7	21.9	15.7	13.6	16.0	21.7	26.3	55.3	25.5	15.7	12.6	46.6	60.6	34.8	19.5	43.0	35.6	23.0	18.0	72.3	12.6	33.5
18	13.6	6.0	20.2	8.4	16.2	8.1	8.1	7.7	29.9	10.4	9.7	9.8	8.9	11.8	11.3	12.9	11.4	10.6	13.0	7.7	9.2	55.8	39.0	35.9	55.8	6.0	15.6
19	67.0	53.9	42.2	59.0	11.0	20.2	11.1	19.1	9.8	8.5	25.6	25.2	13.7	85.0	75.4	67.7	38.3	70.7	22.1	11.9	16.6	11.2	7.9	9.1	85.0	7.9	32.6
20	24.1	7.3	11.9	11.7	11.2	14.0	14.7	16.0	13.4	23.3	53.1	55.7	14.4	16.6	39.9	47.7	54.1	47.6	45.9	60.3	41.4	59.6	50.0	43.0	60.3	7.3	32.4
21	54.9	79.6	69.9	56.6	47.9	12.6	11.3	12.8	17.3	14.3	18.7	19.5	25.8	26.9	26.5	47.2	63.4	43.8	46.2	60.0	65.1	69.2	46.1	37.4	79.6	11.3	40.5
22	16.6	18.6	41.7	65.3	62.2	27.3	56.4	29.8	11.8	14.7	10.6	17.2	9.6	17.0	18.2	38.5	46.6	23.2	20.3	23.8	43.7	63.0	50.4	45.8	65.3	9.6	32.2
23	40.9	63.7	47.2	31.1	29.3	36.0	44.4	36.0	36.4	41.8	46.5	61.8	54.3	63.9	58.8	78.2	68.7	56.9	66.2	33.6	15.1	51.6	52.4	68.4	78.2	15.1	49.3
24	68.6	50.0	49.6	55.4	10.6	9.1	10.1	12.3	9.7	10.0	9.7	9.5	9.6	58.5	32.4	20.5	28.7	43.5	46.0	27.0	54.2	38.6	10.4	17.8	68.6	9.1	28.8
25	16.7	9.8	9.0	22.0	17.8	25.6	44.5	41.8	54.7	28.6	32.0	53.9	52.9	17.3	71.9	25.9	41.9	50.4	35.2	27.7	48.5	20.0	21.0	14.1	71.9	9.0	32.6
26	10.4	9.8	11.7	8.7	8.7	10.5	8.8	4.9	11.6	16.8	5.7	5.7	5.0	4.1	4.4	8.5	9.3	7.8	23.7	33.6	43.3	75.5	82.2	11.8	82.2	4.1	17.6
27	19.2	22.8	14.8	7.1	8.1	10.7	6.1	17.4	5.8	6.6	5.4	7.5	4.3	5.9	8.0	7.2	5.9	6.9	9.8	10.5	7.3	57.6	45.9	45.9	57.6	4.3	14.4
28	67.4	75.4	10.1	56.0	8.6	49.6	22.2	12.8	11.5	19.7	23.5	23.3	6.7	32.7	15.2	40.6	30.7	29.9	12.9	9.8	18.8	22.8	41.9	25.4	75.4	6.7	27.8
29	46.2	7.6	46.8	30.9	33.6	7.0	5.6	15.0	18.5	5.3	5.9	4.0	4.2	4.7	6.9	3.3	6.1	8.3	14.0	39.1	15.8	12.0	12.8	13.1	46.8	3.3	15.3
30	13.3	15.2	14.7	14.4	16.3	20.1	30.3	37.7	28.5	25.2	8.3	12.9	10.7	25.3	23.6	27.4	37.9	27.0	46.9	11.5	16.3	9.5	10.4	12.5	46.9	8.3	20.7
Max.	**72.3**	**79.6**	**69.9**	**65.3**	**62.2**	**57.7**	**70.8**	**41.8**	**54.7**	**56.7**	**53.1**	**61.8**	**55.3**	**85.0**	**75.4**	**78.2**	**68.7**	**78.0**	**66.2**	**60.3**	**65.1**	**75.5**	**82.2**	**68.4**	**85.0**		
Min.	**7.2**	**6.0**	**8.6**	**7.1**	**8.1**	**6.9**	**4.4**	**4.9**	**4.3**	**3.9**	**3.6**	**3.2**	**4.2**	**4.1**	**4.4**	**3.3**	**4.6**	**3.9**	**5.6**	**6.9**	**5.5**	**9.5**	**7.9**	**7.2**		**3.2**	
Avg.	**28.0**	**29.0**	**31.0**	**27.5**	**21.2**	**19.6**	**22.6**	**19.5**	**18.4**	**17.3**	**17.1**	**18.8**	**16.5**	**24.8**	**26.3**	**29.3**	**29.7**	**26.9**	**28.1**	**27.5**	**28.9**	**35.6**	**32.5**	**26.8**			**25.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.5	16.0	17.1	17.3	7.3	10.3	18.3	18.9	10.8	16.9	13.2	8.7	16.3	12.0	14.6	17.4	13.0	25.7	25.0	14.4	13.3	11.1	16.6	23.9	25.7	7.3	15.4
2	41.1	21.2	18.5	25.6	14.6	15.2	15.6	24.7	16.1	7.0	4.8	3.9	4.1	7.7	8.3	6.6	6.4	5.6	12.0	8.4	42.1	43.7	51.0	11.3	51.0	3.9	17.3
3	30.8	43.0	22.9	10.0	27.4	25.5	39.4	17.4	14.7	12.0	5.9	4.2	4.4	4.5	7.5	8.4	7.0	9.8	15.7	15.8	16.1	11.2	20.0	19.0	43.0	4.2	16.4
4	17.9	53.4	17.0	11.3	12.9	11.2	6.8	3.3	39.2	14.1	6.4	12.8	7.6	7.8	10.6	5.9	7.7	9.7	7.9	5.3	13.1	43.1	33.0	22.8	53.4	3.3	15.9
5	10.1	35.9	35.1	41.5	45.3	34.7	11.8	29.6	37.0	8.2	6.2	6.5	11.4	33.0	46.2	21.4	26.1	77.1	19.3	22.6	25.6	13.9	14.2	33.9	77.1	6.2	26.9
6	21.9	16.8	35.5	34.9	12.8	8.7	11.0	47.7	12.2	35.5	9.7	7.7	9.3	6.2	8.2	8.0	17.0	8.3	12.5	18.1	52.6	23.1	17.3	36.3	52.6	6.2	19.6
7	38.5	29.3	10.5	11.9	58.4	12.0	31.6	21.5	7.8	15.2	9.3	7.7	11.8	31.9	9.5	27.7	16.2	10.9	19.2	24.4	10.2	14.3	19.6	17.2	58.4	7.7	19.4
8	44.4	13.6	47.0	54.9	55.8	10.4	9.4	65.6	53.2	8.1	5.7	40.5	46.4	22.2	39.9	27.1	19.6	24.0	11.6	35.9	22.2	30.9	33.7	15.3	65.6	5.7	30.7
9	23.5	42.4	9.2	10.5	6.3	7.7	8.2	5.6	6.1	4.7	4.2	20.9	6.2	8.1	41.8	10.1	10.4	10.5	27.8	54.3	9.6	8.5	10.8	11.5	54.3	4.2	15.0
10	14.5	57.4	60.3	12.2	36.8	48.5	13.5	12.1	25.4	25.0	12.0	10.1	6.9	6.8	26.9	12.3	11.2	11.0	10.6	33.0	36.9	43.5	49.2	46.9	60.3	6.8	25.9
11	21.5	28.0	17.6	17.8	47.0	19.9	12.3	25.1	13.5	15.6	8.2	10.1	8.4	7.5	5.3	6.7	10.5	8.6	5.7	6.7	8.6	18.7	24.8	36.6	47.0	5.3	16.0
12	13.6	34.6	15.6	67.1	56.3	22.3	13.3	30.3	19.7	14.8	8.6	8.0	58.8	11.1	8.1	4.7	3.8	6.1	9.0	10.6	15.9	23.4	47.2	40.7	67.1	3.8	22.6
13	21.5	15.2	50.7	22.9	43.3	12.1	11.1	9.0	13.4	16.3	19.7	22.4	59.1	15.7	6.9	15.6	10.6	6.4	8.6	7.5	5.7	11.0	24.0	61.2	61.2	5.7	20.4
14	7.3	8.0	7.7	7.3	5.9	6.6	7.4	7.3	8.5	7.8	18.2	16.6	26.7	21.3	28.8	25.2	24.2	29.8	20.0	6.9	12.8	15.3	29.9	53.6	53.6	5.9	16.8
15	15.6	13.3	10.2	11.3	50.9	10.2	22.8	26.4	9.6	20.7	10.9	10.2	7.2	6.7	6.5	6.0	7.2	58.9	65.6	35.4	39.8	23.6	15.4	14.4	65.6	6.0	20.8
16	13.8	13.2	13.6	12.0	13.8	13.5	14.0	21.4	9.9	8.9	11.0	12.7	11.5	30.0	45.5	40.4	14.3	15.6	15.7	16.0	24.4	31.3	34.9	27.9	45.5	8.9	19.4
17	15.0	19.4	26.8	22.6	15.5	18.5	13.8	10.9	13.5	24.8	12.2	11.4	17.4	30.6	31.0	24.8	38.5	42.8	43.0	28.2	27.6	39.3	17.2	21.0	43.0	10.9	23.6
18	47.9	30.8	24.4	44.0	23.8	47.4	47.7	6.5	27.8	26.6	7.9	8.7	25.5	13.6	21.8	46.1	13.1	13.0	10.9	10.6	27.8	18.2	10.9	11.7	47.9	6.5	23.6
19	15.2	44.2	46.1	45.2	52.2	37.9	75.4	42.1	18.6	12.3	5.8	5.4	6.8	6.8	6.5	12.2	4.3	25.6	9.4	19.2	28.5	38.5	26.1	26.5	75.4	4.3	25.4
20	17.5	15.4	22.8	50.2	78.6	32.9	30.0	12.4	8.3	15.2	11.9	9.4	9.3	8.5	13.8	11.1	11.2	15.6	11.6	15.2	40.7	67.7	36.4	25.4	78.6	8.3	23.8
21	17.3	16.1	12.1	15.6	17.6	15.7	13.1	13.7	13.0	14.4	14.4	27.5	28.2	25.2	37.3	33.9	9.8	21.3	14.0	12.6	13.3	13.0	12.9	15.2	37.3	9.8	17.8
22	40.9	20.3	18.8	17.3	16.3	27.4	32.8	24.8	60.3	32.4	14.4	12.2	50.2	21.6	52.5	47.3	32.0	17.2	26.8	48.3	59.1	39.2	54.0	17.3	60.3	12.2	32.6
23	35.0	6.0	32.5	31.8	50.4	53.2	43.7	40.6	68.4	52.2	50.0	68.2	47.7	44.0	70.4	68.6	50.4	57.5	51.6	39.1	30.8	42.3	59.4	39.5	70.4	6.0	47.2
24	35.7	50.4	51.6	57.0	12.1	10.0	8.8	8.8	11.4	10.4	10.1	10.7	9.7	9.1	10.5	10.9	10.1	10.7	10.5	9.4	9.4	10.0	9.8	10.1	57.0	8.8	16.5
25	9.3	9.4	9.2	8.9	9.8	9.6	9.4	9.8	9.4	10.0	9.1	8.7	9.4	9.1	9.8	9.7	9.3	9.9	9.7	9.3	10.1	9.3	10.9	38.2	38.2	8.7	10.7
26	19.8	56.1	10.9	53.2	63.1	30.6	19.2	14.9	9.0	23.9	19.5	7.6	8.8	10.1	11.5	10.3	9.8	10.6	8.5	14.3	28.0	16.1	18.0	56.9	63.1	7.6	22.1
27	25.2	13.4	7.6	15.5	9.0	73.4	8.5	44.9	9.3	13.3	6.7	8.7	8.9	10.2	5.1	4.8	4.8	4.5	9.3	13.2	50.9	12.7	49.6	53.2	73.4	4.5	19.3
28	84.8	32.2	29.2	72.2	23.8	14.4	18.9	18.3	18.8	32.6	36.5	19.2	27.4	28.1	51.4	73.1	25.7	13.6	13.2	12.9	11.4	14.3	13.7	16.6	84.8	11.4	29.3
29	14.4	13.1	13.3	13.4	15.2	27.9	22.0	24.4	7.7	8.6	8.7	9.1	16.1	23.3	17.9	24.7	79.7	35.9	12.8	12.7	11.9	12.5	11.9	15.1	79.7	7.7	18.8
30	15.0	29.0	25.9	30.7	28.5	73.0	53.7	7.0	6.4	7.1	4.6	10.6	8.8	10.8	6.4	8.0	5.7	9.6	7.7	14.3	16.1	45.9	8.9	9.0	73.0	4.6	18.4
31	10.3	8.4	11.2	11.0	13.2	11.8	27.2	14.0	36.1	16.4	46.4	31.4	22.5	44.3	22.7	32.9	59.7	16.9	38.1	52.8	38.0	43.6	35.2	41.2	59.7	8.4	28.6
Max.	**84.8**	**57.4**	**60.3**	**72.2**	**78.6**	**73.4**	**75.4**	**65.6**	**68.4**	**52.2**	**50.0**	**68.2**	**59.1**	**44.3**	**70.4**	**73.1**	**79.7**	**77.1**	**65.6**	**54.3**	**59.1**	**67.7**	**59.4**	**61.2**	**84.8**		
Min.	**7.3**	**6.0**	**7.6**	**7.3**	**5.9**	**6.6**	**6.8**	**3.3**	**6.1**	**4.7**	**4.2**	**3.9**	**4.1**	**4.5**	**5.1**	**4.7**	**3.8**	**4.5**	**5.7**	**5.3**	**5.7**	**8.5**	**8.9**	**9.0**		**3.3**	
Avg.	**24.2**	**26.0**	**23.6**	**27.6**	**29.8**	**24.3**	**21.6**	**21.3**	**19.8**	**17.1**	**13.3**	**14.6**	**19.1**	**17.0**	**22.0**	**21.3**	**18.4**	**20.1**	**18.2**	**20.2**	**24.3**	**25.5**	**26.3**	**28.0**			**21.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (Climatronics)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	29.4	27.3	55.1	47.9	39.2	36.8	31.2	25.1	57.1	68.0	67.6	72.1	63.4	70.3	65.7	49.8	52.7	63.1	60.2	71.6	46.3	33.2	51.2	50.4	72.1	25.1	51.4
2	69.6	67.5	59.8	53.2	61.4	50.1	22.9	26.9	41.3	32.6	23.8	33.3	48.7	27.9	21.5	23.7	28.9	22.0	20.1	20.7	19.9	50.9	30.1	25.7	69.6	19.9	36.8
3	25.7	39.3	60.8	13.3	20.8	18.0	20.7	28.4	11.9	19.1	16.2	25.9	21.7	52.3	30.4	33.9	49.6	52.4	39.1	32.1	36.7	33.9	27.1	60.8	60.8	11.9	32.1
4	36.0	32.0	31.8	45.8	40.2	32.3	29.8	45.2	25.3	35.3	37.6	24.7	30.1	26.3	28.4	37.1	28.0	19.5	29.4	20.7	35.1	28.0	44.6	31.4	45.8	19.5	32.3
5	27.6	33.6	38.5	38.4	47.8	52.1	37.0	15.5	12.7	4.4	22.9	46.7	46.6	14.2	29.4	14.6	17.9	19.3	15.4	17.3	15.3	29.3	65.2	77.0	77.0	4.4	30.8
6	62.9	19.2	31.3	20.4	39.2	38.1	14.3	10.2	11.7	16.4	20.3	23.1	20.6	33.5	56.0	43.3	40.9	38.8	55.9	39.6	48.6	53.4	52.4	38.7	62.9	10.2	34.5
7	55.0	64.0	24.5	26.4	18.7	17.3	26.1	20.7	43.0	60.7	33.7	40.4	40.1	24.2	30.3	38.0	32.0	22.2	39.9	72.9	48.4	21.5	23.3	20.3	72.9	17.3	35.1
8	34.4	49.8	17.0	21.3	12.0	12.3	10.9	12.9	11.1	16.8	22.9	26.7	53.3	66.8	32.4	30.2	19.3	17.1	13.5	28.0	73.1	65.9	36.8	24.2	73.1	10.9	29.5
9	27.0	19.6	10.2	11.5	10.1	15.9	29.2	6.1	20.4	7.7	5.5	5.1	5.2	5.4	5.9	5.3	6.0	6.0	5.5	16.4	39.2	37.2	18.9	15.3	39.2	5.1	13.9
10	34.0	58.2	43.4	21.2	25.7	21.5	16.5	16.4	9.9	6.1	6.9	9.0	10.2	9.1	6.6	5.5	4.9	7.1	7.4	16.0	19.2	13.4	33.7	33.0	58.2	4.9	18.1
11	28.7	34.0	15.6	68.5	45.2	16.3	18.8	7.0	7.3	5.2	5.1	4.9	5.6	5.1	5.4	4.3	4.5	6.9	19.1	44.6	80.6	47.0	60.6	30.5	80.6	4.3	23.8
12	57.0	57.6	36.7	62.1	51.0	76.4	64.6	30.6	50.5	43.0	52.4	41.2	48.0	45.8	37.9	36.7	23.5	14.3	19.9	42.4	44.6	64.4	26.0	41.3	76.4	14.3	44.5
13	53.6	39.5	42.4	24.8	20.6	36.0	38.0	33.5	61.3	12.1	5.9	5.3	3.2	5.1	6.6	6.0	5.6	11.5	55.9	43.2	49.3	52.8	65.0	50.7	65.0	3.2	30.3
14	73.7	67.8	57.4	75.2	62.3	48.6	72.7	68.7	64.7	54.6	62.9	62.6	46.7	29.0	19.0	18.5	13.2	13.0	17.5	13.7	15.7	20.6	18.9	45.9	75.2	13.0	43.5
15	67.1	45.2	53.9	32.5	60.1	28.6	24.6	13.0	35.2	25.2	12.3	9.3	7.7	12.5	22.7	8.0	5.2	8.3	9.9	33.2	29.2	18.1	41.6	10.8	67.1	5.2	25.6
16	22.8	47.4	10.2	7.9	46.7	8.4	9.1	10.8	12.2	9.9	9.1	28.2	22.3	8.4	5.3	6.3	5.7	7.6	22.7	10.8	14.4	27.8	15.0	64.9	64.9	5.3	18.1
17	50.4	44.0	18.1	10.9	11.2	58.7	22.9	30.0	9.3	61.3	53.9	48.1	42.6	43.4	40.8	23.7	24.3	24.2	22.6	35.2	27.5	15.8	13.3	16.7	61.3	9.3	31.2
18	13.2	13.3	16.5	14.9	13.6	12.0	11.9	9.5	11.1	8.9	9.4	9.8	8.7	9.0	9.7	9.1	10.9	11.0	9.2	8.9	10.3	9.5	8.9	9.7	16.5	8.7	10.8
19	10.0	10.8	10.9	9.6	9.8	10.2	10.9	10.7	10.5	10.0	10.7	10.4	10.4	10.9	11.2	12.1	11.3	10.3	10.9	10.6	46.6	60.3	37.9	78.1	78.1	9.6	18.1
20	60.2	30.6	34.0	34.1	25.0	13.4	36.6	49.7	49.4	45.6	36.3	52.7	54.7	33.9	33.4	17.4	26.8	41.2	61.0	57.3	61.0	55.7	45.6	41.7	61.0	13.4	41.5
21	39.7	29.9	19.9	21.3	15.6	16.4	12.9	11.9	20.3	13.6	17.3	13.9	16.1	44.9	65.5	46.8	43.7	51.4	77.8	66.7	62.5	48.1	63.5	79.8	79.8	11.9	37.5
22	62.7	68.7	36.3	39.9	35.1	48.2	65.9	64.7	73.1	75.7	67.7	67.8	53.5	62.1	59.1	45.7	56.5	37.8	43.7	59.7	9.7	23.3	40.8	26.4	75.7	9.7	51.0
23	9.9	8.6	7.4	7.3	7.3	6.3	7.9	13.2	54.0	17.8	10.8	39.6	41.0	52.1	53.9	52.8	42.1	22.8	22.7	47.0	28.2	37.2	70.6	42.1	70.6	6.3	29.3
24	26.5	26.0	16.9	13.9	36.1	54.7	54.2	10.5	6.0	7.6	27.9	9.5	10.7	8.6	5.7	6.1	8.9	42.1	36.0	30.4	39.7	46.4	22.0	30.4	54.7	5.7	24.0
25	14.0	6.9	34.0	52.1	19.0	20.9	13.0	19.2	31.0	19.6	11.4	8.2	9.8	6.7	6.8	6.8	5.6	9.5	7.6	10.2	11.0	11.6	16.7	30.7	52.1	5.6	15.9
26	9.4	6.4	9.2	30.3	22.9	43.1	30.7	25.9	33.4	29.3	10.1	10.7	23.1	18.6	21.2	8.6	9.4	42.3	45.8	34.7	9.7	9.5	9.6	10.5	45.8	6.4	21.0
27	10.9	8.9	9.6	9.0	7.9	9.9	11.8	8.7	7.7	9.1	10.2	10.7	10.1	11.3	10.8	11.7	11.5	9.8	9.8	9.1	9.3	14.0	11.2	11.4	14.0	7.7	10.2
28	9.9	15.1	16.0	14.9	14.8	13.3	50.9	64.7	38.1	44.3	47.6	7.1	5.2	6.4	7.1	5.6	4.2	9.4	29.1	51.1	40.8	35.0	21.5	6.4	64.7	4.2	23.3
29	6.0	6.9	23.8	8.2	14.6	11.0	6.4																		23.8	6.0	11.0
30																52.1	52.0								52.1	52.0	52.0
31						90.4	79.6	66.8	26.3	45.1	11.9	11.5													90.4	11.5	47.4
Max.	**73.7**	**68.7**	**60.8**	**75.2**	**62.3**	**90.4**	**79.6**	**68.7**	**73.1**	**75.7**	**67.7**	**72.1**	**63.4**	**70.3**	**65.7**	**52.8**	**56.5**	**63.1**	**77.8**	**72.9**	**80.6**	**65.9**	**70.6**	**79.8**	**90.4**		
Min.	**6.0**	**6.4**	**7.4**	**7.3**	**7.3**	**6.3**	**6.4**	**6.1**	**6.0**	**4.4**	**5.1**	**4.9**	**3.2**	**5.1**	**5.3**	**4.3**	**4.2**	**6.0**	**5.5**	**8.9**	**9.3**	**9.5**	**8.9**	**6.4**		**3.2**	
Avg.	**35.4**	**33.7**	**29.0**	**28.9**	**28.8**	**30.6**	**29.4**	**26.1**	**29.2**	**27.7**	**25.2**	**26.2**	**27.1**	**26.6**	**26.0**	**22.7**	**22.2**	**22.9**	**28.8**	**33.7**	**34.7**	**34.4**	**34.7**	**35.9**			**29.1**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	11.5	21.2	29.9	29.2	78.1	42.4	27.4	82.7	18.8	5.4	55.6	8.1	11.1	6.7	8.2	4.5	5.8	4.9	8.1	11.6	33.5	9.8	21.0	36.0	82.7	4.5	23.8
2	11.7	14.3	25.7	34.2	25.2	16.1	42.7	46.1	29.5	24.9	30.8	49.6	23.4	30.3	13.0	9.9	12.7	14.6	21.9	40.6	24.0	14.3	19.7	22.8	49.6	9.9	24.9
3	24.4	42.1	72.6	17.6	10.6	7.4	8.4	10.1	5.2	8.2	10.6	13.4	14.0	17.6	31.8	49.1	41.1	22.0	40.7	19.5	52.9	24.8	63.0	52.6	72.6	5.2	27.5
4	13.6	41.9	68.7	70.6	39.3	46.7	64.4	84.4	79.4	97.8	48.1	68.3	75.9	68.8	71.6	74.6	42.6	63.3	37.3	38.6	53.1	28.2	22.4	17.4	97.8	13.6	54.9
5	16.6	15.7	15.6	15.9	14.8	16.1	13.0	12.5	11.9	12.2	11.0	9.6	13.4	16.5	18.8	58.0	69.7	24.6	17.8	36.1	62.8	54.8	80.2	85.0	85.0	9.6	29.3
6	60.2	20.0	61.0	66.5	42.3	57.0	51.7	50.7	49.9	26.7	25.9	23.8	15.7	15.3	17.4	49.4	47.7	94.9	25.8	27.8	23.7	14.1	12.8	11.7	94.9	11.7	37.2
7	12.6	21.9	13.8	25.3	37.5	46.1	26.6	27.9	76.5	41.9	62.3	44.5	40.2	40.5	6.0	13.1	29.8	26.6	74.9	65.9	53.1	65.8	73.5	64.2	76.5	6.0	41.3
8	11.8	15.3	16.6	19.3	23.1	18.3	34.2	21.3	27.2	14.1	12.7	13.9	18.9	21.9	12.0	11.2	8.5	8.4	10.3	9.6	10.0	11.8	10.0	8.1	34.2	8.1	15.4
9	8.4	9.0	9.4	8.9	8.6	9.5	10.6	10.2	9.1	9.4	10.0	10.5	8.7	8.3	9.0	19.5	22.4	56.3	100.0	10.3	10.0	11.7	8.2	38.5	100.0	8.2	17.4
10	10.0	78.9	73.3	28.7	79.8	33.5	65.3	10.9	16.9	27.6	71.7	26.7	9.7	8.0	12.7	11.7	32.1	36.2	29.1	23.8	22.6	26.4	35.4	25.5	79.8	8.0	33.2
11	17.3	24.1	19.6	15.8	19.6	45.3	60.0	66.4	72.3	56.3	43.7	47.4	60.9	68.2	60.3	45.9	81.4	82.8	77.7	17.4	18.0	17.6	16.4	17.8	82.8	15.8	43.8
12	17.5	18.2	18.4	17.6	18.5	17.2	16.8	17.4	14.9	15.5	13.2	22.5	35.4	9.7	9.5	8.0	75.5	17.0	12.1	13.3	61.5	64.2	42.3	39.0	75.5	8.0	24.8
13	92.9	71.7	62.2	43.9	23.1	14.1	12.4	12.1	9.7	9.6	11.8	13.6	13.0	37.1	39.5	65.2	96.4	20.6	24.3	43.2	67.7	55.3	77.2	98.3	98.3	9.6	42.3
14	22.2	9.6	11.4	28.7	11.7	10.8	8.2	6.8	6.6	6.5	8.9	7.6	5.4	69.6	7.3	13.7	7.2	6.6	7.6	30.9	72.9	71.7	56.8	74.1	74.1	5.4	23.5
15	84.8	77.8	49.8	46.7	51.4	46.5	43.0	56.9	62.7	56.2	30.7	33.2	61.0	86.6	74.6	70.7	67.3	79.3	68.9	43.3	52.7	74.2	81.5	70.4	86.6	30.7	61.3
16	47.7	43.1	47.0	73.0	59.6	71.2	62.7	66.0	38.9	14.6	35.1	33.8	43.5	57.3	67.6	75.8	80.2	34.3	32.7	66.0	51.3	30.0	72.5	30.3	80.2	14.6	51.4
17	64.7	37.0	64.3	48.8	68.9	50.7	48.6	93.6	57.1	25.7	59.3	58.7	64.2	68.5	88.3	18.6	12.2	40.2	38.8	21.4	47.4	59.8	7.1	13.1	93.6	7.1	48.2
18	11.3	10.4	14.4	10.8	8.0	19.3	29.5	33.4	47.8	18.4	44.3	70.0	64.5	82.7	94.5	87.1	72.1	34.1	19.7	17.8	14.4	16.5	14.3	14.7	94.5	8.0	35.4
19	49.4	12.1	49.8	72.4	13.4	28.2	15.0	18.7	31.0	23.9	68.6	52.5	7.9	17.6	83.4	25.5	29.4		17.9	28.2	20.6	20.8	24.9	12.4	83.4	7.9	31.5
20	12.7	14.2	15.7	14.3	17.8	21.8	18.3	26.2	14.9	58.4	59.1	78.0	89.8	11.1	17.7	20.4	51.1	20.9	13.9	22.3	53.9	26.9	12.8	26.2	89.8	11.1	29.9
21	79.5	46.5	54.8	76.9	55.7	91.8	50.4	49.1	50.2	46.5	47.4	50.3	46.3	56.1	34.4	23.7	30.4	46.0	62.3	84.9	90.6	54.3	71.5	34.0	91.8	23.7	55.6
22	20.6	44.6	24.0	15.9	13.3	19.9	10.4	7.5	9.5	8.7	5.3	10.9	18.9	15.0	16.5	15.7	13.1	12.7	14.4	15.7	16.4	14.7	15.9	14.8	44.6	5.3	15.6
23	13.1	14.8	17.5	11.3	10.7	10.2	12.8	11.5	10.2	13.4	13.8	15.2	12.4	13.4	82.1	6.0	7.8	7.6	7.8	11.6	10.8	51.5	19.7	55.9	82.1	6.0	18.4
24	20.1	78.5	33.4	89.3	68.1	17.0	29.0	16.9	46.8	87.2	89.9	57.3	43.5	41.8	78.7	12.0	17.4	60.6	72.5	81.9	19.7	20.7	10.3	15.4	89.9	10.3	46.2
25	72.9	29.1	44.0	62.4	53.5	26.9	24.9	17.5	94.8	37.7	77.7	60.0	30.2	16.6	16.6	34.3	35.3	33.4	17.8	17.4	19.5	16.1	40.0	87.9	94.8	16.1	40.3
26	43.4	43.3	14.0	17.4	23.0	22.5	26.7	28.9	37.9	21.1	74.9	31.6	55.8	52.1	31.6	40.8	68.1	14.3	24.2	26.4	32.6	85.8	76.7	79.6	85.8	14.0	40.5
27	91.1	101.8	75.1	38.9	22.1	23.2	32.8	42.4	58.6	71.1	20.0	67.4	41.8	13.2	46.0	13.5	14.2	26.5	43.8	74.4	70.7	43.2	19.0	22.4	101.8	13.2	44.7
28	42.7	50.7	32.6	27.5	15.6	13.9	13.4	14.4	15.6	11.5	10.9	10.3	10.6	11.2	11.5	12.8	18.6	19.4	20.7	14.2	10.5	15.2	51.5	81.8	81.8	10.3	22.4
29	17.3	27.4	15.4	14.4	16.5	14.3	18.4	12.7	15.0	15.3	33.5	8.5	67.0	36.8	16.2	23.4	52.0	35.0	51.2	40.1	91.6	49.1	75.6	37.5	91.6	8.5	32.7
30	39.2	13.7	18.5	88.9	34.9	69.8	66.0	27.6	17.5	17.5	82.5	17.9	5.5	7.9	7.0	7.5	44.7	71.0	18.0	15.8	9.5	42.0	18.0	58.3	88.9	5.5	33.3
Max.	**92.9**	**101.8**	**75.1**	**89.3**	**79.8**	**91.8**	**66.0**	**93.6**	**94.8**	**97.8**	**89.9**	**78.0**	**89.8**	**86.6**	**94.5**	**87.1**	**96.4**	**94.9**	**100.0**	**84.9**	**91.6**	**85.8**	**81.5**	**98.3**	**101.8**		
Min.	**8.4**	**9.0**	**9.4**	**8.9**	**8.0**	**7.4**	**8.2**	**6.8**	**5.2**	**5.4**	**5.3**	**7.6**	**5.4**	**6.7**	**6.0**	**4.5**	**5.8**	**4.9**	**7.6**	**9.6**	**9.5**	**9.8**	**7.1**	**8.1**		**4.5**	
Avg.	**34.7**	**35.0**	**35.6**	**37.7**	**32.2**	**30.9**	**31.4**	**32.8**	**34.6**	**29.4**	**39.0**	**33.8**	**33.6**	**33.6**	**36.1**	**30.7**	**39.6**	**35.0**	**33.7**	**32.3**	**39.3**	**36.4**	**38.3**	**41.5**			**34.9**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	49.0	61.4	14.7	15.3	92.7	17.4	20.5	32.9	47.7	63.5	62.2	40.2	21.8	27.9	72.1	32.6	54.0	62.4	47.8	65.9	52.9	60.6	60.6	39.6	92.7	14.7	46.5
2	31.6	34.8	38.8	37.1	68.8	35.8	25.4	49.1	25.2	35.6	33.2	30.7	24.3	25.3	31.2	40.1	51.7	33.9	27.9	47.7	43.0	43.4	31.2	31.8	68.8	24.3	36.6
3	23.9	19.9	47.8	53.2	48.8	53.4	53.4	30.4	40.7	38.2	32.2	25.7	25.5	50.5	41.0	25.5	54.0	42.3	58.3	57.2	43.6	28.6	24.7	34.3	58.3	19.9	39.7
4	33.5	25.1	21.0	8.4	8.8	23.7	22.4	17.4	15.9	68.2	73.3	21.6	17.3	15.7	15.0	15.3	16.3	13.9	16.4	16.7	16.4	14.4	12.6	8.5	73.3	8.4	21.6
5	10.1	12.1	9.9	7.7	7.9	9.4	10.9	9.7	8.2	6.2	6.1	7.1	5.2	8.9	9.8	60.5	86.9	86.4	59.0	87.0	18.8	35.9	47.0	67.2	87.0	5.2	28.2
6	77.3	39.4	58.9	38.6	51.9	50.5	53.8	73.7	38.8	42.7	88.4	78.7	73.7	57.1	68.6	38.5	37.5	50.0	41.8	41.0	31.9	81.8	70.4	30.9	88.4	30.9	54.8
7	25.1	26.7	21.1	14.6	13.9	13.5	13.4	12.9	17.0	14.5	13.5	18.4	29.1	66.5	74.7	46.0	76.0	82.5	51.2	71.2	23.8	17.7	14.9	16.0	82.5	12.9	32.3
8	29.8	16.1	13.5	14.0	13.4	13.1	16.9	15.7	13.6	15.4	32.6	35.3	35.6	15.7	14.3	21.9	28.4	30.3	21.0	16.7	13.5	15.4	35.7	29.5	35.7	13.1	21.1
9	25.5	18.0	20.1	11.1	10.9	9.6	9.0	9.3	15.7	9.9	7.7	7.8	13.0	21.3	14.8	60.5	37.0	38.6	46.6	33.9	28.1	37.5	67.0	48.7	67.0	7.7	25.1
10	95.7	91.3	72.7	73.1	44.0	36.6	40.0	42.6	28.4	20.4	27.8	34.9	70.3	72.2	74.3	50.2	56.4	33.4	28.2	42.0	70.7	66.3	65.6	33.9	95.7	20.4	53.0
11	69.9	18.2	44.0	26.7	13.3	14.4	7.2	6.7	10.1	10.1	10.4	13.0	10.6	10.9	10.6	16.1	14.9	14.5	13.0	10.2	11.9	11.4	10.5	11.1	69.9	6.7	16.2
12	14.9	12.6	10.3	11.1	14.0	12.2	10.4	9.9	9.0	16.8	19.4	18.6	11.1	29.4	40.5	90.3	55.0	97.3	16.7	73.6	22.2	8.0	11.1	9.8	97.3	8.0	26.0
13	14.4	14.0	16.7	36.5	11.1	11.8	16.5	15.2	17.1	14.5	16.8	20.6	15.5	15.4	14.8	14.1	14.3	15.5	14.8	38.0	76.6	85.0	50.1	80.7	85.0	11.1	26.7
14	83.5	97.8	34.7	34.4	97.1	73.5	69.7	51.6	49.5	33.1	25.0	20.1	18.7	25.7	26.1	23.7	21.6	16.4	16.3	28.4	41.5	38.1	19.3	65.6	97.8	16.3	42.2
15	39.1	11.7	16.3	15.1	24.5	16.5	10.9	7.0	6.5	7.3	8.8	8.9	10.2	9.2	9.3	14.0	10.3	12.5	15.7	11.1	13.8	9.6	12.6	10.6	39.1	6.5	13.0
16	14.2	14.2	18.9	13.3	14.1	12.3	9.3	9.9	10.5	11.0	13.4	18.4	18.3	18.7	56.0	18.5	52.3	30.1	43.0	33.5	71.1	8.7	34.9	82.2	82.2	8.7	26.1
17	27.9	40.5	38.6	32.6	35.7	58.3	71.0	17.8	34.2	29.8	18.1	81.1	15.3	12.6	19.4	37.4	26.1	14.9	10.6	27.8	28.6	31.5	21.8	25.0	81.1	10.6	31.5
18	28.5	19.8	9.0	17.8	13.9	26.8	36.0	29.2	41.4	46.6	33.5	17.7	14.8	14.9	14.4	15.1	14.3	15.7	14.2	15.5	13.7	16.9	13.5	15.3	46.6	9.0	20.8
19	15.4	13.7	14.5	14.3	16.2	13.6	13.7	16.1	15.2	14.9	15.9	14.9	14.5	21.7	15.3	18.1	42.8	16.8	18.9	14.2	14.2	11.9	25.8	21.5	42.8	11.9	17.3
20	20.1	17.8	15.3	8.8	13.2	8.8	7.3	6.6	6.0	5.9	4.2	3.9	7.3	14.3	17.3	15.5	12.4	13.4	14.2	11.8	12.4	12.0	14.0	13.8	20.1	3.9	11.5
21	16.5	13.2	12.6	14.0	11.6	12.3	12.7	12.0	11.4	11.3	10.2	11.0	11.1	9.2	8.3	10.4	13.6	13.0	12.9	13.8	12.7	7.0	52.3	30.3	52.3	7.0	14.3
22	20.6	71.3	26.2	8.4	13.0	8.5	12.1	13.4	8.0	12.5	11.4	14.4	14.8	13.1	11.0	10.3	15.9	24.2	39.1	57.2	18.8	24.4	14.5	12.2	71.3	8.0	19.8
23	74.9	13.9	19.1	63.3	27.1	32.6	42.1	68.1	67.9	29.0	18.2	67.1	38.5	80.7	73.7	74.8	69.8	60.9	31.6	17.0	18.7	21.9	28.9	33.0	80.7	13.9	44.7
24	50.8	58.1	66.7	79.7	51.0	22.1	72.1	17.5	77.0	54.5	13.5	8.5	10.5	8.7	8.0	6.3	7.1	8.5	9.3	6.8	7.3	12.3	10.7	10.7	79.7	6.3	28.2
25	11.8	69.5	98.7	22.8	18.4	16.5	16.7	16.6	18.5	17.9	18.0	18.8	18.5	19.1	18.8	18.1	19.2	20.5	16.4	13.4	18.2	16.7	12.8	12.4	98.7	11.8	22.8
26	9.9	9.5	7.4	7.0	8.9	7.9	8.0	12.2	11.2	5.5	6.0	7.7	7.9	7.1	7.4	8.1	10.8	10.0	7.1	8.8	12.9	16.2	16.1	17.3	17.3	5.5	9.6
27	15.8	23.3	15.3	15.7	14.8	15.3	13.5	15.7	11.9	15.3	13.6	14.9	15.2	15.2	18.2	19.4	14.3	12.3	19.0	12.5	13.2	17.3	14.3	9.3	23.3	9.3	15.2
28	13.9	10.3	8.4	7.5	13.9	24.1	19.4	15.5	16.7	18.9	22.7	14.9	7.1	7.6	12.2	10.8	11.5	21.9	15.3	12.6	14.9	15.0	14.8	15.5	24.1	7.1	14.4
29	16.4	17.7	16.9	17.3	19.7	16.7	16.3	16.2	13.5	15.1	13.0	13.5	12.8	13.1	13.0	12.7	13.4	15.0	14.0	14.7	18.0	16.6	13.6	13.9	19.7	12.7	15.1
30	14.2	15.2	11.6	11.3	10.8	9.8	10.5	11.0	11.7	11.2	12.7	55.5	28.2	79.0	94.5	86.2	18.3	17.9	27.5	22.1	23.8	21.4	34.1	21.8	94.5	9.8	27.5
31	22.7	15.6	64.4	61.5	37.1	12.5	17.5	20.7	26.4	19.3	15.8	22.5	32.8	25.5	44.3	30.7	79.1	10.2	13.6	17.1	14.3	11.0	12.2	18.1	79.1	10.2	26.9
Max.	**95.7**	**97.8**	**98.7**	**79.7**	**97.1**	**73.5**	**72.1**	**73.7**	**77.0**	**68.2**	**88.4**	**81.1**	**73.7**	**80.7**	**94.5**	**90.3**	**86.9**	**97.3**	**59.0**	**87.0**	**76.6**	**85.0**	**70.4**	**82.2**	**98.7**		
Min.	**9.9**	**9.5**	**7.4**	**7.0**	**7.9**	**7.9**	**7.2**	**6.6**	**6.0**	**5.5**	**4.2**	**3.9**	**5.2**	**7.1**	**7.4**	**6.3**	**7.1**	**8.5**	**7.1**	**6.8**	**7.3**	**7.0**	**10.5**	**8.5**		**3.9**	
Avg.	**32.2**	**29.8**	**28.5**	**25.6**	**27.1**	**22.2**	**24.5**	**22.0**	**23.4**	**23.1**	**22.5**	**24.7**	**21.0**	**26.2**	**30.6**	**30.4**	**33.4**	**30.2**	**25.2**	**30.3**	**26.5**	**26.3**	**28.0**	**28.1**			**26.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	16.0	15.6	15.1	11.5	11.9	11.5	10.2	10.3	10.5	12.0	9.9	9.5	10.0	9.2	10.5	39.8	37.9	63.0	19.9	60.1	65.6	70.9	57.6	28.4	70.9	9.2	25.7
2	20.5	27.4	26.9	21.1	27.6	26.0	22.8	26.8	21.4	27.3	34.2	29.3	31.5	34.5	33.8	45.7	33.5	45.1	50.9	76.9	25.3	21.4	12.8	13.9	76.9	12.8	30.7
3	17.0	14.6	12.9	14.3	24.1	26.8	25.5	24.4	30.0	17.6	17.0	20.5	26.3	30.4	20.6	49.4	74.2	34.2	24.4	14.7	10.8	5.6	12.0	14.8	74.2	5.6	23.4
4	11.6	13.8	24.1	67.0	40.8	21.5	16.6	17.2	17.1	16.5	16.4	21.1	18.9	20.5	20.4	23.5	16.5	19.3	28.0	16.1	13.9	14.4	16.3	31.6	67.0	11.6	21.8
5	22.1	25.3	85.1	64.5	55.7	17.7	17.3	13.5	25.9	12.0	13.1	8.0	10.3	8.4	8.6	11.9	13.2	9.6	11.1	11.9	14.7	11.7	14.6	14.8	85.1	8.0	20.9
6	16.1	13.9	14.3	14.2	14.6	12.1	11.4	13.1	11.4	11.4	13.0	13.3	12.9	12.5	14.9	14.6	13.3	12.7	12.1	14.1	16.7	17.1	14.8	17.1	17.1	11.4	13.8
7	16.9	15.9	13.3	11.5	15.4	21.5	24.0	16.5	32.6	66.9	83.2	50.1	39.4	76.5	49.4	35.7	99.0	38.6	33.5	57.5	99.8	28.7	42.9	93.3	99.8	11.5	44.2
8	20.0	11.2	15.2	23.9	31.8	18.8	44.8	17.0	15.2	16.2	19.6	18.4	19.9	35.1	72.7	38.3	47.1	59.6	81.9	55.6	94.5	59.3	66.4	81.8	94.5	11.2	40.2
9	70.0	70.5	61.2	11.6	13.1	11.7	9.0	7.7	7.9	9.6	9.9	6.3	8.6	7.1	8.7	8.4	10.7	17.9	11.3	19.5	22.6	8.7	12.0	16.9	70.5	6.3	18.4
10	15.6	12.0	15.8	8.0	7.7	9.1	8.8	7.2	13.1	26.7	8.8	21.2	14.9	34.7	71.4	28.6	39.2	27.2	47.9	38.6	23.4	17.0	17.9	19.5	71.4	7.2	22.3
11	26.4	35.9	38.4	35.1	29.9	19.3	18.5	12.1	10.8	9.9	11.0	11.6	18.2	9.1	17.3	16.0	31.9	38.6	10.3	9.0	16.2	37.2	13.8	15.1	38.6	9.0	20.5
12	14.3	17.9	16.1	16.6	26.8	58.8	24.8	36.1	13.6	14.4	15.8	18.3	44.5	41.9	37.8	17.6	13.9	9.7	8.9	9.1	10.6	9.6	6.9	6.8	58.8	6.8	20.5
13	10.2	12.8	14.5	15.3	16.3	14.4	14.0	14.9	14.0	11.8	10.3	11.7	13.3	16.6	17.9	17.9	12.9	12.3	13.9	11.3	14.2	17.0	11.2	13.3	17.9	10.2	13.8
14	10.5	11.6	41.9	45.8	13.2	58.7	52.3	59.7	44.4	27.8	17.6	13.3	8.8	9.9	10.8	13.1	11.0	11.8	9.5	12.0	15.5	11.2	9.4	14.4	59.7	8.8	22.3
15	7.6	11.4	13.4	9.1	19.2	47.7	16.2	16.1	17.6	45.4	28.6	17.8	11.8	10.9	11.9	17.4	14.9	19.5	35.8	42.1	27.1	33.8	42.9	37.7	47.7	7.6	23.2
16	41.2	13.1	13.5	13.5	13.7	14.3	15.2	14.4	14.1	14.4	13.5	14.1	14.3	13.6	14.9	15.4	15.1	13.8	14.7	14.2	16.0	17.3	15.2	15.2	41.2	13.1	15.6
17	15.7	20.6	14.4	13.5	13.2	14.6	14.8	15.2	15.4	17.0	15.5	21.6	16.3	14.6	15.0	13.7	13.9	14.9	13.2	13.6	14.2	12.5	14.5	13.9	21.6	12.5	15.1
18	14.1	14.4	14.9	19.6	18.9	16.7	22.6	16.9	26.3	22.3	45.0	19.1	17.8	30.2	43.1	48.7	37.2	13.4	8.2	19.1	8.1	6.9	7.5	26.2	48.7	6.9	21.5
19	27.1	17.6	19.7	13.0	11.1	5.9	3.8	6.4	4.9	8.3	7.6	6.7	12.1	10.6	13.3	13.4	11.9	12.1	11.6	13.6	10.1	12.0	11.9	12.4	27.1	3.8	11.5
20	12.9	11.5	14.3	17.2	12.3	12.0	12.5	12.5	12.1	15.2	16.3	18.5	19.6	18.2	17.0	17.8	15.0	13.6	13.4	13.0	12.7	13.8	13.7	12.3	19.6	11.5	14.5
21	12.0	14.3	14.6	15.2	56.3	60.4	46.5	34.0	50.2	61.2	67.3	52.9	68.9	76.7	64.2	86.6	67.3	50.6	65.6	68.7	33.9	59.2	44.2	47.7	86.6	12.0	50.8
22	56.2	81.8	14.7	13.5	14.3	13.0	17.5	18.6	23.1	22.0	23.7	19.2	19.3	20.8	16.3	15.1	16.0	18.3	18.4	18.6	18.3	16.5	16.3	13.6	81.8	13.0	21.9
23	16.1	16.3	16.4	15.1	13.3	49.0	19.6	15.4	20.3	25.0	34.2	36.3	50.0	84.0	83.0	64.1	47.1	36.6	56.4	91.1	31.7	62.6	77.9	59.1	91.1	13.3	42.5
24	26.3	21.9	16.4	13.3	25.8	26.0	21.7	16.1	13.5	9.2	15.3	20.8	19.2	16.0	18.4	29.5	18.4	16.7	14.9	15.9	15.6	19.0	19.3	15.8	29.5	9.2	18.6
25	17.5	18.4	14.2	16.3	14.6	12.1	11.3	13.2	14.8	12.9	14.8	14.1	14.4	13.1	11.8	12.1	11.6	10.1	12.7	10.5	10.8	10.1	10.6	9.9	18.4	9.9	13.0
26	11.5	10.9	12.4	11.2	11.7	10.1	10.6	9.8	9.5	9.8	16.9	21.3	9.2	6.3	6.0	12.5	12.8	15.0	69.1	45.6	62.9	69.8	55.8	38.6	69.8	6.0	22.9
27	67.1	41.5	56.5	65.3	49.3	36.2	16.2	17.6	16.9	16.0	15.8	16.2	17.4	12.5	12.5	14.9	14.1	13.9	13.6	13.6	12.4	12.9	12.1	11.5	67.1	11.5	24.0
28	11.9	10.0	11.6	10.6	9.8	10.4	9.6	7.7	8.9	8.0	19.0	16.3	5.9	5.6	5.7	16.7	28.8	14.5	9.6	10.0	13.1	14.6	13.2	12.3	28.8	5.6	11.8
29	13.2	12.5	9.1	10.8	14.6	12.6	16.0	19.2	15.4	15.6	15.8	14.1	16.4	17.0	17.5	16.6	15.6	15.3	14.4	14.3	14.6	13.9	13.8	15.2	19.2	9.1	14.7
30	16.5	16.4	15.8	17.0	15.4	16.7	15.1	14.4	16.6	15.6	16.2	15.6	15.0	19.1	16.0	18.9	15.0	15.3	16.5	16.5	15.9	20.1	13.4	17.4	20.1	13.4	16.3
Max.	**70.0**	**81.8**	**85.1**	**67.0**	**56.3**	**60.4**	**52.3**	**59.7**	**50.2**	**66.9**	**83.2**	**52.9**	**68.9**	**84.0**	**83.0**	**86.6**	**99.0**	**63.0**	**81.9**	**91.1**	**99.8**	**70.9**	**77.9**	**93.3**	**99.8**		
Min.	**7.6**	**10.0**	**9.1**	**8.0**	**7.7**	**5.9**	**3.8**	**6.4**	**4.9**	**8.0**	**7.6**	**6.3**	**5.9**	**5.6**	**5.7**	**8.4**	**10.7**	**9.6**	**8.2**	**9.0**	**8.1**	**5.6**	**6.9**	**6.8**		**3.8**	
Avg.	**21.8**	**21.0**	**22.2**	**21.1**	**21.4**	**22.9**	**19.0**	**17.5**	**18.3**	**19.9**	**21.5**	**19.2**	**20.2**	**23.9**	**25.4**	**25.8**	**27.0**	**23.1**	**25.1**	**27.6**	**25.4**	**24.2**	**23.0**	**24.7**			**22.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	15.3	22.0	18.0	16.7	57.1	17.6	20.0	21.9	37.7	30.6	63.7	80.2	34.8	9.1	7.2	20.0	88.8	40.3	13.5	17.5	7.5	25.2	36.7	13.0	88.8	7.2	29.8
2	12.6	15.1	11.8	40.4	77.0	18.5	19.4	17.9	69.1	90.7	80.1	27.6	26.0	69.9	53.2	21.5	13.4	12.9	10.4	14.1	11.1	11.1	11.4	11.1	90.7	10.4	31.1
3	10.7	10.4	13.7	14.6	11.0	12.4	11.3	10.4	10.5	11.8	12.0	11.0	9.7	8.5	7.7	11.0	7.5	7.5	11.4	9.8	11.7	11.6	11.1	8.8	14.6	7.5	10.7
4	8.4	9.4	9.4	8.6	10.5	11.1	9.9	10.8	13.1	10.2	9.8	8.7	14.5	10.2	8.9	13.5	12.2	13.3	11.4	12.3	11.2	12.1	14.6	13.4	14.6	8.4	11.1
5	9.9	9.2	9.6	14.9	14.2	18.9	10.3	7.5	7.9	5.8	8.1	6.4	10.6	13.0	14.0	12.1	17.8	21.2	17.1	13.7	14.1	13.9	16.5	21.7	21.7	5.8	12.8
6	18.9	29.8	28.8	31.8	39.2	81.7	67.8	83.3	85.1	85.0	63.7	44.7	58.6	46.7	26.9	28.3	13.5	10.7	9.2	9.6	56.0	93.1	63.4	84.7	93.1	9.2	48.4
7	34.5	84.7	60.0	23.9	33.2	57.4	7.2	10.8	17.5	45.6	41.1	59.1	35.0	28.2	29.7	16.1	16.7	16.6	17.4	18.6	18.8	19.3	18.7	18.8	84.7	7.2	30.4
8	15.5	12.2	9.8	6.1	7.7	8.3	9.0	13.9	21.1	24.3	34.7	48.9	32.4	36.2	38.5	73.0	83.4	33.8	78.6	25.9	67.5	68.6	35.6	18.6	83.4	6.1	33.5
9	29.6	32.2	40.8	71.1	63.1	11.0	7.8	6.7	18.2	34.1	39.9	19.7	19.4	16.2	17.2	14.5	17.8	33.6	57.1	24.9	19.8	15.2	16.5	13.0	71.1	6.7	26.6
10	14.5	12.7	11.2	12.2	12.0	13.6	14.9	13.3	12.9	11.0	10.5	9.8	11.2	11.1	12.6	13.3	11.8	10.2	8.4	9.4	9.1	7.4	20.5	41.4	41.4	7.4	13.1
11	10.6	22.5	45.5	23.4	85.5	23.6	60.1	43.8	36.6	29.4	69.7	38.1	35.6	58.7	77.3	82.3	77.0	13.3	19.6	45.8	26.6	37.3	21.8	15.3	85.5	10.6	41.6
12	14.7	17.1	9.4	12.2	12.6	10.8	14.1	12.3	9.4	11.2	11.3	11.0	13.5	13.9	11.4	10.4	10.5	12.1	9.8	16.7	6.6	5.9	10.0	32.1	32.1	5.9	12.5
13	103.1	23.2	8.6	13.1	60.2	30.9	10.0	12.0	10.3	9.2	9.4	9.1	7.6	9.2	8.4	9.5	9.8	10.3	9.3	28.1	20.7	7.5	10.3	12.1	103.1	7.5	18.4
14	26.0	49.4	16.8	32.7	68.2	34.0	21.3	19.4	18.6	15.0	14.5	15.7	14.2	14.4	16.0	15.5	18.4	50.3	19.9	22.9	25.2	31.5	27.8	27.3	68.2	14.2	25.6
15	89.3	55.3	58.7	31.0	59.6	75.1	77.0	49.1	65.5	47.6	26.3	33.9	30.1	38.8	27.4	29.1	22.9	19.9	28.8	50.1	43.2	26.5	72.2	22.0	89.3	19.9	45.0
16	55.8	21.5	53.8	78.8	46.6	55.7	29.5	22.2	18.4	16.4	15.3	15.0	14.7	13.5	14.7	13.9	14.4	14.4	14.5	14.8	16.7	21.5	16.0	15.5	78.8	13.5	25.6
17	19.9	14.9	13.6	14.2	14.4	14.2	13.9	14.5	15.4	15.3	14.6	14.4	16.0	38.2	43.4	61.1	20.8	29.5	37.1	31.4	28.9	29.5	26.4	11.7	61.1	11.7	23.1
18	56.7	10.1	21.9	18.5	32.8	20.0	10.7	12.3	17.2	13.3	8.6	9.0	8.4	11.1	13.1	16.2	21.4	37.9	54.6	38.3	20.7	17.2	21.2	24.2	56.7	8.4	21.5
19	31.7	19.8	15.5	15.6	17.2	17.7	14.9	16.0	26.7	15.7	21.0	17.7	15.3	15.7	14.6	15.1	17.3	13.5	13.8	13.4	19.5	33.4	21.3	60.1	60.1	13.4	20.1
20	27.3	53.2	17.6	8.4	4.7	7.8	11.3	11.6	11.4	12.4	10.8	14.9	14.8	12.8	13.5	14.5	11.3	10.5	12.7	10.1	10.3	9.1	11.5	9.5	53.2	4.7	13.8
21	13.4	14.0	13.9	15.5	18.5	11.9	18.0	12.0	13.7	15.0	12.7	13.9	14.8	8.1	9.9	14.1	10.9	11.0	11.4	9.7	8.0	11.0	11.1	12.4	18.5	8.0	12.7
22	15.3	15.9	13.8	17.6	17.2	17.1	15.4	17.3	17.3	15.6	12.6	14.6	15.2	13.9	13.7	14.1	14.0	14.3	13.7	21.1	15.0	16.4	18.5	27.9	27.9	12.6	16.1
23	15.0	12.9	29.6	17.2	29.2	40.3	79.5	60.8	34.1	43.1	58.0	60.3	69.4	62.1	49.8	43.1	71.3	38.8	49.0	47.8	98.8	74.6	50.4	25.7	98.8	12.9	48.4
24	83.8	81.6	64.6	45.7	25.8	14.8	33.5	18.0	10.2	12.5	10.3	26.5	52.8	23.3	42.4	13.5	21.3	48.1	16.8	10.7	14.9	17.3	22.7	52.9	83.8	10.2	31.9
25	59.8	67.5	75.9	55.3	33.6	34.5	51.4	54.8	58.2	66.1	79.7	42.6	33.6	38.9	32.6	78.2	54.9	58.6	54.0	59.8	55.1	73.7	24.4	39.6	79.7	24.4	53.4
26	43.2	34.8	29.3	9.8	13.0	10.2	7.7	8.0	16.2	10.3	12.1	15.7	17.1	15.6	13.0	9.9	13.0	12.0	13.4	12.2	13.9	12.9	12.2	12.5	43.2	7.7	15.3
27	11.9	12.4	11.5	10.7	11.6	11.7	11.1	11.0	11.0	10.2	9.4	10.1	10.1	9.7	11.0	10.7	10.2	9.9	10.4	9.8	10.1	12.6	12.9	14.5	14.5	9.4	11.0
28	12.2	13.5	70.4	56.0	44.1	70.5	78.6	46.5	72.2	42.4	35.5	23.9	18.1	17.3	18.8	40.5	38.8	30.0	28.8	16.9	9.0	12.5	11.6	11.0	78.6	9.0	34.1
29	15.4	17.3	18.0	27.9	28.9	25.8	26.1	23.6	31.2	70.8	61.2	75.3	62.8	62.6	37.9	47.6	34.4	32.8	48.5	59.0	81.2	69.5	77.5	94.4	94.4	15.4	47.1
30	84.8	84.7	88.8	75.1	26.7	19.2	16.3	13.9	47.1	19.3	20.9	12.0	9.0	6.3	12.1	8.8	13.3	17.1	15.6	16.7	11.8	10.5	12.4	10.5	88.8	6.3	27.2
31	9.7	8.1	6.8	7.4	7.3	6.5	5.7	5.3	7.3	17.7	17.2	31.6	42.2	37.6	20.5	20.0	15.4	16.8	8.0	9.8	15.5	11.4	9.5	10.1	42.2	5.3	14.5
Max.	**103.1**	**84.7**	**88.8**	**78.8**	**85.5**	**81.7**	**79.5**	**83.3**	**85.1**	**90.7**	**80.1**	**80.2**	**69.4**	**69.9**	**77.3**	**82.3**	**88.8**	**58.6**	**78.6**	**59.8**	**98.8**	**93.1**	**77.5**	**94.4**	**103.1**		
Min.	**8.4**	**8.1**	**6.8**	**6.1**	**4.7**	**6.5**	**5.7**	**5.3**	**7.3**	**5.8**	**8.1**	**6.4**	**7.6**	**6.3**	**7.2**	**8.8**	**7.5**	**7.5**	**8.0**	**9.4**	**6.6**	**5.9**	**9.5**	**8.8**		**4.7**	
Avg.	**31.3**	**28.6**	**28.9**	**26.7**	**31.7**	**25.9**	**25.3**	**22.0**	**27.1**	**27.7**	**28.9**	**26.5**	**24.8**	**24.9**	**23.1**	**25.5**	**25.9**	**22.6**	**23.4**	**22.6**	**25.1**	**26.4**	**24.1**	**25.3**			**26.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Max.																											
Min.																											
Avg.																											

Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1																											
2																											
3																											
4																											
5																											
6																											
7																	2.0	2.8	3.9	0.6	1.1	0.5	1.4	1.2	3.9	0.5	1.7
8	0.8	0.6	0.4	0.8	0.8	0.5	0.4	0.6	2.0	2.1	2.2	3.6	2.0	0.9	0.4	0.6	0.8	0.7	1.1	0.4	0.2	2.2	2.5	3.2	3.6	0.2	1.2
9	3.3	3.1	4.1	3.3	3.0	3.7	2.1	2.0	3.6	2.9	3.5	4.1	3.5	2.9	1.5	0.5	1.3	1.2	1.6	1.6	1.1	0.9	0.9	1.3	4.1	0.5	2.4
10	0.5	1.2	0.4	0.8	0.5	0.5	1.3	1.5	1.8	0.4	0.9	1.5	1.1	1.0	1.7	1.9	1.4	1.2	1.4	1.8	2.2	2.0	1.0	0.9	2.2	0.4	1.2
11	0.9	1.1	1.5	1.7	1.7	4.9	6.0	5.8	4.6	4.8	6.9	7.4	7.7	7.1	7.0	6.8	6.6	6.6	6.9	7.4	7.8	7.7	7.6	7.5	7.8	0.9	5.6
12	8.2	7.6	8.3	8.0	6.8	7.6	7.8	7.5	6.8	5.8	6.4	6.5	5.6	6.0	6.6	6.2	6.5	7.7	8.1	7.5	7.5	9.0	9.4	8.9	9.4	5.6	7.3
13	10.0	10.5	11.6	11.9	11.0	11.5	11.5	11.1	10.8	9.8	9.5	10.1	10.8	10.4	9.8	9.3	8.7	8.0	8.3	7.6	7.2	7.4	7.7	7.0	11.9	7.0	9.6
14	5.1	5.2	5.0	5.1	4.7	5.2	5.0	4.9	4.3	4.0	4.4	4.5	3.8	4.5	4.5	3.8	2.2	0.9	1.2	0.9	3.5	2.0	0.5	1.5	5.2	0.5	3.6
15	4.5	4.4	4.2	3.7	2.1	0.8	1.7	1.4	0.2	1.0	3.0	2.1	1.4	2.7	2.2	2.3	2.2	1.7	1.0	0.7	1.0	1.8	2.7	2.8	4.5	0.2	2.1
16	2.9	2.8	2.7	1.4	1.1	2.4	1.7	1.7	2.2	2.2	0.7	0.5	1.3	0.9	2.1	1.6	1.6	0.7	1.1	1.1	0.7	1.0	1.4	1.3	2.9	0.5	1.5
17	0.4	1.0	2.0	1.3	0.9	1.5	2.3	2.4	2.5	2.4	2.2	3.6	2.9	2.4	1.1	2.8	3.4	3.9	4.0	3.2	4.0	4.2	3.4	3.7	4.2	0.4	2.6
18	2.8	2.1	1.8	1.4	1.0	1.6	0.6	1.0	1.2	1.8	3.1	3.4	2.2	0.4	1.0	1.7	2.2	1.1	0.5	1.6	1.8	1.5	1.9	1.2	3.4	0.4	1.6
19	0.4	0.8	2.8	5.9	6.5	5.1	2.4	2.3	5.2	5.7	5.3	5.0	5.3	5.6	6.7	6.8	6.2	6.5	6.4	4.4	2.1	1.7	2.0	6.0	6.8	0.4	4.5
20	5.2	5.6	8.3	8.8	7.5	8.9	6.4	6.3	6.0	8.3	7.4	6.4	4.8	7.7	6.2	5.0	5.6	6.8	6.4	7.2	9.1	9.8	9.3	10.3	10.3	4.8	7.2
21	9.3	9.7	8.0	5.4	5.4	5.0	5.1	4.8	4.0	3.8	4.3	3.6	3.9	2.8	1.6	3.2	2.6	4.3	4.9	3.5	2.5	0.9	1.0	2.4	9.7	0.9	4.3
22	2.5	4.6	4.8	6.3	6.6	7.0	5.9	5.4	4.7	5.2	5.6	5.7	4.0	2.9	3.3	2.6	2.9	1.7	2.2	2.6	2.4	2.2	2.5	2.9	7.0	1.7	4.0
23	2.5	2.9	3.2	2.8	2.3	2.7	3.4	3.1	2.9	4.4	5.3	5.8	5.2	4.4	4.1	3.8	3.1	3.4	3.4	3.7	4.4	4.3	5.8	5.0	5.8	2.3	3.8
24	5.2	5.9	6.1	6.4	7.9	6.8	7.1	6.8	6.8	5.5	5.7	6.9	4.0	4.3	5.6	5.3	4.9	4.2	4.5	7.3	7.9	6.8	5.5	6.0	7.9	4.0	6.0
25	7.7	3.7	4.8	5.1	6.1	9.2	9.4	10.5	10.7	11.5	11.6	11.7	9.3	10.4	8.3	6.7	4.5	5.1	6.9	10.8	7.5	7.1	5.9	3.0	11.7	3.0	7.8
26	1.7	3.4	3.7	2.1	2.6	2.6	4.0	5.0	4.8	4.5	4.9	4.3	4.1	5.7	4.5	4.7	5.9	8.5	12.7	12.1	11.2	10.1	7.9	7.3	12.7	1.7	5.8
27	9.2	9.1	8.9	6.2	4.4	3.9	2.1	1.3	1.7	2.8	3.4	3.3	3.7	3.6	2.9	1.2	2.6	2.5	2.3	3.7	3.3	2.9	2.5	2.5	9.2	1.2	3.7
28	2.5	2.5	2.8	2.5	1.9	2.1	2.5	3.2	3.7	4.1	4.6	4.9	3.9	2.7	2.5	2.1	1.1	1.3	1.7	1.8	2.5	2.9	3.5	3.7	4.9	1.1	2.8
Max.	**10.0**	**10.5**	**11.6**	**11.9**	**11.0**	**11.5**	**11.5**	**11.1**	**10.8**	**11.5**	**11.6**	**11.7**	**10.8**	**10.4**	**9.8**	**9.3**	**8.7**	**8.5**	**12.7**	**12.1**	**11.2**	**10.1**	**9.4**	**10.3**	**12.7**		
Min.	**0.4**	**0.6**	**0.4**	**0.8**	**0.5**	**0.5**	**0.4**	**0.6**	**0.2**	**0.4**	**0.7**	**0.5**	**1.1**	**0.4**	**0.4**	**0.5**	**0.8**	**0.7**	**0.5**	**0.4**	**0.2**	**0.5**	**0.5**	**0.9**		**0.2**	
Avg.	**4.1**	**4.2**	**4.5**	**4.3**	**4.0**	**4.4**	**4.2**	**4.2**	**4.3**	**4.4**	**4.8**	**5.0**	**4.3**	**4.2**	**4.0**	**3.7**	**3.6**	**3.7**	**4.1**	**4.2**	**4.1**	**4.0**	**3.9**	**4.1**			**4.2**

Total Hours in Month 672 **Hours Data Available** 512 **Data Recovery** 76.2%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.9	3.7	3.2	3.8	4.5	3.9	3.5	2.9	3.3	4.2	5.6	5.8	4.8	3.8	3.4	3.0	2.4	1.5	4.7	4.7	4.3	2.9	2.2	2.8	5.8	1.5	3.7
2	2.7	2.6	4.3	4.6	3.7	3.2	3.6	2.3	3.2	5.4	5.4	4.4	3.1	2.7	2.8	2.4	1.5	1.6	5.5	6.0	4.4	4.2	3.9	4.8	6.0	1.5	3.7
3	4.7	3.9	5.1	4.5	5.1	4.6	4.2	3.5	3.7	6.4	6.0	3.3	2.9	3.1	4.5	3.2	2.4	3.8	5.5	7.2	6.8	6.1	8.2	6.5	8.2	2.4	4.8
4	6.0	6.1	5.6	5.8	4.7	3.1	4.0	3.9	4.1	4.2	4.8	4.3	2.8	2.8	2.6	2.7	1.3	0.8	2.3	3.2	5.6	6.0	5.5	6.6	6.6	0.8	4.1
5	7.9	6.9	7.2	6.8	7.3	7.4	8.2	8.0	6.7	7.1	7.0	5.0	3.8	3.3	3.5	3.0	2.5	2.6	3.5	2.3	2.1	4.0	6.7	6.4	8.2	2.1	5.4
6	6.1	5.0	4.7	6.2	4.8	4.0	4.0	4.8	4.8	4.8	3.9	5.4	5.5	7.2	8.1	8.0	7.3	7.4	7.7	8.3	7.8	7.7	7.2	7.2	8.3	3.9	6.2
7	7.3	7.1	8.0	7.7	7.6	8.7	9.1	6.6	4.4	7.8	9.9	9.6	10.1	10.4	9.6	8.9	9.1	9.4	8.6	9.1	9.3	10.6	10.8	10.4	10.8	4.4	8.7
8	10.1	8.8	9.2	7.9	7.7	7.1	6.1	4.6	1.7	1.4	3.0	3.1	3.6	3.0	3.6	3.9	4.7	4.0	5.5	7.0	4.7	3.9	2.8	4.7	10.1	1.4	5.1
9	5.0	4.3	5.7	4.0	6.2	5.2	3.9	3.3	4.8	4.7	6.0	5.7	5.9	5.1	5.1	3.7	2.5	1.8	3.4	4.2	2.7	5.2	3.4	5.1	6.2	1.8	4.4
10	4.1	4.7	5.8	4.8	4.2	3.5	3.5	5.6	3.4	3.1	3.9	2.0	1.8	1.7	2.1	1.6	5.5	5.1	6.8	5.6	5.6	5.7	6.4	8.0	8.0	1.6	4.3
11	7.6	7.5	7.7	7.0	7.1	9.6	7.4	4.7	5.7	7.6	6.1	6.1	4.4	3.2	3.1	3.4	3.9	6.6	8.2	7.9	8.1	5.7	4.6	6.4	9.6	3.1	6.2
12	4.9	5.7	6.5	6.2	5.9	4.4	5.5	6.7	4.9	5.5	5.4	5.1	8.2	10.2	9.3	7.9	6.4	8.0	11.2	13.3	11.0	9.8	9.2	8.9	13.3	4.4	7.5
13	9.5	7.4	6.8	7.5	7.1	8.7	11.5	11.8	11.7	5.7	5.2	5.6	5.9	8.8	15.4	7.8	8.6	9.0	8.0	7.9	9.6	11.2	11.4	9.1	15.4	5.2	8.8
14	6.8	6.6	4.9	5.5	6.6	7.2	6.0	5.4	5.1	5.6	6.3	4.5	4.3	4.2	3.7	3.6	4.0	4.5	5.7	6.1	5.1	5.4	4.3	4.1	7.2	3.6	5.2
15	6.8	6.3	6.8	6.1	6.7	7.2	7.2	6.6	6.9	7.1	5.6	3.8	3.4	3.1	4.3	3.1	2.9	1.2	2.4	5.6	6.0	4.8	4.2	3.4	7.2	1.2	5.1
16	2.9	3.1	2.9	3.5	3.8	4.0	4.4	5.8	6.8	6.9	6.7	5.9	4.6	4.4	4.1	3.0	2.7	5.1	4.4	6.3	5.2	5.9	6.2	5.7	6.9	2.7	4.8
17	5.2	5.5	5.3	4.8	4.7	6.2	5.4	4.7	5.7	6.4	5.5	4.1	2.5	3.9	4.8	2.8	1.6	1.0	2.2	3.2	2.2	3.1	2.8	2.9	6.4	1.0	4.0
18	3.0	2.5	2.6	3.0	3.0	3.1	3.3	3.4	3.7	5.1	6.0	4.9	3.9	3.3	3.7	3.4	2.7	2.3	2.3	4.9	4.9	5.6	3.3	3.7	6.0	2.3	3.7
19	2.6	4.5	4.9	6.3	6.7	6.7	6.3	4.1	5.2	5.8	5.2	3.8	3.8	3.9	3.8	3.8	2.7	4.9	1.7	2.3	2.0	2.8	2.5	2.2	6.7	1.7	4.1
20	2.6	3.0	3.3	4.0	3.6	3.6	5.9	5.3	6.2	6.7	7.8	9.1	9.1	9.1	9.3	9.8	9.8	10.7	11.7	11.8	11.3	10.7	10.2	9.8	11.8	2.6	7.7
21	8.3	8.1	7.2	6.4	5.5	3.4	2.0	1.5	1.2	0.6	7.8	4.3	5.5	10.0	7.0	6.6	5.3	4.5	7.1	9.8	5.5	7.7	8.2	7.4	10.0	0.6	5.9
22	13.0	9.1	5.2	4.9	7.5	9.8	5.9	5.6	5.8	4.4	3.1	2.5	2.7	3.4	1.5	1.1	2.2	1.1	1.5	5.0	5.5	5.5	7.1	7.2	13.0	1.1	5.0
23	7.6	7.6	7.6	6.7	6.2	6.7	7.1	8.7	10.4	10.1	10.7	10.7	10.1	11.5	8.9	8.6	8.1	8.8	8.0	10.2	9.1	9.1	10.1	8.2	11.5	6.2	8.8
24	6.3	6.0	6.3	8.5	8.5	7.8	10.6	9.5	9.8	9.9	8.8	8.6	8.1	9.0	9.6	9.1	8.6	8.1	8.5	7.4	6.8	5.9	5.2	6.2	10.6	5.2	8.0
25	6.0	3.6	4.2	2.7	3.6	4.4	4.9	4.1	2.2	3.5	5.6	3.4	3.9	2.8	3.0	3.4	1.6	2.0	1.1	1.8	2.8	4.5	6.0	5.6	6.0	1.1	3.6
26	5.9	7.6	7.6	7.5	7.5	7.8	8.8	9.8	9.5	9.7	8.2	7.0	8.1	8.6	7.4	7.7	7.7	7.2	4.9	0.8	1.5	3.0	2.9	1.7	9.8	0.8	6.6
27	1.3	1.6	3.5	2.3	3.4	5.1	4.4	5.7	6.7	6.7	4.8	4.0	3.6	3.4	2.6	3.1	4.6	5.5	3.1	5.4	5.8	3.8	5.0	4.1	6.7	1.3	4.1
28	5.6	5.8	5.6	4.8	5.2	6.0	6.8	6.1	8.4	8.3	7.8	6.4	4.4	4.0	3.5	3.2	4.8	6.2	6.5	7.7	7.5	8.6	8.4	6.1	8.6	3.2	6.2
29	7.7	8.0	7.8	6.8	6.9	8.5	8.4	7.5	6.8	6.9	6.1	5.5	6.8	7.5	5.5	6.0	6.4	4.5	3.8	2.8	4.8	4.2	4.3	5.0	8.5	2.8	6.2
30	3.7	4.3	4.7	3.7	3.0	3.3	3.0	2.8	4.6	5.4	4.5	3.1	1.3	0.9	1.1	1.2	1.5	2.3	1.2	2.3	2.1	0.6	1.6	1.8	5.4	0.6	2.7
31	1.8	2.4	1.4	2.4	1.4	0.7	1.1	0.5	1.5	1.3	0.7	2.5	3.0	2.8	3.0	3.0	2.9	1.9	1.0	0.9	2.4	3.3	3.4	3.0	3.4	0.5	2.0
Max.	**13.0**	**9.1**	**9.2**	**8.5**	**8.5**	**9.8**	**11.5**	**11.8**	**11.7**	**10.1**	**10.7**	**10.7**	**10.1**	**11.5**	**15.4**	**9.8**	**9.8**	**10.7**	**11.7**	**13.3**	**11.3**	**11.2**	**11.4**	**10.4**	**15.4**		
Min.	**1.3**	**1.6**	**1.4**	**2.3**	**1.4**	**0.7**	**1.1**	**0.5**	**1.2**	**0.6**	**0.7**	**2.0**	**1.3**	**0.9**	**1.1**	**1.1**	**1.3**	**0.8**	**1.0**	**0.8**	**1.5**	**0.6**	**1.6**	**1.7**		**0.5**	
Avg.	**5.7**	**5.5**	**5.5**	**5.4**	**5.5**	**5.6**	**5.7**	**5.4**	**5.4**	**5.8**	**5.9**	**5.1**	**4.9**	**5.2**	**5.2**	**4.6**	**4.5**	**4.6**	**5.1**	**5.8**	**5.6**	**5.7**	**5.7**	**5.6**			**5.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	3.0	2.8	3.0	2.9	2.7	2.9	3.3	3.2	3.1	3.8	2.8	1.2	1.5	1.8	2.2	2.0	1.7	2.0	1.1	1.1	1.1	0.7	1.6	0.9	3.8	0.7	2.2
2	2.0	2.9	3.0	3.6	3.0	1.9	1.5	1.5	1.7	1.9	1.3	1.8	1.3	1.5	1.4	1.9	1.0	1.4	1.2	4.2	5.2	5.0	4.9	4.0	5.2	1.0	2.5
3	5.0	4.7	4.3	3.9	4.7	5.1	5.7	5.0	5.2	4.8	5.3	4.8	4.6	5.1	4.9	3.7	4.3	4.4	4.8	5.1	4.9	4.6	3.9	3.0	5.7	3.0	4.7
4	4.1	4.5	5.5	5.6	5.4	5.0	5.5	5.2	4.7	5.0	6.8	6.9	7.5	6.9	6.7	6.3	6.5	6.4	7.8	7.3	7.7	8.2	8.2	9.9	9.9	4.1	6.4
5	11.8	11.1	11.1	11.5	9.8	11.2	11.9	12.9	13.4	11.2	9.9	10.6	10.8	11.4	12.9	14.0	9.5	8.7	8.6	8.4	8.1	8.3	6.3	5.7	14.0	5.7	10.4
6	7.9	8.1	8.3	7.9	8.5	7.8	8.0	7.8	8.8	9.1	8.5	9.2	8.6	9.5	8.9	8.9	7.4	6.7	5.7	6.4	8.8	7.7	9.0	9.0	9.5	5.7	8.2
7	7.7	8.4	8.3	4.6	2.8	3.0	3.9	2.4	4.0	3.9	4.2	5.2	6.1	7.0	7.2	7.0	6.7	7.0	7.5	8.3	9.4	9.7	9.8	9.8	9.8	2.4	6.4
8	10.1	10.3	10.3	10.1	10.0	9.7	9.8	10.5	9.9	8.9	9.1	9.4	10.0	9.4	8.9	9.1	8.3	7.6	6.8	7.5	7.4	5.6	4.6	6.3	10.5	4.6	8.7
9	6.9	7.5	8.0	8.2	8.4	8.6	8.8	8.2	7.4	7.5	7.6	6.7	6.5	6.3	5.9	6.4	6.8	6.5	5.8	5.4	3.4	3.2	4.7	4.6	8.8	3.2	6.6
10	2.6	1.3	1.3	3.0	3.1	2.6	2.9	2.5	2.1	2.4	2.2	1.2	0.7	1.2	1.6	1.3	1.4	2.1	2.6	2.3	2.3	1.8	2.0	2.7	3.1	0.7	2.0
11	2.5	3.1	3.0	3.9	3.6	4.1	3.1	4.0	4.5	3.1	1.7	0.8	2.1	1.5	1.8	2.1	2.6	1.9	1.4	1.7	1.6	1.2	0.7	1.4	4.5	0.7	2.4
12	1.5	2.0	2.3	1.5	1.1	1.2	3.1	4.4	5.2	4.7	3.6	5.2	6.6	6.2	6.0	6.2	5.8	4.0	2.2	2.5	1.0	1.5	2.3	3.7	6.6	1.0	3.5
13	3.6	4.2	4.4	4.1	3.4	3.7	3.4	3.8	4.8	4.3	3.6	3.2	3.7	2.8	1.1	0.7	0.6	0.2	0.5	0.2	1.1	1.1	1.6	1.1	4.8	0.2	2.6
14	2.6	2.4	1.9	1.8	0.4	2.1	2.0	2.4	3.1	3.4	2.1	1.7	2.3	2.1	1.8	3.6	3.2	3.7	4.2	4.2	3.6	2.0	1.9	2.7	4.2	0.4	2.5
15	2.9	2.6	3.5	4.7	4.9	5.3	5.8	6.1	6.1	6.1	6.3	5.9	7.0	7.3	6.6	5.6	3.6	2.7	2.4	0.9	2.2	3.7	5.7	6.2	7.3	0.9	4.8
16	7.0	7.0	7.4	7.9	7.3	8.4	8.2	5.9	5.2	5.6	5.6	7.1	7.5	5.2	5.4	7.1	8.8	7.9	7.1	6.2	3.9	2.4	1.5	2.4	8.8	1.5	6.2
17	2.3	2.5	3.7	4.4	3.3	3.2	3.5	4.7	4.6	3.2	3.7	5.4	5.4	4.3	4.8	5.6	5.3	7.0	8.3	8.8	8.8	8.5	8.7	8.7	8.8	2.3	5.4
18	9.0	9.8	9.7	8.9	8.8	8.4	9.3	9.3	9.5	8.8	8.9	8.4	7.9	7.7	7.9	7.7	7.7	7.3	6.8	6.9	7.2	7.0	7.0	6.9	9.8	6.8	8.2
19	6.5	6.7	7.5	7.7	7.0	7.2	7.2	7.2	8.1	7.4	6.3	3.9	3.9	2.8	5.4	3.6	4.4	3.9	4.7	5.4	6.7	3.9	4.0	5.5	8.1	2.8	5.7
20	4.8	6.0	5.4	9.1	8.8	8.8	8.7	9.1	9.1	9.5	9.5	8.7	9.4	9.0	8.3	7.2	7.7	8.3	8.6	7.2	7.0	7.3	7.6	7.3	9.5	4.8	8.0
21	7.0	7.1	6.7	6.4	6.2	6.7	6.7	6.9	7.1	6.3	6.0	7.2	7.2	6.6	5.9	7.2	6.1	6.5	7.7	7.9	7.2	7.2	6.3	5.7	7.9	5.7	6.7
22	6.1	6.4	6.5	6.3	7.2	8.5	7.7	10.0	9.7	8.8	8.3	9.1	8.7	9.3	8.6	8.8	8.9	8.3	8.5	8.1	9.2	8.8	8.5	9.5	10.0	6.1	8.3
23	9.8	9.4	8.7	9.2	9.3	9.3	8.5	8.1	8.3	8.2	8.7	7.7	7.2	7.1	4.3	2.6	3.3	2.2	3.8	6.6	5.9	4.9	5.2	5.8	9.8	2.2	6.8
24	6.3	7.1	7.7	7.0	6.9	6.7	6.5	5.9	7.1	8.2	8.6	8.8	7.8	7.7	7.5	7.4	8.2	6.0	5.9	5.0	6.1	5.9	6.7	6.8	8.8	5.0	7.0
25	7.4	7.7	7.8	7.8	8.2	8.3	8.6	8.6	8.2	8.0	6.4	5.7	6.5	5.4	6.1	6.4	7.0	7.1	5.8	7.2	6.8	6.9	7.1	6.2	8.6	5.4	7.1
26	4.2	4.4	3.5	2.8	3.6	2.2	0.9	2.1	3.7	1.1	1.4	1.4	3.1	3.7	2.6	2.8	2.1	1.9	0.6	0.9	1.9	2.3	2.5	2.0	4.4	0.6	2.4
27	1.9	1.2	0.8	1.4	2.4	4.4	3.0	1.9	0.7	0.8	1.9	2.3	2.5	2.1	2.5	6.0	6.2	6.0	5.6	5.8	5.2	4.0	3.5	2.9	6.2	0.7	3.1
28	1.9	1.3	0.8	1.6	2.0	1.8	2.2	3.0	2.5	1.2	3.2	3.4	3.0	1.8	2.0	1.5	1.5	1.4	0.8	0.8	1.0	1.2	2.0	2.0	3.4	0.8	1.8
29	3.2	2.9	3.3	4.8	4.1	4.4	4.5	5.4	5.2	6.0	6.3	6.1	5.1	5.1	6.1	2.9	2.3	3.9	5.0	4.4	4.1	3.5	2.4	2.0	6.3	2.0	4.3
30	1.5	1.1	3.6	4.2	3.9	3.9	3.7	5.0	6.3	7.1	7.5	7.3	5.8	6.2	5.6	5.1	3.8	2.1	1.4	1.7	5.4	4.1	4.3	5.1	7.5	1.1	4.4
Max.	**11.8**	**11.1**	**11.1**	**11.5**	**10.0**	**11.2**	**11.9**	**12.9**	**13.4**	**11.2**	**9.9**	**10.6**	**10.8**	**11.4**	**12.9**	**14.0**	**9.5**	**8.7**	**8.6**	**8.8**	**9.4**	**9.7**	**9.8**	**9.9**	**14.0**		
Min.	**1.5**	**1.1**	**0.8**	**1.4**	**0.4**	**1.2**	**0.9**	**1.5**	**0.7**	**0.8**	**1.3**	**0.8**	**0.7**	**1.2**	**1.1**	**0.7**	**0.6**	**0.2**	**0.5**	**0.2**	**1.0**	**0.7**	**0.7**	**0.9**		**0.2**	
Avg.	**5.1**	**5.2**	**5.4**	**5.6**	**5.4**	**5.6**	**5.6**	**5.8**	**6.0**	**5.7**	**5.6**	**5.5**	**5.7**	**5.5**	**5.4**	**5.4**	**5.1**	**4.8**	**4.8**	**4.9**	**5.1**	**4.7**	**4.8**	**5.0**			**5.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	4.8	5.2	4.1	5.3	5.8	4.0	2.6	3.8	3.3	2.0	4.7	6.6	6.8	6.1	5.1	6.1	6.0	5.5	5.6	5.8	4.8	5.2	5.3	5.7	6.8	2.0	5.0
2	5.4	6.5	5.7	5.2	3.4	3.8	3.7	4.8	5.3	5.6	7.2	7.0	6.7	5.3	2.5	2.8	2.7	1.8	1.7	2.2	1.9	1.7	2.1	1.6	7.2	1.6	4.0
3	0.6	2.5	2.7	1.9	1.2	1.4	2.5	2.7	1.5	0.8	1.3	3.9	4.2	4.8	4.3	4.5	4.1	3.3	1.9	0.9	0.6	0.4	0.3	0.8	4.8	0.3	2.2
4	0.4	0.6	1.5	1.9	1.5	0.5	2.3	2.9	2.3	1.8	2.2	2.8	2.8	2.7	2.4	2.3	2.3	2.3	2.5	2.8	1.4	1.5	1.7	1.6	2.9	0.4	2.0
5	1.8	1.0	0.7	1.7	2.6	0.9	1.9	1.1	1.0	1.6	2.9	3.3	3.7	3.7	1.6	2.3	3.3	5.5	6.3	7.4	6.0	5.2	4.7	5.7	7.4	0.7	3.2
6	5.6	4.5	7.7	7.3	5.1	5.6	6.9	7.8	7.2	4.7	5.7	7.2	6.4	7.1	5.4	5.8	5.3	5.2	3.9	5.4	3.3	4.7	4.7	4.6	7.8	3.3	5.7
7	5.2	4.9	5.2	6.2	7.0	6.4	5.7	6.4	4.8	4.5	4.0	3.7	2.7	3.3	4.9	5.0	5.2	5.1	5.7	6.5	6.0	6.7	6.5	7.2	7.2	2.7	5.4
8	6.7	6.9	6.4	6.1	5.7	4.8	3.8	2.4	2.8	2.1	2.1	1.4	2.5	1.9	1.0	1.9	2.8	2.5	3.8	3.8	1.0	1.6	1.8	1.3	6.9	1.0	3.2
9	0.6	2.0	2.2	2.5	2.1	2.7	2.3	2.2	2.9	3.5	3.8	4.4	2.5	0.9	1.4	2.0	1.6	1.5	1.6	1.7	1.2	0.3	0.2	0.6	4.4	0.2	1.9
10	1.5	1.0	1.6	1.4	0.3	0.5	0.6	0.4	0.9	1.4	2.3	2.9	3.6	3.8	3.0	2.5	2.4	2.3	2.1	1.0	0.6	0.7	0.5	1.1	3.8	0.3	1.6
11	1.9	0.8	1.3	1.8	2.4	3.6	3.9	3.1	1.5	1.0	1.1	1.7	1.3	1.4	1.5	1.2	1.1	1.3	1.1	1.1	0.8	1.4	0.8	0.9	3.9	0.8	1.6
12	1.5	2.6	2.8	3.3	2.9	2.5	2.5	2.7	2.6	1.6	2.0	1.3	1.1	1.4	1.1	1.4	0.9	1.3	1.2	1.6	1.4	1.8	1.5	3.2	3.3	0.9	1.9
13	3.9	4.2	4.1	4.7	4.8	4.7	4.2	4.6	4.9	5.9	5.4	5.5	5.0	5.7	6.0	6.3	7.0	6.8	7.1	7.2	7.6	7.4	7.9	7.6	7.9	3.9	5.8
14	7.4	8.0	8.8	9.4	8.3	10.2	9.0	8.5	8.1	9.6	9.8	8.5	7.7	5.0	2.7	1.2	1.3	1.7	1.8	0.8	1.1	2.6	2.6	2.6	10.2	0.8	5.7
15	3.6	4.7	4.7	4.3	4.6	4.7	4.6	4.4	4.4	4.3	4.0	4.2	2.2	4.1	3.7	3.9	3.9	3.3	2.6	1.2	2.3	2.2	1.0	2.3	4.7	1.0	3.5
16	1.3	0.9	0.8	1.2	1.1	1.0	1.1	1.1	1.6	2.0	0.9	1.0	1.5	2.3	4.4	2.8	4.1	3.9	4.3	4.3	2.3	4.3	3.9	2.9	4.4	0.8	2.3
17	1.8	1.8	0.8	0.4	1.9	2.9	3.6	3.9	3.5	2.4	1.7	1.3	3.9	4.1	3.5	2.7	2.4	1.8	1.8	1.2	1.3	1.2	1.6	1.2	4.1	0.4	2.2
18	0.8	1.3	0.9	0.6	0.6	0.7	1.4	1.1	0.9	1.3	1.4	3.0	2.8	3.0	3.1	3.3	3.9	3.6	2.9	1.4	0.4	0.3	1.4	1.5	3.9	0.3	1.7
19	1.2	1.8	3.7	4.2	3.7	3.2	3.3	2.9	2.8	0.7	0.7	0.9	1.1	3.3	2.2	3.1	2.5	1.9	2.8	4.5	6.9	6.4	6.0	6.7	6.9	0.7	3.2
20	6.6	6.3	7.1	6.1	4.0	3.8	5.0	4.6	3.4	3.4	3.2	2.0	0.9	0.8	0.6	0.8	1.7	1.1	1.5	2.2	0.7	0.7	3.0	5.3	7.1	0.6	3.1
21	5.9	5.6	5.1	3.6	3.3	2.2	2.5	2.7	2.0	2.1	2.8	3.2	2.7	3.3	3.2	1.9	1.6	1.3	1.5	1.2	1.0	1.5	1.7	1.6	5.9	1.0	2.6
22	1.2	0.8	1.9	4.2	4.0	4.9	6.5	6.8	6.0	6.5	7.9	8.8	8.1	7.6	8.1	8.5	8.4	8.2	7.8	7.4	10.1	9.9	8.7	7.9	10.1	0.8	6.7
23	8.2	8.8	9.3	9.1	10.1	11.0	9.7	8.6	8.6	8.5	8.4	8.9	7.7	7.6	7.2	6.2	5.6	4.4	4.6	4.5	2.6	3.8	2.7	2.1	11.0	2.1	7.0
24	1.5	1.4	0.9	1.8	1.3	1.7	0.8	1.9	5.1	5.0	4.8	5.1	6.2	6.4	6.5	5.9	5.5	5.6	5.7	6.2	5.6	5.6	6.1	5.6	6.5	0.8	4.3
25	5.9	5.9	5.7	6.0	6.5	6.6	5.7	5.6	5.1	5.6	4.8	3.9	2.1	2.9	2.8	3.3	3.8	3.3	2.7	1.5	1.1	4.1	2.9	1.6	6.6	1.1	4.1
26	1.8	1.7	2.3	2.5	1.3	3.8	4.0	3.0	2.5	2.4	2.3	1.9	2.2	2.5	1.7	1.1	2.3	2.0	1.2	1.0	0.6	1.1	1.2	1.3	4.0	0.6	2.0
27	2.6	1.4	1.3	1.0	1.4	1.1	2.1	1.4	0.7	0.9	2.9	3.0	3.0	2.6	1.9	2.8	3.8	3.6	3.3	4.5	2.6	1.1	1.4	1.4	4.5	0.7	2.2
28	1.7	1.8	1.4	0.7	2.1	1.8	3.0	3.3	0.8	1.6	3.5	2.9	2.3	2.8	2.5	3.2	2.9	3.9	4.0	4.4	3.3	2.4	1.7	1.0	4.4	0.7	2.5
29	1.1	1.3	3.0	4.1	2.5	3.8	3.6	3.6	4.5	5.6	6.8	5.8	4.7	3.6	2.7	3.0	3.7	5.1	5.0	4.6	4.9	3.8	4.5	4.2	6.8	1.1	4.0
30	5.4	5.2	5.4	4.2	2.0	4.7	5.8	5.9	6.0	4.5	3.6	3.3	3.1	3.5	2.7	2.0	2.6	2.2	2.7	3.2	3.6	2.5	2.2	1.7	6.0	1.7	3.7
31	4.0	4.5	5.2	5.2	6.1	6.2	5.5	6.0	5.9	6.3	8.8	7.9	8.3	8.6	9.6	9.7	8.2	8.0	7.8	7.9	7.3	7.3	7.0	7.8	9.7	4.0	7.0
Max.	**8.2**	**8.8**	**9.3**	**9.4**	**10.1**	**11.0**	**9.7**	**8.6**	**8.6**	**9.6**	**9.8**	**8.9**	**8.3**	**8.6**	**9.6**	**9.7**	**8.4**	**8.2**	**7.8**	**7.9**	**10.1**	**9.9**	**8.7**	**7.9**	**11.0**		
Min.	**0.4**	**0.6**	**0.7**	**0.4**	**0.3**	**0.5**	**0.6**	**0.4**	**0.7**	**0.7**	**0.7**	**0.9**	**0.9**	**0.8**	**0.6**	**0.8**	**0.9**	**1.1**	**1.1**	**0.8**	**0.4**	**0.3**	**0.2**	**0.6**		**0.2**	
Avg.	**3.3**	**3.4**	**3.7**	**3.8**	**3.5**	**3.7**	**3.9**	**3.9**	**3.6**	**3.5**	**4.0**	**4.1**	**3.9**	**3.9**	**3.5**	**3.5**	**3.6**	**3.5**	**3.5**	**3.5**	**3.1**	**3.2**	**3.1**	**3.2**			**3.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	7.2	6.9	6.1	5.1	5.7	6.2	6.2	6.7	6.4	5.9	6.5	5.6	4.4	3.3	2.3	1.6	1.3	2.7	2.1	2.4	2.0	1.7	1.9	1.4	7.2	1.3	4.2
2	1.0	1.2	1.5	0.9	0.8	0.8	2.6	3.4	3.3	3.2	3.3	1.6	1.4	0.7	1.5	1.9	1.7	1.2	1.5	1.5	0.9	0.2	0.2	0.1	3.4	0.1	1.5
3	0.5	1.2	0.5	0.6	0.9	1.5	1.0	0.7	0.9	0.9	1.9	3.1	3.0	2.7	1.8	2.5	2.9	3.1	2.9	1.4	0.4	0.6	0.9	1.2	3.1	0.4	1.6
4	2.7	2.3	2.7	2.7	2.0	0.8	1.0	2.1	0.9	5.0	7.2	7.4	6.4	5.4	5.7	5.8	5.2	4.7	6.3	6.6	4.6	3.7	3.7	3.5	7.4	0.8	4.1
5	4.0	2.7	1.4	3.3	4.1	3.9	3.6	4.8	4.9	4.7	3.9	4.7	5.6	4.1	3.8	2.9	1.1	2.2	2.3	2.1	0.9	2.6	1.3	3.6	5.6	0.9	3.3
6	4.0	2.9	0.7	1.7	0.6	3.6	5.3	4.9	4.0	3.6	2.8	2.6	4.6	3.3	3.0	3.8	3.5	3.2	1.9	0.6	0.8	1.0	3.8	3.5	5.3	0.6	2.9
7	3.4	3.4	3.9	5.1	6.3	7.4	7.0	8.1	9.3	9.3	10.5	10.2	7.4	5.7	3.5	2.4	2.1	4.3	4.5	5.7	5.7	4.5	6.3	6.6	10.5	2.1	5.9
8	7.2	8.0	9.1	8.4	8.3	7.9	8.2	8.5	8.4	8.8	7.2	7.5	6.7	7.6	6.1	4.1	3.3	2.2	1.1	1.3	1.9	2.1	2.7	2.6	9.1	1.1	5.8
9	2.0	3.7	2.1	1.5	2.1	3.4	3.2	2.6	1.6	0.8	0.9	0.4	0.8	0.8	0.4	0.5	1.1	0.6	1.8	4.6	4.7	6.0	7.2	5.1	7.2	0.4	2.4
10	4.3	3.9	3.9	5.1	5.6	4.6	3.8	3.0	3.1	1.8	1.4	1.6	0.6	0.9	0.9	3.2	1.8	1.4	3.5	2.5	2.2	3.6	4.7	2.7	5.6	0.6	2.9
11	4.4	3.2	3.3	3.8	3.0	2.2	2.0	3.1	3.5	3.6	2.9	2.1	2.4	1.4	1.8	1.9	1.6	2.4	2.0	1.0	1.3	2.2	1.7	2.2	4.4	1.0	2.5
12	2.0	1.8	0.3	0.9	0.8	0.5	0.6	1.0	0.7	0.4	0.9	1.2	1.3	1.8	2.4	2.8	2.4	2.5	1.9	2.0	1.9	2.1	2.1	1.6	2.8	0.3	1.5
13	0.7	0.4	0.8	1.1	1.1	1.0	1.0	0.9	1.9	2.9	3.1	3.1	2.4	2.6	2.5	2.4	2.2	2.4	2.4	2.0	1.4	1.0	0.5	1.1	3.1	0.4	1.7
14	1.3	1.6	0.9	1.5	2.3	2.1	2.0	2.2	2.2	3.1	3.3	3.1	3.0	3.5	3.3	3.3	3.1	3.2	3.1	3.1	3.3	1.0	0.8	1.0	3.5	0.8	2.4
15	1.2	1.1	0.7	2.0	2.2	2.3	2.9	1.8	2.0	3.0	3.2	3.4	3.0	2.7	1.9	2.3	3.0	2.5	2.0	0.8	0.7	2.4	1.4	2.5	3.4	0.7	2.1
16	4.2	4.2	3.7	3.0	2.8	2.2	2.3	3.8	4.1	4.9	5.3	6.4	6.9	6.6	6.0	5.3	4.9	4.6	6.2	7.9	8.4	5.3	4.0	3.5	8.4	2.2	4.9
17	4.0	4.3	6.8	7.4	8.0	9.1	8.4	8.4	8.1	5.8	4.5	3.7	2.4	1.2	1.8	2.0	0.6	0.7	0.8	0.8	0.8	1.1	2.5	2.7	9.1	0.6	4.0
18	2.6	3.2	1.7	1.9	1.6	1.6	2.0	2.5	1.5	2.4	2.7	3.5	3.3	2.5	2.6	1.9	1.7	1.6	1.3	2.4	1.5	0.4	1.0	0.7	3.5	0.4	2.0
19	0.4	0.6	0.9	0.8	2.0	1.8	2.6	1.7	2.2	2.5	0.9	1.8	2.7	2.6	1.7	2.4	3.4	2.3	4.8	4.7	3.9	3.0	3.9	3.8	4.8	0.4	2.4
20	3.1	4.1	4.4	3.4	2.4	2.5	3.3	3.2	4.7	4.9	3.8	4.3	6.6	6.9	5.6	4.4	3.6	1.9	2.2	1.5	1.8	2.1	4.1	4.2	6.9	1.5	3.7
21	2.5	1.2	1.4	2.2	5.9	9.8	10.2	10.0	8.2	8.6	8.9	9.5	8.4	7.9	8.5	7.0	5.9	6.7	5.9	6.0	6.7	5.9	7.3	7.3	10.2	1.2	6.7
22	10.0	9.1	6.5	3.9	2.9	5.5	2.5	1.5	1.9	3.3	3.8	3.4	3.5	2.5	1.3	0.9	1.4	1.7	2.0	2.2	1.3	0.9	0.9	1.4	10.0	0.9	3.1
23	1.0	1.1	1.7	2.4	2.1	1.6	1.9	2.1	2.6	2.3	1.8	2.0	2.1	2.3	2.8	2.3	2.7	2.8	2.4	3.2	4.3	2.0	2.0	1.6	4.3	1.0	2.2
24	1.5	1.1	1.0	2.1	5.5	5.3	5.3	6.0	5.5	5.7	5.3	5.6	4.3	1.4	0.7	2.3	1.8	2.5	2.9	2.4	1.8	1.8	2.5	2.2	6.0	0.7	3.2
25	3.0	2.9	3.8	2.3	1.6	1.8	1.9	1.3	1.4	3.2	2.5	1.1	1.3	2.3	1.2	1.8	1.6	1.3	1.6	1.5	0.9	1.8	1.6	2.5	3.8	0.9	1.9
26	2.8	3.5	3.3	3.3	2.8	2.5	2.3	1.9	1.1	1.9	2.9	3.4	4.6	5.4	4.8	5.0	5.6	5.0	3.0	1.2	1.2	1.0	1.0	3.7	5.6	1.0	3.0
27	3.8	4.3	4.5	3.8	2.7	1.3	2.5	1.8	2.2	2.2	2.6	3.1	3.2	2.9	2.6	3.0	2.5	2.3	1.8	2.5	3.9	1.8	1.0	1.5	4.5	1.0	2.7
28	0.6	0.8	3.2	1.8	1.8	1.3	1.4	1.8	1.7	0.9	0.5	2.1	4.8	3.6	4.4	2.5	1.6	1.6	1.7	1.3	1.1	0.8	0.6	1.7	4.8	0.5	1.8
29	1.0	2.4	2.0	1.3	2.1	2.6	2.1	0.8	1.4	3.1	3.5	4.0	3.5	3.7	3.7	4.1	5.2	4.4	1.9	2.7	4.8	5.8	6.1	6.5	6.5	0.8	3.3
30	7.1	6.4	6.3	5.9	4.8	4.3	2.9	2.5	0.9	1.8	2.5	3.6	2.0	1.7	2.0	1.8	2.4	1.7	1.3	1.2	1.2	1.7	2.5	1.7	7.1	0.9	2.9
Max.	**10.0**	**9.1**	**9.1**	**8.4**	**8.3**	**9.8**	**10.2**	**10.0**	**9.3**	**9.3**	**10.5**	**10.2**	**8.4**	**7.9**	**8.5**	**7.0**	**5.9**	**6.7**	**6.3**	**7.9**	**8.4**	**6.0**	**7.3**	**7.3**	**10.5**		
Min.	**0.4**	**0.4**	**0.3**	**0.6**	**0.6**	**0.5**	**0.6**	**0.7**	**0.7**	**0.4**	**0.5**	**0.4**	**0.6**	**0.7**	**0.4**	**0.5**	**0.6**	**0.6**	**0.8**	**0.6**	**0.4**	**0.2**	**0.2**	**0.1**		**0.1**	
Avg.	**3.1**	**3.1**	**3.0**	**3.0**	**3.2**	**3.4**	**3.4**	**3.4**	**3.4**	**3.7**	**3.7**	**3.8**	**3.8**	**3.3**	**3.0**	**2.9**	**2.7**	**2.7**	**2.6**	**2.6**	**2.5**	**2.3**	**2.7**	**2.8**			**3.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.0	1.1	0.9	0.9	2.1	2.5	1.0	1.6	2.6	1.7	1.9	1.6	1.0	1.1	2.0	2.1	2.1	2.2	2.7	1.9	1.6	1.2	1.1	1.4	2.7	0.9	1.7
2	0.7	0.5	0.9	1.1	0.9	0.7	0.6	0.5	1.3	2.5	3.2	3.4	3.9	3.9	3.9	3.8	3.8	2.7	1.6	1.7	0.8	0.9	0.8	1.3	3.9	0.5	1.9
3	0.9	0.7	1.0	1.9	1.2	1.6	1.0	1.0	1.3	2.0	2.5	3.5	3.1	3.2	3.2	3.2	3.4	2.5	2.0	1.9	1.3	1.9	1.2	0.8	3.5	0.7	1.9
4	1.0	0.7	1.2	1.6	2.1	1.5	2.7	3.9	1.9	1.1	1.8	1.6	1.7	2.5	3.0	3.4	3.7	3.6	3.7	3.9	3.0	1.8	0.9	1.3	3.9	0.7	2.2
5	1.3	1.3	2.5	1.1	1.6	0.7	3.4	1.7	1.0	2.4	2.9	2.6	2.9	1.7	2.0	1.8	1.5	0.5	1.9	1.3	0.6	1.4	1.8	1.3	3.4	0.5	1.7
6	0.8	1.4	1.8	1.9	2.1	3.2	2.6	0.7	1.1	2.9	3.2	3.0	3.1	3.3	3.2	3.3	3.1	3.1	2.5	1.5	0.7	0.8	1.0	1.0	3.3	0.7	2.1
7	0.8	1.5	3.1	3.2	1.0	2.6	1.6	0.7	1.5	1.7	2.6	4.0	3.0	1.9	3.7	1.5	1.8	2.6	2.2	3.4	2.2	2.1	1.6	1.3	4.0	0.7	2.1
8	0.3	0.9	0.3	0.4	0.8	1.8	2.7	1.6	1.7	4.5	4.7	2.8	1.9	1.5	0.9	1.7	1.2	1.2	1.5	2.4	2.2	1.9	1.5	1.4	4.7	0.3	1.7
9	1.8	1.9	2.9	2.6	2.9	3.2	3.4	4.6	4.3	3.5	4.7	3.4	2.9	3.0	2.2	5.3	5.1	3.9	3.1	2.9	4.7	4.1	3.6	2.3	5.3	1.8	3.4
10	3.1	1.7	0.8	1.4	1.3	0.8	1.2	1.0	0.9	1.1	1.4	2.0	2.6	2.5	2.0	1.2	2.3	2.3	3.2	1.2	0.9	1.0	0.7	0.4	3.2	0.4	1.5
11	1.4	0.8	1.5	2.1	2.7	1.7	2.5	1.9	1.5	1.6	2.0	2.6	2.6	2.7	2.6	2.9	3.1	3.2	3.0	3.0	2.7	1.3	0.9	0.3	3.2	0.3	2.1
12	1.0	0.3	0.4	0.4	0.5	1.3	1.1	0.8	1.1	0.9	1.3	2.0	2.5	2.8	2.7	2.8	2.8	2.4	2.5	1.6	1.4	1.2	1.3	0.4	2.8	0.3	1.5
13	0.5	2.1	0.8	1.0	0.9	1.3	1.6	2.8	2.3	1.7	1.6	1.9	1.1	0.7	1.6	1.1	1.4	2.5	2.3	2.7	2.4	1.8	0.9	0.4	2.8	0.4	1.6
14	2.6	2.8	2.5	2.2	2.3	3.6	5.1	4.8	3.1	3.4	2.7	2.4	1.7	1.7	1.7	0.8	1.6	2.2	2.4	1.9	1.2	0.8	1.1	0.4	5.1	0.4	2.3
15	1.3	1.1	0.8	0.7	0.8	1.2	1.2	1.3	1.6	1.2	1.8	2.4	3.5	3.8	3.7	4.1	4.0	2.7	4.2	4.8	5.3	6.9	7.1	7.3	7.3	0.7	3.0
16	7.7	7.9	7.5	7.3	7.1	6.1	6.1	4.6	3.8	3.0	2.4	2.7	2.9	2.0	1.2	3.9	5.9	5.9	6.1	5.8	5.4	5.8	5.0	4.8	7.9	1.2	5.0
17	6.6	5.8	3.9	2.1	2.8	3.0	3.5	4.3	2.8	2.0	2.6	2.6	2.9	3.0	2.9	1.9	2.6	2.2	1.2	1.2	1.8	1.4	2.4	2.1	6.6	1.2	2.8
18	1.2	2.0	1.6	1.1	0.7	0.6	0.8	2.0	0.7	2.1	5.0	5.1	3.8	3.3	3.0	3.1	4.1	4.0	4.3	4.1	2.2	1.7	2.1	2.0	5.1	0.6	2.5
19	1.8	1.0	0.4	0.8	0.7	0.5	0.4	0.9	0.9	1.8	2.9	3.3	3.8	3.2	3.8	3.0	2.8	1.8	2.7	1.8	1.0	0.9	1.1	1.5	3.8	0.4	1.8
20	2.1	1.4	1.1	0.5	0.3	0.6	1.0	2.2	1.0	2.2	3.0	2.7	3.1	3.5	3.4	3.3	2.7	2.0	2.3	2.5	2.7	4.2	7.2	7.7	7.7	0.3	2.6
21	8.2	8.7	9.6	8.2	8.7	9.6	9.8	8.1	6.7	6.7	5.8	4.1	2.7	2.3	1.5	1.9	2.1	2.8	5.3	6.8	6.0	5.6	4.9	4.0	9.8	1.5	5.8
22	2.1	1.6	2.5	2.5	2.3	0.7	1.3	0.9	0.6	1.6	1.0	1.4	1.7	1.5	1.7	1.7	1.2	1.8	2.3	1.9	1.6	2.4	1.6	1.8	2.5	0.6	1.7
23	1.1	3.5	2.5	2.5	1.8	1.5	2.1	1.5	1.9	1.2	1.7	1.6	1.8	1.7	1.4	1.6	2.2	2.1	2.5	2.5	3.7	3.7	3.3	2.5	3.7	1.1	2.2
24	2.7	1.6	2.2	2.0	5.3	6.3	6.5	6.2	5.7	6.3	5.8	6.4	6.5	6.7	6.4	6.2	6.1	6.9	6.3	6.4	6.1	6.2	7.3	7.3	7.3	1.6	5.6
25	7.0	7.0	7.3	6.7	6.1	6.3	5.9	6.0	6.2	6.5	6.1	6.8	6.4	6.4	5.7	6.6	5.9	5.6	5.0	3.7	4.1	4.9	4.8	2.5	7.3	2.5	5.8
26	2.8	1.6	2.3	1.1	0.9	1.7	2.1	1.8	1.8	1.1	1.2	1.3	2.0	2.5	2.4	2.9	3.2	3.8	4.3	3.3	1.6	1.6	1.8	1.0	4.3	0.9	2.1
27	1.6	1.2	2.3	2.8	3.6	1.1	3.3	1.3	1.9	1.9	2.5	3.1	3.3	3.4	3.8	4.2	4.0	3.0	2.1	1.5	1.5	1.9	1.3	3.1	4.2	1.1	2.5
28	1.8	6.7	6.0	2.0	5.6	6.7	5.9	5.6	5.1	4.5	3.1	1.5	1.1	1.2	1.4	2.0	4.6	6.3	7.1	8.2	9.9	11.5	11.5	8.0	11.5	1.1	5.3
29	7.7	7.6	7.4	7.2	6.5	5.1	5.9	4.4	5.4	3.0	2.1	2.2	1.8	1.2	1.2	1.3	1.1	3.9	6.7	7.8	8.1	7.8	6.7	6.5	8.1	1.1	4.9
30	5.6	2.7	1.9	2.0	2.6	1.7	2.1	7.2	7.9	6.1	7.2	4.4	3.2	2.9	3.6	3.7	3.2	3.3	3.4	3.3	2.6	2.6	3.3	3.3	7.9	1.7	3.7
31	2.4	2.1	2.1	2.2	2.0	1.8	1.1	1.8	1.0	1.5	0.7	0.6	1.0	0.8	1.6	1.7	1.1	1.2	1.8	1.1	2.0	1.7	2.6	2.7	2.7	0.6	1.6
Max.	**8.2**	**8.7**	**9.6**	**8.2**	**8.7**	**9.6**	**9.8**	**8.1**	**7.9**	**6.7**	**7.2**	**6.8**	**6.5**	**6.7**	**6.4**	**6.6**	**6.1**	**6.9**	**7.1**	**8.2**	**9.9**	**11.5**	**11.5**	**8.0**	**11.5**		
Min.	**0.3**	**0.3**	**0.3**	**0.4**	**0.3**	**0.5**	**0.4**	**0.5**	**0.6**	**0.9**	**0.7**	**0.6**	**1.0**	**0.7**	**0.9**	**0.8**	**1.1**	**0.5**	**1.2**	**1.1**	**0.6**	**0.8**	**0.7**	**0.3**		**0.3**	
Avg.	**2.6**	**2.6**	**2.6**	**2.4**	**2.6**	**2.6**	**2.9**	**2.8**	**2.6**	**2.7**	**2.9**	**2.9**	**2.8**	**2.6**	**2.7**	**2.8**	**3.0**	**3.0**	**3.3**	**3.2**	**2.9**	**3.0**	**3.0**	**2.7**			**2.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Speed (RM Young) (m/s)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	2.9	4.1	2.7	2.6	3.2	2.9	2.6	3.9	2.2	2.0	1.7	1.4	1.6	1.5	1.6	2.0	1.6	1.5	1.8	1.7	2.8	3.0	2.5	2.5	4.1	1.4	2.3
2	2.1	2.0	2.8	3.1	2.6	3.2	3.4	3.1	3.1	3.7	3.6	3.0	3.3	3.4	3.8	3.4	3.5	4.2	4.8	4.9	4.6	3.1	3.0	2.6	4.9	2.0	3.3
3	2.7	2.5	2.3	4.2	3.9	3.6	3.0	2.6	3.5	3.8	3.7	3.5	3.2	2.6	2.9	3.4	3.4	2.3	2.1	2.8	2.9	3.1	3.3	2.4	4.2	2.1	3.1
4	2.7	3.5	3.7	3.8	3.9	3.5	4.1	4.1	5.1	4.1	4.1	4.5	3.9	4.1	4.2	2.5	3.5	4.3	3.1	2.9	2.5	2.8	3.2	4.4	5.1	2.5	3.7
5	3.5	3.2	2.9	2.6	2.1	1.7	2.3	1.9	2.2	2.9	1.4	3.5	3.4	8.8	8.2	11.5	10.1	9.4	12.5	12.8	13.0	10.4	3.8	2.9	13.0	1.4	5.7
6	5.3	9.3	5.8	7.4	4.5	4.7	11.8	13.9	11.8	10.4	8.2	6.7	8.7	6.7	5.2	4.2	3.4	3.4	3.0	4.4	2.8	2.9	2.8	4.8	13.9	2.8	6.3
7	4.0	4.3	7.4	6.9	7.0	7.2	6.0	4.6	3.8	1.7	1.8	2.0	2.9	4.4	5.4	4.8	6.5	5.6	3.2	2.3	3.9	5.0	3.8	3.7	7.4	1.7	4.5
8	2.6	1.9	2.1	1.4	2.8	2.8	2.7	3.1	3.3	1.7	1.3	0.7	0.5	1.6	4.0	4.8	6.9	7.1	7.0	6.6	1.7	3.1	4.7	4.9	7.1	0.5	3.3
9	3.9	4.0	4.3	3.4	2.9	2.2	1.5	2.6	1.6	2.6	3.1	2.8	2.9	3.3	3.0	3.4	3.3	3.2	3.0	1.8	0.9	0.7	2.0	1.6	4.3	0.7	2.7
10	0.8	0.7	0.7	0.9	1.7	1.6	1.0	0.9	1.6	2.3	2.6	2.7	2.9	2.8	3.0	3.2	3.0	3.5	2.4	1.0	0.6	0.3	0.2	0.5	3.5	0.2	1.7
11	0.4	0.7	1.3	1.1	1.7	2.1	1.3	2.5	2.8	4.2	3.5	3.7	3.6	3.4	3.3	3.4	2.7	1.6	1.4	1.5	1.0	2.7	2.7	4.4	4.4	0.4	2.4
12	3.0	4.2	8.5	5.4	3.6	2.2	3.5	5.2	2.1	3.7	2.7	3.9	3.7	4.2	2.7	6.5	8.7	9.1	6.9	4.1	1.9	1.5	3.0	2.7	9.1	1.5	4.3
13	1.5	1.3	1.5	1.7	1.8	0.9	0.4	0.5	0.5	1.7	2.7	3.0	3.5	3.4	3.2	3.0	2.6	1.6	0.6	0.8	0.7	1.7	2.6	6.5	6.5	0.4	2.0
14	5.8	5.9	6.1	6.5	7.2	8.8	8.4	7.1	7.3	5.6	5.0	4.4	4.8	7.3	10.2	8.7	9.7	8.9	7.9	7.9	7.3	6.6	5.0	3.8	10.2	3.8	6.9
15	1.7	3.2	2.5	1.6	1.1	1.5	1.4	1.3	1.3	1.0	2.0	3.0	3.5	3.4	2.1	2.6	2.6	2.1	2.3	1.3	0.9	0.8	0.7	2.4	3.5	0.7	1.9
16	1.9	1.4	2.6	3.1	2.6	3.3	3.1	2.9	3.2	3.0	1.4	0.8	1.2	3.0	3.9	3.3	3.5	2.3	1.4	2.0	0.8	1.0	2.3	1.6	3.9	0.8	2.3
17	1.3	1.3	1.5	2.6	2.1	0.7	1.0	1.0	2.4	0.8	1.1	0.7	1.2	0.9	1.7	3.6	3.6	3.0	2.5	1.6	3.0	3.5	3.7	3.3	3.7	0.7	2.0
18	3.4	5.1	4.3	4.7	4.0	4.5	5.3	5.3	5.8	7.3	7.1	6.8	6.7	7.9	8.5	8.7	7.6	7.2	7.9	8.0	8.1	7.7	7.4	8.0	8.7	3.4	6.6
19	7.5	7.7	7.0	7.6	6.8	7.4	7.9	8.3	8.2	8.7	8.6	8.0	7.4	8.0	7.2	6.5	5.9	5.9	6.2	5.8	3.5	2.9	1.7	1.2	8.7	1.2	6.5
20	2.6	3.4	3.8	3.8	3.3	3.7	2.3	1.7	1.2	1.6	1.9	2.2	1.6	1.9	1.5	2.7	1.6	1.1	1.4	1.5	1.6	1.4	1.2	1.7	3.8	1.1	2.1
21	1.6	2.5	2.7	2.0	3.3	3.8	3.4	3.8	2.7	2.8	3.5	2.8	3.5	2.0	1.6	1.4	1.7	1.3	1.2	1.5	1.2	1.4	1.6	1.6	3.8	1.2	2.3
22	2.1	1.4	1.2	1.2	1.7	1.4	1.3	1.4	1.2	1.2	1.4	1.2	1.4	1.7	2.0	2.4	2.4	2.3	2.5	1.5	3.8	3.2	1.6	2.6	3.8	1.2	1.8
23	4.6	4.8	4.8	3.8	3.9	3.7	2.7	2.3	1.0	1.5	1.7	0.9	0.9	0.4	0.8	0.9	1.9	3.7	3.7	3.2	5.1	4.6	3.4	4.9	5.1	0.4	2.9
24	5.4	4.2	3.6	2.7	1.2	0.8	1.2	1.9	3.0	2.4	1.4	1.7	2.2	2.6	2.9	2.9	2.0	1.1	1.4	1.9	0.4	1.1	1.8	1.1	5.4	0.4	2.1
25	2.1	2.2	1.5	0.9	1.1	1.8	2.4	1.6	0.9	1.0	2.3	2.8	3.2	3.1	3.3	3.2	2.6	1.8	2.1	1.9	1.8	1.5	0.6	1.2	3.3	0.6	2.0
26	1.6	1.3	2.0	1.4	0.9	1.0	1.2	0.6	1.0	1.0	1.5	2.0	2.0	2.4	2.8	3.3	3.7	1.5	1.7	1.0	4.4	5.0	5.3	5.7	5.7	0.6	2.3
27	5.3	4.4	3.9	3.9	4.2	4.3	4.3	5.3	5.9	6.0	5.2	4.0	3.6	5.1	5.3	4.7	4.7	4.4	4.0	4.3	4.2	2.1	2.3	2.1	6.0	2.1	4.3
28	3.9	3.2	3.0	3.7	4.3	4.1	2.0	1.2	1.1	1.1	1.7	3.1	2.0	2.2	3.5	4.9	5.4	3.9	1.3	0.7	1.9	4.0	3.1	4.9	5.4	0.7	2.9
29	3.6	3.6	1.9	2.8	2.4	2.4	3.2																		3.6	1.9	2.8
30																0.0	1.3								1.3	0.0	0.7
31						0.6	0.7	1.4	1.6	1.1	2.1	2.0													2.1	0.6	1.4
Max.	**7.5**	**9.3**	**8.5**	**7.6**	**7.2**	**8.8**	**11.8**	**13.9**	**11.8**	**10.4**	**8.6**	**8.0**	**8.7**	**8.8**	**10.2**	**11.5**	**10.1**	**9.4**	**12.5**	**12.8**	**13.0**	**10.4**	**7.4**	**8.0**	**13.9**		
Min.	**0.4**	**0.7**	**0.7**	**0.9**	**0.9**	**0.6**	**0.4**	**0.5**	**0.5**	**0.8**	**1.1**	**0.7**	**0.5**	**0.4**	**0.8**	**0.0**	**1.3**	**1.1**	**0.6**	**0.7**	**0.4**	**0.3**	**0.2**	**0.5**		**0.0**	
Avg.	**3.1**	**3.4**	**3.4**	**3.3**	**3.2**	**3.1**	**3.2**	**3.3**	**3.2**	**3.1**	**3.0**	**3.0**	**3.2**	**3.7**	**3.9**	**4.0**	**4.1**	**3.8**	**3.5**	**3.3**	**3.1**	**3.1**	**2.8**	**3.2**			**3.3**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.0	1.1	0.7	0.8	0.5	0.7	1.2	0.4	1.3	3.0	2.4	2.3	3.2	3.8	3.8	3.7	3.6	3.3	3.1	1.9	0.9	1.3	1.6	2.3	3.8	0.4	2.0
2	2.7	2.5	1.7	1.5	1.5	1.5	1.2	0.9	0.8	1.0	0.9	0.6	1.3	0.8	1.6	1.8	1.9	1.8	1.4	1.5	1.4	1.4	1.1	1.4	2.7	0.6	1.4
3	1.7	1.2	0.7	1.8	2.1	2.0	2.3	2.4	2.8	2.2	2.3	2.6	1.7	1.2	0.7	0.7	1.2	1.5	1.4	2.3	1.9	2.2	1.3	1.6	2.8	0.7	1.7
4	2.4	2.5	1.8	2.0	2.1	2.5	2.5	2.0	1.9	2.1	2.2	2.9	2.4	2.6	3.3	2.8	3.5	3.6	3.9	4.2	3.9	4.7	5.7	6.6	6.6	1.8	3.1
5	7.0	6.9	5.9	6.3	6.7	6.9	6.9	7.1	7.8	6.5	6.2	6.4	4.0	3.3	2.1	1.1	1.8	3.4	4.3	5.0	4.1	4.6	3.0	3.5	7.8	1.1	5.0
6	5.3	7.1	5.9	5.5	6.3	6.3	5.2	5.8	5.5	7.6	7.2	7.2	7.3	5.7	4.7	2.3	1.0	1.5	3.0	3.5	3.9	4.4	5.1	5.2	7.6	1.0	5.1
7	5.0	4.3	5.7	5.2	4.4	4.9	6.6	6.3	5.0	5.2	3.4	1.5	1.7	2.0	5.5	2.9	1.2	1.6	2.0	1.6	2.1	2.0	1.6	1.3	6.6	1.2	3.5
8	7.9	8.2	8.0	7.6	6.5	5.6	3.8	4.7	4.7	5.1	5.2	5.5	5.4	4.6	5.1	3.3	4.4	5.6	5.8	4.6	5.0	3.4	3.6	5.1	8.2	3.3	5.4
9	5.9	5.8	5.5	5.0	5.1	4.3	3.9	4.3	4.8	5.1	5.2	4.6	4.6	4.8	5.0	4.7	3.7	2.2	0.7	3.2	3.1	4.0	4.5	2.9	5.9	0.7	4.3
10	3.8	1.1	0.7	1.3	0.7	0.7	1.5	3.5	3.0	2.3	1.8	1.4	4.9	6.3	5.6	4.8	3.3	2.7	3.6	3.3	2.6	2.9	2.8	3.3	6.3	0.7	2.8
11	3.1	2.5	3.9	6.0	5.6	2.9	2.9	3.4	3.1	3.3	3.7	3.1	3.9	3.8	4.0	3.4	4.1	2.7	2.5	6.4	6.8	7.5	7.8	8.7	8.7	2.5	4.4
12	9.1	8.8	8.8	9.0	8.0	7.6	7.5	7.7	6.5	5.0	4.1	3.3	2.5	3.8	4.5	5.1	3.5	2.7	3.4	3.0	1.3	2.5	3.6	1.9	9.1	1.3	5.1
13	1.9	1.1	1.5	1.0	2.0	3.3	4.5	4.4	4.9	4.2	3.1	2.5	2.6	1.5	1.9	2.3	3.0	4.9	3.4	2.6	1.0	1.9	1.3	1.0	4.9	1.0	2.6
14	2.2	4.1	3.3	2.2	3.4	3.7	3.6	3.5	4.2	3.6	3.5	3.0	2.3	1.4	2.5	3.2	3.2	3.9	3.7	3.2	1.9	1.3	1.0	1.0	4.2	1.0	2.9
15	1.5	2.0	2.0	3.5	3.2	5.8	5.2	3.7	4.2	5.5	5.2	4.8	8.2	4.3	4.3	4.6	3.6	3.1	3.0	3.5	3.6	3.1	2.6	2.7	8.2	1.5	3.9
16	3.3	3.4	2.9	2.6	2.9	2.8	4.6	3.7	5.6	7.3	3.8	2.7	2.9	3.0	3.3	2.5	3.2	4.8	5.5	3.3	5.6	6.9	4.7	5.2	7.3	2.5	4.0
17	5.4	6.8	5.0	4.9	5.5	5.8	5.7	3.1	2.6	4.4	3.3	2.1	2.1	1.3	2.1	1.8	1.5	2.9	2.2	1.8	0.8	0.9	3.0	3.4	6.8	0.8	3.3
18	4.4	5.1	4.1	5.1	4.6	4.5	3.2	3.2	2.4	4.4	3.0	3.1	3.1	3.0	2.8	3.6	3.7	4.5	7.2	6.7	6.6	5.7	5.7	4.9	7.2	2.4	4.4
19	3.3	3.6	1.5	0.9	3.9	4.8	5.7	3.1	5.7	2.3	1.2	1.4	4.0	6.8	3.7	7.5	10.6		13.0	10.6	8.3	10.0	9.1	7.1	13.0	0.9	5.6
20	7.6	8.1	7.5	7.3	6.9	6.2	7.2	4.5	3.4	5.0	2.0	1.8	3.5	9.0	6.2	4.6	3.1	5.1	6.1	4.1	1.4	5.2	6.5	5.1	9.0	1.4	5.3
21	2.3	3.1	3.9	3.0	3.1	2.2	2.9	2.8	2.9	2.7	3.9	3.7	4.4	4.3	5.3	8.2	6.8	4.7	2.9	1.8	1.3	2.1	4.1	6.0	8.2	1.3	3.7
22	6.3	4.0	3.6	3.3	3.4	2.8	3.5	4.1	3.7	3.7	4.3	2.7	4.5	4.5	5.3	6.3	5.4	5.2	4.8	5.8	5.7	5.7	5.7	5.6	6.3	2.7	4.6
23	6.8	7.6	7.7	6.4	6.4	6.2	6.4	6.3	5.7	6.3	5.9	4.4	2.9	1.9	2.5	4.6	3.1	3.3	3.1	2.6	2.4	1.9	1.6	0.6	7.7	0.6	4.4
24	1.6	1.3	1.1	1.5	2.9	11.0	9.6	9.1	5.6	1.8	1.4	2.3	2.6	1.9	3.7	7.7	4.4	1.6	0.7	1.7	3.5	4.1	3.1	2.0	11.0	0.7	3.6
25	1.8	6.1	3.7	4.2	5.4	5.8	4.8	7.9	4.6	1.9	1.4	5.2	5.3	7.5	6.9	4.4	4.5	6.2	7.1	6.7	6.4	7.7	5.8	2.6	7.9	1.4	5.1
26	5.2	4.5	8.3	7.1	5.8	4.7	5.4	6.0	3.6	6.2	2.5	4.2	4.0	3.7	5.3	4.2	2.6	5.5	6.0	7.1	4.4	1.7	1.4	1.4	8.3	1.4	4.6
27	1.1	1.1	1.8	4.4	7.5	8.9	6.5	3.1	2.9	2.1	3.8	3.1	2.0	2.3	2.8	3.1	2.8	2.5	1.9	1.9	1.4	2.2	4.3	5.0	8.9	1.1	3.3
28	5.2	4.5	5.0	5.7	7.5	8.8	9.3	9.3	8.5	8.6	8.3	7.9	7.1	6.4	5.3	4.9	4.1	2.7	2.8	3.8	4.5	4.3	2.5	1.1	9.3	1.1	5.8
29	1.4	3.0	2.5	2.5	2.3	2.0	1.8	2.3	3.0	3.6	3.3	4.2	1.5	4.5	5.0	4.1	3.3	3.8	2.8	2.0	0.9	2.0	1.9	3.7	5.0	0.9	2.8
30	4.9	7.2	5.9	2.9	3.4	1.6	2.4	2.5	2.2	2.2	0.6	2.5	3.4	2.5	2.5	2.2	2.2	1.2	1.4	1.9	3.1	1.6	1.8	1.7	7.2	0.6	2.7
Max.	**9.1**	**8.8**	**8.8**	**9.0**	**8.0**	**11.0**	**9.6**	**9.3**	**8.5**	**8.6**	**8.3**	**7.9**	**8.2**	**9.0**	**6.9**	**8.2**	**10.6**	**6.2**	**13.0**	**10.6**	**8.3**	**10.0**	**9.1**	**8.7**	**13.0**		
Min.	**1.1**	**1.1**	**0.7**	**0.8**	**0.5**	**0.7**	**1.2**	**0.4**	**0.8**	**1.0**	**0.6**	**0.6**	**1.3**	**0.8**	**0.7**	**0.7**	**1.0**	**1.2**	**0.7**	**1.5**	**0.8**	**0.9**	**1.0**	**0.6**		**0.4**	
Avg.	**4.1**	**4.3**	**4.0**	**4.0**	**4.3**	**4.6**	**4.6**	**4.4**	**4.1**	**4.1**	**3.5**	**3.4**	**3.6**	**3.7**	**3.9**	**3.9**	**3.5**	**3.4**	**3.8**	**3.7**	**3.3**	**3.6**	**3.6**	**3.5**			**3.9**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.1	2.8	8.2	7.7	2.8	6.9	7.2	7.3	7.1	5.4	2.5	6.5	8.0	5.3	3.8	3.1	3.5	3.7	3.8	3.0	3.6	3.1	2.9	3.8	8.2	2.5	4.8
2	4.5	5.7	4.1	4.8	3.7	5.5	5.8	4.5	11.1	9.0	7.7	9.1	10.0	9.5	8.2	6.1	4.6	5.9	7.2	4.5	3.6	3.1	6.3	6.9	11.1	3.1	6.3
3	8.2	9.7	3.6	3.3	4.6	3.9	3.7	5.1	4.1	5.9	7.9	9.7	7.3	4.6	4.4	4.9	4.4	4.3	3.9	5.0	6.1	6.1	4.8	4.2	9.7	3.3	5.4
4	4.2	3.0	3.5	4.5	4.0	3.6	3.7	4.1	4.2	4.0	2.5	4.6	5.4	6.9	5.7	5.1	5.4	5.7	5.7	5.9	4.9	4.8	4.1	3.3	6.9	2.5	4.5
5	3.1	3.1	4.2	4.8	4.7	5.7	5.8	5.9	6.0	6.2	6.1	5.4	5.5	4.3	1.9	0.5	1.5	2.7	3.2	5.1	8.4	9.1	5.7	3.5	9.1	0.5	4.7
6	5.6	4.4	4.5	6.9	3.5	4.8	5.8	5.7	8.2	7.5	5.6	5.8	6.8	8.1	7.3	9.1	7.7	6.3	7.2	5.6	7.1	5.7	7.0	7.7	9.1	3.5	6.4
7	7.6	7.5	7.4	7.8	7.1	6.8	6.9	7.7	7.4	6.5	5.8	5.4	4.8	3.9	4.1	4.1	4.1	3.5	5.1	4.3	5.4	5.1	4.8	4.3	7.8	3.5	5.7
8	4.0	5.8	6.6	6.3	7.5	8.3	8.0	6.9	5.8	5.2	3.3	2.8	3.9	4.8	4.8	3.3	4.6	3.7	4.0	5.3	5.2	4.0	3.2	2.4	8.3	2.4	5.0
9	3.2	3.6	3.3	4.5	4.4	4.6	4.4	3.9	3.8	3.3	3.2	2.8	2.9	1.5	1.4	1.2	2.3	2.5	2.8	3.7	3.7	3.9	3.8	2.2	4.6	1.2	3.2
10	2.2	1.8	1.8	3.3	5.3	6.7	5.8	4.1	5.3	7.1	6.6	7.4	5.3	5.7	5.9	7.3	4.0	8.1	6.9	5.9	5.0	5.3	4.6	5.4	8.1	1.8	5.3
11	4.4	4.9	3.7	3.6	3.4	3.2	4.5	4.4	4.1	3.6	4.7	4.7	4.9	5.4	6.5	6.4	6.3	5.8	5.8	6.5	6.9	6.3	5.8	7.1	7.1	3.2	5.1
12	6.8	6.8	6.6	6.9	6.9	6.1	5.5	4.4	4.1	2.1	2.9	2.5	2.4	2.4	1.7	0.5	1.3	1.2	1.8	0.7	2.0	2.6	1.8	1.4	6.9	0.5	3.4
13	1.1	1.3	1.5	2.6	6.4	7.1	6.8	7.4	7.9	7.6	8.6	8.2	7.4	5.8	6.7	7.1	7.5	8.4	9.2	7.8	3.9	4.0	5.6	3.5	9.2	1.1	6.0
14	4.9	4.2	7.2	6.7	5.7	5.9	5.8	7.7	6.2	7.2	7.9	6.8	6.0	6.5	5.9	5.4	5.0	4.5	3.9	2.8	1.1	3.7	3.3	2.8	7.9	1.1	5.3
15	2.1	2.8	1.7	1.9	1.5	2.9	3.4	4.4	4.8	4.5	4.8	5.2	5.5	5.6	4.3	3.0	3.1	2.8	3.4	3.9	4.4	4.3	4.5	3.9	5.6	1.5	3.7
16	4.1	3.9	3.2	2.4	2.5	3.0	3.2	3.5	3.1	2.6	2.3	2.6	3.2	2.0	3.0	2.5	1.6	1.8	1.8	0.9	1.8	4.8	3.1	0.9	4.8	0.9	2.7
17	2.8	2.1	2.2	2.2	3.2	2.2	2.2	4.6	4.3	4.1	4.5	1.5	5.5	4.1	4.6	2.7	2.9	3.8	4.1	2.6	1.9	2.7	3.9	3.7	5.5	1.5	3.3
18	4.3	4.3	5.0	4.0	5.1	3.9	3.9	4.8	4.4	3.7	4.3	5.6	6.4	6.1	7.2	7.8	7.3	7.0	7.6	8.0	8.3	8.9	9.3	8.9	9.3	3.7	6.1
19	9.5	9.5	9.4	8.4	8.1	8.7	7.5	6.8	6.6	6.9	6.4	6.9	6.5	4.5	5.7	5.6	5.0	5.4	5.2	6.2	6.4	6.6	4.9	3.4	9.5	3.4	6.7
20	3.6	2.8	2.5	2.9	2.8	3.3	3.2	3.8	3.8	4.7	5.9	5.5	4.8	5.4	5.5	5.9	5.9	6.7	7.4	7.8	8.8	9.6	10.0	9.3	10.0	2.5	5.5
21	9.3	8.9	8.8	9.3	9.7	9.8	9.2	9.1	8.3	8.5	8.5	8.2	9.0	9.0	8.7	9.0	7.3	5.2	5.3	3.9	2.4	2.4	1.6	1.3	9.8	1.3	7.2
22	0.8	0.7	1.8	2.6	2.8	2.7	3.4	2.5	2.8	3.2	3.3	4.2	7.4	6.0	3.5	3.6	2.7	1.8	1.0	0.9	1.3	0.8	1.7	2.3	7.4	0.7	2.7
23	0.8	1.6	1.4	1.7	2.8	3.2	2.7	2.6	2.4	2.5	3.2	2.1	4.3	3.1	4.2	2.6	4.4	2.4	7.4	8.5	7.5	8.4	3.9	4.1	8.5	0.8	3.7
24	5.2	1.8	1.3	2.0	1.3	1.6	1.4	1.8	1.4	1.0	1.9	4.2	3.4	2.7	2.7	3.2	3.6	4.0	3.4	5.4	5.4	5.4	6.1	6.9	6.9	1.0	3.2
25	8.0	5.3	2.5	5.2	6.4	7.2	8.1	8.7	9.7	10.6	10.2	11.6	10.7	10.4	10.4	9.6	8.7	7.9	7.8	8.1	8.1	8.0	6.2	5.1	11.6	2.5	8.1
26	3.6	3.6	4.0	4.0	4.0	3.3	3.7	4.1	4.1	4.9	5.3	4.4	4.3	4.0	4.7	4.7	5.3	5.4	6.2	5.9	4.9	5.1	5.5	5.2	6.2	3.3	4.6
27	6.0	6.0	5.5	5.5	4.7	5.3	5.5	7.3	7.7	7.3	7.1	6.5	5.9	6.2	5.7	6.0	5.5	4.7	5.8	5.3	5.6	5.6	5.4	5.2	7.7	4.7	5.9
28	4.7	4.7	4.6	4.5	3.4	1.8	1.6	2.4	2.6	2.8	2.1	2.4	2.8	2.0	2.1	3.5	2.4	1.0	1.8	3.7	5.2	5.9	5.6	6.3	6.3	1.0	3.3
29	6.2	6.4	6.4	6.0	6.7	7.7	7.9	8.1	8.8	9.4	10.1	10.8	11.5	11.5	11.8	12.0	11.4	11.5	11.8	10.8	9.5	9.8	9.4	9.6	12.0	6.0	9.4
30	10.6	11.0	11.8	12.9	12.7	12.0	12.1	11.6	12.5	11.0	7.1	2.4	4.8	1.7	2.3	4.8	6.1	6.7	3.7	5.1	5.9	6.0	4.5	6.0	12.9	1.7	7.7
31	6.5	8.8	3.3	3.4	6.9	12.1	9.5	7.2	10.5	8.8	12.0	10.0	7.4	8.1	3.4	2.3	1.5	3.0	4.2	5.6	6.1	6.6	9.5	9.0	12.1	1.5	6.9
Max.	**10.6**	**11.0**	**11.8**	**12.9**	**12.7**	**12.1**	**12.1**	**11.6**	**12.5**	**11.0**	**12.0**	**11.6**	**11.5**	**11.5**	**11.8**	**12.0**	**11.4**	**11.5**	**11.8**	**10.8**	**9.5**	**9.8**	**10.0**	**9.6**	**12.9**		
Min.	**0.8**	**0.7**	**1.3**	**1.7**	**1.3**	**1.6**	**1.4**	**1.8**	**1.4**	**1.0**	**1.9**	**1.5**	**2.4**	**1.5**	**1.4**	**0.5**	**1.3**	**1.0**	**1.0**	**0.7**	**1.1**	**0.8**	**1.6**	**0.9**		**0.5**	
Avg.	**4.9**	**4.8**	**4.6**	**4.9**	**5.0**	**5.5**	**5.4**	**5.6**	**5.9**	**5.7**	**5.6**	**5.7**	**5.9**	**5.4**	**5.1**	**4.9**	**4.7**	**4.7**	**5.1**	**5.1**	**5.2**	**5.4**	**5.1**	**4.8**			**5.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.1	9.9	9.7	9.2	10.3	10.7	10.1	10.7	9.7	7.9	6.4	8.0	6.6	7.2	4.7	2.1	2.5	5.5	7.3	6.5	4.2	4.7	5.4	7.8	10.7	2.1	7.3
2	9.5	7.9	9.8	10.9	10.6	10.2	10.6	7.9	9.8	8.5	9.0	8.6	7.7	7.6	5.6	4.8	4.9	5.5	4.9	4.7	6.0	6.1	6.8	7.0	10.9	4.7	7.7
3	7.3	7.1	7.6	8.1	7.8	7.6	7.3	7.0	7.1	7.5	7.8	7.4	6.3	5.9	4.5	2.6	2.2	1.7	1.8	2.7	4.2	5.0	5.2	4.7	8.1	1.7	5.7
4	5.5	4.5	4.8	3.0	2.5	4.3	4.9	5.6	5.5	5.9	5.9	5.1	5.6	5.3	4.3	4.4	5.3	5.2	5.1	5.4	6.2	5.6	5.0	3.4	6.2	2.5	4.9
5	4.1	3.4	2.7	2.1	4.1	5.6	5.5	5.5	5.1	4.0	4.7	5.7	5.6	5.8	5.3	5.2	4.9	5.0	5.1	5.1	5.3	5.3	5.5	5.0	5.8	2.1	4.8
6	5.9	6.2	6.6	7.2	8.4	7.9	8.7	8.8	8.9	10.1	10.4	9.6	10.4	10.9	10.1	10.8	10.6	11.4	11.0	10.6	9.6	9.4	8.8	8.0	11.4	5.9	9.2
7	7.0	6.4	6.4	5.8	6.1	5.8	6.4	7.5	5.9	3.9	2.5	2.3	2.4	2.1	3.2	2.0	1.1	2.3	3.2	1.1	2.2	4.0	3.6	1.3	7.5	1.1	3.9
8	2.8	2.9	3.5	3.9	3.5	5.3	4.5	6.6	7.8	8.5	11.4	10.4	9.7	7.4	2.8	2.3	2.9	3.1	3.0	3.1	1.9	3.4	2.7	3.3	11.4	1.9	4.9
9	2.7	1.6	1.7	3.9	4.8	4.2	4.5	4.6	4.4	4.1	4.1	5.9	5.8	5.4	5.2	4.3	4.1	3.5	4.4	4.2	4.3	4.0	4.2	3.6	5.9	1.6	4.1
10	4.1	4.4	3.9	4.0	4.1	3.6	3.1	2.5	1.6	1.2	1.9	1.0	1.4	2.4	3.3	4.1	4.3	4.7	3.6	3.3	3.8	4.4	4.4	3.8	4.7	1.0	3.3
11	3.2	2.8	2.2	2.7	3.1	2.8	2.6	3.4	3.1	3.2	2.9	2.4	3.2	3.9	2.4	1.9	0.9	2.8	4.8	5.3	5.1	3.9	5.1	4.3	5.3	0.9	3.2
12	5.1	5.7	5.7	5.7	5.9	5.0	6.4	5.8	7.6	7.4	6.5	6.6	5.5	3.7	3.3	3.7	3.7	3.4	4.4	4.2	4.3	5.7	6.3	5.7	7.6	3.3	5.3
13	6.7	6.8	6.3	6.9	8.4	7.6	8.5	8.5	8.4	9.4	10.1	10.2	9.6	10.1	8.1	7.0	6.4	6.0	5.3	5.6	5.2	5.2	4.1	3.6	10.2	3.6	7.2
14	3.4	4.0	3.2	3.5	3.6	1.8	1.6	2.5	2.7	3.8	3.7	4.2	4.9	4.9	4.8	4.7	4.8	5.0	5.5	5.0	5.1	4.6	3.5	3.5	5.5	1.6	3.9
15	5.2	4.8	4.9	4.4	2.5	1.3	1.8	2.2	2.9	1.9	2.3	1.8	2.7	2.4	3.2	3.7	4.2	4.5	4.5	5.1	6.1	4.7	5.5	5.7	6.1	1.3	3.7
16	6.6	8.7	8.4	9.2	9.1	8.9	8.6	8.6	8.6	9.0	9.7	8.8	8.1	8.0	7.4	8.0	9.0	7.9	6.3	7.2	6.2	6.6	7.0	6.8	9.7	6.2	8.0
17	5.6	5.2	7.0	7.8	7.6	6.9	7.6	7.9	7.5	6.0	7.0	5.5	6.4	8.2	8.2	7.6	8.4	8.6	8.3	7.8	7.9	9.0	8.5	9.4	9.4	5.2	7.5
18	9.5	9.4	9.1	9.7	9.4	8.7	7.0	8.3	6.1	7.2	5.0	6.6	8.6	7.0	5.8	4.9	5.1	5.2	6.3	6.6	7.6	7.6	7.0	5.7	9.7	4.9	7.2
19	4.4	4.7	4.6	4.4	4.8	4.9	5.3	4.6	5.6	5.1	5.5	5.3	5.4	6.6	5.8	7.0	7.5	8.4	9.0	9.1	9.6	9.2	9.1	9.1	9.6	4.4	6.5
20	10.4	10.5	10.2	11.0	10.9	10.9	10.3	10.6	10.0	10.1	10.1	10.7	11.1	9.4	9.2	10.3	10.8	11.6	11.3	11.5	10.7	11.6	12.1	11.8	12.1	9.2	10.7
21	11.1	10.7	9.9	8.6	5.3	2.6	2.5	3.2	3.1	2.9	2.1	4.5	2.8	2.3	2.2	1.6	2.1	2.3	1.8	2.4	3.1	2.6	2.7	3.5	11.1	1.6	4.0
22	2.0	2.2	5.5	7.9	9.0	10.1	10.3	10.3	11.4	10.6	9.2	8.7	8.6	9.1	9.1	10.4	11.2	11.8	11.1	9.8	8.8	6.6	6.0	6.1	11.8	2.0	8.6
23	5.4	4.8	5.3	5.1	4.2	2.5	4.5	6.0	6.2	7.0	6.3	6.6	5.3	5.7	5.0	7.2	6.9	9.1	7.0	5.1	6.2	5.7	4.9	6.2	9.1	2.5	5.8
24	7.0	7.0	7.2	6.0	2.6	1.4	2.2	3.6	3.7	4.5	4.7	5.2	6.1	5.6	4.7	5.6	8.0	8.9	10.0	10.5	10.1	10.4	9.6	9.0	10.5	1.4	6.4
25	8.5	8.9	9.3	8.2	8.5	9.6	10.1	11.9	13.7	12.6	13.0	12.8	12.3	12.7	13.6	13.4	13.1	13.1	13.2	13.2	12.6	12.0	12.1	12.4	13.7	8.2	11.7
26	12.9	13.8	13.4	12.5	13.2	12.2	11.3	9.8	8.3	6.3	6.3	5.5	3.9	4.3	4.3	3.4	2.7	1.7	1.3	2.0	1.7	1.5	2.6	2.5	13.8	1.3	6.6
27	1.6	2.2	3.0	3.4	2.7	3.8	4.9	5.6	5.5	6.6	6.1	7.5	7.6	8.4	7.6	8.5	8.3	7.4	8.2	8.6	8.5	8.6	8.6	7.6	8.6	1.6	6.3
28	8.0	7.5	6.0	6.8	6.9	6.3	6.3	6.2	5.6	4.8	3.9	4.0	4.0	3.8	3.9	2.9	3.0	3.8	5.0	4.9	5.5	5.1	4.7	5.2	8.0	2.9	5.2
29	5.7	5.1	5.0	4.8	4.6	4.0	4.5	5.6	6.7	6.3	6.3	6.4	6.8	7.4	7.5	7.3	7.2	7.9	8.0	7.9	8.5	8.3	7.9	8.0	8.5	4.0	6.6
30	8.1	8.5	7.1	7.7	7.6	7.4	8.2	8.6	9.0	8.7	8.2	9.1	8.2	6.9	7.0	8.5	8.8	9.0	8.6	9.9	8.5	7.7	7.2	8.5	9.9	6.9	8.2
Max.	**12.9**	**13.8**	**13.4**	**12.5**	**13.2**	**12.2**	**11.3**	**11.9**	**13.7**	**12.6**	**13.0**	**12.8**	**12.3**	**12.7**	**13.6**	**13.4**	**13.1**	**13.1**	**13.2**	**13.2**	**12.6**	**12.0**	**12.1**	**12.4**	**13.8**		
Min.	**1.6**	**1.6**	**1.7**	**2.1**	**2.5**	**1.3**	**1.6**	**2.2**	**1.6**	**1.2**	**1.9**	**1.0**	**1.4**	**2.1**	**2.2**	**1.6**	**0.9**	**1.7**	**1.3**	**1.1**	**1.7**	**1.5**	**2.6**	**1.3**		**0.9**	
Avg.	**6.3**	**6.3**	**6.3**	**6.5**	**6.4**	**6.1**	**6.3**	**6.7**	**6.7**	**6.5**	**6.4**	**6.5**	**6.4**	**6.4**	**5.7**	**5.7**	**5.8**	**6.2**	**6.3**	**6.3**	**6.3**	**6.3**	**6.2**	**6.1**			**6.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.9	6.7	6.0	5.9	3.3	4.7	4.5	3.4	2.6	3.3	1.8	0.8	3.7	4.7	3.7	2.0	0.4	0.5	1.7	2.1	3.3	2.1	2.0	2.5	8.9	0.4	3.4
2	2.0	2.5	3.3	1.5	0.6	1.8	2.8	2.4	0.9	0.9	0.9	2.4	1.6	2.4	2.8	6.5	9.4	12.9	10.2	7.4	10.4	9.8	12.6	12.5	12.9	0.6	5.0
3	12.5	11.0	9.5	9.6	8.8	8.5	8.4	9.9	10.7	10.8	10.4	11.7	12.0	11.5	12.0	10.5	11.4	10.5	8.0	9.1	8.5	9.6	10.0	10.0	12.5	8.0	10.2
4	11.4	10.4	10.0	9.4	8.8	11.0	11.8	9.7	10.2	10.3	9.3	8.3	5.3	2.3	2.7	3.5	3.5	2.3	2.1	2.2	2.3	2.0	1.9	2.4	11.8	1.9	6.4
5	2.6	2.2	2.7	2.2	2.0	2.5	3.1	3.8	5.7	6.9	7.1	7.5	7.1	7.4	8.1	8.4	7.6	5.9	6.1	5.7	6.1	6.8	7.8	7.1	8.4	2.0	5.5
6	7.2	6.1	6.5	5.7	5.1	3.1	4.4	4.3	4.2	4.2	4.1	4.8	4.1	4.1	5.8	6.8	5.8	5.6	6.0	4.0	1.2	0.7	2.0	2.5	7.2	0.7	4.5
7	2.9	2.3	1.6	2.0	1.6	1.1	3.5	5.5	4.9	3.6	2.9	2.3	3.8	4.9	5.2	6.8	8.4	9.4	10.8	10.6	10.9	11.2	10.6	9.0	11.2	1.1	5.7
8	7.4	5.9	6.1	6.5	6.2	6.5	6.9	6.1	4.6	4.8	3.7	3.6	4.0	4.6	3.3	2.0	0.3	0.0	0.0	1.3	2.1	4.2	6.6	7.8	7.8	0.0	4.3
9	5.9	4.5	4.6	1.8	1.7	2.7	4.1	5.5	4.3	2.9	2.9	4.3	4.2	4.6	4.5	4.6	4.4	3.5	3.5	4.5	5.2	5.7	5.8	6.4	6.4	1.7	4.3
10	6.8	9.1	10.7	10.8	10.3	11.7	11.7	12.0	11.2	11.5	11.4	11.8	11.7	11.3	8.9	9.1	9.1	8.4	7.6	7.0	6.6	5.7	2.5	0.8	12.0	0.8	9.1
11	2.0	1.3	4.0	6.8	5.7	8.6	5.0	5.1	4.1	5.1	5.4	7.4	9.1	7.1	5.6	6.4	5.1	7.4	6.4	4.2	3.9	3.0	3.5	4.5	9.1	1.3	5.3
12	3.3	3.0	4.1	3.8	3.9	4.1	4.8	5.0	5.0	5.3	4.4	4.5	5.4	5.4	4.9	3.6	3.8	3.6	3.1	3.1	3.7	3.8	2.9	1.7	5.4	1.7	4.0
13	0.6	0.8	1.8	2.0	0.8	1.6	3.1	2.8	2.6	3.9	3.8	4.0	4.4	3.6	3.8	3.5	3.0	2.1	2.2	1.2	0.7	2.1	1.2	0.8	4.4	0.6	2.4
14	0.6	0.6	1.5	1.2	1.0	1.7	2.3	5.8	7.3	7.8	6.1	5.1	6.3	6.3	6.6	6.5	5.8	5.0	5.5	7.5	7.4	6.7	6.8	6.9	7.8	0.6	4.9
15	5.0	4.1	4.1	5.8	4.5	5.9	4.8	5.4	6.4	5.6	7.6	6.5	7.0	5.9	9.5	8.7	9.6	8.9	6.6	4.3	6.0	6.1	5.0	6.6	9.6	4.1	6.2
16	4.3	7.5	6.4	4.7	5.4	6.3	7.0	8.0	7.8	8.1	9.2	8.4	7.9	8.5	9.2	9.6	8.3	7.6	6.5	7.7	7.6	7.5	7.2	5.5	9.6	4.3	7.3
17	5.7	7.8	8.8	9.0	7.8	8.1	8.6	8.5	8.4	7.2	7.1	6.4	5.4	3.7	3.9	3.1	5.1	4.0	4.1	2.6	4.1	4.5	4.6	6.0	9.0	2.6	6.0
18	3.7	6.5	6.0	5.4	4.2	4.6	5.6	5.6	6.0	6.0	6.1	6.6	7.7	6.6	5.6	4.2	3.4	3.1	2.6	2.0	2.3	2.2	2.4	2.8	7.7	2.0	4.6
19	3.6	4.2	5.1	6.1	5.1	5.8	6.3	6.6	4.8	6.8	6.0	5.4	6.6	6.8	8.0	7.9	7.1	7.2	7.5	7.6	5.6	2.2	2.5	2.6	8.0	2.2	5.7
20	2.9	3.2	3.9	5.5	5.3	5.3	4.9	5.9	6.9	8.0	7.6	7.5	8.0	8.3	8.8	9.0	9.0	9.8	9.1	9.1	8.6	9.3	8.8	8.1	9.8	2.9	7.2
21	7.9	7.5	6.9	6.8	5.8	6.2	7.2	7.2	6.8	5.9	5.4	4.6	3.6	3.7	3.7	3.9	3.9	4.7	5.7	6.5	6.5	6.9	6.4	7.3	7.9	3.6	5.9
22	7.5	7.3	7.2	8.4	7.8	7.4	7.4	7.7	7.0	7.1	7.0	6.8	6.2	6.1	6.0	6.5	6.2	5.5	6.2	6.2	6.5	6.0	6.1	4.6	8.4	4.6	6.7
23	4.9	5.3	3.6	8.9	8.2	8.8	6.7	6.0	7.6	6.7	5.1	4.6	3.4	5.9	5.7	5.5	3.9	4.6	4.9	4.5	4.1	3.7	3.0	6.7	8.9	3.0	5.5
24	3.7	1.8	2.1	1.9	3.7	4.3	2.7	2.5	4.4	6.5	5.4	3.3	3.3	3.0	3.3	4.4	3.4	3.7	9.0	9.2	9.5	10.0	10.4	7.9	10.4	1.8	5.0
25	6.8	6.8	7.2	8.5	10.0	10.6	5.6	5.2	6.4	6.4	6.9	6.7	9.5	11.5	13.5	9.4	10.4	8.0	7.8	7.5	6.5	7.4	9.5	7.2	13.5	5.2	8.1
26	5.2	3.4	4.3	7.9	6.5	4.6	5.5	4.7	3.6	4.4	5.3	5.8	8.1	9.6	9.2	9.6	8.6	8.7	9.7	9.6	8.5	9.3	9.7	8.9	9.7	3.4	7.1
27	9.0	9.9	9.9	10.4	10.3	10.1	11.1	11.2	10.5	10.6	11.0	10.4	10.6	10.1	9.9	10.0	9.8	10.0	9.7	9.3	8.9	8.7	8.7	8.8	11.2	8.7	9.9
28	7.4	6.6	3.7	4.0	5.0	5.0	4.1	4.7	5.9	8.1	6.5	5.3	6.6	5.2	5.6	4.6	4.4	5.0	3.6	2.9	3.1	2.3	3.0	2.8	8.1	2.3	4.8
29	3.5	3.5	2.4	2.9	3.9	5.3	5.5	7.3	7.1	4.5	3.9	5.2	6.2	7.3	7.8	6.4	6.6	6.4	6.1	6.9	5.6	6.3	5.0	5.5	7.8	2.4	5.5
30	5.3	5.8	4.6	5.4	6.2	6.7	6.5	6.0	4.1	2.7	3.0	4.1	4.8	5.3	4.5	5.9	6.5	7.6	9.6	10.0	8.7	8.6	7.7	6.5	10.0	2.7	6.1
31	6.0	5.0	4.9	4.7	5.1	5.2	5.5	5.5	6.2	5.9	5.3	4.7	3.9	4.4	5.2	5.1	6.0	6.0	5.7	6.1	7.2	7.9	6.9	7.8	7.9	3.9	5.7
Max.	**12.5**	**11.0**	**10.7**	**10.8**	**10.3**	**11.7**	**11.8**	**12.0**	**11.2**	**11.5**	**11.4**	**11.8**	**12.0**	**11.5**	**13.5**	**10.5**	**11.4**	**12.9**	**10.8**	**10.6**	**10.9**	**11.2**	**12.6**	**12.5**	**13.5**		
Min.	**0.6**	**0.6**	**1.5**	**1.2**	**0.6**	**1.1**	**2.3**	**2.4**	**0.9**	**0.9**	**0.9**	**0.8**	**1.6**	**2.3**	**2.7**	**2.0**	**0.3**	**0.0**	**0.0**	**1.2**	**0.7**	**0.7**	**1.2**	**0.8**		**0.0**	
Avg.	**5.4**	**5.2**	**5.3**	**5.7**	**5.3**	**5.8**	**5.9**	**6.1**	**6.1**	**6.2**	**5.9**	**5.8**	**6.2**	**6.2**	**6.4**	**6.3**	**6.1**	**6.1**	**6.1**	**5.9**	**5.9**	**5.9**	**5.9**	**5.8**			**5.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
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Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1																								
2																								
3																								
4																								
5																								
6																								
7																	208.8	211.0	212.6	25.4	46.6	178.7	203.9	206.5
8	141.9	48.7	185.4	53.7	9.4	9.9	220.1	12.9	1.2	21.5	13.4	26.8	23.2	78.1	77.7	160.2	193.1	222.2	30.2	12.6	238.9	12.3	5.0	27.6
9	20.3	24.5	25.2	29.1	20.8	28.1	13.6	13.3	29.7	43.7	36.2	30.8	33.0	29.6	40.1	175.0	203.6	204.5	209.7	211.3	205.4	28.1	30.5	25.4
10	10.9	29.5	29.2	29.3	14.5	220.5	194.7	209.6	203.1	167.1	38.4	25.0	83.8	72.5	57.7	50.4	33.7	3.6	6.0	8.5	11.9	11.7	6.8	12.8
11	25.1	26.7	24.9	27.1	27.0	23.9	26.2	19.7	15.5	22.9	26.0	26.6	25.2	21.9	25.5	12.1	4.5	5.1	4.0	0.7	3.5	359.0	358.9	346.3
12	345.5	352.9	346.0	346.0	353.6	356.0	348.5	342.7	350.5	359.4	350.4	352.4	7.8	10.9	7.7	13.3	5.6	3.1	6.1	15.9	18.7	18.2	19.4	19.0
13	21.7	23.8	24.9	29.4	30.5	28.8	26.8	24.8	21.2	16.7	17.7	17.1	13.2	16.3	11.7	15.0	16.3	7.9	353.0	349.2	350.0	350.3	342.1	342.0
14	330.8	335.8	349.1	322.6	344.7	352.0	357.0	354.2	5.9	2.9	1.8	0.8	6.6	16.8	20.0	27.6	20.4	270.4	232.0	16.0	26.6	52.7	252.0	28.9
15	30.2	25.0	26.0	14.7	255.9	328.0	27.9	16.4	27.5	33.5	31.8	36.6	193.8	206.9	202.3	207.7	205.6	205.5	214.9	343.8	33.4	26.0	27.8	25.5
16	25.7	26.4	24.5	26.8	24.1	26.8	26.9	34.2	20.3	355.7	202.8	75.5	194.4	29.8	201.9	197.5	33.1	217.4	226.7	220.2	341.8	14.7	349.8	15.5
17	30.4	254.2	29.4	341.5	252.6	338.3	26.8	28.4	28.5	32.2	49.5	34.2	33.2	48.4	89.5	33.6	9.0	9.6	18.6	25.0	27.6	27.6	26.6	27.3
18	20.6	10.9	23.2	24.2	23.0	20.3	29.4	16.2	5.0	32.1	34.1	33.8	34.8	28.2	40.8	199.6	206.5	190.7	342.6	358.6	12.6	18.7	21.0	18.5
19	31.4	203.4	215.8	193.2	198.0	194.2	327.1	69.7	286.9	308.7	310.6	313.7	315.4	312.8	311.4	313.0	311.0	311.9	313.5	338.1	356.3	349.1	8.4	49.9
20	46.9	43.6	35.7	314.4	306.3	305.3	297.2	293.8	300.0	295.9	308.9	295.8	305.8	287.9	313.9	339.7	193.0	153.7	116.9	290.8	307.7	307.5	298.2	311.1
21	312.0	309.7	307.2	304.9	312.1	34.5	47.2	38.8	26.0	38.9	43.6	41.9	40.4	46.1	64.3	47.0	24.3	53.8	59.2	29.1	0.7	319.5	327.1	19.0
22	15.2	37.7	43.6	49.6	47.2	45.5	38.7	37.9	31.8	47.1	42.4	36.3	39.7	44.6	43.2	48.0	33.2	0.5	4.0	16.7	17.2	15.4	9.8	14.7
23	6.0	9.7	11.6	5.8	1.2	9.3	17.5	5.7	14.4	33.4	36.4	37.1	35.9	38.8	41.5	40.2	52.1	35.7	43.4	39.2	41.2	19.1	43.6	8.4
24	353.4	337.6	345.6	324.5	309.7	310.1	316.3	319.8	312.6	337.8	41.8	52.3	43.2	57.6	323.1	317.0	311.7	316.1	321.6	308.5	313.1	314.1	2.5	30.6
25	55.4	30.5	22.2	351.0	9.1	311.5	311.7	317.5	313.6	312.1	318.5	315.6	319.8	311.6	335.2	359.2	136.2	21.5	284.6	283.2	289.8	98.0	102.8	70.4
26	324.6	2.0	9.8	4.9	343.0	317.8	175.3	174.9	181.5	189.2	200.6	157.3	195.8	157.5	148.6	127.8	191.1	208.4	204.2	204.9	205.3	194.2	174.9	179.9
27	177.5	192.4	183.9	134.7	321.8	12.0	10.1	2.5	10.1	27.2	32.1	33.6	30.1	30.6	36.0	67.1	198.3	202.6	308.6	8.8	6.6	10.8	18.4	17.1
28	19.4	19.3	21.1	19.5	8.9	11.0	11.9	15.7	16.1	20.9	25.0	28.6	31.1	35.3	37.2	38.7	350.6	285.8	325.5	352.5	351.8	357.3	16.8	16.5

Total Hours in Month 672 **Hours Data Available** 512 **Data Recovery** 76.2%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

March *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	23.3	19.2	9.6	22.0	32.3	27.3	23.7	14.7	20.9	31.2	34.9	31.3	32.8	39.9	37.2	47.0	41.8	26.4	49.3	43.8	37.8	16.8	1.4	16.0
2	0.6	16.3	30.4	38.5	23.4	16.6	19.3	0.8	13.3	47.2	49.4	43.6	42.3	42.9	42.1	37.4	50.9	30.5	57.2	49.2	40.1	33.6	25.7	29.6
3	32.9	26.8	33.9	26.1	39.6	28.2	21.8	20.0	20.5	48.4	50.5	36.3	39.4	38.2	37.6	36.4	71.3	59.8	45.5	49.6	57.3	52.5	50.8	36.1
4	40.2	49.6	50.7	51.0	35.8	7.9	25.9	22.5	31.0	35.2	45.7	47.8	45.3	36.0	42.8	40.5	36.5	326.8	337.9	41.2	54.9	51.0	44.8	48.7
5	49.7	51.7	52.2	56.5	55.8	56.2	54.3	54.7	55.5	58.7	59.7	49.8	51.5	39.4	35.2	28.1	29.3	345.0	319.3	1.0	358.6	41.1	54.2	59.9
6	47.0	328.1	319.3	54.7	42.2	36.5	29.3	45.0	47.1	33.9	8.3	342.5	320.7	316.5	317.4	316.4	318.0	315.2	310.6	313.1	314.7	315.0	313.1	316.3
7	311.2	311.6	315.3	314.4	314.8	315.1	314.4	312.9	296.9	311.6	314.9	315.4	314.3	313.6	305.5	296.7	299.7	301.8	307.4	308.7	310.8	313.7	312.9	309.8
8	312.5	313.0	317.0	314.8	316.6	313.5	310.5	316.3	12.5	359.1	47.6	42.6	37.1	43.2	52.8	350.6	328.6	16.7	359.6	308.5	354.4	56.0	56.4	53.7
9	52.6	42.0	41.4	42.6	60.4	56.3	60.1	82.6	51.8	69.7	50.9	54.2	59.4	45.8	52.9	44.7	47.5	14.0	45.6	59.8	79.1	55.5	34.0	50.0
10	39.1	38.4	40.7	30.4	27.1	18.2	20.0	41.7	22.1	37.2	48.1	52.0	73.4	68.9	166.4	183.6	54.1	43.9	49.3	51.8	42.5	40.1	49.0	52.7
11	52.1	51.8	55.2	22.2	321.0	313.7	317.8	9.3	61.7	57.9	50.7	49.6	56.9	47.8	49.9	50.7	13.6	309.5	315.3	316.5	315.0	327.5	52.9	56.5
12	40.2	333.0	314.7	311.1	314.8	330.6	338.0	315.6	331.3	36.5	353.0	321.5	315.7	314.9	313.8	23.2	146.9	150.1	162.3	176.2	162.1	293.1	300.6	302.3
13	316.6	144.2	175.0	173.0	186.6	179.6	172.2	166.7	161.6	100.5	137.1	129.6	142.8	166.8	172.8	162.8	116.8	69.8	54.1	329.2	307.1	315.6	318.0	24.9
14	76.7	310.9	59.7	317.0	353.3	41.3	124.5	188.6	132.1	68.0	28.3	87.4	87.5	124.4	116.4	81.9	144.3	293.5	310.9	318.2	313.3	310.9	310.5	341.6
15	54.3	50.4	52.2	49.4	52.1	52.7	52.0	49.9	52.8	56.2	54.6	45.9	44.9	41.6	36.1	30.9	28.0	357.3	22.1	54.7	50.8	37.1	35.9	19.4
16	8.1	14.5	4.2	14.0	11.9	15.4	21.4	33.1	47.4	51.0	51.1	45.7	38.8	34.1	38.4	41.8	40.1	55.6	48.2	49.5	39.4	42.3	42.6	37.6
17	32.6	33.9	36.5	40.7	32.5	48.2	42.3	32.5	36.9	48.1	45.5	51.0	46.7	36.2	33.2	43.3	48.9	12.9	23.7	28.9	11.0	17.9	10.2	3.2
18	1.0	351.3	357.2	359.6	0.8	2.1	2.0	2.0	20.4	41.2	49.1	49.6	33.9	36.4	40.3	41.2	40.5	37.7	28.3	49.7	43.5	41.9	22.8	22.5
19	7.6	32.9	35.4	43.4	46.8	41.6	44.4	24.6	39.5	46.2	49.4	38.6	31.4	32.3	38.4	36.8	85.4	205.6	2.5	11.1	11.4	14.7	15.0	25.9
20	29.0	27.2	30.0	29.9	30.3	27.8	22.0	16.1	4.8	5.9	8.7	5.9	10.8	16.1	15.2	16.4	17.8	18.2	17.6	13.1	15.5	18.3	19.5	24.4
21	16.8	10.8	8.0	9.3	6.5	2.8	6.4	28.4	36.0	65.0	191.9	175.6	103.1	180.7	187.3	183.6	167.1	103.9	180.4	189.9	166.0	173.4	177.1	193.3
22	191.1	178.8	167.1	198.9	288.1	308.9	317.9	43.6	53.4	38.0	36.6	37.3	38.9	39.6	61.1	60.7	33.2	0.5	215.9	45.8	44.0	47.8	48.0	47.5
23	52.6	49.8	50.0	329.7	319.1	331.9	309.5	308.8	313.9	306.7	311.7	308.7	299.9	279.1	290.5	150.5	39.4	162.3	140.4	13.2	7.1	84.0	138.5	160.9
24	161.1	138.6	69.7	298.1	303.4	303.4	312.3	309.0	310.6	311.4	309.3	309.7	312.2	313.9	312.7	311.2	309.5	311.4	314.8	307.4	310.0	316.1	337.4	354.9
25	39.5	28.7	29.4	10.9	21.7	54.0	82.1	85.8	45.1	151.1	172.2	125.9	61.0	104.0	179.3	178.8	170.5	135.7	354.1	347.2	12.2	24.5	27.4	24.1
26	19.4	7.9	4.6	9.5	10.0	12.6	15.6	10.0	7.2	19.0	15.1	323.4	297.5	305.4	312.6	311.0	312.6	311.4	318.5	178.7	189.9	61.3	71.0	239.6
27	331.2	8.9	34.4	7.1	25.1	38.7	35.2	44.4	49.7	46.9	38.7	30.7	30.9	34.3	37.5	50.6	1.7	313.0	347.2	321.6	319.8	18.3	39.2	25.1
28	35.2	36.5	36.0	29.7	33.2	39.0	41.0	38.2	48.6	49.6	54.5	61.5	42.9	41.6	42.2	51.3	326.9	316.8	316.3	315.4	315.1	313.6	313.7	356.1
29	53.7	54.4	50.7	355.6	345.5	49.8	48.7	42.3	22.2	37.3	47.8	344.0	322.7	312.6	335.0	345.6	287.0	324.3	342.1	37.1	348.5	11.3	27.0	35.7
30	19.2	26.2	28.5	19.5	9.6	9.6	10.4	9.4	31.3	39.3	43.0	47.1	38.9	58.4	54.1	47.9	49.4	209.3	46.9	20.3	17.8	28.2	23.6	24.8
31	20.5	20.7	2.7	22.5	22.2	9.2	185.7	250.6	32.7	38.3	174.3	200.6	203.3	202.8	201.0	201.8	203.1	204.6	213.6	340.4	4.1	15.4	11.0	7.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	5.4	15.2	13.7	11.5	11.2	2.5	12.0	12.4	23.2	29.8	33.5	113.2	192.4	199.5	199.9	203.6	204.2	204.4	203.2	210.9	216.1	251.2	25.7	13.2
2	28.5	29.8	24.5	26.6	27.8	31.5	12.2	356.0	353.7	305.2	282.2	264.7	224.0	230.7	252.9	209.0	227.2	270.3	349.6	6.0	349.6	343.6	343.4	5.9
3	356.2	357.1	358.5	1.9	2.7	4.2	353.8	3.9	2.4	6.5	15.2	17.6	18.0	19.0	6.1	7.1	12.9	17.3	18.4	8.3	0.9	354.9	347.9	353.8
4	357.1	352.8	358.0	2.7	8.2	10.5	5.9	10.5	6.5	14.7	17.7	25.0	32.9	22.5	20.1	14.8	14.0	11.5	11.1	11.2	13.0	14.3	15.3	17.2
5	18.7	24.4	23.8	20.6	18.2	20.1	19.0	20.3	21.9	20.5	21.6	22.7	19.8	17.5	20.1	21.4	5.4	3.4	5.6	2.2	357.0	356.8	4.1	2.7
6	357.9	357.6	0.4	356.8	6.4	1.9	5.1	4.1	9.3	10.8	16.3	18.8	20.3	23.2	22.3	20.3	20.7	15.5	10.7	15.0	17.0	13.8	15.6	15.5
7	14.5	10.6	18.1	306.7	273.2	267.4	346.2	344.8	356.1	342.0	9.5	8.2	8.1	5.6	11.5	11.2	5.1	6.4	11.7	8.8	11.0	11.8	12.2	14.9
8	17.5	18.6	18.6	17.6	15.2	15.9	15.9	18.1	16.8	17.3	19.7	18.7	19.6	20.9	16.4	11.8	4.9	7.7	4.8	3.3	6.2	16.1	17.5	12.3
9	3.5	7.9	11.7	10.2	13.0	12.2	10.8	11.0	6.7	8.3	13.4	9.7	13.7	14.3	15.7	10.0	3.8	358.5	356.0	344.8	15.5	34.1	8.0	356.3
10	71.4	229.8	292.5	304.1	330.7	356.3	358.1	0.1	2.9	345.3	27.0	34.4	11.1	196.9	200.4	212.4	58.8	116.9	27.3	24.3	12.8	4.3	358.2	22.1
11	11.6	26.9	28.6	30.4	26.7	27.6	24.9	31.4	32.3	34.4	49.4	93.5	161.8	199.3	193.6	188.2	178.9	211.8	290.2	320.2	302.9	198.3	238.5	17.3
12	50.9	27.8	29.9	222.8	224.5	37.3	11.6	30.8	28.1	38.7	55.4	23.0	20.8	21.1	25.5	28.8	32.1	24.3	355.9	345.9	359.8	11.7	9.0	331.9
13	2.7	18.5	345.0	359.3	357.7	2.4	10.2	29.8	40.6	44.4	54.4	47.9	34.6	38.9	116.2	137.4	167.4	215.5	348.2	138.4	20.3	6.9	23.6	13.7
14	11.0	24.2	15.1	10.8	329.1	20.9	25.3	25.5	31.7	35.7	51.6	161.9	160.3	184.0	89.1	24.8	16.1	4.2	1.3	357.8	5.4	346.1	359.4	354.3
15	352.4	328.6	9.4	2.7	11.1	9.7	8.4	6.2	8.4	11.1	13.9	10.6	20.4	21.7	22.7	22.7	16.7	1.4	358.9	132.1	301.0	329.3	309.2	308.8
16	311.1	309.3	308.3	308.9	312.1	314.5	312.5	332.8	329.7	313.3	313.2	315.8	315.2	304.0	290.0	301.2	306.6	315.1	315.6	317.2	317.9	4.6	0.4	8.6
17	12.8	21.4	23.6	22.8	3.3	342.8	346.3	346.2	353.8	37.9	11.5	351.5	345.8	311.7	346.6	355.2	1.9	3.7	355.8	352.5	352.3	341.5	344.2	343.9
18	341.1	346.0	351.1	0.1	3.7	5.2	6.4	4.9	7.3	6.2	11.7	15.2	12.4	10.0	9.4	11.4	9.1	7.3	4.3	3.9	0.7	0.8	2.3	359.6
19	0.5	0.4	357.5	353.8	0.6	358.7	355.2	1.9	356.9	352.0	343.4	103.8	346.6	355.5	338.7	35.6	348.0	5.7	2.3	346.7	351.3	327.9	331.6	347.6
20	355.6	342.5	2.0	358.9	8.6	9.6	11.4	12.5	12.7	13.0	17.0	14.7	18.2	18.0	20.2	16.9	16.5	14.2	16.9	12.7	15.6	15.3	14.7	9.9
21	7.3	6.6	5.7	3.1	0.2	359.3	3.9	7.4	13.0	4.6	10.4	17.8	19.8	14.4	24.0	20.6	36.3	31.9	17.7	13.8	10.9	359.3	3.5	13.3
22	16.5	12.3	356.9	3.9	9.3	12.3	10.9	18.2	13.9	14.3	14.8	15.7	17.9	22.9	21.2	19.9	20.7	18.1	12.0	11.3	14.3	16.4	12.8	12.4
23	10.5	14.9	15.4	14.4	11.2	10.1	10.2	11.2	14.4	14.8	18.5	9.9	17.7	16.9	4.1	43.9	9.5	318.9	13.2	11.8	6.0	0.3	1.2	6.1
24	8.8	14.2	10.6	8.2	8.8	10.2	12.9	15.4	17.5	20.3	20.2	22.5	24.4	24.0	21.4	22.6	19.3	11.8	4.6	1.2	356.6	1.0	13.8	11.4
25	7.1	8.7	4.9	357.4	8.1	7.8	5.3	10.8	7.2	8.9	6.0	352.6	350.6	358.5	2.1	10.2	20.8	18.1	12.3	22.2	15.3	10.8	10.9	16.2
26	14.5	13.9	18.2	18.7	24.9	27.2	29.7	28.9	32.7	123.0	170.2	140.7	186.3	200.2	186.3	187.3	185.1	197.1	204.9	228.0	10.6	18.0	25.7	227.8
27	223.9	319.5	22.1	26.4	29.2	29.9	26.4	31.9	122.8	161.9	197.7	196.7	200.8	191.8	188.7	211.8	211.5	210.9	214.2	212.4	218.1	217.9	223.6	219.5
28	222.3	228.7	305.1	20.5	16.0	0.9	31.9	54.0	58.0	89.3	201.6	203.3	203.0	186.2	185.3	203.6	216.8	196.9	234.5	268.2	328.1	334.5	359.3	358.5
29	5.4	22.7	12.0	25.2	13.2	21.3	4.9	350.5	1.8	10.4	14.7	18.4	15.8	19.4	23.0	279.8	222.4	23.3	14.1	7.1	236.2	230.2	244.5	229.2
30	239.0	348.4	26.9	26.1	19.6	24.8	32.0	29.5	24.0	24.2	26.5	24.1	21.9	21.0	20.9	24.2	24.7	353.2	10.2	209.8	23.1	24.8	16.4	16.8

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	9.5	17.2	26.2	23.8	12.1	0.8	231.1	3.4	0.7	31.5	13.3	17.1	19.6	18.7	22.9	22.9	19.1	18.9	15.4	17.5	17.1	8.2	9.6	5.8
2	7.8	11.4	18.5	24.8	27.3	12.7	17.8	15.9	22.0	30.0	30.6	23.8	32.4	68.5	29.8	13.4	53.6	51.8	14.0	7.7	342.3	0.3	5.4	347.2
3	19.3	27.9	24.7	20.0	9.5	42.8	33.7	39.9	49.1	148.5	156.8	198.7	206.8	206.5	203.2	204.5	204.8	202.6	205.1	190.9	223.8	229.4	268.8	13.7
4	266.6	14.2	24.9	26.5	24.7	33.1	33.3	32.5	41.1	56.8	177.5	186.3	187.1	188.9	185.7	200.4	196.7	198.2	208.0	211.9	215.4	223.3	217.7	251.5
5	264.9	269.1	315.5	354.7	310.7	303.8	191.1	193.0	184.9	54.3	43.3	41.8	42.0	49.1	57.9	37.2	6.7	309.6	304.3	301.5	41.6	335.5	105.4	152.8
6	292.0	338.6	315.7	303.2	92.7	70.8	49.2	85.6	49.5	50.8	72.8	344.3	18.6	96.1	127.7	147.6	141.6	139.6	142.4	185.2	183.2	169.3	161.7	70.7
7	300.6	286.4	282.6	295.3	306.2	311.8	313.2	310.3	309.3	291.2	299.4	292.2	131.5	70.2	311.4	313.6	291.4	303.5	294.4	304.1	295.2	302.7	298.5	309.9
8	305.6	312.5	312.1	316.2	318.1	319.4	325.1	13.6	37.1	46.5	44.8	49.3	39.6	42.7	121.8	49.4	163.4	187.6	211.4	206.1	190.5	228.1	231.6	240.3
9	320.8	18.8	23.4	15.0	22.8	17.8	356.5	349.3	12.5	26.9	27.2	29.2	32.6	122.0	198.3	205.5	198.8	198.5	202.5	201.7	210.1	224.0	275.3	289.5
10	19.9	15.6	30.1	11.9	273.3	211.5	38.8	57.1	176.6	169.9	185.8	188.5	191.4	203.8	197.6	190.9	192.9	191.8	201.3	214.0	223.9	242.4	261.3	10.6
11	27.5	354.3	27.1	23.7	23.1	26.1	33.3	34.4	63.2	216.5	217.8	212.3	203.5	173.5	176.0	165.5	201.4	215.0	330.2	31.4	197.4	339.2	284.7	269.9
12	9.2	26.6	26.9	26.2	26.2	27.4	29.4	26.7	28.4	276.3	159.7	170.8	221.2	181.4	198.6	196.1	209.5	197.0	240.2	235.1	220.5	290.4	349.0	5.9
13	9.8	15.4	14.2	16.1	14.2	15.1	12.4	7.3	1.7	3.3	9.4	16.0	15.4	19.2	19.3	19.7	21.4	20.4	21.2	16.9	12.7	11.6	18.3	16.7
14	15.6	18.6	23.0	25.9	21.0	23.8	20.2	17.8	16.2	17.7	20.4	15.6	12.5	10.7	143.5	136.7	19.8	326.2	248.4	289.2	282.2	15.9	26.6	28.6
15	23.1	23.6	24.1	24.1	21.7	21.4	11.0	14.7	7.2	14.4	10.9	18.5	180.3	205.3	217.7	213.9	195.0	205.7	206.4	28.0	26.5	22.5	207.9	11.3
16	5.1	24.0	2.6	347.7	235.5	222.1	261.9	11.8	218.7	65.0	69.6	180.1	207.8	211.0	212.0	197.6	209.0	209.6	213.3	219.3	208.7	217.0	221.1	223.6
17	207.5	210.3	37.9	39.3	18.8	30.3	26.9	31.4	17.6	139.8	172.0	177.5	202.6	205.6	235.0	214.5	214.2	208.6	219.6	210.0	213.2	236.3	248.4	246.8
18	7.2	355.4	224.1	316.9	280.9	337.8	27.7	55.8	127.3	164.1	158.3	193.8	203.5	193.2	194.5	184.0	196.0	184.6	175.4	176.2	251.3	285.7	23.7	12.6
19	30.2	29.2	30.1	18.0	11.7	29.5	30.0	39.0	46.6	73.0	116.2	148.6	142.2	166.8	114.2	168.3	189.1	138.6	24.4	296.2	311.2	305.7	308.4	308.6
20	307.6	303.2	311.0	312.4	341.8	9.1	52.0	55.4	39.2	38.2	44.0	53.9	127.4	86.6	146.1	84.8	106.2	142.6	148.6	189.3	223.5	227.8	292.6	312.6
21	312.5	312.0	313.5	352.8	22.4	17.4	31.3	40.6	78.0	194.5	200.0	196.9	199.8	190.9	201.1	214.2	209.9	214.5	329.8	330.5	320.8	236.1	239.1	229.2
22	225.6	248.2	26.2	28.2	10.0	355.0	9.2	17.2	11.4	24.7	20.4	23.1	24.6	27.0	28.1	25.0	22.2	25.5	25.4	27.5	30.9	20.7	14.0	19.4
23	17.4	16.6	16.6	17.0	19.7	19.3	17.0	18.0	17.0	15.5	13.7	19.3	18.2	18.9	19.1	15.0	6.0	14.0	351.6	354.8	163.7	1.8	0.0	335.6
24	257.4	267.1	73.2	223.1	229.1	216.1	218.9	21.1	0.7	353.5	9.1	5.2	358.8	1.7	2.6	4.5	7.3	12.8	10.2	7.3	1.9	7.8	9.0	5.4
25	3.0	7.7	6.2	6.3	6.0	7.2	0.3	360.0	5.1	355.1	4.4	356.1	210.1	207.3	208.6	206.9	206.2	209.9	208.6	200.1	37.4	29.2	49.5	198.1
26	202.7	205.0	201.1	208.7	181.4	215.3	235.5	233.5	236.3	240.1	247.2	247.2	271.1	271.1	294.5	3.1	326.7	330.9	306.4	262.9	139.9	233.1	225.4	6.0
27	25.7	24.6	27.0	215.6	214.8	216.3	202.7	180.2	86.2	158.8	203.0	207.7	205.6	206.2	202.7	190.1	202.9	201.9	174.7	199.3	180.4	207.0	236.0	224.9
28	246.8	231.3	231.4	354.2	13.3	18.8	27.3	35.1	116.0	145.2	137.7	152.3	209.0	206.7	198.2	191.2	205.8	209.9	204.4	204.0	200.9	298.5	337.9	2.2
29	266.6	1.7	20.3	23.8	19.0	29.7	33.9	28.2	25.5	32.4	37.0	29.9	29.3	23.5	26.3	15.9	23.0	20.9	24.6	25.3	19.4	18.7	10.1	11.4
30	22.9	24.0	27.1	20.0	173.9	11.2	359.9	5.8	15.2	11.0	1.8	5.1	13.5	227.9	197.0	206.0	185.8	183.1	161.3	205.4	205.1	213.6	211.9	219.2
31	12.1	7.3	6.9	5.4	10.0	9.5	1.5	359.4	10.5	16.6	20.1	18.8	18.6	20.0	20.1	18.4	15.8	13.3	11.9	13.2	11.8	11.9	9.7	9.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	9.3	8.7	6.0	4.7	3.1	10.3	9.0	11.5	11.3	16.4	18.3	18.4	2.7	181.8	236.6	325.7	311.5	11.3	271.4	272.2	305.7	309.2	269.5	291.9
2	338.4	315.7	322.2	0.0	341.9	351.1	30.0	27.1	34.2	34.7	35.0	42.9	45.6	93.0	185.4	183.0	173.9	182.4	196.2	191.2	202.9	230.9	288.7	19.6
3	309.1	26.0	243.5	210.3	23.5	28.2	35.4	50.5	56.7	167.4	191.4	197.7	199.3	197.3	192.0	203.0	204.3	204.4	201.0	179.1	230.6	293.3	21.2	20.1
4	4.4	7.7	6.0	357.6	11.7	359.4	12.9	16.5	273.1	28.1	23.0	10.7	9.0	359.3	4.6	218.2	223.8	214.8	215.0	215.7	230.3	233.7	246.0	224.8
5	215.0	214.0	222.5	8.2	18.6	5.8	17.3	19.9	12.3	3.5	4.7	18.0	3.4	8.1	0.7	34.9	220.5	268.2	309.7	272.7	286.7	8.4	25.7	359.2
6	358.2	1.3	249.1	223.8	330.1	29.8	30.7	26.1	26.5	37.6	204.9	203.3	209.8	237.2	173.8	198.4	199.0	205.6	189.1	67.4	211.9	10.4	25.5	15.8
7	19.4	16.5	19.2	6.2	10.4	16.2	15.2	17.2	21.5	21.7	27.6	27.5	29.7	35.0	19.4	332.0	51.6	3.8	11.3	13.6	355.1	15.8	12.7	12.3
8	2.5	12.7	9.9	10.9	7.7	8.3	14.6	13.1	14.5	23.7	18.8	19.1	19.3	21.4	22.2	13.0	2.5	344.7	280.9	244.7	281.2	234.2	229.8	227.4
9	216.7	211.2	329.6	7.2	15.8	19.8	18.1	32.3	47.6	216.1	221.1	164.8	78.3	74.0	96.8	105.1	76.4	49.8	247.1	309.1	312.8	315.5	314.2	346.1
10	1.2	3.3	355.0	10.4	356.9	7.2	16.6	19.9	31.6	70.4	191.4	202.0	155.7	68.9	114.5	308.5	24.4	16.0	316.7	222.7	207.0	261.0	311.4	11.7
11	355.6	355.7	2.1	18.6	17.2	27.2	55.1	98.3	164.9	184.0	201.4	186.8	212.7	197.1	168.5	156.1	105.4	112.6	103.6	326.9	45.1	7.6	351.5	13.9
12	12.5	12.3	58.2	235.4	254.8	287.5	320.6	234.8	278.2	345.5	253.0	225.0	193.5	190.2	166.7	148.9	154.8	159.0	182.6	176.6	195.7	203.9	160.2	164.3
13	193.5	277.8	353.3	324.4	255.0	191.8	145.5	155.6	167.4	167.3	161.4	171.2	180.5	186.5	203.6	191.0	193.5	203.5	206.2	207.7	213.6	235.8	270.4	358.7
14	26.2	345.5	1.9	0.2	11.3	10.5	32.7	35.8	140.1	190.9	198.3	201.5	201.7	196.0	209.7	200.6	198.9	197.8	200.3	202.4	206.4	213.1	226.6	355.0
15	30.3	25.2	12.5	27.4	16.0	22.7	32.2	46.0	196.4	192.3	197.2	200.4	200.7	192.4	202.9	206.9	203.8	203.6	221.0	236.1	345.5	21.6	11.8	19.4
16	23.5	19.7	13.8	7.5	20.6	16.5	349.2	14.7	359.0	333.1	316.7	317.1	313.6	307.0	300.6	279.2	357.5	48.3	89.2	71.8	68.9	84.8	98.5	137.8
17	152.3	72.9	21.2	334.2	301.2	312.2	307.1	312.9	316.2	316.3	319.7	316.6	328.6	125.9	59.6	46.6	146.9	93.6	233.8	246.6	320.5	342.3	7.4	10.7
18	4.8	12.2	15.9	12.7	11.3	17.8	24.2	35.5	159.4	195.7	193.0	160.1	172.6	192.3	197.6	184.3	178.5	170.9	197.1	204.9	204.3	120.8	9.7	241.0
19	9.9	272.1	42.5	10.5	21.8	13.7	17.0	32.6	34.4	38.8	154.4	190.1	196.5	278.5	158.8	286.9	323.0	22.9	312.6	316.5	314.6	26.2	14.0	14.9
20	14.6	15.7	8.6	4.6	7.4	18.7	18.6	15.7	28.8	38.4	23.5	314.8	313.4	315.0	320.2	144.2	187.5	359.7	354.6	357.1	5.4	134.9	62.4	357.2
21	345.2	251.3	266.3	356.1	293.3	312.3	307.7	310.1	308.0	311.4	308.7	307.5	302.7	297.0	299.1	293.7	88.5	69.2	83.3	93.5	79.1	266.5	295.9	301.2
22	312.1	307.3	298.5	29.5	26.3	329.2	9.6	54.9	33.6	91.4	118.4	167.6	162.6	178.3	184.4	174.9	243.1	278.9	266.2	279.9	307.7	85.9	346.9	15.8
23	1.4	342.9	342.2	15.4	39.6	14.2	7.9	19.6	343.2	332.1	204.4	122.2	287.3	324.1	335.2	0.0	330.8	328.3	2.7	24.0	359.2	357.4	307.3	336.1
24	269.1	232.8	73.3	357.7	359.0	8.2	4.5	0.3	4.7	358.9	6.7	0.5	358.8	221.6	176.4	188.0	214.5	277.0	314.1	343.5	344.1	129.4	15.2	20.9
25	22.9	18.8	11.3	27.0	40.5	172.7	335.3	17.0	332.9	272.0	286.7	203.8	192.0	310.3	296.0	293.8	352.9	315.7	292.5	252.8	294.7	284.6	283.2	6.4
26	26.5	26.3	22.1	29.7	16.4	24.6	28.1	31.9	50.9	190.2	205.3	203.7	205.6	210.6	209.5	207.6	211.7	201.3	195.6	241.5	224.4	330.9	21.4	28.8
27	18.8	3.8	23.3	14.4	13.3	10.8	29.7	51.5	186.6	186.0	188.9	188.0	196.8	201.6	200.5	201.8	202.4	207.8	214.2	213.6	211.2	231.8	356.5	318.4
28	272.3	230.2	15.0	350.5	27.3	173.2	218.6	209.2	210.5	184.8	164.3	154.5	29.7	47.7	72.1	132.5	218.2	205.7	211.3	213.5	230.1	230.0	237.9	225.1
29	252.0	15.4	1.8	23.0	340.8	31.9	38.8	49.7	179.3	195.1	186.7	188.2	187.7	183.2	188.8	189.3	195.9	189.2	212.6	233.9	310.1	312.6	312.0	313.9
30	315.0	312.3	310.8	308.1	311.2	315.3	17.8	48.0	89.2	180.1	191.9	205.3	198.1	197.9	204.3	196.3	242.6	217.4	199.1	202.6	201.6	196.8	199.2	217.0

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	221.9	224.7	269.8	13.1	7.7	19.7	40.6	183.3	198.4	171.3	187.2	192.7	194.9	213.4	184.9	201.7	197.7	200.8	218.5	193.5	201.3	229.0	237.8	197.0
2	250.6	355.9	13.8	12.1	204.1	225.5	188.5	175.1	164.8	181.6	191.0	192.9	190.4	192.2	202.4	209.9	211.6	208.3	204.1	201.5	211.4	201.5	196.8	211.8
3	207.1	230.4	210.8	211.5	209.3	243.7	341.0	202.0	185.9	202.6	191.0	194.8	196.3	199.5	194.8	191.4	196.8	205.0	207.2	204.1	226.5	205.1	209.7	220.1
4	218.3	35.3	18.5	26.0	27.9	27.3	31.0	33.5	44.8	191.7	196.6	193.3	191.6	185.6	191.0	206.7	211.5	210.2	210.9	208.2	203.5	237.8	225.1	214.9
5	223.1	225.2	226.9	355.1	20.5	68.0	188.6	143.8	138.8	177.9	179.2	186.9	193.5	198.0	265.5	252.2	241.1	152.5	246.5	213.4	210.7	6.8	2.7	357.0
6	353.5	18.5	18.3	24.2	25.6	26.0	32.5	37.8	41.5	193.1	208.3	206.5	200.2	199.8	198.1	199.4	200.6	194.5	201.6	222.8	346.1	5.6	4.3	330.7
7	26.3	24.9	25.3	23.0	283.5	207.0	184.5	178.2	196.0	182.9	185.6	206.1	204.4	191.1	191.6	178.8	153.4	168.3	184.9	220.4	200.7	216.3	233.3	206.3
8	244.5	8.7	285.4	76.4	240.6	15.2	24.7	263.4	188.1	26.1	27.7	30.0	90.0	185.7	183.2	181.3	188.9	174.5	202.2	210.3	179.0	233.0	247.7	256.5
9	277.4	6.8	22.9	9.2	15.9	16.4	23.3	27.4	30.9	35.6	35.8	61.2	204.2	203.7	194.2	26.1	21.1	17.7	187.8	6.8	7.9	7.3	10.3	11.4
10	6.6	3.5	20.4	22.7	16.0	280.7	27.9	31.7	46.9	181.8	181.1	189.7	190.9	179.7	169.7	176.4	192.8	197.1	214.4	213.3	197.6	235.2	348.5	251.0
11	238.8	274.9	8.7	220.0	148.5	347.1	27.2	53.5	164.0	181.4	198.4	193.4	205.4	207.0	200.8	204.9	189.5	200.1	205.2	209.5	218.1	211.8	235.3	311.2
12	15.6	9.0	7.4	295.7	334.6	9.8	17.2	177.3	191.8	178.6	170.0	196.6	199.1	181.1	185.6	198.4	195.5	182.8	195.1	195.6	205.2	228.3	239.3	281.9
13	245.0	269.7	334.1	293.0	316.3	342.6	18.2	21.5	21.9	18.1	69.8	321.6	236.1	204.4	198.6	186.4	195.7	202.3	209.1	206.4	204.4	208.8	217.1	319.1
14	11.9	18.8	20.7	16.8	26.8	28.0	26.5	24.8	21.3	29.5	43.1	123.3	222.1	217.4	217.7	198.5	215.5	222.3	244.3	209.3	217.8	219.6	216.4	26.2
15	189.9	210.3	214.3	203.4	213.8	28.5	32.5	116.7	197.1	121.8	173.6	196.5	199.1	199.2	199.0	203.5	205.9	205.2	302.1	286.1	288.4	300.1	310.7	311.4
16	313.1	313.0	313.3	314.6	312.5	315.3	316.2	342.5	41.0	47.6	55.8	55.9	57.3	65.6	83.7	327.2	312.7	312.5	311.3	308.8	302.8	293.3	303.3	301.1
17	311.1	322.0	351.6	11.5	3.9	7.6	33.1	45.0	60.3	137.7	196.6	195.5	199.1	187.2	204.5	163.7	247.9	264.0	229.8	226.1	260.8	235.0	231.5	244.8
18	277.4	286.8	281.5	203.9	212.2	311.4	286.5	207.6	82.1	30.3	25.0	15.3	28.5	210.1	227.5	11.2	10.9	17.5	16.6	9.9	210.9	205.5	205.2	208.6
19	211.5	34.7	16.8	227.7	252.6	341.8	256.3	205.1	191.5	187.7	200.9	204.7	205.0	197.1	191.9	187.0	200.5	193.1	210.3	180.6	206.1	245.4	2.6	20.1
20	25.9	26.9	28.1	19.8	217.1	333.9	209.2	206.6	189.4	180.9	202.5	186.4	170.8	170.1	171.6	183.3	199.2	198.4	214.5	197.3	195.3	349.7	295.3	301.0
21	306.2	311.8	311.0	307.8	307.0	308.7	311.4	314.9	316.7	318.0	318.9	31.2	66.9	91.8	144.0	77.1	50.3	21.4	310.9	313.1	313.4	314.0	313.9	314.9
22	349.1	1.5	19.1	13.6	7.9	332.4	156.4	213.8	236.5	37.4	17.4	33.9	179.1	249.8	285.7	289.7	282.8	317.7	345.1	315.4	321.4	297.9	278.9	308.7
23	25.3	28.6	328.7	322.5	318.6	309.3	297.6	264.8	346.1	140.0	240.4	87.6	55.8	60.4	14.4	318.4	317.3	315.9	308.8	320.5	339.6	332.6	337.6	309.4
24	255.4	136.9	265.6	273.3	342.6	359.7	10.5	5.7	0.6	357.6	2.2	4.8	7.5	10.6	8.4	8.6	8.9	13.3	8.3	6.3	6.5	5.9	8.1	9.8
25	15.9	16.3	21.9	23.8	19.6	17.9	18.0	24.5	24.4	23.6	25.6	25.9	21.8	22.4	21.6	21.1	21.5	19.0	15.4	15.4	8.8	0.3	358.5	11.9
26	222.1	267.7	17.5	31.1	268.3	14.5	19.6	17.2	32.6	171.2	190.7	193.6	193.7	182.3	194.6	200.8	194.4	187.1	200.0	205.7	211.9	243.6	235.6	296.8
27	13.0	18.7	22.4	24.8	33.1	20.1	29.2	203.8	198.2	177.8	179.4	185.3	185.6	193.6	202.5	205.2	206.9	207.1	203.8	200.3	212.8	205.3	224.3	21.9
28	244.1	324.8	310.5	151.9	309.7	304.1	305.5	310.5	313.6	345.2	54.0	188.8	153.3	152.8	179.7	272.0	315.6	312.3	308.2	307.1	311.3	313.0	309.5	304.2
29	307.2	311.7	313.5	313.2	313.4	344.0	338.3	25.3	50.3	43.9	46.2	49.0	51.9	182.9	188.8	178.7	163.8	316.8	315.0	312.7	312.3	313.0	315.6	312.7
30	312.6	242.3	226.0	210.7	12.0	91.1	354.0	209.4	211.3	208.8	210.2	191.5	166.7	183.5	181.5	193.2	179.2	193.0	185.4	176.5	186.2	165.0	197.0	183.6
31	184.7	156.0	161.7	178.1	169.6	150.8	162.7	156.8	210.2	165.0	173.9	231.0	288.1	338.8	326.6	27.9	76.7	321.4	14.5	353.1	351.8	13.4	341.8	336.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Resultant Wind Direction (RM Young) (Degrees)

August *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
1	344.3	341.2	323.9	312.3	330.4	352.7	356.5	338.2	357.1	21.2	328.2	51.7	26.7	337.3	67.2	323.2	316.7	24.0	322.8	323.7	340.7	348.2	334.2	325.6
2	312.6	320.0	303.5	339.4	308.6	340.7	353.0	341.7	326.3	359.4	3.4	12.9	354.2	353.4	340.2	347.8	347.2	342.8	342.8	340.4	349.9	8.6	5.0	356.6
3	345.9	339.9	353.4	349.5	350.9	348.2	10.3	32.4	13.2	341.6	6.3	346.2	338.6	347.2	325.6	343.2	3.7	339.5	326.7	335.7	322.7	331.9	344.7	342.3
4	340.7	318.5	334.0	313.4	336.9	341.1	318.8	292.0	287.5	279.7	285.1	278.6	303.4	276.8	290.9	311.0	281.4	264.7	286.3	268.9	271.8	281.9	276.3	271.3
5	309.1	309.4	298.2	295.3	295.2	290.9	333.7	4.2	39.7	35.6	92.0	195.7	36.9	200.5	188.9	199.8	190.4	195.6	192.0	187.2	200.6	208.4	215.3	170.3
6	209.2	197.2	212.5	214.0	214.1	212.5	200.5	198.6	199.0	199.4	197.4	195.5	197.0	193.9	186.2	104.6	81.6	95.0	109.6	46.1	33.0	106.0	58.1	48.7
7	61.2	301.3	305.2	300.6	307.7	306.7	288.1	310.2	320.9	65.6	114.3	89.4	116.9	183.6	190.9	183.6	192.1	196.2	211.4	246.7	331.4	298.8	320.4	32.8
8	10.7	14.2	8.7	4.3	8.7	1.2	18.1	30.2	42.4	50.2	66.8	171.2	147.7	53.6	105.4	175.8	181.8	184.7	193.7	178.2	176.2	52.2	296.3	327.0
9	8.6	24.0	19.9	17.0	6.7	2.6	13.1	32.5	118.2	199.6	203.5	206.5	206.0	206.0	208.3	208.4	205.3	202.9	204.3	203.8	211.6	231.8	205.9	219.7
10	252.6	345.0	222.5	219.2	255.4	230.0	207.1	188.9	182.5	199.9	186.9	193.3	198.1	192.0	195.5	196.5	199.2	209.2	197.1	204.3	214.8	225.2	297.4	224.8
11	235.0	358.4	9.0	17.0	17.8	212.7	193.6	204.1	201.9	201.0	195.2	197.6	200.1	202.6	203.3	203.7	204.1	202.9	204.5	203.9	171.4	16.0	28.0	34.7
12	16.9	347.3	315.9	202.7	47.2	65.7	33.7	47.3	186.5	145.6	75.9	65.6	58.2	57.6	95.1	179.9	177.7	189.7	186.1	186.1	213.0	239.0	217.2	221.5
13	219.6	217.7	227.4	217.9	224.3	219.2	204.3	189.1	162.1	193.1	199.1	196.0	195.7	199.7	205.9	204.3	202.4	206.3	214.5	22.8	2.9	199.0	172.9	7.3
14	295.9	33.5	135.4	97.9	289.9	294.4	325.6	329.8	44.6	148.0	147.0	161.7	160.8	180.4	185.9	186.0	190.5	194.6	183.1	189.5	187.0	178.2	189.1	202.6
15	269.2	6.9	341.1	255.1	299.6	20.5	1.9	21.3	151.7	120.0	164.8	162.6	189.3	164.4	198.7	212.1	205.9	205.4	207.2	204.9	223.8	233.8	31.1	18.2
16	25.6	16.2	13.3	12.7	16.0	14.2	20.4	28.7	35.7	43.3	49.3	77.2	146.9	208.8	209.6	208.9	206.2	207.4	221.7	213.5	219.1	209.8	229.7	224.7
17	271.0	225.3	209.4	222.8	223.4	254.8	20.7	219.3	211.6	66.5	340.6	43.9	317.6	206.4	235.2	307.0	15.5	351.5	341.5	355.1	337.8	339.8	349.7	351.6
18	358.0	339.4	353.4	340.9	345.1	342.5	354.8	356.0	355.7	2.6	355.4	355.5	358.3	0.2	1.2	2.9	352.4	349.2	357.2	355.0	358.7	353.6	6.1	7.1
19	4.1	3.2	357.1	7.3	4.0	11.9	17.6	11.8	14.1	15.6	15.1	15.1	17.3	5.1	2.3	347.9	6.0	2.2	0.6	349.6	107.8	331.9	197.1	251.2
20	317.9	318.5	313.2	316.2	329.7	24.7	18.5	266.2	256.1	252.0	215.0	278.0	236.0	213.2	225.9	129.6	158.9	12.4	43.5	308.7	276.9	288.6	215.0	328.2
21	330.4	332.6	348.4	9.1	359.2	11.3	13.1	8.0	5.7	12.2	358.6	7.5	9.8	353.0	118.2	186.8	73.0	66.3	18.3	88.1	322.7	333.3	345.8	157.3
22	19.8	68.6	83.7	81.0	91.9	62.1	357.6	36.3	274.1	304.3	51.2	75.6	282.4	66.7	317.2	328.4	325.6	336.5	308.6	314.7	8.7	338.4	310.3	19.7
23	3.4	16.5	8.5	2.2	18.3	25.7	24.9	28.5	354.2	24.8	29.2	34.3	47.2	65.1	62.5	56.0	124.5	315.0	307.9	309.2	308.0	314.5	53.7	339.4
24	333.6	0.5	14.3	9.1	7.6	347.5	8.5	27.5	35.3	39.7	168.5	199.1	184.9	197.5	202.6	205.4	209.3	181.4	31.7	11.5	237.6	226.8	227.2	9.3
25	26.3	26.1	30.1	25.1	22.0	19.0	13.8	40.0	137.2	151.0	177.5	194.9	194.1	199.9	202.5	199.7	200.4	211.6	209.8	216.8	224.0	228.1	238.6	2.7
26	23.8	25.9	24.8	23.2	24.5	16.4	352.7	284.8	53.5	165.9	204.2	198.6	191.7	210.2	215.1	202.5	207.5	238.0	249.3	199.4	3.4	355.9	10.2	1.0
27	357.6	4.5	0.4	13.1	9.7	7.7	338.7	10.2	25.1	10.9	15.8	21.4	20.1	20.7	19.5	15.9	15.6	8.8	6.8	6.6	1.7	20.3	14.3	21.1
28	9.8	18.6	20.0	2.4	9.3	27.0	355.6	21.1	13.6	22.1	197.3	199.2	168.9	168.0	198.5	208.0	208.9	208.9	216.7	304.2	20.8	28.6	23.1	18.6
29	18.0	17.3	12.3	13.9	24.0	17.1	19.6																	
30																165.7	47.1							
31						259.1	315.9	292.8	2.4	354.8	17.2	15.5												

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	15.5	5.1	13.2	15.0	31.8	17.0	17.8	337.8	36.2	40.6	70.5	179.5	201.4	202.7	207.2	195.1	207.9	209.5	215.2	214.7	223.2	216.4	230.4	195.0
2	169.1	172.8	167.4	150.0	155.1	141.0	165.5	225.1	281.7	223.3	217.6	220.6	173.1	191.2	171.3	182.7	177.0	174.8	193.3	222.9	223.2	229.6	246.6	233.0
3	163.3	185.6	356.7	11.2	20.8	11.3	24.9	24.8	36.6	35.6	30.6	30.2	40.7	56.9	45.9	65.4	202.1	217.9	196.6	147.2	137.4	125.2	0.8	324.2
4	18.5	2.6	152.0	330.8	13.1	26.3	359.8	8.7	62.7	74.8	46.3	42.5	20.0	350.5	1.9	358.8	2.7	344.6	4.1	11.6	354.6	341.6	346.8	354.8
5	2.8	3.2	14.1	9.6	8.5	9.4	14.8	17.5	21.1	19.5	22.6	26.2	20.9	17.6	26.7	203.6	289.2	306.5	315.0	297.6	343.7	293.4	125.5	39.2
6	316.8	312.7	304.1	339.4	33.1	83.0	79.2	46.1	298.2	299.6	299.8	307.6	313.6	319.3	320.7	14.6	84.7	22.2	321.5	320.3	313.1	315.8	314.7	315.0
7	316.4	315.1	316.6	304.1	294.2	301.8	308.2	304.1	341.2	305.2	318.9	131.0	76.9	50.7	213.0	200.5	181.8	219.7	336.1	79.6	359.1	322.9	0.6	248.7
8	12.6	8.3	352.8	359.4	12.7	17.7	11.3	29.7	22.5	27.8	28.7	29.0	16.1	15.5	33.3	46.3	26.3	25.5	23.2	23.6	28.2	27.2	20.4	32.4
9	26.2	23.3	20.6	20.6	24.9	22.8	23.3	21.1	23.5	25.2	22.0	24.7	26.5	26.2	26.8	25.8	110.9	93.4	291.9	23.8	19.2	16.7	16.5	11.9
10	18.8	352.1	283.7	30.2	304.6	234.9	7.3	29.4	22.8	53.0	131.1	71.4	38.6	28.0	21.3	21.5	100.5	63.5	2.6	1.1	356.2	350.9	340.2	344.4
11	352.8	5.8	20.5	29.7	30.0	32.1	28.7	43.7	314.1	6.8	9.3	356.1	343.6	354.4	0.5	346.0	319.3	195.9	275.6	355.2	0.1	359.2	357.5	5.9
12	5.1	5.6	3.8	4.6	4.5	5.4	5.7	357.8	354.8	5.7	11.7	21.1	66.7	32.4	30.3	29.0	37.4	224.5	236.3	236.3	275.9	17.8	10.3	354.7
13	344.2	319.7	327.0	320.4	26.7	31.9	28.6	19.9	21.3	23.9	20.4	32.3	40.3	64.7	176.7	45.9	59.9	188.4	161.5	183.8	305.8	50.5	300.2	257.3
14	2.5	22.0	20.4	2.9	22.7	30.7	28.6	27.9	30.7	29.8	28.0	35.3	41.7	111.9	198.7	198.0	204.3	203.8	202.7	220.2	340.2	316.1	0.7	314.5
15	328.6	235.8	197.9	156.6	141.6	164.0	169.1	153.7	150.0	66.2	62.8	84.1	185.1	161.1	142.4	175.9	97.7	201.9	66.0	79.5	56.3	52.0	91.4	105.6
16	52.7	74.6	44.4	96.1	68.5	188.2	160.7	130.0	49.2	45.7	82.5	120.2	101.5	99.4	104.7	69.7	158.9	201.6	195.2	128.9	169.2	192.3	124.0	47.9
17	165.1	175.3	105.9	156.1	118.3	351.5	312.6	111.0	162.6	181.9	143.5	142.0	81.2	144.4	162.5	33.1	44.0	208.9	182.9	216.3	271.5	333.1	26.4	27.9
18	23.8	12.4	11.6	16.2	26.3	13.0	338.8	3.2	15.9	29.5	12.8	339.3	325.2	297.1	250.6	313.9	330.1	347.6	5.6	8.6	9.8	13.5	13.6	18.1
19	39.4	20.1	359.4	242.2	218.4	166.3	165.3	192.6	188.1	24.4	25.1	168.9	211.4	198.7	117.3	195.6	190.8		198.1	192.4	205.4	212.6	207.4	223.1
20	223.8	219.9	219.7	219.9	219.3	215.7	207.4	221.9	235.5	213.2	25.3	65.7	187.6	205.5	206.9	208.6	212.1	191.9	198.8	202.1	255.4	207.1	212.5	208.8
21	169.0	85.2	162.2	179.6	45.3	114.0	163.8	141.2	188.1	161.2	70.6	143.9	162.7	138.6	192.7	194.7	195.7	173.1	162.2	92.6	292.0	178.7	170.5	294.6
22	308.1	336.6	11.5	7.9	10.4	13.4	24.1	30.0	33.9	34.4	40.0	33.8	16.1	0.1	4.7	7.5	14.9	22.4	7.5	357.6	349.4	7.2	3.1	9.5
23	15.8	11.9	4.4	16.6	17.6	19.5	12.0	13.0	13.2	10.0	8.0	17.2	32.9	38.7	83.3	215.8	218.6	217.6	223.7	230.3	244.6	273.6	359.7	11.3
24	0.1	359.2	358.4	269.7	313.8	192.0	165.0	190.3	192.6	203.0	223.6	22.1	188.9	72.4	79.2	203.8	185.0	188.6	282.5	332.7	10.7	29.1	19.7	358.0
25	265.8	181.9	216.1	92.2	188.6	202.1	206.1	200.8	215.8	14.6	36.9	189.0	200.4	193.2	198.8	191.3	173.9	198.4	194.4	193.9	198.5	198.9	207.8	34.3
26	188.3	169.2	195.2	212.4	200.6	183.7	156.7	166.4	207.4	198.9	150.1	52.1	87.7	144.6	187.3	169.6	111.9	197.0	181.8	183.8	175.6	220.1	221.2	7.8
27	323.0	138.9	216.3	187.3	178.5	178.0	180.6	204.4	181.1	136.4	203.4	132.6	139.9	58.1	91.7	137.9	132.9	113.3	47.9	92.6	6.8	6.7	25.0	24.7
28	36.5	11.4	16.2	9.2	5.5	14.9	13.8	13.9	9.0	16.0	20.7	22.7	24.3	21.4	15.9	15.1	6.8	0.4	356.5	11.7	22.4	19.4	12.9	2.2
29	11.6	12.5	16.5	14.4	9.2	3.4	353.2	0.9	4.9	33.7	50.5	53.6	38.1	307.7	321.6	322.1	324.9	320.0	346.4	244.9	9.0	22.8	354.2	210.1
30	205.6	207.5	203.2	327.1	336.8	322.0	83.7	18.6	5.5	26.1	69.1	36.9	41.8	47.3	43.9	46.8	60.2	264.3	307.2	326.9	8.6	359.4	357.7	4.0

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	208.0	145.8	205.2	204.9	226.4	190.6	194.3	177.2	177.1	44.8	147.3	163.4	190.7	195.3	148.8	55.6	108.3	170.6	187.6	110.4	159.1	140.0	155.3	66.0
2	53.0	41.0	60.1	68.2	70.7	197.5	193.4	173.6	180.5	170.9	174.6	173.1	183.0	187.2	187.2	185.0	168.1	179.1	185.2	173.7	98.5	90.6	178.3	175.1
3	188.6	191.2	172.8	146.2	169.4	180.4	188.8	196.2	190.3	182.5	181.6	190.8	194.7	164.6	70.5	63.9	116.1	171.4	171.6	164.9	313.8	300.2	308.3	319.4
4	345.6	15.1	18.2	31.1	30.3	19.3	10.2	349.3	357.2	164.0	28.2	4.4	7.0	4.5	5.2	9.4	6.8	10.2	2.6	4.4	4.1	6.4	16.2	26.1
5	22.4	24.5	28.3	29.0	33.9	28.0	20.5	20.3	26.5	28.1	27.5	27.2	29.5	24.6	32.6	87.6	35.1	62.5	79.2	192.4	209.7	196.3	193.2	113.8
6	65.2	53.0	112.6	152.8	131.7	164.3	167.4	99.6	313.1	294.8	19.0	29.9	27.6	341.2	49.3	179.0	185.6	174.0	170.4	74.4	50.4	106.8	338.7	303.2
7	310.7	307.5	309.6	311.7	316.1	315.6	318.0	318.4	311.6	314.6	312.5	312.9	313.0	3.7	24.6	79.9	56.0	345.5	290.6	295.1	308.0	307.3	310.1	312.8
8	321.8	315.2	316.0	318.1	317.6	317.0	313.4	313.5	317.9	315.8	44.7	45.0	322.5	323.2	320.9	324.9	312.8	292.4	309.0	316.3	313.8	312.4	341.3	6.5
9	15.2	13.5	9.3	20.8	21.3	26.3	24.5	24.7	18.2	23.5	35.0	39.9	48.2	55.0	54.0	54.1	65.1	70.0	315.2	322.2	318.0	309.9	359.1	316.8
10	310.5	171.2	291.5	97.6	175.5	170.0	159.9	146.2	177.4	192.1	191.7	183.8	86.4	1.5	342.3	137.1	110.5	177.5	172.9	178.9	84.0	48.7	315.9	283.1
11	320.5	319.7	6.9	26.7	6.0	5.3	25.7	28.7	28.0	26.0	27.7	17.1	21.7	19.0	28.7	22.3	13.9	10.9	14.3	16.3	14.4	16.4	17.1	13.1
12	8.6	14.4	16.6	17.2	10.0	14.2	20.2	20.8	24.0	21.1	13.7	14.6	30.2	15.6	69.3	202.5	75.4	28.0	354.5	330.7	12.9	9.9	7.3	8.2
13	20.7	23.0	17.4	20.7	315.6	315.4	314.3	313.2	314.1	312.0	314.5	311.9	315.9	315.3	317.4	320.4	318.6	317.0	316.5	317.2	39.6	343.2	15.7	166.6
14	356.6	182.0	341.5	293.1	28.9	27.6	58.7	19.7	323.6	298.4	311.9	316.9	317.4	315.6	312.4	315.8	313.9	318.2	318.0	322.2	304.1	40.9	41.5	31.3
15	354.7	20.1	27.4	25.9	334.6	7.1	10.9	17.8	19.4	23.1	25.9	26.4	23.6	26.9	31.7	21.4	27.3	16.7	24.8	8.6	14.2	21.0	16.3	17.2
16	10.4	12.2	23.8	25.4	22.6	22.0	23.6	22.6	19.7	17.9	26.0	22.5	48.9	55.3	347.9	319.0	45.5	86.9	57.3	273.5	5.3	57.7	32.1	305.6
17	24.2	13.5	4.6	13.6	40.8	0.9	8.0	54.0	43.4	51.7	55.5	107.4	61.4	59.0	55.2	45.3	43.9	45.6	47.7	33.3	359.3	13.0	36.7	34.0
18	41.7	50.7	54.4	51.5	51.8	48.9	29.4	324.3	359.5	17.2	335.9	317.2	317.3	322.6	319.1	320.6	320.2	319.8	319.2	317.2	316.1	313.3	315.0	314.3
19	312.1	317.0	315.3	316.5	316.3	318.9	318.7	316.2	315.8	315.4	317.4	317.4	317.6	321.6	320.8	322.6	314.0	320.6	325.5	317.7	316.5	318.2	334.5	28.0
20	30.1	13.7	355.3	14.3	12.1	18.6	21.7	27.1	33.3	32.2	34.8	34.7	30.2	19.6	30.8	14.9	13.3	10.6	17.3	24.2	21.4	23.4	20.8	15.5
21	16.8	17.3	15.2	15.4	19.2	15.3	16.1	18.1	20.9	22.5	24.1	23.9	24.7	30.0	31.5	27.6	18.4	15.9	11.5	0.8	25.0	28.0	18.9	17.9
22	26.3	356.6	21.7	28.2	27.7	21.3	19.1	24.7	28.1	23.4	19.1	18.0	36.4	34.6	18.4	27.0	9.3	15.3	4.3	1.0	27.6	9.7	22.1	21.5
23	325.8	8.6	357.3	5.7	28.5	44.2	44.0	38.4	5.8	10.2	39.1	67.3	191.9	210.4	69.3	96.2	186.1	184.9	208.9	199.5	208.7	211.3	214.8	223.4
24	222.3	256.1	271.4	336.4	281.8	348.1	348.0	353.1	264.0	278.0	28.1	26.7	28.4	39.5	34.4	34.1	31.4	27.1	28.8	28.8	28.5	17.7	18.5	17.2
25	17.8	3.0	184.1	359.6	7.1	6.2	0.9	359.7	350.0	353.8	359.8	357.2	356.7	359.6	7.3	2.5	359.4	3.1	7.5	11.8	4.0	5.6	14.4	18.1
26	24.2	16.4	25.8	27.8	25.8	23.6	27.9	20.8	27.3	32.4	32.2	26.1	25.7	30.7	28.4	26.3	20.2	26.2	30.3	29.3	8.6	5.7	3.3	358.8
27	357.0	346.1	1.8	3.1	2.9	5.4	15.8	11.7	20.8	15.5	14.6	15.5	8.7	9.6	5.5	10.4	14.6	20.9	13.1	13.8	15.4	31.5	8.6	22.1
28	16.8	22.2	24.8	29.0	1.3	27.7	20.2	20.3	24.8	19.0	13.7	29.5	38.4	32.5	23.2	27.7	31.9	33.4	11.3	4.8	6.7	3.2	7.5	359.7
29	355.7	0.5	355.2	351.5	355.4	357.5	5.0	6.9	12.4	13.0	15.8	15.9	21.1	19.2	20.8	22.3	18.9	16.4	16.7	13.6	7.4	11.6	16.4	14.7
30	15.2	16.5	19.4	22.3	22.3	26.4	30.0	24.9	22.9	22.2	17.7	301.7	290.9	290.8	283.1	219.2	206.6	200.1	215.9	183.3	179.9	190.5	178.8	193.4
31	214.6	207.6	204.6	210.5	205.5	205.7	194.9	204.1	195.9	205.2	207.2	193.2	167.4	181.4	175.3	153.6	71.9	347.9	1.4	9.7	9.7	15.6	11.7	5.2

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	12.3	8.3	12.4	17.8	22.7	26.2	36.3	35.0	24.4	22.0	25.6	35.1	25.3	24.4	22.7	359.7	271.5	268.7	314.0	339.2	102.0	125.1	150.6	170.4
2	186.2	186.0	178.7	187.0	180.4	176.4	187.7	186.8	182.0	171.6	169.1	169.4	177.1	173.1	154.5	162.2	163.3	149.6	133.0	12.8	307.1	307.8	319.3	317.5
3	313.0	315.9	317.2	315.2	306.3	311.2	308.9	308.7	305.2	316.2	315.7	313.9	315.4	319.3	331.2	15.8	30.0	4.7	1.2	10.3	23.7	33.3	22.7	21.2
4	25.6	35.9	38.4	30.3	238.2	193.7	189.7	188.0	188.6	183.2	186.0	176.8	180.6	182.2	179.8	174.4	185.8	181.0	176.2	183.9	195.0	187.2	185.8	178.0
5	166.5	165.9	317.2	316.9	351.3	23.9	19.1	23.3	13.7	31.7	21.6	28.5	23.7	22.3	25.3	21.0	14.2	20.5	21.0	18.3	7.4	11.7	0.3	7.8
6	4.1	8.3	5.0	12.2	13.1	20.8	23.3	17.6	21.9	20.3	15.4	15.9	18.9	19.8	14.7	12.0	12.1	14.3	12.9	10.9	6.3	8.4	11.8	2.4
7	2.3	1.3	11.9	12.4	3.7	16.1	5.8	8.4	9.6	320.0	310.6	224.4	322.7	325.6	212.5	199.1	285.6	334.0	26.3	318.2	262.4	226.7	197.5	44.4
8	10.4	14.6	12.6	10.0	338.5	348.9	357.2	28.8	15.6	10.9	4.4	2.8	359.8	349.7	192.8	192.8	307.0	298.1	187.2	113.2	275.7	166.3	126.4	5.8
9	101.5	93.4	300.7	24.1	16.3	22.1	20.8	30.4	28.4	26.2	22.9	28.7	25.9	30.2	28.2	32.2	31.8	25.3	10.7	4.9	5.2	30.5	28.2	9.2
10	1.1	12.6	16.0	22.8	19.5	18.6	26.2	18.7	25.6	17.1	20.5	17.6	25.2	35.4	22.3	60.7	39.7	49.9	333.0	351.0	322.3	318.9	316.2	322.2
11	324.3	4.8	14.7	28.7	4.3	12.0	7.1	6.3	10.0	16.2	14.1	15.8	37.8	50.9	36.8	32.4	15.3	45.9	56.9	55.6	48.2	7.3	320.2	316.4
12	319.8	316.9	317.4	318.6	321.5	334.4	309.4	312.2	315.9	317.3	317.7	318.1	340.9	53.5	43.5	49.1	9.3	18.3	27.3	24.3	20.6	26.5	26.2	30.4
13	22.5	12.6	10.5	13.1	8.2	14.8	13.0	12.7	11.4	21.5	28.6	19.5	13.8	4.3	356.2	354.8	11.2	12.1	26.8	16.2	13.6	12.8	14.6	24.5
14	24.1	24.8	14.1	188.2	170.8	213.0	252.2	171.0	340.5	22.2	26.7	25.3	29.3	30.7	30.9	17.8	24.4	21.0	21.7	15.9	18.5	24.3	29.6	20.6
15	28.4	15.1	25.2	26.4	21.9	18.6	18.9	21.0	21.9	14.1	23.9	25.5	31.3	27.2	25.9	29.6	47.5	44.5	23.3	3.9	325.8	8.2	353.5	348.7
16	328.7	316.9	316.0	315.6	317.9	318.8	318.3	317.0	318.6	319.2	316.6	316.1	316.6	316.3	314.4	315.1	317.9	319.0	316.6	317.2	315.1	315.2	318.1	316.7
17	315.4	306.1	319.2	317.5	317.9	313.3	316.8	317.0	318.3	315.4	317.5	313.4	316.9	316.7	316.8	317.3	320.0	317.1	319.8	320.9	318.0	317.3	315.3	313.8
18	313.0	310.7	313.0	312.2	313.7	318.7	320.7	312.6	320.0	52.2	46.3	320.4	316.6	320.4	2.7	39.5	27.3	54.0	56.0	51.3	59.7	56.1	56.4	34.7
19	25.9	28.6	24.2	26.5	26.1	32.8	34.2	31.4	32.5	24.2	26.1	27.5	20.4	35.0	20.0	12.9	15.6	17.0	16.6	14.2	17.5	15.7	13.8	14.1
20	16.0	19.5	12.9	8.2	13.6	17.0	17.2	16.9	14.0	9.3	6.8	2.3	1.2	2.8	4.1	7.3	10.3	15.2	16.7	17.9	18.0	14.4	14.9	19.9
21	19.4	13.9	13.1	7.0	340.1	313.5	252.4	217.7	209.1	222.4	333.7	336.4	358.0	240.5	243.5	4.8	306.7	221.6	266.9	353.0	5.0	335.2	318.0	342.8
22	325.4	348.6	11.1	14.7	12.4	14.7	6.9	4.1	352.3	12.9	15.8	17.9	16.0	9.8	12.4	11.5	11.1	6.4	4.0	5.1	1.9	358.6	359.2	351.7
23	356.1	359.9	353.7	348.3	351.5	358.0	319.8	308.6	307.8	305.9	302.7	302.9	287.9	26.8	31.9	326.6	318.5	20.0	76.6	97.6	183.3	111.5	75.8	334.4
24	312.1	312.5	313.6	319.4	322.4	337.7	12.1	29.1	25.3	30.3	19.0	5.8	352.9	4.0	344.8	340.2	353.9	5.7	9.2	10.5	10.0	5.3	359.3	351.8
25	351.6	353.0	348.1	4.9	10.8	19.7	18.1	18.4	20.3	17.4	16.0	17.7	18.9	19.5	21.3	20.2	20.9	21.9	21.5	22.2	23.3	23.1	25.8	25.5
26	23.3	24.4	22.2	23.9	24.1	23.9	27.2	29.3	33.2	25.3	359.6	2.8	26.7	31.0	32.4	23.5	24.8	27.0	238.4	246.9	262.4	26.8	317.2	303.7
27	320.7	270.1	263.3	289.6	326.6	353.3	349.5	354.5	358.0	360.0	4.4	6.6	3.3	14.5	15.8	14.1	16.6	15.6	15.9	16.0	16.0	16.0	16.2	15.4
28	19.7	25.4	24.4	23.6	29.3	17.2	16.9	23.2	22.4	28.9	19.8	32.2	35.6	32.9	31.1	27.4	12.2	9.2	29.2	27.0	18.1	14.9	7.8	15.5
29	9.7	22.0	28.2	25.5	13.4	13.5	17.3	4.7	3.3	0.9	353.1	6.6	359.8	356.0	358.5	1.1	5.8	8.0	8.9	9.2	8.2	11.3	11.1	5.1
30	357.1	352.9	353.8	359.6	356.1	359.3	354.1	352.4	353.2	351.6	0.2	350.4	348.6	5.1	11.1	351.5	348.0	345.4	352.5	351.6	350.2	358.7	19.7	348.4

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	342.7	355.6	4.8	9.7	146.3	149.9	163.8	154.6	186.6	230.0	267.5	352.4	25.8	34.8	36.7	47.8	151.0	39.5	29.5	23.2	28.9	23.8	19.3	13.3
2	11.0	18.5	17.5	6.7	22.4	12.0	18.4	15.5	229.3	22.3	265.0	34.2	33.3	47.3	37.3	23.6	21.0	24.3	26.1	31.9	31.5	27.0	28.3	27.7
3	28.6	26.3	16.8	17.7	20.8	22.1	21.5	27.0	29.2	23.8	20.2	24.1	30.1	33.9	36.5	34.6	34.9	36.7	16.0	22.7	18.1	22.4	21.0	27.3
4	33.4	24.6	23.9	26.9	25.1	25.3	25.6	22.8	23.0	22.2	24.4	31.4	22.3	31.6	31.0	35.7	40.9	22.5	4.1	348.0	345.1	341.0	353.7	9.8
5	19.5	23.8	24.6	20.8	26.6	24.8	20.7	25.9	27.2	30.0	27.6	28.6	23.2	20.9	14.8	16.1	3.5	352.8	4.3	6.4	8.1	8.5	1.5	357.0
6	7.9	346.9	2.5	12.5	19.3	313.9	257.1	301.7	303.2	308.0	300.7	1.2	14.2	9.1	344.6	347.1	11.3	16.9	22.9	27.7	11.4	30.0	23.4	208.5
7	221.5	87.6	353.6	23.9	0.2	283.0	32.0	31.7	29.6	347.5	331.2	355.6	335.0	355.2	331.1	12.7	3.4	5.0	355.8	355.6	0.1	358.6	359.7	2.5
8	6.6	13.8	28.5	29.5	25.2	21.4	21.7	19.4	12.8	20.7	13.6	352.7	315.5	245.8	229.8	227.1	30.5	0.0	0.0	21.2	25.0	179.1	172.9	187.1
9	169.4	186.1	179.2	240.1	263.6	28.7	31.2	33.3	19.5	334.6	331.1	4.9	348.6	6.0	355.5	6.2	1.0	9.2	340.9	8.4	356.4	359.4	3.1	10.9
10	11.8	14.8	20.6	19.0	19.3	22.0	17.4	19.3	17.4	21.1	22.3	23.8	23.5	23.6	18.6	17.2	18.6	20.6	23.8	22.7	23.2	25.6	9.8	15.6
11	19.3	1.8	339.9	312.4	344.3	185.6	74.3	53.1	55.1	53.9	132.2	171.3	168.6	149.5	130.2	19.4	330.4	316.5	308.9	345.5	38.6	20.6	25.7	28.4
12	23.5	25.5	29.8	24.6	14.5	15.6	11.0	18.4	18.6	13.9	14.6	21.3	11.0	9.9	24.1	21.5	15.0	20.3	24.6	13.1	28.8	30.0	20.3	23.3
13	334.1	27.7	27.0	21.2	4.9	27.0	21.9	18.3	18.4	22.7	17.5	20.7	25.8	22.5	25.5	26.3	16.9	14.7	15.3	12.8	17.1	28.5	22.8	14.6
14	359.7	13.7	21.0	20.3	341.2	349.4	346.9	316.7	317.4	314.9	315.1	312.2	316.0	321.6	318.7	312.6	312.0	351.0	308.9	305.6	299.0	310.6	297.5	295.3
15	298.5	155.0	165.3	192.3	61.2	174.0	84.2	70.9	151.3	74.0	54.8	57.5	58.3	73.8	58.0	59.3	59.8	52.0	62.9	78.0	74.6	51.6	80.9	57.6
16	84.1	56.5	59.3	106.9	77.3	289.8	304.8	312.0	317.6	314.4	315.0	317.0	320.4	319.0	316.8	316.9	319.6	317.4	314.8	316.6	315.1	313.3	317.8	317.6
17	310.7	317.7	317.7	314.8	316.2	315.8	315.6	316.8	318.6	320.1	319.3	317.3	318.4	329.3	32.2	355.4	317.5	320.0	37.0	5.8	43.5	42.4	45.6	56.5
18	22.6	57.3	51.8	51.2	27.5	46.8	53.3	51.1	50.1	55.6	57.9	58.6	58.0	56.9	53.3	50.3	41.5	24.2	15.8	12.3	11.9	16.5	17.2	25.1
19	333.1	316.8	316.8	320.0	319.3	319.0	321.8	320.6	328.1	318.9	319.3	318.1	317.2	318.2	317.9	314.1	311.6	317.2	318.3	317.5	324.5	357.4	346.2	360.0
20	20.6	11.2	12.7	25.8	32.9	29.1	23.0	33.8	23.5	17.0	19.0	8.7	9.1	17.3	13.8	15.9	20.1	20.8	16.6	19.8	20.5	19.2	20.6	21.2
21	14.2	10.9	12.2	8.1	18.3	16.9	5.4	17.1	11.7	11.1	10.7	7.1	10.7	23.6	20.2	6.7	20.8	14.5	22.9	20.8	21.7	19.8	16.7	12.8
22	6.0	10.6	13.7	3.5	1.0	6.3	8.6	5.3	0.7	4.6	12.9	9.8	7.5	11.4	10.0	8.4	8.8	9.0	9.9	10.1	5.7	356.0	357.2	6.2
23	14.3	12.6	357.4	312.2	300.2	295.3	284.9	104.6	170.0	158.4	135.7	130.0	108.0	91.6	68.4	185.0	128.3	52.0	22.7	67.2	305.7	184.6	78.5	191.1
24	93.6	272.0	358.5	8.1	20.6	23.9	30.2	14.1	23.5	22.8	24.2	9.6	16.7	219.7	96.6	69.0	70.8	44.4	315.0	315.1	314.8	311.3	306.8	305.1
25	274.6	74.8	18.5	83.2	67.5	70.6	129.8	108.5	124.9	98.4	79.1	120.0	153.5	152.2	157.1	89.6	149.7	149.2	147.5	130.8	96.1	292.3	287.4	309.0
26	334.9	8.6	9.4	48.8	39.0	21.9	26.8	29.3	24.3	33.9	28.0	10.0	3.3	8.6	19.7	27.8	17.1	15.2	15.1	14.5	9.8	12.3	18.6	19.8
27	20.6	16.7	18.7	19.6	16.1	16.5	18.2	20.5	19.4	23.9	23.8	20.8	21.2	21.7	20.4	18.7	19.0	19.2	19.2	19.6	17.8	12.9	11.8	9.6
28	17.3	14.5	18.5	262.2	307.8	39.3	137.4	64.5	53.3	71.5	317.6	318.1	306.9	312.8	322.3	17.2	14.1	348.6	10.1	359.5	14.5	18.8	15.1	9.1
29	15.8	15.3	354.6	7.0	15.4	320.6	310.3	306.8	299.0	140.0	151.5	76.3	106.0	132.2	160.5	113.8	73.7	73.4	117.3	77.2	87.8	300.5	275.2	335.1
30	357.4	334.2	347.9	342.5	304.5	311.7	309.2	317.4	356.8	359.5	5.7	22.3	24.9	28.6	25.4	20.8	17.0	7.4	8.5	7.8	15.4	16.3	15.4	20.5
31	28.0	32.2	31.5	25.7	25.4	28.4	30.5	31.4	33.5	30.7	31.1	18.2	322.2	344.9	17.3	7.3	357.9	1.6	24.6	26.7	25.6	23.3	27.9	26.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

January *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
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Min.																											
Avg.																											

Total Hours in Month 744 **Hours Data Available** 0 **Data Recovery** 0.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

February 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1																											
2																											
3																											
4																											
5																											
6																											
7																	48.2	6.3	8.1	38.3	50.3	66.3	11.5	14.6	66.3	6.3	30.4
8	23.7	32.4	56.1	24.5	15.3	51.2	37.4	21.3	10.6	9.8	12.2	7.5	10.7	29.8	19.7	15.2	11.4	33.0	6.7	29.8	41.8	10.6	10.6	9.1	56.1	6.7	22.1
9	9.8	7.8	6.8	6.0	12.7	5.8	11.2	14.5	5.9	5.4	5.6	6.0	6.6	6.9	21.8	24.6	12.9	6.1	5.6	8.9	40.1	43.3	45.2	8.5	45.2	5.4	13.7
10	61.6	12.4	20.7	11.2	20.0	33.7	8.4	6.7	15.0	44.8	21.1	19.3	20.0	19.2	10.7	13.2	28.2	26.6	14.5	12.4	9.4	10.8	16.8	14.4	61.6	6.7	19.6
11	13.5	10.4	14.8	11.1	11.2	7.9	6.5	7.3	9.1	6.9	6.0	5.1	5.5	7.1	6.6	9.6	11.6	11.2	12.2	11.8	12.5	11.5	11.9	12.9	14.8	5.1	9.8
12	12.3	12.3	13.3	13.5	12.1	13.0	10.3	11.0	12.9	12.0	13.8	11.9	12.1	11.4	10.7	9.5	10.6	11.3	10.9	8.6	8.8	9.6	8.7	9.5	13.8	8.6	11.2
13	9.3	9.5	9.6	8.1	7.5	8.1	8.5	8.9	9.7	9.7	9.2	9.4	9.7	9.4	9.4	9.9	9.1	11.4	12.6	12.2	12.9	11.1	10.9	10.9	12.9	7.5	9.9
14	16.1	23.4	16.8	19.0	24.1	18.9	13.4	17.3	12.7	14.5	12.5	14.3	15.9	10.7	12.2	5.3	35.3	68.6	45.4	56.5	7.9	47.6	62.4	36.1	68.6	5.3	25.3
15	5.1	5.6	5.5	6.8	44.0	67.0	38.5	20.5	51.8	47.3	4.7	10.5	38.0	5.0	5.7	4.4	5.0	8.5	13.9	33.0	25.7	11.6	5.3	7.0	67.0	4.4	19.6
16	8.9	6.4	9.6	43.2	43.7	6.8	9.4	35.3	17.2	47.6	53.0	47.0	42.2	41.1	16.4	42.0	17.3	42.8	49.0	14.2	43.2	11.6	24.3	19.2	53.0	6.4	28.8
17	52.7	21.3	8.0	30.8	19.1	18.4	7.8	5.6	8.1	13.0	50.7	3.4	4.0	33.8	21.6	16.0	10.6	11.9	7.9	7.1	6.3	7.0	6.7	9.2	52.7	3.4	15.9
18	12.5	16.0	8.1	8.4	11.5	8.6	46.2	9.6	8.8	7.1	3.7	3.6	8.3	17.3	11.2	19.8	5.5	19.5	35.8	17.4	10.3	11.1	8.6	9.5	46.2	3.6	13.3
19	34.7	40.8	36.4	6.4	5.5	13.4	35.7	67.1	47.9	19.3	19.3	43.4	20.7	18.6	16.0	16.6	17.6	15.5	13.8	24.2	36.3	54.0	47.6	26.5	67.1	5.5	28.2
20	26.9	28.9	25.2	16.7	19.8	16.3	26.5	31.3	27.4	24.6	18.3	26.6	38.8	32.5	52.1	62.9	25.9	43.4	67.0	29.5	22.1	22.7	26.9	17.4	67.0	16.3	30.4
21	17.6	15.8	18.3	19.6	18.9	42.2	21.1	17.7	24.7	15.8	12.6	9.6	7.8	10.7	37.3	17.3	26.4	37.6	34.9	37.8	17.0	42.6	38.5	44.9	44.9	7.8	24.4
22	45.4	16.0	20.2	8.2	9.3	8.6	12.1	16.1	17.9	8.0	5.7	6.1	6.8	8.8	8.8	10.7	16.5	19.7	35.4	22.9	17.9	19.4	20.0	12.1	45.4	5.7	15.5
23	12.9	9.2	8.1	10.2	19.0	21.4	16.7	12.2	14.3	8.5	6.1	6.0	6.0	6.9	8.8	11.5	14.7	12.2	19.4	44.9	23.4	29.2	17.0	31.1	44.9	6.0	15.4
24	30.7	28.9	28.4	29.4	14.7	17.5	18.4	21.1	17.3	27.3	23.4	7.3	9.7	13.8	26.0	15.5	16.5	19.4	25.9	16.0	14.6	18.9	35.6	35.3	35.6	7.3	21.3
25	11.2	34.0	25.1	37.7	31.8	14.3	15.8	13.7	14.5	15.5	13.7	11.2	15.5	14.6	44.2	52.3	56.9	69.9	51.6	17.5	53.1	47.8	48.0	64.9	69.9	11.2	32.3
26	54.4	37.7	18.4	40.2	41.9	46.0	65.1	35.9	37.0	57.1	45.9	47.3	28.0	36.9	43.8	53.3	33.5	15.6	9.4	6.9	6.5	12.7	18.0	17.7	65.1	6.5	33.7
27	24.1	12.6	20.3	55.0	49.6	34.6	17.2	14.9	16.8	7.5	4.3	4.8	6.3	7.3	7.2	25.7	17.9	13.5	22.8	7.0	8.4	13.3	7.8	7.0	55.0	4.3	16.9
28	7.9	7.1	6.5	10.5	9.8	8.0	10.1	7.6	8.0	7.8	6.7	7.2	5.5	6.6	7.0	6.6	25.0	21.4	10.8	26.4	12.3	11.8	15.8	11.9	26.4	5.5	10.8
Max.	**61.6**	**40.8**	**56.1**	**55.0**	**49.6**	**67.0**	**65.1**	**67.1**	**51.8**	**57.1**	**53.0**	**47.3**	**42.2**	**41.1**	**52.1**	**62.9**	**56.9**	**69.9**	**67.0**	**56.5**	**53.1**	**66.3**	**62.4**	**64.9**	**69.9**		
Min.	**5.1**	**5.6**	**5.5**	**6.0**	**5.5**	**5.8**	**6.5**	**5.6**	**5.9**	**5.4**	**3.7**	**3.4**	**4.0**	**5.0**	**5.7**	**4.4**	**5.0**	**6.1**	**5.6**	**6.9**	**6.3**	**7.0**	**5.3**	**7.0**		**3.4**	
Avg.	**23.4**	**18.5**	**17.9**	**19.8**	**21.0**	**22.0**	**20.8**	**18.8**	**18.5**	**19.5**	**16.6**	**14.6**	**15.1**	**16.6**	**18.9**	**21.0**	**20.7**	**23.9**	**23.3**	**22.0**	**21.9**	**23.8**	**22.6**	**19.5**			**20.1**

Total Hours in Month 672 **Hours Data Available** 512 **Data Recovery** 76.2%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

March 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	15.1	13.7	14.4	15.8	16.0	9.9	15.9	13.5	9.5	7.6	6.3	6.5	5.7	7.5	9.3	12.9	15.8	35.7	26.6	16.7	21.6	22.9	35.3	34.2	35.7	5.7	16.2
2	22.7	24.9	20.8	15.8	26.4	20.2	21.9	23.1	31.9	8.8	10.4	10.1	10.7	10.9	11.4	13.2	50.5	29.5	13.5	14.5	21.1	20.8	21.4	18.0	50.5	8.8	19.7
3	19.9	25.8	19.7	23.9	17.8	22.5	19.9	24.0	23.4	9.0	9.0	10.1	9.2	8.4	7.6	8.3	37.4	35.9	26.2	11.3	16.4	16.1	11.8	18.0	37.4	7.6	18.0
4	25.8	14.6	19.8	12.8	19.8	21.2	20.8	19.4	17.3	13.3	8.7	8.7	9.6	12.9	14.4	12.5	33.9	18.5	34.5	36.8	11.6	9.1	11.4	8.6	36.8	8.6	17.3
5	6.9	8.4	8.3	10.5	9.9	7.6	9.4	12.5	13.3	11.8	11.6	12.1	17.8	13.5	9.5	14.3	13.1	28.9	25.0	29.4	35.9	28.6	10.2	12.4	35.9	6.9	15.0
6	28.6	29.4	29.8	21.3	36.0	27.3	21.8	19.4	30.9	28.0	40.1	28.5	22.4	14.3	14.7	15.8	16.9	21.8	18.6	17.2	15.8	14.7	14.4	13.0	40.1	13.0	22.5
7	15.1	16.5	15.9	15.8	15.2	14.0	12.9	18.5	35.6	18.7	14.8	14.4	16.1	17.9	29.1	29.9	30.0	29.9	24.2	21.7	20.0	15.6	14.8	16.7	35.6	12.9	19.7
8	13.6	15.4	13.6	13.8	14.2	14.1	17.1	18.1	28.6	31.8	20.2	19.0	26.3	16.0	18.8	39.4	40.6	46.8	38.3	19.1	24.9	21.3	43.0	25.2	46.8	13.6	24.1
9	19.8	33.4	37.7	34.6	22.3	23.2	52.1	54.5	27.2	31.6	18.5	14.1	14.9	12.0	11.7	13.6	38.7	47.2	30.7	23.5	53.2	17.0	40.2	18.2	54.5	11.7	28.7
10	44.0	21.2	14.4	19.6	23.6	23.7	22.1	13.7	23.2	14.5	19.9	33.7	35.6	43.5	43.0	45.9	12.8	13.1	10.0	19.1	14.1	17.8	17.7	10.5	45.9	10.0	23.2
11	10.4	13.8	11.7	33.9	23.0	14.5	18.0	47.0	15.3	10.5	11.2	11.0	17.7	17.4	15.5	15.7	27.5	19.7	15.4	14.7	13.5	24.3	28.4	22.7	47.0	10.4	18.9
12	30.8	31.9	16.4	17.5	16.1	52.0	36.9	20.1	38.0	29.9	42.5	35.2	17.4	15.9	27.2	72.4	44.7	47.6	40.8	31.1	48.4	38.1	53.8	43.8	72.4	15.9	35.3
13	43.2	47.1	37.3	31.0	34.0	28.7	26.4	33.3	26.7	51.9	48.3	51.4	46.9	33.1	27.1	48.0	44.4	39.8	56.4	61.2	28.9	18.3	16.0	34.5	61.2	16.0	38.1
14	50.7	65.9	81.1	63.9	44.8	43.3	45.2	32.0	39.3	60.1	47.2	53.1	46.7	40.5	46.7	33.4	52.7	41.0	18.8	12.7	15.2	15.2	15.5	36.9	81.1	12.7	41.7
15	7.3	9.9	8.9	10.5	7.5	7.3	7.0	9.0	7.1	7.2	12.0	14.3	12.5	12.1	9.5	12.6	14.0	31.0	29.5	10.8	9.1	15.8	20.1	23.2	31.0	7.0	12.8
16	20.7	27.1	22.9	24.5	21.5	19.7	21.6	18.3	13.6	10.8	10.5	8.4	10.3	8.2	8.0	28.8	38.4	18.1	18.3	11.4	29.9	18.4	14.9	17.7	38.4	8.0	18.4
17	22.4	18.9	16.9	23.4	25.4	15.5	20.6	21.6	16.4	13.0	12.9	14.7	13.3	8.4	4.5	7.9	11.5	54.3	27.5	21.5	25.5	21.9	20.8	19.8	54.3	4.5	19.1
18	15.8	28.4	19.2	14.1	14.8	15.4	18.0	17.4	16.5	13.7	11.6	13.1	9.4	9.1	8.4	20.7	11.4	16.4	24.1	19.6	17.5	15.2	25.9	20.1	28.4	8.4	16.5
19	24.7	18.1	20.9	11.2	8.0	13.0	11.4	17.1	14.1	9.8	11.3	9.5	6.7	6.7	6.4	6.9	33.4	6.2	20.1	12.5	10.3	8.3	12.4	15.0	33.4	6.2	13.1
20	6.8	5.3	5.7	5.4	10.8	7.9	9.3	8.3	9.3	10.6	9.5	11.1	10.1	8.7	8.1	9.0	9.3	9.5	9.7	9.8	10.4	8.7	7.9	7.6	11.1	5.3	8.7
21	9.1	10.1	10.3	9.5	9.5	9.8	17.9	11.6	6.6	46.6	30.5	56.9	57.7	19.7	27.1	28.3	38.0	59.8	37.3	36.2	41.7	39.6	34.6	32.7	59.8	6.6	28.4
22	15.0	26.4	59.5	41.4	49.1	18.8	27.6	23.6	12.3	13.6	12.1	13.3	10.2	8.7	26.5	20.9	10.7	23.4	48.6	15.5	16.8	13.0	10.1	12.8	59.5	8.7	22.1
23	7.5	8.2	12.0	27.4	28.3	31.5	19.6	17.8	15.2	15.9	14.6	19.0	25.9	25.1	65.0	72.2	74.8	51.8	71.9	63.5	74.2	64.7	52.2	43.0	74.8	7.5	37.6
24	47.8	40.0	59.6	33.2	24.2	22.4	15.5	17.4	16.1	15.2	15.6	14.9	17.0	15.1	13.6	14.2	14.0	14.7	13.6	16.8	15.1	18.1	35.2	23.0	59.6	13.6	22.2
25	18.9	46.8	24.3	37.0	42.2	31.5	32.1	48.3	53.6	30.3	28.0	44.3	30.7	46.4	42.4	25.9	41.0	34.1	56.5	18.8	16.6	6.1	4.7	5.7	56.5	4.7	31.9
26	8.0	9.6	10.5	10.3	9.2	9.9	9.7	10.0	11.2	8.6	12.3	22.4	31.6	18.3	13.7	15.0	12.6	13.1	25.9	51.0	32.6	26.3	27.2	30.0	51.0	8.0	17.9
27	48.0	36.4	17.4	25.8	26.4	16.5	21.9	12.2	7.0	6.6	9.6	9.8	7.9	7.2	13.7	16.4	21.4	14.4	39.0	23.7	21.3	29.3	16.8	20.9	48.0	6.6	19.6
28	16.4	15.8	19.3	18.3	17.9	15.4	13.3	15.9	7.2	8.0	11.8	11.4	9.5	8.2	11.7	10.2	26.5	16.5	16.6	15.6	15.0	14.4	13.6	30.9	30.9	7.2	15.0
29	9.1	9.9	20.5	26.7	34.0	13.0	11.4	21.9	23.1	25.7	47.2	36.1	28.1	19.8	28.0	33.9	56.7	51.3	64.6	59.6	39.7	24.0	19.4	16.8	64.6	9.1	30.0
30	23.6	20.5	15.2	22.1	15.5	15.7	16.3	25.3	12.4	9.9	9.8	8.1	9.8	19.4	13.3	11.9	28.0	6.4	39.9	6.1	10.9	64.6	10.1	26.5	64.6	6.1	18.4
31	44.9	36.4	17.6	8.8	14.2	33.3	27.8	31.3	4.9	22.4	33.5	4.9	4.3	4.2	4.3	4.3	4.4	4.5	20.1	65.6	12.8	7.2	10.0	9.8	65.6	4.2	18.0
Max.	**50.7**	**65.9**	**81.1**	**63.9**	**49.1**	**52.0**	**52.1**	**54.5**	**53.6**	**60.1**	**48.3**	**56.9**	**57.7**	**46.4**	**65.0**	**72.4**	**74.8**	**59.8**	**71.9**	**65.6**	**74.2**	**64.7**	**53.8**	**43.8**	**81.1**		
Min.	**6.8**	**5.3**	**5.7**	**5.4**	**7.5**	**7.3**	**7.0**	**8.3**	**4.9**	**6.6**	**6.3**	**4.9**	**4.3**	**4.2**	**4.3**	**4.3**	**4.4**	**4.5**	**9.7**	**6.1**	**9.1**	**6.1**	**4.7**	**5.7**		**4.2**	
Avg.	**22.3**	**23.5**	**22.6**	**21.9**	**21.9**	**20.0**	**20.7**	**21.8**	**19.6**	**19.2**	**19.4**	**20.0**	**19.1**	**16.4**	**19.0**	**23.0**	**29.2**	**28.4**	**30.4**	**25.4**	**23.9**	**21.8**	**21.6**	**21.5**			**22.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

April *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	10.7	10.2	8.0	10.8	12.4	10.6	8.4	10.3	8.3	5.7	8.4	19.5	7.5	5.1	3.9	5.4	4.6	3.9	9.7	9.9	8.6	26.0	7.3	47.8	47.8	3.9	11.0
2	6.9	11.1	15.8	11.8	16.1	32.7	54.7	60.3	52.2	40.1	60.1	63.0	74.8	52.3	45.2	33.5	39.9	35.7	67.2	10.7	12.2	14.7	12.1	18.4	74.8	6.9	35.0
3	11.8	10.6	11.1	13.7	10.1	10.6	11.5	11.6	11.1	11.1	10.2	10.1	10.9	9.0	12.4	15.6	12.7	11.5	10.7	10.3	11.4	11.5	11.3	21.2	21.2	9.0	11.7
4	12.8	11.1	10.2	10.7	8.5	9.9	10.0	10.1	12.3	11.8	10.1	11.4	10.6	9.8	9.6	10.9	12.0	10.9	10.6	10.8	11.4	10.8	11.3	11.3	12.8	8.5	10.8
5	11.4	10.0	9.9	11.3	11.1	10.2	9.8	9.4	8.7	9.7	10.0	10.0	9.8	10.6	9.1	9.8	13.3	10.9	11.0	11.3	12.7	12.4	11.9	22.7	22.7	8.7	11.1
6	12.4	12.2	12.9	11.6	10.2	10.6	10.6	11.3	10.0	10.9	10.3	9.4	9.5	10.1	9.8	9.7	9.7	10.7	12.6	12.3	9.8	10.3	10.1	9.9	12.9	9.4	10.7
7	10.6	12.2	15.2	56.7	59.6	45.3	58.2	69.9	70.2	58.5	30.0	20.2	11.6	12.0	10.8	12.0	12.6	13.9	13.0	11.9	11.5	11.3	10.2	11.0	70.2	10.2	27.0
8	9.6	10.3	9.6	10.1	10.2	10.7	10.8	10.6	10.7	9.9	9.7	10.1	9.7	9.1	10.1	11.2	12.3	11.8	13.6	12.5	13.8	13.6	13.6	11.7	13.8	9.1	11.1
9	12.7	11.3	11.0	11.8	10.3	10.8	10.6	11.7	11.7	11.1	11.1	11.3	10.1	9.5	10.4	10.6	11.1	11.6	11.3	11.5	26.4	11.7	10.7	12.9	26.4	9.5	11.8
10	30.9	55.4	64.5	20.3	30.4	42.9	34.1	35.1	30.8	33.2	16.7	55.1	61.1	39.6	21.3	49.4	36.5	30.6	24.3	13.1	27.9	37.5	25.3	15.7	64.5	13.1	34.7
11	10.8	8.7	7.1	6.0	8.3	5.9	8.2	6.0	3.8	8.8	10.0	22.5	22.6	16.9	16.9	18.3	11.9	19.7	27.0	47.3	58.6	51.7	69.8	20.9	69.8	3.8	20.3
12	33.0	42.5	10.4	45.5	25.4	46.6	15.5	6.5	5.3	6.6	11.2	11.7	8.2	9.1	9.0	9.6	8.6	10.7	14.8	13.9	25.6	12.0	17.0	28.8	46.6	5.3	17.8
13	23.6	19.2	26.7	23.3	17.4	17.1	13.6	10.9	8.8	9.3	8.0	7.1	3.7	3.6	33.8	32.9	39.0	63.5	62.1	69.7	15.7	25.6	7.7	40.5	69.7	3.6	24.3
14	6.7	7.6	10.1	13.0	49.1	8.5	6.8	8.6	7.4	11.2	11.4	33.4	29.4	38.0	27.9	10.0	13.1	15.7	12.6	11.5	13.4	56.2	48.3	28.0	56.2	6.7	19.9
15	45.9	43.0	12.7	11.1	10.2	10.9	10.0	10.4	10.6	10.7	10.2	13.2	9.1	7.8	6.7	8.4	13.1	13.5	15.7	63.8	41.7	23.8	13.3	13.9	63.8	6.7	17.9
16	12.8	14.1	12.2	11.2	11.7	10.7	14.7	22.4	23.5	15.0	15.7	13.9	15.8	55.3	58.6	37.1	23.6	14.3	14.3	13.2	27.1	56.9	32.9	20.7	58.6	10.7	22.8
17	19.9	11.1	14.4	11.5	24.4	26.8	22.7	22.5	28.3	59.6	64.9	35.0	49.3	40.8	19.5	12.8	13.5	12.5	11.9	13.0	12.8	13.2	14.5	11.0	64.9	11.0	23.6
18	13.5	12.4	12.6	12.5	13.1	12.4	11.2	11.9	11.3	12.1	11.0	10.3	9.6	10.0	10.4	9.8	10.6	11.0	11.1	12.2	12.2	11.6	11.0	11.6	13.5	9.6	11.5
19	10.9	11.0	13.1	12.3	12.3	12.7	12.5	12.8	12.6	12.0	10.7	50.2	29.4	58.5	34.8	49.3	52.1	42.6	14.5	14.8	16.7	33.8	52.2	26.1	58.5	10.7	25.3
20	21.4	22.2	15.9	12.9	10.3	10.1	10.7	9.8	11.6	9.7	9.8	11.7	10.7	10.6	9.7	12.4	10.7	11.0	11.5	10.7	12.2	13.4	11.5	11.6	22.2	9.7	12.2
21	11.3	12.0	11.3	12.2	12.1	11.4	11.7	10.9	11.1	11.7	11.3	9.9	10.2	11.0	13.2	13.5	19.5	14.4	9.9	10.6	10.8	13.1	12.2	15.3	19.5	9.9	12.1
22	11.8	10.6	12.1	14.5	12.9	10.6	11.6	10.8	10.9	11.9	11.3	11.2	10.8	10.7	10.9	10.6	10.2	11.4	12.0	10.7	11.5	10.6	10.7	10.9	14.5	10.2	11.3
23	11.5	10.2	10.4	10.0	11.1	11.9	12.9	11.1	11.2	10.9	10.4	12.2	10.3	11.7	15.7	44.8	36.0	41.7	17.0	12.3	11.3	11.6	11.3	11.8	44.8	10.0	15.4
24	11.0	9.9	10.3	10.3	10.9	10.7	10.3	10.1	9.9	8.5	8.0	9.0	8.7	8.4	9.1	9.7	9.7	11.0	12.4	11.8	11.7	11.6	9.7	10.1	12.4	8.0	10.1
25	10.1	10.8	11.2	12.2	10.5	10.8	12.2	11.3	10.3	11.5	11.7	12.2	11.6	14.6	13.8	11.3	9.3	9.5	9.8	10.1	10.7	10.3	10.9	9.6	14.6	9.3	11.1
26	10.9	10.2	10.4	12.6	9.9	58.0	65.1	22.3	11.8	56.6	31.3	37.7	8.3	4.5	10.3	11.6	7.8	13.9	49.5	51.1	53.0	17.8	29.4	54.2	65.1	4.5	27.0
27	36.5	44.8	35.9	14.3	8.4	4.9	13.9	10.1	60.6	43.5	11.5	17.4	15.2	11.1	9.7	7.7	5.4	6.1	8.5	7.7	10.4	9.8	10.1	9.2	60.6	4.9	17.2
28	18.1	15.1	35.2	16.2	7.6	11.0	15.2	12.4	8.9	29.2	5.1	4.4	6.3	22.1	16.8	17.3	19.3	12.5	20.4	29.6	42.0	38.1	14.7	15.6	42.0	4.4	18.0
29	11.4	8.4	9.8	5.6	13.5	10.9	13.0	11.7	11.2	9.5	9.3	9.2	11.9	18.0	10.8	46.4	47.6	13.0	11.4	11.8	18.3	19.1	23.4	26.5	47.6	5.6	15.9
30	17.5	42.2	6.3	7.0	6.6	6.9	9.8	7.9	8.7	8.8	8.7	9.3	10.3	10.6	10.5	10.2	13.5	20.5	47.5	52.6	16.1	13.3	11.7	11.6	52.6	6.3	15.3
Max.	**45.9**	**55.4**	**64.5**	**56.7**	**59.6**	**58.0**	**65.1**	**69.9**	**70.2**	**59.6**	**64.9**	**63.0**	**74.8**	**58.5**	**58.6**	**49.4**	**52.1**	**63.5**	**67.2**	**69.7**	**58.6**	**56.9**	**69.8**	**54.2**	**74.8**		
Min.	**6.7**	**7.6**	**6.3**	**5.6**	**6.6**	**4.9**	**6.8**	**6.0**	**3.8**	**5.7**	**5.1**	**4.4**	**3.7**	**3.6**	**3.9**	**5.4**	**4.6**	**3.9**	**8.5**	**7.7**	**8.6**	**9.8**	**7.3**	**9.2**		**3.6**	
Avg.	**15.9**	**17.3**	**15.2**	**14.8**	**15.5**	**16.8**	**17.3**	**16.0**	**16.8**	**18.6**	**15.3**	**18.7**	**16.9**	**18.0**	**16.4**	**18.4**	**18.0**	**17.3**	**19.3**	**19.8**	**19.2**	**20.4**	**18.2**	**19.0**			**17.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

May *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.2	10.4	8.2	9.4	10.5	43.6	41.0	11.4	12.0	57.2	12.5	13.2	9.9	9.5	11.3	10.0	10.4	9.3	11.3	11.4	10.8	10.5	10.7	11.4	57.2	8.2	15.3
2	11.0	9.7	9.4	8.2	8.7	14.1	13.0	9.8	10.7	10.3	9.8	9.6	13.2	16.5	46.5	24.8	33.6	51.1	64.1	22.1	27.3	26.1	9.2	20.1	64.1	8.2	19.9
3	41.6	16.7	7.0	11.8	26.8	53.9	7.7	4.0	14.2	18.0	16.5	6.0	5.8	4.7	4.4	4.6	4.9	5.4	9.6	29.7	16.9	18.7	49.5	40.1	53.9	4.0	17.4
4	70.7	61.6	15.5	9.3	10.7	30.9	10.0	5.4	4.7	20.3	7.5	8.1	8.0	8.1	7.6	6.4	5.5	7.5	7.1	11.4	17.2	12.5	27.1	30.5	70.7	4.7	16.8
5	31.7	48.3	38.7	34.1	32.0	75.3	45.4	36.9	15.3	15.0	8.1	6.7	5.4	7.1	22.5	33.6	46.6	18.1	24.6	34.9	72.8	66.6	59.4	67.1	75.3	5.4	35.3
6	68.8	72.7	23.4	29.2	49.0	59.5	63.0	29.4	48.6	83.6	70.3	72.3	58.2	52.8	52.9	50.4	39.2	41.5	39.3	28.9	57.5	47.1	44.6	65.2	83.6	23.4	52.0
7	62.5	36.9	35.3	31.3	20.2	17.4	21.0	16.3	30.3	36.3	44.2	59.9	35.1	47.5	23.1	18.3	29.5	29.3	33.3	26.2	27.8	27.1	27.1	18.6	62.5	16.3	31.4
8	21.5	15.7	16.1	14.4	13.9	16.6	25.6	28.3	26.1	9.6	7.8	15.4	6.2	6.1	22.9	16.5	37.6	11.4	8.4	6.0	54.0	23.2	9.4	32.6	54.0	6.0	18.6
9	52.5	18.9	11.9	8.4	6.7	8.6	19.2	17.2	16.1	9.2	7.3	6.2	10.2	21.5	20.6	10.0	12.4	12.6	10.3	11.1	43.0	56.5	34.1	39.9	56.5	6.2	19.4
10	7.8	24.1	26.2	35.8	28.9	46.5	48.3	16.1	33.3	11.0	11.7	9.0	5.5	5.0	5.6	8.3	7.0	6.3	6.8	12.6	10.7	27.1	27.9	26.8	48.3	5.0	18.7
11	7.9	23.9	18.0	14.4	11.2	6.5	4.6	4.8	15.9	37.6	20.3	30.6	39.2	56.2	33.2	55.9	40.4	47.8	60.3	24.7	30.0	26.0	44.7	29.5	60.3	4.6	28.5
12	24.0	5.6	5.8	5.4	9.1	9.0	9.5	16.2	21.0	46.6	17.2	23.0	46.9	42.1	18.3	22.3	41.7	28.0	51.1	31.1	26.7	20.2	43.5	8.2	51.1	5.4	23.9
13	8.4	11.3	10.5	9.1	8.1	9.5	9.1	10.7	12.7	11.1	11.4	11.4	11.6	9.4	8.1	8.1	8.2	8.7	9.6	9.6	10.4	9.5	10.1	10.4	12.7	8.1	9.9
14	10.4	9.1	9.2	8.4	9.5	9.8	9.4	9.7	10.0	9.2	8.9	10.3	10.4	22.3	25.2	62.1	58.0	40.3	52.0	30.2	56.5	27.7	9.9	8.5	62.1	8.4	21.5
15	6.8	6.0	5.7	6.6	7.6	6.6	9.8	11.7	12.6	12.3	12.5	12.1	60.8	15.5	17.3	9.5	7.8	6.4	7.1	45.8	15.9	29.2	45.5	51.9	60.8	5.7	17.6
16	43.7	76.4	58.2	44.0	60.2	47.6	64.5	61.7	61.4	43.8	27.3	30.4	23.9	45.4	19.2	8.4	5.2	6.6	12.0	9.0	17.0	8.8	8.8	13.0	76.4	5.2	33.2
17	71.4	58.0	82.6	62.6	12.0	15.0	10.9	4.5	10.9	44.0	28.1	34.8	6.0	6.4	25.2	18.5	20.3	24.9	32.3	43.3	21.6	24.5	21.5	21.8	82.6	4.5	29.2
18	61.8	22.9	53.3	43.6	42.6	15.7	15.0	17.2	21.4	13.2	15.9	9.1	8.3	6.6	5.0	6.4	6.7	10.1	16.3	40.8	40.5	47.5	19.9	39.5	61.8	5.0	24.1
19	46.9	40.0	13.0	7.2	8.8	7.9	7.5	10.5	10.2	21.4	32.8	25.1	33.8	36.9	34.5	22.2	24.6	53.6	56.3	35.8	14.1	22.2	19.4	17.3	56.3	7.2	25.1
20	15.2	21.6	13.4	14.9	27.5	30.4	9.2	12.1	9.2	7.3	5.2	13.7	21.9	25.2	21.1	24.4	26.1	36.5	34.2	20.1	56.0	68.7	52.5	13.1	68.7	5.2	24.1
21	13.8	14.1	17.1	38.2	13.3	10.2	6.8	8.3	28.9	8.7	7.8	5.9	12.8	12.0	22.6	43.7	23.4	69.1	33.3	24.6	80.3	32.9	29.2	24.5	80.3	5.9	24.2
22	23.4	65.3	48.7	10.5	15.1	16.8	14.0	9.5	12.6	13.1	10.1	9.7	9.6	9.2	10.5	10.8	11.0	11.5	10.1	10.5	11.3	10.7	10.6	9.6	65.3	9.2	15.6
23	10.7	10.6	10.7	11.2	10.3	10.7	10.5	10.2	11.0	11.9	11.1	9.4	9.2	8.9	9.3	9.3	11.4	9.4	11.3	13.2	55.7	17.2	26.6	63.5	63.5	8.9	15.6
24	86.0	59.6	55.4	13.7	19.2	15.4	50.5	24.4	13.2	15.1	11.0	13.0	13.6	13.7	13.6	12.2	11.8	10.6	10.8	11.2	11.1	9.9	12.2	10.8	86.0	9.9	21.6
25	12.8	11.8	12.3	11.0	12.4	11.5	12.6	14.1	15.0	13.6	10.6	13.2	17.3	8.0	6.1	6.4	5.4	5.7	5.8	47.0	50.1	4.7	39.6	20.8	50.1	4.7	15.3
26	10.4	9.0	7.6	9.5	53.9	7.2	11.3	11.9	11.7	11.4	15.1	18.9	40.6	21.0	36.1	64.2	36.0	41.8	46.7	36.6	26.5	11.5	12.8	22.9	64.2	7.2	23.9
27	36.7	54.7	37.7	31.5	12.7	10.7	8.5	19.1	19.8	19.2	5.2	5.4	5.9	12.0	24.6	8.2	5.0	5.9	9.9	10.3	13.1	15.0	19.1	21.6	54.7	5.0	17.2
28	18.0	11.1	14.7	36.6	9.9	10.5	7.0	6.3	34.6	27.7	18.2	24.7	42.7	11.3	15.3	10.0	7.0	5.4	7.6	6.4	6.4	29.7	30.1	23.4	42.7	5.4	17.3
29	18.5	31.9	8.3	10.0	44.8	10.0	8.3	13.6	10.5	9.0	7.6	9.3	9.2	10.7	10.3	14.8	10.6	9.3	9.7	9.2	10.7	11.9	10.6	10.0	44.8	7.6	12.9
30	8.0	8.8	5.4	13.1	65.2	11.4	13.0	14.0	11.4	12.6	13.8	13.5	47.1	20.4	17.9	18.5	8.7	14.4	10.3	5.5	5.9	14.4	10.6	28.0	65.2	5.4	16.3
31	12.8	10.0	10.5	11.6	10.5	12.9	12.1	11.7	10.3	10.8	9.8	10.3	10.8	11.6	10.3	10.2	11.2	12.0	12.0	10.9	11.6	11.7	12.2	12.1	12.9	9.8	11.2
Max.	**86.0**	**76.4**	**82.6**	**62.6**	**65.2**	**75.3**	**64.5**	**61.7**	**61.4**	**83.6**	**70.3**	**72.3**	**60.8**	**56.2**	**52.9**	**64.2**	**58.0**	**69.1**	**64.1**	**47.0**	**80.3**	**68.7**	**59.4**	**67.1**	**86.0**		
Min.	**6.8**	**5.6**	**5.4**	**5.4**	**6.7**	**6.5**	**4.6**	**4.0**	**4.7**	**7.3**	**5.2**	**5.4**	**5.4**	**4.7**	**4.4**	**4.6**	**4.9**	**5.4**	**5.8**	**5.5**	**5.9**	**4.7**	**8.8**	**8.2**		**4.0**	
Avg.	**29.9**	**28.3**	**22.2**	**19.5**	**21.7**	**21.0**	**19.3**	**15.4**	**18.6**	**21.6**	**16.0**	**17.4**	**20.6**	**18.8**	**19.4**	**20.3**	**19.6**	**21.0**	**23.0**	**21.6**	**29.3**	**24.8**	**25.4**	**26.2**			**21.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

June *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	11.3	11.6	11.1	12.3	12.6	10.8	11.2	11.1	12.7	12.2	10.8	11.1	12.3	37.6	39.9	57.9	67.1	33.4	29.4	44.1	50.0	58.8	21.1	28.5	67.1	10.8	25.8
2	46.8	45.5	17.9	36.1	38.0	34.1	8.2	5.3	4.3	4.2	3.9	4.8	6.2	19.0	13.3	5.4	6.0	7.5	6.1	8.1	11.5	59.1	62.6	37.3	62.6	3.9	20.5
3	39.2	14.3	38.7	45.4	39.9	8.3	43.6	27.8	17.6	16.6	5.1	4.3	4.7	7.4	13.5	7.9	4.7	5.4	9.9	55.7	49.6	40.3	65.7	22.7	65.7	4.3	24.5
4	11.2	10.3	10.2	12.1	18.0	58.1	56.2	28.9	45.2	6.0	7.6	10.0	12.9	12.0	11.9	44.9	12.7	7.3	7.3	7.6	11.7	13.2	12.5	11.7	58.1	6.0	18.3
5	6.8	7.6	30.0	16.7	10.9	11.2	8.0	7.7	9.8	11.2	21.1	14.8	12.4	14.3	12.9	30.0	55.0	21.7	44.3	57.4	42.4	22.1	38.6	21.4	57.4	6.8	22.0
6	14.5	45.3	59.1	15.2	32.4	14.1	4.8	7.3	7.0	28.2	31.0	12.6	8.8	25.3	10.2	7.2	7.4	9.3	39.0	58.2	33.9	59.5	11.5	13.2	59.5	4.8	23.1
7	8.4	9.6	9.5	12.6	11.3	10.4	10.9	10.4	10.4	11.0	11.3	10.0	11.4	25.7	54.2	70.0	33.9	13.8	13.3	10.7	14.6	13.3	11.6	11.1	70.0	8.4	17.1
8	12.5	12.5	12.0	12.0	13.1	12.2	12.3	12.4	12.7	10.1	11.1	12.7	11.3	10.2	9.9	12.1	14.8	20.8	56.8	43.6	19.5	12.8	13.5	12.2	56.8	9.9	16.0
9	8.7	7.1	37.8	19.4	8.3	10.9	12.5	6.6	11.9	42.1	22.0	40.7	19.5	50.3	43.3	46.5	48.8	48.1	66.2	16.2	21.7	16.9	14.4	28.6	66.2	6.6	27.0
10	20.4	21.3	19.7	25.7	28.2	30.2	23.8	23.2	20.4	24.4	23.7	19.4	51.1	39.6	55.5	54.8	38.9	33.9	18.8	28.1	23.8	29.9	13.6	28.0	55.5	13.6	29.0
11	14.9	19.1	14.5	13.5	17.4	8.6	23.4	30.1	14.0	11.8	13.3	22.1	24.2	46.3	40.3	23.8	31.9	13.8	16.5	34.9	36.2	30.5	27.6	10.5	46.3	8.6	22.5
12	10.4	9.8	65.4	39.7	40.1	56.7	67.5	35.4	30.5	65.7	42.6	37.0	13.6	8.0	20.7	7.5	8.0	8.3	7.8	8.1	5.6	9.5	8.3	7.2	67.5	5.6	25.6
13	34.6	36.6	20.5	13.2	19.5	21.7	21.3	24.5	13.1	8.8	7.7	9.4	9.5	16.1	10.5	14.2	8.7	8.7	7.8	6.8	9.0	12.6	56.9	53.7	56.9	6.8	18.5
14	26.8	58.1	64.0	48.3	12.9	11.5	10.9	9.3	33.1	6.0	3.5	5.2	5.6	5.8	5.8	5.3	5.1	3.9	5.6	7.0	14.2	34.8	55.7	52.2	64.0	3.5	20.4
15	60.0	66.6	68.0	11.7	11.9	6.8	4.6	29.2	7.8	5.7	4.4	3.1	4.0	8.4	8.0	9.6	8.7	10.1	34.2	31.5	48.4	32.2	34.8	25.0	68.0	3.1	22.3
16	8.5	7.9	8.3	10.6	17.7	23.6	65.1	39.8	38.9	23.2	15.7	16.4	15.2	26.5	34.7	48.0	52.2	78.3	43.2	39.0	38.0	44.3	55.3	62.9	78.3	7.9	33.9
17	72.9	66.4	60.6	51.5	32.3	17.4	22.9	16.6	14.3	16.6	23.6	27.4	55.7	26.3	16.1	12.8	47.4	62.2	33.6	18.2	42.2	35.0	23.3	18.2	72.9	12.8	33.9
18	14.0	6.4	20.8	8.6	16.0	7.9	8.1	7.6	30.1	10.3	9.8	10.2	8.7	11.7	11.1	12.7	11.3	10.2	12.9	7.6	8.9	57.8	39.7	34.9	57.8	6.4	15.7
19	65.8	53.3	42.3	60.2	11.3	20.0	11.0	19.5	9.7	8.3	26.8	25.7	13.4	83.8	75.5	68.5	38.3	70.4	22.9	12.3	17.5	11.2	8.0	9.2	83.8	8.0	32.7
20	24.3	7.3	12.5	12.5	11.7	13.9	14.7	16.5	13.2	22.7	53.8	56.0	15.3	17.3	40.7	47.9	54.1	48.8	45.7	62.9	41.8	61.0	49.3	43.9	62.9	7.3	32.8
21	54.5	79.4	69.3	56.6	47.4	13.6	12.2	13.8	18.1	15.1	19.6	20.5	26.3	28.1	27.3	48.1	63.7	44.1	45.9	60.2	65.0	69.3	46.6	38.3	79.4	12.2	41.0
22	17.5	19.2	42.1	64.9	61.8	28.1	56.6	30.1	11.6	14.8	11.0	17.8	9.8	16.5	18.7	38.7	46.5	24.1	21.0	24.9	44.6	62.4	53.1	47.2	64.9	9.8	32.6
23	43.6	61.0	47.6	31.3	29.2	37.1	44.8	36.7	36.8	43.1	46.7	63.0	54.8	65.4	59.0	77.5	68.8	57.6	66.3	34.0	15.8	51.6	52.0	67.6	77.5	15.8	49.6
24	68.8	50.4	51.4	56.0	12.5	9.8	11.5	13.9	11.6	12.1	10.8	11.1	12.1	58.0	32.3	20.2	28.0	44.6	47.6	27.7	52.5	38.7	10.5	17.7	68.8	9.8	29.6
25	16.1	9.4	9.7	21.9	16.5	25.6	46.2	43.5	55.4	29.4	32.2	56.3	53.7	18.4	71.8	26.9	42.2	50.8	35.5	28.2	47.8	20.8	21.5	14.5	71.8	9.4	33.1
26	10.1	9.7	11.7	8.5	8.8	10.3	8.5	5.0	11.1	17.4	5.7	5.7	5.1	4.1	4.4	8.4	8.8	8.0	23.9	33.5	45.8	75.3	82.1	11.8	82.1	4.1	17.6
27	18.9	22.9	14.7	7.4	8.5	10.8	5.9	17.9	5.7	6.5	5.4	7.5	4.4	5.9	7.9	7.4	5.8	6.6	9.6	10.3	6.9	55.4	47.3	46.2	55.4	4.4	14.4
28	69.1	75.9	10.6	57.4	8.9	48.7	21.2	12.4	11.1	19.9	24.7	23.3	6.3	33.1	15.8	39.7	30.8	29.1	12.4	9.4	18.4	20.7	43.5	25.3	75.9	6.3	27.8
29	46.0	7.8	47.6	30.4	34.5	7.1	5.8	14.7	18.5	5.4	6.0	4.1	4.3	4.7	7.0	3.5	6.1	8.3	13.9	38.9	16.7	12.9	14.0	14.1	47.6	3.5	15.5
30	14.0	15.8	15.4	15.7	17.1	21.1	30.4	37.7	28.4	25.5	8.3	12.8	10.7	25.5	23.3	27.9	37.8	26.4	44.0	10.8	15.4	9.2	10.5	12.5	44.0	8.3	20.7
Max.	**72.9**	**79.4**	**69.3**	**64.9**	**61.8**	**58.1**	**67.5**	**43.5**	**55.4**	**65.7**	**53.8**	**63.0**	**55.7**	**83.8**	**75.5**	**77.5**	**68.8**	**78.3**	**66.3**	**62.9**	**65.0**	**75.3**	**82.1**	**67.6**	**83.8**		
Min.	**6.8**	**6.4**	**8.3**	**7.4**	**8.3**	**6.8**	**4.6**	**5.0**	**4.3**	**4.2**	**3.5**	**3.1**	**4.0**	**4.1**	**4.4**	**3.5**	**4.7**	**3.9**	**5.6**	**6.8**	**5.6**	**9.2**	**8.0**	**7.2**		**3.1**	
Avg.	**29.0**	**28.9**	**31.4**	**27.6**	**21.6**	**20.0**	**22.8**	**19.8**	**18.8**	**17.8**	**17.3**	**19.2**	**16.8**	**25.0**	**26.5**	**29.5**	**29.8**	**27.2**	**28.0**	**27.9**	**29.0**	**35.7**	**33.5**	**27.6**			**25.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

July *2007*

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	12.8	15.2	16.8	18.4	7.9	10.7	18.3	19.8	10.6	16.9	13.6	8.8	16.0	10.6	14.3	17.1	12.5	25.5	24.5	14.6	13.0	11.0	16.3	23.9	25.5	7.9	15.4
2	39.8	19.8	18.0	28.4	13.8	14.7	13.5	25.4	16.5	6.8	4.9	4.1	4.3	7.9	8.3	6.6	6.1	5.6	11.7	8.3	44.5	45.8	52.9	10.7	52.9	4.1	17.4
3	30.7	44.6	23.8	10.0	28.6	23.9	41.4	20.9	16.1	11.6	5.7	4.2	4.3	4.5	7.5	8.4	7.2	9.8	15.1	15.8	15.5	11.1	19.7	15.2	44.6	4.2	16.5
4	18.3	53.8	17.2	11.3	12.8	11.0	6.9	3.5	39.0	13.9	6.3	12.2	7.5	7.7	10.4	6.0	7.6	9.4	7.8	5.1	12.8	44.5	33.0	22.6	53.8	3.5	15.9
5	10.0	34.8	35.0	41.7	47.5	36.4	11.5	29.7	37.0	8.2	6.2	6.5	11.2	32.8	46.2	21.4	26.0	79.1	19.3	22.5	24.2	13.7	14.3	34.3	79.1	6.2	27.0
6	24.6	17.8	36.3	36.1	12.9	8.8	10.7	49.6	12.5	35.8	9.5	7.7	9.0	6.1	8.1	8.0	16.7	8.4	12.2	17.9	46.5	22.5	18.1	36.5	49.6	6.1	19.7
7	43.6	30.4	10.3	12.1	59.1	12.3	31.7	22.6	7.2	15.3	9.3	7.6	11.5	31.5	9.5	27.6	16.5	10.9	19.0	23.5	10.0	14.0	19.5	16.7	59.1	7.2	19.6
8	47.2	13.7	51.8	57.4	56.5	10.9	9.2	66.0	52.8	7.8	5.2	41.1	47.9	22.1	36.7	26.9	18.9	23.6	11.6	35.2	22.6	30.7	33.5	15.2	66.0	5.2	31.0
9	23.7	42.5	9.0	11.6	6.7	7.5	7.9	5.3	5.8	4.8	4.2	21.0	6.2	8.0	42.4	10.0	10.0	10.2	27.3	53.2	10.8	9.7	11.4	11.9	53.2	4.2	15.0
10	15.1	57.3	59.2	12.1	39.8	50.2	13.7	11.4	22.3	24.5	11.7	9.9	6.9	6.7	27.3	12.2	11.0	10.6	10.2	34.3	37.8	43.9	47.6	55.1	59.2	6.7	26.3
11	20.9	28.3	18.0	17.4	47.8	21.1	12.7	25.5	13.9	15.5	8.1	10.2	8.4	7.3	5.4	6.6	10.5	8.8	5.5	6.5	8.3	18.7	24.5	50.2	50.2	5.4	16.7
12	14.0	38.4	22.8	66.2	54.4	22.7	13.6	29.3	19.8	14.7	8.4	8.0	59.1	11.1	8.0	4.8	3.9	5.9	9.0	10.7	15.7	24.0	48.4	41.0	66.2	3.9	23.1
13	19.9	15.7	47.9	23.2	44.0	12.7	10.7	8.9	13.3	16.3	20.5	20.3	57.0	15.3	7.0	16.0	10.3	6.5	8.3	7.3	5.6	10.9	21.4	53.9	57.0	5.6	19.7
14	7.7	8.2	7.7	7.3	6.1	6.4	7.0	6.8	8.5	7.5	18.0	17.1	26.3	20.1	28.4	24.7	23.9	30.1	19.5	6.6	12.5	14.1	22.4	53.2	53.2	6.1	16.2
15	16.0	13.1	9.7	11.8	51.7	9.8	22.7	26.9	9.8	21.0	10.9	9.9	7.2	6.8	6.6	6.0	7.2	59.3	66.2	36.1	39.8	24.4	16.3	15.2	66.2	6.0	21.0
16	14.5	13.7	14.5	13.0	14.4	14.3	14.8	22.0	9.9	9.4	11.1	13.0	11.8	34.3	46.5	41.8	15.2	16.4	16.6	17.1	25.1	32.2	35.7	29.1	46.5	9.4	20.3
17	16.0	20.2	27.4	23.0	16.1	18.9	13.7	11.2	14.0	25.1	12.0	11.3	17.2	30.1	30.8	23.0	38.1	44.1	43.3	27.7	27.1	39.3	17.3	20.4	44.1	11.2	23.6
18	48.6	32.2	24.6	42.9	22.9	50.7	50.7	6.4	27.8	26.7	7.6	9.4	25.4	13.1	21.3	44.9	13.7	12.7	11.1	11.4	25.8	17.7	10.7	11.4	50.7	6.4	23.7
19	15.4	42.6	52.9	37.9	51.5	38.5	68.7	33.1	19.5	12.3	5.8	5.3	6.8	6.9	6.6	12.1	4.3	24.8	9.0	19.8	27.9	36.8	24.8	26.0	68.7	4.3	24.6
20	18.0	17.8	24.8	47.5	76.9	40.4	31.4	12.1	8.3	15.2	11.9	9.3	9.3	8.5	14.0	11.1	11.1	15.1	11.1	14.9	40.6	67.7	37.4	26.6	76.9	8.3	24.2
21	18.2	16.8	13.0	16.6	18.6	16.7	13.9	14.4	13.6	14.9	15.2	27.4	28.7	26.0	38.5	33.4	10.1	21.6	14.9	13.5	14.4	14.0	13.8	16.2	38.5	10.1	18.5
22	41.1	20.5	19.1	17.9	16.2	29.7	33.3	25.8	59.6	35.6	14.6	12.7	50.4	21.4	52.5	50.9	35.8	17.6	26.8	48.6	61.6	40.3	53.2	17.7	61.6	12.7	33.5
23	34.8	5.8	33.2	32.8	51.5	54.1	43.9	40.5	66.3	53.2	50.1	68.5	48.2	43.3	70.2	68.8	50.9	58.6	52.8	39.8	31.2	42.4	59.4	40.2	70.2	5.8	47.5
24	35.1	51.0	51.9	57.5	12.7	11.8	9.5	10.9	12.2	12.8	11.9	12.5	10.7	9.6	11.7	11.9	11.1	11.6	11.3	11.7	11.2	11.2	11.3	11.6	57.5	9.5	17.7
25	9.7	9.2	9.2	8.6	9.7	9.2	8.8	9.5	9.3	9.7	8.8	8.6	8.9	8.6	9.6	9.3	9.0	9.8	9.9	9.2	10.7	11.1	12.7	37.3	37.3	8.6	10.7
26	20.1	55.7	11.4	53.3	61.3	34.3	18.6	15.1	8.8	25.0	19.9	7.7	8.9	10.1	11.4	10.0	9.7	10.5	8.1	14.0	27.1	16.0	17.8	61.1	61.3	7.7	22.3
27	25.9	13.9	7.1	15.7	9.0	73.3	8.6	45.4	9.1	13.1	6.4	8.6	8.9	10.2	5.2	4.9	4.9	4.4	9.2	12.9	51.1	12.2	49.4	53.2	73.3	4.4	19.3
28	85.6	33.9	30.2	74.1	25.0	15.6	20.6	19.4	19.6	32.9	36.5	19.3	26.5	28.8	51.1	72.6	26.3	14.7	14.3	14.0	12.2	15.0	14.5	17.7	85.6	12.2	30.0
29	15.4	14.1	14.1	14.3	16.0	28.0	22.7	24.4	8.0	9.0	9.0	9.0	16.6	22.8	16.8	24.8	80.2	36.8	13.8	13.5	12.8	13.4	12.7	16.0	80.2	8.0	19.3
30	15.9	29.4	25.4	30.9	27.9	73.2	54.6	7.0	6.2	6.8	4.7	10.5	8.8	10.6	6.4	8.1	5.6	9.5	7.7	14.3	15.6	46.4	8.8	8.9	73.2	4.7	18.5
31	10.3	8.9	11.4	10.7	13.2	12.6	28.2	14.5	35.0	17.0	47.3	33.9	24.4	43.8	23.9	32.2	61.1	17.2	40.7	51.8	38.0	44.9	35.3	42.5	61.1	8.9	29.1
Max.	**85.6**	**57.3**	**59.2**	**74.1**	**76.9**	**73.3**	**68.7**	**66.0**	**66.3**	**53.2**	**50.1**	**68.5**	**59.1**	**43.8**	**70.2**	**72.6**	**80.2**	**79.1**	**66.2**	**53.2**	**61.6**	**67.7**	**59.4**	**61.1**	**85.6**		
Min.	**7.7**	**5.8**	**7.1**	**7.3**	**6.1**	**6.4**	**6.9**	**3.5**	**5.8**	**4.8**	**4.2**	**4.1**	**4.3**	**4.5**	**5.2**	**4.8**	**3.9**	**4.4**	**5.5**	**5.1**	**5.6**	**9.7**	**8.8**	**8.9**		**3.5**	
Avg.	**24.8**	**26.4**	**24.3**	**27.8**	**30.1**	**25.2**	**21.7**	**21.4**	**19.7**	**17.4**	**13.4**	**14.7**	**19.2**	**17.0**	**22.0**	**21.4**	**18.6**	**20.3**	**18.3**	**20.4**	**24.3**	**25.8**	**26.3**	**28.8**			**22.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Wind Sigma (RM Young)

August 2007

Day	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	Max.	Min.	Avg.
1	29.2	27.7	54.6	48.4	39.7	37.5	31.1	25.3	57.2	68.1	68.8	72.0	64.0	72.2	65.8	49.2	53.4	65.7	61.0	71.7	46.7	34.5	51.3	50.3	72.2	25.3	51.9
2	69.1	68.0	61.3	53.5	61.5	50.9	24.0	27.3	42.7	32.9	24.0	33.3	49.9	28.9	22.3	24.3	29.4	23.1	21.2	21.9	20.6	52.1	30.0	26.3	69.1	20.6	37.4
3	26.6	40.0	60.9	14.5	21.7	18.6	20.5	29.2	12.0	19.9	15.8	26.3	22.6	52.8	31.5	34.2	49.8	53.1	40.5	32.3	37.4	34.5	27.4	60.9	60.9	12.0	32.6
4	37.1	33.7	32.7	46.4	41.2	33.6	30.6	45.9	26.4	35.5	38.4	26.0	30.9	26.8	29.8	38.9	28.5	19.9	30.7	21.1	33.9	28.9	46.7	31.7	46.7	19.9	33.1
5	28.2	34.6	39.1	37.8	51.3	51.6	38.8	16.6	12.4	4.3	23.3	46.2	46.9	14.2	29.8	14.8	18.1	19.5	15.6	17.3	15.4	29.0	65.0	77.8	77.8	4.3	31.2
6	62.3	19.4	31.0	19.8	38.7	37.5	14.3	10.3	11.7	16.2	20.1	23.3	20.8	33.5	55.8	43.3	40.9	39.4	56.4	39.3	49.2	54.1	52.1	38.7	62.3	10.3	34.5
7	55.6	65.1	25.2	27.2	19.3	18.1	26.8	21.4	43.7	60.6	32.7	40.6	40.2	24.6	30.4	39.2	32.4	22.2	41.3	73.6	48.5	22.3	25.0	20.2	73.6	18.1	35.7
8	35.2	50.0	17.2	21.6	12.5	13.5	11.2	13.0	11.4	16.7	22.7	27.8	54.8	65.0	33.1	30.7	19.8	17.3	13.6	28.4	73.4	66.2	37.6	24.5	73.4	11.2	29.9
9	27.5	19.8	9.7	11.3	10.8	16.4	29.2	6.3	20.4	7.5	5.5	5.2	5.3	5.4	6.0	5.5	6.0	5.9	5.3	16.6	41.1	34.9	18.7	14.8	41.1	5.2	14.0
10	35.7	60.4	35.1	20.9	24.9	19.3	16.5	16.8	9.8	6.1	6.9	9.2	10.1	9.2	6.8	5.7	5.0	6.9	7.4	15.9	20.1	13.5	46.7	38.2	60.4	5.0	18.6
11	29.8	32.6	15.7	69.4	45.1	16.3	18.4	6.9	7.2	5.3	5.2	5.0	5.5	5.1	5.5	4.3	4.3	6.7	18.5	45.0	81.7	47.2	59.9	31.0	81.7	4.3	23.8
12	58.3	57.7	37.3	62.3	50.2	76.0	65.1	30.8	50.9	43.5	51.9	42.4	47.7	46.2	39.0	37.0	24.1	14.5	20.2	42.6	45.5	64.8	25.7	40.4	76.0	14.5	44.7
13	53.6	40.2	42.2	24.8	20.6	36.2	38.1	37.1	63.6	12.4	5.9	5.5	3.4	5.1	6.5	6.0	5.6	11.8	54.9	45.0	48.7	51.3	64.5	51.1	64.5	3.4	30.6
14	73.8	68.4	57.7	76.1	62.8	49.1	73.4	68.6	64.9	55.4	64.1	62.8	47.5	29.4	19.4	18.6	13.3	13.1	17.7	13.8	15.9	20.9	19.0	45.3	76.1	13.1	43.8
15	67.2	45.3	52.7	34.3	60.4	29.7	25.0	13.2	34.8	26.4	12.5	9.6	7.6	12.7	22.3	7.8	5.1	8.0	9.6	32.5	29.7	36.4	44.1	10.7	67.2	5.1	26.6
16	23.9	47.8	10.6	8.6	45.8	8.6	9.2	10.8	12.0	10.1	9.3	28.8	22.3	8.1	5.2	6.0	5.5	7.6	22.4	10.3	14.1	27.7	15.0	64.8	64.8	5.2	18.1
17	51.6	43.3	16.6	11.1	11.2	58.0	24.0	30.5	9.1	61.4	54.6	48.1	42.7	42.0	40.9	24.8	24.8	23.9	22.3	36.7	27.5	16.7	14.4	17.0	61.4	9.1	31.4
18	13.9	13.9	17.3	15.6	13.9	12.3	13.6	12.5	13.0	11.7	12.3	12.8	12.0	12.9	12.5	12.6	12.5	11.8	12.8	12.5	11.9	12.1	11.9	11.1	17.3	11.1	12.9
19	12.0	13.3	12.5	11.6	11.7	10.9	10.9	11.7	11.1	10.0	11.5	10.6	10.3	13.2	13.8	14.4	13.4	13.3	13.3	12.6	47.7	60.6	37.7	78.3	78.3	10.0	19.4
20	61.8	31.7	34.6	34.8	25.8	13.0	36.4	49.6	49.1	46.9	36.1	53.9	54.8	32.8	33.6	18.0	27.1	44.5	61.2	58.9	59.8	55.6	43.5	41.6	61.8	13.0	41.9
21	40.4	30.1	20.0	21.4	15.9	16.3	14.3	12.6	19.9	14.3	17.9	14.3	16.4	45.3	66.8	47.1	43.2	51.5	76.7	66.9	64.8	49.0	63.5	79.8	79.8	12.6	37.8
22	61.8	69.5	36.5	41.8	34.8	48.1	67.2	65.2	74.3	75.8	68.4	67.3	51.0	63.1	58.6	45.9	56.7	38.3	45.1	60.0	10.8	23.7	43.7	27.0	75.8	10.8	51.4
23	11.2	8.4	8.9	9.8	7.6	6.1	7.8	12.8	51.5	17.8	10.7	40.5	53.4	47.6	54.9	56.8	42.1	23.6	23.7	48.4	29.1	37.6	71.4	42.5	71.4	6.1	30.2
24	26.8	26.0	17.1	13.9	36.4	54.5	53.0	10.7	6.1	7.7	28.4	9.4	10.5	8.5	5.8	6.2	8.6	41.3	35.5	30.3	43.3	43.1	22.3	30.5	54.5	5.8	24.0
25	14.2	6.9	33.9	55.6	19.9	21.4	13.1	19.3	32.0	21.0	11.4	8.3	9.9	6.6	6.9	6.8	5.6	9.2	7.5	10.0	11.2	11.6	16.1	33.3	55.6	5.6	16.3
26	9.7	6.5	9.2	30.6	21.9	43.8	30.9	24.6	33.6	27.9	9.7	10.6	23.6	18.1	21.2	8.6	9.0	43.6	44.8	32.5	11.0	11.1	10.2	11.2	44.8	6.5	21.0
27	11.6	10.3	10.6	9.0	8.3	10.9	11.8	9.2	7.5	10.2	10.4	10.5	9.8	11.0	10.6	11.4	11.6	11.2	10.9	10.1	10.5	13.7	11.2	11.0	13.7	7.5	10.5
28	10.4	14.7	16.1	15.8	15.2	13.1	51.0	64.8	40.2	44.1	48.5	7.2	5.4	6.6	7.2	5.5	3.9	9.7	28.3	50.0	41.8	36.1	22.1	6.2	64.8	3.9	23.5
29	5.7	7.7	24.9	8.3	14.9	10.9	6.2																		24.9	5.7	11.2
30																1.9	20.0								20.0	1.9	11.0
31						82.8	78.4	67.0	25.5	44.8	12.5	11.4													82.8	11.4	46.0
Max.	**73.8**	**69.5**	**61.3**	**76.1**	**62.8**	**82.8**	**78.4**	**68.6**	**74.3**	**75.8**	**68.8**	**72.0**	**64.0**	**72.2**	**66.8**	**56.8**	**56.7**	**65.7**	**76.7**	**73.6**	**81.7**	**66.2**	**71.4**	**79.8**	**82.8**		
Min.	**5.7**	**6.5**	**8.9**	**8.3**	**7.6**	**6.1**	**6.2**	**6.3**	**6.1**	**4.3**	**5.2**	**5.0**	**3.4**	**5.1**	**5.2**	**1.9**	**3.9**	**5.9**	**5.3**	**10.0**	**10.5**	**11.1**	**10.2**	**6.2**		**1.9**	
Avg.	**36.0**	**34.2**	**29.0**	**29.5**	**29.1**	**30.5**	**29.7**	**26.5**	**29.5**	**28.1**	**25.5**	**26.5**	**27.8**	**26.7**	**26.5**	**21.6**	**21.4**	**23.5**	**29.2**	**34.1**	**35.4**	**35.3**	**35.6**	**36.3**			**29.5**

Total Hours in Month 744 **Hours Data Available** 688 **Data Recovery** 92.5%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

September 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	11.4	21.1	29.9	26.7	68.5	30.9	25.6	73.9	12.6	5.4	56.8	7.9	11.4	6.9	8.5	4.9	6.0	5.1	7.9	11.4	33.4	9.9	20.7	35.9	73.9	4.9	22.2
2	11.9	14.5	26.3	32.8	25.8	16.4	42.7	41.4	25.7	24.6	29.5	42.6	24.3	28.4	13.0	9.9	12.6	14.8	21.9	40.0	23.8	14.3	17.9	21.4	42.7	9.9	24.0
3	23.0	42.4	65.2	17.6	10.5	6.6	8.1	9.8	5.1	8.1	10.1	12.7	14.3	18.3	32.2	37.8	28.5	21.5	39.7	19.8	47.8	25.0	60.7	51.7	65.2	5.1	25.7
4	12.3	40.6	67.2	69.1	38.8	44.5	63.9	83.7	79.1	97.4	45.4	69.0	75.8	68.9	71.1	74.8	42.4	63.1	36.6	37.9	52.6	28.0	22.1	16.7	97.4	12.3	54.2
5	13.5	14.3	13.4	14.1	12.0	12.0	10.7	10.6	11.1	10.7	10.1	8.8	12.3	15.4	18.1	51.4	70.0	25.6	18.8	36.7	63.0	55.2	80.5	84.6	84.6	8.8	28.0
6	60.9	21.0	61.9	67.1	41.8	57.6	51.9	50.6	50.8	27.6	26.5	24.4	16.5	16.2	17.7	48.0	45.9	93.1	26.5	27.5	23.4	15.3	13.4	12.7	93.1	12.7	37.4
7	13.7	22.6	14.5	26.4	38.5	46.9	27.0	28.8	76.8	42.2	62.6	44.6	41.2	40.8	5.8	13.2	30.3	23.4	74.1	64.6	52.5	65.7	71.6	61.5	76.8	5.8	41.2
8	10.1	12.3	15.0	18.1	21.5	17.3	33.7	20.7	25.7	13.2	12.0	13.2	17.8	20.7	11.4	11.6	7.8	7.6	9.8	9.1	9.0	11.0	9.1	7.8	33.7	7.6	14.4
9	7.7	7.8	8.7	8.3	8.0	8.7	10.0	9.0	8.5	8.4	9.0	8.7	7.8	7.5	7.7	18.8	22.9	56.0	94.0	9.7	9.4	10.6	7.7	35.9	94.0	7.5	16.3
10	9.2	78.5	65.4	27.7	71.1	19.7	56.9	10.4	15.2	27.6	72.5	27.7	10.1	7.2	11.1	10.5	32.7	36.9	27.8	23.2	22.2	26.2	35.9	25.5	78.5	7.2	31.3
11	17.0	23.0	18.8	15.2	19.0	44.9	58.2	65.7	72.8	55.5	42.6	46.8	60.7	67.6	60.5	45.2	81.6	82.3	76.5	16.4	15.7	17.4	14.8	14.1	82.3	14.1	43.0
12	14.3	14.5	14.9	14.6	13.3	13.5	14.6	16.3	14.7	12.8	10.8	21.9	35.5	9.0	8.7	7.5	75.0	16.5	12.4	13.6	60.1	64.5	41.4	38.7	75.0	7.5	23.3
13	92.0	67.1	61.9	43.8	23.2	13.4	11.5	11.2	9.1	8.9	11.2	13.0	13.1	37.3	39.4	64.5	96.8	20.8	24.7	43.1	65.2	55.5	76.3	93.0	96.8	8.9	41.5
14	21.9	8.9	10.3	27.7	10.8	10.4	7.8	6.5	6.2	5.9	8.2	7.5	5.6	70.0	7.5	14.0	7.5	6.8	7.8	31.1	72.4	66.9	52.6	72.0	72.4	5.6	22.8
15	84.1	77.7	49.8	46.6	51.6	47.2	43.3	57.2	63.0	57.1	31.2	33.7	61.5	87.0	75.5	71.1	67.6	79.6	69.0	43.7	52.0	73.2	81.1	70.9	87.0	31.2	61.4
16	48.1	43.5	46.9	73.3	60.0	70.7	63.1	66.8	38.8	14.9	35.6	34.0	43.9	58.1	68.0	74.6	80.6	34.7	33.4	65.7	52.0	30.3	73.3	30.3	80.6	14.9	51.7
17	65.2	38.0	64.7	49.6	69.6	51.4	49.2	93.3	55.5	26.7	59.6	55.8	65.2	61.1	89.0	18.5	11.8	40.2	37.4	21.4	42.1	55.4	6.9	12.6	93.3	6.9	47.5
18	10.4	9.2	14.3	10.4	7.6	18.9	29.6	33.5	47.3	17.7	43.9	69.7	64.6	81.4	94.1	87.4	71.0	33.9	18.9	15.9	11.4	14.1	12.6	13.8	94.1	7.6	34.7
19	49.5	11.3	47.2	66.0	13.6	28.3	15.4	18.9	31.4	22.1	64.8	53.6	7.8	17.9	84.1	26.1	29.8		18.4	28.7	20.3	20.6	25.0	11.9	84.1	7.8	31.0
20	12.5	13.9	15.2	14.1	17.7	21.7	18.9	25.7	14.9	58.6	52.8	77.4	90.4	11.4	17.6	20.1	50.4	21.1	14.5	22.4	51.4	26.9	12.5	26.5	90.4	11.4	29.5
21	79.4	46.7	55.9	76.4	55.5	92.6	50.7	49.2	49.2	47.0	48.4	50.9	46.8	56.7	34.6	24.1	30.8	46.4	62.9	85.2	88.0	54.2	72.4	34.5	92.6	24.1	55.8
22	21.5	45.0	23.4	15.2	12.7	19.4	9.7	7.3	8.7	8.6	5.2	10.2	18.2	13.5	15.7	13.9	11.8	11.5	13.0	15.4	16.6	13.1	14.4	13.4	45.0	5.2	14.9
23	11.8	12.4	13.5	9.7	8.8	9.5	10.5	9.5	9.0	11.5	12.4	13.2	12.2	13.1	83.2	5.8	7.2	7.2	7.8	11.9	11.2	50.9	19.1	41.0	83.2	5.8	16.8
24	19.6	74.9	33.0	81.2	67.0	17.6	29.5	17.4	46.3	85.6	84.5	56.7	43.6	41.4	79.5	12.3	17.9	58.4	70.4	76.6	18.8	20.2	10.4	16.3	85.6	10.4	45.0
25	71.4	29.8	43.9	63.2	54.0	26.7	25.4	18.1	94.1	36.1	78.8	60.2	30.4	17.0	16.8	34.1	36.2	33.6	18.4	17.7	19.9	16.6	38.3	87.0	94.1	16.6	40.3
26	42.6	43.9	14.6	17.3	23.4	22.8	27.3	29.6	37.9	21.1	73.0	32.0	56.4	52.6	32.0	40.8	67.7	14.7	24.3	27.3	33.5	84.9	75.1	77.3	84.9	14.6	40.5
27	87.7	99.7	71.2	37.9	22.6	23.6	33.4	42.3	58.1	72.4	20.1	68.4	42.6	13.9	46.4	13.7	14.4	26.8	43.8	74.8	70.0	43.2	17.9	21.5	99.7	13.7	44.4
28	42.3	49.9	32.5	25.7	13.9	12.2	11.6	12.0	14.4	10.5	9.7	9.7	9.8	10.3	10.4	11.2	17.9	19.2	20.9	14.4	9.6	14.5	51.1	80.3	80.3	9.6	21.4
29	17.2	26.7	15.0	14.9	15.8	13.2	17.5	13.8	14.4	14.9	33.6	9.2	66.6	36.8	17.1	24.0	52.7	35.5	49.6	37.8	89.7	46.5	73.8	37.0	89.7	9.2	32.2
30	38.8	14.0	18.9	88.3	35.1	66.1	65.5	27.1	16.9	16.8	70.9	17.8	5.7	8.2	7.2	7.7	43.9	70.4	18.7	15.2	8.8	39.2	18.4	55.4	88.3	5.7	32.3
Max.	**92.0**	**99.7**	**71.2**	**88.3**	**71.1**	**92.6**	**65.5**	**93.3**	**94.1**	**97.4**	**84.5**	**77.4**	**90.4**	**87.0**	**94.1**	**87.4**	**96.8**	**93.1**	**94.0**	**85.2**	**89.7**	**84.9**	**81.1**	**93.0**	**99.7**		
Min.	**7.7**	**7.8**	**8.7**	**8.3**	**7.6**	**6.6**	**7.8**	**6.5**	**5.1**	**5.4**	**5.2**	**7.5**	**5.6**	**6.9**	**5.8**	**4.9**	**6.0**	**5.1**	**7.8**	**9.1**	**8.8**	**9.9**	**6.9**	**7.8**		**4.9**	
Avg.	**34.0**	**34.2**	**34.4**	**36.6**	**31.1**	**29.5**	**30.8**	**32.0**	**33.8**	**29.0**	**37.7**	**33.4**	**33.7**	**33.2**	**36.1**	**29.9**	**39.1**	**34.7**	**33.3**	**31.9**	**38.2**	**35.6**	**37.6**	**40.0**			**34.2**

Total Hours in Month 720 **Hours Data Available** 719 **Data Recovery** 99.9%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

October 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	48.4	62.4	15.0	15.5	91.3	17.8	21.1	33.4	48.5	62.6	59.6	41.1	22.5	28.6	72.7	32.5	54.9	62.9	47.5	65.9	53.3	61.8	61.9	39.5	91.3	15.0	46.7
2	31.7	34.5	38.4	37.6	68.7	36.0	25.8	49.9	26.2	36.3	34.0	31.6	24.8	26.2	31.9	40.7	52.1	34.5	28.3	48.4	43.8	43.9	31.8	32.5	68.7	24.8	37.1
3	24.7	20.3	48.2	53.8	49.5	53.2	53.8	30.4	40.6	38.5	33.3	26.6	26.1	51.6	41.1	26.1	54.4	42.7	58.7	58.1	44.2	29.6	25.4	33.6	58.7	20.3	40.2
4	33.3	25.0	20.1	8.1	8.2	22.6	22.4	17.7	16.5	68.6	72.8	19.8	16.8	14.2	12.9	13.5	14.2	12.6	14.0	15.5	14.7	14.1	11.9	7.9	72.8	7.9	20.7
5	9.7	11.6	9.5	7.3	7.8	8.7	9.7	9.1	7.9	5.7	5.6	6.5	4.9	8.4	10.1	55.1	78.8	87.2	58.3	86.3	18.8	36.2	47.3	66.5	87.2	4.9	27.4
6	77.8	39.5	58.6	39.2	51.2	51.3	54.4	74.1	39.5	43.4	88.2	78.6	73.5	57.1	68.6	39.5	38.4	50.6	42.4	41.0	31.5	81.8	70.7	32.3	88.2	31.5	55.1
7	25.7	28.0	22.2	15.6	14.6	14.8	14.3	13.6	17.6	15.2	14.3	19.3	29.0	66.7	74.9	45.9	76.1	82.3	51.2	71.2	25.0	18.7	16.0	16.9	82.3	13.6	32.9
8	30.3	17.2	14.3	15.0	14.0	14.2	17.8	16.6	14.7	15.8	32.7	34.3	36.1	16.4	15.2	22.1	29.3	30.6	21.7	17.5	14.5	16.6	35.5	29.7	36.1	14.0	21.8
9	24.8	17.0	19.5	10.8	10.4	9.1	8.4	9.1	14.9	9.3	7.5	7.9	13.4	21.2	15.4	58.7	37.1	39.5	46.8	33.2	27.6	38.4	65.9	47.5	65.9	7.5	24.7
10	94.1	91.8	70.2	73.3	44.3	37.2	40.5	43.3	28.6	20.8	28.2	35.9	70.4	71.3	74.8	51.0	56.9	34.6	29.0	44.0	71.2	65.7	65.5	34.1	94.1	20.8	53.2
11	69.9	18.7	43.5	26.5	13.0	13.5	6.9	6.2	9.7	9.1	9.1	11.6	9.1	9.7	10.0	14.4	12.5	12.6	11.4	9.0	10.2	9.9	9.7	9.8	69.9	6.2	15.3
12	13.6	10.3	8.9	9.1	12.5	11.2	9.7	9.3	8.5	15.9	18.8	17.6	10.5	28.7	38.3	80.6	53.6	91.4	16.9	63.5	22.0	7.4	10.8	9.3	91.4	7.4	24.1
13	14.4	14.0	16.6	35.8	12.1	12.6	17.6	16.2	17.7	15.3	17.5	21.0	16.0	16.6	15.5	14.9	15.0	16.3	15.7	38.1	76.8	85.7	49.4	80.7	85.7	12.1	27.1
14	82.4	98.1	34.7	34.9	97.0	73.0	69.5	51.7	50.3	33.5	25.5	20.5	19.3	26.5	26.2	24.1	22.7	17.2	17.0	28.3	40.8	37.4	19.4	65.7	98.1	17.0	42.3
15	38.8	11.5	16.1	14.1	24.1	15.6	9.0	6.8	6.1	7.3	8.0	8.2	8.8	8.6	8.7	13.3	9.4	11.6	15.0	9.6	12.5	8.7	11.5	10.2	38.8	6.1	12.2
16	11.5	12.7	18.8	12.7	13.5	11.8	8.8	8.8	10.0	10.1	12.8	18.0	18.5	19.4	55.0	19.6	51.6	29.3	42.9	32.8	69.9	9.3	34.9	72.1	72.1	8.8	25.2
17	27.1	37.9	37.9	32.1	36.1	58.1	70.3	18.1	34.2	29.7	18.4	79.2	15.6	13.3	19.6	36.2	24.6	15.2	11.0	27.3	29.3	31.4	21.4	24.5	79.2	11.0	31.2
18	28.1	19.8	9.5	18.1	14.0	26.3	34.7	29.8	40.8	45.6	33.3	18.6	15.5	15.6	14.9	15.4	15.0	16.5	14.8	15.6	14.4	17.8	14.7	16.2	45.6	9.5	21.0
19	16.1	14.6	15.4	15.3	17.2	14.5	14.3	17.2	15.7	15.5	16.4	15.3	15.3	22.3	15.8	19.1	42.9	17.3	18.9	14.8	15.1	12.6	25.7	21.1	42.9	12.6	17.8
20	19.4	17.1	14.9	8.5	13.0	8.3	7.1	6.5	6.2	5.8	4.0	3.7	6.9	13.6	16.8	13.4	11.2	11.3	11.8	10.6	10.9	10.3	12.4	12.4	19.4	3.7	10.7
21	13.7	11.5	10.9	11.7	10.0	10.1	10.5	10.5	9.8	10.0	9.1	9.8	10.3	8.7	8.2	9.3	11.8	11.7	10.8	12.1	12.0	6.6	52.4	30.3	52.4	6.6	13.0
22	21.0	54.7	22.0	8.1	12.9	7.7	11.4	12.7	7.8	12.1	10.7	12.9	14.4	12.6	10.0	9.7	15.0	23.8	28.5	47.6	19.0	24.7	14.3	11.5	54.7	7.7	17.7
23	54.5	13.5	19.4	63.8	26.7	32.3	42.0	68.3	67.9	28.9	17.9	67.3	39.4	79.8	73.4	75.8	70.4	61.1	31.6	17.2	18.9	21.7	27.7	31.9	79.8	13.5	43.8
24	49.4	57.1	65.9	78.0	46.6	21.8	71.3	17.6	76.0	49.5	13.3	8.4	10.2	8.9	7.9	6.2	6.8	7.8	8.8	6.0	6.8	10.6	9.9	9.3	78.0	6.0	27.3
25	10.2	68.4	97.7	23.0	16.9	13.5	14.9	14.8	17.3	16.3	15.2	14.5	16.1	16.6	14.2	16.1	16.7	19.0	13.4	11.9	16.4	14.5	11.5	11.9	97.7	10.2	20.9
26	9.3	8.7	6.7	6.5	8.0	7.7	7.3	10.8	10.4	5.2	5.6	7.4	7.5	6.6	6.9	7.4	10.1	9.1	6.6	7.7	12.0	14.6	13.5	16.8	16.8	5.2	8.8
27	14.1	22.6	14.3	13.1	13.0	13.2	12.0	12.7	10.8	14.0	11.8	14.0	13.6	12.6	16.2	18.1	12.7	11.8	17.0	11.3	12.1	16.6	11.4	8.4	22.6	8.4	13.6
28	12.2	9.4	7.6	6.9	12.9	23.6	12.7	14.3	16.4	18.4	22.1	14.2	7.0	7.1	11.5	10.1	11.1	9.9	14.2	12.4	12.7	12.7	12.6	14.8	23.6	6.9	12.8
29	15.2	16.3	16.2	17.3	18.4	15.4	14.4	12.9	12.7	11.9	11.7	11.3	10.8	11.4	11.2	11.0	11.7	11.9	11.2	12.2	14.3	13.7	11.5	11.2	18.4	10.8	13.2
30	12.3	11.4	9.5	10.0	9.2	9.1	9.4	9.7	10.0	9.9	11.8	55.5	28.8	73.6	91.7	85.6	18.0	18.3	27.3	22.4	24.3	21.8	34.8	22.2	91.7	9.1	26.5
31	22.4	15.7	64.2	60.6	37.1	12.7	17.5	20.5	26.5	19.5	15.7	23.0	33.8	25.8	44.3	31.1	77.5	10.1	11.5	16.6	12.3	9.3	10.4	14.2	77.5	9.3	26.3
Max.	**94.1**	**98.1**	**97.7**	**78.0**	**97.0**	**73.0**	**71.3**	**74.1**	**76.0**	**68.6**	**88.2**	**79.2**	**73.5**	**79.8**	**91.7**	**85.6**	**78.8**	**91.4**	**58.7**	**86.3**	**76.8**	**85.7**	**70.7**	**80.7**	**98.1**		
Min.	**9.3**	**8.7**	**6.7**	**6.5**	**7.8**	**7.7**	**6.9**	**6.2**	**6.1**	**5.2**	**4.0**	**3.7**	**4.9**	**6.6**	**6.9**	**6.2**	**6.8**	**7.8**	**6.6**	**6.0**	**6.8**	**6.6**	**9.7**	**7.9**		**3.7**	
Avg.	**30.8**	**28.8**	**28.0**	**25.2**	**26.6**	**21.8**	**23.9**	**21.7**	**23.2**	**22.6**	**22.1**	**24.3**	**20.8**	**25.8**	**30.1**	**29.6**	**32.7**	**29.4**	**24.3**	**29.3**	**26.0**	**25.9**	**27.5**	**27.3**			**26.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

November 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.7	14.1	11.6	9.8	11.0	10.4	10.1	9.6	9.6	10.8	9.1	9.1	9.3	8.3	10.5	37.9	37.6	62.2	20.7	60.4	66.0	71.3	58.4	29.4	71.3	8.3	25.0
2	20.9	27.8	27.7	21.8	28.1	26.6	23.6	27.3	21.9	27.8	34.9	30.0	32.4	35.3	35.0	46.7	34.7	45.7	51.7	77.0	26.0	22.0	13.4	14.5	77.0	13.4	31.4
3	17.7	15.3	13.9	14.9	25.0	27.5	26.2	25.4	30.4	18.3	18.0	21.2	26.8	30.8	21.2	48.9	73.2	33.7	24.3	14.1	10.4	5.4	10.9	13.3	73.2	5.4	23.6
4	11.0	13.3	23.7	66.6	39.4	21.5	16.7	17.6	17.3	16.8	16.6	21.4	19.1	21.0	20.9	24.0	16.9	19.5	28.6	16.5	14.1	14.7	16.6	31.7	66.6	11.0	21.9
5	22.6	25.9	84.4	64.0	55.7	17.1	16.5	11.9	25.4	11.5	12.5	6.9	9.4	7.8	7.7	10.2	11.3	8.1	9.6	11.5	12.1	10.8	13.8	13.0	84.4	6.9	20.0
6	14.1	11.4	11.9	13.0	13.3	10.7	10.0	11.1	9.9	10.2	11.1	11.3	10.5	10.7	12.0	11.3	10.5	10.6	10.7	11.3	14.9	12.7	12.6	14.0	14.9	9.9	11.7
7	14.4	14.2	12.0	10.1	14.8	20.7	23.1	13.3	31.2	66.9	82.0	49.6	39.9	74.1	48.6	31.3	97.7	38.0	33.5	54.8	98.8	28.1	43.1	91.2	98.8	10.1	43.0
8	19.6	10.5	14.9	23.4	31.7	18.8	44.1	16.5	13.6	13.7	16.6	16.2	19.7	34.2	72.3	39.4	47.9	59.2	81.4	55.3	91.7	59.6	67.0	81.3	91.7	10.5	39.5
9	70.7	69.5	61.1	11.1	12.0	10.8	8.2	7.3	7.4	9.0	9.4	5.7	7.2	6.3	8.0	7.4	9.9	17.1	9.5	19.0	22.5	8.1	11.4	15.1	70.7	5.7	17.7
10	15.2	11.7	15.0	7.6	7.1	8.2	8.6	6.8	12.8	22.3	8.6	20.6	14.1	34.4	69.9	29.0	38.9	27.8	48.4	38.6	24.6	18.0	18.2	20.1	69.9	6.8	21.9
11	26.7	35.5	38.3	34.4	29.5	18.2	17.8	12.3	10.8	9.1	10.3	11.1	18.1	9.7	17.2	15.7	29.6	39.0	10.9	9.7	16.2	36.5	14.7	16.2	39.0	9.1	20.3
12	14.9	18.3	17.1	17.0	27.1	58.8	25.8	36.2	14.6	15.3	16.5	18.2	44.5	41.9	37.2	18.0	13.1	8.6	8.3	8.0	9.7	8.9	6.4	6.1	58.8	6.1	20.4
13	9.1	10.8	12.8	13.5	14.2	11.8	11.6	12.2	13.2	10.2	9.7	10.2	10.7	15.2	15.8	15.0	12.3	11.0	12.8	9.5	12.6	15.6	10.3	12.7	15.8	9.1	12.2
14	9.8	11.0	41.7	45.1	13.5	55.9	51.2	59.5	44.5	27.7	17.2	12.4	8.4	9.1	10.3	11.1	10.1	10.9	9.0	10.1	14.2	10.5	9.0	12.8	59.5	8.4	21.5
15	7.1	10.3	12.0	8.3	19.0	44.6	16.0	15.8	16.9	40.7	26.5	16.3	11.6	10.4	11.3	16.8	15.3	19.7	35.3	41.5	27.7	33.2	42.6	37.0	44.6	7.1	22.3
16	41.2	13.7	14.5	14.3	14.3	14.9	16.0	15.0	15.0	15.1	14.2	14.8	15.3	14.7	15.3	16.4	15.9	14.5	15.3	14.5	16.3	18.5	15.3	15.5	41.2	13.7	16.3
17	16.4	21.4	14.9	14.0	14.3	15.5	15.7	15.8	15.8	18.0	16.0	22.1	16.9	15.5	15.5	14.4	14.5	15.7	13.7	13.9	14.9	13.4	15.4	14.9	22.1	13.4	15.8
18	14.9	15.1	15.9	20.3	19.9	17.0	23.4	17.9	27.0	22.4	44.8	19.5	18.3	29.4	42.2	47.3	36.7	13.5	8.7	18.5	8.5	7.4	8.0	26.3	47.3	7.4	21.8
19	27.0	17.2	18.8	12.7	10.4	5.8	3.6	6.0	4.7	7.6	6.9	6.1	11.1	10.2	12.3	11.3	10.2	11.2	9.8	11.8	9.1	10.5	10.4	10.9	27.0	3.6	10.6
20	10.9	9.7	11.0	14.0	10.7	9.9	10.4	10.0	10.5	11.6	14.0	14.9	15.1	15.9	15.2	13.7	13.4	10.9	11.1	10.3	10.9	12.8	11.7	10.5	15.9	9.7	12.0
21	10.6	11.3	12.0	13.1	54.8	60.1	46.4	33.7	49.7	60.7	66.6	52.6	67.8	75.2	62.6	83.1	66.7	49.8	63.0	68.1	33.1	58.8	43.6	46.7	83.1	10.6	49.6
22	54.1	81.1	14.5	11.4	12.7	10.7	14.7	14.1	22.6	20.2	22.7	17.1	17.8	19.1	14.8	13.9	13.8	14.6	15.8	13.6	13.3	14.5	15.0	13.9	81.1	10.7	19.8
23	16.3	14.9	15.7	15.7	13.7	48.4	20.7	16.4	20.5	25.3	34.4	36.3	49.3	83.1	82.9	64.0	47.5	36.5	56.3	92.0	32.1	62.8	78.0	58.9	92.0	13.7	42.6
24	27.2	22.8	17.0	14.6	26.6	25.8	21.1	15.8	13.0	8.5	14.4	19.6	18.3	15.1	18.5	29.4	16.4	14.6	13.3	12.5	12.8	14.9	15.7	15.2	29.4	8.5	17.6
25	16.6	17.1	14.5	15.3	11.9	10.4	9.7	11.4	12.9	11.4	12.5	11.5	12.4	10.8	10.1	9.7	9.8	9.0	10.1	9.8	9.1	9.6	9.4	9.9	17.1	9.0	11.5
26	9.8	9.2	10.9	10.0	9.9	9.3	9.6	8.9	9.3	9.0	16.4	20.1	8.4	5.9	5.7	11.6	12.5	14.3	64.1	42.9	60.6	58.0	55.0	39.9	64.1	5.7	21.3
27	67.7	40.4	55.8	65.1	49.7	35.9	15.9	16.9	16.1	16.3	12.5	13.2	14.2	11.4	10.9	12.9	12.2	11.8	12.9	12.5	11.8	10.8	11.0	9.6	67.7	9.6	22.8
28	10.4	9.4	10.9	10.1	9.2	9.4	9.4	7.2	7.9	7.4	18.2	15.2	5.7	5.2	5.2	15.3	27.8	13.2	8.7	9.1	12.6	14.0	12.6	11.2	27.8	5.2	11.1
29	11.0	10.9	8.6	9.7	13.6	11.3	14.5	17.5	12.1	13.6	14.1	12.2	15.5	15.4	14.7	14.3	13.6	12.0	12.3	12.1	12.0	11.6	11.3	13.8	17.5	8.6	12.8
30	14.7	15.2	13.2	15.5	14.0	14.3	14.8	14.4	15.9	15.1	15.8	15.7	14.9	18.2	13.3	18.1	15.9	15.1	15.5	16.2	16.1	20.0	12.0	16.8	20.0	12.0	15.4
Max.	**70.7**	**81.1**	**84.4**	**66.6**	**55.7**	**60.1**	**51.2**	**59.5**	**49.7**	**66.9**	**82.0**	**52.6**	**67.8**	**83.1**	**82.9**	**83.1**	**97.7**	**62.2**	**81.4**	**92.0**	**98.8**	**71.3**	**78.0**	**91.2**	**98.8**		
Min.	**7.1**	**9.2**	**8.6**	**7.6**	**7.1**	**5.8**	**3.6**	**6.0**	**4.7**	**7.4**	**6.9**	**5.7**	**5.7**	**5.2**	**5.2**	**7.4**	**9.8**	**8.1**	**8.3**	**8.0**	**8.5**	**5.4**	**6.4**	**6.1**		**3.6**	
Avg.	**21.2**	**20.3**	**21.5**	**20.5**	**20.9**	**22.0**	**18.5**	**16.8**	**17.8**	**19.1**	**20.8**	**18.4**	**19.4**	**23.1**	**24.6**	**24.6**	**26.2**	**22.3**	**24.2**	**26.5**	**24.5**	**23.1**	**22.4**	**24.1**			**21.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

December 2007

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	14.9	21.1	17.4	16.1	57.1	18.4	20.5	22.3	38.5	29.2	61.5	75.9	34.4	8.7	7.1	19.4	86.6	29.2	13.0	17.6	7.5	22.0	30.3	13.1	86.6	7.1	28.4
2	12.9	15.2	11.4	37.6	71.0	18.0	19.3	17.5	65.4	85.0	77.3	18.5	25.2	69.6	52.8	21.5	11.6	11.9	10.2	13.8	10.7	10.4	10.3	10.6	85.0	10.2	29.5
3	9.3	9.6	12.1	12.3	10.4	11.1	9.9	9.5	9.8	10.8	10.6	10.1	9.2	7.8	7.7	10.3	7.6	7.5	11.5	9.3	9.5	9.9	9.7	8.6	12.3	7.5	9.8
4	7.6	8.3	7.9	8.3	9.6	9.8	8.7	9.4	11.9	9.1	9.2	8.4	14.0	10.1	8.6	13.7	12.4	12.8	10.6	12.0	11.5	12.1	13.6	13.3	14.0	7.6	10.5
5	9.0	8.6	9.1	14.7	14.1	18.6	9.4	7.0	7.2	5.3	7.6	5.9	9.9	11.6	12.8	10.9	16.8	20.5	15.7	12.6	12.3	10.9	15.1	20.7	20.7	5.3	11.9
6	16.6	29.8	27.7	31.0	38.3	80.8	66.6	82.4	84.3	84.7	63.9	44.0	58.8	46.2	26.9	28.0	10.1	9.9	8.0	9.0	56.1	87.3	63.3	83.9	87.3	8.0	47.4
7	33.8	84.2	58.4	23.7	33.2	56.1	6.8	10.4	16.4	45.4	41.6	58.5	35.3	27.6	29.5	13.0	14.2	14.9	16.7	15.9	15.1	16.5	15.6	14.4	84.2	6.8	29.1
8	13.2	11.0	8.9	5.5	7.0	7.5	8.2	12.3	19.5	23.0	33.3	47.8	33.0	36.0	38.7	55.1	31.4	0.0	0.0	18.4	65.6	68.3	36.2	19.1	68.3	0.0	25.0
9	30.3	32.4	41.6	69.6	60.6	10.2	7.3	6.3	16.2	34.0	39.9	18.6	19.2	15.4	16.1	12.8	16.5	33.5	56.6	23.8	19.3	14.5	14.8	11.1	69.6	6.3	25.9
10	11.8	11.0	10.2	10.0	11.1	10.9	12.3	12.3	11.9	9.6	9.3	9.0	9.7	9.9	11.6	11.4	10.0	9.2	7.5	8.2	8.2	6.9	20.2	23.3	23.3	6.9	11.1
11	10.5	22.7	45.2	24.2	85.5	24.0	60.7	43.8	37.2	30.1	70.9	38.9	36.6	59.8	77.9	82.2	76.5	14.0	20.6	45.4	26.3	36.9	20.9	14.3	85.5	10.5	41.9
12	13.8	16.4	8.3	11.6	11.2	9.8	12.8	10.7	8.3	9.8	9.9	10.2	10.9	13.1	10.7	9.9	9.8	10.9	9.2	15.7	6.2	5.5	9.6	27.8	27.8	5.5	11.3
13	98.3	12.7	8.3	12.2	56.3	29.1	9.5	11.4	9.9	8.5	8.9	8.2	7.0	8.5	7.6	9.1	8.8	10.3	9.0	27.3	18.9	7.2	10.0	11.3	98.3	7.0	17.0
14	25.5	38.5	16.6	32.3	60.3	33.9	21.1	20.1	19.0	16.1	15.4	16.4	15.0	14.8	16.5	16.2	18.8	49.8	20.5	23.7	26.3	31.9	28.4	27.9	60.3	14.8	25.2
15	89.4	56.2	59.6	31.5	59.9	75.3	77.6	49.7	66.5	47.6	26.7	34.5	30.9	39.1	27.7	29.9	23.8	20.4	29.3	49.8	43.9	26.8	72.0	22.7	89.4	20.4	45.4
16	55.3	22.3	54.4	79.8	46.9	56.0	30.0	22.6	19.3	17.4	15.7	15.6	14.8	14.3	15.6	14.9	14.8	14.9	15.5	15.6	17.4	22.4	16.5	15.9	79.8	14.3	26.2
17	21.3	15.7	14.1	15.0	14.9	15.3	14.4	15.2	16.4	15.6	15.6	15.3	16.8	38.0	42.7	61.3	21.1	29.8	37.1	31.1	29.0	29.1	26.4	12.3	61.3	12.3	23.5
18	56.4	10.7	22.1	18.8	32.9	20.2	11.4	12.6	17.6	13.5	9.2	9.5	8.8	11.5	13.6	16.5	21.6	37.9	53.5	37.7	20.3	16.4	21.2	23.6	56.4	8.8	21.6
19	31.5	20.5	16.0	16.2	17.6	18.3	15.4	16.3	27.8	16.5	21.7	17.9	16.0	16.6	15.0	16.0	17.8	14.3	14.3	14.1	20.5	33.2	21.3	58.6	58.6	14.1	20.6
20	27.2	52.7	17.5	7.8	4.4	7.1	10.6	11.1	10.6	10.8	9.6	13.7	12.5	11.5	11.3	12.2	10.1	8.9	10.6	8.6	8.5	8.6	10.1	8.5	52.7	4.4	12.7
21	10.6	12.3	12.3	12.7	17.4	11.1	16.9	10.7	11.6	12.3	11.9	11.5	13.2	7.6	9.1	13.0	9.9	10.2	10.2	8.7	7.6	9.5	10.1	11.0	17.4	7.6	11.3
22	14.0	13.6	11.4	15.5	15.5	14.4	14.5	13.8	14.1	14.5	10.4	11.5	12.6	12.4	11.7	12.0	11.8	12.0	11.7	19.8	12.7	15.4	17.6	27.0	27.0	10.4	14.2
23	13.5	11.7	29.3	17.7	30.1	41.0	79.3	60.8	34.8	44.1	58.1	60.7	69.4	62.9	50.1	43.3	70.8	38.4	48.7	48.0	98.5	74.1	51.1	25.2	98.5	11.7	48.4
24	84.9	79.7	64.4	45.4	24.6	13.7	33.3	17.5	9.9	11.8	9.8	25.8	52.4	23.2	41.7	14.1	21.3	48.0	17.2	11.5	15.5	17.9	23.5	53.1	84.9	9.8	31.7
25	59.7	67.7	76.3	55.7	33.8	34.9	52.5	55.0	58.5	66.2	79.7	43.3	34.5	39.7	33.2	78.7	56.0	59.1	54.9	60.2	55.6	73.4	24.3	39.7	79.7	24.3	53.9
26	42.7	34.4	28.5	10.1	13.0	9.7	7.2	7.4	15.7	10.0	11.4	14.1	16.1	12.5	10.8	9.1	11.5	10.8	12.1	10.3	13.2	10.3	10.5	11.2	42.7	7.2	14.3
27	9.7	10.7	9.4	8.9	9.9	10.2	9.4	10.4	9.9	9.1	8.8	8.6	8.8	8.5	9.1	9.3	8.6	9.0	8.8	8.8	9.0	10.5	11.0	12.2	12.2	8.5	9.5
28	10.9	11.8	70.0	55.1	44.4	69.4	78.9	47.5	71.5	43.1	35.6	24.5	19.3	18.2	19.5	40.1	37.5	29.4	27.3	15.9	8.5	12.2	10.7	10.8	78.9	8.5	33.8
29	14.8	16.4	17.5	27.5	27.9	25.0	26.7	24.4	31.4	71.0	62.2	75.3	63.4	63.4	38.8	47.9	34.5	33.2	48.5	59.6	81.1	70.3	77.1	94.2	94.2	14.8	47.2
30	84.7	83.7	88.8	74.9	27.4	19.8	17.0	14.5	46.3	18.9	20.3	11.0	8.5	6.0	11.0	8.3	12.5	14.0	12.6	13.8	10.0	9.7	9.9	9.8	88.8	6.0	26.4
31	8.8	7.9	6.5	7.1	6.7	6.1	5.4	5.0	7.0	17.0	16.7	30.6	42.1	37.2	20.1	19.3	15.8	15.2	7.3	9.0	13.8	9.9	8.7	9.8	42.1	5.0	13.9
Max.	**98.3**	**84.2**	**88.8**	**79.8**	**85.5**	**80.8**	**79.3**	**82.4**	**84.3**	**85.0**	**79.7**	**75.9**	**69.4**	**69.6**	**77.9**	**82.2**	**86.6**	**59.1**	**56.6**	**60.2**	**98.5**	**87.3**	**77.1**	**94.2**	**98.5**		
Min.	**7.6**	**7.9**	**6.5**	**5.5**	**4.4**	**6.1**	**5.4**	**5.0**	**7.0**	**5.3**	**7.6**	**5.9**	**7.0**	**6.0**	**7.1**	**8.3**	**7.6**	**0.0**	**0.0**	**8.2**	**6.2**	**5.5**	**8.7**	**8.5**		**0.0**	
Avg.	**30.4**	**27.4**	**28.4**	**26.1**	**30.7**	**25.3**	**25.0**	**21.6**	**26.6**	**27.1**	**28.5**	**25.6**	**24.5**	**24.6**	**22.8**	**24.5**	**23.6**	**20.6**	**20.3**	**21.8**	**24.5**	**25.5**	**23.2**	**24.0**			**25.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Appendix E

Validated Manual Particulate Data

Not Applicable.

APPENDIX 26F

2008 Annual Data Report, Pebble Port Station, for the Pebble Project Meteorological Monitoring Program

(Please also note: Pebble Port Station is also called Port Site 1 in the text of this document.)

2008 Annual Data Report
Pebble Port Station

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

April 2009

Pebble Port Station
2008 Annual Data Report

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

April 2009

prepared for

The Pebble Limited Partnership,
care of Pebble Mines Corp.
Anchorage, Alaska

prepared by

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This data report has been prepared and reviewed by the following:

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Signature

April 13, 2009
Date

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Name

Signature

4/13/2009
Date

HCG Lead Network Operator:

Dominic Shallies
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4/2/09
Date

HCG Data Manager:

Rebecca Van Wyck
Name

Signature

4/13/09
Date

CONTENTS

Executive Summary **1**

1.0 Introduction **4**

1.1 Project Summary 4
1.2 Measurements Method Table 5
1.3 Variations from the Quality Assurance Project Plan 5

2.0 Station Performance Summary **10**

2.1 Significant Project Events 10
2.2 Missing, Invalid, and Adjusted Data 11
2.3 Network Data Completeness 11
2.4 Precision Statistics 14
2.4.1 Monitoring Network Precision Statistics 14
2.4.2 Analytical Laboratory Precision Statistics 14
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 14
2.5 Accuracy Statistics 14
2.5.1 Instrument Calibration Statistics 14
2.5.2 Independent Quality Assurance Audits 14

3.0 Monitoring Data Network Summary **20**

3.1 Air Quality Data Summary 20
3.2 Meteorological Data Summary 20
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 20
3.2.2 Temperature Climatology 33
3.3.3 Other Meteorological Parameters 38

4.0 References **44**

List of Figures

1-1. Map of the Pebble Project Area 7
1-2. Map of the Pebble Port Station 8
1-3. Pebble Port Meteorological Monitoring Station 9
3-1. 2008 Pebble Port Wind Roses 23
3-2. Quarterly Pebble Port Wind Roses (Climatronics) 24
3-3. Quarterly Pebble Port Wind Roses (RM Young) 25
3-4. 2008 Wind Rose Superimposed on Site Map 32
3-5. Hourly Average 2-Meter and 10-Meter Temperatures 36

3-6. Hourly Average Vertical Temperature Difference 37
3-7. Hourly Average Relative Humidity 40
3-8. Barometric Pressure 41
3-9. Hourly Average Solar Radiation 42
3-10. Hourly and Cumulative Precipitation 43

List of Tables

E-1. Meteorological Data Capture – Valid Hours per Month 2
E-2. Meteorological Data Capture – Percent Data Capture 3
1-1. Meteorological Measurement Methods 6
2-1. Chronology of Significant Events 10
2-2. Percentage of Final Data Flagged 12
2-3. Pebble Port Station Percent Data Capture 13
2-4. August 29 and 30, 2007 Performance Audit Summary (CR1000) 16
2-5. April 9, 2008 Performance Audit Summary 17
2-6. September 10, 2008 Performance Audit Summary 18
3-1. Average and Maximum Wind Speeds 21
3-2. Average and Maximum Wind Speeds at Seldovia Airport 21
3-3. 2008 Annual Wind Rose Analysis Table (Climatronics) 26
3-4. Quarter A Wind Rose Analysis Table (Climatronics) 27
3-5. Quarter B Wind Rose Analysis Table (Climatronics) 27
3-6. Quarter C Wind Rose Analysis Table (Climatronics) 28
3-7. Quarter D Wind Rose Analysis Table (Climatronics) 28
3-8. 2008 Annual Wind Rose Analysis Table (RM Young) 29
3-9. Quarter A Wind Rose Analysis Table (RM Young) 30
3-10. Quarter B Wind Rose Analysis Table (RM Young) 30
3-11. Quarter C Wind Rose Analysis Table (RM Young) 31
3-12. Quarter D Wind Rose Analysis Table (RM Young) 31
3-13. 2-Meter Temperature Summary 34
3-14. 10-Meter Temperature Summary 35
3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary 39

List of Appendices

A Data Processing Specifications and Statistical Formulae
B Precision Data
C Accuracy Data
D Validated Continuous Data Summaries
E Validated Manual Particulate Data

Executive Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG, Inc., dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration (PSD) quality meteorological monitoring for the Pebble Project began on August 1, 2005 and will be ongoing. This report provides details of the 2008 calendar year of meteorological measurements collected from January 1, 2008 through December 31, 2008 at a possible port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble Port meteorological monitoring station. The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year.

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters													
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP	Precip[3]	Evap[3]
January 2008	744	744	744	744	744	744	744	744	744	744	744	744	N/A	N/A
February 2008	696	696	696	696	696	696	696	696	696	696	696	696	N/A	N/A
March 2008	744	744	744	744	744	744	744	744	744	744	744	744	N/A	N/A
April 2008	714	714	714	715	715	715	715	715	715	720	720	720	N/A	N/A
May 2008	744	744	744	744	744	744	744	744	744	744	744	744	N/A	N/A
June 2008	720	720	720	720	720	720	720	720	720	720	720	720	N/A	N/A
July 2008	742	742	742	742	742	742	742	742	742	742	742	742	408	388
August 2008	744	744	744	744	744	744	744	744	744	744	744	744	744	720
September 2008	719	719	719	718	718	718	718	718	718	720	720	720	718	683
October 2008	744	744	744	744	744	744	744	744	744	744	744	744	739	360
November 2008	720	720	720	720	720	720	720	720	720	720	720	720	720	N/A
December 2008	744	744	744	744	744	744	744	744	744	744	744	744	744	N/A
Monitoring Year	**8,775**	**8,775**	**8,775**	**8,775**	**8,775**	**8,775**	**8,775**	**8,775**	**8,775**	**8,782**	**8,782**	**8,782**	**4,073**	**2,151**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] Precipitation and Evaporation gauges installed on July 15, 2008 and evaporation gauge decommissioned on October 16, 2008.

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters													
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP	Precip[3]	Evap[3]
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
April 2008	99.2%	99.2%	99.2%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	100%	100%	100%	N/A	N/A
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter B	**99.7%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
July 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	95.1%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96.8%
September 2008	99.9%	99.9%	99.9%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%	99.7%	94.9%
Quarter C	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**95.7%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.3%	93.6%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**99.8%**	**93.6%**
Monitoring Year	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**95.3%**

[1]CLM = Climatronics wind speed and wind direction sensor.

[2]RMY = R.M. Young wind speed and wind direction sensor.

[3] Precipitation and Evaporation gauges installed on July 15, 2008 and evaporation gauge decommissioned on October 16, 2008.

1.0 Introduction

1.1 Project Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc, dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring project currently consists of seven PSD-quality meteorological monitoring stations. Four stations are located in the deposit area; Pebble 1, Pebble 4, Pebble 5, and Pebble 6. Three stations are located in the proposed Port area; Pebble Port, Williamsport, and North Head. Data from the non-PSD meteorological monitoring station, Pebble 3 and Pebble 5A, are being used for engineering and mine design purposes. This report focuses on the third year of measurements collected at the Pebble Port station from January 1, 2008 through December 31, 2008. A separate annual data report has been prepared for each of the other PSD-quality meteorological monitoring stations.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble Port station.

The Pebble Port station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C]);
- Air temperature, ten meters above ground level (degrees Celsius [°C]);
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]));
- Wind speed (meters per second [m/s]);
- Wind direction (degrees [°]);
- Wind direction standard deviation (wind sigma [σ_θ]);
- Relative humidity (percent [%]);
- Solar radiation (Watts per square meter [W/m^2]);
- Barometric Pressure (millibar [mb]);
- Precipitation (millimeters [mm]); and
- Evaporation (millimeters [mm]).

Measurements of these parameters will provide at least one year of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble Port station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble Port station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble Port station.

1.3 Variations from the Quality Assurance Project Plan

During the 2008 monitoring year, no variations occurred from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]
Precipitation	ETI NOAH II	Pressure of water column above a load cell mechanism	0 to 12 in	± .254 mm	N/A[3]	N/A[3]
Evaporation	Nova Lynx 255-100	Change in pressure head determined by float mechanism	3 to 10 in	± 0.25% over 10 in range	1 second	1 minute

[1] Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.
[2] Instantaneous barometric pressure measurements are collected for one second during every hour.
[3] Instantaneous precipitation measurements are collected by the datalogger and subsequently summed on an hourly basis.

Figure 1-1. Map of the Pebble Project Area

Figure 1-2. Map of the Pebble Port Station

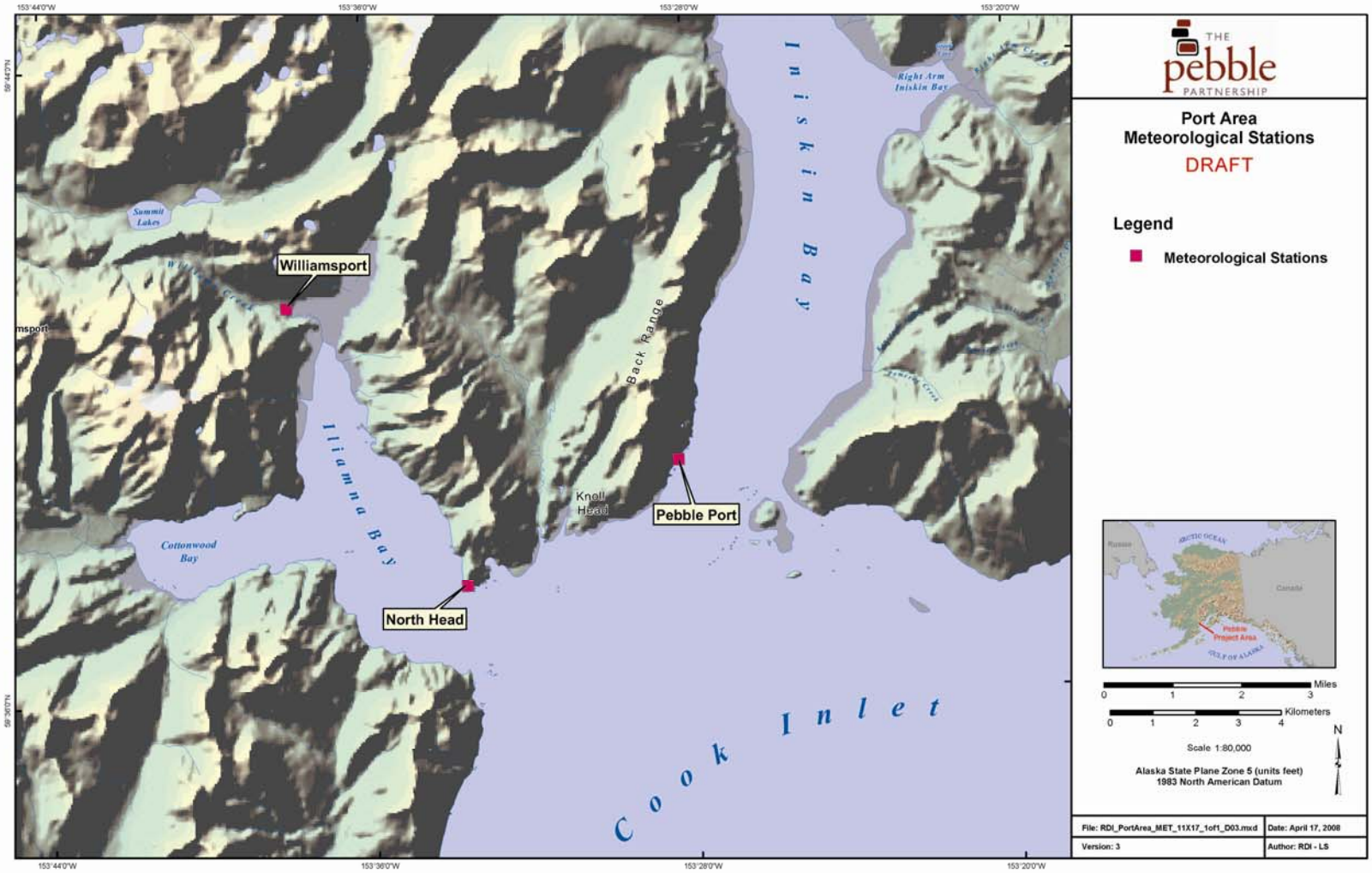


Figure 1-3. Pebble Port Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble Port station relevant to the 2008 meteorological monitoring year.

Table 2-1. Chronology of Significant Events

Date	Event
January 1, 2008	Beginning of 2008 monitoring year.
April 9, 2008	Full audit performed (all parameters passed).
April 30, 2008	Site visit for maintenance.
May 16, 2008	Site visit for maintenance.
July 8-15, 2008	Installed precipitation and evaporation gauges at site.
July 31, 2008	Site visit for maintenance.
August 23, 2008	Changed out damaged radio to restore communications to station.
September 10, 2008	Full audit performed (all parameters passed).
October 16, 2008	Evaporation gauge decommissioned for winter.
October 29, 2008	Site visit for precipitation gauge maintenance.
December 21, 2008	Site visit for precipitation gauge maintenance.
December 31, 2008	End of 2008 monitoring year.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble Port station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the second monitoring year at the Pebble Port station.

The Pebble Port meteorological monitoring station met all PSD requirements during the monitoring year.

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	1.0%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	1.6%
	< 10° variation over 18 consecutive hours	1.6%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	1.0%
	< 0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.0%
	< 1° variation over 3 consecutive hours	1.5%
	< 10° variation over 18 consecutive hours	1.6%
Temperature (2 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	0.8%
	Value is > record high, < record low	0.0%
Temperature (10 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.4%
	Value is > record high, < record low	0.0%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	0.2%
	Value is < -0.8°C during the night	0.0%
	Value is > 5°C, < -3°C	0.0%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.0%
	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.4%
	Equals ambient temperature for 12 consecutive hours	0.2%
Solar Radiation	> 0 W/m^2 at night	0.0%
	Greater than the maximum possible value for date	0.0%
Barometric Pressure	> 1060 mb (sea level)	0.0%
	< 940 mb (sea level)	0.0%
	> 6 mb variation for 3 consecutive hours	0.1%
Precipitation	> 25 mm in one hour	0.0%
	> 100 mm in 24 hours	0.0%
	< 50 mm in one month	16.6%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

Table 2-3. Pebble Port Station Percent Data Capture

Period	Meteorological Parameters													
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP	Precip[3]	Evap[3]
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
April 2008	99.2%	99.2%	99.2%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	100%	100%	100%	N/A	N/A
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter B	**99.7%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
July 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	95.1%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96.8%
September 2008	99.9%	99.9%	99.9%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%	99.7%	94.9%
Quarter C	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**95.7%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.3%	93.6%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**99.8%**	**93.6%**
Monitoring Year	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**95.3%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.
[3] Precipitation and Evaporation gauges installed on July 15, 2008 and evaporation gauge decommissioned on October 16, 2008.

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A performance audit was performed on all station sensors on August 29 and 30, 2007 to check sensor operation after upgrading the CR10X data logger with a CR1000 data logger. All sensors passed. The results of the performance audit after the upgrading are presented in Table 2-4.

Semiannual performance audits were conducted at the Pebble Port station on April 9, 2008 and September 10, 2008. The results of these performance audits are presented in Tables 2-5 and 2-6. All sensors passed during both audits. During the April 9, 2008 audit, the data logger time was found to be off by one hour and was corrected.

The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. All complete performance audit reports are available in Appendix C.

A technical systems audit was performed during the September 10, 2008 performance audit. During each of these audits, the power supply, DAS, communications system, and audited sensors all worked properly. The systems audit found that the station is well-

planned, equipped with PSD quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

Table 2-4. August 29 and 30, 2007 Performance Audit Summary (CR1000)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-12:00:18	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (New bearings)	≤ 0.104	oz-in	0.08	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.9	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	-6.3[3]	Pass

[1.] DAS time 12 hours behind AST on new datalogger, error corrected from office.
[2.] New DAS/sensor, no as-found value.
[3] Max percent error value of 6.3 within limit of 5% input + resolution, see audit.

Table 2-5. April 9, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:01	Fail
2-m Temperature Accuracy (E3381)[1]	≤ ±0.5	°C	0.43	Pass
10-m Temperature Accuracy (E3381)	≤ ±0.5	°C	0.43	Pass
Air Temperature Difference (E3381)	≤ ±0.1	°C	0.03	Pass
2-m Temperature Accuracy (G9579)[1]	≤ ±0.5	°C	-0.11	Pass
10-m Temperature Accuracy (G9579)	≤ ±0.5	°C	-0.06	Pass
Air Temperature Difference (G9579)	≤ ±0.1	°C	0.10	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.4	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	g-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (4690)[2]	≤ 7.5	g-cm	6.5	Pass
Wind Dir. Azim. Align. (as-found) (4690)	≤ ±5	Degree	-2.7	Pass
Wind Direction Accuracy (4690)	≤ ±5	Degree	2.3	Pass
Wind Direction Linearity (4690)	≤ 3	Degree	1.9	Pass
Wind Direction Torque (4691)[2]	≤ 7.5	g-cm	3.5	Pass
Wind Direction Accuracy (4691)	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity (4691)	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left) (4691)	≤ ±5	Degree	1.0	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	g-cm	0.6	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	1.8	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.7	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-8.7	Pass

1. Thermistors SN E3381 replaced for preventive maintenance with SN G9579.
2. Wind direction sensor SN 4690 replaced with SN 4691 due to high torque.

Table 2-6. September 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:05	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.15	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.15	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity/Dew Point	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System (In Situ)				
Wind Speed Torque	≤ 0.35	gm-cm	0.3	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	7.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	2.9	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Climatronics Wind System (Replacement Sensors)				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	3.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.8	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	4.4	Pass
RM Young Wind System (In Situ)				
Wind Speed Torque	≤ 1.0	gm-cm	0.8	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	9.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.1	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.8	Pass
Wind Direction Linearity	≤ 3	Degree	1.5	Pass

Table 2-6 (Cont.) September 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
RM Young Wind System (Replacement)				
Wind Speed Torque	≤ 1.0	gm-cm	0.4	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	4.0	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.4	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	4.5	Pass
Barometric Pressure	≤ ±3	Mbar	1.1	Pass
Solar Radiation	≤ ±5+Res	% input	6.0	Pass[1]
Weighing Precipitation	≤ ±10	% input	4.2	Pass
Evaporation	≤ ±10	% input	4.2	Pass

[1] Maximum error within limit of 5% of input + resolution, see audit.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a statistical summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the second year of meteorological monitoring at the Pebble Port station. The mean hourly average wind speed during the monitoring year was 4.63 meters per second (m/s) and 4.41 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 20.70 m/s and 19.82 m/s were measured by the CLM and RMY sensors, respectively, on February 15, 2008. Table 3-2 provides the mean and maximum daily wind speeds at the Seldovia meteorological station, located approximately 100 kilometers (km) from the Pebble Port Station. During the monitoring year the mean daily average wind speed at the Seldovia airport was 1.25 m/s, while the maximum daily average wind speed was 10.28 m/s on January 21, 2008 and March 3, 2008.

Table 3-1 indicates that the RMY statistical values are generally 95 percent of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (greater than 95 percent) when wind sigma values were less than 30 degrees and when winds were blowing from the northern end of Iniskin Bay. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Table 3-1. Average and Maximum Wind Speeds

Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speeds (m/s) (RMY)
Quarter A	5.67	5.46	20.70	19.82
Quarter B	4.06	3.83	16.12	15.29
Quarter C	3.57	3.33	12.19	12.04
Quarter D	5.22	5.00	15.52	14.33
Monitoring Year	**4.63**	**4.41**	**20.70**	**19.82**

Table 3-2. Average and Maximum Wind Speeds at Seldovia Airport

Monitoring Period	Mean Hourly Average Wind Speed (m/s)	Maximum Hourly Average Wind Speed (m/s)
Quarter A	1.50	10.28
Quarter B	1.25	9.39
Quarter C	0.86	8.05
Quarter D	1.38	8.05
Monitoring Year	**1.25**	**10.28**

Figure 3-1 provides wind roses for the CLM and RMY wind instruments during the 2008 monitoring year collocated at the Pebble Port station. Winds were predominantly from the north and northeast with infrequent winds from the south, southwest and northwest. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by predominant wind component from the north and northeast. Quarter A and D wind roses display a minor wind component from the northwest direction. Quarter B and C wind roses display minor wind components from the south, southwest and northwest.

Tables 3-3 through 3-7 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-8 through 3-12 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the 2008 year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble Port site and vicinity. The wind rose is centered over the Pebble Port station and shows that, on an annual basis, winds at the site predominantly blow to the north and northeast, with a lesser northwest component.

Figure 3-1. 2008 Pebble Port Wind Roses

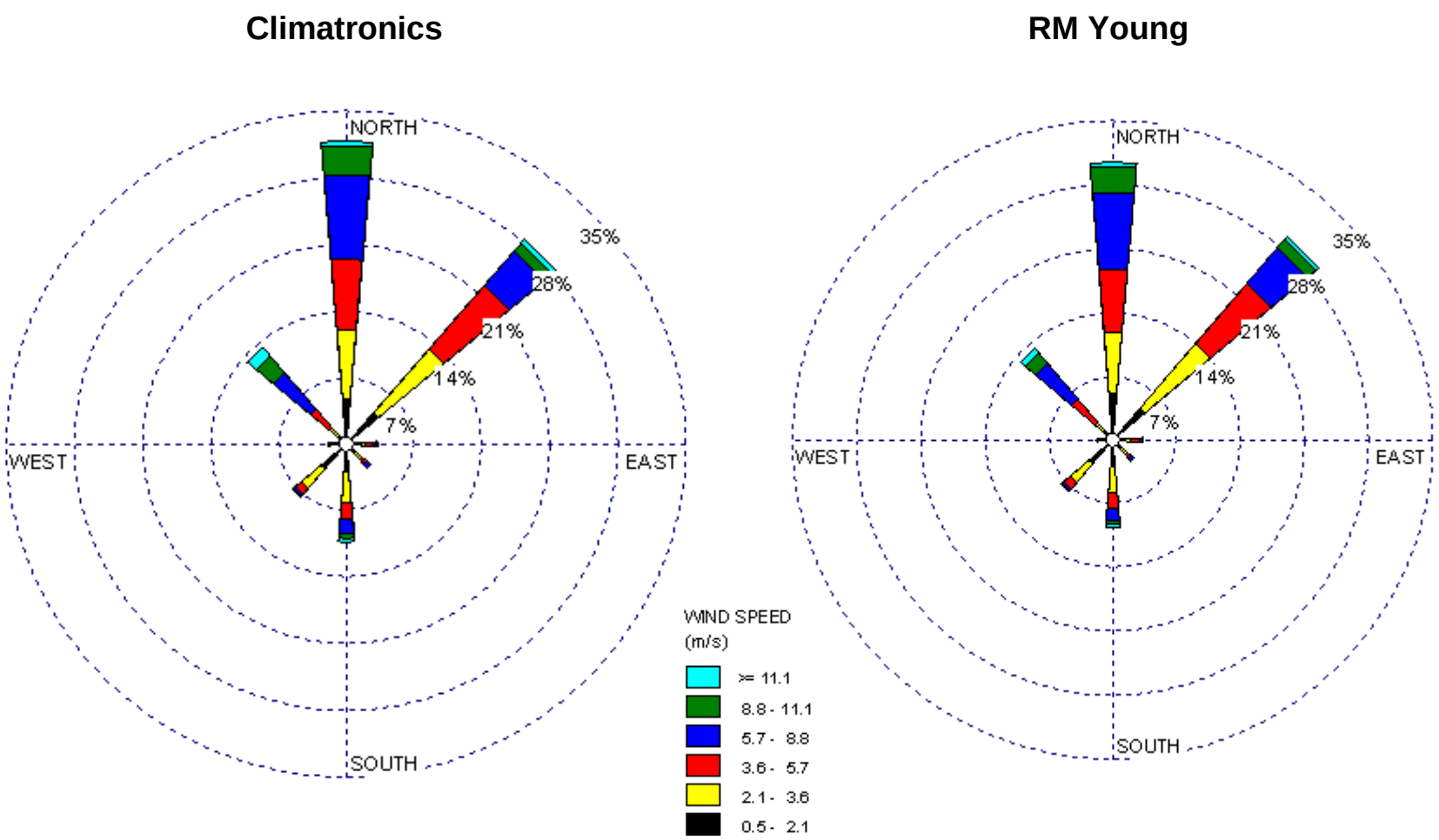
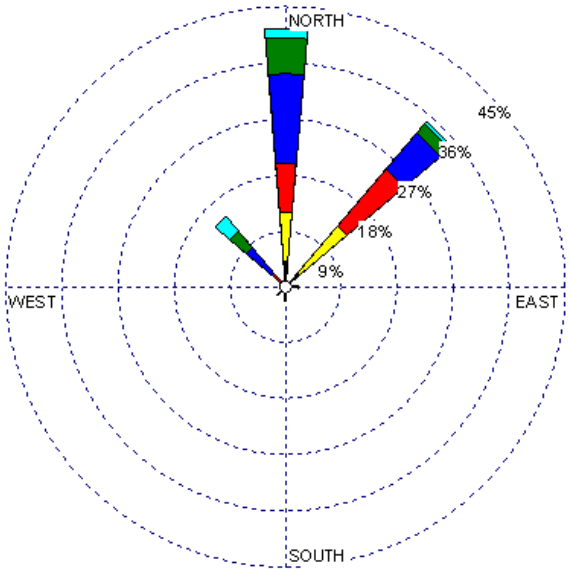
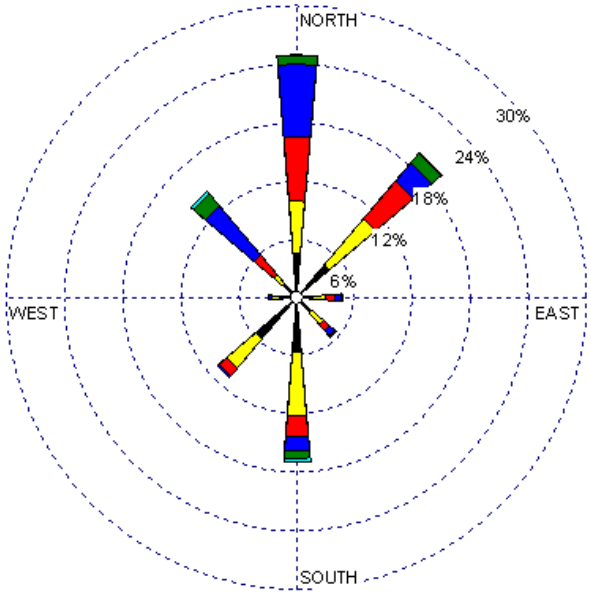


Figure 3-2. Quarterly Pebble Port Wind Roses (Climatronics)

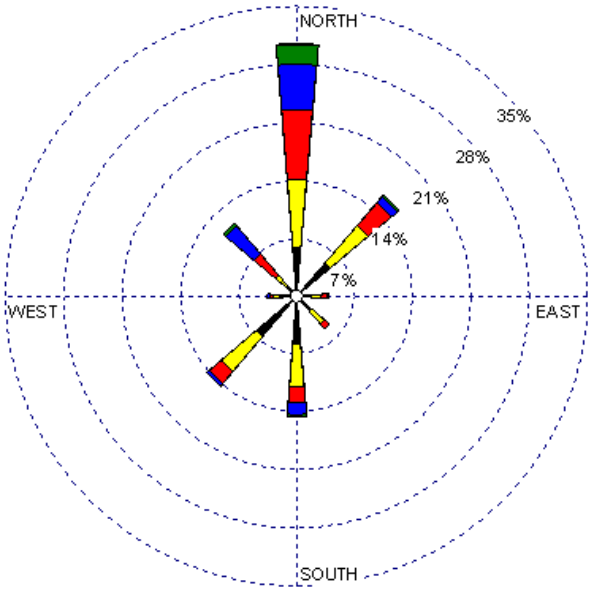
Quarter A (1/1/2008 – 3/31/2008)



Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)

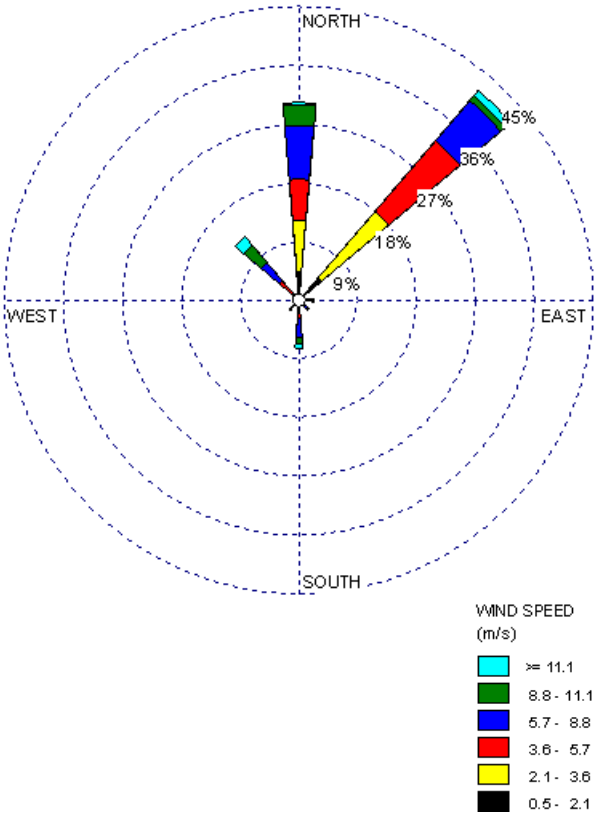
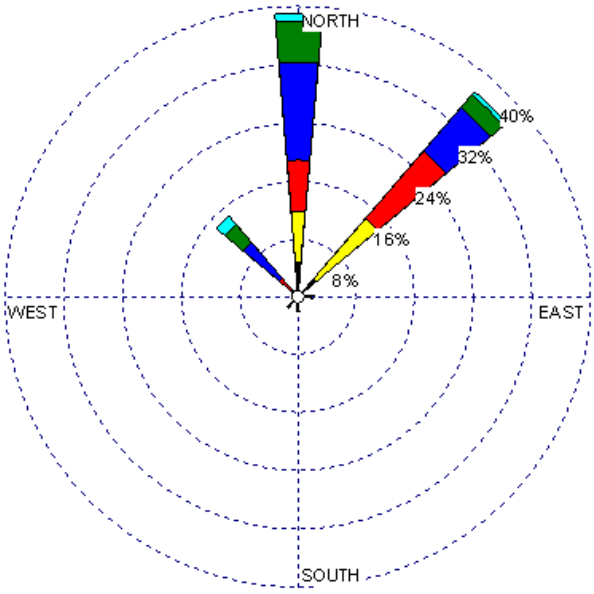
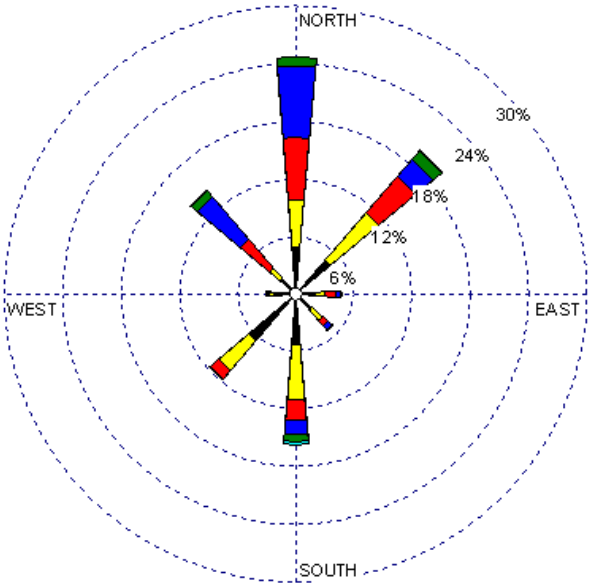


Figure 3-3. Quarterly Pebble Port Wind Roses (RM Young)

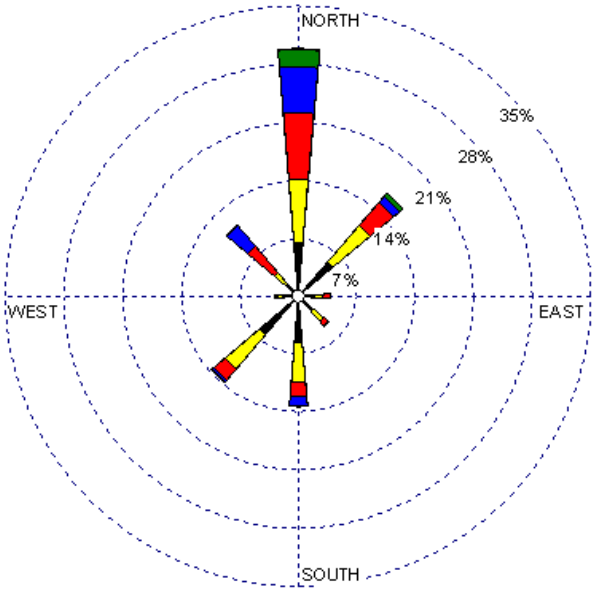
Quarter A (1/1/2008 – 3/31/2008)



Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)

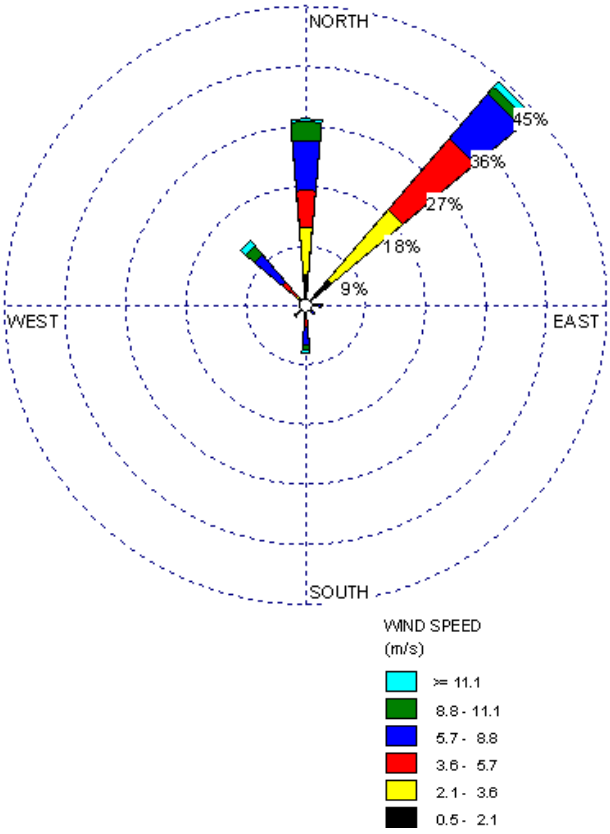


Table 3-3. 2008 Annual Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.84%	7.25%	7.29%	8.84%	3.02%	0.52%	31.76%
NE	4.38%	8.78%	8.77%	4.75%	1.07%	0.44%	28.19%
E	1.09%	0.89%	0.87%	0.42%	0.06%	0.01%	3.34%
SE	1.21%	1.04%	0.65%	0.46%	0.07%	0.01%	3.43%
S	3.10%	3.19%	1.66%	1.51%	0.49%	0.36%	10.32%
SW	3.42%	2.69%	0.91%	0.27%	0.05%	0.01%	7.34%
W	1.21%	0.44%	0.14%	0.22%	0.02%	0.00%	2.03%
NW	1.22%	1.06%	2.61%	5.01%	2.21%	1.29%	13.39%
Sub-Total:	20.46%	25.34%	22.89%	21.48%	6.98%	2.65%	99.80%
Calms (<0.5m/s):							0.20%
Total:							100.00%

Table 3-4. Quarter A Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.21%	7.83%	7.74%	14.42%	5.68%	1.51%	41.39%
NE	3.11%	9.75%	12.09%	7.46%	1.92%	0.55%	34.89%
E	0.41%	0.60%	0.82%	0.32%	0.00%	0.05%	2.20%
SE	0.32%	0.09%	0.18%	0.23%	0.05%	0.00%	0.87%
S	0.55%	0.41%	0.64%	0.27%	0.09%	0.37%	2.34%
SW	0.87%	0.69%	0.18%	0.23%	0.05%	0.00%	2.01%
W	0.55%	0.23%	0.00%	0.14%	0.00%	0.00%	0.92%
NW	0.32%	0.78%	1.83%	5.45%	3.43%	3.02%	14.84%
Sub-Total:	10.35%	20.38%	23.49%	28.53%	11.22%	5.49%	99.45%
Calms (<0.5m/s):							0.55%
Total:							100.00%

Table 3-5. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.67%	5.27%	6.64%	7.37%	0.92%	0.05%	24.91%
NE	4.44%	6.23%	5.08%	2.52%	1.14%	0.14%	19.55%
E	1.79%	1.19%	1.05%	0.60%	0.18%	0.00%	4.81%
SE	2.01%	1.69%	0.82%	0.69%	0.14%	0.05%	5.40%
S	5.63%	6.55%	2.15%	1.47%	0.73%	0.41%	16.94%
SW	5.59%	3.94%	1.10%	0.18%	0.05%	0.00%	10.85%
W	1.88%	0.69%	0.09%	0.32%	0.05%	0.00%	3.02%
NW	1.92%	1.19%	2.66%	6.59%	1.60%	0.41%	14.38%
Sub-Total:	27.93%	26.74%	19.60%	19.73%	4.81%	1.05%	99.86%
Calms (<0.5m/s):							0.14%
Total:							100.00%

Table 3-6. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.03%	8.07%	8.48%	5.39%	2.36%	0.14%	30.46%
NE	5.35%	5.85%	3.72%	0.91%	0.32%	0.00%	16.14%
E	1.77%	1.31%	0.73%	0.14%	0.00%	0.00%	3.94%
SE	2.40%	2.04%	0.82%	0.09%	0.00%	0.00%	5.35%
S	5.80%	5.26%	1.86%	1.41%	0.23%	0.00%	14.55%
SW	6.48%	5.44%	1.95%	0.32%	0.05%	0.05%	14.28%
W	2.09%	0.77%	0.41%	0.32%	0.00%	0.00%	3.58%
NW	1.81%	1.63%	3.35%	4.35%	0.41%	0.05%	11.60%
Sub-Total:	31.73%	30.37%	21.31%	12.92%	3.35%	0.23%	99.91%
Calms (<0.5m/s):							0.09%
Total:							100.00%

Table 3-7. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Port (Climatronics) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.44%	7.84%	6.30%	8.20%	3.13%	0.41%	30.30%
NE	4.62%	13.27%	14.18%	8.11%	0.91%	1.09%	42.16%
E	0.41%	0.45%	0.86%	0.63%	0.05%	0.00%	2.40%
SE	0.09%	0.32%	0.77%	0.82%	0.09%	0.00%	2.08%
S	0.41%	0.54%	1.99%	2.90%	0.91%	0.68%	7.43%
SW	0.72%	0.68%	0.41%	0.36%	0.05%	0.00%	2.22%
W	0.32%	0.09%	0.05%	0.09%	0.05%	0.00%	0.59%
NW	0.82%	0.63%	2.58%	3.67%	3.40%	1.68%	12.77%
Sub-Total:	11.82%	23.82%	27.13%	24.77%	8.56%	3.85%	99.95%
Calms (<0.5m/s):							0.05%
Total:							100.00%

Table 3-8. 2008 Annual Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction		0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	337.5	5.23%	6.66%	6.76%	8.45%	2.85%	0.43%	30.38%
NE	22.50	4.68%	9.22%	8.73%	5.02%	1.24%	0.43%	29.33%
E	67.50	1.26%	0.83%	0.93%	0.32%	0.05%	0.00%	3.39%
SE	112.5	1.24%	0.89%	0.61%	0.38%	0.06%	0.01%	3.19%
S	157.5	2.99%	2.89%	1.65%	1.40%	0.39%	0.32%	9.64%
SW	202.5	3.53%	2.69%	0.90%	0.27%	0.06%	0.01%	7.46%
W	247.5	1.26%	0.33%	0.14%	0.13%	0.01%	0.00%	1.87%
NW	292.5	1.39%	1.23%	3.28%	5.23%	1.48%	0.66%	13.27%
Sub-Total:	Sub-T	21.59%	24.74%	23.01%	21.19%	6.13%	1.87%	98.53%
Calms (<0.	Calms:							1.47%
Total:	Total:							100.00%

Table 3-9. Quarter A Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.81%	6.96%	7.10%	13.42%	5.63%	1.10%	39.01%
NE	3.30%	10.94%	12.18%	7.92%	2.20%	0.55%	37.09%
E	0.50%	0.73%	0.73%	0.27%	0.05%	0.00%	2.29%
SE	0.32%	0.09%	0.18%	0.14%	0.05%	0.00%	0.78%
S	0.55%	0.37%	0.55%	0.32%	0.05%	0.37%	2.20%
SW	0.78%	0.78%	0.23%	0.23%	0.05%	0.00%	2.06%
W	0.64%	0.23%	0.00%	0.09%	0.00%	0.00%	0.96%
NW	0.41%	0.73%	2.29%	6.41%	3.25%	1.60%	14.70%
Sub-Total:	11.31%	20.83%	23.26%	28.80%	11.26%	3.62%	99.08%
Calms (<0.5m/s):							0.91%
Total:							100.00%

Table 3-10. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.99%	4.81%	6.50%	7.37%	0.96%	0.00%	24.63%
NE	4.76%	6.36%	4.99%	2.38%	1.05%	0.14%	19.69%
E	2.11%	0.96%	1.19%	0.41%	0.09%	0.00%	4.76%
SE	2.20%	1.47%	0.73%	0.60%	0.09%	0.05%	5.13%
S	5.31%	5.77%	2.06%	1.51%	0.73%	0.32%	15.71%
SW	6.46%	3.98%	1.14%	0.14%	0.05%	0.00%	11.77%
W	2.29%	0.46%	0.18%	0.23%	0.05%	0.00%	3.21%
NW	2.20%	1.42%	3.89%	5.77%	0.87%	0.05%	14.19%
Sub-Total:	30.31%	25.23%	20.70%	18.41%	3.89%	0.55%	99.08%
Calms (<0.5m/s):							0.91%
Total:							100.00%

Table 3-11. Quarter C Wind Rose Analysis Table (RM Young)

Station ID: Pebble Port (RM Young) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	6.48%	7.66%	7.93%	5.53%	2.09%	0.14%	29.83%
NE	5.53%	5.67%	3.76%	0.91%	0.50%	0.00%	16.36%
E	2.04%	0.95%	0.91%	0.09%	0.00%	0.00%	3.99%
SE	2.36%	1.68%	0.77%	0.09%	0.00%	0.00%	4.90%
S	5.67%	4.81%	1.68%	1.09%	0.14%	0.00%	13.37%
SW	6.12%	5.44%	1.68%	0.32%	0.05%	0.05%	13.64%
W	1.90%	0.54%	0.27%	0.09%	0.00%	0.00%	2.81%
NW	1.95%	1.81%	4.17%	3.31%	0.14%	0.00%	11.38%
Sub-Total:	32.05%	28.56%	21.17%	11.42%	2.90%	0.18%	96.28%
Calms (<0.5m/s):							3.71%
Total:							100.00%

Table 3-12. Quarter D Wind Rose Analysis Table (RM Young)

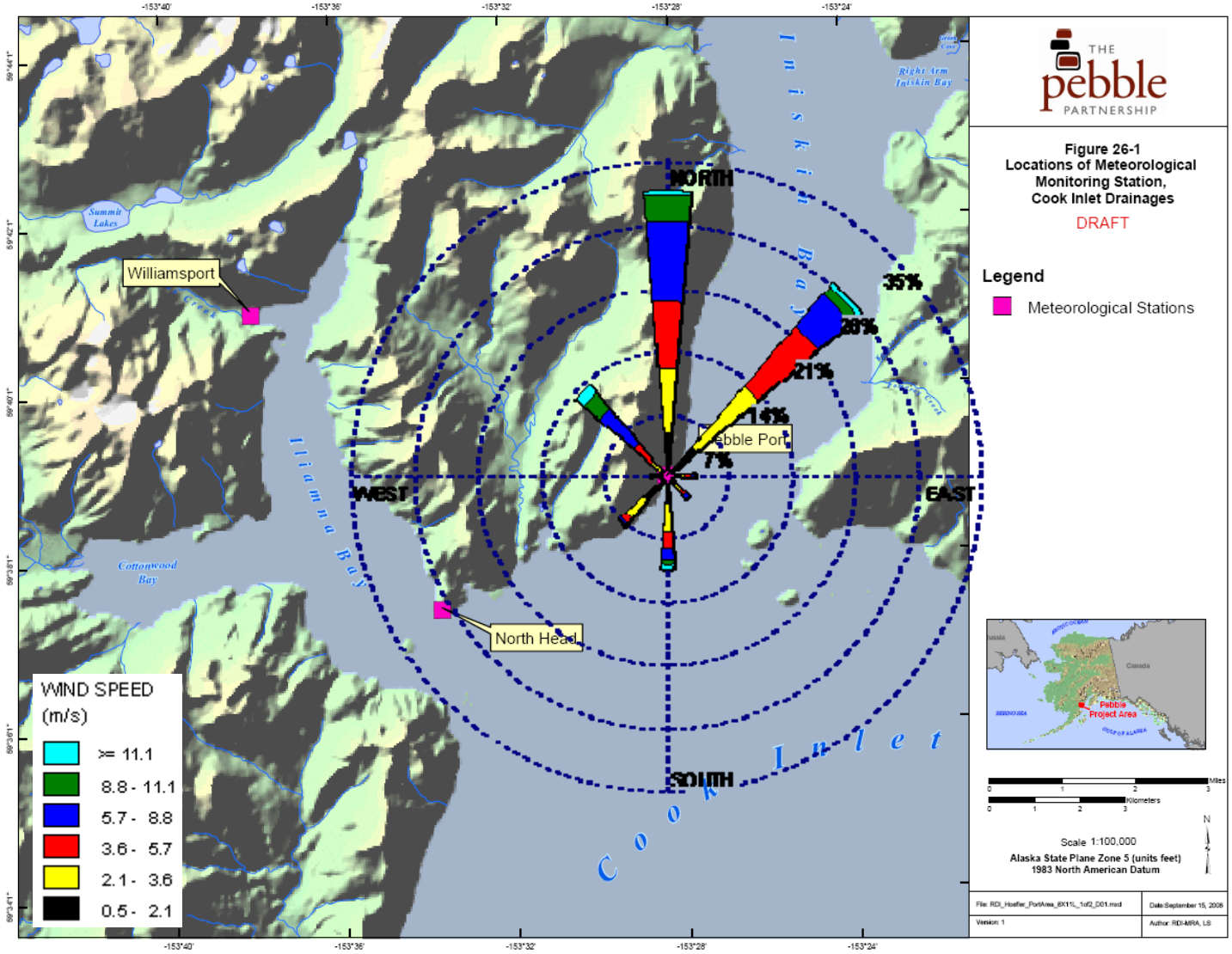
Station ID: Pebble Port (RM Young) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	4.62%	7.20%	5.53%	7.52%	2.72%	0.50%	28.08%
NE	5.12%	13.90%	13.99%	8.88%	1.22%	1.04%	44.16%
E	0.41%	0.68%	0.91%	0.50%	0.05%	0.00%	2.54%
SE	0.09%	0.32%	0.77%	0.68%	0.09%	0.00%	1.95%
S	0.45%	0.63%	2.31%	2.67%	0.63%	0.59%	7.29%
SW	0.77%	0.54%	0.54%	0.41%	0.09%	0.00%	2.36%
W	0.23%	0.09%	0.09%	0.09%	0.00%	0.00%	0.50%
NW	1.00%	0.95%	2.76%	5.43%	1.68%	1.00%	12.82%
Sub-Total:	12.68%	24.32%	26.90%	26.18%	6.48%	3.13%	99.68%
Calms (<0.5m/s):							0.32%
Total:							100.00%

Figure 3-4. 2008 Wind Rose Superimposed on Site Map



3.2.2 Temperature Climatology

Tables 3-13 and 3-14 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The 2008 annual mean temperature was 2.7°C at the 2-meter height. This annual mean temperature is slightly higher in comparison to the annual mean temperature of 2.5°C observed at the Seldovia meteorological station from January 1, 2008 through December 31, 2008. Hourly average temperatures at the Pebble Port station varied from a maximum of 21.2°C on July 30, 2008 to a minimum of -19.0°C on January 12, 2008.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months. Figure 3-5 also includes a plot of average daily temperatures recorded at the meteorological monitoring station in Seldovia, Alaska. Both the Pebble Port station and the Seldovia meteorological monitoring station are located in the Cook Inlet maritime climate zone.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 2.7°C measured on June 22, 2008. The greatest negative temperature difference was -2.7°C measured on July 19, 2008.

Table 3-13. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
January 2008	2.9	-18.1	-6.9	4.9	-19.0
February 2008	3.9	-16.7	-5.2	5.3	-18.3
March 2008	4.3	-9.5	-1.2	5.7	-11.2
Quarter A	**4.3**	**-18.1**	**-4.4**	**5.7**	**-19.0**
April 2008	6.4	-5.3	0.5	10.7	-7.4
May 2008	12.4	3.9	6.6	14.5	1.8
June 2008	10.9	6.6	9.1	14.9	5.2
Quarter B	**12.4**	**-5.3**	**5.4**	**14.9**	**-7.4**
July 2008	19.1	9.7	11.8	21.2	6.6
August 2008	16.6	10.7	12.4	19.9	7.9
September 2008	11.7	6.5	9.1	13.2	1.3
Quarter C	**19.1**	**6.5**	**11.1**	**21.2**	**1.3**
October 2008	7.4	-4.2	1.4	10.2	-6.6
November 2008	3.1	-11.1	-2.6	4.9	-12.1
December 2008	4.0	-16.5	-3.1	5.4	-17.4
Quarter D	**7.4**	**-16.5**	**-1.4**	**10.2**	**-17.4**
Monitoring Year	**19.1**	**-18.1**	**2.7**	**21.2**	**-19.0**

Table 3-14. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Max Hourly Mean Temp (°C)	Min Hourly Average Temp (°C)
January 2008	3.1	-18.2	-6.8	5.0	-19.2
February 2008	4.0	-16.7	-5.1	5.4	-18.3
March 2008	4.5	-9.7	-1.2	5.8	-11.3
Quarter A	**4.5**	**-18.2**	**-4.4**	**5.8**	**-19.2**
April 2008	6.3	-5.4	0.4	11.0	-7.4
May 2008	12.2	3.8	6.4	14.1	2.3
June 2008	11.2	6.7	8.8	13.8	5.6
Quarter B	**12.2**	**-5.4**	**5.2**	**14.1**	**-7.4**
July 2008	19.2	9.7	11.7	20.7	7.4
August 2008	16.4	10.8	12.4	18.5	9.3
September 2008	11.6	6.6	9.3	13.1	1.5
Quarter C	**19.2**	**6.6**	**11.2**	**20.7**	**1.5**
October 2008	7.6	-4.2	1.6	9.4	-6.2
November 2008	3.2	-11.0	-2.5	4.8	-11.6
December 2008	4.4	-16.6	-3.0	5.7	-17.6
Quarter D	**7.6**	**-16.6**	**-1.3**	**9.4**	**-17.6**
Monitoring Year	**19.2**	**-18.2**	**2.7**	**20.7**	**-19.2**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

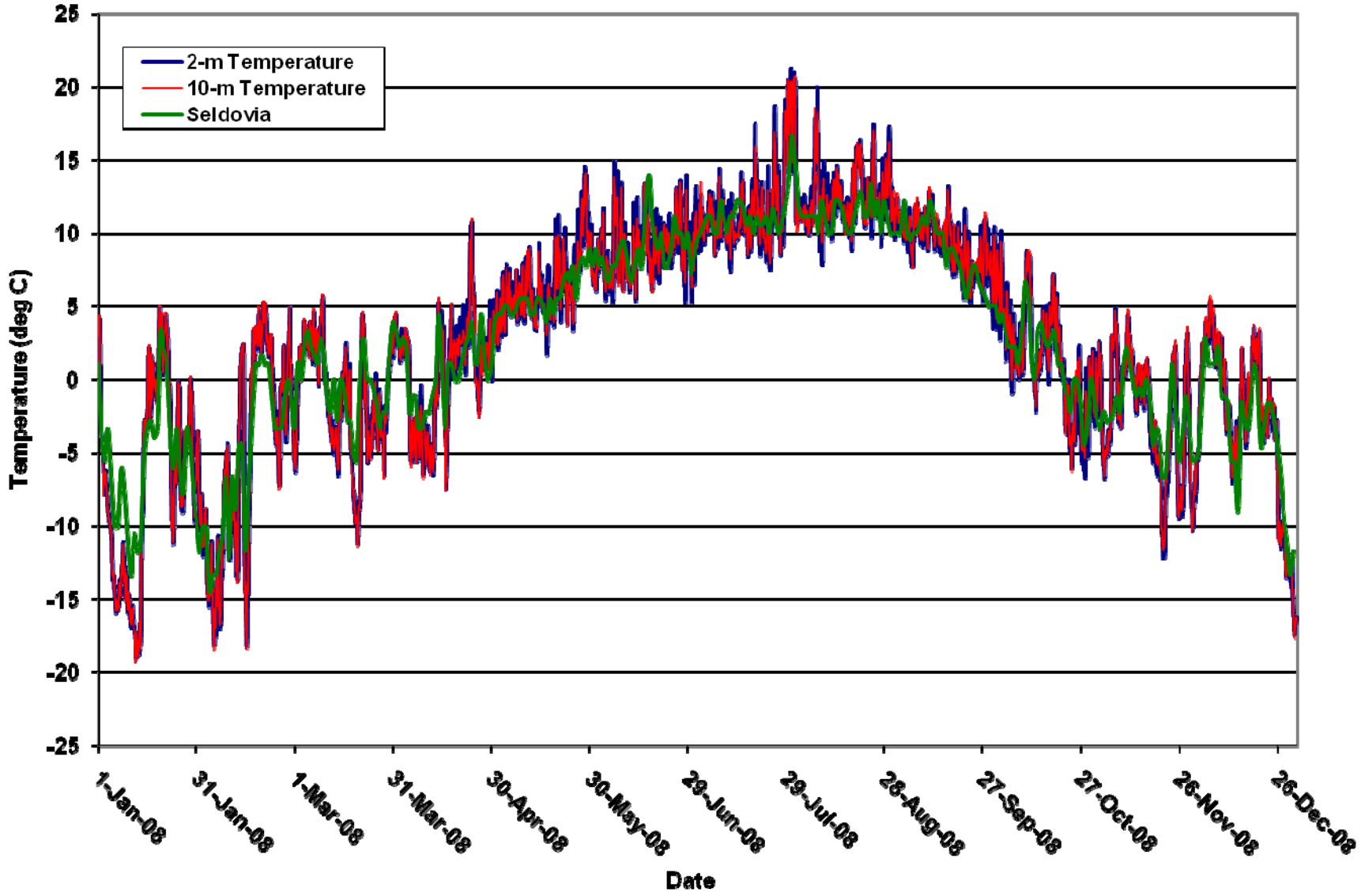
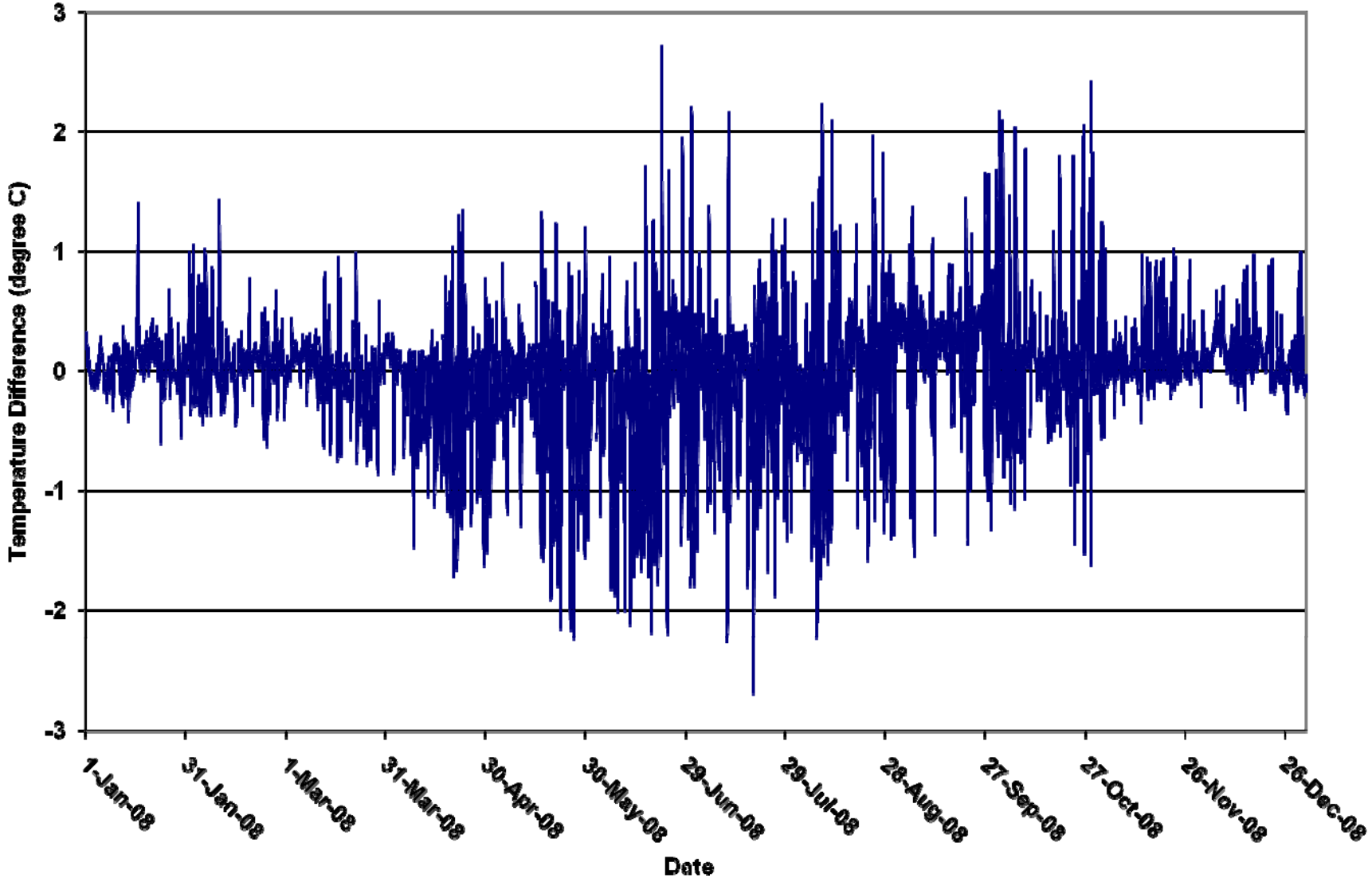


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble Port station include relative humidity, barometric pressure, and solar radiation.

Table 3-15 provides a summary of the relative humidity, barometric pressure, and solar radiation at the Pebble Port station during the 2008 monitoring year.

Figure 3-7 is a plot of the annual hourly average relative humidity. The lowest relative humidity value measured at the Pebble Port site was 23.7 percent on January 23, 2008. The mean relative humidity during the monitoring year was 75.0 percent. The mean relative humidity at the Seldovia meteorological station for the monitoring period was 81 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 967 mb on December 9, 2008, to a maximum of 1,041 mb observed on December 13, 2008. The mean barometric pressure during the monitoring year was 1,006 mb. The mean barometric pressure at the Seldovia meteorological station for the monitoring period was 1,007 mb.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 941.0 W/m^2 recorded on July 17, 2008 at 12:00 noon. The mean hourly average solar radiation for the monitoring year was 90.7 W/m^2.

Figure 3-10 is a graph of total daily precipitation and the cumulative precipitation during the 2008 monitoring year. The highest total daily precipitation was 70.9 mm measured on September 13, 2008. The maximum monthly precipitation was 370.8 mm during September 2008. The cumulative precipitation during the monitoring year was 810.5 mm. Daily winter precipitation data (October through April) should be closely examined before use because snowfall adaptors may influence daily totals.

A table of total daily evaporation is provided in Appendix D. The maximum total monthly evaporation at the Pebble 1 station was 50.6 mm during July 2008.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Table 3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary

Period	Mean Relative Humidity (%)	Minimum Relative Humidity (%)	Maximum Relative Humidity (%)	Mean Barometric Pressure (mb)	Minimum Barometric Pressure (mb)	Maximum Barometric Pressure (mb)	Mean Solar Radiation (W/m^2)	Maximum Solar Radiation (W/m^2)
January 2008	73.2	23.7	100.0	1,003	977	1,031	16.7	237.3
February 2008	70.4	27.1	97.0	999	968	1,017	40.8	363.9
March 2008	74.6	34.2	100.0	1,003	977	1,021	84.1	587.4
Quarter A	**72.8**	**23.7**	**100.0**	**1,002**	**968**	**1,031**	**47.3**	**587.4**
April 2008	67.0	31.5	99.4	1,013	993	1,040	171.6	747.7
May 2008	73.4	35.6	96.6	1,011	980	1,026	155.9	891.0
June 2008	79.5	41.4	99.0	1,013	994	1,024	175.3	843.0
Quarter B	**73.3**	**31.5**	**99.4**	**1,012**	**980**	**1,040**	**167.5**	**891.0**
July 2008	78.4	40.1	98.7	1,010	999	1,022	162.6	941.0
August 2008	81.8	39.6	98.3	1,007	990	1,022	126.7	765.6
September 2008	82.8	34.4	98.6	1,007	988	1,022	65.5	595.9
Quarter C	**81.0**	**34.4**	**98.7**	**1,008**	**988**	**1,022**	**118.9**	**941.0**
October 2008	70.7	29.1	98.6	1,002	984	1,021	58.7	457.9
November 2008	73.3	32.3	99.0	1,000	975	1,024	21.0	278.7
December 2008	74.1	30.7	99.7	1,012	967	1,041	9.0	125.0
Quarter D	**72.7**	**29.1**	**99.7**	**1,005**	**967**	**1,041**	**29.6**	**457.9**
Monitoring Year	**75.0**	**23.7**	**100.0**	**1,007**	**967**	**1,041**	**90.7**	**941.0**

Figure 3-7. Hourly Average Relative Humidity

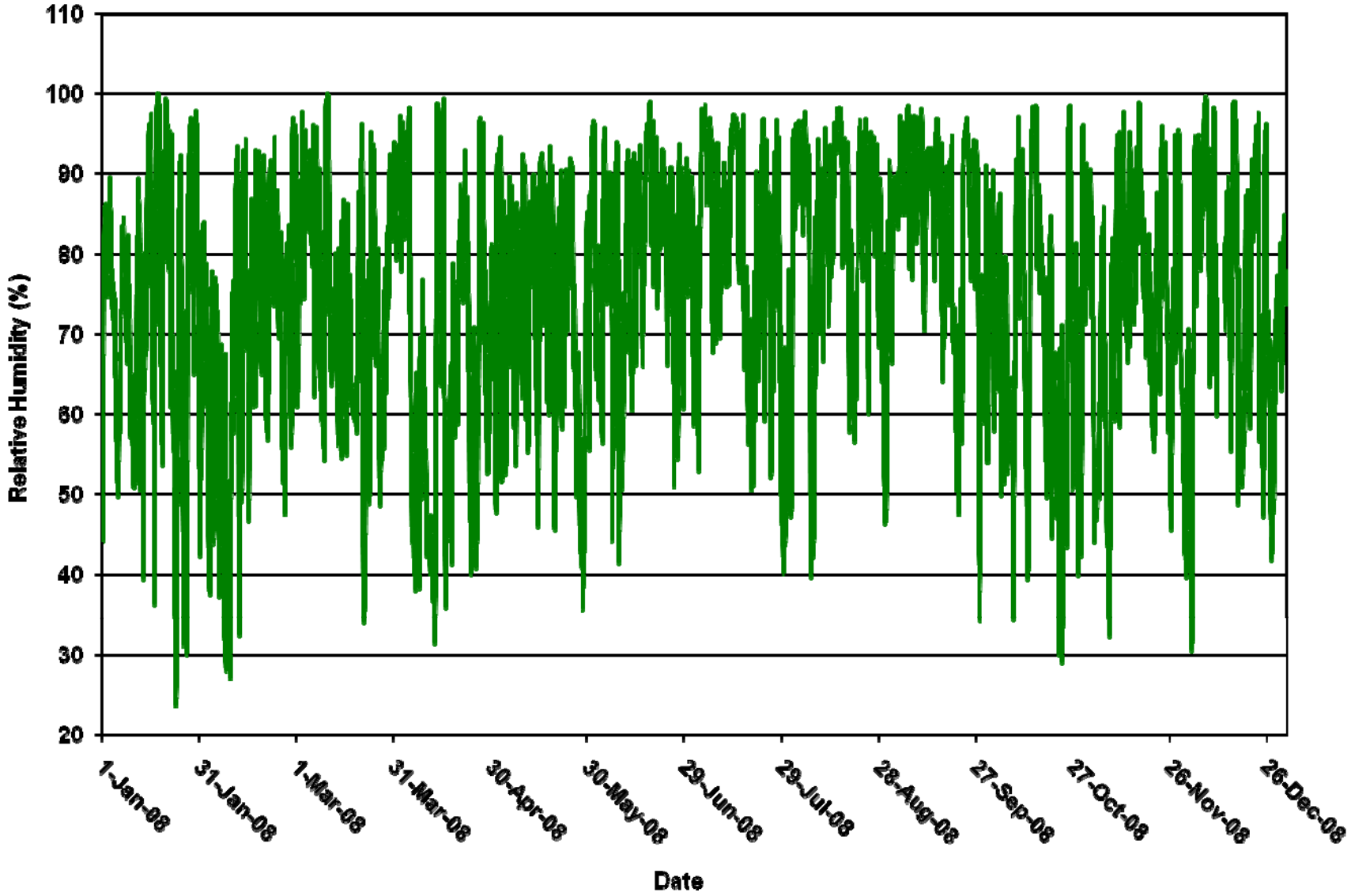


Figure 3-8. Hourly Average Barometric Pressure

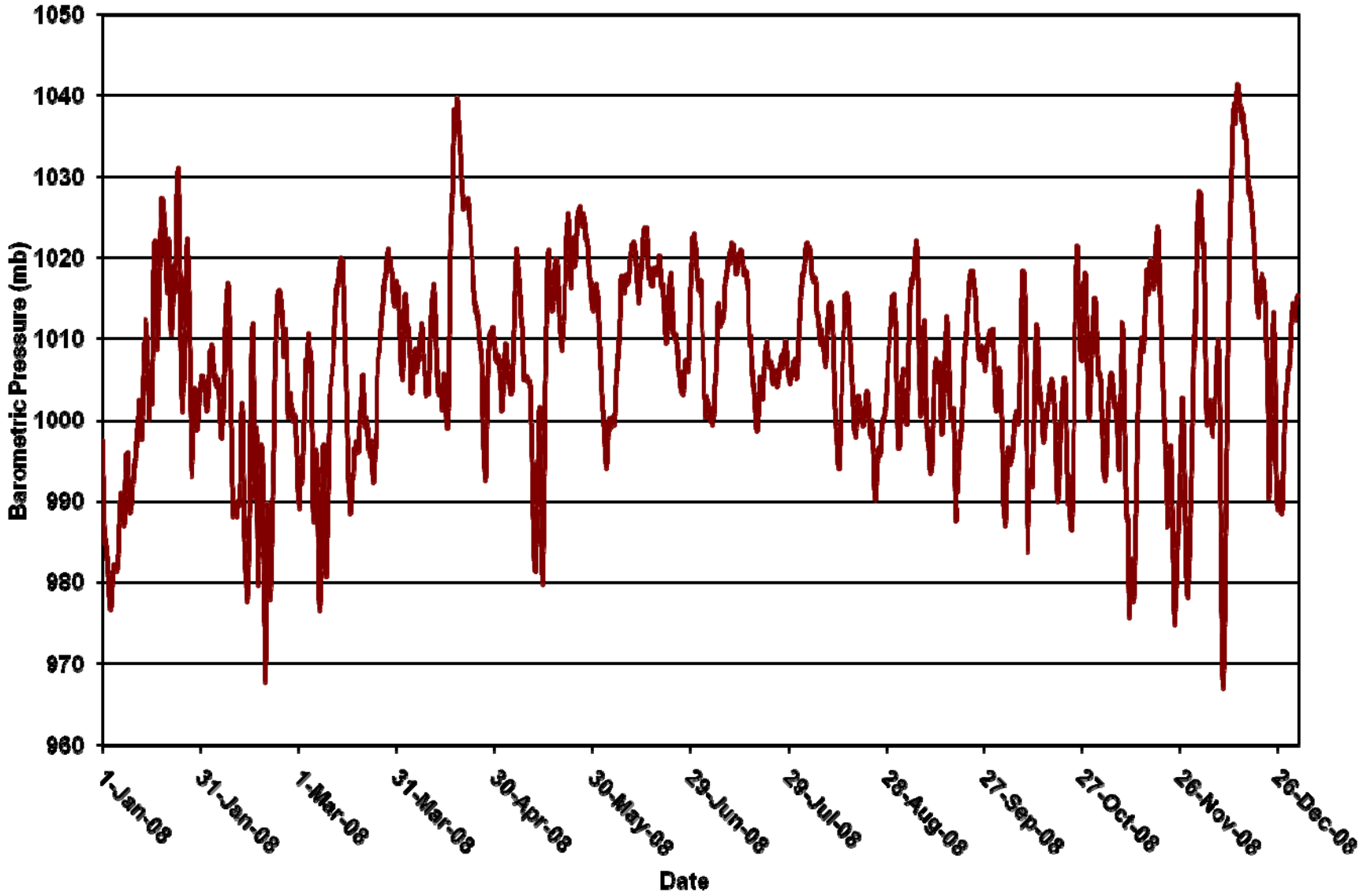


Figure 3-9. Hourly Average Solar Radiation

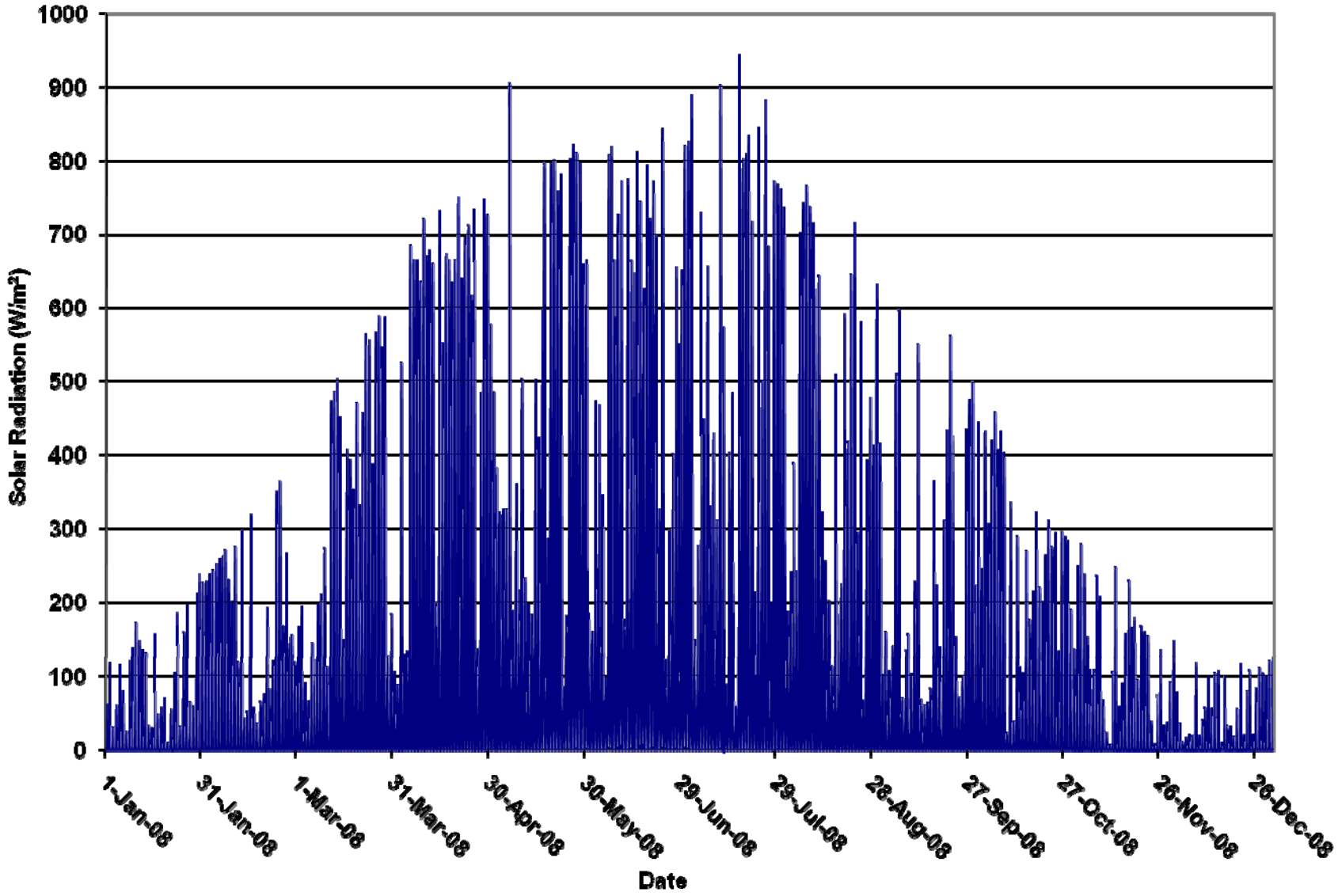
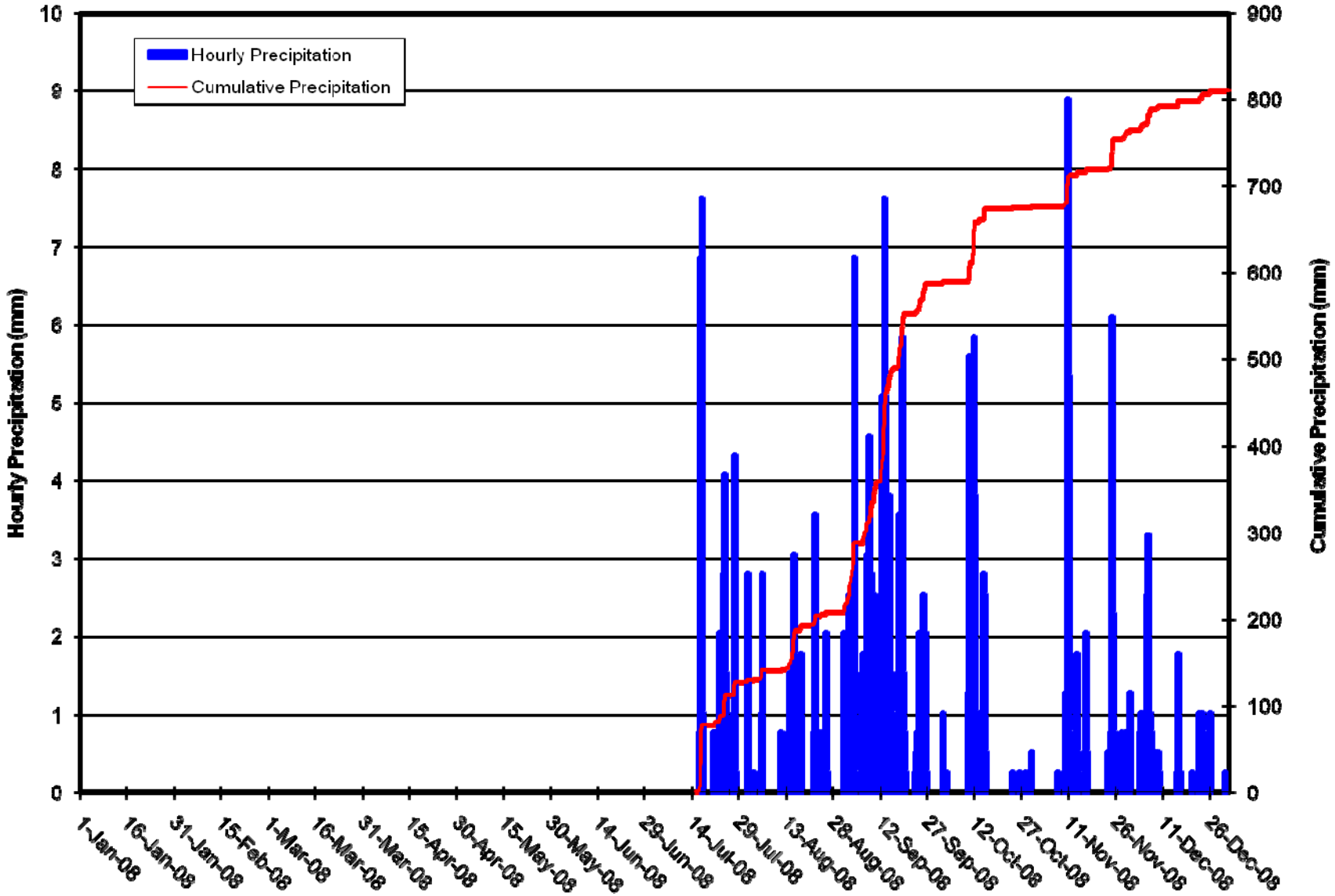


Figure 3-10. Hourly and Cumulative Precipitation



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Appendix A

Data Processing Specifications and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Table A-1. Station Performance Summary – Data Recovery 2008

Period	Meteorological Parameters													
	2-m Temp	10-m Temp	∆ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP	Precip[3]	Evap[3]
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
April 2008	99.2%	99.2%	99.2%	99.3%	99.3%	99.3%	99.3%	99.3%	99.3%	100%	100%	100%	N/A	N/A
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A
Quarter B	**99.7%**	**99.7%**	**99.7%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**100%**	**100%**	**100%**	**N/A**	**N/A**
July 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	95.1%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	96.8%
September 2008	99.9%	99.9%	99.9%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%	99.7%	94.9%
Quarter C	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**95.7%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.3%	93.6%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**99.8%**	**93.6%**
Monitoring Year	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**95.3%**

[1] CLM = Climatronics wind speed and wind direction sensor.

[2] RMY = R.M. Young wind speed and wind direction sensor.

[3] Precipitation and Evaporation gauges installed on July 15, 2008 and evaporation gauge decommissioned on October 16, 2008.

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

CONTENTS

1. Pebble Port Station August 2007 Quality Assurance Systems Audit and Performance Audit

2. Pebble Port Station April 2008 Quality Assurance Performance Audit

3. Pebble Port Station September 2008 Quality Assurance Systems Audit and Performance Audit

Pebble Port 1 PSD Meteorological Monitoring Station

August 2007

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Port 1 PSD Meteorological Monitoring Station
August 2007
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 13

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel 2
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Port 1 August 29, 2007 Performance Audit Summary (CR10X) 11
Table 3-3 Port 1 August 30, 2007 Performance Audit Summary (CR1000) 12

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential mine port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Port 1 station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agenc (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

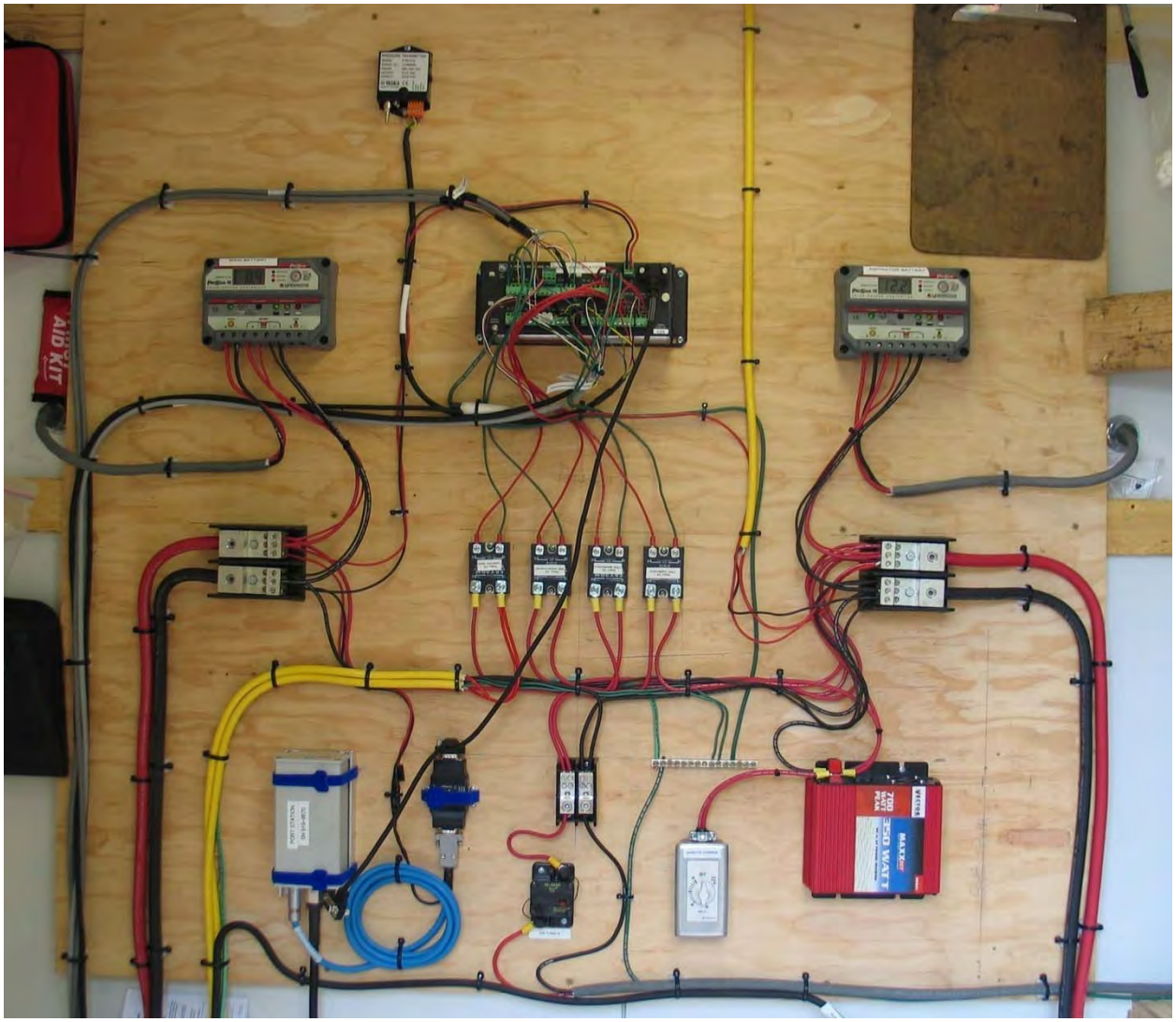
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the Port 1 station was conducted in late August 2007. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port 1 meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4’ by 4’ plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel



The Campbell Scientific CR10X/CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar controller and

buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port 1 station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best

reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Port 1 station is a well designed and operated meteorological monitoring station. During the recent audit the operator upgraded the data acquisition system and added current shunts to the system in order to remotely monitor the aspirator fans. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port 1 station and practices sufficient data review and preventive maintenance to avoid significant data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]
Precipitation	Calibrated water volume	≤ ±10% of input
Evaporation	Measured water level	≤ ±10% of input

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audits were conducted at the Port 1 station on August 29 & 30, 2007, with Dominic Shallies of HCG assisting. The station was audited as found on August 29, 2007. After the initial audit the datalogger was upgraded from a Campbell Scientific CR10X to a CR1000 and the solar radiation sensor was also replaced. After these station modifications the station was re-audited on August 30, 2007. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. The time on the new CR1000 DAS was inadvertently set to AM time rather than PM on startup, a 12 hour error. This error was rectified in the HCG office rather than in the field, in order to continue field solar tests and allow data recovery. Summary audit results are contained in Tables 3-2 and 3-3, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Port 1 August 29, 2007 Performance Audit Summary (CR10X)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:33	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.40	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.8	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.090	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	2.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.5	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	3.7	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.2	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	N/A[1]	N/A
Barometric Pressure	≤ ±3	Mbar	0.5	Pass
Solar Radiation	≤ ±5+Res	% input	-6.7[2]	Pass

1. Not re-tested until after DAS/sensor change.
2. Max % error value of 6.7 within limit of 5% input + resolution, see audit.

Table 3-3 Port 1 August 30, 2007 Performance Audit Summary (CR1000)

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-12:00:18	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.14	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (New bearings)	≤ 0.104	oz-in	0.080	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	1.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.0	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-1.8	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.008	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	8.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.9	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	-6.3[3]	Pass

1. DAS time 12 hours behind AST on new datalogger, error corrected from office.
2. New DAS/sensor, no as-found value.
3. Max % error value of 6.3 within limit of 5% input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port 1 station is located on a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

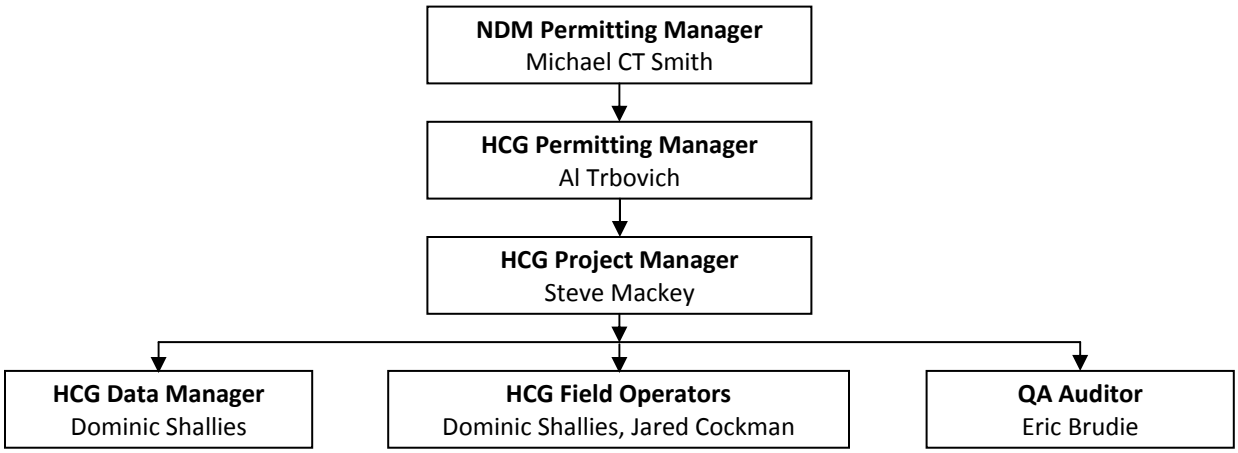
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
Old DAS[1]	Campbell Scientific	CR10X	X41611
Old DAS Wiring Panel	Campbell Scientific	CR10X	31375
New DAS[2]	Campbell Scientific	CR1000	Unknown
New DAS Wiring Panel	Campbell Scientific	CR1000	Unknown
Temperature (2-meter)	Met One	062MP	E3381, ID #1/2
Temperature (10-meter)	Met One	062MP	E3381, ID #2/2
Relative Humidity	Vaisala	HMP45AC	C0540091
Temperature Aspirators	Met One	076B-4	E3489 & E3490
New Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Primary Wind Direction	Climatronics	F460-100076	4690
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1425
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Backup Wind Speed	RM Young	05305 Wind Mon-AQ	76266
Backup Wind Spd Prop	RM Young	08254	63037
Backup Wind Direction	RM Young	05305 Wind Mon-AQ	76266
Barometric Pressure	Vaisala	PTB101B	A1950006
Old Solar Radiation	LI-COR	Li-200SX	PY50763
New Solar Radiation	LI-COR	Li-200SX	PY51449

1. DAS and some sensors replaced after initial audit on Aug 29, 2007.
2. New DAS and sensors audited on Aug 30, 2007.

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on telephone grid.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: None.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

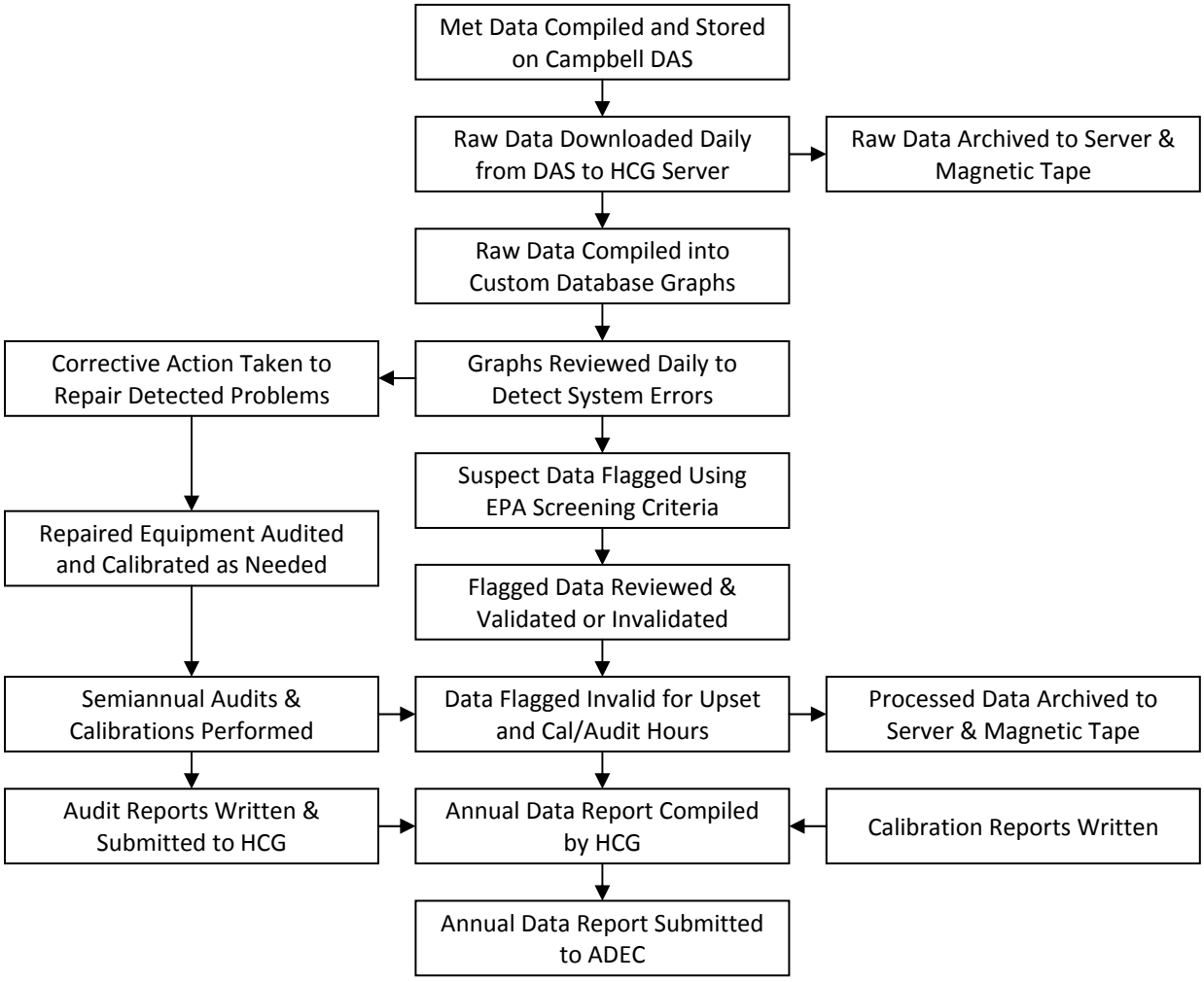
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits & cals?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Shallies Alternate: Steve Mackey Date: Aug 29-30, 2007
Witnesses: Dominic Shallies Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Audit with CR10X datalogger.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
11:37:00	11:36:27	**-00:33**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1200
End: 1300

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	40.69	40.88	0.19	Pass	40.88	0.19	Pass	0.00	Pass
Warm	15 to 25	20.82	20.94	0.12	Pass	20.94	0.12	Pass	0.00	Pass
Ice Bath	0	-0.05	0.08	0.13	Pass	0.08	0.13	Pass	0.00	Pass
Cold	-15 to -25	-18.83	-18.55	0.28	Pass	-18.55	0.28	Pass	0.00	Pass
Very Cold	-35 to -45	-38.93	-38.53	0.40	Pass	-38.53	0.40	Pass	0.00	Pass
		Max Abs. Error		0.40	**PASS**		0.40	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	C0540091	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1027	71.1	16.2	11.0	76.8	15.9	11.8	0.8	Pass
1048	73.5	15.5	10.7	76.9	15.5	11.5	0.8	Pass
						Max Abs. Error	0.8	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1010 End: 1012

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	262.4	-0.5	Pass
South Twin	211.3	208.8	-2.5	Pass
Mt Eleanor	202.6	201.1	-1.5	Pass
Mt Augustine Peak	356.0	354.8	-1.2	Pass
East Flank Augustine	347.0	346.3	-0.7	Pass
Compass	101.0	100.5	-0.5	Pass
Compass	347.0	347.3	0.3	Pass
Max Abs. Error			**2.5**	**PASS**
Mean Abs. Error			**1.0**	**GOOD**

Time: Begin: 930 End: 1000

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	177.8	-2.2	Pass
West	270.0	269.6	-0.4	Pass
North	360.0	0.1	0.1	Pass
East	90.0	89.5	-0.5	Pass
North	360.0	0.1	0.1	Pass
West	270.0	269.6	-0.4	Pass
South	180.0	178.5	-1.5	Pass
East	90.0	89.2	-0.8	Pass
Max Abs. Error		**2.2**	**PASS**	
Mean Abs. Error		**0.7**	**PASS**	

Time: Begin: 1020 End: 1022

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.8	-1.2	Pass	330.0	329.8	-0.2	Pass
60.0	58.5	-1.5	Pass	355.0	354.7	-0.3	Pass
90.0	89.1	-0.9	Pass	30.0	28.8	-1.2	Pass
120.0	119.6	-0.4	Pass	60.0	58.9	-1.1	Pass
150.0	149.0	-1.0	Pass	90.0	89.0	-1.0	Pass
180.0	178.9	-1.1	Pass	120.0	119.6	-0.4	Pass
210.0	209.4	-0.6	Pass	150.0	149.2	-0.8	Pass
240.0	239.4	-0.6	Pass	180.0	178.9	-1.1	Pass
270.0	269.3	-0.7	Pass	**Max Abs. Error**		**1.5**	**PASS**
300.0	299.6	-0.4	Pass	**Mean Abs. Error**		**0.8**	**PASS**

Time: Begin: 1041 End: 1044

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.090	**PASS**
New	0.104	0.080	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument/DAS Changed-				
No Post-Audit Test				
Max Abs. Error				
Mean Abs. Error				

Time: Begin: End:

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Wind direction sensor bearings replaced.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 76266	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.0	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1307 End: 1310

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	262.9	260.9	-2.0	Pass
South Twin	211.3	208.4	-2.9	Pass
Mt Eleanor	202.6	200.1	-2.5	Pass
Mt Augustine Peak	356.0	356.1	0.1	Pass
East Flank Augustine	347.0	343.3	-3.7	Pass
Compass	101.0	99.0	-2.0	Pass
Compass	347.0	346.5	-0.5	Pass
Time: Begin: 930	**Max Abs. Error**		**3.7**	**PASS**
End: 1000	**Mean Abs. Error**		**2.0**	**GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.6	0.6	Pass	150.0	148.6	-1.4	Pass	270.0	268.9	-1.1	Pass
60.0	60.5	0.5	Pass	180.0	178.9	-1.1	Pass	300.0	299.3	-0.7	Pass
90.0	91.0	1.0	Pass	210.0	208.6	-1.4	Pass	330.0	327.3	-2.7	Pass
120.0	119.1	-0.9	Pass	240.0	238.6	-1.4	Pass	355.0	353.3	-1.7	Pass
					Time: Begin: 1320			**Max Abs. Error**		**2.7**	**PASS**
					End: 1323			**Mean Abs. Error**		**1.2**	**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	8.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument/DAS Changed-				
No Post-Audit Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 29, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1237	29.82	29.73	1006.7	1007.2	0.5	Pass
			Max Abs. Error		0.5	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

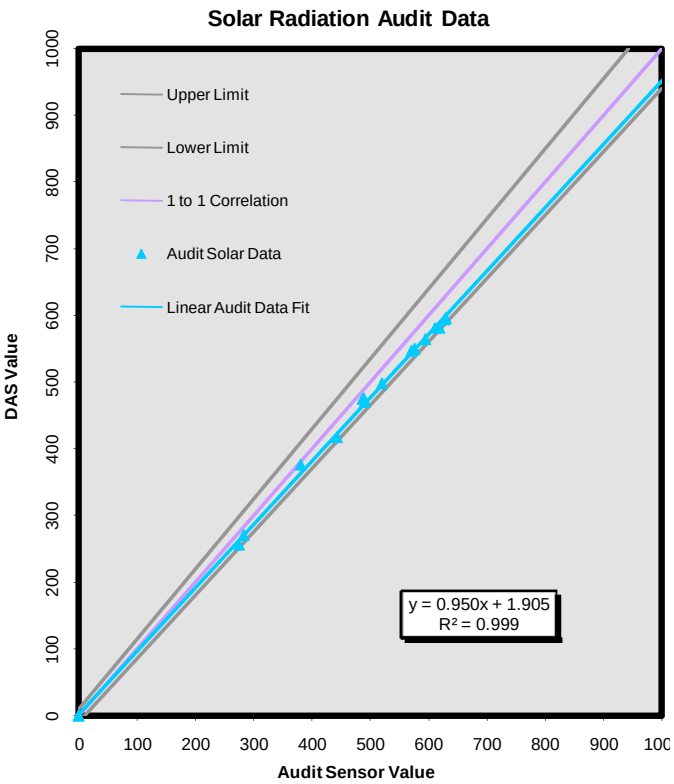
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY50763 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
837	0.0	0.0	0.0	±10.0	n/a	Pass
842	282.7	270.1	-12.6	±24.1	-4.5%	Pass
1027	489.0	474.9	-14.1	±34.5	-2.9%	Pass
1131	575.5	549.3	-26.2	±38.8	-4.6%	Pass
1212	610.4	581.5	-28.9	±40.5	-4.7%	Pass
1254	629.8	595.5	-34.3	±41.5	-5.4%	Pass
1550	490.5	469.6	-20.9	±34.5	-4.3%	Pass
1629	443.0	417.2	-25.8	±32.2	-5.8%	Pass
900	274.8	256.5	-18.3	±23.7	-6.7%	Pass
1000	380.9	375.6	-5.3	±29.0	-1.4%	Pass
1100	487.4	474.5	-12.9	±34.4	-2.6%	Pass
1200	570.5	546.7	-23.8	±38.5	-4.2%	Pass
1300	618.1	581.0	-37.1	±40.9	-6.0%	Pass
1400	626.9	593.3	-33.6	±41.3	-5.4%	Pass
1500	594.0	563.6	-30.4	±39.7	-5.1%	Pass
1600	519.8	498.0	-21.8	±36.0	-4.2%	Pass
2200	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9996**	**Max Abs. Percent Error**			**6.7%**	**PASS**
R² Value	**0.9991**	**Intercept**	**1.9**	**Slope**	**0.9502**	**PASS**



Begin Date: 08/29/07 **End Date:** 08/29/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Audit with CR1000. Date stamp set 12 hours behind (-18 second).

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
12:17:00	0:16:42	**-12:00:18**	**FAIL**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	E3381 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1435
End: 1450

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	36.66	36.79	0.13	Pass	36.79	0.13	Pass	0.00	Pass
Warm	15 to 25	19.60	19.67	0.07	Pass	19.67	0.07	Pass	0.00	Pass
Ice Bath	0	0.07	0.21	0.14	Pass	0.21	0.14	Pass	0.00	Pass
Cold	-15 to -25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Very Cold	-35 to -45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Max Abs. Error		0.14	**PASS**		0.14	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: No dry ice available to run cold temperature tests after DAS change.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	C0540091	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1630	61.7	18.4	11.4	71.6	16.6	11.4	0.0	Pass
1643	65.9	18.1	11.7	74.1	16.5	11.9	0.2	Pass
						Max Abs. Error	0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0 **E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1515 End: 1518

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	177.4	-2.6	Pass
West	270.0	267.6	-2.4	Pass
North	360.0	357.8	-2.2	Pass
East	90.0	87.5	-2.5	Pass
North	360.0	358.1	-1.9	Pass
West	270.0	268.5	-1.5	Pass
South	180.0	177.8	-2.2	Pass
East	90.0	87.7	-2.3	Pass
	Max Abs. Error		**2.6**	**PASS**
	Mean Abs. Error		**2.2**	**PASS**

Time: Begin: 1502 End: 1507

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.8	-1.2	Pass	330.0	329.3	-0.7	Pass
60.0	58.9	-1.1	Pass	355.0	354.0	-1.0	Pass
90.0	88.9	-1.1	Pass	30.0	29.1	-0.9	Pass
120.0	118.7	-1.3	Pass	60.0	58.9	-1.1	Pass
150.0	148.3	-1.7	Pass	90.0	89.4	-0.6	Pass
180.0	179.0	-1.0	Pass	120.0	119.2	-0.8	Pass
210.0	209.2	-0.8	Pass	150.0	148.6	-1.4	Pass
240.0	239.0	-1.0	Pass	180.0	178.9	-1.1	Pass
270.0	269.0	-1.0	Pass	**Max Abs. Error**		**1.7**	**PASS**
300.0	299.4	-0.6	Pass	**Mean Abs. Error**		**1.0**	**PASS**

Time: Begin: 1510 End: 1513

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.080	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Mt Eleanor	202.6	200.8	-1.8	Pass
Pomeroy Repeater	262.9	262.0	-0.9	Pass
East Flank Augustine	347.0	346.0	-1.0	Pass
Compass	100.5	100.9	0.4	Pass
Time: Begin: 1550	**Max Abs. Error**		**1.8**	**PASS**
End: 1610	**Mean Abs. Error**		**1.0**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	76266	**Prop #:**	63037	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1440 End: 1443

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
New Instrument/DAS-				
No In-Situ Test				
Time: Begin:	**Max Abs. Error**			
End:	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.4	-0.6	Pass	150.0	147.9	-2.1	Pass	270.0	267.2	-2.8	Pass
60.0	60.1	0.1	Pass	180.0	177.9	-2.1	Pass	300.0	297.6	-2.4	Pass
90.0	89.3	-0.7	Pass	210.0	207.8	-2.2	Pass	330.0	327.1	-2.9	Pass
120.0	118.8	-1.2	Pass	240.0	237.4	-2.6	Pass	355.0	352.3	-2.7	Pass
				Time: Begin:	1450	**Max Abs. Error**		**2.9**			**PASS**
				End:	1455	**Mean Abs. Error**		**1.9**			**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.008	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	8.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Mt Eleanor	202.6	202.9	0.3	Pass
Pomeroy Repeater	262.9	263.3	0.4	Pass
East Flank Augustine	347.0	347.2	0.2	Pass
Compass	100.5	101.9	1.4	Pass
Time: Begin: 1550	**Max Abs. Error**		**1.4**	**PASS**
End: 1610	**Mean Abs. Error**		**0.6**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 30, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1520	29.77	29.68	1005.0	1005.1	0.1	Pass
			Max Abs. Error		0.1	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

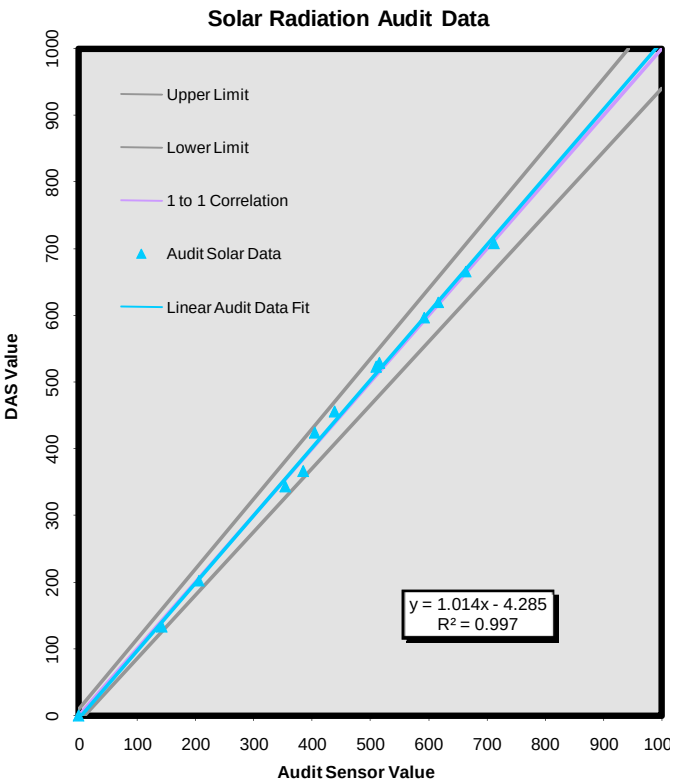
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY51449 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

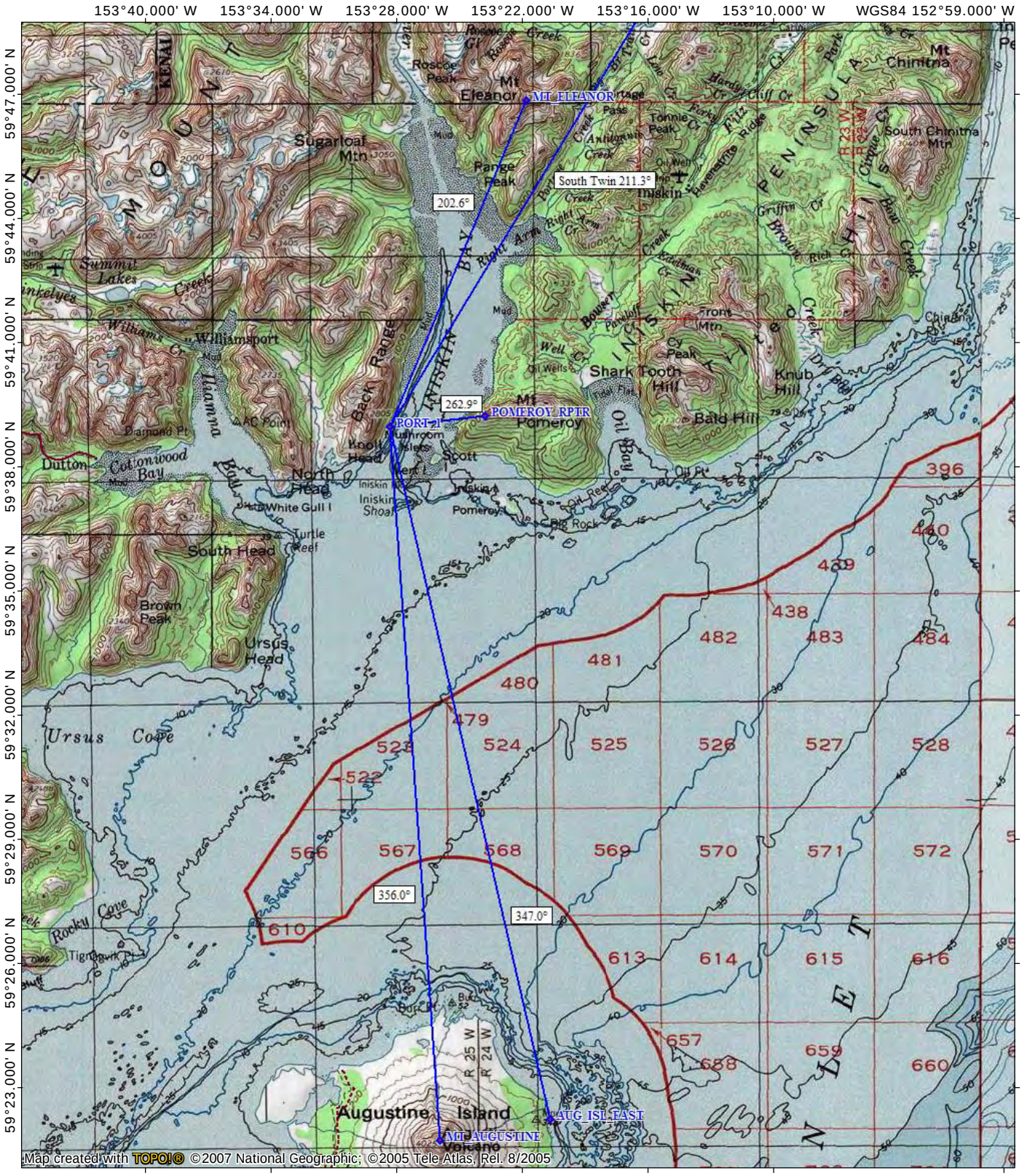
SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1203	142.1	133.1	-9.0	±17.1	-6.3%	Pass
1245	712.4	707.6	-4.8	±45.6	-0.7%	Pass
1412	616.1	620.1	4.0	±40.8	0.6%	Pass
1525	515.2	528.1	12.9	±35.8	2.5%	Pass
1613	438.9	455.7	16.8	±31.9	3.8%	Pass
1651	385.3	366.2	-19.1	±29.3	-5.0%	Pass
1200	206.2	202.7	-3.5	±20.3	-1.7%	Pass
1300	354.5	343.0	-11.5	±27.7	-3.2%	Pass
1400	663.2	666.0	2.8	±43.2	0.4%	Pass
1500	592.1	596.9	4.8	±39.6	0.8%	Pass
1600	509.5	522.4	12.9	±35.5	2.5%	Pass
1700	404.7	423.6	18.9	±30.2	4.7%	Pass
2200	0.0	0.0	0.0	±10.0	n/a	Pass
Corr. Val	**0.9987**	**Max Abs. Percent Error**			**6.3%**	**PASS**
R² Value	**0.9973**	**Intercept**	**-4.3**	**Slope**	**1.0146**	**PASS**



Begin Date: 08/30/07 **End Date:** 08/30/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

Port 1 TOPO Alignment Map - 58°38.949' N, 153°28.294' W WGS84



APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Block Unit

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

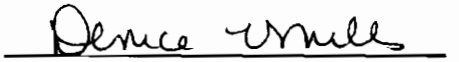
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: eplab@mail.bbsnet.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments for Precision Measurements Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Pebble Port 1 Station
April 2008
Quality Assurance Performance Audit

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

Pebble Port 1 PSD Meteorological Monitoring Station
April 2008
Quality Assurance Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Relative Humidity 3
2.1.4 Wind Speed 4
2.1.5 Wind Direction 4
2.1.6 Barometric Pressure 6
2.1.7 Solar Radiation 6

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 8

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Port 1 April 9, 2008 Performance Audit Summary 7

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for The Pebble Limited Partnership, care of Pebble Mines Corporation (PMC); in support of the Pebble Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential project port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for PMC to serve as a quantitative review of the Pebble Port 1 station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit; instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Port 1 station on April 9, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and all sensors yielded errors below the PSD limits. The time on the DAS was one hour fast due to being reset to Daylight Saving Time on March 26, 2008. The data set was shifted one hour forward of Alaska Standard Time by the HCG polling computer, but should be recoverable by adjusting the data timestamp. Table 2-2 contains summary data from the field audit and complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- Manually adjust DAS clocks and ensure that the reference computer is always set to Alaska Standard Time.

Table 2-2 Port 1 April 9, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:01	Fail
2-m Temperature Accuracy (E3381)[1]	≤ ±0.5	°C	0.43	Pass
10-m Temperature Accuracy (E3381)	≤ ±0.5	°C	0.43	Pass
Air Temperature Difference (E3381)	≤ ±0.1	°C	0.03	Pass
2-m Temperature Accuracy (G9579)[1]	≤ ±0.5	°C	-0.11	Pass
10-m Temperature Accuracy (G9579)	≤ ±0.5	°C	-0.06	Pass
Air Temperature Difference (G9579)	≤ ±0.1	°C	0.10	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.4	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (4690)[2]	≤ 7.5	gm-cm	6.5	Pass
Wind Dir. Azim. Align. (as-found) (4690)	≤ ±5	Degree	-2.7	Pass
Wind Direction Accuracy (4690)	≤ ±5	Degree	2.3	Pass
Wind Direction Linearity (4690)	≤ 3	Degree	1.9	Pass
Wind Direction Torque (4691)[2]	≤ 7.5	gm-cm	3.5	Pass
Wind Direction Accuracy (4691)	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity (4691)	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left) (4691)	≤ ±5	Degree	1.0	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	gm-cm	0.6	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	1.8	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.7	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-8.7	Pass

1. Thermistors SN E3381 replaced for preventive maintenance with SN G9579.
2. Wind direction sensor SN 4690 replaced with SN 4691 due to high torque.

3.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

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"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

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"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

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"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: DAS SN #11726, Wire Pnl #11395. DAS set to Daylight Saving Time.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
9:36:00	10:36:01	**1:00:01**	**FAIL**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** E3381 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1300
End: 1350

THERMISTOR COLLOCATED STANDARD TEST

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	35.79	35.91	0.12	Pass	35.94	0.15	Pass	0.03	Pass
Warm	15 to 25	17.61	17.76	0.15	Pass	17.76	0.15	Pass	0.00	Pass
Ice Bath	0	0.04	0.12	0.08	Pass	0.12	0.08	Pass	0.00	Pass
Cold	-15 to -25	-19.73	-19.30	0.43	Pass	-19.30	0.43	Pass	0.00	Pass
Very Cold	-35 to -45	-37.67	-37.73	-0.06	Pass	-37.75	-0.08	Pass	-0.02	Pass
		Max Abs. Error	0.43	**PASS**		0.43	**PASS**	0.03	**PASS**	

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: Thermistors changed for preventive maintenance and then re-audited.

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G9579 # 1/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G9579 # 2/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1400
End: 1438

THERMISTOR COLLOCATED STANDARD TEST

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	40.18	40.24	0.06	Pass	40.24	0.06	Pass	0.00	Pass
Warm	15 to 25	17.00	17.04	0.04	Pass	17.04	0.04	Pass	0.00	Pass
Ice Bath	0	0.09	0.03	-0.06	Pass	0.03	-0.06	Pass	0.00	Pass
Cold	-15 to -25	-18.58	-18.55	0.03	Pass	-18.58	0.00	Pass	-0.03	Pass
Very Cold	-35 to -45	-37.04	-37.15	-0.11	Pass	-37.05	-0.01	Pass	0.10	Pass
		Max Abs. Error	0.11	**PASS**		0.06	**PASS**	0.10	**PASS**	

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: New thermistors installed for preventive maintenance. New thermistors very close to the limit on Delta T.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (Pre-Replacement)*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4690	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.9	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.73	23.73	N/A	0.0	Pass
2000	47.21	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1430 End: 1432

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	262.3	-0.9	Pass
South Twin	211.3	209.3	-2.0	Pass
East Flank Augustine	347.1	344.4	-2.7	Pass
Compass	101.5	100.1	-1.4	Pass
Max Abs. Error			**2.7**	**PASS**
Mean Abs. Error			**1.8**	**GOOD**

Time: Begin: 1040 End: 1200

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.2	-1.8	Pass
West	270.0	268.5	-1.5	Pass
North	360.0	0.2	0.2	Pass
East	90.0	89.8	-0.2	Pass
North	360.0	0.1	0.1	Pass
West	270.0	269.1	-0.9	Pass
South	180.0	177.8	-2.2	Pass
East	90.0	88.9	-1.1	Pass
Max Abs. Error			**2.2**	**PASS**
Mean Abs. Error			**1.0**	**PASS**

Time: Begin: 1150 End: 1154

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	27.8	-2.2	Pass	330.0	328.2	-1.8	Pass
60.0	58.0	-2.0	Pass	355.0	353.3	-1.7	Pass
90.0	88.0	-2.0	Pass	30.0	28.1	-1.9	Pass
120.0	118.3	-1.7	Pass	60.0	58.0	-2.0	Pass
150.0	147.9	-2.1	Pass	90.0	88.2	-1.8	Pass
180.0	177.9	-2.1	Pass	120.0	118.6	-1.4	Pass
210.0	208.1	-1.9	Pass	150.0	148.2	-1.8	Pass
240.0	238.2	-1.8	Pass	180.0	177.7	-2.3	Pass
270.0	268.1	-1.9	Pass	**Max Abs. Error**		**2.3**	**PASS**
300.0	298.1	-1.9	Pass	**Mean Abs. Error**		**1.9**	**PASS**

Time: Begin: 1420 End: 1423

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	<0.2	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	6.5	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument replaced,				
no post-audit.				
Max Abs. Error				
Mean Abs. Error				

Time: Begin: N/A End: N/A

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Wind direction sensor had high threshold torque, instrument replaced and re-audited.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (Post-Replacement)*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	N/A	**Cup #:**	N/A	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4691	**Vane #:**	1425	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.9	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22			N/A	
100	2.57			N/A	
200	4.92			N/A	
400	9.62		N/A		
1000	23.73		N/A		
2000	47.21		N/A		
	Max Abs. Error				

Time: Begin: N/A End: N/A

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New instrument,				
no in-situ audit.				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.1	-1.9	Pass
West	270.0	269.0	-1.0	Pass
North	360.0	357.8	-2.2	Pass
East	90.0	89.7	-0.3	Pass
North	360.0	357.8	-2.2	Pass
West	270.0	268.7	-1.3	Pass
South	180.0	177.8	-2.2	Pass
East	90.0	89.4	-0.6	Pass
	Max Abs. Error	**2.2**		**PASS**
	Mean Abs. Error	**1.5**		**PASS**

Time: Begin: 1446 End: 1448

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.9	-1.1	Pass	330.0	329.4	-0.6	Pass
60.0	59.0	-1.0	Pass	355.0	354.9	-0.1	Pass
90.0	89.6	-0.4	Pass	30.0	28.9	-1.1	Pass
120.0	119.7	-0.3	Pass	60.0	58.9	-1.1	Pass
150.0	149.1	-0.9	Pass	90.0	89.6	-0.4	Pass
180.0	178.8	-1.2	Pass	120.0	119.7	-0.3	Pass
210.0	208.6	-1.4	Pass	150.0	149.1	-0.9	Pass
240.0	238.4	-1.6	Pass	180.0	178.9	-1.1	Pass
270.0	269.0	-1.0	Pass	**Max Abs. Error**		**1.6**	**PASS**
300.0	299.4	-0.6	Pass	**Mean Abs. Error**		**0.8**	**PASS**

Time: Begin: 1420 End: 1422

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	N/A	**N/A**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	3.5	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	263.6	0.4	Pass
South Twin	211.3	211.0	-0.3	Pass
East Flank Augustine	347.1	346.2	-0.9	Pass
Compass	102.0	103.0	1.0	Pass
North Iniskin Island	314.4	314.9	0.5	Pass
Time: Begin: 1540	**Max Abs. Error**		**1.0**	**PASS**
End: 1555	**Mean Abs. Error**		**0.6**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: New wind direction sensor, speed sensor already audited.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 76266	**Prop #:** 63037	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Honeywell 366-3m	**S.N.#:** 5103				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 17.9	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1130 End: 1132

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	263.2	0.0	Pass
South Twin	211.3	210.6	-0.7	Pass
East Flank Augustine	347.1	346.1	-1.0	Pass
Compass	101.5	103.3	1.8	Pass
Time: Begin: 1040	**Max Abs. Error**		**1.8**	**PASS**
End: 1200	**Mean Abs. Error**		**0.9**	**GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.1	0.1	Pass	150.0	150.2	0.2	Pass	270.0	268.8	-1.2	Pass
60.0	60.3	0.3	Pass	180.0	180.2	0.2	Pass	300.0	298.9	-1.1	Pass
90.0	90.0	0.0	Pass	210.0	210.2	0.2	Pass	330.0	328.4	-1.6	Pass
120.0	120.4	0.4	Pass	240.0	239.8	-0.2	Pass	355.0	353.9	-1.1	Pass
				Time: Begin:	1121			**Max Abs. Error**		**1.6**	**PASS**
				End:	1124			**Mean Abs. Error**		**0.6**	**PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	0.6	**PASS**
New	1.0	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	7.0	**PASS**
New	11.0	0.153	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	263.0	-0.2	Pass
South Twin	211.3	210.9	-0.4	Pass
East Flank Augustine	347.1	344.4	-2.7	Pass
Compass	102.0	102.5	0.5	Pass
North Iniskin Island	314.4	314.9	0.5	Pass
Time: Begin: 1540	**Max Abs. Error**		**2.7**	**PASS**
End: 1555	**Mean Abs. Error**		**0.9**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
932	29.72	29.63	1003.3	1004.44	1.1	Pass
1402	29.70	29.61	1002.6	1004.38	1.7	Pass
			Max Abs. Error		1.7	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

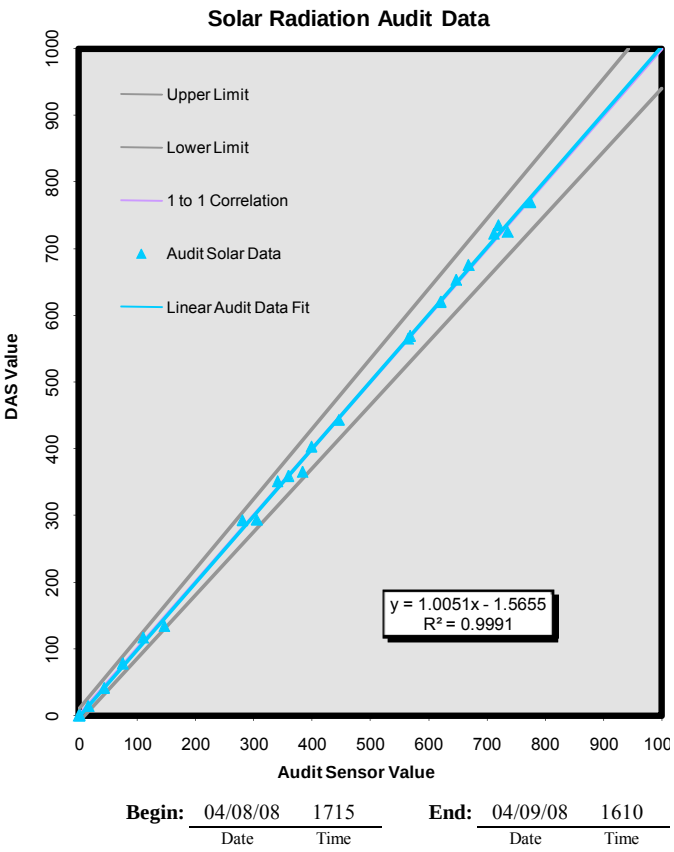
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56452 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1727	384.0	365.3	-18.7	±29.2	-4.9%	Pass
1730	359.8	359.2	-0.6	±28.0	-0.2%	Pass
930	280.6	292.8	12.2	±24.0	4.3%	Pass
951	340.9	351.2	10.3	±27.0	3.0%	Pass
1010	399.0	403.2	4.2	±30.0	1.1%	Pass
1129	568.3	569.3	1.0	±38.4	0.2%	Pass
1202	620.5	620.2	-0.3	±41.0	0.0%	Pass
1357	774.1	769.8	-4.3	±48.7	-0.6%	Pass
1455	735.5	725.2	-10.3	±46.8	-1.4%	Pass
1900	110.5	116.6	6.1	±15.5	5.5%	Pass
2000	75.7	78.1	2.4	±13.8	3.2%	Pass
2100	43.5	41.3	-2.2	±12.2	n/a	Pass
2200	1.7	0.4	-1.3	±10.1	n/a	Pass
2300	-0.2	0.0	0.2	±10.0	n/a	Pass
700	0.1	0.0	-0.1	±10.0	n/a	Pass
800	16.6	14.2	-2.4	±10.8	n/a	Pass
900	146.7	134.0	-12.7	±17.3	-8.7%	Pass
1000	305.3	293.8	-11.5	±25.3	-3.8%	Pass
1100	445.9	443.5	-2.4	±32.3	-0.5%	Pass
1200	565.0	565.1	0.1	±38.3	0.0%	Pass
1300	647.4	653.0	5.6	±42.4	0.9%	Pass
1400	719.7	735.0	15.3	±46.0	2.1%	Pass
1500	712.0	722.0	10.0	±45.6	1.4%	Pass
1600	668.4	675.4	7.0	±43.4	1.0%	Pass
Corr. Val	**0.9996**	**Max Abs. Percent Error**			**8.7%**	**PASS**
R² Value	**0.9991**	**Intercept**	**-1.6**	**Slope**	**1.0051**	**PASS**



Begin: 04/08/08 (Date) 1715 (Time) **End:** 04/09/08 (Date) 1610 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 9, 2008

● *RELATIVE HUMIDITY SENSOR AUDIT*

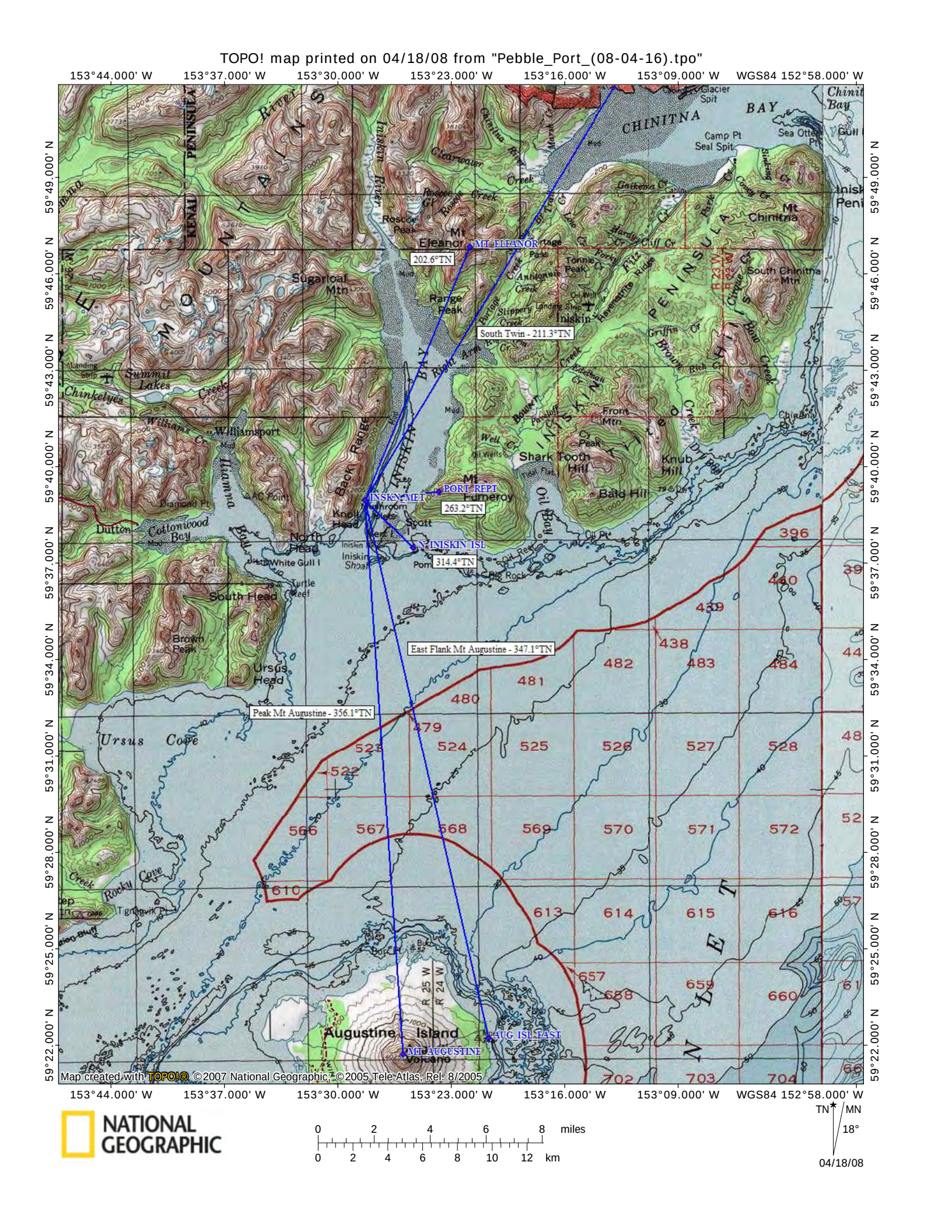
Height: 2.1 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45ASP **S.N.#:** C0540091 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST

Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
949	55.7	-6.0	-12.6	61.5	-6.6	-12.6	0.0	Pass
1007	56.0	-5.9	-12.4	60.6	-6.2	-12.5	-0.1	Pass
1125	54.8	-4.3	-11.4	57.2	-4.9	-11.8	-0.4	Pass
					Max Abs. Error		0.4	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.


TOPO! map printed on 04/18/08 from "Pebble_Port_(08-04-16).tpo"
153°44.000' W
153°37.000' W
153°30.000' W
153°23.000' W
153°16.000' W
153°09.000' W
WGS84 152°58.000' W
59°49.000' N
59°46.000' N
59°43.000' N
59°40.000' N
59°37.000' N
59°34.000' N
59°31.000' N
59°28.000' N
59°25.000' N
59°22.000' N
MT_ELEANOR
202.6°TN
South Twin - 211.3°TN
PORT_REPT
263.2°TN
INSKNMET
N_INISKIN_ISL
314.4°TN
East Flank Mt Augustine - 347.1°TN
Peak Mt Augustine - 356.1°TN
AUG_ISL_EAST
MT_AUGUSTINE
Augustine Island
Volcano
CHINITNA BAY
Camp Pt
Seal Spit
Mt Eleanor
Sugarloaf Mtn
Iniskin Bay
Iniskin Peninsula
Shark Tooth Hill
Bald Hill
Knub Hill
Front Mtn
Williamsport
Tuxedni Bay
Ursus Cove
Map created with TOPO!® ©2007 National Geographic, ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0 2 4 6 8 miles
0 2 4 6 8 10 12 km
TN MN
18°
04/18/08

APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Block Unit

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 28 Nov 2007
Inspection Interval One Year

Tested By EJC

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150 Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Ester Gozon

Ester Gozon, Quality Manager

Printed: 10/12/2007

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Easter Gozon

Easter Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner Name: HOEFLER Consulting Group

Address: 340 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER:

MODEL NUMBER: 5008

SERIAL NUMBER: 5080199319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

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Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: K. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Pebble Port 1 Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

for the:

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corporation

prepared by:

Hoefler
CONSULTING GROUP

Pebble Port 1 (Iniskin Bay)
PSD Meteorological Monitoring Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 9
3.1.7 Solar Radiation 9
3.1.1 Precipitation 10
3.1.2 Evaporation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 13

LIST of FIGURES and TABLES

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Iniskin Bay Port 1 September 10, 2008 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for Pebble Limited Partnership (PLP) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Port 1 monitoring station located near a potential mine port site.

The Port 1 station is located on the west shore of Iniskin Bay, near the southern end of the bay. The station is situated on a 50' high knoll, very near the water's edge. The Port 1 station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' south of the tower is a 6' by 8' insulated building which houses the datalogger and power supply system. Mounted on top of the instrumentation building is a deck which supports both a weighing precipitation gauge and an evaporation pan. The Pebble Port 1 station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR1000 DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer
- Precipitation (mm H_2O): ETI Model Noah II Weighing Precipitation Gauge
- Evaporation (mm H_2O): Nova-Lynx Model 255-100/200 Pan and Gauge.

This report has been prepared for PLP to serve as an official review of the Pebble Port 1 station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agenc (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

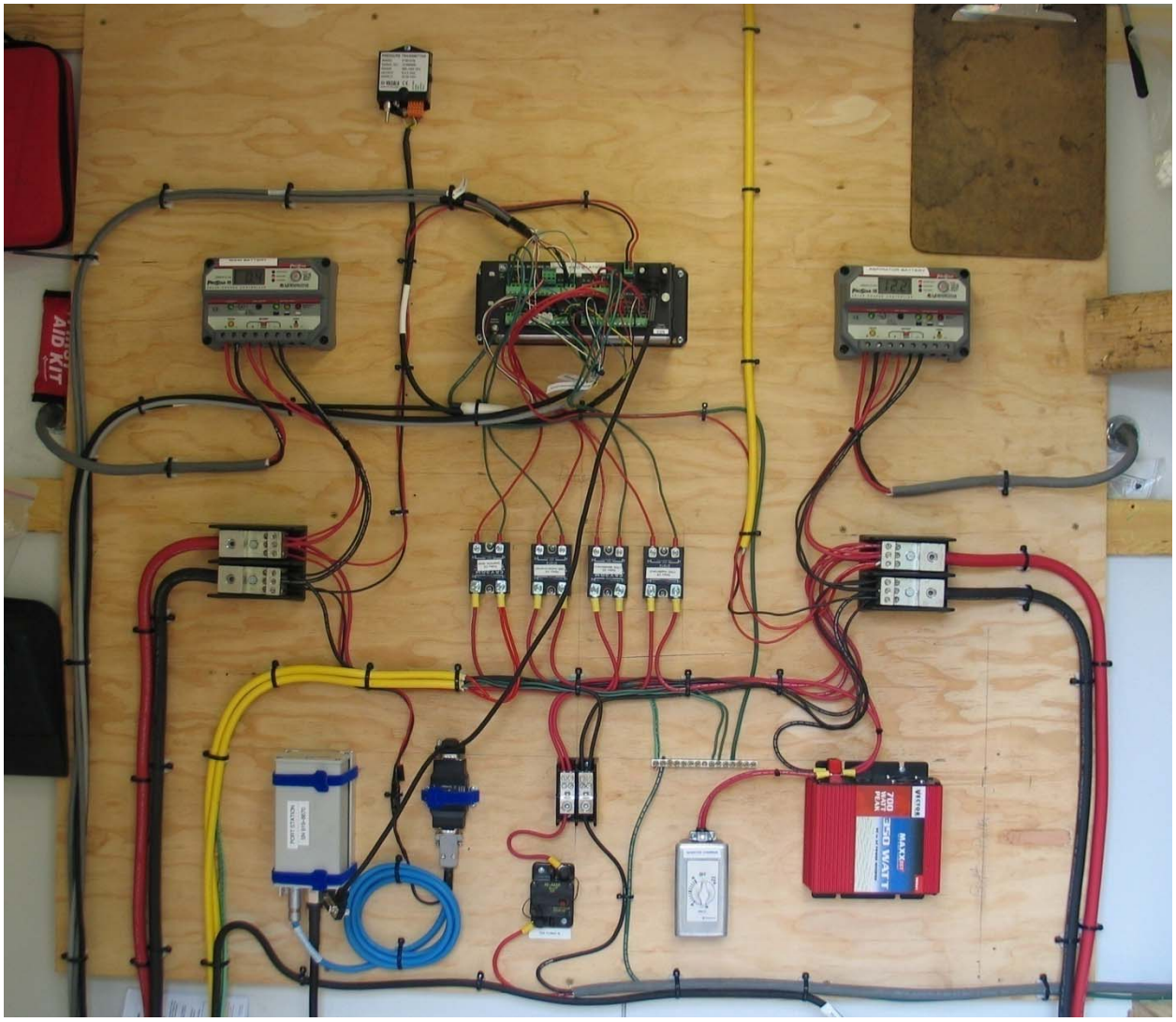
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the Port 1 station was conducted in September 2008. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Port 1 meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2" liquid-tight conduit runs from the 12' height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Port 1 Station DAS Wiring Panel



The Campbell Scientific CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of four 50-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Three solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar

controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. Equally, the Pebble Port 1 station is representative of the Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified

in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Port 1 station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Pebble Port 1 station and practices sufficient data review and preventive maintenance to avoid significant data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]
Precipitation	Calibrated water volume	≤ ±10% of input
Evaporation	Measured water level	≤ ±10% of input

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6" diameter by 9" high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of

discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change.

An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.1.1 Precipitation

The Met-One tipping precipitation gauge is audited by slowly adding precisely measured volumes of water to the gauge using a dripping Nova Lynx Model 260-2595 Rain Gauge Calibrator. The predicted millimeters of precipitation corresponding to the measured volume added are calculated using the diameter of the gauge opening. The tare reading from the DAS is initially recorded and subsequent DAS readings are recorded after each test run.

The ETI weighing gauge is also audited using the calibrated bottle from the Nova Lynx Model 260-2595 Rain Gauge Calibrator, except the measured water volume is poured directly into the gauge opening. The DAS reading is recorded at the beginning of the test and after every 1/2" to 1" pour thereafter, up to the limit of the gauge. With both gauges, the percent difference between the predicted audit value and the DAS value is compared to the PSD limit of ±10%.

3.1.2 Evaporation

The evaporation gauge is first checked to confirm that the pan and gauge are level. The accuracy is checked by first removing or adding enough water to bring the initial level to approximately 50 mm or 240 mm, the minimum and maximum for this gauge. An accurate millimeter scale is taped to the inside of the evaporation pan and the water level on the scale is compared to the DAS output. Water is added to or removed from the pan to change the level by 10-20mm and another set of readings are taken. This process is repeated until the level in the pan reaches the upper or lower limit of the gauge. The resultant suite of DAS and scaled water level readings are then input into a custom spreadsheet which calculates a linear regression for the data. The evaporation gauge reads change in water level due to evaporation and rainfall, so the calculated intercept must be removed from measured water levels. The adjusted level is compared to the DAS output with a maximum allowable error of ±10% of input and the slope of resultant line has a limit of 1.0±0.1.

3.2 Performance Audit Results

The performance audit was conducted at the Port 1 station on September 10, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. Summary audit results are contained in Table 3-2, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Iniskin Bay Port 1 September 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:05	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.15	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.15	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System (In Situ)				
Wind Speed Torque	≤ 0.35	gm-cm	0.3	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	7.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	2.9	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Climatronics Wind System (Replacement Sensor)				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	3.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.8	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	4.4	Pass
RM Young Wind System (In Situ)				
Wind Speed Torque	≤ 1.0	gm-cm	0.8	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	9.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.1	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.8	Pass
Wind Direction Linearity	≤ 3	Degree	1.5	Pass

Table 3-2 (Cont.) Iniskin Bay Port 1 Sept 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
RM Young Wind System (In Situ)				
Wind Speed Torque	≤ 1.0	gm-cm	0.4	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	4.0	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.4	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	4.5	Pass
Barometric Pressure	≤ ±3	Mbar	1.1	Pass
Solar Radiation	≤ ±5+Res	% input	6.0	Pass[1]
Weighing Precipitation	≤ ±10	% input	4.2	Pass
Evaporation	≤ ±10	% input	4.2	Pass

1. Maximum error within limit of 5% of input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 7
3.3.4 Wind Speed and Wind Direction Sensors 7
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
3.3.1 Precipitation Gauge 7
3.3.2 Evaporation Gauge 8
4.0 STANDARD OPERATING PROCEDURES 8
4.1 General 8
4.2 DAS and Meteorological Sensors 8
5.0 DOCUMENTATION 9
5.1 System Reference and Maintenance Manuals 9
5.2 Station Monitoring Plan and Report Forms 9
6.0 DATA PROCESSING AND VALIDATAION 10
6.1 Overall Data Management 10
6.2 Data Collection and Initial Data Review 10
6.3 Corrective Actions 11
6.4 Data Validation 11
6.5 Data Capture 12
6.6 Data Reporting 12
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 12
7.1 Quality Assurance Program 12
7.2 Quality Assurance Methods and Audits 12
8.0 COMMENTS AND SUGGESTIONS 13

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Port 1 station is located on a small point on the west shore of Iniskin Bay. The 50' high point is approximately 75' wide and 150' long and is vegetated with Alders, low shrubs and small Spruce trees. East of the station are the waters of Iniskin Bay and to the west the topography rises steeply to almost 3,000'.

1.2 Site Location

1.2.1 Coordinates

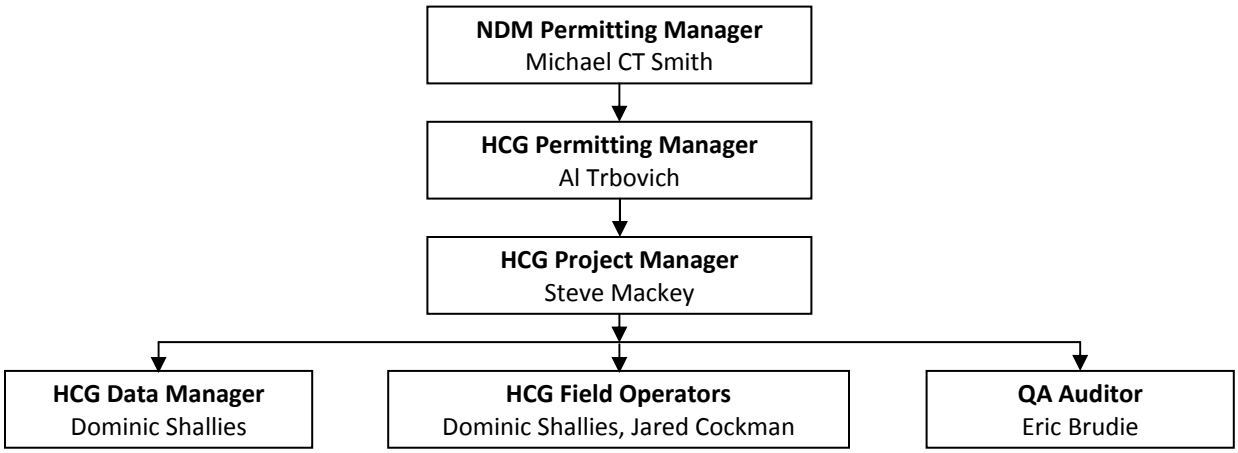
Indicated by Operator	Determined by Auditor
59° 39' N	59° 38.959' N
153° 28' W	153° 28.314' W
Elevation: 40 feet	Elevation: 50 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: 6' fence surrounds station.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR1000	11726
DAS Wiring Panel	Campbell Scientific	CR1000	11395
Temperature (2-meter)	Met One	062MP	G9579, ID #1/2
Temperature (10-meter)	Met One	062MP	G9579, ID #2/2
Relative Humidity	Vaisala	HMP45AC	C0540091
Temperature Aspirators	Met One	076B-4	E3489 & E3490
Old Primary Wind Speed	Climatronics	F460-100075	5008
New Primary Wind Speed	Climatronics	F460-100075	4410
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2285
Old Primary Wind Direction	Climatronics	F460-100076	4691
New Primary Wind Direction	Climatronics	F460-100076	4745
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1433
Wind Sigma	Campbell Scientific	DAS Calculated	N/A
Old Backup Wind Spd/Dir	RM Young	05305 Wind Mon-AQ	76266
New Backup Wind Spd/Dir	RM Young	05305 Wind Mon-AQ	71368
Backup Wind Spd Prop	RM Young	08254	63037
Barometric Pressure	Vaisala	PTB101B	A1950006
Solar Radiation	LI-COR	Li-200SX	PY56452
Precipitation-Weighing	ETI	8205-00710 Noah II	422
Precip Weighing Wind Screen	ETI	Alter type	N/A
Evaporation Gauge	NovaLynx	255-100	695
Evaporation Pan	NovaLynx	255-200	None

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on telephone grid.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 50-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by three 50-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Weighing Precipitation – ETI Mdl. 8205-00710 Noah II			
Accuracy:	±0.01 in (0.254mm)	±10% observed or ±0.5 mm	Yes
Range:	0-152 mm/hr (0-6 in/hr)	0-50 mm/hr (0-2 in/hr)	Yes
*Resolution:	0.01in (0.254mm)	0.3 mm	Yes
Operating Temperatures:	-30°C to +50°C	Not Specified	N/A
Evaporation – NovaLynx Mdl. 255-100/200			
Accuracy:	±0.25% over 10" range	Not Specified	N/A
Range:	2" to 10"	Not Specified	N/A
*Resolution:	0.1 mm	Not Specified	N/A
Operating Temperatures:	0°C to +60°C	Not Specified	N/A
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base? ■ Yes □ No Comments: None.

Is the height of the tower at least 10 meters above the ground? ■ Yes □ No Comments: None.

Is the tower stable and plumb? ■ Yes □ No Comments: None.

Is the tower protected from lightning? □ Yes ■ No Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter? ■ Yes □ No Comments: None.

Are the temperature difference probes at heights of 2-m and 10-m above the ground? ■ Yes □ No Comments: None.

Are the sensors at a distance greater than four times the height of any obstruction? ■ Yes □ No Comments: None.

Is the ground beneath the temperature sensors natural native material? ■ Yes □ No Comments: None.

Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)? ■ Yes □ No Comments: None.

Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)? ■ Yes □ No Comments: None.

Are the sensors located at least 30 meters from large paved areas? ■ Yes □ No Comments: None.

Pebble Port 1 PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.
Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

3.3.1 Precipitation Gauge

Are all obstructions to the wind farther away from the gauge than the obstruction height?	■ Yes □ No	Comments: None.
If located in an open and windy area, is a windshield being used?	■ Yes □ No	Comments: Wyoming Wind screen surrounds ETI gauge and Alter type around Met-One.
Is the area surrounding the rain gauge covered by natural vegetation or gravel?	■ Yes □ No	Comments: None.
Is the instrument mounted at least 30 cm above the ground?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Is the instrument mounted level?	■ Yes □ No	Comments: None.

3.3.2 Evaporation Gauge

Is the evaporation pan above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Are the pan and gauge mounted on a stable and level platform?	■ Yes □ No	Comments: Mounted on a 6' x 8' deck supported on adjustable pier blocks.
Is the evaporation pan protected from animals?	■ Yes □ No	Comments: Six-foot fence surrounds evaporation pan and gauge.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.
Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

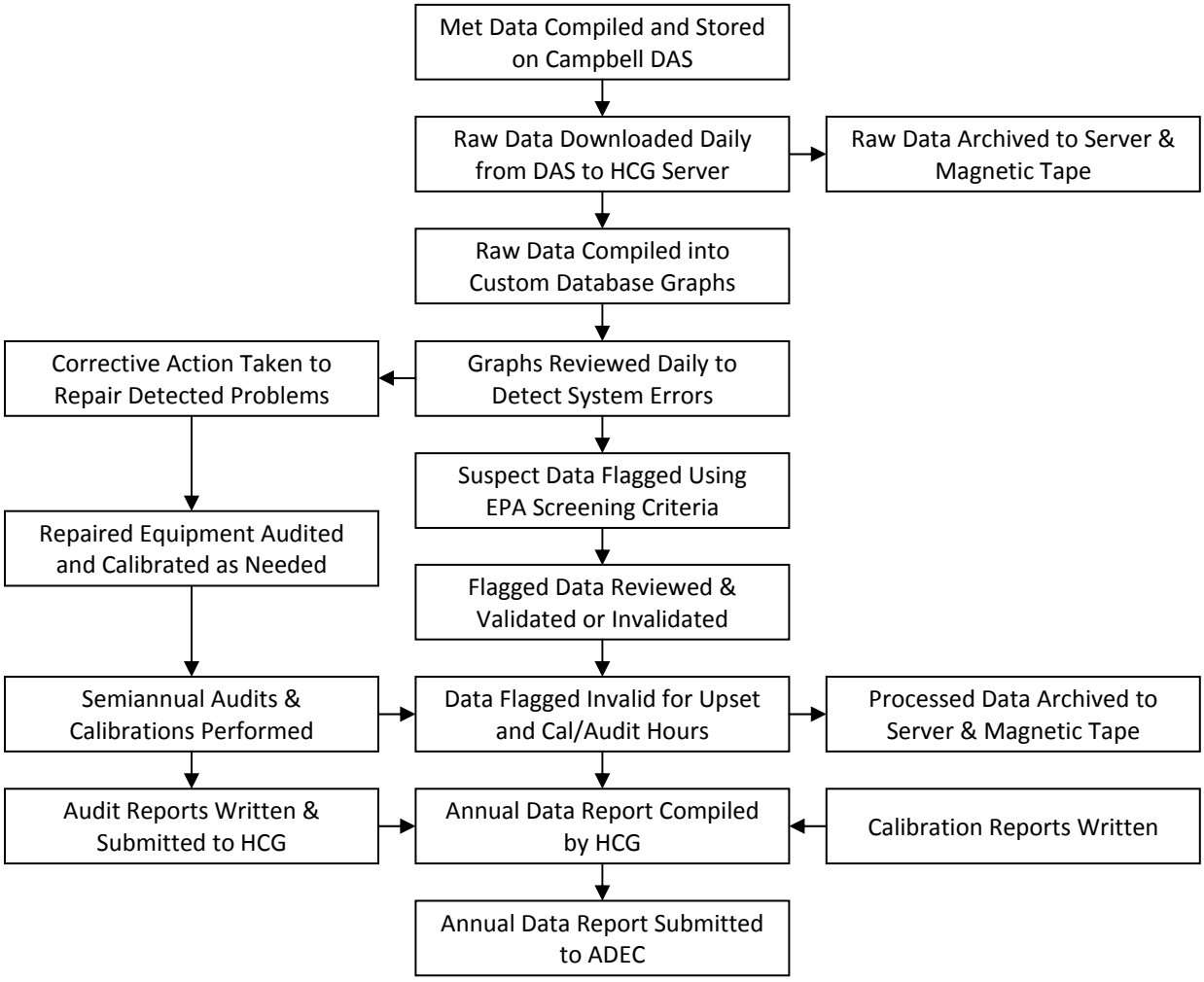
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits & cals?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 10, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing?	■ Yes □ No	Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use?	■ Yes □ No	Comments: None.
Are adjusted and unadjusted data sets maintained?	■ Yes □ No	Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
13:45:00	13:45:05	**0:00:05**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.1 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G9579 # 1/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G9579 # 2/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1446
End: 1517

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	38.51	38.66	0.15	Pass	38.66	0.15	Pass	0.00	Pass
Warm	15 to 25	21.03	21.04	0.01	Pass	21.04	0.01	Pass	0.00	Pass
Ice Bath	0	0.12	0.20	0.08	Pass	0.20	0.08	Pass	0.00	Pass
Cold	-15 to -25	-20.15	-20.14	0.01	Pass	-20.14	0.01	Pass	0.00	Pass
Very Cold	-35 to -45	-35.75	-35.67	0.08	Pass	-35.67	0.08	Pass	0.00	Pass
		Max Abs. Error		0.15	**PASS**		0.15	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.1 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45ASP	**S.N.#:**	C0540091	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1428	87.9	12.1	10.2	88.6	11.8	10.0	-0.2	Pass
1432	87.8	11.9	9.9	89.5	11.7	10.0	0.1	Pass
1552	84.5	12.1	9.7	85.7	12.0	9.7	0.0	Pass
						Max Abs. Error	0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008
In-Situ

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (In Situ)*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4691	**Vane #:**	1433	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.8	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1617 End: 1619

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	266.1	2.9	Pass
North Iniskin Isl	314.4	317.2	2.8	Pass
East Flank Augustine	347.1	348.2	1.1	Pass
Compass	106.5	106.6	0.1	Pass
Compass	183.0	184.9	1.9	Pass
Time: Begin: 1355	**Max Abs. Error**		**2.9**	**PASS**
End: 1410	**Mean Abs. Error**		**1.8**	**GOOD**

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	178.6	-1.4	Pass
West	270.0	269.4	-0.6	Pass
North	360.0	357.9	-2.1	Pass
East	90.0	91.3	1.3	Pass
North	360.0	357.9	-2.1	Pass
West	270.0	272.8	2.8	Pass
South	180.0	179.9	-0.1	Pass
East	90.0	91.1	1.1	Pass
	Max Abs. Error	**2.8**	**PASS**	
	Mean Abs. Error	**1.4**	**PASS**	

Time: Begin: 1553 End: 1555

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.1	-1.9	Pass	330.0	331.3	1.3	Pass
60.0	59.2	-0.8	Pass	355.0	357.6	2.6	Pass
90.0	90.5	0.5	Pass	30.0	28.4	-1.6	Pass
120.0	119.8	-0.2	Pass	60.0	59.3	-0.7	Pass
150.0	149.0	-1.0	Pass	90.0	90.3	0.3	Pass
180.0	179.8	-0.2	Pass	120.0	119.7	-0.3	Pass
210.0	209.7	-0.3	Pass	150.0	149.1	-0.9	Pass
240.0	240.1	0.1	Pass	180.0	179.7	-0.3	Pass
270.0	269.4	-0.6	Pass	**Max Abs. Error**		**2.6**	**PASS**
300.0	301.2	1.2	Pass	**Mean Abs. Error**		**0.8**	**PASS**

Time: Begin: 1601 End: 1603

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	0.3	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	7.0	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument replaced,				
no post-audit.				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Sensors replaced for routine maintenance.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (Replacement Sensors)*

Height: 11.1 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	4410	**Cup #:**	2285	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4745	**Vane #:**	1433	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.8	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1627 End: 1629

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New instrument,				
no in-situ audit.				
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: N/A End: N/A

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	179.2	-0.8	Pass
West	270.0	270.0	0.0	Pass
North	360.0	0.1	0.1	Pass
East	90.0	89.5	-0.5	Pass
North	360.0	0.2	0.2	Pass
West	270.0	270.3	0.3	Pass
South	180.0	178.8	-1.2	Pass
East	90.0	89.0	-1.0	Pass
	Max Abs. Error		**1.2**	**PASS**
	Mean Abs. Error		**0.5**	**PASS**

Time: Begin: 1636 End: 1639

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.7	-1.3	Pass	330.0	331.2	1.2	Pass
60.0	58.6	-1.4	Pass	355.0	356.8	1.8	Pass
90.0	88.8	-1.2	Pass	30.0	29.0	-1.0	Pass
120.0	120.4	0.4	Pass	60.0	58.6	-1.4	Pass
150.0	149.8	-0.2	Pass	90.0	89.0	-1.0	Pass
180.0	179.0	-1.0	Pass	120.0	121.0	1.0	Pass
210.0	209.9	-0.1	Pass	150.0	150.4	0.4	Pass
240.0	239.8	-0.2	Pass	180.0	179.6	-0.4	Pass
270.0	270.2	0.2	Pass	**Max Abs. Error**		**1.8**	**PASS**
300.0	300.6	0.6	Pass	**Mean Abs. Error**		**0.8**	**PASS**

Time: Begin: 1622 End: 1626

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	N/A	**N/A**
New	0.35	0.0049	<0.2	**PASS**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	N/A	**N/A**
New	7.5	0.104	3.5	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	106.5	107.9	1.4	Pass
Pomeroy Repeater	263.2	265.8	2.6	Pass
North Iniskin Isl	314.4	317.8	3.4	Pass
East Flank Augustine	347.1	348.8	1.7	Pass
Compass	203.5	207.9	4.4	Pass
	Max Abs. Error		**4.4**	**PASS**
	Mean Abs. Error		**2.7**	**GOOD**

Time: Begin: 1700 End: 1715

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: New sensors.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ (In Situ)*

Height: 10.2 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	76266	**Prop #:**	63037	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	17.8	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1435 End: 1450

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Pomeroy Repeater	263.2	264.1	0.9	Pass
North Iniskin Isl	314.4	314.9	0.5	Pass
East Flank Augustine	347.1	347.3	0.2	Pass
Compass	106.5	105.4	-1.1	Pass
Compass	183.0	182.5	-0.5	Pass

Time: Begin: 1355 End: 1410 **Max Abs. Error** **1.1** **PASS** **Mean Abs. Error** **0.6** **GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.2	0.2	Pass	150.0	150.0	0.0	Pass	270.0	267.3	-2.7	Pass
60.0	60.6	0.6	Pass	180.0	178.2	-1.8	Pass	300.0	297.6	-2.4	Pass
90.0	90.0	0.0	Pass	210.0	207.4	-2.6	Pass	330.0	327.4	-2.6	Pass
120.0	120.3	0.3	Pass	240.0	237.2	-2.8	Pass	355.0	352.5	-2.5	Pass

Time: Begin: 1420 End: 1425 **Max Abs. Error** **2.8** **PASS** **Mean Abs. Error** **1.5** **PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	0.8	**PASS**
New	1.0	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	9.0	**PASS**
New	11.0	0.153	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Instrument replaced,				
no post-audit.				

Time: Begin: N/A End: N/A **Max Abs. Error** **Mean Abs. Error**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Sensor replaced for routine maintenance.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ (Replacement Sensor)*

Height: 10.2 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 71368	**Prop #:** 63037	**Range:** 0-360 **Deg**				
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Honeywell 366-3m	**S.N.#:** 5103				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 17.8 **E of N**					

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1540 End: 1542

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
New instrument,				
no in-situ audit.				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.1	0.1	Pass	150.0	149.7	-0.3	Pass	270.0	268.4	-1.6	Pass
60.0	59.6	-0.4	Pass	180.0	179.3	-0.7	Pass	300.0	297.6	-2.4	Pass
90.0	90.0	0.0	Pass	210.0	209.3	-0.7	Pass	330.0	328.2	-1.8	Pass
120.0	120.3	0.3	Pass	240.0	239.1	-0.9	Pass	355.0	354.1	-0.9	Pass
				Time: Begin:	1536	**Max Abs. Error**		**2.4**	**PASS**		
				End:	1539	**Mean Abs. Error**		**0.8**	**PASS**		

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	N/A	**N/A**
New	1.0	0.014	0.4	**PASS**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	N/A	**N/A**
New	11.0	0.153	4.0	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Compass	106.5	111.0	4.5	Pass
Pomeroy Repeater	263.2	263.2	0.0	Pass
North Iniskin Isl	314.4	316.9	2.5	Pass
East Flank Augustine	347.1	348.6	1.5	Pass
Compass	203.5	206.8	3.3	Pass
Time: Begin: 1700	**Max Abs. Error**		**4.5**	**PASS**
End: 1715	**Mean Abs. Error**		**2.4**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: New sensor.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** A1950006 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST							
Date	Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
10/16/08	930	29.63	29.57	1001.19	1002.33	1.1	Pass
				Max Abs. Error		1.1	PASS

Audit Inst Cal Data	
Cal. Date: 07/28/08	
Audit Inst	Offset Amount
24.09	-0.09
26.06	-0.07
28.08	-0.08
30.06	-0.06
Intercept	**-0.18**
Slope	**0.0040**

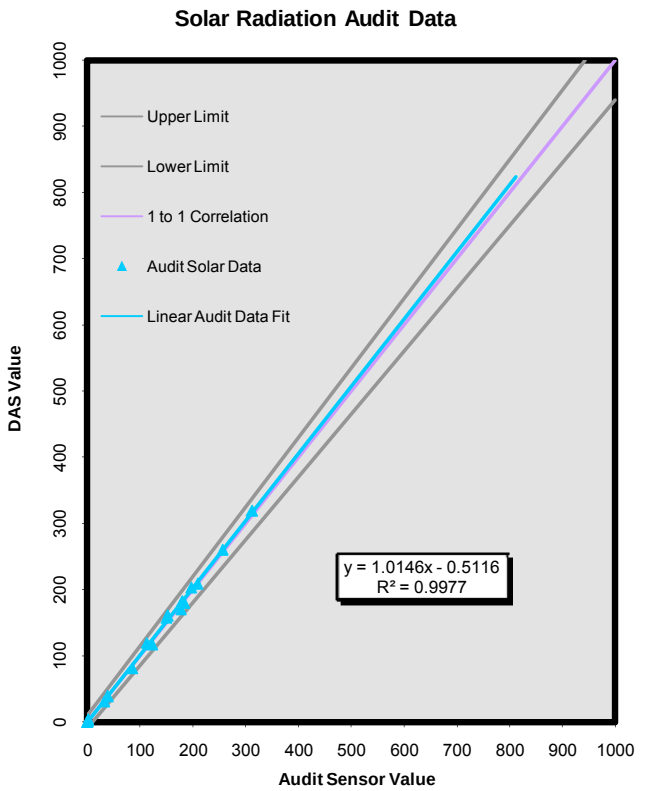
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: New audit instrument broken during September audit, audited with calibrated standard during October trip.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56452 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1338	209.6	209.1	-0.5	±20.5	-0.2%	Pass
1349	312.1	319.8	7.7	±25.6	2.5%	Pass
1351	256.8	260.6	3.8	±22.8	1.5%	Pass
1430	179.9	182.7	2.8	±19.0	1.6%	Pass
1523	197.1	203.6	6.5	±19.9	3.3%	Pass
1533	152.7	161.1	8.4	±17.6	5.5%	Pass
1553	150.1	157.6	7.5	±17.5	5.0%	Pass
1632	113.0	119.8	6.8	±15.7	6.0%	Pass
1500	184.2	180.3	-3.9	±19.2	-2.1%	Pass
1600	177.9	170.4	-7.5	±18.9	-4.2%	Pass
1700	122.9	117.3	-5.6	±16.1	-4.6%	Pass
1800	85.6	81.1	-4.5	±14.3	-5.3%	Pass
1900	38.8	39.1	0.3	±11.9	n/a	Pass
2000	2.3	3.9	1.6	±10.1	n/a	Pass
2100	0.0	0.0	0.0	±10.0	n/a	Pass
600	0.0	0.0	0.0	±10.0	n/a	Pass
700	1.8	2.3	0.5	±10.1	n/a	Pass
800	32.1	31.3	-0.8	±11.6	n/a	Pass
Corr. Val	**0.9989**	**Max Abs. Percent Error**			**6.0%**	**PASS**
R² Value	**0.9977**	**Intercept**	**-0.5**	**Slope**	**1.0146**	**PASS**



Begin: 09/10/08 (Date) 1330 (Time) **End:** 09/11/08 (Date) 805 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Iniskin Port 1
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 10, 2008

• *WEIGHING PRECIPITATION GAUGE AUDIT*

Height: 2.5 **Meters**

Precipitation Gauge: **Make:** ETI **Model:** 8205-00710 Noah II **S.N.#:** 422 **Range:** 6 **Inches per Hour**
Audit Equipment: **Make:** Nova Lynx Corp. **Model:** 260-2595 **S.N.#:** 936 **Range:** 2 **Inches per Hour**
Diameter: 12.00 **Inches** **Volume Rate** 72.97 **ml/mm**

WEIGHING PRECIPITATION GAUGE VOLUME TEST

Reading Time	Approx in	Input Vol ml	Input mm	Begin mm	End mm	Delta mm	Error % Input	Pass/ Fail?	Notes
1535		1600	21.9	0.00	21.34	21.34	-2.7%	Pass	
1546		1600	21.9	21.34	43.94	22.60	3.1%	Pass	
1556		1600	21.9	43.94	66.80	22.86	4.2%	Pass	
1606		1600	21.9	66.80	88.91	22.11	0.8%	Pass	7.11 mm at 1600 hour.
1612	8 1/2	1600	21.9	7.11	29.46	22.35	1.9%	Pass	
1626		1600	21.9	29.46	52.32	22.86	4.2%	Pass	
1633	10 1/8	1600	21.9	52.32	74.68	22.36	2.0%	Pass	
1640		1600	21.9	74.68	97.28	22.60	3.1%	Pass	
1648		1600	21.9	97.28	119.89	22.61	3.1%	Pass	
					Max Abs. Error		**4.2%**	**PASS**	

PSD Limits: Max Absolute Error > 10 % of Input.
Comments: Tested on 7/12/08 during initial installation.

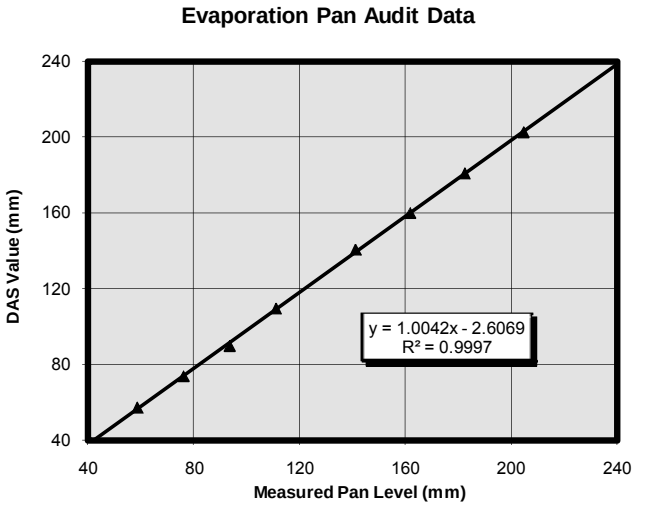
• *EVAPORATION GAUGE AUDIT*

Height: 0.6 **Meters**

Evaporation Gauge: **Make:** NovaLynx **Model:** 255-100 **S.N.#:** 695 **Range:** 40-254 **mm**
Evaporation Pan: **Make:** NovaLynx **Model:** 255-200 **S.N.#:** None **Range:** 0-254 **mm**

EVAPORATION PAN STAGE HEIGHT TEST

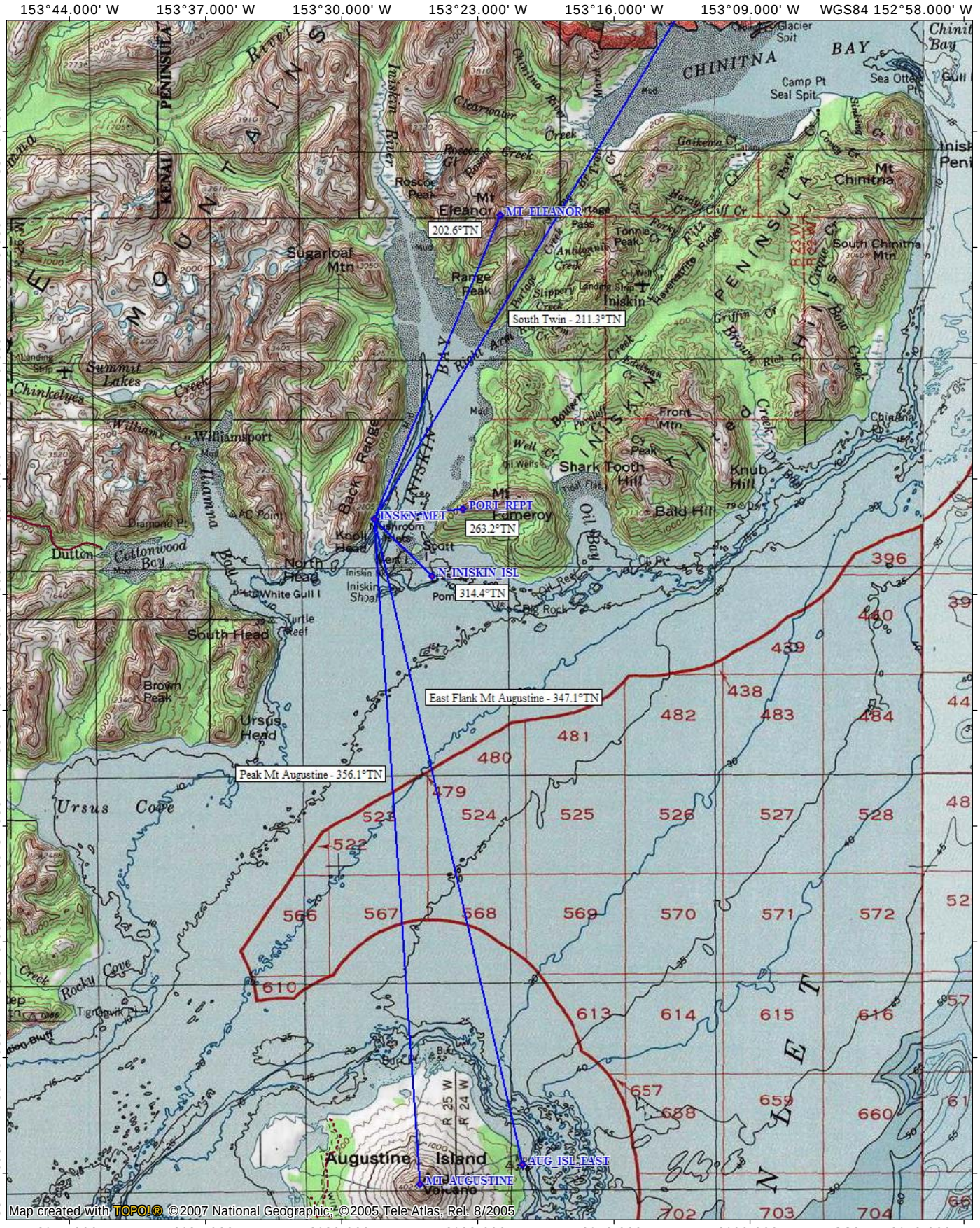
Pan inch	Pan mm	DAS mm	Pan Level + Intcpt	Error mm	Error % Input	Pass/ Fail?
8 1/16	204.8	202.6	204.8	-2.2	-1.1%	Pass
7 3/16	182.6	180.8	182.6	-1.8	-1.0%	Pass
6 3/8	161.9	160.0	161.9	-1.9	-1.2%	Pass
5 9/16	141.3	140.5	141.3	-0.8	-0.6%	Pass
4 3/8	111.1	109.4	111.1	-1.7	-1.6%	Pass
3 11/16	93.7	89.7	93.7	-4.0	-4.2%	Pass
3	76.2	73.7	76.2	-2.5	-3.3%	Pass
2 5/16	58.7	57.1	58.7	-1.6	-2.8%	Pass
		Max Abs. Error		**4.0**	**4.2%**	**PASS**
		Intercept	**-2.6**	**Slope**	**1.0042**	**PASS**



Date: 10/16/08 **Time:** Begin: 935 End: 1030

PSD Limits: Max Absolute Error > 10 % of Input adjusted for slope/intercept.
Comments: Pan audited and then winterized.

TOPO! map printed on 04/18/08 from "Pebble_Port_(08-04-16).tpo"



NATIONAL GEOGRAPHIC

0 2 4 6 8 miles
0 2 4 6 8 10 12 km

TN MN
18°
04/18/08

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Calibration complies with ISO 9001 ISO/IEC 17025 AND ANSI/NCSL Z540-1

ACCREDITED

Calibration Certificate No. 1750.01

Cert. No.: 4000-1974024

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Justin Mangold, Anchorage, AK 99503 U.S.A. (RMA:944729)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath TC191	A79341		
Thermistor Module	A27129	8/22/09	1000248949
Temperature Probe	3039	10/26/08	A7710039-4
Temperature Probe	149	3/06/09	A82225037-3
Thermistor Module	A17118	10/30/08	A7831032
Temperature Calibration Bath TC218	A73332		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 9/08/08 **Cal Due: 9/08/09**

Test Conditions: 24.5°C 45.0 %RH 1017 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.001	0.087	N	0.001	0.000	Y	-0.049	0.051	0.013	3.8:1
°C	25.001	25.076	N	25.001	25.000	Y	24.951	25.051	0.013	3.8:1
°C	60.001	60.127	N	60.001	59.999	Y	59.951	60.051	0.018	2.8:1
°C	100.001	100.333	N	100.001	100.001	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Date=MM/DD/YY

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2000 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company

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VAISALA

Certificate of Calibration

Report #: 090408-X0740015-RH **RMA #:** 95-70314 **Calibration Date:** Sep-04-2008
Model #: HMI41/HMP45 **Serial #:** X0650080/X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%, RH Recommended Calibration Due Date: Sep-04-2009
Instrument Range: -20 to +60 °C, T

Customer: HOEFLER CONSULTING GROUP, INC.
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0% against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
22.11	22.30	0.19	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.12	11.30	0.18	2.00	0.92
33.04	32.30	-0.74	2.00	1.01
74.33	72.60	-1.73	2.00	1.02
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.97	21.90	-0.07	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.21	11.50	0.29	2.00	0.92
32.80	33.00	0.20	2.00	1.01
74.89	74.90	0.01	2.00	1.02

Problem Noted: None
Action Taken: The Unit Was Calibrated

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number TN 276340-08. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 6B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900343	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7519018	Dec. 19, 2007	Jun. 19, 2009
HMK13B	P3940001	May. 16, 2008	Nov. 16, 2008
HMP233	V4210039	Jul. 17, 2008	Oct. 17, 2008
HMT333	B0920007	Jun. 17, 2008	Sep. 17, 2008
HMI41/HMP45	S0720005	May. 21, 2008	Nov. 21, 2008

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.50 %RH

Approved By

Technical Operator
Roun Roeun

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18811** (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA 02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft 27106D produces 10 pulses per revolution of the anemometer shaft

(2) Indicated on the Control Unit LCD display

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 7/31/08
Inspection Interval One Year

Tested By RP

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA 01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 10/23/08
Inspection Interval One Year

Tested By RP

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esztr Gozon

Esztar Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Job 128274

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP.

P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esther Gozon

Esther Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner: HOEFLER Consulting Group
Name: _____

Address: 341 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER: _____

MODEL NUMBER: 5008

SERIAL NUMBER: 508099319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072808. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/28/08 Lab temperature 72.9 °F
Lab pressure 660.0 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.09	0.09	-0.09
25.99	26.06	0.07	-0.07
28.00	28.08	0.08	-0.08
30.00	30.06	0.06	-0.06

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ NO ☒

Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R L S Date: 7/28/08

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: R. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Appendix D

Validated Continuous Data Summaries

CONTENTS

Pebble Port Station 2008 Hourly Data:

1. Temperature at 2 meters (deg. C)

2. Temperature at 10 meters (deg. C)

3. Temperature Difference 2 meter to 10 meter (deg. C)

4. Relative Humidity (%)

5. Solar (Watts/m^2)

6. Barometric Pressure (mbar)

7. Wind Speed – Climatronic (m/s)

8. Wind Direction – Climatronic (degrees)

9. Wind Sigma – Climatronic (σ_θ)

10. Wind Speed – RM Young (m/s)

11. Wind Direction – RM Young (degrees)

12. Wind Sigma – RM Young (σ_θ)

13. Daily Total Precipitation (mm)

14. Daily Total Evaporation (mm)

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.3	2.8	3.4	3.4	3.6	2.9	4.0	3.9	4.1	3.9	2.7	2.3	0.6	0.8	1.0	0.1	-0.9	-1.5	-2.0	-2.4	-2.8	-3.2	-3.2	-3.3	4.1	-3.3	0.9
2	-3.5	-3.7	-3.8	-3.9	-4.3	-4.3	-4.3	-4.6	-4.8	-5.0	-5.0	-5.2	-5.6	-5.5	-5.2	-6.0	-6.1	-7.0	-7.3	-7.8	-7.7	-7.3	-7.2	-7.2	-3.5	-7.8	-5.5
3	-7.1	-7.1	-6.9	-6.7	-7.1	-7.0	-6.5	-6.3	-6.3	-6.3	-6.3	-6.2	-6.4	-6.4	-6.7	-7.0	-7.1	-7.2	-7.3	-7.4	-7.5	-7.9	-8.0	-8.5	-6.2	-8.5	-7.0
4	-8.5	-8.7	-8.7	-8.9	-8.9	-9.1	-9.1	-9.2	-9.3	-9.3	-9.4	-9.6	-9.5	-9.3	-9.3	-9.3	-9.5	-9.7	-9.9	-9.9	-10.1	-10.1	-10.1	-10.1	-8.5	-10.1	-9.4
5	-10.2	-10.4	-10.5	-10.6	-10.7	-10.9	-11.1	-11.7	-12.3	-12.6	-13.2	-13.5	-13.6	-13.5	-13.5	-13.4	-13.7	-13.5	-13.7	-13.4	-13.4	-13.6	-13.7	-14.1	-10.2	-14.1	-12.5
6	-14.4	-14.2	-14.1	-14.1	-14.6	-14.7	-14.9	-15.0	-15.3	-15.4	-15.7	-15.7	-15.9	-15.8	-15.3	-15.3	-15.1	-15.0	-14.9	-14.9	-15.1	-15.4	-15.5	-15.6	-14.1	-15.9	-15.1
7	-15.7	-15.5	-15.2	-15.2	-15.1	-15.3	-15.4	-15.3	-14.8	-15.0	-14.8	-14.4	-14.2	-13.7	-13.8	-13.7	-14.0	-14.0	-14.0	-13.8	-14.0	-14.1	-14.7	-14.2	-13.7	-15.7	-14.6
8	-14.3	-13.9	-13.3	-13.3	-13.0	-13.2	-12.7	-12.8	-12.6	-12.5	-13.2	-13.0	-12.8	-11.7	-11.6	-11.1	-11.4	-11.8	-12.1	-12.0	-12.4	-12.8	-13.8	-13.4	-11.1	-14.3	-12.7
9	-13.1	-12.9	-13.3	-13.3	-12.8	-13.5	-13.7	-13.2	-13.8	-14.0	-14.3	-15.0	-14.1	-13.3	-13.2	-13.9	-13.3	-13.4	-14.0	-14.6	-15.0	-15.3	-15.2	-15.5	-12.8	-15.5	-13.9
10	-15.7	-15.8	-15.5	-15.4	-14.8	-14.7	-14.7	-15.1	-15.4	-15.8	-16.0	-15.8	-15.1	-15.3	-15.4	-15.4	-15.9	-16.2	-16.1	-16.7	-16.8	-16.2	-16.1	-16.1	-14.7	-16.8	-15.7
11	-16.1	-16.6	-16.9	-16.8	-16.3	-16.4	-16.2	-15.9	-15.8	-15.9	-16.0	-16.0	-16.1	-16.0	-15.7	-15.6	-15.4	-15.8	-16.1	-16.3	-16.2	-16.6	-16.3	-16.7	-15.4	-16.9	-16.2
12	-17.0	-17.3	-17.4	-17.0	-16.9	-17.1	-17.6	-17.9	-17.6	-17.6	-18.4	-18.5	-19.0	-18.5	-18.4	-18.0	-18.1	-17.9	-18.4	-18.2	-17.3	-17.7	-18.6	-18.6	-16.9	-19.0	-17.9
13	-18.6	-18.9	-18.5	-18.5	-18.1	-18.3	-18.1	-18.3	-18.7	-18.3	-18.2	-18.7	-18.3	-17.7	-18.0	-18.1	-18.7	-18.4	-18.0	-17.6	-16.7	-16.9	-17.6	-18.0	-16.7	-18.9	-18.1
14	-17.8	-17.5	-18.0	-17.6	-17.2	-16.5	-15.1	-13.3	-11.5	-11.1	-10.8	-10.3	-10.0	-9.3	-9.1	-9.2	-9.2	-9.1	-8.9	-8.6	-8.3	-7.6	-5.0	-4.5	-4.5	-18.0	-11.5
15	-4.3	-3.7	-3.9	-3.7	-3.3	-2.8	-3.2	-2.7	-3.4	-3.5	-3.0	-3.4	-3.6	-3.4	-3.4	-3.1	-2.9	-3.0	-3.2	-3.3	-3.1	-2.8	-2.6	-2.6	-2.6	-4.3	-3.2
16	-2.4	-2.3	-2.5	-2.1	-1.9	-1.1	-1.5	-1.5	-0.1	1.6	1.4	1.6	2.0	2.2	2.1	2.0	1.9	1.5	0.9	-0.6	-1.5	-2.1	-1.8	-3.2	2.2	-3.2	-0.3
17	-2.5	-2.2	-2.4	-0.6	-0.2	-1.4	-1.9	0.9	1.6	1.3	0.8	0.2	-1.1	-1.2	-1.0	-0.3	0.1	1.0	1.1	0.7	1.1	1.1	0.7	0.7	1.6	-2.5	-0.1
18	0.4	0.4	0.2	0.1	-0.1	-0.2	-0.3	-0.6	-0.8	-0.7	-0.6	-0.7	-0.4	-0.2	0.0	-0.3	-0.8	-0.6	-0.7	-1.1	-1.5	-1.3	-1.3	-1.3	0.4	-1.5	-0.5
19	-1.2	-1.5	-1.3	-0.5	-0.4	0.1	0.5	0.9	1.3	1.2	1.6	2.7	2.6	3.5	3.1	4.0	4.2	4.9	4.5	3.9	2.5	2.0	1.9	2.1	4.9	-1.5	1.8
20	2.1	2.1	1.8	1.7	2.6	3.3	3.0	3.5	3.6	3.9	4.3	4.0	4.2	3.2	4.0	2.9	3.2	1.3	0.7	0.6	0.4	0.9	1.0	1.7	4.3	0.4	2.5
21	1.5	1.0	2.1	1.7	1.1	1.6	1.4	1.5	2.7	2.1	3.0	3.5	3.6	4.2	4.3	3.9	4.0	3.8	3.3	3.7	4.4	4.0	3.2	3.2	4.4	1.0	2.9
22	3.5	3.3	3.5	3.2	3.6	2.8	2.6	2.2	2.1	2.7	2.8	0.9	0.6	1.1	2.0	1.0	-0.3	-0.7	-0.6	-0.7	-0.5	-1.1	-0.9	-0.4	3.6	-1.1	1.4
23	-0.5	-0.8	-1.1	-1.4	-1.8	-2.2	-2.8	-4.1	-5.1	-6.1	-7.0	-7.4	-7.3	-7.9	-8.5	-9.5	-9.3	-9.5	-9.1	-8.7	-8.3	-9.2	-10.2	-10.3	-0.5	-10.3	-6.2
24	-11.0	-11.2	-10.8	-10.7	-10.4	-10.0	-9.3	-7.4	-7.4	-7.1	-6.8	-6.5	-6.2	-5.9	-6.3	-6.4	-6.5	-6.5	-6.2	-6.2	-6.5	-6.7	-6.9	-6.8	-5.9	-11.2	-7.7
25	-6.9	-6.9	-6.9	-6.3	-5.2	-4.9	-5.2	-4.3	-2.6	-2.1	-1.9	-1.4	-1.0	-0.8	-0.1	-0.3	-0.5	-0.5	-0.7	-0.5	-0.6	-1.3	-2.1	-3.3	-0.1	-6.9	-2.8
26	-3.3	-3.5	-3.8	-4.9	-4.7	-6.5	-7.7	-8.0	-8.4	-8.8	-8.7	-8.6	-8.2	-8.2	-7.8	-7.7	-7.7	-8.7	-8.9	-9.0	-8.9	-8.7	-9.0	-8.7	-3.3	-9.0	-7.4
27	-8.1	-8.2	-7.2	-5.5	-6.1	-5.9	-5.8	-5.7	-4.9	-3.7	-3.6	-3.9	-4.2	-4.8	-5.1	-5.2	-4.8	-4.6	-4.1	-4.1	-4.2	-3.8	-4.0	-4.0	-3.6	-8.2	-5.1
28	-4.0	-3.9	-4.3	-4.4	-4.2	-4.2	-4.2	-4.2	-4.1	-4.0	-4.0	-3.5	-3.3	-3.3	-3.2	-3.1	-3.1	-3.0	-3.0	-2.7	-2.5	-3.1	-2.0	-0.4	-0.4	-4.4	-3.4
29	-0.3	-0.1	0.0	-0.1	-0.2	-0.7	-1.0	-1.1	-1.0	-0.9	-1.2	-1.1	-0.8	-1.1	-1.9	-2.3	-3.0	-3.8	-4.4	-4.9	-5.0	-5.3	-5.8	-6.3	0.0	-6.3	-2.2
30	-6.7	-6.9	-6.9	-7.8	-8.3	-8.5	-8.2	-9.0	-9.2	-9.6	-9.5	-8.8	-7.7	-7.3	-7.2	-7.1	-7.2	-7.2	-7.7	-7.7	-7.1	-7.2	-7.5	-7.4	-6.7	-9.6	-7.8
31	-5.9	-6.2	-6.3	-6.7	-5.8	-5.4	-5.1	-4.5	-5.0	-6.4	-7.0	-6.0	-4.5	-4.1	-3.5	-3.5	-4.9	-4.0	-4.6	-5.4	-6.4	-7.4	-7.9	-8.4	-3.5	-8.4	-5.6
Max.	**3.5**	**3.3**	**3.5**	**3.4**	**3.6**	**3.3**	**4.0**	**3.9**	**4.1**	**3.9**	**4.3**	**4.0**	**4.2**	**4.2**	**4.3**	**4.0**	**4.2**	**4.9**	**4.5**	**3.9**	**4.4**	**4.0**	**3.2**	**3.2**	**4.9**		
Min.	**-18.6**	**-18.9**	**-18.5**	**-18.5**	**-18.1**	**-18.3**	**-18.1**	**-18.3**	**-18.7**	**-18.3**	**-18.4**	**-18.7**	**-19.0**	**-18.5**	**-18.4**	**-18.1**	**-18.7**	**-18.4**	**-18.4**	**-18.2**	**-17.3**	**-17.7**	**-18.6**	**-18.6**		**-19.0**	
Avg.	**-7.1**	**-7.1**	**-7.0**	**-7.0**	**-6.8**	**-6.9**	**-6.9**	**-6.7**	**-6.6**	**-6.6**	**-6.7**	**-6.7**	**-6.6**	**-6.4**	**-6.3**	**-6.5**	**-6.6**	**-6.8**	**-7.0**	**-7.1**	**-7.1**	**-7.3**	**-7.4**	**-7.5**			**-6.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-8.2	-8.8	-9.2	-9.1	-9.7	-10.0	-10.2	-10.4	-10.4	-9.8	-10.0	-9.9	-8.9	-8.5	-8.3	-8.1	-7.8	-8.3	-9.1	-9.9	-10.1	-10.6	-11.0	-11.0	-7.8	-11.0	-9.5
2	-11.3	-11.0	-10.9	-11.7	-12.0	-11.3	-11.4	-11.0	-11.6	-11.6	-11.7	-10.8	-10.7	-10.8	-10.3	-10.6	-10.5	-9.1	-10.1	-9.5	-9.4	-9.3	-9.0	-8.9	-8.9	-12.0	-10.6
3	-9.7	-9.8	-10.1	-11.7	-10.8	-11.7	-11.3	-11.9	-13.8	-13.1	-14.3	-14.7	-14.5	-14.1	-13.9	-13.3	-13.3	-13.5	-14.0	-14.4	-14.3	-15.0	-15.4	-15.3	-9.7	-15.4	-13.1
4	-15.3	-15.3	-15.1	-15.2	-15.3	-15.0	-15.0	-15.1	-15.2	-15.1	-14.5	-12.7	-12.7	-11.7	-11.2	-11.2	-11.0	-11.8	-12.6	-13.7	-14.3	-14.7	-15.1	-14.9	-11.0	-15.3	-13.9
5	-14.7	-14.6	-15.5	-16.0	-16.2	-16.7	-17.1	-17.4	-17.5	-17.8	-18.1	-18.1	-17.9	-17.4	-16.3	-15.8	-15.4	-15.7	-16.4	-16.5	-17.2	-17.4	-17.5	-17.1	-14.6	-18.1	-16.7
6	-16.0	-15.4	-15.6	-15.3	-15.8	-16.0	-14.2	-14.1	-13.7	-14.2	-14.1	-13.2	-12.5	-12.0	-11.5	-10.7	-11.1	-12.0	-13.3	-14.6	-15.1	-15.7	-15.9	-16.0	-10.7	-16.0	-14.1
7	-16.1	-16.3	-16.6	-17.0	-16.8	-16.9	-16.7	-16.7	-16.6	-16.5	-16.2	-15.4	-14.7	-13.8	-12.4	-11.7	-11.5	-11.9	-12.8	-13.5	-13.1	-12.1	-11.4	-10.8	-10.8	-17.0	-14.5
8	-11.8	-10.0	-10.2	-11.8	-11.1	-7.9	-7.9	-7.6	-7.2	-7.3	-7.4	-7.0	-6.7	-6.3	-6.2	-6.3	-6.5	-6.4	-6.5	-6.6	-7.0	-6.9	-5.9	-5.5	-5.5	-11.8	-7.7
9	-5.5	-5.3	-5.1	-4.9	-4.9	-5.2	-5.4	-5.4	-5.5	-5.3	-5.1	-5.0	-4.8	-4.6	-4.4	-4.4	-4.4	-4.9	-5.7	-5.6	-6.5	-8.2	-8.6	-8.7	-4.4	-8.7	-5.6
10	-9.0	-9.6	-10.0	-10.4	-10.5	-10.8	-11.2	-11.6	-11.6	-12.3	-12.0	-11.6	-11.1	-10.6	-9.9	-9.3	-8.9	-9.0	-10.0	-10.5	-10.5	-10.2	-10.0	-9.9	-8.9	-12.3	-10.4
11	-9.6	-9.5	-9.5	-9.4	-9.2	-9.3	-9.4	-9.5	-9.5	-9.2	-8.8	-8.7	-8.2	-8.0	-7.7	-7.8	-8.0	-7.9	-8.2	-8.6	-9.1	-9.3	-9.8	-10.8	-7.7	-10.8	-9.0
12	-10.9	-11.3	-11.4	-10.7	-10.2	-10.1	-10.0	-13.3	-12.8	-11.3	-12.6	-12.8	-12.7	-12.2	-12.8	-13.6	-13.3	-13.1	-12.9	-13.1	-12.7	-10.5	-7.0	-6.4	-6.4	-13.6	-11.6
13	-6.7	-5.6	-4.3	-3.1	-3.4	-3.4	-2.9	-2.4	-2.1	-1.8	-1.0	0.2	1.0	0.4	1.1	0.9	1.1	1.2	1.8	1.7	1.8	2.0	2.0	2.0	2.0	-6.7	-0.8
14	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.4	2.3	2.3	2.4	0.5	-1.4	-3.9	-7.0	-8.7	-10.0	-11.4	-12.5	-13.4	-14.2	-14.4	-14.2	-13.5	2.4	-14.4	-4.2
15	-13.4	-13.8	-14.2	-14.7	-15.3	-16.0	-16.4	-16.9	-17.7	-18.2	-17.9	-17.2	-14.0	-13.7	-13.9	-14.1	-14.3	-14.5	-14.4	-14.6	-13.5	-12.6	-11.9	-9.9	-9.9	-18.2	-14.7
16	-9.6	-9.3	-8.9	-8.7	-8.1	-7.8	-7.1	-6.9	-6.4	-5.4	-4.5	-3.6	-3.2	-2.7	-1.8	-1.2	-0.9	-0.6	-0.3	0.4	0.4	0.4	-0.5	-1.4	0.4	-9.6	-4.1
17	-1.1	-1.0	-0.9	-1.0	-0.7	-0.4	1.1	1.1	2.2	3.4	3.0	2.4	1.9	1.9	1.8	1.7	1.5	1.5	2.5	3.1	3.1	3.3	3.4	3.3	3.4	-1.1	1.5
18	3.6	3.2	2.3	2.6	3.1	2.9	3.1	3.2	2.9	2.8	3.0	2.9	3.1	3.5	3.7	3.5	3.6	2.2	2.0	2.7	3.1	4.2	4.5	4.1	4.5	2.0	3.2
19	3.7	2.2	3.1	3.5	4.0	4.7	2.9	3.5	3.5	3.1	2.7	2.3	2.3	2.5	2.9	3.3	3.7	3.9	3.4	3.7	3.6	3.3	2.9	2.6	4.7	2.2	3.2
20	1.8	2.2	2.6	2.7	3.2	3.0	2.9	2.8	3.5	3.4	3.2	4.8	5.2	5.1	5.3	5.2	5.0	4.9	4.6	4.8	5.0	4.9	3.8	4.5	5.3	1.8	3.9
21	5.0	5.0	4.7	4.6	4.7	5.0	4.8	4.4	4.6	4.2	4.0	3.5	2.6	2.9	3.2	2.6	2.4	2.6	2.9	2.8	2.7	2.3	2.0	2.2	5.0	2.0	3.6
22	2.1	2.4	2.4	2.0	1.6	1.8	1.7	1.9	2.4	2.1	1.9	1.9	2.0	2.2	2.8	2.9	3.1	2.9	2.7	2.0	2.3	2.3	2.4	1.4	3.1	1.4	2.2
23	1.8	2.5	2.8	0.5	0.3	0.8	0.4	0.0	-0.3	-0.7	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.8	-1.2	-1.7	-2.1	-2.4	-2.8	-2.9	2.8	-2.9	-0.4
24	-3.2	-3.5	-3.6	-3.8	-3.8	-4.1	-4.1	-4.3	-4.3	-4.4	-4.1	-4.1	-3.3	-2.6	-2.3	-2.2	-2.2	-2.4	-3.4	-3.9	-4.3	-4.7	-4.9	-5.1	-2.2	-5.1	-3.7
25	-5.3	-5.7	-5.9	-6.1	-6.6	-7.0	-7.1	-7.2	-7.1	-7.1	-6.7	-6.8	-5.6	-3.5	-1.1	-0.9	-0.7	-0.5	-0.5	-0.7	-0.8	-0.5	-0.3	-0.3	-0.3	-7.2	-3.9
26	-0.2	-0.3	-0.5	-0.7	-0.6	-0.9	-0.7	-0.8	-1.0	-1.0	-0.2	0.6	1.3	1.8	2.0	2.2	2.3	1.9	-0.1	-0.3	-0.3	-0.4	-0.9	-1.4	2.3	-1.4	0.1
27	-2.0	-2.3	-2.7	-2.8	-3.1	-3.7	-4.1	-4.2	-4.1	-3.8	-3.2	-2.7	-2.1	-1.6	-1.3	-0.7	-0.8	0.1	0.7	0.8	1.1	1.3	2.2	2.5	2.5	-4.2	-1.5
28	2.5	2.4	2.1	2.2	2.7	3.1	3.5	3.5	3.7	4.0	4.4	4.7	4.9	5.0	4.9	4.9	4.1	2.3	1.6	0.0	-0.1	-0.5	-0.5	1.0	5.0	-0.5	2.8
29	0.8	0.4	0.1	0.3	0.1	-0.4	-0.6	-0.7	-1.4	-1.7	-1.9	-1.6	-1.2	-1.6	-2.2	-2.1	-2.1	-2.3	-2.5	-3.0	-3.5	-3.9	-4.3	-4.7	0.8	-4.7	-1.7
Max.	**5.0**	**5.0**	**4.7**	**4.6**	**4.7**	**5.0**	**4.8**	**4.4**	**4.6**	**4.2**	**4.4**	**4.8**	**5.2**	**5.1**	**5.3**	**5.2**	**5.0**	**4.9**	**4.6**	**4.8**	**5.0**	**4.9**	**4.5**	**4.5**	**5.3**		
Min.	**-16.1**	**-16.3**	**-16.6**	**-17.0**	**-16.8**	**-16.9**	**-17.1**	**-17.4**	**-17.7**	**-18.2**	**-18.1**	**-18.1**	**-17.9**	**-17.4**	**-16.3**	**-15.8**	**-15.4**	**-15.7**	**-16.4**	**-16.5**	**-17.2**	**-17.4**	**-17.5**	**-17.1**		**-18.2**	
Avg.	**-5.4**	**-5.4**	**-5.4**	**-5.6**	**-5.6**	**-5.6**	**-5.5**	**-5.7**	**-5.7**	**-5.6**	**-5.5**	**-5.3**	**-4.9**	**-4.6**	**-4.4**	**-4.3**	**-4.4**	**-4.6**	**-5.0**	**-5.2**	**-5.4**	**-5.4**	**-5.3**	**-5.2**			**-5.2**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-5.4	-5.4	-5.5	-5.6	-5.5	-5.1	-5.7	-5.8	-6.3	-6.0	-5.7	-5.4	-5.0	-4.5	-4.3	-4.0	-3.9	-4.1	-4.1	-3.3	-2.4	-1.8	-1.6	-1.3	-1.3	-6.3	-4.5
2	-0.7	-0.3	0.1	-0.2	-0.3	-0.1	0.1	0.1	0.3	0.6	1.0	0.9	0.7	0.8	1.7	2.2	1.2	0.7	0.0	0.3	0.9	1.3	1.1	2.0	2.2	-0.7	0.6
3	1.6	1.3	1.0	1.2	1.8	2.1	1.4	1.2	1.4	1.9	1.8	1.9	1.9	2.1	2.0	1.9	1.9	1.8	1.9	2.8	3.6	3.8	4.0	3.9	4.0	1.0	2.1
4	3.8	3.7	3.6	3.2	2.7	3.3	3.5	3.6	3.5	3.3	3.1	3.0	2.4	2.7	3.0	3.0	3.2	3.1	3.0	3.1	3.2	2.7	2.5	2.1	3.8	2.1	3.1
5	2.3	3.1	3.3	3.0	2.8	2.9	2.4	2.0	2.1	2.1	1.9	1.9	1.7	1.7	2.7	3.2	3.9	3.8	3.4	3.3	3.4	3.4	3.5	3.5	3.9	1.7	2.8
6	3.2	3.1	3.0	3.1	3.3	3.3	3.4	3.0	2.7	2.1	1.2	1.4	2.7	3.4	3.4	3.9	3.8	3.8	4.5	4.6	3.8	3.2	3.4	2.5	4.6	1.2	3.2
7	2.2	2.0	2.1	2.3	2.5	2.6	3.2	1.4	1.2	1.1	1.5	2.0	2.3	2.4	1.8	2.6	2.7	2.4	3.0	3.4	3.0	2.8	2.7	2.7	3.4	1.1	2.3
8	2.3	2.1	1.7	1.4	1.0	0.3	-0.4	0.2	1.1	1.2	1.7	1.6	2.3	3.2	3.6	3.6	2.8	2.4	2.5	3.1	3.3	3.8	4.3	3.7	4.3	-0.4	2.2
9	3.8	3.8	3.7	3.7	3.7	4.0	4.4	4.5	4.5	4.5	4.6	4.7	4.6	4.7	4.6	5.2	5.5	5.7	5.4	5.3	3.3	3.6	3.3	1.9	5.7	1.9	4.3
10	1.3	1.1	0.7	0.3	0.2	0.3	0.5	0.9	0.7	0.5	0.0	0.0	0.1	-0.3	-0.2	-0.4	-0.3	0.4	0.2	-0.1	-0.6	-0.8	-1.0	-1.1	1.3	-1.1	0.1
11	-1.2	-1.0	-0.8	-1.0	-1.3	-1.8	-2.0	-2.4	-2.4	-2.4	-2.2	-1.8	-1.7	-1.8	-1.9	-2.0	-2.0	-2.6	-2.8	-2.7	-2.6	-2.5	-2.8	-3.1	-0.8	-3.1	-2.0
12	-3.0	-3.4	-3.6	-3.7	-3.7	-3.9	-3.7	-3.8	-4.2	-4.2	-4.1	-3.7	-3.4	-3.1	-3.0	-2.8	-2.8	-2.9	-3.5	-4.0	-4.6	-5.0	-4.9	-4.9	-2.8	-5.0	-3.8
13	-4.9	-5.0	-4.9	-4.7	-4.4	-4.5	-4.7	-4.8	-4.6	-4.4	-4.2	-4.0	-3.8	-3.7	-3.5	-3.2	-3.4	-3.5	-3.8	-3.5	-4.1	-4.2	-4.2	-4.7	-3.2	-5.0	-4.2
14	-5.4	-5.5	-5.7	-5.7	-5.7	-5.9	-5.9	-6.5	-6.2	-5.8	-5.3	-5.1	-4.2	-3.2	-2.1	-1.3	-0.8	-0.6	-0.7	-1.1	-1.3	-1.3	-1.2	-0.8	-0.6	-6.5	-3.6
15	-0.7	-1.0	-2.3	-2.7	-2.3	-2.1	-1.9	-1.5	-1.4	-0.6	-0.1	0.0	0.0	0.1	0.4	0.5	0.3	0.1	0.0	0.2	0.1	-0.1	0.1	0.3	0.5	-2.7	-0.6
16	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.3	1.2	0.6	0.7	1.5	1.7	2.2	2.5	2.2	1.8	1.6	0.9	0.5	0.0	-0.4	-1.1	-1.7	2.5	-1.7	0.8
17	-2.2	-1.8	-1.8	-1.8	-2.4	-2.4	-2.4	-2.6	-2.8	-1.7	-1.4	-1.1	-0.5	-0.2	0.2	0.6	1.1	0.9	0.9	-0.8	-2.7	-3.2	-3.9	-4.1	1.1	-4.1	-1.5
18	-4.4	-4.7	-4.8	-5.0	-5.1	-5.1	-5.2	-5.2	-5.1	-5.3	-5.4	-5.4	-5.4	-5.8	-5.9	-6.3	-6.4	-6.6	-6.8	-6.8	-6.7	-7.0	-7.1	-7.5	-4.4	-7.5	-5.8
19	-7.6	-7.5	-7.8	-8.1	-8.1	-8.2	-7.8	-7.7	-8.1	-8.6	-9.0	-8.7	-8.4	-8.5	-8.7	-9.3	-9.6	-9.7	-9.7	-9.7	-9.6	-9.8	-9.8	-9.3	-7.5	-9.8	-8.7
20	-9.5	-9.5	-9.4	-9.6	-9.6	-10.0	-10.4	-10.6	-10.8	-11.2	-10.9	-10.4	-10.1	-9.7	-9.4	-8.7	-8.6	-8.5	-8.3	-8.5	-8.7	-8.8	-8.7	-8.6	-8.3	-11.2	-9.5
21	-8.2	-8.3	-7.8	-7.7	-7.7	-7.2	-6.0	-5.3	-2.4	0.7	1.4	1.9	2.5	2.7	3.0	3.3	4.3	4.5	3.9	3.8	4.4	4.1	3.8	3.8	4.5	-8.3	-0.5
22	3.9	3.4	3.6	3.3	3.4	3.3	2.1	0.5	1.1	-0.3	-1.0	-1.3	-0.7	0.0	0.3	0.2	0.3	0.3	-0.5	-1.5	-1.9	-0.4	-0.9	-2.1	3.9	-2.1	0.6
23	-2.3	-2.9	-3.0	-3.1	-3.9	-4.5	-4.9	-5.3	-5.6	-5.1	-4.8	-4.8	-4.6	-4.7	-3.8	-3.2	-3.6	-4.3	-4.8	-4.6	-4.4	-4.3	-4.7	-4.6	-2.3	-5.6	-4.3
24	-4.7	-4.1	-4.4	-5.2	-5.2	-4.8	-4.5	-4.3	-4.3	-4.6	-4.5	-3.8	-3.2	-2.6	-2.4	-2.5	-2.5	-2.5	-2.5	-3.0	-3.5	-3.8	-3.9	-1.8	-1.8	-5.2	-3.7
25	-2.4	-2.2	-2.3	-1.5	-1.4	-1.9	-1.8	-2.4	-2.9	-2.2	-1.4	-0.6	-0.3	-0.5	-0.3	-0.3	0.4	-0.4	-1.3	-1.4	-1.9	-2.4	-2.6	-2.8	0.4	-2.9	-1.5
26	-3.1	-3.3	-3.5	-3.5	-3.5	-3.6	-3.8	-4.4	-4.6	-4.7	-4.3	-3.5	-2.3	-1.5	-1.0	-0.9	-0.8	-0.6	-1.0	-1.1	-1.5	-2.0	-2.4	-2.4	-0.6	-4.7	-2.6
27	-2.7	-2.6	-2.9	-3.0	-3.5	-4.0	-4.1	-3.8	-3.7	-3.3	-3.3	-3.4	-3.2	-2.6	-2.9	-3.2	-3.3	-3.6	-3.9	-4.0	-4.1	-3.9	-3.8	-3.9	-2.6	-4.1	-3.4
28	-4.2	-4.4	-4.6	-4.6	-5.1	-5.4	-6.2	-6.3	-6.5	-6.4	-6.1	-5.6	-4.0	-3.1	-2.5	-2.3	-2.0	-1.8	-2.1	-2.4	-2.7	-3.2	-3.3	-3.6	-1.8	-6.5	-4.1
29	-3.2	-2.5	-2.1	-2.5	-2.6	-2.1	-1.7	-1.6	-1.4	-1.3	-1.1	-0.1	-0.4	-0.5	-0.3	0.1	0.2	0.1	0.8	0.9	1.0	1.2	1.2	0.6	1.2	-3.2	-0.7
30	0.2	1.3	1.5	1.3	1.1	1.2	1.1	0.9	1.2	1.6	1.5	1.4	1.6	2.0	2.0	2.6	2.1	2.4	2.5	2.4	2.3	2.1	2.1	2.1	2.6	0.2	1.7
31	2.4	2.6	2.7	2.8	2.6	1.6	2.2	2.2	2.2	2.6	2.8	2.9	4.0	3.4	3.5	3.8	4.3	3.5	2.9	3.3	3.8	4.1	4.4	4.3	4.4	1.6	3.1
Max.	**3.9**	**3.8**	**3.7**	**3.7**	**3.7**	**4.0**	**4.4**	**4.5**	**4.5**	**4.5**	**4.6**	**4.7**	**4.6**	**4.7**	**4.6**	**5.2**	**5.5**	**5.7**	**5.4**	**5.3**	**4.4**	**4.1**	**4.4**	**4.3**	**5.7**		
Min.	**-9.5**	**-9.5**	**-9.4**	**-9.6**	**-9.6**	**-10.0**	**-10.4**	**-10.6**	**-10.8**	**-11.2**	**-10.9**	**-10.4**	**-10.1**	**-9.7**	**-9.4**	**-9.3**	**-9.6**	**-9.7**	**-9.7**	**-9.7**	**-9.6**	**-9.8**	**-9.8**	**-9.3**		**-11.2**	
Avg.	**-1.6**	**-1.5**	**-1.6**	**-1.7**	**-1.8**	**-1.9**	**-1.9**	**-2.0**	**-1.9**	**-1.8**	**-1.7**	**-1.4**	**-1.1**	**-0.8**	**-0.6**	**-0.4**	**-0.3**	**-0.5**	**-0.7**	**-0.7**	**-0.9**	**-0.9**	**-1.0**	**-1.1**			**-1.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.2	4.0	3.6	3.3	3.2	3.3	3.0	2.7	2.6	2.7	2.6	2.4	2.5	2.4	2.9	2.9	3.0	2.8	2.6	2.3	2.5	2.6	2.4	2.4	4.2	2.3	2.9
2	2.4	2.4	1.8	1.6	1.3	1.3	1.3	1.3	1.3	1.6	1.7	2.2	2.6	2.9	3.3	3.5	3.2	3.0	2.6	2.1	2.0	2.3	2.5	2.7	3.5	1.3	2.2
3	2.7	2.8	2.7	2.5	2.2	1.5	1.9	2.1	2.0	2.0	2.3	2.8	2.4	2.4	2.7	2.7	2.8	2.9	3.2	3.4	3.4	3.3	3.0	3.0	3.4	1.5	2.6
4	3.0	2.9	2.9	2.7	2.5	2.3	2.4	2.1	2.1	2.4	2.7	2.6	2.5	2.4	2.6	2.6	2.6	2.4	2.3	1.8	1.5	0.9	0.9	-0.3	3.0	-0.3	2.2
5	-1.6	-2.9	-4.1	-4.4	-4.7	-4.9	-5.0	-5.3	-5.5	-5.3	-5.6	-5.0	-4.4	-4.1	-3.9	-3.6	-3.2	-3.0	-3.1	-2.9	-3.2	-3.6	-4.3	-4.7	-1.6	-5.6	-4.1
6	-4.8	-4.6	-4.7	-4.7	-4.7	-4.7	-4.7	-5.0	-4.7	-4.1	-4.6	-5.0	-4.2	-3.7	-3.7	-3.4	-3.1	-2.7	-3.1	-2.9	-2.8	-2.6	-3.0	-3.6	-2.6	-5.0	-4.0
7	-3.9	-4.2	-4.7	-4.7	-5.1	-5.1	-5.4	-5.6	-5.4	-5.0	-4.8	-4.0	-3.4	-3.6	-3.0	-2.4	-2.1	-2.1	-2.4	-2.3	-2.2	-2.5	-2.9	-3.2	-2.1	-5.6	-3.8
8	-3.4	-3.7	-3.9	-4.3	-4.6	-4.4	-4.9	-5.4	-4.9	-4.2	-3.4	-2.5	-1.7	-1.0	-1.3	-0.7	-0.4	-1.2	-1.4	-1.8	-1.7	-2.5	-2.5	-3.3	-0.4	-5.4	-2.9
9	-3.7	-4.2	-5.1	-5.1	-5.2	-5.4	-5.5	-6.1	-6.5	-6.3	-5.4	-4.3	-2.5	-9.5	-10.0	-0.1	-0.2	-2.4	-2.8	-2.9	-3.2	-3.7	-4.2	-4.6	-0.1	-10.0	-4.5
10	-4.8	-4.8	-4.7	-5.1	-5.3	-5.4	-5.1	-5.4	-5.9	-5.4	-4.8	-4.2	-3.6	-3.9	-3.6	-3.2	-3.1	-3.2	-3.8	-3.8	-3.9	-4.2	-4.4	-4.7	-3.1	-5.9	-4.4
11	-4.8	-5.1	-5.2	-5.4	-5.7	-5.7	-6.1	-6.2	-6.1	-6.2	-5.9	-5.4	-5.6	-5.1	-4.9	-5.1	-4.7	-4.4	-4.5	-4.5	-4.7	-5.1	-4.9	-5.3	-4.4	-6.2	-5.3
12	-5.6	-5.5	-5.7	-5.7	-6.1	-6.1	-6.5	-6.3	-6.2	-5.5	-5.3	-5.5	-5.0	-4.9	-4.0	-2.7	-1.7	-1.5	-1.8	-1.7	-1.4	-1.1	-0.8	-0.2	-0.2	-6.5	-4.0
13	-0.6	-0.8	-0.5	-0.5	-1.4	-1.9	-1.6	-1.5	-1.1	-0.7	-0.6	-1.0	-0.9	-1.0	-0.4	0.5	1.1	2.1	4.3	4.9	4.8	5.3	5.1	5.0	5.3	-1.9	0.8
14	4.3	3.7	3.6	3.3	3.2	2.8	2.6	2.2	2.1	2.4	2.4	2.3	2.7	3.1	3.7	4.3	4.7	4.6	4.1	3.7	3.5	3.5	3.3	3.3	4.7	2.1	3.3
15	3.2	3.3	3.1	3.3	2.7	1.6	1.4	1.4	2.2	0.7	0.5	0.5	0.6	1.3	2.8	3.7	3.2	2.6	1.7	0.9	-0.1	-0.8	-3.0	-4.0	3.7	-4.0	1.4
16	-3.9	-3.6	-4.5	-4.5	-4.6	-5.6	-6.2	-7.4	-6.6	-6.6	-6.6	-6.1	-5.7	-5.2	-4.6	-3.8	-3.5	-3.2	-3.3	-3.2	-3.0	-2.7	-2.1	-1.8	-1.8	-7.4	-4.5
17	-1.5	-1.0	-0.5	-0.3	0.2	0.2	0.4	0.9	1.5	2.1	2.2	2.0	2.7	2.8	2.1	2.4	2.5	2.8	2.5	2.7	3.2	3.7	4.6	5.0	5.0	-1.5	1.8
18	2.6	3.0	2.0	1.6	1.3	0.9	0.6	0.2	0.9	2.0	2.2	2.7	2.7	3.1	3.4	3.4	3.5	3.2	2.7	2.3	2.3	2.0	2.0	1.7	3.5	0.2	2.2
19	2.2	2.0	1.2	1.2	0.6	0.7	0.9	0.2	1.3	2.5	3.0	3.7	3.4	3.3	3.3	3.2	3.3	3.4	3.0	2.8	2.5	2.0	1.6	1.0	3.7	0.2	2.2
20	1.7	1.6	1.6	1.6	0.9	0.9	1.0	1.7	2.4	3.5	3.8	3.8	3.9	4.2	4.2	3.6	3.2	2.9	2.7	2.6	2.6	2.5	2.5	2.5	4.2	0.9	2.6
21	2.5	2.5	2.6	2.6	2.5	2.5	2.3	2.5	2.8	3.2	3.4	4.4	5.0	4.8	4.4	3.8	3.6	3.7	3.4	2.9	2.5	2.2	2.3	2.6	5.0	2.2	3.1
22	2.0	1.0	0.7	0.4	0.4	1.7	1.6	1.8	2.1	2.8	3.6	4.0	4.2	4.0	4.2	4.7	5.0	5.5	4.6	3.9	3.5	3.2	3.0	3.1	5.5	0.4	3.0
23	2.7	2.3	2.6	2.8	3.9	3.7	3.5	3.7	4.4	5.3	6.1	7.0	8.3	8.8	9.3	10.5	9.8	8.5	8.0	7.8	8.0	7.7	7.6	10.2	10.5	2.3	6.4
24	10.7	9.6	8.2	7.5	6.7	6.4	6.6	6.5	6.4	6.0	5.3	5.8	6.0	5.7	5.5	5.1	5.1	5.2	5.6	4.4	4.5	4.3	4.4	4.4	10.7	4.3	6.1
25	4.2	3.4	1.9	1.3	0.6	0.1	0.3	0.3	-0.2	0.1	0.3	0.7	1.3	1.3	1.1	0.9	0.9	0.3	-0.3	-0.4	-0.3	-0.3	-0.3	-0.3	4.2	-0.4	0.7
26	-0.5	-0.4	-0.9	-1.3	-1.3	-1.3	-1.2	-1.0	-1.5	-2.2	-2.1	-2.1	-1.9	-1.8	-1.5	-1.0	-0.6	-0.3	-0.1	0.1	0.4	0.8	0.5	0.7	0.8	-2.2	-0.9
27	0.9	1.6	2.2	2.2	1.7	1.1	1.0	0.6	0.7	1.3	1.0	0.6	0.8	0.9	1.9	2.7	2.9	2.5	2.8	2.5	2.2	2.2	2.0	1.6	2.9	0.6	1.7
28	1.3	1.4	1.8	1.6	1.4	0.9	0.6	0.8	1.2	1.9	2.1	2.2	2.5	2.4	2.2	2.8	2.8	2.7	2.6	2.4	2.2	2.3	2.3	2.1	2.8	0.6	1.9
29	2.0	2.0	1.9	1.6	1.4	1.2	0.8	1.0	1.1	1.7	2.2	2.7	3.2	3.7	4.3	4.8	5.1	5.4	4.4	4.5	4.1	3.2	2.0	1.6	5.4	0.8	2.7
30	1.2	0.9	0.7	0.5	0.2	0.1	0.0	0.8	1.8	2.2	2.4	3.6	4.2	4.7	4.6	4.0	4.2	5.3	5.5	5.2	4.7	4.4	3.8	3.5	5.5	0.0	2.9
Max.	**10.7**	**9.6**	**8.2**	**7.5**	**6.7**	**6.4**	**6.6**	**6.5**	**6.4**	**6.0**	**6.1**	**7.0**	**8.3**	**8.8**	**9.3**	**10.5**	**9.8**	**8.5**	**8.0**	**7.8**	**8.0**	**7.7**	**7.6**	**10.2**	**10.7**		
Min.	**-5.6**	**-5.5**	**-5.7**	**-5.7**	**-6.1**	**-6.1**	**-6.5**	**-7.4**	**-6.6**	**-6.6**	**-6.6**	**-6.1**	**-5.7**	**-9.5**	**-10.0**	**-5.1**	**-4.7**	**-4.4**	**-4.5**	**-4.5**	**-4.7**	**-5.1**	**-4.9**	**-5.3**		**-10.0**	
Avg.	**0.5**	**0.3**	**0.0**	**-0.1**	**-0.4**	**-0.6**	**-0.7**	**-0.7**	**-0.5**	**-0.2**	**0.0**	**0.4**	**0.7**	**0.7**	**0.9**	**1.5**	**1.7**	**1.6**	**1.4**	**1.2**	**1.1**	**1.0**	**0.8**	**0.7**			**0.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.1	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.7	3.1	3.8	4.4	4.8	5.3	5.2	5.3	5.7	5.9	5.9	6.1	5.7	5.4	4.5	4.3	6.1	2.6	4.2
2	3.3	2.3	2.1	2.7	2.8	2.5	2.6	2.7	2.9	3.1	3.5	4.6	4.6	4.8	5.0	5.2	5.1	5.1	5.4	6.0	5.2	4.4	3.6	3.7	6.0	2.1	3.9
3	3.3	3.1	3.1	3.0	3.9	3.7	3.1	3.6	4.3	6.1	7.0	7.0	7.1	7.2	7.1	7.3	6.8	6.5	6.7	6.6	4.6	3.9	3.6	3.6	7.3	3.0	5.1
4	3.6	4.2	4.0	3.2	3.2	3.1	3.5	4.3	4.7	4.9	4.9	5.1	5.2	5.7	6.1	6.9	7.9	7.9	7.9	7.7	7.4	6.9	6.3	5.5	7.9	3.1	5.4
5	5.2	4.7	4.6	4.7	5.0	4.9	5.0	5.0	5.4	5.7	6.4	6.6	6.8	7.1	6.8	6.5	6.7	7.3	7.6	7.1	5.7	5.0	4.6	4.6	7.6	4.6	5.8
6	5.3	5.6	5.9	5.9	4.9	4.9	4.9	4.4	4.9	4.8	5.2	5.1	5.2	5.0	6.6	6.6	5.8	5.6	5.5	5.0	5.1	4.8	5.1	4.9	6.6	4.4	5.3
7	5.1	5.1	5.4	5.4	5.7	5.0	4.8	5.0	5.2	5.6	5.0	5.2	5.5	5.8	6.1	6.3	6.6	6.8	7.1	7.5	7.0	5.7	5.1	4.6	7.5	4.6	5.7
8	4.3	4.2	3.9	4.0	4.4	4.9	5.2	5.3	5.6	5.9	5.7	6.0	6.3	6.5	6.3	7.0	7.0	6.9	6.5	6.1	5.7	6.0	6.4	6.1	7.0	3.9	5.7
9	5.6	5.3	4.8	4.6	4.7	4.3	4.3	4.4	4.7	5.2	5.4	5.4	6.0	6.9	7.5	7.9	7.4	8.0	7.8	5.7	5.8	5.0	4.5	4.3	8.0	4.3	5.6
10	4.0	4.0	4.0	4.0	3.9	4.0	4.1	4.5	4.8	5.3	6.0	7.1	7.3	7.8	8.4	8.3	7.4	6.5	6.3	5.6	6.3	7.9	6.1	5.7	8.4	3.9	5.8
11	6.1	7.2	8.4	8.5	6.1	6.6	7.4	7.5	8.0	6.7	7.9	8.1	8.0	8.6	9.0	8.7	8.3	8.5	8.4	8.4	7.9	6.9	6.4	6.2	9.0	6.1	7.7
12	5.6	5.5	5.4	5.3	5.0	4.7	4.7	4.5	4.3	4.4	4.5	5.0	5.7	6.2	5.9	5.6	5.2	4.6	4.4	4.5	4.5	4.5	4.2	4.2	6.2	4.2	4.9
13	4.1	4.5	4.4	4.1	3.9	4.0	3.5	3.8	4.3	4.6	4.9	5.1	5.0	5.4	5.6	5.5	5.3	5.4	4.9	4.6	4.9	3.5	4.2	4.2	5.6	3.5	4.6
14	4.0	4.7	5.4	5.5	5.3	5.4	5.6	5.5	5.6	6.1	6.3	6.2	5.3	6.2	7.7	8.0	8.6	9.3	8.6	7.5	7.3	7.3	7.2	7.1	9.3	4.0	6.5
15	6.2	5.5	5.1	5.2	6.6	6.3	5.7	5.3	5.4	5.5	5.6	5.7	5.9	6.1	6.5	6.9	7.1	6.6	5.9	5.3	5.1	4.9	4.7	4.7	7.1	4.7	5.7
16	4.7	4.6	4.8	5.0	4.9	5.0	4.9	4.6	4.8	4.9	5.4	5.9	6.4	5.6	5.5	5.7	6.0	6.3	5.7	4.8	4.4	4.2	3.4	2.8	6.4	2.8	5.0
17	2.9	2.5	1.9	1.8	2.2	2.3	3.3	4.3	5.1	5.9	7.4	7.8	6.8	6.9	7.3	7.6	7.7	7.7	7.1	6.5	6.1	5.6	5.1	5.2	7.8	1.8	5.3
18	4.7	4.3	4.1	4.8	4.6	4.6	4.0	4.0	4.4	4.4	4.8	4.7	4.8	4.9	5.4	5.6	5.8	6.2	5.6	5.5	5.6	5.5	4.9	4.9	6.2	4.0	4.9
19	4.4	4.5	4.4	4.2	4.0	3.7	3.8	4.4	5.1	5.8	6.5	7.0	6.7	7.4	8.9	9.7	10.9	10.6	9.8	9.2	9.0	9.1	9.4	9.5	10.9	3.7	7.0
20	9.3	8.6	7.1	6.3	5.7	5.6	6.1	6.8	7.4	8.8	9.9	10.8	11.2	10.9	8.9	9.3	9.5	9.7	9.4	8.8	8.2	7.3	7.5	7.4	11.2	5.6	8.4
21	6.2	5.7	5.0	4.6	4.4	4.0	5.2	6.2	7.5	7.7	8.1	8.3	8.4	8.6	8.3	8.4	7.7	7.7	7.5	6.7	6.0	6.1	8.0	9.4	9.4	4.0	6.9
22	9.3	9.4	9.1	9.0	8.5	8.2	8.1	8.4	8.2	9.0	9.8	10.4	9.8	9.1	8.6	8.0	8.4	7.4	7.0	6.9	6.4	6.2	5.7	5.6	10.4	5.6	8.2
23	5.4	5.3	5.2	4.8	4.1	3.9	3.8	4.1	4.4	4.4	4.6	5.7	6.8	7.1	7.3	7.5	6.9	6.5	6.3	6.3	6.3	6.6	6.5	6.7	7.5	3.8	5.7
24	6.8	6.7	6.6	6.7	6.5	6.3	6.2	6.1	6.3	6.5	6.5	6.2	6.1	6.1	6.0	5.7	5.7	6.3	5.9	5.8	5.6	5.9	5.9	5.2	6.8	5.2	6.1
25	4.7	4.2	3.8	3.4	3.5	3.6	3.7	4.7	5.2	6.1	7.2	8.1	8.6	8.8	9.2	9.0	8.9	8.8	8.3	7.7	7.4	7.3	7.2	7.0	9.2	3.4	6.5
26	6.7	7.4	7.0	7.3	6.9	6.9	6.9	7.4	7.9	7.8	8.2	9.0	10.2	11.2	11.5	11.6	10.6	10.0	9.3	8.8	8.6	8.3	8.3	8.1	11.6	6.7	8.6
27	7.9	7.7	7.3	7.3	7.6	7.4	7.6	8.4	8.3	9.2	9.1	9.7	10.8	11.5	11.5	11.9	12.8	12.5	12.7	12.0	11.9	12.1	11.9	11.8	12.8	7.3	10.0
28	11.6	10.5	9.5	9.1	9.6	9.4	10.5	11.3	11.7	12.0	11.6	11.8	13.7	13.7	14.1	14.5	14.4	14.3	13.9	14.0	14.0	13.7	13.6	13.9	14.5	9.1	12.4
29	14.0	13.3	12.8	11.2	12.0	12.6	11.4	10.2	10.4	10.7	11.0	9.5	9.4	9.7	10.4	10.9	11.3	11.4	11.1	10.5	10.1	9.7	9.1	8.7	14.0	8.7	10.9
30	8.9	8.3	8.4	8.5	8.4	8.1	8.2	8.3	9.0	9.8	9.8	9.6	9.7	10.6	10.1	9.6	8.1	7.9	8.9	8.6	8.3	7.9	7.6	7.4	10.6	7.4	8.8
31	7.4	7.4	7.2	7.0	6.7	6.5	6.6	6.5	6.6	6.7	6.9	7.5	7.3	7.4	7.3	7.1	6.9	6.8	6.7	6.5	6.3	6.2	6.3	6.1	7.5	6.1	6.8
Max.	**14.0**	**13.3**	**12.8**	**11.2**	**12.0**	**12.6**	**11.4**	**11.3**	**11.7**	**12.0**	**11.6**	**11.8**	**13.7**	**13.7**	**14.1**	**14.5**	**14.4**	**14.3**	**13.9**	**14.0**	**14.0**	**13.7**	**13.6**	**13.9**	**14.5**		
Min.	**2.9**	**2.3**	**1.9**	**1.8**	**2.2**	**2.3**	**2.6**	**2.6**	**2.7**	**3.1**	**3.5**	**4.4**	**4.6**	**4.8**	**5.0**	**5.2**	**5.1**	**4.6**	**4.4**	**4.5**	**4.4**	**3.5**	**3.4**	**2.8**		**1.8**	
Avg.	**5.9**	**5.8**	**5.6**	**5.5**	**5.4**	**5.3**	**5.4**	**5.6**	**6.0**	**6.3**	**6.7**	**7.1**	**7.3**	**7.6**	**7.7**	**7.9**	**7.8**	**7.8**	**7.6**	**7.2**	**6.9**	**6.6**	**6.4**	**6.2**			**6.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.1	6.8	7.3	7.1	7.1	7.1	7.3	7.3	7.9	8.6	8.9	8.8	8.5	9.1	8.8	9.3	9.6	8.9	8.5	8.5	8.1	7.9	7.5	7.4	9.6	6.1	8.0
2	7.8	8.0	8.1	8.1	7.9	7.7	7.9	8.2	8.5	8.6	9.2	9.7	9.8	10.0	10.3	10.1	10.1	9.6	9.9	9.8	9.8	9.5	9.4	10.1	10.3	7.7	9.1
3	9.6	9.8	9.6	9.3	9.7	9.7	9.4	9.7	10.4	11.1	11.4	11.7	9.8	8.2	7.9	8.2	8.0	7.3	7.1	6.8	6.9	6.8	6.5	6.1	11.7	6.1	8.8
4	5.9	5.5	5.7	6.0	5.9	5.9	6.0	6.3	7.0	7.6	8.5	7.4	7.4	7.8	7.7	8.0	8.0	8.5	8.8	7.8	7.8	7.7	7.1	6.8	8.8	5.5	7.1
5	6.6	6.7	6.6	6.1	6.0	6.0	6.4	6.6	6.6	6.7	6.7	6.4	6.4	6.3	6.2	6.3	6.4	6.7	7.0	6.9	6.8	6.9	7.1	6.9	7.1	6.0	6.6
6	6.8	6.5	6.9	5.9	5.5	5.2	5.7	6.3	6.9	7.9	8.9	9.8	11.2	12.4	12.8	13.9	14.9	14.1	12.0	11.2	13.0	12.5	12.7	11.9	14.9	5.2	9.8
7	11.4	10.9	10.5	10.6	10.9	11.1	11.3	11.3	11.1	11.3	11.8	13.1	13.7	13.5	14.3	13.5	9.1	7.3	7.3	6.9	6.9	6.9	6.8	6.8	14.3	6.8	10.3
8	6.8	6.9	6.9	6.7	6.7	6.6	6.7	6.9	7.7	9.0	9.7	10.8	12.3	13.1	11.5	10.8	9.8	12.5	13.4	12.6	11.9	11.2	10.8	10.6	13.4	6.6	9.7
9	9.8	9.0	9.0	7.7	6.8	6.3	6.2	6.2	6.8	7.6	8.3	8.6	9.0	9.6	10.1	10.5	10.7	10.7	10.2	9.6	9.5	9.2	8.9	8.5	10.7	6.2	8.7
10	8.3	8.1	7.7	7.5	7.3	7.0	7.2	6.9	7.4	8.0	8.1	8.6	8.9	8.4	9.1	9.3	9.2	8.0	7.5	7.4	6.9	6.9	6.9	7.0	9.3	6.9	7.8
11	7.0	7.0	6.8	6.3	6.1	6.1	6.2	6.1	6.4	6.7	7.1	6.8	7.0	6.9	7.0	7.2	6.8	7.0	7.1	7.3	7.1	7.0	6.9	6.8	7.3	6.1	6.8
12	6.7	7.7	7.6	7.4	7.2	7.2	7.4	7.7	7.9	8.4	9.5	9.7	10.8	11.3	11.1	12.1	11.7	11.3	10.2	10.1	9.8	9.5	8.3	7.8	12.1	6.7	9.1
13	7.8	7.5	7.5	7.5	6.8	5.9	5.4	5.6	5.9	6.8	7.7	8.2	8.8	9.3	9.9	11.1	12.2	12.5	11.6	10.1	9.1	8.8	8.8	8.5	12.5	5.4	8.5
14	8.5	8.5	8.7	8.2	8.7	10.0	10.2	9.0	9.3	9.3	9.6	9.9	10.5	10.1	9.9	9.9	10.0	9.9	9.8	9.4	9.2	9.1	8.3	8.4	10.5	8.2	9.3
15	8.7	8.7	8.3	8.2	8.3	8.2	9.1	9.2	9.2	9.6	10.0	10.4	10.5	9.6	9.9	10.3	10.6	10.6	10.6	12.7	13.2	13.4	13.2	12.6	13.4	8.2	10.2
16	12.2	12.2	12.2	12.1	11.6	10.9	10.6	10.6	10.9	11.5	10.1	9.7	9.3	9.6	11.0	11.5	12.5	11.8	11.6	10.6	10.2	9.6	9.3	9.5	12.5	9.3	10.9
17	9.1	8.4	7.7	7.6	7.4	7.3	8.5	9.5	9.5	9.3	9.1	8.6	8.5	8.5	8.1	7.8	8.2	8.8	8.4	8.2	8.3	8.3	8.0	6.9	9.5	6.9	8.3
18	6.8	6.9	6.5	6.2	6.2	6.2	6.6	6.9	7.5	7.8	7.6	7.9	8.2	8.8	10.7	10.5	10.7	11.1	11.4	10.3	9.4	9.1	8.5	8.1	11.4	6.2	8.3
19	7.8	8.0	7.8	7.2	7.1	7.0	8.2	9.8	11.6	9.6	10.1	10.8	11.3	11.1	9.9	9.5	9.6	10.1	9.7	9.3	9.4	9.1	8.6	8.3	11.6	7.0	9.2
20	7.6	7.2	7.1	7.1	6.8	6.7	7.8	8.7	9.0	10.4	9.8	10.6	11.1	11.0	10.6	10.1	9.7	10.3	10.1	9.6	9.6	9.2	9.1	8.9	11.1	6.7	9.1
21	9.0	8.9	8.8	8.8	8.7	8.9	8.9	9.0	9.2	9.5	9.6	9.9	10.2	10.4	10.6	10.6	10.7	10.7	10.7	10.0	9.9	10.1	9.4	7.8	10.7	7.8	9.6
22	7.8	8.7	8.6	8.8	9.2	9.2	9.2	9.3	9.4	9.7	9.9	9.7	9.6	9.3	9.3	10.0	9.8	9.8	10.4	10.5	10.3	10.0	9.9	9.7	10.5	7.8	9.5
23	9.2	9.2	8.8	8.5	8.6	8.1	8.4	8.9	9.8	11.2	10.9	11.1	11.3	11.3	11.3	11.0	11.1	10.7	10.6	9.2	9.2	8.4	7.9	8.1	11.3	7.9	9.7
24	7.7	7.9	8.7	8.5	8.2	8.1	8.2	8.5	8.8	9.2	9.6	9.3	9.0	8.7	8.6	8.7	8.8	8.9	9.0	9.1	9.2	10.0	10.0	10.0	10.0	7.7	8.9
25	10.4	10.1	9.5	8.9	8.8	9.8	9.8	9.5	9.4	10.1	11.2	11.7	12.0	12.7	12.7	13.0	13.1	12.8	12.4	12.0	11.4	11.4	10.1	9.2	13.1	8.8	10.9
26	8.9	8.9	8.8	8.7	8.9	8.8	8.7	8.8	9.3	9.5	9.8	10.0	10.4	11.2	12.0	12.2	12.8	13.5	13.6	13.2	12.9	12.7	12.6	12.5	13.6	8.7	10.8
27	12.4	12.0	11.4	9.6	9.2	8.9	8.9	8.9	8.6	8.1	7.6	8.1	8.6	8.7	9.1	9.8	10.6	10.0	9.7	9.4	9.0	8.6	8.4	7.6	12.4	7.6	9.3
28	6.4	6.6	6.9	6.5	5.9	5.4	6.2	8.9	10.5	10.7	11.4	11.8	12.4	13.1	13.9	11.6	10.9	10.8	10.7	9.6	9.3	9.4	9.1	9.0	13.9	5.4	9.5
29	8.4	8.6	8.7	8.7	8.7	8.7	8.8	9.0	8.9	9.1	8.9	9.2	9.0	9.1	9.8	10.4	10.7	10.3	9.7	9.2	8.9	8.8	9.1	9.1	10.7	8.4	9.2
30	9.0	8.7	7.4	6.4	5.8	5.3	6.7	7.7	8.4	8.3	8.9	9.2	9.6	9.8	10.2	10.8	11.1	11.3	11.3	10.2	10.1	9.9	8.9	7.7	11.3	5.3	8.9
Max.	**12.4**	**12.2**	**12.2**	**12.1**	**11.6**	**11.1**	**11.3**	**11.3**	**11.6**	**11.5**	**11.8**	**13.1**	**13.7**	**13.5**	**14.3**	**13.9**	**14.9**	**14.1**	**13.6**	**13.2**	**13.2**	**13.4**	**13.2**	**12.6**	**14.9**		
Min.	**5.9**	**5.5**	**5.7**	**5.9**	**5.5**	**5.2**	**5.4**	**5.6**	**5.9**	**6.7**	**6.7**	**6.4**	**6.4**	**6.3**	**6.2**	**6.3**	**6.4**	**6.7**	**7.0**	**6.8**	**6.8**	**6.8**	**6.5**	**6.1**		**5.2**	
Avg.	**8.3**	**8.3**	**8.2**	**7.9**	**7.7**	**7.6**	**7.9**	**8.2**	**8.7**	**9.0**	**9.3**	**9.6**	**9.8**	**10.0**	**10.2**	**10.3**	**10.2**	**10.2**	**10.0**	**9.6**	**9.4**	**9.3**	**8.9**	**8.6**			**9.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.8	7.2	7.0	6.9	6.6	6.6	8.2	9.5	9.5	9.7	10.9	11.8	12.0	11.4	11.1	12.6	12.5	13.2	12.2	11.5	10.3	10.2	9.9	9.5	13.2	6.6	9.9
2	9.6	9.5	9.2	9.1	9.0	8.9	8.7	9.8	10.2	10.2	10.3	10.8	11.6	11.6	11.7	11.5	11.9	11.9	11.7	12.2	11.4	11.2	10.7	9.9	12.2	8.7	10.5
3	8.9	8.9	10.1	11.1	12.6	11.6	11.8	11.4	9.7	9.3	9.7	10.1	10.7	11.4	11.1	10.8	10.1	10.1	10.2	10.2	9.8	9.6	9.9	9.5	12.6	8.9	10.4
4	9.7	9.4	9.3	9.3	9.3	9.5	9.9	10.2	10.4	10.3	10.5	10.7	10.9	10.6	11.0	11.0	10.6	10.6	11.2	11.0	10.4	10.4	10.9	10.9	11.2	9.3	10.3
5	10.8	10.5	10.1	10.0	10.1	10.0	10.0	10.3	10.8	11.0	11.7	12.0	12.2	11.9	12.1	12.4	12.5	12.9	12.5	11.9	12.1	12.2	11.1	10.5	12.9	10.0	11.3
6	11.1	11.0	11.0	10.5	10.7	10.8	10.6	11.3	11.4	11.7	12.0	12.7	12.6	12.1	11.4	11.2	11.2	11.2	11.7	11.7	11.2	11.0	10.8	10.8	12.7	10.5	11.3
7	10.9	10.8	10.7	10.6	10.6	9.7	8.6	8.6	8.6	8.9	8.9	9.6	10.6	11.3	11.5	11.4	12.0	12.2	11.7	10.8	10.5	10.1	9.9	9.4	12.2	8.6	10.3
8	9.3	9.0	9.1	9.2	9.1	9.2	9.6	9.8	11.5	11.7	12.1	12.3	12.7	13.3	13.7	14.4	12.9	11.6	11.9	11.6	11.5	11.5	10.1	9.8	14.4	9.0	11.1
9	9.8	9.8	9.6	9.6	9.5	9.6	9.6	10.2	11.1	11.9	12.3	12.8	12.9	12.0	11.2	11.1	11.5	12.0	12.1	12.4	12.2	12.1	11.9	11.5	12.9	9.5	11.2
10	11.6	11.7	11.6	11.1	10.8	10.7	10.6	10.6	10.7	10.7	10.5	11.3	11.3	11.7	11.8	11.3	11.0	10.6	10.1	10.0	9.9	9.8	9.8	10.0	11.8	9.8	10.8
11	9.9	9.7	9.6	9.6	9.4	9.1	9.0	9.4	9.8	9.9	10.3	10.6	10.4	11.9	12.1	12.2	12.3	12.1	12.0	11.0	10.3	9.7	9.2	8.8	12.3	8.8	10.3
12	8.3	7.7	8.1	8.0	7.7	7.4	8.0	8.7	10.2	10.9	11.5	12.0	12.7	12.2		11.9		11.4	11.4	11.0	10.7	10.5	10.4	10.3	12.7	7.4	10.0
13	9.9	9.8	9.7	9.5	9.5	9.1	9.1	9.1	9.3	9.4	9.8	10.1	10.2	10.0	9.9	10.1	10.1	10.1	10.0	9.9	9.8	9.7	9.7	9.7	10.2	9.1	9.7
14	9.7	9.7	9.7	9.7	9.6	9.6	9.6	9.9	10.0	10.3	10.3	10.5	10.4	10.6	10.9	11.0	11.1	11.2	11.2	11.2	11.2	10.9	10.6	10.4	11.2	9.6	10.4
15	10.4	10.3	10.2	10.5	10.8	10.2	10.4	10.8	11.6	12.9	14.2	13.5	13.5	13.6	13.0	13.0	13.5	13.1	13.0	13.3	13.5	13.0	12.5	12.5	14.2	10.2	12.2
16	11.8	11.0	10.7	10.8	10.9	10.7	10.8	10.5	10.2	10.2	10.0	10.1	10.3	10.2	10.3	10.4	10.4	10.4	10.5	10.7	10.6	10.5	10.6	10.5	11.8	10.0	10.5
17	10.6	10.5	10.3	10.3	9.8	9.2	9.2	8.6	8.5	8.7	9.7	11.0	11.7	11.2	11.7	11.5	11.4	11.4	11.7	11.9	11.4	11.2	10.8	10.4	11.9	8.5	10.5
18	10.0	9.7	9.4	9.5	9.3	8.8	9.1	9.4	9.8	10.2	11.2	11.7	12.5	13.0	13.2	13.4	13.5	13.6	12.9	12.2	12.1	11.8	11.6	11.5	13.6	8.8	11.2
19	11.5	11.6	11.4	11.1	11.0	10.9	11.0	11.3	11.6	12.7	13.7	14.6	15.6	16.8	17.5	17.5	14.5	15.1	14.5	15.4	15.2	15.2	15.2	14.9	17.5	10.9	13.7
20	14.9	14.5	13.9	13.1	12.4	13.3	13.2	13.3	13.5	13.6	13.5	12.9	11.6	11.6	12.7	12.5	12.4	12.9	11.9	11.2	11.2	11.5	11.5	11.4	14.9	11.2	12.7
21	10.7	9.8	9.6	9.2	9.7	9.8	9.0	8.5	8.8	9.7	10.2	10.4	11.0	11.9	12.4	12.6	11.1	12.1	13.5	12.4	12.5	12.9	12.4	12.4	13.5	8.5	10.9
22	12.0	11.7	11.4	11.4	11.0	9.6	9.1	9.8	10.2	11.1	10.7	10.7	10.6	10.3	10.1	9.8	9.6	9.6	9.7	9.7	9.4	9.3	9.0	8.8	12.0	8.8	10.2
23	8.5	8.5	8.3	8.3	8.1	8.4	8.6	9.5	10.0	10.8	11.0	11.3	12.1	13.5	14.6	12.3	11.6	11.1	11.0	10.8	10.3	9.8	9.1	8.7	14.6	8.1	10.3
24	8.3	8.0	7.8	7.7	7.9	7.7	7.5	7.8	8.1	8.3	8.4	9.0	9.9	10.7	11.1	11.5	11.7	11.7	12.2	12.1	12.7	11.4	10.5	10.7	12.7	7.5	9.7
25	10.7	10.8	10.8	11.2	11.4	11.3	11.1	11.9	12.8	12.9	12.9	15.2	16.1	17.9	18.7	18.3	16.9	16.5	16.1	16.0	14.8	14.0	13.7	12.6	18.7	10.7	13.9
26	12.8	12.3	12.0	11.6	11.2	11.4	13.7	12.8	12.5	12.7	13.7	14.1	14.2	14.6	14.0	13.9	14.3	13.4	11.9	11.1	10.8	10.5	10.3	10.1	14.6	10.1	12.5
27	10.1	9.7	10.1	10.2	9.8	9.9	8.8	8.6	8.6	8.9	9.5	9.9	10.0	10.2	10.6	10.8	11.1	11.1	11.1	11.1	10.6	10.5	10.0	9.8	11.1	8.6	10.0
28	9.4	9.1	9.3	10.5	10.7	10.8	12.1	12.6	13.5	14.2	14.9	15.3	15.1	17.1	17.8	18.2	18.7	19.1	18.7	17.6	17.3	16.7	16.4	16.1	19.1	9.1	14.6
29	17.4	17.4	17.0	16.9	16.6	16.3	16.2	16.4	17.0	17.7	18.2	18.8	19.6	20.4	18.8	16.3	15.5	16.5	15.7	15.1	19.3	19.9	20.1	20.1	20.4	15.1	17.6
30	19.7	18.8	18.6	18.6	18.4	17.5	17.1	16.6	16.9	17.1	16.9	17.6	17.8	17.9	19.1	21.1	21.2	20.5	20.5	20.2	19.8	19.6	19.5	19.4	21.2	16.6	18.8
31	19.4	19.2	20.0	16.4	14.2	15.0	17.3	19.7	19.4	17.2	19.6	20.0	20.7	21.0	20.7	20.2	19.3	19.4	20.0	20.2	20.2	19.3	20.4	19.6	21.0	14.2	19.1
Max.	**19.7**	**19.2**	**20.0**	**18.6**	**18.4**	**17.5**	**17.3**	**19.7**	**19.4**	**17.7**	**19.6**	**20.0**	**20.7**	**21.0**	**20.7**	**21.1**	**21.2**	**20.5**	**20.5**	**20.2**	**20.2**	**19.9**	**20.4**	**20.1**	**21.2**		
Min.	**7.8**	**7.2**	**7.0**	**6.9**	**6.6**	**6.6**	**7.5**	**7.8**	**8.1**	**8.3**	**8.4**	**9.0**	**9.9**	**10.0**	**9.9**	**9.8**	**9.6**	**9.6**	**9.7**	**9.7**	**9.4**	**9.3**	**9.0**	**8.7**		**6.6**	
Avg.	**11.1**	**10.9**	**10.8**	**10.7**	**10.6**	**10.4**	**10.6**	**10.9**	**11.2**	**11.4**	**11.9**	**12.4**	**12.7**	**13.0**	**13.2**	**13.1**	**12.9**	**12.9**	**12.7**	**12.5**	**12.4**	**12.1**	**11.9**	**11.6**			**11.8**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	19.2	18.2	17.2	13.9	11.2	10.8	10.7	11.0	11.2	11.3	11.2	11.1	10.8	10.8	10.9	11.2	11.2	11.7	12.1	12.2	12.1	12.0	11.9	11.9	19.2	10.7	12.3
2	12.0	11.8	11.4	11.0	10.9	10.9	10.9	10.9	11.2	11.4	11.4	11.7	12.1	12.0	12.4	12.0	12.2	12.0	11.7	11.5	11.4	11.2	11.1	11.1	12.4	10.9	11.5
3	11.1	11.1	11.2	11.3	11.1	11.0	10.9	10.9	11.2	11.5	12.1	11.7	11.5	12.0	12.6	12.2	12.5	12.2	11.7	11.4	11.4	11.4	11.4	11.5	12.6	10.9	11.5
4	11.2	11.1	11.2	10.8	10.6	10.2	10.3	10.4	10.8	11.5	11.6	11.6	11.8	11.8	11.4	11.5	11.5	11.5	10.9	10.2	10.0	10.1	10.0	10.0	11.8	10.0	10.9
5	10.2	10.1	10.0	10.0	10.2	10.2	10.1	10.4	10.8	11.5	12.0	11.8	12.4	12.5	12.3	12.6	12.8	13.2	12.8	12.2	12.2	12.1	11.9	10.6	13.2	10.0	11.5
6	11.6	11.6	11.5	11.6	11.2	11.2	10.9	10.7	11.1	11.9	12.9	13.1	13.2	14.0	14.5	14.8	15.1	15.0	14.2	15.5	17.8	17.2	16.5	16.3	17.8	10.7	13.5
7	16.0	15.9	15.3	15.0	14.6	14.5	14.8	14.8	15.1	15.2	15.6	16.4	17.3	18.4	19.3	19.6	19.9	19.6	18.2	16.7	16.4	16.8	16.8	16.5	19.9	14.5	16.6
8	13.2	12.9	12.3	10.5	9.5	9.7	8.9	10.3	12.3	13.7	12.3	12.4	13.0	13.6	13.9	14.2	14.1	14.0	13.6	12.5	12.1	11.7	10.6	10.2	14.2	8.9	12.1
9	9.7	9.2	9.4	8.3	7.9	7.9	7.9	9.4	11.0	11.9	13.4	13.8	14.2	14.0	14.4	14.6	14.9	14.7	13.7	12.9	12.1	11.6	11.1	10.8	14.9	7.9	11.6
10	11.1	11.0	10.9	11.2	11.2	11.2	10.9	11.0	10.9	11.2	11.7	11.9	12.3	12.7	13.1	13.8	14.1	14.1	13.0	12.0	11.9	12.0	11.9	11.8	14.1	10.9	12.0
11	11.8	11.5	11.4	11.2	10.7	10.8	10.8	11.2	11.6	12.1	12.7	12.5	12.8	12.9	13.2	13.2	13.2	13.2	13.1	12.3	10.9	10.3	9.9	10.3	13.2	9.9	11.8
12	9.9	9.9	9.5	10.1	10.1	10.5	10.4	10.6	11.1	12.3	13.4	13.6	13.4	13.6	13.7	14.1	14.0	13.7	13.7	13.4	12.6	12.0	11.6	11.7	14.1	9.5	12.0
13	11.6	11.4	11.3	11.3	11.2	11.4	12.3	13.0	13.1	12.8	13.3	13.3	14.3	14.6	13.6	12.3	12.1	12.0	12.0	12.3	12.4	12.8	13.1	13.2	14.6	11.2	12.5
14	12.3	12.3	12.0	12.1	12.4	12.2	12.1	11.7	11.7	11.7	11.9	12.2	12.6	13.2	13.0	12.6	12.9	13.5	13.4	13.2	12.9	12.5	12.4	12.2	13.5	11.7	12.5
15	12.0	11.8	11.8	11.9	11.7	11.5	11.2	10.9	10.9	10.9	11.0	11.1	11.2	11.3	11.3	11.5	11.5	11.6	12.0	12.1	11.9	11.9	11.6	11.2	12.1	10.9	11.5
16	10.9	10.5	10.2	10.2	10.2	10.3	10.3	10.5	10.8	11.2	11.4	11.1	11.1	11.5	12.3	12.5	12.1	12.3	12.3	12.1	11.4	10.7	10.8	10.6	12.5	10.2	11.1
17	10.5	10.4	10.2	10.0	10.0	10.1	9.8	9.8	9.8	10.4	10.5	10.6	10.3	10.4	10.6	11.2	11.8	12.2	11.9	11.7	11.5	11.3	10.9	10.8	12.2	9.8	10.7
18	10.9	10.9	10.3	9.7	9.5	9.2	8.9	9.5	10.2	10.7	11.5	12.2	12.6	13.2	13.5	14.0	14.3	14.4	14.4	14.3	13.9	13.7	14.1	12.6	14.4	8.9	12.0
19	12.6	12.6	12.1	12.3	11.5	10.7	11.7	11.0	11.4	12.0	12.6	13.5	14.3	15.6	15.8	15.6	15.5	15.8	15.5	14.9	15.9	15.3	15.7	15.9	15.9	10.7	13.7
20	15.7	15.4	15.3	15.6	15.6	15.7	15.3	14.9	14.6	14.6	15.1	15.3	15.8	14.9	14.5	15.1	16.2	16.4	15.4	15.0	15.7	15.7	15.4	15.3	16.4	14.5	15.3
21	15.2	14.9	14.6	14.7	14.6	14.4	14.7	14.5	13.7	13.6	13.4	13.3	12.4	12.5	13.3	13.7	13.3	13.1	12.4	11.3	11.0	11.4	11.1	10.8	15.2	10.8	13.2
22	11.1	11.0	10.6	10.5	10.5	10.4	10.5	10.7	11.1	11.7	12.0	12.6	12.9	12.6	13.5	13.6	12.9	11.6	12.1	12.1	12.0	11.2	12.9	13.3	13.6	10.4	11.8
23	12.9	13.0	12.7	12.6	12.7	12.9	12.9	12.7	12.6	13.0	13.6	13.7	13.4	13.1	12.8	12.3	12.1	12.1	12.1	12.1	11.8	11.5	11.0	11.3	13.7	11.0	12.5
24	11.3	10.4	10.2	9.7	10.1	10.2	10.8	11.4	12.2	14.0	15.0	15.7	15.7	16.3	16.6	17.0	17.4	17.4	16.8	16.5	16.4	15.0	13.3	12.4	17.4	9.7	13.8
25	12.2	12.1	12.3	12.1	11.9	11.9	11.7	11.6	11.4	11.3	11.3	11.4	12.0	11.7	11.6	11.7	11.9	11.9	11.8	11.6	11.7	11.9	11.9	12.0	12.3	11.3	11.8
26	12.1	12.1	11.7	11.1	11.0	11.5	12.1	11.3	11.4	11.7	12.4	12.8	13.0	13.1	13.3	12.9	12.9	13.3	12.3	12.1	11.9	11.5	11.0	10.8	13.3	10.8	12.1
27	10.8	10.5	10.5	10.2	9.2	9.8	9.8	9.9	10.3	11.3	12.0	12.6	13.1	14.1	14.3	14.6	15.0	15.1	13.7	13.6	13.6	13.1	12.9	12.9	15.1	9.2	12.2
28	12.9	13.1	12.6	12.2	12.0	11.1	10.9	10.9	11.6	12.1	12.3	12.7	13.4	13.9	13.5	14.7	15.1	15.4	14.6	14.4	14.1	13.9	13.8	13.8	15.4	10.9	13.1
29	13.8	13.8	11.8	12.7	12.6	12.1	11.6	11.8	12.6	13.0	13.7	15.0	16.2	16.7	17.3	17.1	17.0	16.6	15.2	14.7	14.4	14.1	13.7	13.4	17.3	11.6	14.2
30	13.3	13.0	13.0	12.8	12.4	11.6	10.3	10.2	10.6	11.3	12.3	13.1	12.4	11.9	11.6	12.0	12.2	11.9	11.7	12.0	12.3	12.0	11.7	11.5	13.3	10.2	12.0
31	11.3	11.5	11.2	10.8	10.5	9.7	9.7	9.6	9.9	10.1	10.3	10.5	10.7	11.1	11.1	11.0	11.1	11.2	11.7	12.3	12.0	12.1	12.1	12.3	12.3	9.6	11.0
Max.	**19.2**	**18.2**	**17.2**	**15.6**	**15.6**	**15.7**	**15.3**	**14.9**	**15.1**	**15.2**	**15.6**	**16.4**	**17.3**	**18.4**	**19.3**	**19.6**	**19.9**	**19.6**	**18.2**	**16.7**	**17.8**	**17.2**	**16.8**	**16.5**	**19.9**		
Min.	**9.7**	**9.2**	**9.4**	**8.3**	**7.9**	**7.9**	**7.9**	**9.4**	**9.8**	**10.1**	**10.3**	**10.5**	**10.3**	**10.4**	**10.6**	**11.0**	**11.1**	**11.2**	**10.9**	**10.2**	**10.0**	**10.1**	**9.9**	**10.0**		**7.9**	
Avg.	**12.3**	**12.1**	**11.8**	**11.5**	**11.2**	**11.1**	**11.1**	**11.2**	**11.6**	**12.0**	**12.4**	**12.7**	**13.0**	**13.2**	**13.4**	**13.5**	**13.6**	**13.6**	**13.2**	**12.9**	**12.8**	**12.6**	**12.4**	**12.2**			**12.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	12.4	12.3	11.2	10.8	11.5	11.3	10.6	10.6	10.9	10.4	10.2	10.4	10.6	10.8	11.1	11.0	10.9	10.8	10.9	10.7	10.8	10.8	10.6	10.6	12.4	10.2	10.9
2	10.3	10.1	10.3	10.5	10.6	10.8	10.5	10.4	10.4	10.3	10.0	10.1	10.4	10.6	10.7	10.8	10.8	10.6	10.5	10.2	9.9	10.0	10.0	9.6	10.8	9.6	10.3
3	9.4	9.7	9.8	10.2	10.3	10.3	10.1	10.2	10.3	9.8	9.6	9.9	9.9	9.7	9.8	9.7	10.0	10.5	10.6	10.8	10.4	9.9	10.2	9.9	10.8	9.4	10.0
4	9.5	9.3	9.1	8.8	9.2	9.1	9.0	9.0	9.5	10.0	10.6	11.2	11.6	11.5	11.6	11.7	11.8	11.7	11.4	10.9	10.1	9.0	9.0	9.0	11.8	8.8	10.1
5	8.5	8.5	8.7	8.6	8.1	8.0	7.8	7.9	8.4	9.4	10.0	10.1	10.1	10.3	10.1	10.1	9.7	9.4	9.0	8.6	8.3	8.1	7.8	7.9	10.3	7.8	8.9
6	8.8	8.9	9.4	9.7	9.5	9.5	9.8	10.2	10.9	11.4	11.7	11.3	10.5	10.2	10.1	10.3	10.4	10.4	10.4	10.3	10.2	10.5	10.4	10.2	11.7	8.8	10.2
7	10.4	11.0	11.5	11.5	11.5	12.1	11.7	11.0	11.2	11.4	10.8	10.3	11.1	10.6	10.6	10.7	10.9	11.4	10.9	10.3	10.0	9.9	9.8	9.8	12.1	9.8	10.9
8	9.8	9.8	9.7	9.6	9.5	9.3	9.4	9.3	9.3	9.6	10.0	10.3	10.7	11.3	10.7	9.9	9.7	9.8	9.7	9.6	9.5	9.4	9.4	9.2	11.3	9.2	9.8
9	9.1	9.1	9.2	9.7	10.1	9.9	10.3	10.6	10.4	10.3	10.5	10.7	11.2	11.7	10.7	10.8	10.4	10.4	10.4	10.5	10.3	10.4	10.3	10.1	11.7	9.1	10.3
10	10.0	9.9	9.8	10.1	9.8	9.5	9.2	8.9	8.9	9.2	9.5	9.9	10.7	10.8	11.0	12.2	1.3	12.1	12.9	12.3	11.5	11.6	11.4	12.0	12.9	1.3	10.2
11	12.1	12.6	12.1	11.8	11.9	12.0	11.8	11.4	12.1	11.8	11.7	12.1	12.1	12.1	12.3	12.6	11.7	11.4	11.1	11.3	11.2	10.6	10.5	10.4	12.6	10.4	11.7
12	10.8	10.4	10.3	10.1	9.5	9.4	9.4	9.3	9.1	9.0	8.9	8.8	9.1	9.3	9.4	9.7	9.8	10.1	10.4	10.4	10.4	10.4	10.5	10.9	10.9	8.8	9.8
13	10.8	10.9	10.7	10.6	10.5	10.4	10.4	10.4	10.3	10.3	10.3	10.1	10.0	9.7	9.4	9.3	9.2	9.0	9.0	8.9	8.8	8.9	8.9	8.9	10.9	8.8	9.8
14	9.1	9.4	9.7	9.7	9.9	9.0	8.6	8.6	8.6	8.9	9.2	9.1	8.8	8.9	9.0	9.1	9.2	9.2	9.0	8.9	8.7	8.7	8.5	8.6	9.9	8.5	9.0
15	8.6	8.8	8.8	9.3	9.4	9.5	9.6	9.8	9.4	9.6	10.1	10.3	10.3	10.4	10.5	10.4	10.2	9.9	9.5	9.9	9.9	10.1	9.3	9.6	10.5	8.6	9.7
16	10.1	9.3	8.8	8.7	8.8	8.6	8.4	8.4	8.5	8.6	8.8	9.3	10.2	11.2	11.8	12.9	13.2	12.9	12.2	11.4	11.0	10.9	11.3	10.9	13.2	8.4	10.3
17	10.8	10.9	10.9	11.2	10.9	10.2	10.0	9.8	9.7	10.1	10.7	10.5	10.7	10.4	10.4	9.8	8.8	7.8	7.6	7.5	7.5	7.6	7.5	7.5	11.2	7.5	9.5
18	7.3	7.1	7.1	7.1	7.2	7.2	7.4	7.6	8.3	9.1	9.1	9.8	10.3	9.2	8.7	8.3	7.6	7.2	7.1	7.7	8.7	8.6	8.6	8.8	10.3	7.1	8.1
19	8.8	8.2	8.4	8.3	7.9	7.8	7.9	7.8	7.7	7.7	8.2	8.2	8.6	9.2	9.7	10.5	10.7	10.0	9.8	9.3	9.1	9.0	9.0	9.0	10.7	7.7	8.8
20	8.9	8.8	8.9	8.7	8.6	8.6	8.6	8.4	8.4	8.6	8.7	8.6	7.9	8.1	8.3	8.4	8.7	9.0	8.5	7.5	6.9	6.5	7.0	6.2	9.0	6.2	8.2
21	6.9	7.3	7.8	7.6	7.7	7.5	7.5	7.4	5.6	7.0	7.9	8.9	10.0	11.2	11.6	11.6	11.5	10.4	9.7	9.5	9.2	8.3	8.0	7.8	11.6	5.6	8.7
22	7.7	7.8	7.6	7.6	7.2	7.2	6.8	5.9	7.1	6.4	7.0	7.9	8.8	9.4	9.7	10.1	9.9	9.5	9.2	8.6	8.3	7.4	6.4	6.0	10.1	5.9	7.9
23	5.7	5.8	5.4	5.4	5.4	5.4	5.4	5.3	5.4	5.6	5.9	6.2	6.6	7.0	7.0	7.4	7.7	7.9	8.0	8.1	7.7	7.3	7.1	6.9	8.1	5.3	6.5
24	6.7	6.6	6.5	6.5	6.3	6.8	6.7	6.8	6.8	6.8	7.0	6.9	7.0	7.1	7.3	7.4	7.4	7.3	7.1	6.9	6.9	6.8	6.9	7.2	7.4	6.3	6.9
25	7.2	7.3	7.0	7.2	7.1	7.7	7.6	7.3	7.1	7.2	7.1	7.0	7.2	7.3	7.5	7.7	7.9	7.8	7.7	7.4	7.3	7.4	7.5	7.6	7.9	7.0	7.4
26	7.7	7.5	7.4	7.2	7.2	7.1	7.0	6.9	7.1	7.5	8.0	9.0	9.6	10.0	10.2	10.5	10.5	10.1	9.3	8.3	7.1	7.1	6.0	6.2	10.5	6.0	8.1
27	6.3	6.4	6.1	6.0	6.0	5.9	5.7	5.5	5.3	6.2	7.0	7.7	8.7	9.4	10.6	10.8	10.9	10.7	8.8	8.6	10.7	10.6	10.6	11.0	11.0	5.3	8.2
28	10.8	10.8	10.4	9.9	9.6	9.4	9.2	7.4	6.4	7.2	8.0	8.4	9.3	10.0	10.2	10.3	10.2	9.7	9.0	8.1	7.6	7.6	7.2	7.1	10.8	6.4	8.9
29	7.3	7.4	7.3	7.3	7.2	7.3	7.1	7.0	6.9	6.9	7.3	7.8	8.2	8.5	8.7	8.8	9.0	8.7	7.7	7.1	6.6	6.4	6.0	5.6	9.0	5.6	7.4
30	5.3	4.7	4.5	4.4	6.0	5.4	5.2	3.6	3.8	5.6	7.0	8.4	9.2	9.8	10.1	10.4	10.4	9.9	9.2	8.9	8.4	8.1	6.8	5.4	10.4	3.6	7.1
Max.	**12.4**	**12.6**	**12.1**	**11.8**	**11.9**	**12.1**	**11.8**	**11.4**	**12.1**	**11.8**	**11.7**	**12.1**	**12.1**	**12.1**	**12.3**	**12.9**	**13.2**	**12.9**	**12.9**	**12.3**	**11.5**	**11.6**	**11.4**	**12.0**	**13.2**		
Min.	**5.3**	**4.7**	**4.5**	**4.4**	**5.4**	**5.4**	**5.2**	**3.6**	**3.8**	**5.6**	**5.9**	**6.2**	**6.6**	**7.0**	**7.0**	**7.4**	**1.3**	**7.2**	**7.1**	**6.9**	**6.6**	**6.4**	**6.0**	**5.4**		**1.3**	
Avg.	**8.9**	**8.9**	**8.8**	**8.8**	**8.8**	**8.7**	**8.6**	**8.4**	**8.5**	**8.7**	**9.0**	**9.3**	**9.6**	**9.8**	**10.0**	**10.1**	**9.7**	**9.8**	**9.6**	**9.3**	**9.1**	**8.9**	**8.7**	**8.7**			**9.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.6	3.9	3.7	3.8	3.8	3.6	3.5	3.7	4.0	5.6	6.3	7.4	8.0	9.1	9.0	8.0	7.6	7.7	7.4	7.0	6.8	6.6	6.4	6.2	9.1	3.5	6.0
2	5.5	5.5	5.7	5.2	4.3	3.5	3.8	3.3	2.8	4.6	5.6	6.4	7.6	9.3	9.9	10.2	9.9	9.4	8.8	8.2	8.0	7.6	6.6	4.8	10.2	2.8	6.5
3	4.5	4.7	4.5	4.4	4.4	3.8	4.0	4.1	4.0	3.7	3.7	4.5	4.7	5.1	5.1	5.4	5.3	5.0	4.5	4.4	4.4	4.5	4.3	4.2	5.4	3.7	4.5
4	4.0	3.4	2.3	1.6	1.5	1.5	1.4	1.4	1.4	2.4	3.3	4.0	4.9	5.4	5.9	6.6	6.4	5.9	5.4	5.0	4.9	4.9	4.1	3.6	6.6	1.4	3.8
5	3.3	3.2	3.0	3.0	2.9	2.9	2.8	2.7	2.6	2.8	3.8	4.4	4.7	4.8	5.1	5.1	5.4	4.8	2.5	1.4	1.7	1.1	0.6	0.1	5.4	0.1	3.1
6	-0.3	-0.4	-0.5	-0.8	-0.9	-0.7	-0.6	-0.5	-0.8	1.0	2.3	3.2	3.5	4.1	3.9	4.5	4.0	3.3	2.7	2.4	2.3	2.2	2.2	2.2	4.5	-0.9	1.6
7	2.2	2.0	2.1	2.0	1.6	1.2	1.2	1.0	0.8	0.8	0.9	1.4	1.9	2.6	2.8	2.4	2.3	2.2	1.9	1.5	1.1	1.0	1.0	0.6	2.8	0.6	1.6
8	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.1	0.3	0.6	1.2	2.2	1.9	2.8	3.9	3.7	3.8	2.9	1.2	1.1	1.3	1.1	1.0	1.8	3.9	0.1	1.4
9	2.2	2.3	2.4	2.4	2.5	2.1	1.2	0.4	0.6	0.7	0.7	0.7	0.7	1.4	2.1	2.3	3.1	3.7	4.0	4.5	4.9	5.3	5.5	6.0	6.0	0.4	2.6
10	6.3	6.4	6.6	6.5	5.8	5.7	6.7	6.3	6.9	7.3	8.1	8.1	8.8	8.6	8.6	8.4	8.5	8.1	8.4	7.8	6.7	6.8	7.4	8.1	8.8	5.7	7.4
11	8.4	8.6	8.3	8.3	8.3	8.4	8.3	8.3	8.4	8.3	8.4	8.2	7.1	6.8	6.2	5.9	5.6	5.7	4.8	3.6	2.7	2.5	2.1	1.9	8.6	1.9	6.5
12	1.6	1.4	1.2	1.1	0.8	0.9	0.9	0.5	0.5	0.4	0.5	0.3	0.4	1.0	1.0	0.9	0.8	0.8	0.9	0.4	-0.2	-0.5	-0.8	-0.5	1.6	-0.8	0.6
13	-0.3	-0.8	-1.1	-0.9	-1.0	-0.7	-1.7	-1.4	-2.2	-2.1	-1.9	-1.1	-0.3	1.0	1.9	2.1	1.2	0.7	0.8	0.8	0.8	1.0	0.5	0.2	2.1	-2.2	-0.2
14	0.0	0.1	0.4	0.6	0.6	0.7	0.5	0.5	0.4	0.4	0.5	0.7	1.1	1.4	1.7	1.9	2.0	2.0	1.6	1.3	0.7	0.7	0.9	1.0	2.0	0.0	0.9
15	1.3	1.6	1.8	1.8	1.6	1.7	1.7	1.8	1.8	1.8	2.2	2.6	3.1	3.8	4.5	4.9	5.0	4.9	4.5	3.8	3.4	3.1	2.7	2.9	5.0	1.3	2.8
16	2.9	2.6	2.9	3.3	3.5	3.2	3.2	3.2	3.0	2.8	2.9	3.4	3.7	4.5	4.9	5.0	4.9	4.5	4.0	3.4	2.9	2.5	2.0	1.5	5.0	1.5	3.4
17	1.1	1.1	0.7	1.2	1.1	0.7	0.2	-0.2	-0.1	0.3	1.0	1.3	1.9	2.7	4.3	5.2	5.2	5.0	4.6	4.1	3.9	4.0	3.8	3.9	5.2	-0.2	2.4
18	4.1	4.1	3.6	3.8	4.0	4.0	3.8	3.8	3.8	3.9	4.4	5.1	6.2	6.6	7.1	7.2	7.1	7.0	6.7	6.3	5.8	5.5	5.3	5.3	7.2	3.6	5.2
19	5.5	3.8	2.7	2.7	2.3	2.0	2.0	2.4	2.5	2.9	3.3	4.1	4.9	5.4	5.9	5.9	5.8	5.7	5.3	4.2	4.1	3.8	3.5	3.2	5.9	2.0	3.9
20	2.9	2.6	2.5	2.5	2.2	2.2	2.7	2.8	3.1	3.2	3.3	2.9	2.9	3.7	3.5	2.9	2.4	1.6	0.8	0.4	0.8	0.8	1.1	0.4	3.7	0.4	2.3
21	0.4	0.5	0.9	0.7	0.9	0.8	1.2	0.8	0.0	0.1	0.5	0.5	0.9	1.1	1.4	1.4	1.3	0.8	0.4	0.1	-0.1	0.0	0.2	-0.2	1.4	-0.2	0.6
22	-0.6	-0.8	-1.5	-2.0	-2.7	-3.2	-3.3	-3.1	-3.5	-3.5	-2.9	-2.5	-2.1	-1.7	-1.8	-2.1	-1.0	-1.7	-2.5	-3.5	-3.2	-3.7	-3.4	-2.6	-0.6	-3.7	-2.5
23	-0.8	-0.4	-0.5	-0.8	-1.4	-2.7	-3.2	-2.5	-2.3	-2.3	-1.7	-1.4	-0.3	0.0	0.0	-0.1	-0.2	-2.2	-4.1	-4.7	-4.6	-4.5	-4.3	-3.9	0.0	-4.7	-2.0
24	-3.9	-4.1	-4.1	-4.4	-4.3	-4.4	-4.6	-4.8	-5.2	-6.0	-6.0	-5.1	-3.9	-3.5	-3.2	-3.0	-3.3	-3.2	-3.2	-3.6	-3.4	-3.7	-3.6	-4.2	-3.0	-6.0	-4.1
25	-3.6	-4.0	-3.6	-3.4	-4.2	-4.4	-4.3	-4.2	-3.9	-3.5	-3.1	-2.3	-1.2	-0.8	-1.2	-0.8	-0.5	-0.4	-0.7	-1.0	-1.2	-1.3	-1.4	-1.2	-0.4	-4.4	-2.3
26	-0.7	-0.5	-0.5	0.0	-0.3	0.3	-0.7	-1.1	-2.3	-3.6	-3.0	-0.7	1.2	2.2	1.1	1.1	2.3	1.4	0.5	-0.3	-1.1	-1.6	-2.2	-2.3	2.3	-3.6	-0.5
27	-2.5	-2.7	-3.5	-3.9	-3.9	-4.1	-4.5	-5.1	-5.1	-5.6	-4.8	-4.2	-3.9	-3.4	-3.0	-3.0	-2.4	-3.6	-4.4	-4.5	-5.1	-5.3	-6.1	-6.0	-2.4	-6.1	-4.2
28	-5.5	-5.8	-5.6	-5.6	-5.7	-5.8	-6.4	-6.3	-6.3	-6.6	-5.0	-3.4	-2.4	-1.7	-1.5	-1.2	0.8	-1.2	-3.5	-3.5	-4.0	-4.5	-4.5	-4.4	0.8	-6.6	-4.2
29	-4.3	-4.6	-4.8	-4.9	-4.6	-5.2	-5.1	-5.1	-5.0	-4.8	-3.3	-2.2	-0.7	0.2	0.9	1.3	1.5	1.3	1.0	-0.2	-1.1	-1.4	-1.1	-1.1	1.5	-5.2	-2.2
30	-1.0	-0.9	-0.7	-0.3	-0.2	0.0	0.1	-0.1	0.3	0.2	0.7	0.7	0.7	1.3	1.6	2.0	2.1	2.0	1.1	0.5	-0.7	-1.4	-2.0	-2.5	2.1	-2.5	0.1
31	-2.7	-2.8	-2.6	-2.1	-2.3	-2.5	-2.7	-2.6	-3.1	-3.2	-2.4	-1.8	-1.1	-0.2	0.5	0.9	1.8	0.7	0.2	0.0	-0.3	-0.8	-1.8	-2.5	1.8	-3.2	-1.4
Max.	**8.4**	**8.6**	**8.3**	**8.3**	**8.3**	**8.4**	**8.3**	**8.3**	**8.4**	**8.3**	**8.4**	**8.2**	**8.8**	**9.3**	**9.9**	**10.2**	**9.9**	**9.4**	**8.8**	**8.2**	**8.0**	**7.6**	**7.4**	**8.1**	**10.2**		
Min.	**-5.5**	**-5.8**	**-5.6**	**-5.6**	**-5.7**	**-5.8**	**-6.4**	**-6.3**	**-6.3**	**-6.6**	**-6.0**	**-5.1**	**-3.9**	**-3.5**	**-3.2**	**-3.0**	**-3.3**	**-3.6**	**-4.4**	**-4.7**	**-5.1**	**-5.3**	**-6.1**	**-6.0**		**-6.6**	
Avg.	**1.1**	**1.0**	**0.9**	**0.8**	**0.7**	**0.5**	**0.4**	**0.3**	**0.2**	**0.4**	**1.0**	**1.5**	**2.1**	**2.7**	**3.0**	**3.1**	**3.2**	**2.7**	**2.1**	**1.6**	**1.4**	**1.2**	**1.0**	**0.9**			**1.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-2.4	-2.1	-2.3	-1.4	-1.4	-1.6	-1.8	-1.8	-1.7	-2.6	-2.5	-1.3	-0.1	0.4	1.9	2.6	2.5	2.6	2.5	2.4	1.5	0.5	-0.4	-0.8	2.6	-2.6	-0.3
2	1.3	0.9	1.5	1.6	1.5	1.3	1.2	0.8	0.2	-0.3	-0.8	-1.2	-1.5	-2.1	-2.4	-2.4	-2.9	-3.3	-3.5	-3.4	-4.0	-4.5	-4.7	-4.8	1.6	-4.8	-1.3
3	-5.0	-5.4	-5.6	-5.8	-5.8	-5.9	-6.2	-6.2	-6.3	-6.4	-6.7	-6.0	-5.5	-5.1	-5.3	-5.2	-4.9	-4.9	-5.1	-5.1	-5.1	-5.0	-5.1	-5.0	-4.9	-6.7	-5.5
4	-5.1	-5.0	-4.9	-4.7	-4.5	-4.9	-5.0	-4.8	-5.1	-5.1	-4.8	-4.6	-4.3	-3.7	-3.4	-3.6	-3.9	-3.7	-3.8	-3.8	-3.7	-3.7	-4.2	-4.3	-3.4	-5.1	-4.4
5	-4.3	-4.3	-4.1	-3.8	-3.6	-3.4	-3.1	-2.8	-2.2	-1.9	-1.1	-0.4	1.8	3.0	3.0	3.0	3.0	2.5	2.1	2.0	1.8	1.7	2.0	2.0	3.0	-4.3	-0.3
6	2.0	1.9	1.9	1.9	2.0	2.5	2.5	2.4	2.5	2.5	2.7	3.2	3.6	4.3	4.9	4.1	3.4	3.7	3.8	3.8	3.7	3.4	3.7	3.7	4.9	1.9	3.1
7	3.6	2.4	2.5	2.3	1.5	1.1	0.8	0.3	-1.7	-2.4	-2.8	-2.4	-2.0	-1.3	-1.6	-1.6	-0.2	-0.8	-1.8	-2.6	-3.0	-2.2	-2.4	-2.4	3.6	-3.0	-0.7
8	-1.7	-1.6	-2.6	-2.9	-3.2	-3.1	-3.0	-3.2	-2.8	-2.1	-1.4	-0.6	0.2	0.7	0.9	0.8	0.7	0.5	0.4	0.3	0.3	0.7	0.8	0.9	0.9	-3.2	-0.9
9	0.9	0.5	0.2	0.3	0.3	0.8	0.7	0.6	0.5	0.3	0.2	0.2	0.3	0.4	0.6	0.6	0.6	0.6	0.7	0.7	0.9	1.1	1.4	1.8	1.8	0.2	0.6
10	3.0	3.4	3.3	3.2	3.5	3.6	3.6	4.4	4.4	3.2	2.0	1.1	1.0	1.6	3.3	3.9	3.5	4.3	4.0	2.6	1.2	2.4	2.5	2.7	4.4	1.0	3.0
11	2.4	2.5	2.8	2.9	2.7	2.4	2.1	1.9	1.0	1.4	1.5	1.2	1.0	0.9	0.9	1.0	1.1	1.2	1.9	1.6	2.0	1.7	1.6	1.6	2.9	0.9	1.7
12	1.3	1.1	1.0	0.6	0.4	0.1	-0.3	-0.5	-0.5	-0.6	-0.2	-0.2	0.1	0.1	0.1	0.0	0.0	0.0	-0.1	-0.2	-0.6	-1.3	-1.6	-2.0	1.3	-2.0	-0.1
13	-1.7	-2.3	-2.3	-2.2	-1.9	-1.8	-2.2	-1.3	-0.9	-0.4	0.1	-0.4	0.1	0.2	0.4	0.7	1.0	0.9	0.7	0.5	0.4	0.3	0.4	0.6	1.0	-2.3	-0.5
14	0.3	0.0	0.3	0.1	-0.3	0.2	0.0	-0.8	-1.3	-1.5	-1.1	-1.5	-1.3	-0.9	-0.4	0.1	-0.2	-0.2	0.1	0.0	0.2	0.7	0.2	-0.1	0.7	-1.5	-0.3
15	0.2	-0.1	-0.4	-0.5	-0.8	-0.8	-0.6	-0.7	-0.5	-1.6	-2.0	-1.7	-1.7	-0.8	-0.1	0.6	0.1	-0.4	-0.3	0.9	1.1	1.0	0.8	1.1	1.1	-2.0	-0.3
16	1.0	1.0	0.8	1.0	0.9	1.2	1.4	0.4	0.2	0.3	0.3	0.3	0.5	0.4	0.4	0.8	0.4	0.2	0.2	-0.1	-0.2	-0.3	-0.4	-1.7	1.4	-1.7	0.4
17	-2.4	-2.8	-3.3	-3.5	-3.5	-3.6	-3.7	-4.2	-4.4	-4.5	-4.5	-3.6	-3.2	-2.6	-2.6	-2.4	-2.4	-2.7	-2.9	-3.5	-3.7	-4.2	-4.8	-5.3	-2.4	-5.3	-3.5
18	-5.5	-5.6	-5.6	-5.7	-5.6	-5.3	-5.0	-4.6	-4.5	-4.8	-4.8	-4.1	-3.8	-3.2	-3.0	-2.9	-3.0	-3.4	-4.0	-4.4	-4.8	-5.1	-5.5	-5.9	-2.9	-5.9	-4.6
19	-5.8	-6.2	-6.3	-6.3	-6.3	-6.3	-6.4	-6.2	-6.4	-6.5	-6.3	-6.1	-5.7	-5.1	-5.3	-5.4	-5.4	-5.5	-5.6	-5.6	-5.4	-5.7	-5.3	-5.2	-5.1	-6.5	-5.8
20	-5.2	-5.3	-5.5	-6.3	-6.8	-6.2	-6.3	-6.7	-6.5	-6.5	-6.2	-6.6	-6.8	-6.9	-7.3	-7.6	-8.1	-8.8	-9.1	-9.7	-10.5	-10.4	-10.3	-10.3	-5.2	-10.5	-7.5
21	-10.4	-10.4	-10.5	-10.7	-11.3	-11.3	-11.3	-11.5	-11.8	-12.1	-11.8	-11.4	-10.9	-11.0	-10.9	-11.0	-11.0	-11.3	-12.0	-11.9	-11.6	-11.2	-10.2	-9.6	-9.6	-12.1	-11.1
22	-8.7	-8.3	-7.5	-7.4	-7.3	-7.5	-7.2	-7.0	-7.6	-7.9	-7.7	-6.8	-6.6	-6.2	-5.9	-5.7	-5.8	-6.4	-6.8	-6.9	-6.6	-6.2	-5.7	-5.2	-5.2	-8.7	-6.9
23	-4.9	-4.9	-4.9	-5.0	-4.7	-4.6	-4.5	-4.7	-4.0	-4.0	-3.5	-3.5	-3.3	-2.8	-2.3	-2.0	-1.7	-1.2	-1.1	-1.3	-1.4	-0.6	0.2	0.4	0.4	-5.0	-2.9
24	0.6	0.7	0.9	1.4	1.6	1.4	1.5	1.6	1.7	1.7	1.6	1.7	1.3	1.3	1.6	1.5	1.8	2.1	1.9	2.1	2.0	2.1	2.3	2.0	2.3	0.6	1.6
25	1.5	0.2	-0.6	-0.7	-1.4	-2.4	-3.0	-2.6	-2.8	-3.3	-2.9	-3.3	-4.2	-5.1	-6.3	-6.4	-7.3	-7.6	-8.2	-8.5	-8.9	-9.2	-8.9	-8.9	1.5	-9.2	-4.6
26	-9.4	-9.3	-8.9	-8.7	-8.7	-8.9	-9.1	-9.0	-8.9	-8.9	-8.7	-8.7	-8.2	-7.6	-7.4	-7.2	-7.7	-7.9	-8.1	-8.3	-8.4	-8.7	-8.8	-8.9	-7.2	-9.4	-8.5
27	-9.3	-9.1	-8.7	-8.7	-8.7	-8.8	-8.6	-7.5	-7.2	-7.2	-6.8	-6.3	-5.3	-4.8	-4.1	-3.4	-3.3	-3.9	-3.6	-1.8	0.9	0.6	0.2	0.4	0.9	-9.3	-5.2
28	0.3	1.0	0.8	1.4	2.1	2.0	2.7	2.7	2.3	2.1	1.7	3.2	3.2	2.2	2.5	1.4	1.1	1.2	0.9	0.2	-0.2	-0.8	-1.0	-1.0	3.2	-1.0	1.3
29	-1.3	-1.0	-1.7	-1.9	-2.6	-3.2	-3.9	-4.6	-5.3	-5.9	-6.4	-6.9	-7.0	-7.2	-7.6	-7.8	-8.1	-8.4	-8.6	-8.8	-8.8	-9.0	-9.0	-8.8	-1.0	-9.0	-6.0
30	-9.1	-9.3	-10.0	-10.3	-10.1	-9.7	-9.5	-9.6	-9.9	-9.9	-10.0	-10.0	-10.1	-9.4	-8.9	-8.9	-8.7	-8.2	-8.3	-7.7	-7.9	-7.9	-7.7	-8.0	-7.7	-10.3	-9.1
Max.	**3.6**	**3.4**	**3.3**	**3.2**	**3.5**	**3.6**	**3.6**	**4.4**	**4.4**	**3.2**	**2.7**	**3.2**	**3.6**	**4.3**	**4.9**	**4.1**	**3.5**	**4.3**	**4.0**	**3.8**	**3.7**	**3.4**	**3.7**	**3.7**	**4.9**		
Min.	**-10.4**	**-10.4**	**-10.5**	**-10.7**	**-11.3**	**-11.3**	**-11.3**	**-11.5**	**-11.8**	**-12.1**	**-11.8**	**-11.4**	**-10.9**	**-11.0**	**-10.9**	**-11.0**	**-11.0**	**-11.3**	**-12.0**	**-11.9**	**-11.6**	**-11.2**	**-10.3**	**-10.3**		**-12.1**	
Avg.	**-2.5**	**-2.6**	**-2.7**	**-2.7**	**-2.7**	**-2.8**	**-2.8**	**-2.8**	**-3.0**	**-3.2**	**-3.1**	**-2.9**	**-2.6**	**-2.3**	**-2.1**	**-2.1**	**-2.2**	**-2.3**	**-2.5**	**-2.6**	**-2.6**	**-2.7**	**-2.7**	**-2.7**			**-2.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 2 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-7.8	-7.6	-7.3	-8.3	-6.3	-7.4	-7.4	-7.3	-7.6	-7.4	-7.1	-6.9	-6.5	-5.5	-5.1	-5.1	-5.3	-5.1	-5.3	-5.3	-5.4	-5.4	-5.3	-5.1	-5.1	-8.3	-6.4
2	-5.2	-5.3	-4.9	-4.7	-4.7	-4.6	-4.4	-3.8	-3.2	-3.0	-2.9	-1.9	-1.8	-2.2	-1.3	-1.0	-0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.4	0.4	-5.3	-2.3
3	0.5	1.1	1.0	1.9	2.0	2.3	2.5	2.1	1.4	1.1	1.1	1.9	1.8	0.9	0.9	1.0	1.0	1.6	1.7	2.0	2.2	2.5	2.5	2.9	2.9	0.5	1.7
4	2.2	1.8	2.1	3.1	3.8	4.0	3.8	3.1	3.1	3.3	3.6	3.9	3.5	3.3	3.2	3.2	3.1	3.6	2.9	3.0	2.9	2.8	3.4	3.3	4.0	1.8	3.2
5	2.8	2.5	2.9	3.0	2.6	2.8	3.0	3.2	3.6	2.6	3.1	5.4	5.0	4.9	5.0	4.8	4.9	5.0	4.9	5.0	4.9	5.0	5.0	4.8	5.4	2.5	4.0
6	4.3	4.2	4.3	3.9	3.8	3.6	3.5	4.0	4.1	4.5	4.3	4.2	3.8	3.5	2.6	2.3	2.1	1.9	1.9	2.1	2.2	2.3	2.1	1.5	4.5	1.5	3.2
7	1.3	0.9	1.3	1.1	1.0	1.5	2.3	3.1	2.3	1.8	1.5	1.3	1.9	2.2	1.2	1.0	1.3	0.9	1.2	0.8	0.8	0.8	0.8	2.1	3.1	0.8	1.4
8	2.5	3.1	3.2	2.9	2.9	3.1	2.9	2.8	2.5	2.9	2.0	0.3	1.1	1.7	2.0	1.6	1.1	0.5	0.4	1.2	2.0	1.6	0.8	0.9	3.2	0.3	1.9
9	1.4	1.9	2.2	2.4	2.5	2.8	2.2	1.1	0.6	0.2	0.2	0.4	0.5	0.5	0.6	0.6	0.5	0.3	0.4	0.4	0.0	-0.7	0.1	-0.4	2.8	-0.7	0.9
10	-0.7	-0.1	0.7	1.2	1.1	0.8	0.3	-0.4	-1.3	-1.4	-1.8	-2.4	-2.7	-2.9	-3.3	-3.3	-3.2	-3.4	-3.7	-3.5	-3.1	-3.2	-3.2	-3.3	1.2	-3.7	-1.8
11	-3.4	-3.3	-3.3	-3.4	-3.5	-2.5	-2.7	-2.6	-3.1	-2.4	-2.5	-2.2	-1.8	-2.0	-2.4	-2.4	-2.6	-2.6	-2.9	-3.3	-4.4	-4.0	-3.6	-4.1	-1.8	-4.4	-3.0
12	-4.1	-4.3	-4.3	-4.1	-4.2	-4.3	-4.4	-5.8	-6.5	-6.8	-7.0	-6.6	-5.9	-5.5	-4.9	-4.5	-4.5	-4.9	-5.0	-4.9	-5.2	-4.9	-4.8	-4.5	-4.1	-7.0	-5.1
13	-5.4	-5.8	-5.9	-5.8	-6.0	-5.8	-6.1	-6.4	-6.5	-6.6	-6.4	-6.1	-5.3	-3.3	-2.8	-4.1	-4.3	-4.8	-5.4	-5.5	-5.7	-6.0	-6.3	-6.3	-2.8	-6.6	-5.5
14	-6.4	-6.4	-6.5	-6.1	-5.9	-5.9	-5.6	-5.5	-4.6	-4.6	-3.8	-4.2	-3.5	-2.7	-2.6	-2.9	-2.6	-2.7	-2.8	-2.2	-2.8	-2.7	-1.6	-0.7	-0.7	-6.5	-4.0
15	-0.3	-0.5	1.5	2.0	1.5	1.8	2.1	1.4	1.0	0.9	0.7	-0.5	-0.2	-0.1	-0.5	-0.3	-0.1	-0.2	-0.7	-1.0	-1.3	-1.4	-1.3	-1.6	2.1	-1.6	0.1
16	-1.8	-1.9	-2.1	-2.4	-3.0	-3.1	-3.0	-3.1	-3.6	-4.4	-4.6	-4.5	-4.4	-3.6	-4.0	-3.5	-2.9	-2.0	-2.5	-2.4	-2.5	-2.4	-1.8	-1.2	-1.2	-4.6	-2.9
17	-0.4	-0.1	-1.1	-0.8	0.1	0.0	-0.5	-0.8	-0.5	-0.4	-1.6	-0.6	-0.3	-0.5	-0.5	-0.1	-0.3	-0.5	-0.5	-0.5	-0.8	-0.4	-0.4	-0.3	0.1	-1.6	-0.5
18	-0.1	-0.1	-0.3	-0.3	-0.3	-0.3	-0.1	1.1	2.3	1.9	1.1	0.6	2.3	2.9	1.7	1.9	2.1	2.9	2.9	2.9	3.3	3.6	3.6	3.4	3.6	-0.3	1.6
19	2.9	2.7	2.8	2.9	1.9	2.3	2.1	1.7	1.5	1.5	1.3	1.4	1.8	1.5	1.4	1.7	2.1	2.3	2.6	2.5	2.4	2.4	2.1	1.8	2.9	1.3	2.1
20	1.4	1.3	1.0	1.1	1.7	2.0	2.1	2.2	2.4	2.6	2.6	2.8	2.8	3.0	3.2	2.9	3.2	3.3	2.4	2.1	0.9	0.5	-0.3	-1.0	3.3	-1.0	1.9
21	-1.6	-2.1	-2.0	-2.3	-3.0	-3.2	-3.3	-3.1	-2.9	-2.6	-2.7	-2.9	-2.3	-2.2	-2.4	-2.3	-2.2	-2.5	-2.8	-3.1	-3.3	-4.0	-4.3	-4.2	-1.6	-4.3	-2.8
22	-3.9	-3.8	-3.6	-3.8	-3.2	-2.9	-3.1	-3.3	-3.6	-3.4	-3.4	-3.4	-3.3	-3.3	-2.9	-2.2	-2.0	-2.1	-2.3	-2.9	-3.2	-3.2	-3.3	-3.5	-2.0	-3.9	-3.2
23	-3.6	-3.7	-3.8	-3.5	-3.0	-3.1	-2.8	-2.7	-2.7	-2.3	-1.3	-0.4	-0.1	0.0	-0.5	-0.8	-1.1	-1.2	-1.6	-2.0	-2.1	-2.2	-2.3	-2.0	0.0	-3.8	-2.0
24	-1.7	-1.8	-1.5	-1.4	-1.3	-1.4	-1.7	-2.0	-2.0	-2.2	-2.3	-2.0	-1.7	-1.8	-1.7	-1.8	-2.1	-3.0	-3.4	-2.0	-2.3	-2.9	-2.9	-3.0	-1.3	-3.4	-2.1
25	-3.0	-2.6	-1.9	-2.0	-3.4	-4.0	-3.5	-3.6	-3.6	-3.5	-3.5	-3.6	-3.8	-3.9	-4.1	-3.8	-3.8	-3.9	-3.5	-2.8	-2.9	-3.7	-3.8	-4.0	-1.9	-4.1	-3.4
26	-4.4	-5.1	-5.7	-6.5	-7.4	-8.3	-8.9	-9.6	-10.2	-10.7	-10.8	-10.7	-10.3	-10.2	-10.0	-9.9	-9.8	-9.8	-9.6	-9.9	-10.0	-10.2	-10.7	-11.0	-4.4	-11.0	-9.2
27	-11.2	-11.2	-11.2	-11.5	-11.3	-10.9	-10.9	-10.7	-10.5	-10.9	-10.9	-10.8	-10.4	-10.3	-10.3	-10.2	-10.2	-10.5	-10.3	-9.6	-10.0	-9.7	-9.8	-10.0	-9.6	-11.5	-10.6
28	-10.4	-10.0	-9.9	-10.0	-10.2	-10.4	-10.7	-10.8	-11.4	-11.8	-12.2	-12.1	-11.9	-11.7	-11.7	-11.9	-12.2	-12.4	-12.8	-13.4	-13.2	-13.4	-13.3	-13.4	-9.9	-13.4	-11.7
29	-13.4	-13.4	-13.3	-13.0	-12.9	-12.7	-12.8	-12.3	-12.6	-12.3	-12.4	-12.9	-12.9	-12.6	-11.9	-11.9	-12.1	-12.8	-12.6	-12.7	-13.0	-12.6	-12.9	-13.2	-11.9	-13.4	-12.7
30	-13.6	-13.3	-13.5	-13.3	-13.0	-12.5	-12.6	-12.7	-13.7	-13.6	-14.0	-13.5	-13.1	-12.8	-12.7	-12.6	-13.0	-13.8	-14.3	-14.5	-14.8	-14.7	-14.9	-15.5	-12.5	-15.5	-13.6
31	-15.7	-16.0	-16.0	-16.0	-16.0	-16.1	-16.4	-16.8	-17.2	-17.2	-17.0	-17.2	-17.4	-17.2	-16.5	-16.3	-16.5	-16.7	-16.7	-16.6	-16.3	-16.4	-16.4	-16.2	-15.7	-17.4	-16.5
Max.	**4.3**	**4.2**	**4.3**	**3.9**	**3.8**	**4.0**	**3.8**	**4.0**	**4.1**	**4.5**	**4.3**	**5.4**	**5.0**	**4.9**	**5.0**	**4.8**	**4.9**	**5.0**	**4.9**	**5.0**	**4.9**	**5.0**	**5.0**	**4.8**	**5.4**		
Min.	**-15.7**	**-16.0**	**-16.0**	**-16.0**	**-16.0**	**-16.1**	**-16.4**	**-16.8**	**-17.2**	**-17.2**	**-17.0**	**-17.2**	**-17.4**	**-17.2**	**-16.5**	**-16.3**	**-16.5**	**-16.7**	**-16.7**	**-16.6**	**-16.3**	**-16.4**	**-16.4**	**-16.2**		**-17.4**	
Avg.	**-3.2**	**-3.2**	**-3.1**	**-3.0**	**-3.0**	**-3.0**	**-3.0**	**-3.2**	**-3.3**	**-3.4**	**-3.4**	**-3.3**	**-3.1**	**-2.9**	**-2.9**	**-2.9**	**-2.9**	**-3.0**	**-3.1**	**-3.1**	**-3.2**	**-3.3**	**-3.3**	**-3.3**			**-3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.5	3.0	3.6	3.7	3.9	3.1	4.3	4.1	4.4	4.2	3.0	2.6	0.8	1.0	1.2	0.2	-0.9	-1.4	-1.9	-2.2	-2.6	-3.1	-3.1	-3.1	4.4	-3.1	1.1
2	-3.4	-3.7	-3.7	-3.8	-4.3	-4.3	-4.2	-4.5	-4.8	-5.1	-5.0	-5.2	-5.7	-5.6	-5.3	-6.0	-6.1	-7.1	-7.4	-7.9	-7.8	-7.3	-7.3	-7.3	-3.4	-7.9	-5.5
3	-7.2	-7.1	-6.9	-6.8	-7.2	-7.0	-6.6	-6.3	-6.4	-6.4	-6.4	-6.3	-6.5	-6.5	-6.8	-7.1	-7.2	-7.3	-7.3	-7.4	-7.6	-8.0	-8.1	-8.6	-6.3	-8.6	-7.0
4	-8.7	-8.8	-8.7	-9.1	-8.9	-9.0	-9.1	-9.2	-9.3	-9.3	-9.5	-9.6	-9.6	-9.4	-9.5	-9.5	-9.6	-9.7	-9.8	-9.8	-10.1	-10.2	-10.1	-10.2	-8.7	-10.2	-9.4
5	-10.2	-10.4	-10.5	-10.5	-10.6	-10.9	-11.0	-11.5	-12.1	-12.3	-13.0	-13.2	-13.4	-13.3	-13.3	-13.2	-13.5	-13.3	-13.5	-13.3	-13.3	-13.4	-13.5	-14.0	-10.2	-14.0	-12.4
6	-14.3	-14.1	-14.0	-14.0	-14.6	-14.6	-14.9	-14.9	-15.2	-15.3	-15.5	-15.6	-15.8	-15.8	-15.3	-15.3	-15.2	-15.1	-15.1	-15.1	-15.2	-15.5	-15.5	-15.6	-14.0	-15.8	-15.1
7	-15.7	-15.5	-15.4	-15.3	-15.3	-15.4	-15.6	-15.4	-14.9	-15.1	-14.9	-14.5	-14.3	-13.9	-13.9	-13.9	-14.1	-14.1	-14.1	-13.9	-14.1	-14.2	-14.8	-14.2	-13.9	-15.7	-14.7
8	-14.3	-13.8	-13.4	-13.4	-13.2	-13.4	-12.7	-12.6	-12.6	-12.5	-13.2	-13.0	-12.8	-11.9	-11.7	-11.2	-11.5	-11.9	-12.2	-12.1	-12.5	-12.9	-13.8	-13.2	-11.2	-14.3	-12.7
9	-13.0	-12.8	-13.3	-13.4	-12.9	-13.8	-14.0	-13.4	-13.9	-13.9	-14.4	-15.1	-14.2	-13.5	-13.4	-14.1	-13.4	-13.3	-13.8	-14.4	-14.7	-15.1	-15.1	-15.4	-12.8	-15.4	-13.9
10	-15.6	-15.7	-15.4	-15.3	-14.7	-14.6	-14.6	-14.9	-15.3	-15.6	-15.7	-15.6	-15.0	-15.2	-15.3	-15.3	-15.8	-16.1	-15.9	-16.5	-16.6	-16.1	-15.9	-15.9	-14.6	-16.6	-15.5
11	-15.9	-16.4	-16.7	-16.8	-16.4	-16.2	-16.1	-15.8	-15.7	-15.7	-16.0	-16.0	-16.3	-16.1	-15.9	-15.7	-15.6	-15.9	-16.1	-16.3	-16.4	-16.9	-16.6	-16.8	-15.6	-16.9	-16.2
12	-17.1	-17.5	-17.5	-17.2	-17.0	-17.4	-17.9	-18.2	-17.9	-17.7	-18.1	-18.3	-19.2	-18.7	-18.4	-18.1	-18.3	-18.0	-18.2	-18.0	-17.3	-17.6	-18.4	-18.4	-17.0	-19.2	-17.9
13	-18.5	-18.9	-18.6	-18.5	-18.2	-18.3	-18.2	-18.5	-18.9	-18.2	-18.2	-18.7	-18.5	-17.8	-18.1	-18.2	-18.5	-18.2	-17.8	-17.3	-16.5	-17.0	-18.0	-18.2	-16.5	-18.9	-18.2
14	-18.0	-17.6	-18.1	-17.7	-17.1	-16.5	-15.2	-13.5	-11.5	-11.0	-10.7	-10.3	-10.1	-9.4	-9.2	-9.3	-9.4	-9.3	-9.0	-8.8	-8.4	-7.6	-5.0	-4.5	-4.5	-18.1	-11.5
15	-4.3	-3.5	-3.7	-3.5	-3.2	-2.8	-3.3	-2.8	-3.4	-3.5	-3.0	-3.5	-3.7	-3.5	-3.5	-3.2	-3.0	-3.1	-3.2	-3.3	-3.1	-2.8	-2.7	-2.6	-2.6	-4.3	-3.3
16	-2.4	-2.2	-2.5	-2.1	-1.8	-1.1	-1.4	-1.3	0.3	1.9	1.6	1.7	2.1	2.4	2.3	2.2	2.1	2.1	1.3	-0.1	-1.0	-1.4	-0.4	-2.7	2.4	-2.7	0.0
17	-1.8	-1.6	-1.9	-0.1	0.1	-1.3	-1.7	1.2	1.7	1.5	0.9	0.2	-1.1	-1.3	-1.0	-0.3	0.1	1.1	1.2	0.8	1.2	1.2	0.8	0.8	1.7	-1.9	0.0
18	0.5	0.5	0.3	0.2	0.0	-0.1	-0.2	-0.5	-0.6	-0.5	-0.6	-0.6	-0.4	-0.3	0.0	-0.4	-0.8	-0.6	-0.7	-1.1	-1.5	-1.3	-1.2	-1.2	0.5	-1.5	-0.5
19	-1.2	-1.4	-1.3	-0.2	-0.1	0.3	0.7	1.1	1.4	1.5	1.9	2.9	2.9	3.7	3.2	4.1	4.4	5.0	4.7	4.2	2.6	2.1	2.0	2.2	5.0	-1.4	1.9
20	2.1	2.1	1.8	1.7	2.6	3.5	3.2	3.8	3.9	4.1	4.5	4.3	4.4	3.5	4.2	3.3	3.5	1.5	0.8	0.7	0.5	1.0	1.1	2.1	4.5	0.5	2.7
21	1.7	1.3	2.4	2.2	1.4	1.9	1.6	1.8	2.9	2.5	3.3	3.6	3.7	4.3	4.4	4.0	4.1	3.9	3.3	3.7	4.5	4.0	3.3	3.2	4.5	1.3	3.1
22	3.6	3.5	3.7	3.4	3.7	2.9	2.9	2.6	2.2	2.9	3.0	1.0	0.7	1.3	2.0	1.0	-0.4	-0.7	-0.5	-0.5	-0.3	-0.8	-0.7	-0.2	3.7	-0.8	1.5
23	-0.5	-0.8	-1.1	-1.3	-1.8	-2.1	-2.7	-4.1	-5.0	-6.1	-7.0	-7.4	-7.4	-8.1	-9.0	-10.1	-9.7	-9.6	-9.0	-8.6	-8.1	-9.0	-10.0	-10.2	-0.5	-10.2	-6.2
24	-10.9	-11.1	-10.9	-10.7	-10.4	-10.1	-9.5	-7.5	-7.4	-7.1	-6.8	-6.5	-6.3	-6.0	-6.4	-6.6	-6.7	-6.6	-6.4	-6.5	-6.7	-6.9	-7.0	-6.9	-6.0	-11.1	-7.8
25	-7.1	-7.0	-7.0	-6.4	-5.4	-5.0	-5.1	-4.0	-2.5	-2.0	-1.7	-1.4	-0.9	-0.8	-0.2	-0.2	-0.4	-0.4	-0.6	-0.4	-0.5	-1.0	-1.9	-3.2	-0.2	-7.1	-2.7
26	-3.1	-3.4	-3.7	-4.7	-4.6	-6.3	-7.0	-7.7	-8.2	-8.4	-8.6	-8.7	-8.5	-8.4	-7.9	-7.7	-7.8	-8.6	-8.5	-8.7	-8.5	-8.3	-8.6	-8.6	-3.1	-8.7	-7.3
27	-7.9	-8.0	-7.2	-5.5	-5.8	-5.7	-5.8	-5.7	-4.8	-3.6	-3.5	-3.9	-4.2	-4.8	-5.1	-5.3	-4.8	-4.6	-4.1	-4.1	-4.2	-3.8	-4.0	-4.0	-3.5	-8.0	-5.0
28	-4.0	-3.9	-4.3	-4.4	-4.2	-4.2	-4.3	-4.3	-4.2	-4.1	-4.0	-3.6	-3.4	-3.4	-3.4	-3.3	-3.3	-3.2	-3.1	-2.9	-2.6	-3.0	-1.6	-0.2	-0.2	-4.4	-3.5
29	-0.1	0.1	0.2	0.0	-0.1	-0.7	-1.0	-1.0	-0.9	-0.8	-1.2	-1.0	-0.8	-1.1	-2.2	-2.9	-3.2	-4.0	-4.5	-4.9	-5.1	-5.3	-5.8	-6.3	0.2	-6.3	-2.2
30	-6.7	-6.9	-7.0	-7.8	-8.2	-8.3	-8.1	-8.7	-9.0	-9.4	-9.4	-8.7	-7.9	-7.6	-7.4	-7.2	-7.2	-7.2	-7.7	-7.7	-7.0	-7.2	-7.4	-7.4	-6.7	-9.4	-7.8
31	-5.7	-6.0	-6.1	-6.6	-5.7	-5.2	-4.9	-4.3	-4.8	-6.2	-6.9	-5.9	-4.5	-4.1	-3.5	-3.6	-4.9	-3.9	-4.5	-5.3	-6.3	-7.2	-7.7	-8.0	-3.5	-8.0	-5.5
Max.	**3.6**	**3.5**	**3.7**	**3.7**	**3.9**	**3.5**	**4.3**	**4.1**	**4.4**	**4.2**	**4.5**	**4.3**	**4.4**	**4.3**	**4.4**	**4.1**	**4.4**	**5.0**	**4.7**	**4.2**	**4.5**	**4.0**	**3.3**	**3.2**	**5.0**		
Min.	**-18.5**	**-18.9**	**-18.6**	**-18.5**	**-18.2**	**-18.3**	**-18.2**	**-18.5**	**-18.9**	**-18.2**	**-18.2**	**-18.7**	**-19.2**	**-18.7**	**-18.4**	**-18.2**	**-18.5**	**-18.2**	**-18.2**	**-18.0**	**-17.3**	**-17.6**	**-18.4**	**-18.4**		**-19.2**	
Avg.	**-7.0**	**-7.0**	**-7.0**	**-6.9**	**-6.8**	**-6.9**	**-6.9**	**-6.7**	**-6.5**	**-6.5**	**-6.6**	**-6.7**	**-6.6**	**-6.5**	**-6.4**	**-6.5**	**-6.7**	**-6.8**	**-6.9**	**-7.0**	**-7.1**	**-7.2**	**-7.3**	**-7.4**			**-6.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-7.7	-8.1	-8.6	-8.1	-9.1	-9.3	-9.6	-9.6	-9.8	-9.7	-9.7	-9.9	-9.3	-8.9	-8.6	-8.2	-7.9	-8.3	-8.7	-9.4	-9.4	-9.9	-10.5	-10.4	-7.7	-10.5	-9.1
2	-10.7	-10.2	-10.2	-11.3	-11.4	-10.6	-10.8	-10.3	-10.7	-10.6	-11.4	-11.0	-11.0	-11.0	-10.5	-10.7	-10.6	-9.1	-10.1	-9.5	-9.4	-9.2	-9.0	-8.8	-8.8	-11.4	-10.3
3	-9.7	-9.6	-9.8	-11.4	-10.6	-11.4	-11.0	-11.8	-13.8	-13.1	-14.4	-14.9	-14.8	-14.3	-14.1	-13.6	-13.4	-13.4	-13.7	-13.7	-14.1	-14.6	-15.1	-14.7	-9.6	-15.1	-13.0
4	-14.9	-14.5	-14.6	-14.7	-14.8	-14.5	-14.8	-14.8	-14.8	-14.7	-14.3	-12.9	-13.0	-12.1	-11.5	-11.4	-11.2	-11.7	-12.1	-13.3	-13.8	-14.3	-14.7	-14.2	-11.2	-14.9	-13.6
5	-14.3	-14.6	-15.7	-16.3	-16.5	-17.0	-17.5	-17.7	-17.7	-17.9	-18.3	-18.3	-18.2	-17.7	-16.6	-16.1	-15.6	-15.8	-16.3	-16.4	-16.8	-16.8	-17.0	-16.5	-14.3	-18.3	-16.7
6	-15.0	-14.4	-14.8	-14.5	-15.4	-15.5	-13.5	-13.2	-13.0	-13.6	-13.7	-13.3	-12.8	-12.4	-11.8	-10.9	-11.3	-12.2	-13.5	-14.4	-15.2	-15.7	-15.6	-15.9	-10.9	-15.9	-13.8
7	-15.8	-16.1	-16.5	-16.8	-16.6	-16.7	-16.5	-16.3	-16.3	-16.2	-16.1	-15.6	-15.0	-14.2	-12.7	-12.0	-11.7	-12.0	-12.5	-12.9	-12.7	-11.5	-10.8	-10.1	-10.1	-16.8	-14.3
8	-10.9	-9.2	-9.5	-11.6	-10.2	-7.5	-7.6	-7.3	-6.9	-7.1	-7.2	-7.0	-6.7	-6.3	-6.2	-6.3	-6.5	-6.4	-6.4	-6.5	-6.9	-6.8	-5.9	-5.4	-5.4	-11.6	-7.4
9	-5.4	-5.2	-5.0	-4.9	-4.9	-5.2	-5.4	-5.4	-5.5	-5.2	-5.0	-5.0	-4.8	-4.7	-4.5	-4.5	-4.5	-4.9	-5.1	-5.5	-6.2	-7.7	-8.0	-8.2	-4.5	-8.2	-5.5
10	-8.5	-8.4	-8.5	-9.0	-9.6	-10.2	-10.7	-10.9	-10.9	-11.8	-11.8	-11.8	-11.5	-10.9	-10.2	-9.6	-9.1	-9.1	-9.6	-10.2	-10.4	-10.1	-9.9	-9.8	-8.4	-11.8	-10.1
11	-9.6	-9.3	-9.4	-9.4	-9.2	-9.3	-9.5	-9.6	-9.6	-9.3	-9.0	-8.8	-8.5	-8.3	-8.0	-8.1	-8.2	-8.1	-8.4	-8.7	-9.3	-9.5	-9.9	-10.9	-8.0	-10.9	-9.1
12	-10.9	-11.5	-11.5	-10.7	-9.9	-10.0	-9.7	-13.1	-12.5	-11.1	-12.6	-12.7	-12.8	-12.3	-12.9	-13.7	-13.5	-13.3	-12.8	-12.9	-12.4	-10.2	-6.7	-6.4	-6.4	-13.7	-11.5
13	-6.6	-5.4	-4.1	-3.0	-3.3	-3.4	-2.8	-2.4	-2.0	-1.8	-1.0	0.3	1.0	0.4	1.1	1.0	1.1	1.3	1.7	1.7	1.8	2.0	2.0	2.0	2.0	-6.6	-0.8
14	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.3	2.3	2.3	2.4	0.6	-1.3	-3.7	-6.8	-8.4	-9.7	-11.3	-12.4	-13.4	-14.3	-14.6	-14.5	-13.9	2.4	-14.6	-4.2
15	-13.8	-14.2	-14.6	-15.1	-15.8	-16.4	-16.8	-17.2	-17.9	-18.3	-18.0	-17.3	-14.3	-14.1	-14.2	-14.4	-14.5	-14.7	-14.5	-14.6	-13.2	-12.6	-11.8	-9.9	-9.9	-18.3	-14.9
16	-9.7	-9.4	-8.9	-8.7	-8.1	-7.8	-7.1	-6.9	-6.4	-5.4	-4.5	-3.7	-3.2	-2.7	-1.8	-1.2	-0.9	-0.5	-0.2	0.6	0.7	0.8	-0.4	-1.2	0.8	-9.7	-4.0
17	-1.0	-0.9	-0.8	-0.9	-0.6	-0.3	1.3	1.3	2.4	3.5	3.2	2.5	1.9	1.8	1.7	1.6	1.4	1.5	2.4	3.2	3.2	3.4	3.5	3.4	3.5	-1.0	1.6
18	3.7	3.3	2.4	2.7	3.1	2.9	3.2	3.4	3.1	2.9	3.1	3.0	3.2	3.6	3.7	3.5	3.7	2.4	2.2	2.9	3.4	4.4	4.8	4.5	4.8	2.2	3.3
19	4.2	2.7	3.9	3.7	4.4	4.9	3.1	3.6	3.7	3.3	2.7	2.3	2.3	2.6	2.9	3.3	3.8	4.0	3.5	3.7	3.7	3.5	3.0	2.6	4.9	2.3	3.4
20	1.8	2.0	2.4	2.4	3.2	3.1	3.0	2.9	3.7	3.6	3.4	4.9	5.3	5.2	5.4	5.3	5.2	5.1	4.8	5.0	5.2	5.1	3.9	4.7	5.4	1.8	4.0
21	5.3	5.2	4.9	4.8	4.9	5.2	5.0	4.6	4.7	4.4	4.2	3.6	2.6	3.0	3.3	2.7	2.5	2.8	3.0	3.0	2.8	2.4	2.1	2.3	5.3	2.1	3.7
22	2.2	2.5	2.6	2.1	1.7	1.9	1.8	1.9	2.5	2.2	1.9	1.9	2.1	2.3	2.9	3.0	3.1	3.0	2.8	2.2	2.5	2.5	2.7	1.7	3.1	1.7	2.3
23	2.3	3.0	2.9	0.7	0.7	1.1	0.6	0.3	-0.1	-0.5	-0.2	-0.8	-0.9	-0.9	-0.9	-0.9	-1.0	-1.1	-1.1	-1.4	-1.5	-2.1	-2.6	-2.7	3.0	-2.7	-0.3
24	-2.9	-3.2	-3.4	-3.6	-3.6	-3.9	-3.9	-4.1	-4.2	-4.4	-4.3	-4.4	-3.7	-3.2	-2.9	-2.7	-2.6	-2.6	-3.5	-3.8	-4.3	-4.7	-4.8	-4.7	-2.6	-4.8	-3.7
25	-5.2	-5.6	-5.8	-6.1	-6.6	-7.1	-7.2	-7.4	-7.2	-7.3	-6.9	-7.1	-5.9	-3.6	-1.1	-0.9	-0.8	-0.5	-0.5	-0.6	-0.7	-0.4	-0.3	-0.2	-0.2	-7.4	-4.0
26	-0.2	-0.2	-0.4	-0.5	-0.5	-0.7	-0.5	-0.6	-0.9	-0.8	-0.1	0.6	1.3	1.7	1.9	2.2	2.3	2.0	0.0	-0.1	0.0	-0.3	-0.6	-0.9	2.3	-0.9	0.2
27	-1.6	-2.1	-2.2	-2.2	-2.6	-3.2	-3.7	-3.8	-3.8	-3.5	-3.3	-3.0	-2.5	-2.0	-1.6	-1.0	-1.0	0.1	0.7	0.9	1.2	1.3	2.3	2.6	2.6	-3.8	-1.4
28	2.6	2.5	2.3	2.4	2.9	3.4	3.7	3.7	3.9	4.1	4.6	4.8	5.0	5.0	4.9	4.9	4.4	2.6	1.9	0.0	-0.2	-0.4	0.0	1.3	5.0	-0.4	2.9
29	1.1	0.7	0.3	0.3	0.2	-0.3	-0.5	-0.6	-1.3	-1.7	-2.0	-1.8	-1.5	-1.9	-2.5	-2.5	-2.3	-2.6	-2.7	-3.1	-3.7	-4.0	-4.4	-4.7	1.1	-4.7	-1.7
Max.	**5.3**	**5.2**	**4.9**	**4.8**	**4.9**	**5.2**	**5.0**	**4.6**	**4.7**	**4.4**	**4.6**	**4.9**	**5.3**	**5.2**	**5.4**	**5.3**	**5.2**	**5.1**	**4.8**	**5.0**	**5.2**	**5.1**	**4.8**	**4.7**	**5.4**		
Min.	**-15.8**	**-16.1**	**-16.5**	**-16.8**	**-16.6**	**-17.0**	**-17.5**	**-17.7**	**-17.9**	**-18.3**	**-18.3**	**-18.3**	**-18.2**	**-17.7**	**-16.6**	**-16.1**	**-15.6**	**-15.8**	**-16.3**	**-16.4**	**-16.8**	**-16.8**	**-17.0**	**-16.5**		**-18.3**	
Avg.	**-5.1**	**-5.1**	**-5.2**	**-5.4**	**-5.4**	**-5.4**	**-5.4**	**-5.5**	**-5.5**	**-5.4**	**-5.5**	**-5.3**	**-5.1**	**-4.8**	**-4.5**	**-4.5**	**-4.4**	**-4.6**	**-4.9**	**-5.1**	**-5.2**	**-5.2**	**-5.1**	**-5.0**			**-5.1**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-5.5	-5.4	-5.5	-5.7	-5.5	-5.1	-5.6	-5.7	-6.2	-6.0	-5.8	-5.5	-5.2	-4.7	-4.5	-4.1	-3.9	-4.2	-4.2	-3.3	-2.4	-1.8	-1.6	-1.2	-1.2	-6.2	-4.5
2	-0.7	-0.3	0.1	-0.2	-0.4	-0.1	0.1	0.1	0.3	0.7	1.0	0.8	0.8	0.8	1.6	2.1	1.2	0.7	0.0	0.4	1.2	1.6	1.3	2.4	2.4	-0.7	0.7
3	1.8	1.7	1.2	1.6	2.0	2.2	1.5	1.3	1.6	2.0	1.9	2.0	1.9	2.1	2.1	2.0	1.9	1.9	2.0	3.0	3.7	4.0	4.1	4.0	4.1	1.2	2.2
4	4.0	3.9	3.9	3.3	3.0	3.4	3.7	3.7	3.7	3.5	3.3	3.2	2.6	2.8	3.2	3.1	3.3	3.2	3.1	3.2	3.3	2.8	2.6	2.2	4.0	2.2	3.2
5	2.4	3.2	3.4	3.1	2.9	3.0	2.4	2.0	2.1	2.0	1.9	1.8	1.6	1.6	2.5	3.1	4.0	4.0	3.5	3.5	3.5	3.5	3.6	3.6	4.0	1.6	2.8
6	3.3	3.2	3.2	3.2	3.5	3.5	3.6	3.3	2.9	2.3	1.3	1.6	2.8	3.5	3.6	4.0	3.9	4.0	4.7	4.8	4.0	3.3	3.6	2.6	4.8	1.3	3.3
7	2.3	2.2	2.3	2.5	2.8	2.8	3.4	1.6	1.5	1.3	1.5	1.9	2.0	2.4	1.9	2.5	2.6	2.3	3.0	3.4	3.2	3.0	3.0	2.8	3.4	1.3	2.4
8	2.3	2.1	1.7	1.4	1.2	0.3	-0.3	0.4	1.5	1.4	1.8	1.6	2.3	3.3	3.6	3.6	2.8	2.4	2.5	3.2	3.5	4.0	4.5	3.9	4.5	-0.3	2.3
9	4.0	3.9	3.8	3.9	3.9	4.2	4.6	4.7	4.7	4.6	4.8	4.8	4.7	4.7	4.6	5.3	5.7	5.8	5.6	5.5	3.6	3.9	3.6	2.2	5.8	2.2	4.5
10	1.4	1.1	0.7	0.4	0.2	0.5	0.6	0.9	0.6	0.4	-0.1	-0.2	-0.2	-0.5	-0.3	-0.5	-0.4	0.6	0.2	0.0	-0.6	-0.8	-1.0	-1.1	1.4	-1.1	0.1
11	-1.2	-0.9	-0.5	-0.8	-1.0	-1.6	-1.7	-2.2	-2.1	-2.2	-2.1	-1.9	-1.9	-2.0	-2.1	-2.2	-2.2	-2.6	-2.9	-2.7	-2.5	-2.5	-2.8	-3.1	-0.5	-3.1	-2.0
12	-3.0	-3.3	-3.5	-3.7	-3.7	-3.9	-3.7	-3.8	-4.1	-4.3	-4.4	-4.2	-4.0	-3.7	-3.6	-3.4	-3.3	-3.2	-3.4	-3.6	-3.9	-4.1	-4.4	-4.6	-3.0	-4.6	-3.8
13	-4.8	-4.8	-4.8	-4.7	-4.4	-4.4	-4.6	-4.6	-4.4	-4.3	-4.3	-4.2	-4.0	-3.9	-3.7	-3.4	-3.5	-3.5	-3.6	-3.3	-3.8	-4.0	-4.1	-4.5	-3.3	-4.8	-4.2
14	-5.0	-5.3	-5.5	-5.6	-5.7	-5.9	-5.9	-6.0	-6.2	-6.1	-5.8	-5.7	-4.9	-3.8	-2.6	-1.8	-1.4	-1.0	-0.8	-1.1	-1.3	-1.2	-1.0	-0.7	-0.7	-6.2	-3.8
15	-0.6	-0.9	-2.3	-2.7	-2.3	-2.1	-1.9	-1.5	-1.4	-0.6	-0.1	0.0	-0.1	0.0	0.3	0.4	0.2	0.0	0.0	0.2	0.2	-0.1	0.1	0.3	0.4	-2.7	-0.6
16	0.3	0.4	0.4	0.5	0.7	0.8	1.1	1.4	1.3	0.7	0.8	1.4	1.5	2.0	2.2	1.7	1.0	0.9	0.7	0.5	0.2	0.1	-0.1	-1.2	2.2	-1.2	0.8
17	-1.6	-1.2	-1.3	-1.3	-1.9	-1.8	-1.8	-2.1	-2.0	-1.8	-1.8	-1.6	-1.2	-0.9	-0.4	0.0	0.4	0.4	0.6	-0.9	-2.8	-3.2	-3.9	-4.2	0.6	-4.2	-1.5
18	-4.5	-4.7	-4.8	-5.0	-5.0	-5.1	-5.1	-5.1	-5.1	-5.3	-5.5	-5.5	-5.6	-6.0	-6.1	-6.5	-6.5	-6.7	-6.8	-6.7	-6.7	-6.9	-7.0	-7.4	-4.5	-7.4	-5.8
19	-7.5	-7.4	-7.6	-8.0	-7.9	-8.1	-7.7	-7.7	-8.0	-8.5	-8.9	-8.8	-8.6	-8.7	-9.0	-9.4	-9.7	-9.8	-9.7	-9.7	-9.6	-9.8	-9.7	-9.3	-7.4	-9.8	-8.7
20	-9.6	-9.5	-9.5	-9.7	-9.7	-10.1	-10.4	-10.7	-10.9	-11.3	-11.1	-10.9	-10.6	-10.3	-9.9	-9.3	-9.1	-8.9	-8.6	-8.6	-8.9	-8.9	-8.8	-8.7	-8.6	-11.3	-9.7
21	-8.5	-8.4	-8.0	-7.8	-7.9	-7.2	-6.0	-5.2	-1.9	0.8	1.5	2.0	2.6	2.8	3.1	3.4	4.3	4.5	4.2	4.1	4.6	4.4	4.1	4.0	4.6	-8.5	-0.4
22	4.1	3.6	3.8	3.5	3.7	3.6	2.6	1.5	1.7	0.1	-1.1	-1.6	-1.3	-0.8	-0.4	-0.4	-0.3	-0.1	-0.6	-1.5	-1.9	-0.2	-0.8	-2.0	4.1	-2.0	0.6
23	-2.2	-2.5	-2.6	-3.1	-3.9	-4.6	-4.9	-5.4	-5.7	-5.2	-5.0	-5.2	-5.0	-4.7	-3.9	-3.6	-3.8	-4.3	-4.8	-4.5	-4.3	-4.2	-4.7	-4.6	-2.2	-5.7	-4.3
24	-4.7	-4.0	-4.6	-5.3	-5.4	-5.0	-4.6	-4.4	-4.4	-4.8	-4.9	-4.4	-3.8	-3.2	-3.0	-2.9	-2.9	-3.0	-2.7	-3.2	-3.6	-3.8	-4.0	-1.8	-1.8	-5.4	-3.9
25	-2.4	-2.2	-2.1	-1.3	-1.4	-1.6	-1.8	-2.3	-2.9	-2.4	-1.8	-1.1	-1.1	-1.2	-1.1	-0.8	-0.2	-0.8	-1.3	-1.4	-1.9	-2.4	-2.5	-2.7	-0.2	-2.9	-1.7
26	-3.1	-3.2	-3.4	-3.4	-3.5	-3.6	-3.8	-4.4	-4.7	-4.8	-4.5	-3.9	-3.0	-2.2	-1.7	-1.6	-1.2	-1.0	-0.9	-1.0	-1.4	-1.8	-2.2	-2.2	-0.9	-4.8	-2.8
27	-2.5	-2.4	-2.7	-2.9	-3.3	-3.8	-3.9	-3.6	-3.6	-3.3	-3.4	-3.6	-3.5	-3.0	-3.2	-3.5	-3.5	-3.7	-3.9	-3.9	-4.0	-3.8	-3.7	-3.8	-2.4	-4.0	-3.4
28	-4.0	-4.2	-4.5	-4.5	-5.2	-5.5	-6.3	-6.3	-6.7	-6.7	-6.4	-6.0	-4.7	-4.0	-3.3	-3.0	-2.7	-2.4	-2.2	-2.3	-2.3	-2.6	-3.0	-3.0	-2.2	-6.7	-4.2
29	-2.8	-2.0	-2.0	-2.5	-2.6	-2.0	-1.6	-1.6	-1.3	-1.3	-1.1	-0.2	-0.4	-0.6	-0.4	0.1	0.2	0.1	0.8	0.9	1.1	1.3	1.3	0.7	1.3	-2.8	-0.7
30	0.3	1.3	1.5	1.4	1.2	1.3	1.3	1.0	1.3	1.7	1.6	1.5	1.6	2.0	2.0	2.5	2.1	2.5	2.6	2.6	2.5	2.3	2.3	2.4	2.6	0.3	1.8
31	2.6	2.7	2.8	2.9	2.8	1.8	2.4	2.5	2.4	2.8	3.1	3.2	4.3	3.5	3.7	4.0	4.4	3.6	3.1	3.5	4.1	4.4	4.6	4.5	4.6	1.8	3.3
Max.	**4.1**	**3.9**	**3.9**	**3.9**	**3.9**	**4.2**	**4.6**	**4.7**	**4.7**	**4.6**	**4.8**	**4.8**	**4.7**	**4.7**	**4.6**	**5.3**	**5.7**	**5.8**	**5.6**	**5.5**	**4.6**	**4.4**	**4.6**	**4.5**	**5.8**		
Min.	**-9.6**	**-9.5**	**-9.5**	**-9.7**	**-9.7**	**-10.1**	**-10.4**	**-10.7**	**-10.9**	**-11.3**	**-11.1**	**-10.9**	**-10.6**	**-10.3**	**-9.9**	**-9.4**	**-9.7**	**-9.8**	**-9.7**	**-9.7**	**-9.6**	**-9.8**	**-9.7**	**-9.3**		**-11.3**	
Avg.	**-1.5**	**-1.4**	**-1.5**	**-1.6**	**-1.7**	**-1.7**	**-1.8**	**-1.9**	**-1.8**	**-1.8**	**-1.7**	**-1.6**	**-1.3**	**-1.1**	**-0.8**	**-0.6**	**-0.5**	**-0.6**	**-0.6**	**-0.6**	**-0.7**	**-0.8**	**-0.9**	**-1.0**			**-1.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.4	4.2	3.9	3.5	3.3	3.4	3.3	3.0	2.8	2.9	2.7	2.5	2.6	2.5	2.9	3.0	3.0	2.9	2.7	2.4	2.7	2.8	2.5	2.6	4.4	2.4	3.0
2	2.7	2.7	2.0	1.9	1.5	1.6	1.6	1.6	1.4	1.5	1.3	1.8	1.9	2.0	2.5	2.7	2.7	2.7	2.3	2.0	2.0	2.5	2.6	2.7	2.7	1.3	2.1
3	2.8	2.9	2.8	2.6	2.3	1.6	2.1	2.3	2.1	2.0	2.2	2.7	2.4	2.4	2.7	2.7	2.8	3.0	3.4	3.5	3.5	3.4	3.1	3.1	3.5	1.6	2.7
4	3.1	3.1	3.1	2.8	2.6	2.5	2.6	2.3	2.2	2.6	2.9	2.7	2.5	2.4	2.6	2.6	2.6	2.4	2.4	1.8	1.5	0.9	1.0	-0.4	3.1	-0.4	2.3
5	-1.7	-3.0	-4.2	-4.5	-4.8	-5.0	-5.2	-5.5	-5.6	-5.7	-5.9	-5.6	-5.1	-4.6	-4.4	-4.2	-3.7	-3.4	-3.2	-2.8	-3.2	-3.7	-4.4	-4.8	-1.7	-5.9	-4.3
6	-4.9	-4.8	-4.8	-4.8	-4.9	-4.7	-4.8	-4.9	-4.7	-4.3	-5.0	-5.3	-4.4	-4.0	-3.9	-3.7	-3.3	-3.0	-3.2	-2.8	-2.7	-2.5	-2.9	-3.4	-2.5	-5.3	-4.1
7	-3.7	-4.1	-4.6	-4.8	-5.2	-5.2	-5.5	-5.6	-5.6	-5.5	-5.4	-4.7	-4.0	-4.0	-3.4	-2.8	-2.4	-2.3	-2.4	-2.3	-2.2	-2.3	-2.7	-3.1	-2.2	-5.6	-3.9
8	-3.3	-3.7	-3.9	-4.3	-4.4	-4.5	-4.9	-5.3	-5.2	-4.9	-4.3	-3.5	-2.8	-2.2	-2.2	-2.1	-1.9	-1.9	-1.8	-2.0	-2.0	-2.3	-2.4	-3.3	-1.8	-5.3	-3.3
9	-3.7	-4.2	-5.1	-5.2	-5.4	-5.4	-5.6	-6.2	-6.7	-6.7	-6.2	-3.5	-2.6	-11.1	-10.1	-1.1	-2.7	-3.2	-3.1	-3.1	-3.3	-3.7	-4.2	-4.5	-1.1	-11.1	-4.9
10	-4.7	-4.7	-4.6	-5.0	-5.3	-5.3	-4.9	-5.3	-5.9	-5.6	-5.2	-4.8	-4.2	-4.5	-4.3	-3.9	-3.7	-3.6	-3.8	-3.7	-3.8	-4.1	-4.3	-4.5	-3.6	-5.9	-4.6
11	-4.7	-4.9	-5.1	-5.3	-5.6	-5.6	-5.9	-6.0	-6.1	-6.4	-6.2	-5.8	-6.1	-5.7	-5.5	-5.6	-5.1	-4.9	-4.5	-4.5	-4.7	-5.0	-4.8	-5.2	-4.5	-6.4	-5.4
12	-5.5	-5.4	-5.6	-5.6	-6.0	-6.0	-6.3	-6.2	-6.2	-5.6	-5.4	-5.7	-5.4	-5.3	-4.6	-3.5	-2.8	-2.3	-2.0	-1.7	-1.3	-1.0	-0.7	-0.1	-0.1	-6.3	-4.2
13	-0.4	-0.7	-0.4	-0.4	-1.4	-1.9	-1.6	-1.5	-1.3	-1.0	-1.1	-1.5	-1.4	-1.3	-0.8	0.1	0.8	2.0	4.4	5.1	5.1	5.6	5.4	5.3	5.6	-1.9	0.7
14	4.5	3.8	3.8	3.5	3.3	3.0	2.7	2.3	2.1	2.4	2.3	1.9	2.2	2.4	2.9	3.3	3.5	3.7	3.7	3.5	3.5	3.7	3.4	3.5	4.5	1.9	3.1
15	3.4	3.4	3.2	3.4	2.8	1.7	1.5	1.6	2.3	0.7	0.5	0.3	0.2	0.5	2.1	3.3	3.0	2.4	1.6	0.7	-0.3	-0.8	-3.1	-4.0	3.4	-4.0	1.3
16	-3.8	-3.6	-4.5	-4.5	-4.5	-5.6	-6.3	-7.4	-6.8	-7.0	-7.0	-6.7	-6.5	-6.2	-5.5	-4.8	-4.4	-3.8	-3.6	-3.3	-3.0	-2.7	-2.0	-1.8	-1.8	-7.4	-4.8
17	-1.5	-0.9	-0.4	-0.2	0.3	0.4	0.7	1.0	1.4	1.5	1.7	1.5	1.9	1.9	1.5	1.7	2.1	2.5	2.4	2.7	3.3	4.0	4.9	5.2	5.2	-1.5	1.7
18	2.9	3.3	2.5	2.3	2.1	1.3	1.1	0.8	1.0	1.5	1.5	1.7	1.9	2.2	2.2	2.4	2.4	2.3	2.2	2.3	2.7	2.5	2.3	2.1	3.3	0.8	2.1
19	2.5	2.4	1.7	1.7	1.1	1.3	1.5	0.7	1.5	2.1	2.1	2.5	2.2	2.2	2.4	2.4	2.5	2.5	2.7	2.7	2.6	2.5	2.4	1.7	2.7	0.7	2.1
20	2.3	2.0	2.1	2.2	1.6	1.9	1.7	2.0	2.4	3.0	2.9	2.7	2.6	2.5	2.6	2.5	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	3.0	1.6	2.4
21	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.5	2.7	2.8	2.9	3.1	3.4	3.3	3.2	3.2	3.1	3.2	3.0	2.9	2.9	2.9	2.9	2.9	3.4	2.5	2.9
22	2.7	2.3	1.5	0.9	1.2	2.1	1.8	1.9	1.7	1.9	2.7	2.7	2.9	3.0	3.1	3.6	4.2	4.1	3.9	4.0	3.9	4.0	4.1	4.0	4.2	0.9	2.8
23	3.5	3.3	3.9	4.2	4.6	4.1	3.8	3.7	4.0	4.5	4.9	5.9	7.2	7.8	8.1	9.5	9.2	7.7	8.0	8.3	8.7	8.2	8.0	10.7	10.7	3.3	6.3
24	11.0	9.9	8.5	7.8	6.9	6.6	6.8	6.6	6.4	6.0	5.1	5.5	5.6	5.3	5.1	4.7	4.7	4.9	5.6	4.3	4.5	4.4	4.5	4.5	11.0	4.3	6.0
25	4.3	3.4	1.9	1.3	0.6	0.0	0.3	0.1	-0.3	-0.4	-0.4	-0.5	0.0	0.1	-0.1	-0.3	-0.3	-0.4	-0.5	-0.4	-0.3	-0.2	-0.1	-0.2	4.3	-0.5	0.3
26	-0.1	-0.3	-0.9	-1.3	-1.3	-1.4	-1.2	-1.1	-1.6	-2.5	-2.5	-2.5	-2.3	-2.1	-1.8	-1.3	-1.0	-0.7	-0.4	-0.1	0.3	0.8	0.7	0.8	0.8	-2.5	-1.0
27	1.0	1.7	2.3	2.3	1.8	1.1	1.0	0.5	0.6	1.2	0.9	0.4	0.6	0.6	1.2	1.6	2.0	1.7	2.1	2.2	2.1	2.3	2.1	1.8	2.3	0.4	1.5
28	1.6	1.7	2.0	1.9	1.5	1.0	0.9	0.8	0.9	1.2	1.1	1.2	1.5	1.9	1.9	2.5	2.5	2.5	2.5	2.4	2.3	2.4	2.5	2.3	2.5	0.8	1.8
29	2.2	2.1	2.0	1.7	1.5	1.4	0.9	0.9	0.7	1.0	1.1	1.3	1.7	2.2	2.8	3.1	3.6	3.9	3.8	4.1	4.0	3.5	2.7	2.2	4.1	0.7	2.3
30	1.9	1.5	1.2	1.0	0.8	0.6	0.5	0.7	0.9	1.1	1.5	2.4	2.9	3.2	3.1	3.1	3.2	4.2	4.7	4.6	4.5	4.5	4.3	3.6	4.7	0.5	2.5
Max.	**11.0**	**9.9**	**8.5**	**7.8**	**6.9**	**6.6**	**6.8**	**6.6**	**6.4**	**6.0**	**5.1**	**5.9**	**7.2**	**7.8**	**8.1**	**9.5**	**9.2**	**7.7**	**8.0**	**8.3**	**8.7**	**8.2**	**8.0**	**10.7**	**11.0**		
Min.	**-5.5**	**-5.4**	**-5.6**	**-5.6**	**-6.0**	**-6.0**	**-6.3**	**-7.4**	**-6.8**	**-7.0**	**-7.0**	**-6.7**	**-6.5**	**-11.1**	**-10.1**	**-5.6**	**-5.1**	**-4.9**	**-4.5**	**-4.5**	**-4.7**	**-5.0**	**-4.8**	**-5.2**		**-11.1**	
Avg.	**0.7**	**0.5**	**0.2**	**0.1**	**-0.2**	**-0.4**	**-0.5**	**-0.7**	**-0.6**	**-0.5**	**-0.5**	**-0.2**	**0.0**	**-0.1**	**0.2**	**0.8**	**1.0**	**1.1**	**1.2**	**1.2**	**1.2**	**1.2**	**1.0**	**0.9**			**0.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.4	3.3	2.8	2.8	2.9	2.8	2.7	2.6	2.4	2.7	3.1	3.5	3.6	4.2	4.5	5.0	5.4	5.6	5.7	5.9	5.7	5.4	4.7	4.5	5.9	2.4	4.0
2	3.7	2.6	2.3	2.9	3.0	2.6	2.7	2.9	3.0	3.1	3.5	4.4	3.9	4.2	4.6	4.6	4.5	4.8	5.1	5.6	5.2	4.6	3.8	3.7	5.6	2.3	3.8
3	3.4	3.3	3.3	3.5	4.3	4.2	3.4	3.9	4.4	5.7	6.6	6.6	6.6	6.9	6.9	7.1	6.4	6.3	6.7	6.6	4.6	3.9	3.7	3.7	7.1	3.3	5.1
4	3.7	4.3	4.1	3.3	3.3	3.2	3.7	4.4	4.8	4.9	4.8	5.0	5.0	5.5	5.8	6.5	7.5	7.5	7.6	7.6	7.3	7.0	6.5	6.2	7.6	3.2	5.4
5	5.9	5.6	5.3	5.2	5.2	5.2	5.2	5.1	5.4	5.5	5.9	5.9	6.1	6.4	6.2	5.9	6.3	6.9	7.3	7.0	5.8	5.0	4.7	4.8	7.3	4.7	5.7
6	5.3	5.7	5.9	6.0	5.1	5.4	5.0	4.4	4.7	4.6	4.7	4.7	4.9	4.7	5.5	5.4	5.2	5.2	5.0	4.8	4.9	4.8	5.2	5.1	6.0	4.4	5.1
7	5.3	5.3	5.5	5.5	5.8	5.2	5.0	5.1	5.3	5.5	4.9	5.1	5.4	5.7	5.8	6.0	6.4	6.7	7.1	7.5	7.1	5.9	5.3	4.8	7.5	4.8	5.7
8	4.5	4.4	4.0	4.1	4.5	5.1	5.3	5.4	5.6	5.7	5.4	5.7	6.0	6.2	6.0	6.5	6.6	6.5	6.3	6.1	5.7	6.0	6.5	6.1	6.6	4.0	5.6
9	5.6	5.4	4.9	4.7	4.8	4.4	4.4	4.5	4.7	5.3	5.4	5.3	5.8	6.7	7.3	7.7	7.4	7.8	7.7	5.8	5.9	5.1	4.6	4.5	7.8	4.4	5.7
10	4.4	4.4	4.4	4.5	4.3	4.2	4.3	4.5	4.6	4.8	5.1	5.8	6.3	6.9	7.5	7.2	6.1	5.3	5.8	5.2	6.7	8.1	6.1	6.0	8.1	4.2	5.5
11	6.4	7.5	8.7	8.7	6.3	6.9	7.6	7.7	8.1	6.9	8.2	8.1	7.8	8.4	8.9	8.6	8.3	8.5	8.4	8.4	8.0	6.9	6.2	6.1	8.9	6.1	7.7
12	5.5	5.2	5.2	5.2	4.8	4.7	4.7	4.6	4.2	4.3	4.4	5.0	5.6	6.1	5.9	5.6	5.3	4.8	4.5	4.6	4.7	4.7	4.3	4.5	6.1	4.2	4.9
13	4.3	4.7	4.5	3.8	3.7	3.9	3.6	4.0	4.4	4.6	4.8	5.0	4.8	5.0	5.2	5.3	5.1	5.1	4.7	4.5	4.9	3.5	4.4	4.3	5.3	3.5	4.5
14	4.2	5.0	5.6	5.7	5.5	5.5	5.7	5.6	5.6	6.0	6.2	6.1	5.2	5.8	7.3	7.6	8.1	8.8	8.4	7.3	7.2	7.4	7.3	7.2	8.8	4.2	6.4
15	6.3	5.8	5.7	5.9	7.0	6.8	6.4	5.6	5.2	5.0	5.1	5.2	5.3	5.5	5.7	6.3	6.6	6.3	5.7	5.3	5.1	5.0	4.9	4.8	7.0	4.8	5.7
16	4.8	4.8	5.0	5.1	5.0	5.1	4.9	4.6	4.6	4.7	5.0	5.1	5.1	5.1	4.8	4.8	4.7	4.7	4.7	4.6	4.4	4.3	4.2	4.1	5.1	4.1	4.8
17	4.0	3.7	3.0	3.0	3.4	3.3	3.5	3.9	4.2	4.8	6.0	6.2	5.6	5.8	6.1	6.4	6.5	6.2	6.2	6.1	5.9	5.7	5.5	6.1	6.5	3.0	5.0
18	5.5	4.8	4.7	5.1	4.8	4.7	4.1	4.1	4.4	4.4	4.7	4.5	4.6	4.7	4.8	5.1	5.3	5.4	5.2	5.2	5.4	5.4	5.1	5.1	5.5	4.1	4.9
19	5.0	4.7	4.6	4.4	4.1	4.0	3.9	4.1	4.3	4.6	5.1	5.8	5.4	5.7	7.0	8.2	9.0	9.7	9.4	9.2	9.1	9.2	9.6	9.7	9.7	3.9	6.5
20	9.6	8.9	7.4	6.6	6.2	6.2	6.2	6.5	6.7	7.6	8.6	9.4	9.9	9.9	7.9	8.3	8.1	8.5	8.7	8.9	8.7	8.1	8.5	8.6	9.9	6.2	8.1
21	7.4	6.6	6.0	5.8	5.6	4.8	5.3	6.0	6.7	6.7	7.0	7.1	6.7	6.8	6.9	6.6	6.3	6.2	6.5	6.6	6.1	6.4	8.3	9.6	9.6	4.8	6.6
22	9.6	9.7	9.6	9.2	8.6	8.2	8.1	7.9	7.5	7.7	8.2	8.7	7.6	7.1	7.3	6.7	7.5	6.6	6.2	6.5	6.2	6.1	5.6	5.5	9.7	5.5	7.6
23	5.4	5.4	5.4	5.1	4.1	3.9	3.8	4.0	4.3	4.3	4.4	5.7	6.9	7.2	7.2	7.4	6.9	6.5	6.3	6.2	6.2	6.6	6.5	6.7	7.4	3.8	5.7
24	6.8	6.7	6.6	6.7	6.5	6.3	6.2	6.0	6.2	6.4	6.3	5.9	5.7	5.7	5.7	5.4	5.4	5.7	5.5	5.6	5.9	6.3	6.3	5.7	6.8	5.4	6.1
25	5.3	4.8	4.4	4.0	4.3	4.5	3.8	4.2	4.5	5.0	6.1	6.5	6.7	6.8	7.0	7.0	7.2	7.3	7.2	7.4	7.3	7.3	7.3	7.5	7.5	3.8	6.0
26	7.5	7.8	7.6	7.5	7.1	7.0	6.9	7.2	7.4	7.3	7.4	8.0	8.6	9.2	9.2	9.4	9.2	8.9	8.6	8.6	8.6	8.3	8.4	8.3	9.4	6.9	8.1
27	8.1	7.8	7.5	7.5	7.7	7.4	7.6	8.3	8.1	8.7	8.5	8.9	9.8	10.5	10.6	10.9	11.3	11.8	11.8	11.9	12.0	12.4	12.2	12.3	12.4	7.4	9.7
28	12.1	11.2	10.3	9.8	10.2	10.0	10.7	11.2	11.4	11.4	11.1	11.3	12.8	12.8	13.3	13.4	13.4	13.8	13.7	13.9	14.0	13.8	13.8	14.0	14.0	9.8	12.2
29	14.1	13.5	13.0	11.8	12.3	12.9	11.6	10.0	10.0	10.0	9.9	8.7	8.3	8.4	9.2	9.8	9.8	9.8	9.9	10.2	9.9	9.6	9.3	9.9	14.1	8.3	10.5
30	9.6	8.9	9.0	9.1	9.2	8.8	8.5	8.2	8.7	9.4	9.2	8.6	8.9	10.0	8.8	8.2	7.1	7.3	8.4	8.2	8.0	7.6	7.4	7.3	10.0	7.1	8.5
31	7.4	7.3	7.1	7.0	6.7	6.6	6.6	6.5	6.5	6.5	6.5	6.9	6.9	7.2	7.0	6.7	6.5	6.4	6.4	6.2	6.1	6.1	6.2	6.1	7.4	6.1	6.6
Max.	**14.1**	**13.5**	**13.0**	**11.8**	**12.3**	**12.9**	**11.6**	**11.2**	**11.4**	**11.4**	**11.1**	**11.3**	**12.8**	**12.8**	**13.3**	**13.4**	**13.4**	**13.8**	**13.7**	**13.9**	**14.0**	**13.8**	**13.8**	**14.0**	**14.1**		
Min.	**3.4**	**2.6**	**2.3**	**2.8**	**2.9**	**2.6**	**2.7**	**2.6**	**2.4**	**2.7**	**3.1**	**3.5**	**3.6**	**4.2**	**4.5**	**4.6**	**4.5**	**4.7**	**4.5**	**4.5**	**4.4**	**3.5**	**3.7**	**3.7**		**2.3**	
Avg.	**6.3**	**6.1**	**5.9**	**5.8**	**5.7**	**5.6**	**5.5**	**5.6**	**5.7**	**5.9**	**6.2**	**6.4**	**6.5**	**6.8**	**7.0**	**7.1**	**7.1**	**7.1**	**7.1**	**7.0**	**6.9**	**6.7**	**6.5**	**6.5**			**6.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.2	7.1	7.6	7.3	7.4	7.3	7.6	7.7	8.2	8.6	9.0	8.8	8.5	9.2	9.0	9.4	9.7	9.0	8.7	8.8	8.4	8.2	7.6	7.6	9.7	6.2	8.2
2	8.0	8.2	8.3	8.3	8.1	7.8	8.1	8.4	8.5	8.5	9.1	9.5	9.4	9.4	9.9	9.9	9.9	9.4	9.7	9.7	9.9	9.6	9.5	10.3	10.3	7.8	9.1
3	9.8	10.0	9.8	9.5	9.9	9.9	9.6	9.8	10.4	10.9	11.0	11.4	9.6	7.8	7.3	7.0	7.0	6.9	7.0	6.8	6.9	7.0	6.8	6.5	11.4	6.5	8.7
4	6.4	6.3	6.2	6.0	6.3	6.1	6.0	6.4	7.4	7.5	8.4	7.2	7.0	7.1	7.1	7.5	7.6	7.9	8.1	7.4	7.6	7.7	7.0	6.8	8.4	6.0	7.0
5	6.8	6.9	6.6	6.2	6.3	6.3	6.6	6.7	6.8	6.8	6.8	6.5	6.5	6.4	6.3	6.3	6.4	6.8	7.1	7.0	7.0	7.1	7.4	7.2	7.4	6.2	6.7
6	7.2	6.7	7.4	6.4	6.4	6.2	6.1	6.3	6.6	7.0	7.9	8.6	9.4	11.2	11.6	12.7	13.8	12.9	11.5	11.4	13.1	12.8	12.8	12.0	13.8	6.1	9.5
7	11.5	11.0	10.6	10.7	11.0	11.2	11.3	11.2	10.6	10.5	10.5	11.2	11.9	12.1	12.4	11.6	7.8	6.9	6.8	6.5	6.5	6.6	6.6	6.6	12.4	6.5	9.7
8	6.7	6.7	6.7	6.6	6.7	6.6	6.6	6.6	7.0	7.7	8.6	9.6	10.9	11.1	9.7	9.4	8.3	11.6	13.1	12.8	12.1	11.2	10.9	10.6	13.1	6.6	9.1
9	9.9	9.0	9.2	7.8	6.9	6.3	6.1	6.1	6.5	7.0	7.5	7.7	8.1	8.7	9.2	9.6	9.9	10.0	9.9	9.7	9.6	9.4	9.0	8.7	10.0	6.1	8.4
10	8.4	8.3	7.9	7.6	7.4	7.1	7.1	6.8	6.8	6.8	7.0	7.3	7.7	7.1	7.1	7.3	7.2	6.8	6.7	6.8	6.7	6.8	6.9	7.0	8.4	6.7	7.2
11	7.3	7.5	7.1	6.8	6.8	6.5	6.3	6.2	6.6	6.7	6.9	6.4	6.9	6.8	6.8	6.9	6.6	6.7	6.7	6.9	6.7	6.8	6.7	6.8	7.5	6.2	6.8
12	7.1	7.9	7.7	7.5	7.3	7.4	7.4	7.5	7.5	7.8	8.1	8.1	8.6	9.4	9.6	10.1	10.5	9.9	9.2	9.6	9.6	9.4	8.4	7.9	10.5	7.1	8.5
13	7.9	7.7	7.6	7.6	7.0	6.1	5.6	5.7	5.9	6.6	7.3	7.8	8.1	8.6	9.1	9.9	10.5	11.0	10.6	9.8	9.2	9.3	9.4	9.4	11.0	5.6	8.2
14	9.2	8.9	8.9	8.3	9.0	10.2	10.2	8.8	9.0	8.8	8.9	9.2	9.4	8.8	8.4	8.6	8.8	8.7	8.7	8.7	8.7	8.8	8.8	8.8	10.2	8.3	9.0
15	8.9	8.9	8.6	8.6	8.6	8.5	9.4	9.0	8.7	9.0	9.1	9.2	9.3	8.1	8.3	8.6	9.0	9.2	9.6	12.6	13.2	13.4	13.3	12.6	13.4	8.1	9.7
16	12.2	12.3	12.3	12.2	11.7	11.1	10.4	9.9	10.3	10.7	9.0	8.8	8.6	8.8	9.8	10.0	10.9	10.6	10.5	10.1	10.3	10.0	10.5	11.2	12.3	8.6	10.5
17	10.3	9.6	8.8	8.8	8.6	8.2	8.2	8.4	8.7	8.5	8.0	7.5	7.3	7.1	6.9	6.6	6.6	7.0	7.1	7.7	8.1	8.3	7.9	6.7	10.3	6.6	8.0
18	6.5	6.9	6.5	6.1	6.2	6.1	6.3	6.6	6.6	7.0	6.6	7.1	7.0	7.3	8.5	8.6	8.7	9.4	10.4	10.1	9.3	9.1	8.8	9.1	10.4	6.1	7.7
19	9.0	9.0	8.9	8.5	8.1	7.9	8.1	9.3	10.4	8.6	8.9	9.2	9.8	9.6	9.4	8.7	9.0	9.1	8.7	8.7	9.3	9.1	8.7	8.5	10.4	7.9	8.9
20	8.5	8.1	7.7	7.6	7.4	7.2	8.0	8.3	8.3	9.0	8.8	9.2	9.5	9.3	8.8	8.6	8.6	8.8	8.9	9.4	9.1	8.9	9.0	9.3	9.5	7.2	8.6
21	9.6	9.4	9.3	9.3	8.9	9.0	8.9	8.9	9.0	9.1	9.0	9.1	9.1	9.2	9.1	9.1	9.2	9.5	9.5	9.7	9.8	10.2	10.1	10.3	10.3	8.9	9.3
22	10.5	10.6	9.7	9.4	9.3	9.2	9.2	9.2	9.3	9.4	9.5	9.1	9.1	8.7	8.9	9.6	9.0	9.2	9.7	10.3	10.1	10.0	9.9	9.7	10.6	8.7	9.5
23	9.3	9.3	9.0	8.8	8.9	8.6	8.6	8.7	9.1	9.6	10.0	9.8	9.6	9.2	9.1	9.0	9.2	9.0	9.1	9.1	9.3	9.0	9.0	9.3	10.0	8.6	9.1
24	9.4	9.1	9.1	8.8	8.4	8.4	8.5	8.6	8.8	9.1	9.2	9.1	8.8	8.8	8.6	8.8	9.0	9.2	9.3	9.6	9.7	10.5	10.5	10.4	10.5	8.4	9.2
25	10.8	10.5	10.3	9.0	9.1	10.3	10.1	9.6	9.6	10.3	11.3	11.9	12.0	12.6	12.6	12.7	13.1	12.7	12.5	12.3	12.0	11.9	10.7	9.8	13.1	9.0	11.2
26	9.5	9.5	9.4	9.3	9.3	9.2	9.2	9.4	9.8	9.9	10.1	10.3	10.6	11.4	12.1	12.3	12.7	13.2	13.4	13.2	13.0	12.9	12.9	12.8	13.4	9.2	11.1
27	12.7	12.5	11.7	9.6	9.3	9.1	9.0	8.9	8.4	7.9	7.5	7.7	8.1	8.2	8.6	8.9	9.1	8.9	8.8	8.8	8.8	8.7	8.7	8.5	12.7	7.5	9.1
28	8.4	8.4	8.5	7.5	7.0	6.6	6.6	9.1	10.5	10.6	11.1	11.5	11.9	12.4	12.9	11.1	10.4	10.3	10.4	9.3	9.2	9.4	9.4	9.6	12.9	6.6	9.7
29	8.8	8.8	9.0	8.9	8.9	8.8	9.0	8.9	8.6	8.7	8.5	8.6	8.6	8.7	9.0	9.1	9.3	9.4	9.2	9.1	9.2	9.4	9.4	9.3	9.4	8.5	9.0
30	9.3	9.1	8.2	7.4	6.8	6.5	6.3	6.5	7.0	7.9	8.1	8.2	8.5	8.5	8.6	9.0	9.3	9.6	9.9	10.0	10.0	10.1	10.0	9.9	10.1	6.3	8.5
Max.	**12.7**	**12.5**	**12.3**	**12.2**	**11.7**	**11.2**	**11.3**	**11.2**	**10.6**	**10.9**	**11.3**	**11.9**	**12.0**	**12.6**	**12.9**	**12.7**	**13.8**	**13.2**	**13.4**	**13.2**	**13.2**	**13.4**	**13.3**	**12.8**	**13.8**		
Min.	**6.2**	**6.3**	**6.2**	**6.0**	**6.2**	**6.1**	**5.6**	**5.7**	**5.9**	**6.6**	**6.6**	**6.4**	**6.5**	**6.4**	**6.3**	**6.3**	**6.4**	**6.7**	**6.7**	**6.5**	**6.5**	**6.6**	**6.6**	**6.5**		**5.6**	
Avg.	**8.9**	**8.8**	**8.6**	**8.2**	**8.1**	**8.0**	**8.0**	**8.1**	**8.4**	**8.6**	**8.7**	**8.8**	**9.0**	**9.1**	**9.2**	**9.2**	**9.2**	**9.3**	**9.4**	**9.4**	**9.4**	**9.4**	**9.2**	**9.1**			**8.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.0	8.8	8.3	8.0	7.8	7.4	8.1	8.7	8.8	9.2	10.2	11.1	10.8	10.1	9.7	11.1	11.0	11.4	11.4	11.5	10.5	10.2	9.9	10.0	11.5	7.4	9.7
2	9.7	9.5	9.3	9.3	9.2	9.2	9.0	9.5	9.7	9.4	9.3	9.5	10.2	10.2	10.2	10.3	10.4	11.0	11.2	12.1	11.4	11.2	10.9	10.7	12.1	9.0	10.1
3	9.8	9.7	10.7	12.1	13.5	12.6	12.8	12.3	10.6	10.1	10.4	10.6	11.0	11.6	11.5	10.7	10.0	10.1	10.2	10.2	9.8	9.8	10.1	9.7	13.5	9.7	10.8
4	9.8	9.5	9.4	9.4	9.4	9.7	10.4	10.5	10.6	10.3	10.4	10.4	10.6	10.3	10.5	10.5	10.5	10.6	11.2	11.0	10.3	10.5	11.2	11.1	11.2	9.4	10.3
5	10.9	10.8	10.3	10.1	10.2	10.2	10.0	10.2	10.5	10.8	11.3	11.5	11.8	11.4	11.3	11.5	11.4	12.2	12.7	12.0	12.3	12.6	11.6	11.9	12.7	10.0	11.2
6	12.3	11.5	11.5	11.1	11.7	11.2	11.0	11.4	11.6	11.7	11.9	12.4	11.5	11.0	10.7	10.5	10.8	11.0	11.5	11.7	11.2	11.0	11.0	11.3	12.4	10.5	11.4
7	11.1	10.9	10.8	10.7	10.6	9.6	8.5	8.6	8.7	8.8	8.8	9.3	9.9	10.6	10.5	10.3	10.7	10.8	10.6	10.5	10.3	10.1	9.9	9.8	11.1	8.5	10.0
8	9.7	9.6	9.6	9.7	9.7	9.6	9.8	9.8	11.4	11.5	11.7	11.8	12.2	12.8	13.2	13.8	12.1	11.1	11.5	11.3	11.4	11.4	10.0	9.7	13.8	9.6	11.0
9	9.7	9.8	9.7	9.9	9.7	9.8	9.7	10.0	10.6	11.2	11.7	12.0	12.0	11.3	10.8	10.8	11.3	11.7	11.9	12.3	12.3	12.2	12.2	11.8	12.3	9.7	11.0
10	11.8	11.9	11.8	11.3	10.9	10.9	10.7	10.7	10.7	10.5	10.1	10.9	10.7	11.0	10.9	10.1	10.0	9.8	9.6	9.6	9.6	9.7	9.8	10.0	11.9	9.6	10.5
11	9.9	9.7	9.8	9.9	9.6	9.3	9.3	9.3	9.4	9.3	9.3	9.4	9.4	9.7	9.8	10.1	10.5	10.6	10.7	10.6	10.3	10.3	10.8	10.8	10.8	9.3	9.9
12	10.3	9.9	9.3	9.1	8.8	8.2	8.4	8.7	10.1	10.6	11.2	11.3	11.4	11.3		11.2		11.2	11.2	10.8	10.7	10.6	10.6	10.6	11.4	8.2	10.2
13	10.1	10.1	10.0	9.8	9.8	9.5	9.4	9.2	9.6	9.5	9.8	10.1	10.0	9.8	9.7	9.8	9.8	9.7	9.7	9.7	9.6	9.6	9.6	9.6	10.1	9.2	9.7
14	9.8	9.8	9.9	9.9	9.9	9.8	9.7	9.9	9.9	10.0	9.8	9.7	9.7	9.8	9.8	10.0	10.1	10.2	10.4	10.6	10.8	10.6	10.4	10.3	10.8	9.7	10.0
15	10.3	10.3	10.5	10.7	10.9	10.5	10.4	10.6	10.9	12.3	13.3	13.1	13.1	13.3	12.8	12.8	13.2	12.7	12.9	13.3	13.5	13.2	12.7	12.6	13.5	10.3	12.1
16	11.9	11.0	10.7	10.9	11.0	10.9	11.2	10.7	10.3	10.1	10.0	10.3	10.5	10.2	10.3	10.5	10.5	10.6	10.7	10.9	10.9	10.9	10.9	10.8	11.9	10.0	10.7
17	11.0	10.8	10.5	10.5	9.9	9.5	9.4	8.8	8.6	8.5	9.0	9.4	9.9	9.6	10.0	10.5	10.8	10.9	11.1	11.6	11.4	11.2	10.8	10.5	11.6	8.5	10.2
18	10.1	9.9	9.6	9.6	9.4	8.9	9.1	9.3	9.5	9.8	10.6	11.0	11.6	12.1	12.3	12.5	12.7	12.9	12.6	12.4	12.4	12.0	11.8	11.7	12.9	8.9	11.0
19	11.7	11.7	11.6	11.3	11.2	11.1	11.1	11.3	11.1	11.6	12.7	13.0	14.1	14.1	15.2	15.8	13.9	13.6	13.8	15.9	15.9	15.9	15.6	15.1	15.9	11.1	13.3
20	15.1	14.7	14.1	13.4	12.7	13.5	13.2	13.4	13.6	13.5	13.4	12.7	11.2	11.0	11.4	11.6	11.6	12.4	11.6	11.2	11.5	11.5	11.7	11.6	15.1	11.0	12.6
21	11.1	10.6	10.4	9.8	10.1	10.2	9.9	9.2	9.3	9.9	10.2	10.2	10.6	11.1	11.5	11.5	10.5	11.8	12.8	12.6	12.8	13.1	12.8	12.7	13.1	9.2	11.0
22	12.2	11.9	11.6	11.6	11.3	10.3	9.7	9.8	10.0	10.3	10.0	10.0	10.2	10.1	9.9	9.6	9.4	9.3	9.5	9.5	9.3	9.4	9.0	8.8	12.2	8.8	10.1
23	8.7	8.6	8.6	9.0	8.9	8.9	8.9	9.9	10.2	10.4	10.7	10.9	11.5	12.4	12.9	11.4	10.5	10.2	10.2	10.3	10.2	9.7	9.2	9.1	12.9	8.6	10.1
24	8.7	8.6	8.3	8.3	8.5	8.2	7.9	8.3	8.4	8.3	8.4	9.0	9.7	10.3	10.7	11.0	11.0	10.9	11.6	12.4	12.9	11.7	11.7	11.8	12.9	7.9	9.9
25	11.6	11.7	11.9	11.7	12.6	12.0	11.9	12.6	13.2	12.9	13.0	14.2	15.6	16.8	16.9	16.4	16.1	16.0	16.1	16.2	15.2	14.4	14.2	13.4	16.9	11.6	14.0
26	13.8	13.2	12.8	11.7	11.5	12.0	13.8	12.8	12.5	12.6	13.3	13.5	13.6	13.9	13.6	13.2	13.2	12.9	11.5	10.7	10.3	10.3	10.2	10.1	13.9	10.1	12.4
27	10.2	9.9	10.2	10.3	10.1	10.1	8.8	8.6	8.6	8.9	9.6	10.0	10.1	10.4	10.6	10.7	10.9	10.9	10.9	10.8	10.5	10.4	10.2	10.2	10.9	8.6	10.1
28	10.2	10.2	10.1	11.0	11.2	11.3	12.4	12.7	13.4	14.0	14.3	14.1	13.9	16.4	16.8	17.2	17.6	17.9	18.4	18.2	18.1	17.6	17.4	17.4	18.4	10.1	14.7
29	18.1	17.7	17.2	17.1	16.8	16.6	16.4	16.6	17.0	17.5	17.9	18.4	19.0	19.6	17.4	15.2	14.5	15.8	15.2	15.0	20.0	20.4	20.3	20.3	20.4	14.5	17.5
30	19.9	19.0	18.8	18.8	18.6	17.7	17.2	16.7	16.9	16.8	16.8	17.4	17.6	17.8	18.6	19.8	20.3	20.3	20.2	20.3	19.9	19.8	19.8	19.7	20.3	16.7	18.7
31	20.0	19.6	20.2	17.0	14.9	15.9	17.8	19.9	19.4	16.6	19.0	19.5	20.2	20.5	20.1	19.8	19.3	19.5	20.2	20.7	20.7	20.1	20.6	19.9	20.7	14.9	19.2
Max.	**20.0**	**19.6**	**20.2**	**18.8**	**18.6**	**17.7**	**17.8**	**19.9**	**19.4**	**17.5**	**19.0**	**19.5**	**20.2**	**20.5**	**20.1**	**19.8**	**20.3**	**20.3**	**20.2**	**20.7**	**20.7**	**20.4**	**20.6**	**20.3**	**20.7**		
Min.	**8.7**	**8.6**	**8.3**	**8.0**	**7.8**	**7.4**	**7.9**	**8.3**	**8.4**	**8.3**	**8.4**	**9.0**	**9.4**	**9.6**	**9.7**	**9.6**	**9.4**	**9.3**	**9.5**	**9.5**	**9.3**	**9.4**	**9.0**	**8.8**		**7.4**	
Avg.	**11.6**	**11.3**	**11.2**	**11.1**	**11.0**	**10.8**	**10.8**	**11.0**	**11.1**	**11.2**	**11.5**	**11.8**	**12.1**	**12.3**	**12.3**	**12.3**	**12.2**	**12.3**	**12.4**	**12.4**	**12.5**	**12.3**	**12.2**	**12.0**			**11.7**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	19.5	18.4	17.4	14.0	11.2	10.8	10.9	10.7	10.7	10.8	10.7	10.6	10.2	10.2	10.3	10.4	10.6	11.2	11.8	12.1	12.0	12.0	11.9	11.9	19.5	10.2	12.1
2	12.0	11.8	11.3	10.9	10.9	10.9	10.9	10.9	11.0	11.2	11.1	11.4	11.6	11.6	11.7	11.5	11.6	11.7	11.3	11.3	11.2	11.0	11.0	11.1	12.0	10.9	11.3
3	11.0	11.0	11.2	11.3	11.1	10.9	10.8	10.9	11.1	11.3	11.5	11.0	10.8	11.1	11.8	11.3	11.6	11.5	11.2	11.0	11.1	11.4	11.5	11.9	11.9	10.8	11.2
4	11.2	11.4	11.4	11.4	11.0	10.5	10.6	10.5	10.7	11.4	11.3	11.2	11.5	11.1	10.7	10.8	11.0	11.1	10.6	10.0	10.0	10.0	10.0	10.1	11.5	10.0	10.8
5	10.3	10.1	10.0	10.0	10.2	10.3	10.4	10.5	11.0	11.5	11.7	11.4	11.5	11.2	11.1	11.1	11.3	11.8	12.1	11.9	12.0	12.0	12.3	12.0	12.3	10.0	11.2
6	11.9	11.9	11.8	11.8	11.7	11.7	11.0	10.5	10.8	11.3	11.8	11.8	11.9	12.9	13.2	13.4	13.6	13.8	13.5	15.9	18.5	17.8	17.2	16.9	18.5	10.5	13.2
7	16.5	16.4	16.0	15.6	15.3	15.0	15.0	14.9	15.1	14.8	15.1	14.8	15.0	16.7	17.2	18.1	18.0	18.2	18.3	17.7	17.6	17.5	17.5	16.9	18.3	14.8	16.4
8	14.3	14.3	13.8	11.8	11.0	11.3	10.1	10.1	11.6	12.2	11.4	11.3	11.7	12.0	12.3	12.5	12.4	12.4	12.5	12.3	12.2	11.9	11.9	12.3	14.3	10.1	12.1
9	11.8	11.4	11.2	10.3	9.7	9.4	9.3	9.3	10.0	10.9	12.4	13.1	12.8	12.5	12.8	13.1	13.6	13.7	12.9	12.3	11.6	11.3	10.9	10.8	13.7	9.3	11.5
10	10.9	10.9	11.0	11.2	11.2	11.1	10.8	10.9	10.7	10.7	10.9	11.0	11.1	11.4	11.8	12.2	12.6	12.5	12.2	12.0	12.0	12.0	11.9	11.8	12.6	10.7	11.4
11	12.0	11.9	11.8	11.4	10.8	11.1	11.4	11.4	11.6	11.7	11.9	11.8	11.7	11.7	11.8	11.8	11.9	12.0	12.1	12.1	12.2	12.2	12.0	11.5	12.2	10.8	11.7
12	10.8	10.6	10.2	11.3	11.0	11.3	11.2	11.4	11.7	12.7	13.1	13.2	13.0	13.2	13.3	13.5	13.6	13.6	13.6	13.4	12.7	12.5	12.7	12.1	13.6	10.2	12.3
13	12.3	12.1	11.9	11.9	11.8	11.9	12.9	13.7	13.6	13.1	13.4	13.5	14.0	14.5	13.9	13.0	12.6	12.4	12.4	12.6	12.7	13.4	14.0	14.0	14.5	11.8	13.0
14	12.8	12.8	12.7	12.4	12.9	13.4	13.2	12.6	12.0	11.8	12.1	12.3	12.4	13.1	12.7	12.3	12.7	13.2	13.1	12.9	12.8	12.7	12.6	12.3	13.4	11.8	12.7
15	12.0	11.9	11.9	11.9	11.7	11.6	11.4	11.1	11.1	10.9	10.9	11.0	11.0	11.0	11.0	11.0	11.2	11.3	11.7	11.9	11.8	11.9	11.6	11.1	12.0	10.9	11.4
16	10.8	10.2	10.0	10.3	10.6	10.7	10.7	10.8	10.9	11.2	11.3	10.8	11.1	11.2	11.4	11.5	11.6	11.7	11.9	12.1	11.4	11.1	11.2	11.0	12.1	10.0	11.1
17	10.9	10.7	10.5	10.6	10.5	10.4	10.1	10.1	10.2	10.7	10.7	10.9	10.5	10.7	10.8	11.3	11.8	12.0	12.0	12.0	11.9	11.8	11.5	11.2	12.0	10.1	11.0
18	11.4	11.3	10.9	10.2	9.9	9.5	9.4	9.7	10.4	10.8	11.7	12.5	12.8	13.3	13.6	14.0	14.5	14.6	14.8	14.8	14.6	14.4	14.6	13.5	14.8	9.4	12.4
19	13.2	13.3	12.8	13.1	12.8	11.8	12.0	11.7	11.7	12.2	12.3	13.1	13.8	14.3	14.8	15.2	15.1	15.7	15.6	15.1	16.2	15.7	16.0	16.1	16.2	11.7	13.9
20	15.9	15.6	15.5	15.8	15.8	15.9	15.5	15.1	14.8	14.7	15.0	14.7	15.3	14.3	13.9	14.4	15.7	15.6	15.3	15.4	16.0	16.0	15.7	15.6	16.0	13.9	15.3
21	15.5	15.2	14.9	14.9	14.9	14.6	14.8	14.6	13.8	13.6	13.4	13.2	12.0	12.0	12.3	12.6	12.5	12.4	11.7	10.9	10.8	11.4	11.1	11.0	15.5	10.8	13.1
22	11.2	11.0	10.6	10.7	10.8	10.6	10.6	10.8	11.1	11.3	11.3	11.5	11.9	11.5	11.9	12.2	11.5	10.6	11.2	11.7	11.9	11.8	13.6	13.8	13.8	10.6	11.5
23	13.4	13.4	13.1	13.0	13.1	13.3	13.4	13.2	12.9	13.0	13.4	13.3	12.9	12.4	12.3	12.0	11.8	11.9	11.9	11.9	11.8	11.9	11.9	12.0	13.4	11.8	12.6
24	12.1	12.4	11.8	11.2	11.1	11.0	11.4	11.8	12.4	14.3	14.9	15.0	14.4	15.1	15.5	16.3	16.2	16.9	17.0	16.8	16.7	15.4	14.3	13.8	17.0	11.0	14.1
25	13.4	13.2	13.6	12.6	11.9	11.9	11.7	11.6	11.4	11.2	11.2	11.5	12.0	11.5	11.6	11.6	11.8	11.8	11.9	11.7	11.8	12.0	12.0	12.2	13.6	11.2	12.0
26	12.4	12.4	12.1	11.4	11.4	11.8	12.4	11.7	11.4	11.5	11.8	12.1	12.6	12.7	12.7	12.5	12.3	12.4	11.7	11.7	11.7	11.5	11.3	11.2	12.7	11.2	11.9
27	11.4	11.3	11.3	11.2	11.0	10.7	10.6	10.5	10.6	10.8	11.3	11.6	12.2	12.7	13.1	13.5	13.8	14.2	14.1	14.1	14.0	13.4	13.3	13.3	14.2	10.5	12.2
28	13.2	13.3	12.9	12.6	12.4	11.9	11.6	11.4	11.5	11.7	11.5	11.8	12.6	12.8	12.7	14.5	14.8	15.1	14.7	14.6	14.3	14.2	14.1	14.1	15.1	11.4	13.1
29	14.1	14.1	12.4	13.6	13.5	13.1	12.6	12.5	13.0	12.6	12.9	14.3	15.1	15.6	15.9	16.2	16.2	16.0	15.5	15.0	14.7	14.4	13.9	13.6	16.2	12.4	14.2
30	13.5	13.3	13.2	13.0	12.7	12.0	11.1	10.8	10.8	10.8	11.3	11.7	11.3	11.0	11.0	11.6	11.3	11.1	11.7	12.2	12.9	12.4	12.1	11.8	13.5	10.8	11.9
31	11.6	11.7	11.4	10.9	10.7	10.2	10.2	9.9	10.3	10.5	10.8	10.9	11.1	11.6	11.6	11.5	11.5	11.5	12.0	12.7	12.4	12.5	12.4	12.6	12.7	9.9	11.4
Max.	**19.5**	**18.4**	**17.4**	**15.8**	**15.8**	**15.9**	**15.5**	**15.1**	**15.1**	**14.8**	**15.1**	**15.0**	**15.3**	**16.7**	**17.2**	**18.1**	**18.0**	**18.2**	**18.3**	**17.7**	**18.5**	**17.8**	**17.5**	**16.9**	**19.5**		
Min.	**10.3**	**10.1**	**10.0**	**10.0**	**9.7**	**9.4**	**9.3**	**9.3**	**10.0**	**10.5**	**10.7**	**10.6**	**10.2**	**10.2**	**10.3**	**10.4**	**10.6**	**10.6**	**10.6**	**10.0**	**10.0**	**10.0**	**10.0**	**10.1**		**9.3**	
Avg.	**12.7**	**12.6**	**12.3**	**12.0**	**11.8**	**11.6**	**11.6**	**11.5**	**11.6**	**11.8**	**12.1**	**12.2**	**12.3**	**12.5**	**12.6**	**12.8**	**12.9**	**13.0**	**13.0**	**13.0**	**13.0**	**12.9**	**12.8**	**12.7**			**12.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	12.7	12.6	11.6	11.3	11.9	11.7	11.1	11.1	11.4	10.9	10.7	10.8	10.9	11.0	11.4	11.4	11.2	11.1	11.3	11.1	11.3	11.3	11.1	11.1	12.7	10.7	11.3
2	10.8	10.6	10.7	11.0	11.1	11.3	10.9	10.9	10.9	10.7	10.3	10.4	10.9	10.9	11.0	11.2	11.2	11.0	10.9	10.5	10.1	10.2	10.3	9.9	11.3	9.9	10.7
3	9.7	10.0	10.1	10.5	10.7	10.7	10.5	10.6	10.6	10.0	9.9	10.2	10.1	9.6	9.5	9.6	9.8	10.4	10.7	10.9	10.8	10.3	10.4	10.3	10.9	9.5	10.3
4	10.0	9.6	9.5	9.9	10.1	9.8	9.6	9.5	9.8	9.7	10.3	10.4	10.4	10.3	10.4	10.5	10.6	10.9	11.1	10.8	10.4	10.3	10.2	9.9	11.1	9.5	10.2
5	9.6	9.5	9.5	8.9	8.9	9.3	8.7	8.8	8.7	8.9	9.2	9.0	8.8	8.9	8.6	8.5	8.4	8.4	8.4	8.2	8.0	7.9	7.7	7.8	9.6	7.7	8.7
6	8.9	8.9	9.7	10.1	9.6	9.7	10.4	11.0	11.4	11.8	12.0	11.8	11.1	10.6	10.5	10.6	10.7	10.7	10.8	10.6	10.4	10.8	10.6	10.5	12.0	8.9	10.5
7	10.7	11.4	11.8	11.8	11.8	12.4	12.1	11.5	11.7	11.8	11.1	10.5	11.7	10.6	11.0	11.1	11.3	11.6	11.1	10.5	10.2	10.0	10.0	10.1	12.4	10.0	11.2
8	10.0	10.1	10.0	9.7	9.8	9.8	9.7	9.5	9.5	9.7	10.1	10.5	10.7	11.2	10.8	10.2	9.9	10.2	10.1	10.1	9.9	9.7	9.8	9.6	11.2	9.5	10.0
9	9.5	9.6	9.4	10.1	10.4	10.2	10.6	10.8	10.6	10.5	10.8	10.9	11.5	11.9	10.7	10.8	10.5	10.6	10.6	10.7	10.5	10.5	10.3	10.0	11.9	9.4	10.5
10	9.9	10.0	10.2	10.8	10.5	10.1	9.6	9.3	9.0	8.9	9.3	9.7	10.3	10.6	10.6	11.7	1.5	13.0	13.1	12.7	12.2	12.6	12.5	12.7	13.1	1.5	10.5
11	12.7	12.9	12.5	12.1	12.2	12.2	12.1	11.9	12.4	11.8	11.3	11.6	11.3	11.0	11.1	11.3	10.9	11.0	11.0	11.4	11.4	10.6	10.5	10.5	12.9	10.5	11.6
12	11.0	10.7	10.6	10.3	9.8	9.7	9.7	9.7	9.5	9.3	9.0	9.0	9.2	9.5	9.6	9.9	10.0	10.5	10.8	10.8	10.8	10.9	10.9	11.3	11.3	9.0	10.1
13	11.2	11.2	10.9	10.8	10.8	10.6	10.6	10.5	10.5	10.5	10.4	10.3	10.2	9.9	9.6	9.8	9.5	9.3	9.4	9.3	9.2	9.3	9.3	9.3	11.2	9.2	10.1
14	9.6	9.8	10.1	10.1	10.2	9.5	9.1	9.1	9.1	9.3	9.5	9.4	9.1	9.1	9.2	9.2	9.4	9.3	9.1	9.2	9.1	9.1	8.7	8.8	10.2	8.7	9.3
15	8.8	8.9	8.9	9.5	9.8	9.9	10.0	10.2	9.8	10.0	10.4	10.7	10.6	10.7	10.5	10.5	10.5	10.2	10.1	10.5	10.6	10.9	9.6	10.1	10.9	8.8	10.1
16	11.0	9.9	9.1	9.3	9.7	9.2	8.9	8.9	8.9	8.8	8.9	9.3	10.5	11.2	11.8	12.4	12.9	12.8	12.4	12.0	11.9	11.6	11.8	11.6	12.9	8.8	10.6
17	11.6	11.3	11.3	11.4	11.0	10.5	10.2	10.1	9.8	10.2	10.4	10.0	10.3	10.1	10.1	9.9	9.1	8.2	8.1	8.0	8.0	8.0	7.9	7.8	11.6	7.8	9.7
18	7.5	7.3	7.4	7.3	7.4	7.4	7.6	7.9	8.6	9.2	9.3	10.1	10.6	9.4	8.9	8.8	8.0	7.5	7.3	7.9	8.9	8.9	9.1	9.2	10.6	7.3	8.4
19	9.2	8.8	9.0	9.0	8.3	8.2	8.4	8.5	8.2	8.3	8.3	8.0	8.4	8.5	9.2	10.2	10.4	10.0	9.9	9.6	9.5	9.4	9.3	9.4	10.4	8.0	9.0
20	9.3	9.1	9.3	9.0	8.7	8.7	8.7	8.6	8.6	8.7	8.7	8.3	7.5	7.7	7.9	8.2	8.6	8.9	8.8	8.4	7.9	7.9	7.8	7.6	9.3	7.5	8.4
21	7.7	7.8	8.0	7.8	7.9	7.8	8.0	7.8	6.4	6.9	7.3	8.1	9.0	9.8	10.2	10.4	10.5	10.4	9.9	9.6	9.4	8.9	8.5	8.5	10.5	6.4	8.6
22	8.3	8.0	8.0	7.8	7.4	7.5	7.1	6.4	7.3	6.1	6.3	7.0	7.8	8.4	9.0	9.1	9.4	9.3	9.1	8.8	8.9	8.5	7.5	6.9	9.4	6.1	7.9
23	6.4	6.1	5.8	5.7	5.6	5.6	5.5	5.5	5.6	5.7	5.9	6.1	6.3	6.8	6.8	7.1	7.5	7.6	7.9	8.0	7.8	7.8	7.6	7.3	8.0	5.5	6.6
24	7.0	6.8	6.8	6.6	6.4	7.1	6.9	7.1	7.1	7.1	7.1	7.2	7.2	7.3	7.5	7.7	7.7	7.6	7.5	7.4	7.5	7.4	7.4	7.7	7.7	6.4	7.2
25	7.7	7.7	7.5	7.7	7.6	8.0	8.0	7.7	7.6	7.7	7.6	7.5	7.7	7.7	7.9	8.1	8.2	8.2	8.2	8.0	7.9	7.9	8.1	8.2	8.2	7.5	7.9
26	8.3	8.2	8.0	7.5	7.5	7.4	7.3	7.3	7.5	7.7	8.4	9.2	9.3	9.5	9.6	9.8	9.7	9.6	9.4	9.0	8.7	8.5	7.2	7.1	9.8	7.1	8.4
27	7.1	7.0	7.1	7.2	6.8	6.8	6.8	6.6	6.3	6.3	6.5	6.9	7.7	8.5	9.8	10.2	10.4	10.8	10.4	10.3	11.2	10.9	10.9	11.4	11.4	6.3	8.5
28	11.1	11.2	10.8	10.3	9.9	9.7	9.5	7.9	7.1	7.4	7.6	7.6	8.4	8.8	8.9	9.1	9.1	9.3	9.0	8.9	8.2	8.2	7.9	7.8	11.2	7.1	8.9
29	7.9	7.8	7.7	7.6	7.4	7.5	7.4	7.3	7.2	7.1	7.4	7.7	8.0	8.2	8.5	8.6	8.8	8.6	8.1	7.7	7.5	7.3	7.2	6.8	8.8	6.8	7.7
30	6.7	6.4	5.8	5.4	6.5	5.8	5.8	5.0	5.3	5.7	6.6	7.7	8.6	9.1	9.5	9.8	9.9	9.7	9.4	9.2	8.8	8.5	7.4	6.2	9.9	5.0	7.5
Max.	**12.7**	**12.9**	**12.5**	**12.1**	**12.2**	**12.4**	**12.1**	**11.9**	**12.4**	**11.8**	**12.0**	**11.8**	**11.7**	**11.9**	**11.8**	**12.4**	**12.9**	**13.0**	**13.1**	**12.7**	**12.2**	**12.6**	**12.5**	**12.7**	**13.1**		
Min.	**6.4**	**6.1**	**5.8**	**5.4**	**5.6**	**5.6**	**5.5**	**5.0**	**5.3**	**5.7**	**5.9**	**6.1**	**6.3**	**6.8**	**6.8**	**7.1**	**1.5**	**7.5**	**7.3**	**7.4**	**7.5**	**7.3**	**7.2**	**6.2**		**1.5**	
Avg.	**9.4**	**9.3**	**9.2**	**9.2**	**9.2**	**9.1**	**9.0**	**8.9**	**8.9**	**8.9**	**9.0**	**9.2**	**9.5**	**9.6**	**9.7**	**9.9**	**9.5**	**9.9**	**9.8**	**9.7**	**9.6**	**9.5**	**9.3**	**9.2**			**9.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.5	5.3	5.9	5.2	4.8	4.5	4.2	4.5	4.8	5.5	5.8	6.9	7.6	8.6	8.8	8.1	8.0	8.1	7.8	7.5	7.3	7.2	7.0	6.8	8.8	4.2	6.5
2	6.0	5.8	6.7	6.2	5.5	5.5	4.8	4.4	4.1	4.9	5.0	5.5	6.8	8.4	9.2	9.4	9.2	9.0	8.7	8.3	8.0	7.6	6.5	4.8	9.4	4.1	6.7
3	4.7	4.8	4.6	4.4	4.4	4.0	4.0	4.0	4.0	3.8	3.9	4.3	4.4	4.7	4.6	4.7	4.8	4.7	4.4	4.5	4.5	4.6	4.6	4.5	4.8	3.8	4.4
4	4.3	3.9	3.4	3.0	2.6	2.6	2.4	2.3	2.0	2.5	2.7	3.1	3.8	4.5	5.1	6.0	6.0	5.9	5.6	5.3	5.1	5.0	4.2	3.6	6.0	2.0	4.0
5	3.4	3.2	3.1	3.0	3.0	3.0	2.8	2.8	2.7	2.8	3.3	3.8	3.9	3.8	4.0	4.1	4.4	4.3	3.6	3.4	2.7	2.0	1.7	1.0	4.4	1.0	3.2
6	0.7	0.4	0.3	0.0	0.0	0.3	0.4	0.4	0.5	1.4	2.3	2.9	3.2	3.6	3.4	3.8	3.6	3.2	2.7	2.5	2.4	2.3	2.3	2.3	3.8	0.0	1.9
7	2.6	2.6	2.5	2.3	1.9	1.4	1.3	1.1	0.9	0.8	0.7	1.0	1.3	1.8	2.0	1.8	1.9	1.9	1.7	1.5	1.3	1.2	1.0	0.8	2.6	0.7	1.6
8	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.2	0.4	0.7	1.1	1.9	1.6	2.2	2.8	3.3	3.5	3.1	3.1	2.7	1.9	1.4	1.4	2.2	3.5	0.2	1.5
9	2.4	2.5	2.5	2.5	2.5	2.2	1.3	0.5	0.6	0.7	0.7	0.7	0.9	1.6	2.2	2.4	3.2	3.9	4.2	4.7	5.2	5.5	5.8	6.2	6.2	0.5	2.7
10	6.6	6.7	7.0	6.9	5.9	5.8	7.2	7.0	7.6	7.5	7.8	8.1	8.3	8.3	8.3	8.3	8.4	8.4	8.7	8.5	7.4	7.5	8.0	8.6	8.7	5.8	7.6
11	8.7	8.8	8.5	8.5	8.6	8.7	8.6	8.5	8.5	8.5	8.6	8.4	7.5	7.3	6.5	6.2	5.9	6.2	5.1	3.9	2.9	2.7	2.2	2.0	8.8	2.0	6.7
12	1.7	1.5	1.3	1.1	0.9	0.9	0.9	0.6	0.5	0.4	0.5	0.3	0.3	0.8	0.8	0.8	0.7	0.7	0.9	0.5	-0.1	-0.4	-0.7	-0.5	1.7	-0.7	0.6
13	-0.2	-0.7	-1.1	-0.9	-0.8	-0.5	-1.1	-1.3	-1.9	-1.9	-1.9	-1.3	-0.5	0.8	1.8	2.0	1.1	0.8	0.9	1.0	1.0	1.1	0.6	0.3	2.0	-1.9	-0.1
14	0.1	0.2	0.5	0.7	0.6	0.7	0.6	0.5	0.4	0.4	0.5	0.7	1.0	1.3	1.6	1.8	1.9	1.9	1.7	1.4	0.8	0.8	0.9	1.1	1.9	0.1	0.9
15	1.4	1.7	1.8	1.8	1.8	2.0	2.2	2.1	2.0	1.9	2.1	2.3	2.8	3.4	3.9	4.3	4.6	4.7	4.5	3.9	3.5	3.2	2.9	3.0	4.7	1.4	2.8
16	3.0	2.8	3.0	3.3	3.4	3.2	3.2	3.2	3.0	2.8	2.8	3.3	3.4	4.0	4.3	4.5	4.5	4.4	4.0	3.4	2.9	2.6	2.2	1.7	4.5	1.7	3.3
17	1.6	1.4	1.3	1.4	1.4	1.1	1.1	0.9	0.6	0.5	0.8	1.0	1.4	2.2	3.9	4.9	5.0	4.9	4.6	4.2	4.0	4.1	3.9	4.0	5.0	0.5	2.5
18	4.2	4.2	3.7	4.0	4.1	4.1	3.9	3.9	3.9	4.0	4.4	4.9	5.7	6.3	6.9	7.1	7.2	7.1	7.0	6.7	6.2	5.9	5.8	5.9	7.2	3.7	5.3
19	6.3	4.8	4.5	4.1	3.8	2.8	3.0	4.1	3.4	3.4	3.4	3.9	4.5	4.8	5.3	5.6	5.6	5.6	5.5	4.7	4.2	3.9	3.6	3.3	6.3	2.8	4.3
20	3.0	2.8	2.7	2.7	2.5	2.6	2.8	2.8	3.1	3.3	3.2	2.9	2.8	3.6	3.3	2.8	2.4	1.6	0.9	0.5	0.9	1.0	1.4	0.9	3.6	0.5	2.3
21	0.8	0.9	1.2	0.9	1.2	1.0	1.4	1.1	0.3	0.2	0.6	0.3	0.5	0.7	0.9	1.0	1.0	0.7	0.5	0.3	0.0	0.2	0.3	-0.1	1.4	-0.1	0.7
22	-0.6	-0.8	-1.4	-2.0	-2.8	-3.2	-3.5	-3.2	-3.5	-3.7	-3.3	-3.0	-2.9	-2.6	-2.3	-2.3	-1.2	-1.6	-1.8	-2.3	-2.7	-3.0	-2.9	-2.1	-0.6	-3.7	-2.4
23	-0.4	-0.2	-0.3	-0.6	-0.9	-1.3	-1.4	-1.7	-1.7	-1.8	-1.7	-1.6	-0.8	-0.4	-0.4	-0.7	-1.7	-2.7	-4.0	-4.5	-4.4	-4.4	-4.1	-3.9	-0.2	-4.5	-1.9
24	-4.0	-4.2	-4.0	-4.4	-4.2	-4.3	-4.5	-4.8	-5.5	-6.2	-6.2	-5.5	-4.8	-4.4	-3.9	-3.7	-3.7	-3.4	-3.2	-3.3	-3.1	-3.2	-3.0	-3.7	-3.0	-6.2	-4.2
25	-3.5	-3.9	-3.6	-3.4	-4.1	-4.3	-4.2	-4.1	-3.8	-3.4	-3.0	-2.3	-1.4	-1.0	-1.0	-0.7	-0.2	0.3	0.6	0.3	-0.1	-0.2	-0.5	-0.4	0.6	-4.3	-2.0
26	0.2	0.1	0.0	0.6	0.3	1.2	1.2	0.4	-1.0	-1.5	-1.6	-0.8	0.6	0.7	0.7	1.1	1.5	1.4	0.9	0.1	-0.8	-1.2	-1.8	-1.9	1.5	-1.9	0.0
27	-2.0	-2.4	-2.7	-3.2	-3.5	-3.7	-4.1	-4.4	-4.5	-4.8	-4.6	-4.5	-4.3	-3.9	-3.3	-3.2	-3.1	-3.4	-3.7	-4.2	-4.6	-4.9	-4.9	-4.7	-2.0	-4.9	-3.9
28	-4.7	-4.5	-4.6	-4.6	-4.7	-5.0	-4.8	-5.1	-5.4	-5.1	-4.8	-3.6	-3.0	-2.3	-1.7	-1.4	-0.8	-1.1	-1.1	-1.9	-2.8	-3.5	-3.2	-3.3	-0.8	-5.4	-3.5
29	-3.0	-3.2	-3.6	-3.6	-3.7	-3.4	-3.2	-3.7	-3.9	-3.8	-3.1	-2.3	-0.8	0.1	0.7	1.2	1.5	1.3	1.1	-0.4	-1.2	-1.5	-1.1	-1.1	1.5	-3.9	-1.7
30	-1.0	-1.0	-0.7	-0.3	-0.3	0.0	0.1	0.0	0.4	0.3	0.8	0.6	0.6	1.1	1.4	1.8	2.0	2.0	1.2	0.6	-0.4	-1.0	-1.7	-2.1	2.0	-2.1	0.2
31	-2.2	-2.3	-1.8	-1.3	-1.4	-1.7	-1.9	-1.6	-2.5	-2.6	-2.2	-2.0	-1.6	-0.5	0.3	0.7	1.3	1.5	1.0	0.6	0.5	0.5	-0.7	-2.1	1.5	-2.6	-0.9
Max.	**8.7**	**8.8**	**8.5**	**8.5**	**8.6**	**8.7**	**8.6**	**8.5**	**8.5**	**8.5**	**8.6**	**8.4**	**8.3**	**8.6**	**9.2**	**9.4**	**9.2**	**9.0**	**8.7**	**8.5**	**8.0**	**7.6**	**8.0**	**8.6**	**9.4**		
Min.	**-4.7**	**-4.5**	**-4.6**	**-4.6**	**-4.7**	**-5.0**	**-4.8**	**-5.1**	**-5.5**	**-6.2**	**-6.2**	**-5.5**	**-4.8**	**-4.4**	**-3.9**	**-3.7**	**-3.7**	**-3.4**	**-4.0**	**-4.5**	**-4.6**	**-4.9**	**-4.9**	**-4.7**		**-6.2**	
Avg.	**1.5**	**1.4**	**1.3**	**1.3**	**1.1**	**1.0**	**0.9**	**0.8**	**0.7**	**0.7**	**0.9**	**1.3**	**1.7**	**2.2**	**2.6**	**2.8**	**2.8**	**2.8**	**2.5**	**2.1**	**1.7**	**1.5**	**1.3**	**1.2**			**1.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-1.6	-1.4	-1.8	-1.2	-1.3	-1.5	-1.3	-0.5	-1.0	-1.9	-2.2	-1.3	-0.3	0.1	1.3	2.2	2.2	2.4	2.5	2.5	1.7	1.0	0.3	0.3	2.5	-2.2	0.0
2	1.7	1.4	1.7	1.8	1.6	1.5	1.4	0.9	0.2	-0.2	-0.7	-1.2	-1.5	-2.2	-2.5	-2.5	-2.9	-3.2	-3.4	-3.3	-3.9	-4.4	-4.6	-4.7	1.8	-4.7	-1.2
3	-4.8	-5.2	-5.4	-5.7	-5.7	-5.8	-6.1	-6.1	-6.2	-6.2	-6.6	-6.0	-5.5	-5.1	-5.3	-5.2	-4.9	-4.8	-4.9	-5.0	-4.9	-4.8	-5.0	-4.9	-4.8	-6.6	-5.4
4	-5.0	-4.9	-4.8	-4.7	-4.5	-4.8	-4.8	-4.8	-5.1	-4.9	-4.8	-4.8	-4.6	-4.1	-3.7	-3.9	-4.1	-3.8	-3.6	-3.5	-3.5	-3.6	-3.8	-4.1	-3.5	-5.1	-4.3
5	-4.1	-4.2	-4.0	-3.8	-3.6	-3.4	-3.0	-2.7	-2.1	-1.8	-1.1	-0.5	1.9	3.0	3.1	3.0	3.1	2.7	2.3	2.1	2.0	2.0	2.2	2.1	3.1	-4.2	-0.2
6	2.1	2.2	2.2	2.1	2.2	2.7	2.7	2.7	2.7	2.7	2.9	3.3	3.6	4.2	4.7	4.0	3.6	3.9	3.9	3.9	3.9	3.5	3.8	3.8	4.7	2.1	3.2
7	3.7	2.6	2.7	2.4	1.6	1.2	0.9	0.5	-1.6	-2.3	-2.7	-2.3	-2.1	-1.6	-1.7	-1.7	-0.2	-0.8	-1.6	-2.6	-2.7	-2.1	-2.3	-2.2	3.7	-2.7	-0.6
8	-1.5	-1.3	-2.2	-2.5	-2.8	-3.0	-3.0	-3.2	-2.8	-2.0	-1.3	-0.6	0.1	0.6	0.8	0.8	0.7	0.5	0.4	0.3	0.3	0.7	0.9	0.9	0.9	-3.2	-0.8
9	0.9	0.4	0.2	0.3	0.3	0.8	0.7	0.6	0.5	0.4	0.2	0.2	0.3	0.4	0.6	0.6	0.6	0.6	0.7	0.8	1.0	1.1	1.3	1.8	1.8	0.2	0.6
10	3.3	3.7	3.6	3.4	3.8	3.9	3.9	4.8	4.7	3.4	2.0	1.1	1.1	1.8	3.6	4.2	3.8	4.7	4.3	2.8	1.4	2.7	2.8	3.0	4.8	1.1	3.2
11	2.7	2.8	3.1	3.2	2.9	2.5	2.2	2.0	1.1	1.6	1.7	1.4	0.9	0.8	0.8	0.8	1.0	1.2	2.1	1.7	2.2	1.8	1.7	1.6	3.2	0.8	1.8
12	1.3	1.0	1.0	0.6	0.4	0.1	-0.3	-0.5	-0.5	-0.6	-0.3	-0.4	-0.2	-0.3	-0.3	-0.2	-0.1	0.0	0.1	0.2	-0.1	-0.3	-0.7	-1.0	1.3	-1.0	0.0
13	-1.4	-1.8	-2.0	-1.8	-1.8	-1.7	-2.1	-1.0	-0.5	-0.1	0.3	-0.3	0.2	0.3	0.5	0.8	1.2	1.1	0.9	0.7	0.6	0.8	1.0	1.0	1.2	-2.1	-0.2
14	0.8	0.3	0.8	0.4	-0.1	0.4	0.2	-0.5	-0.9	-0.8	-0.2	-1.3	-1.5	-1.1	-0.5	0.0	-0.2	0.1	0.6	0.4	0.8	1.0	0.6	0.4	1.0	-1.5	0.0
15	0.6	0.5	0.2	-0.1	-0.4	-0.2	0.3	0.1	0.0	-1.0	-1.4	-1.6	-1.8	-0.9	-0.2	0.5	0.0	-0.4	-0.4	1.1	1.2	1.1	0.8	1.2	1.2	-1.8	0.0
16	1.1	1.1	0.9	1.1	0.9	1.4	1.5	0.4	0.3	0.5	0.4	0.4	0.4	0.2	0.3	0.8	0.4	0.4	0.3	0.0	-0.1	-0.2	-0.1	-1.5	1.5	-1.5	0.4
17	-2.2	-2.4	-2.9	-3.0	-2.6	-2.7	-3.0	-3.6	-3.9	-3.6	-3.9	-3.4	-3.2	-2.7	-2.6	-2.4	-2.1	-2.2	-2.3	-2.9	-3.1	-3.5	-4.2	-4.7	-2.1	-4.7	-3.1
18	-4.8	-4.9	-4.8	-4.9	-5.0	-4.6	-4.3	-3.9	-3.9	-4.1	-4.2	-4.0	-3.9	-3.2	-2.9	-2.8	-2.8	-2.8	-3.0	-3.7	-4.2	-4.6	-4.8	-5.4	-2.8	-5.4	-4.1
19	-5.2	-5.6	-5.7	-5.7	-5.7	-5.4	-5.6	-5.5	-5.4	-5.7	-5.8	-5.9	-5.6	-5.2	-5.2	-5.2	-5.5	-5.5	-5.5	-5.3	-5.0	-5.1	-4.9	-5.0	-4.9	-5.9	-5.4
20	-5.1	-5.2	-5.4	-6.0	-6.2	-6.0	-6.2	-6.5	-6.4	-6.3	-6.2	-6.4	-6.8	-7.0	-7.3	-7.5	-8.0	-8.5	-8.9	-9.5	-10.3	-10.2	-10.2	-10.3	-5.1	-10.3	-7.3
21	-10.4	-10.4	-10.4	-10.6	-11.2	-11.2	-11.3	-11.5	-11.5	-11.6	-11.6	-11.4	-11.1	-11.2	-11.0	-11.1	-11.1	-11.3	-11.5	-11.1	-11.0	-10.8	-10.1	-9.4	-9.4	-11.6	-11.0
22	-8.6	-8.2	-7.5	-7.4	-7.1	-7.1	-6.8	-6.7	-6.8	-6.9	-7.0	-6.9	-6.7	-6.3	-6.0	-5.7	-5.6	-5.6	-5.9	-6.3	-6.2	-6.0	-5.5	-5.0	-5.0	-8.6	-6.6
23	-4.8	-4.7	-4.8	-5.0	-4.7	-4.7	-4.5	-4.7	-4.0	-4.1	-3.6	-3.6	-3.4	-2.8	-2.4	-2.0	-1.7	-1.1	-1.0	-1.2	-1.3	-0.5	0.3	0.4	0.4	-5.0	-2.9
24	0.7	0.7	0.9	1.4	1.6	1.4	1.5	1.6	1.8	1.8	1.7	1.7	1.4	1.4	1.8	1.7	2.0	2.3	2.1	2.3	2.2	2.4	2.7	2.5	2.7	0.7	1.7
25	1.7	0.4	-0.5	-0.6	-1.4	-2.4	-2.9	-2.5	-2.7	-3.3	-2.8	-3.3	-4.1	-5.0	-6.4	-6.4	-7.3	-7.7	-8.1	-8.6	-9.0	-9.3	-8.9	-8.9	1.7	-9.3	-4.6
26	-9.4	-9.2	-8.9	-8.5	-8.6	-8.8	-9.0	-8.8	-8.8	-8.7	-8.5	-8.6	-8.2	-7.6	-7.4	-7.3	-7.7	-7.8	-7.8	-8.3	-8.3	-8.6	-8.6	-8.8	-7.3	-9.4	-8.4
27	-8.9	-8.7	-8.4	-8.2	-8.1	-8.0	-8.2	-6.9	-6.2	-6.7	-6.7	-6.3	-5.3	-4.9	-4.2	-3.5	-3.3	-3.9	-3.7	-1.7	1.0	0.8	0.4	0.5	1.0	-8.9	-5.0
28	0.5	1.1	0.9	1.5	2.3	2.2	2.9	2.9	2.5	2.3	1.9	3.6	3.4	2.5	2.9	1.5	1.2	1.3	1.0	0.3	-0.2	-0.8	-1.0	-1.0	3.6	-1.0	1.5
29	-1.3	-1.0	-1.7	-1.8	-2.4	-3.1	-3.8	-4.5	-5.2	-5.8	-6.3	-6.8	-7.0	-7.1	-7.6	-7.8	-8.1	-8.4	-8.7	-8.8	-8.8	-9.0	-9.0	-8.9	-1.0	-9.0	-6.0
30	-9.2	-9.4	-10.0	-10.3	-10.1	-9.7	-9.5	-9.6	-9.8	-9.9	-10.0	-10.0	-10.1	-9.6	-9.2	-9.1	-8.6	-8.2	-8.3	-7.6	-7.6	-7.5	-7.6	-7.7	-7.5	-10.3	-9.1
Max.	**3.7**	**3.7**	**3.6**	**3.4**	**3.8**	**3.9**	**3.9**	**4.8**	**4.7**	**3.4**	**2.9**	**3.6**	**3.6**	**4.2**	**4.7**	**4.2**	**3.8**	**4.7**	**4.3**	**3.9**	**3.9**	**3.5**	**3.8**	**3.8**	**4.8**		
Min.	**-10.4**	**-10.4**	**-10.4**	**-10.6**	**-11.2**	**-11.2**	**-11.3**	**-11.5**	**-11.5**	**-11.6**	**-11.6**	**-11.4**	**-11.1**	**-11.2**	**-11.0**	**-11.1**	**-11.1**	**-11.3**	**-11.5**	**-11.1**	**-11.0**	**-10.8**	**-10.2**	**-10.3**		**-11.6**	
Avg.	**-2.2**	**-2.3**	**-2.4**	**-2.5**	**-2.5**	**-2.5**	**-2.6**	**-2.6**	**-2.7**	**-2.9**	**-2.9**	**-2.8**	**-2.6**	**-2.4**	**-2.2**	**-2.1**	**-2.2**	**-2.2**	**-2.2**	**-2.3**	**-2.4**	**-2.4**	**-2.4**	**-2.5**			**-2.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature at 10 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-7.3	-7.2	-6.9	-7.8	-6.1	-7.2	-7.3	-7.2	-7.2	-7.1	-6.9	-6.9	-6.4	-5.3	-5.1	-5.0	-5.3	-5.1	-5.2	-5.3	-5.3	-5.3	-5.2	-5.1	-5.0	-7.8	-6.2
2	-5.2	-5.1	-4.8	-4.6	-4.6	-4.6	-4.3	-3.6	-3.1	-2.9	-2.7	-1.7	-1.7	-2.2	-1.2	-0.9	-0.1	0.1	0.4	0.5	0.1	0.1	0.1	0.5	0.5	-5.2	-2.1
3	0.6	1.2	1.2	2.0	2.2	2.5	2.6	2.1	1.5	1.1	1.1	1.9	1.8	1.0	0.9	1.1	1.1	1.6	1.7	2.1	2.3	2.6	2.6	3.0	3.0	0.6	1.7
4	2.3	2.0	2.3	3.4	4.1	4.3	4.1	3.3	3.2	3.5	3.8	4.1	3.6	3.4	3.5	3.5	3.5	4.0	3.3	3.4	3.2	3.2	3.8	3.7	4.3	2.0	3.4
5	3.2	2.8	3.3	3.3	2.9	3.2	3.4	3.5	3.9	2.9	3.8	5.7	5.2	5.1	5.2	5.0	5.3	5.5	5.2	5.4	5.3	5.4	5.4	5.1	5.7	2.8	4.4
6	4.6	4.4	4.6	4.3	4.1	3.8	3.8	4.3	4.5	4.8	4.7	4.6	4.4	3.9	2.7	2.7	2.6	2.1	2.2	2.3	2.6	2.6	2.4	2.0	4.8	2.0	3.5
7	1.9	1.5	1.7	1.8	1.7	2.2	2.9	3.5	2.9	2.5	2.2	1.9	2.3	2.4	1.4	1.2	1.4	1.0	1.3	0.9	0.9	0.9	0.9	2.4	3.5	0.9	1.8
8	2.6	3.2	3.3	3.1	3.0	3.2	3.0	2.9	2.7	3.0	2.0	0.3	1.2	1.8	2.2	1.7	1.1	0.5	0.4	1.3	2.2	1.7	0.9	0.9	3.3	0.3	2.0
9	1.5	2.1	2.4	2.6	2.7	3.0	2.4	1.3	0.7	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.4	-0.5	0.3	-0.2	3.0	-0.5	1.0
10	-0.4	0.2	1.0	1.4	1.3	1.0	0.4	-0.3	-1.2	-1.3	-1.6	-2.3	-2.7	-2.9	-3.3	-3.4	-3.2	-3.3	-3.5	-3.4	-3.1	-3.2	-3.2	-3.3	1.4	-3.5	-1.7
11	-3.3	-3.0	-2.9	-3.0	-3.1	-2.2	-2.3	-2.2	-2.5	-2.1	-2.0	-1.9	-1.6	-2.0	-2.6	-2.6	-2.7	-2.7	-3.0	-3.3	-4.2	-3.4	-3.5	-4.1	-1.6	-4.2	-2.8
12	-3.9	-4.2	-4.2	-3.9	-4.0	-4.1	-4.2	-5.6	-6.3	-6.5	-6.7	-6.5	-5.9	-5.6	-5.0	-4.6	-4.6	-4.9	-4.9	-4.9	-5.1	-4.8	-4.6	-4.4	-3.9	-6.7	-5.0
13	-5.2	-5.1	-5.6	-5.3	-5.6	-5.3	-5.5	-5.6	-5.6	-6.2	-5.8	-5.8	-5.3	-3.5	-3.1	-4.1	-4.0	-4.2	-4.9	-4.8	-5.1	-5.4	-5.8	-5.6	-3.1	-6.2	-5.1
14	-5.7	-5.8	-5.8	-5.5	-5.3	-5.4	-5.0	-4.8	-4.0	-3.7	-3.5	-3.9	-3.2	-2.4	-2.3	-2.8	-2.5	-2.7	-2.7	-2.1	-2.7	-2.6	-1.3	-0.3	-0.3	-5.8	-3.6
15	0.2	0.0	1.9	2.2	1.7	2.0	2.2	1.6	1.3	1.1	0.9	-0.5	-0.1	0.0	-0.5	-0.1	0.0	-0.1	-0.7	-1.1	-1.3	-1.4	-1.4	-1.7	2.2	-1.7	0.3
16	-1.9	-2.0	-2.1	-2.4	-2.8	-3.0	-3.0	-3.2	-3.6	-4.3	-4.2	-3.6	-3.9	-3.3	-3.7	-3.0	-2.6	-1.6	-1.7	-1.9	-1.9	-1.7	-1.2	-0.7	-0.7	-4.3	-2.6
17	0.1	0.4	-0.9	-0.5	0.5	0.3	-0.3	-0.7	-0.3	-0.2	-1.6	-0.5	-0.1	-0.3	-0.4	0.1	-0.1	-0.5	-0.5	-0.5	-0.7	-0.2	-0.2	-0.1	0.5	-1.6	-0.3
18	0.1	0.1	-0.1	-0.1	-0.1	-0.1	0.0	1.4	2.6	2.2	1.4	0.9	2.5	3.1	1.9	2.0	2.2	3.0	3.1	3.1	3.5	3.8	3.7	3.5	3.8	-0.1	1.8
19	3.0	2.8	2.8	3.0	1.9	2.4	2.2	1.9	1.6	1.6	1.4	1.4	1.8	1.6	1.4	1.7	2.1	2.4	2.7	2.6	2.4	2.5	2.2	1.8	3.0	1.4	2.1
20	1.4	1.3	1.0	1.2	1.8	2.2	2.3	2.4	2.7	2.8	2.8	2.9	3.0	3.2	3.4	3.2	3.5	3.5	2.8	2.4	1.4	1.1	0.3	-0.1	3.5	-0.1	2.2
21	-0.8	-1.4	-1.2	-1.7	-2.3	-2.4	-2.8	-2.8	-2.3	-2.2	-2.4	-2.5	-2.5	-2.4	-2.4	-2.3	-1.8	-2.0	-1.9	-2.3	-2.6	-3.4	-3.7	-3.9	-0.8	-3.9	-2.3
22	-3.9	-3.9	-3.7	-3.9	-3.3	-3.0	-3.1	-3.3	-3.6	-3.5	-3.5	-3.5	-3.4	-3.4	-3.1	-2.4	-2.2	-2.2	-2.4	-2.9	-3.2	-3.2	-3.3	-3.6	-2.2	-3.9	-3.2
23	-3.7	-3.8	-3.9	-3.6	-2.9	-3.1	-2.8	-2.7	-2.7	-2.2	-1.3	0.1	0.1	0.1	-0.4	-0.7	-1.0	-1.1	-1.4	-1.8	-2.0	-2.1	-2.2	-2.0	0.1	-3.9	-2.0
24	-1.7	-1.7	-1.5	-1.4	-1.2	-1.4	-1.6	-2.0	-2.0	-2.2	-2.3	-2.0	-1.8	-1.8	-1.6	-1.6	-1.9	-2.5	-3.0	-1.7	-2.1	-2.9	-2.7	-2.9	-1.2	-3.0	-2.0
25	-2.9	-2.5	-1.7	-1.8	-3.5	-4.0	-3.5	-3.6	-3.6	-3.5	-3.5	-3.7	-3.9	-4.0	-4.2	-3.9	-3.9	-4.0	-3.6	-2.9	-2.8	-3.7	-3.8	-3.9	-1.7	-4.2	-3.4
26	-4.4	-5.2	-5.9	-6.7	-7.5	-8.4	-9.1	-9.9	-10.4	-10.8	-11.0	-10.9	-10.7	-10.6	-10.3	-10.2	-10.1	-10.1	-9.7	-9.9	-10.1	-10.3	-10.7	-11.0	-4.4	-11.0	-9.3
27	-11.2	-11.2	-11.2	-11.4	-11.2	-10.8	-10.8	-10.6	-10.4	-10.7	-10.8	-10.7	-10.3	-10.3	-10.2	-10.1	-10.1	-10.4	-10.2	-9.6	-9.8	-9.7	-9.7	-9.9	-9.6	-11.4	-10.5
28	-10.1	-9.9	-9.9	-9.9	-10.0	-10.2	-10.5	-10.8	-11.4	-11.7	-12.0	-12.0	-12.0	-11.8	-11.6	-11.8	-12.3	-12.4	-12.7	-13.1	-13.1	-13.2	-13.3	-13.4	-9.9	-13.4	-11.6
29	-13.5	-13.4	-13.3	-13.1	-13.0	-12.7	-12.9	-12.4	-12.5	-12.3	-12.3	-12.7	-12.6	-12.7	-12.1	-11.9	-11.8	-12.1	-12.3	-12.4	-12.6	-12.2	-12.4	-12.6	-11.8	-13.5	-12.6
30	-12.8	-12.7	-12.7	-12.7	-12.6	-12.3	-12.5	-12.7	-12.9	-13.0	-13.0	-12.9	-13.0	-12.9	-12.8	-12.6	-12.9	-13.4	-14.2	-14.6	-14.3	-14.3	-14.6	-15.3	-12.3	-15.3	-13.2
31	-15.4	-16.0	-16.1	-16.1	-16.1	-16.1	-16.6	-16.9	-17.2	-17.4	-17.1	-17.3	-17.6	-17.4	-16.7	-16.5	-16.7	-16.9	-16.9	-16.8	-16.5	-16.6	-16.4	-16.2	-15.4	-17.6	-16.6
Max.	**4.6**	**4.4**	**4.6**	**4.3**	**4.1**	**4.3**	**4.1**	**4.3**	**4.5**	**4.8**	**4.7**	**5.7**	**5.2**	**5.1**	**5.2**	**5.0**	**5.3**	**5.5**	**5.2**	**5.4**	**5.3**	**5.4**	**5.4**	**5.1**	**5.7**		
Min.	**-15.4**	**-16.0**	**-16.1**	**-16.1**	**-16.1**	**-16.1**	**-16.6**	**-16.9**	**-17.2**	**-17.4**	**-17.1**	**-17.3**	**-17.6**	**-17.4**	**-16.7**	**-16.5**	**-16.7**	**-16.9**	**-16.9**	**-16.8**	**-16.5**	**-16.6**	**-16.4**	**-16.2**		**-17.6**	
Avg.	**-3.0**	**-3.0**	**-2.9**	**-2.8**	**-2.8**	**-2.8**	**-2.9**	**-3.0**	**-3.1**	**-3.2**	**-3.2**	**-3.1**	**-3.0**	**-2.9**	**-2.9**	**-2.8**	**-2.8**	**-2.8**	**-3.0**	**-2.9**	**-3.0**	**-3.1**	**-3.1**	**-3.1**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.2	0.17	0.20	0.25	0.31	0.20	0.32	0.24	0.22	0.23	0.27	0.28	0.17	0.21	0.21	0.03	0.03	0.06	0.15	0.20	0.17	0.15	0.12	0.15	0.32	0.03	0.19
2	0.1	0.01	0.08	0.09	0.03	0.05	0.07	0.03	-0.02	-0.01	0.01	-0.03	-0.09	-0.08	-0.01	0.01	0.01	-0.04	-0.04	-0.08	-0.04	-0.01	-0.08	-0.14	0.09	-0.14	-0.01
3	-0.1	-0.08	-0.07	-0.09	-0.10	-0.07	-0.08	-0.04	-0.12	-0.06	-0.07	-0.12	-0.10	-0.10	-0.16	-0.12	-0.12	-0.10	-0.02	-0.02	-0.05	-0.10	-0.08	-0.08	-0.02	-0.16	-0.08
4	-0.1	-0.10	-0.04	-0.13	0.01	0.06	-0.04	-0.02	0.05	-0.04	-0.10	0.01	-0.06	-0.12	-0.14	-0.14	-0.10	0.01	0.13	0.01	0.01	-0.03	0.02	-0.03	0.13	-0.14	-0.04
5	-0.1	-0.03	-0.01	0.09	0.08	0.05	0.10	0.15	0.22	0.26	0.29	0.26	0.22	0.22	0.23	0.23	0.18	0.19	0.17	0.15	0.13	0.15	0.15	0.14	0.29	-0.08	0.15
6	0.1	0.10	0.08	0.07	0.06	0.07	0.09	0.11	0.13	0.13	0.14	0.11	0.08	0.05	0.01	-0.01	-0.10	-0.12	-0.17	-0.17	-0.09	-0.06	-0.06	-0.06	0.14	-0.17	0.02
7	-0.1	-0.01	-0.12	-0.15	-0.16	-0.13	-0.18	-0.15	-0.06	-0.09	-0.12	-0.14	-0.13	-0.13	-0.10	-0.26	-0.14	-0.09	-0.07	-0.08	-0.10	-0.07	-0.09	0.05	0.05	-0.26	-0.11
8	0.0	0.04	-0.07	-0.18	-0.17	-0.12	0.00	0.12	0.00	0.02	-0.06	-0.02	-0.02	-0.18	-0.13	-0.16	-0.11	-0.13	-0.13	-0.06	-0.05	-0.04	0.04	0.13	0.13	-0.18	-0.05
9	0.1	0.03	-0.05	-0.14	-0.13	-0.27	-0.32	-0.21	-0.04	0.09	-0.06	-0.11	-0.12	-0.16	-0.17	-0.20	-0.09	0.09	0.21	0.22	0.23	0.22	0.16	0.14	0.23	-0.32	-0.02
10	0.1	0.12	0.13	0.13	0.12	0.13	0.13	0.14	0.14	0.20	0.23	0.16	0.09	0.09	0.08	0.14	0.12	0.16	0.19	0.18	0.17	0.18	0.21	0.20	0.23	0.08	0.15
11	0.2	0.18	0.16	0.07	-0.01	0.14	0.14	0.11	0.11	0.12	0.04	-0.01	-0.16	-0.19	-0.19	-0.16	-0.16	-0.09	0.03	-0.01	-0.17	-0.21	-0.26	-0.09	0.19	-0.26	-0.02
12	-0.1	-0.13	-0.17	-0.19	-0.16	-0.25	-0.29	-0.26	-0.26	-0.14	0.37	0.19	-0.22	-0.14	-0.07	-0.13	-0.15	-0.06	0.26	0.22	0.03	0.13	0.19	0.17	0.37	-0.29	-0.05
13	0.1	-0.07	-0.10	-0.04	-0.03	0.02	-0.12	-0.16	-0.20	0.04	0.00	0.01	-0.22	-0.10	-0.15	-0.06	0.16	0.19	0.19	0.23	0.19	-0.09	-0.42	-0.19	0.23	-0.42	-0.03
14	-0.2	-0.11	-0.14	-0.06	0.15	0.07	-0.08	-0.21	0.01	0.17	0.10	-0.01	-0.02	-0.09	-0.10	-0.13	-0.12	-0.13	-0.16	-0.12	-0.15	-0.02	0.04	0.01	0.17	-0.21	-0.05
15	0.0	0.12	0.20	0.13	0.11	0.03	-0.02	-0.02	-0.06	0.00	-0.02	-0.05	-0.07	-0.11	-0.11	-0.08	-0.06	-0.04	-0.04	-0.05	-0.06	0.01	-0.03	0.00	0.20	-0.11	-0.01
16	0.0	0.06	0.00	0.01	0.04	0.07	0.09	0.22	0.45	0.26	0.16	0.18	0.11	0.20	0.17	0.23	0.27	0.58	0.47	0.51	0.52	0.71	1.40	0.49	1.40	0.00	0.30
17	0.7	0.62	0.51	0.45	0.26	0.15	0.18	0.37	0.15	0.15	0.09	0.07	-0.01	-0.02	-0.01	0.00	0.01	0.05	0.08	0.06	0.08	0.05	0.12	0.10	0.73	-0.02	0.18
18	0.1	0.10	0.05	0.14	0.10	0.14	0.19	0.12	0.21	0.18	0.07	0.07	0.05	-0.02	-0.07	-0.07	-0.03	0.00	0.05	-0.01	0.01	0.08	0.10	0.07	0.21	-0.07	0.07
19	0.0	0.05	0.05	0.25	0.25	0.22	0.17	0.15	0.15	0.23	0.33	0.20	0.23	0.16	0.08	0.06	0.13	0.14	0.22	0.23	0.15	0.07	0.01	0.06	0.33	0.01	0.15
20	0.0	-0.04	0.02	0.00	0.02	0.21	0.16	0.25	0.27	0.25	0.24	0.26	0.20	0.27	0.26	0.36	0.36	0.19	0.18	0.15	0.08	0.15	0.12	0.40	0.40	-0.04	0.18
21	0.2	0.33	0.32	0.44	0.35	0.31	0.21	0.28	0.22	0.32	0.30	0.15	0.08	0.09	0.13	0.11	0.11	0.12	0.08	0.05	0.10	0.07	0.13	0.08	0.44	0.05	0.19
22	0.1	0.20	0.21	0.24	0.13	0.14	0.25	0.37	0.14	0.18	0.24	0.11	0.08	0.13	0.10	0.03	-0.07	0.00	0.08	0.14	0.14	0.27	0.16	0.16	0.37	-0.07	0.15
23	0.0	0.03	0.03	0.19	0.07	0.06	0.05	0.00	0.10	0.07	0.04	-0.02	-0.15	-0.23	-0.48	-0.61	-0.38	-0.07	0.08	0.10	0.25	0.14	0.23	0.11	0.25	-0.61	-0.01
24	0.1	0.04	-0.06	-0.02	-0.07	-0.14	-0.24	-0.01	-0.05	-0.03	-0.02	-0.05	-0.08	-0.10	-0.11	-0.14	-0.18	-0.10	-0.16	-0.23	-0.16	-0.14	-0.13	-0.12	0.06	-0.24	-0.09
25	-0.1	-0.11	-0.07	-0.14	-0.22	-0.03	0.09	0.31	0.13	0.05	0.12	0.04	0.04	0.02	-0.03	0.06	0.02	0.05	0.09	0.12	0.10	0.30	0.23	0.11	0.31	-0.22	0.05
26	0.1	0.08	0.11	0.20	0.14	0.13	0.68	0.27	0.14	0.42	0.10	-0.15	-0.21	-0.23	-0.16	-0.04	-0.08	0.13	0.39	0.35	0.44	0.41	0.31	0.15	0.68	-0.23	0.16
27	0.3	0.20	0.08	0.08	0.35	0.19	0.04	0.02	0.07	0.09	0.08	0.03	0.01	-0.02	-0.04	-0.07	-0.01	0.02	0.02	0.01	0.00	-0.01	-0.02	0.00	0.35	-0.07	0.06
28	0.0	0.00	-0.01	-0.03	-0.02	-0.05	-0.07	-0.10	-0.09	-0.07	-0.01	-0.06	-0.15	-0.15	-0.18	-0.18	-0.17	-0.14	-0.14	-0.13	-0.08	0.03	0.40	0.19	0.40	-0.18	-0.05
29	0.3	0.20	0.18	0.19	0.13	0.09	0.05	0.07	0.14	0.14	0.05	0.09	0.04	-0.07	-0.25	-0.55	-0.24	-0.18	-0.15	-0.08	-0.04	-0.03	-0.01	-0.06	0.27	-0.55	0.00
30	0.0	0.01	-0.11	-0.02	0.06	0.21	0.09	0.24	0.28	0.24	0.12	0.13	-0.22	-0.28	-0.19	-0.13	-0.08	0.00	-0.03	-0.01	0.05	0.00	0.16	0.09	0.28	-0.28	0.03
31	0.2	0.15	0.17	0.05	0.16	0.19	0.18	0.20	0.14	0.23	0.11	0.08	0.02	-0.03	0.00	-0.02	0.02	0.09	0.11	0.16	0.11	0.14	0.22	0.39	0.39	-0.03	0.13
Max.	**0.7**	**0.62**	**0.51**	**0.45**	**0.35**	**0.31**	**0.68**	**0.37**	**0.45**	**0.42**	**0.37**	**0.28**	**0.23**	**0.27**	**0.26**	**0.36**	**0.36**	**0.58**	**0.47**	**0.51**	**0.52**	**0.71**	**1.40**	**0.49**	**1.40**		
Min.	**-0.2**	**-0.13**	**-0.17**	**-0.19**	**-0.22**	**-0.27**	**-0.32**	**-0.26**	**-0.26**	**-0.14**	**-0.12**	**-0.15**	**-0.22**	**-0.28**	**-0.48**	**-0.61**	**-0.38**	**-0.18**	**-0.17**	**-0.23**	**-0.17**	**-0.21**	**-0.42**	**-0.19**		**-0.61**	
Avg.	**0.1**	**0.07**	**0.05**	**0.06**	**0.06**	**0.06**	**0.06**	**0.08**	**0.08**	**0.12**	**0.10**	**0.05**	**-0.02**	**-0.04**	**-0.05**	**-0.06**	**-0.03**	**0.03**	**0.07**	**0.07**	**0.06**	**0.08**	**0.11**	**0.08**			**0.05**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.5	0.62	0.61	1.00	0.65	0.73	0.65	0.81	0.57	0.18	0.29	-0.05	-0.35	-0.36	-0.27	-0.17	-0.09	0.07	0.37	0.49	0.67	0.67	0.54	0.56	1.00	-0.36	0.36
2	0.6	0.81	0.66	0.47	0.54	0.65	0.67	0.74	1.00	1.06	0.30	-0.13	-0.29	-0.23	-0.17	-0.14	-0.06	0.07	0.02	0.07	0.05	0.05	0.04	0.10	1.06	-0.29	0.29
3	0.1	0.16	0.29	0.27	0.22	0.26	0.31	0.12	-0.01	0.01	-0.07	-0.23	-0.26	-0.26	-0.28	-0.26	-0.14	0.08	0.35	0.70	0.24	0.36	0.32	0.57	0.70	-0.28	0.12
4	0.4	0.80	0.52	0.49	0.48	0.50	0.24	0.33	0.41	0.36	0.22	-0.18	-0.35	-0.37	-0.32	-0.24	-0.14	0.10	0.56	0.47	0.49	0.44	0.38	0.73	0.80	-0.37	0.26
5	0.4	0.01	-0.23	-0.29	-0.32	-0.30	-0.45	-0.32	-0.17	-0.13	-0.18	-0.28	-0.31	-0.34	-0.33	-0.23	-0.21	-0.06	0.14	0.15	0.40	0.60	0.53	0.56	0.60	-0.45	-0.06
6	1.0	0.95	0.83	0.76	0.47	0.50	0.71	0.93	0.65	0.54	0.39	-0.12	-0.29	-0.38	-0.35	-0.21	-0.21	-0.20	-0.14	0.20	-0.07	-0.04	0.38	0.14	1.02	-0.38	0.27
7	0.2	0.16	0.13	0.18	0.26	0.20	0.22	0.44	0.26	0.30	0.06	-0.21	-0.33	-0.37	-0.28	-0.27	-0.23	-0.04	0.25	0.56	0.43	0.60	0.55	0.68	0.68	-0.37	0.16
8	0.9	0.81	0.77	0.24	0.85	0.37	0.27	0.30	0.24	0.22	0.17	0.06	0.00	-0.02	-0.01	0.01	0.01	0.04	0.07	0.10	0.06	0.05	0.08	0.09	0.87	-0.02	0.24
9	0.1	0.10	0.09	0.04	-0.04	-0.03	-0.01	0.00	0.02	0.05	0.07	0.00	-0.06	-0.10	-0.16	-0.11	-0.09	0.03	0.52	0.13	0.33	0.43	0.52	0.51	0.52	-0.16	0.10
10	0.6	1.18	1.43	1.41	0.89	0.57	0.51	0.67	0.68	0.50	0.17	-0.20	-0.36	-0.35	-0.32	-0.26	-0.21	-0.07	0.40	0.29	0.12	0.16	0.06	0.04	1.43	-0.36	0.33
11	0.0	0.13	0.05	0.03	-0.02	-0.02	-0.05	-0.07	-0.10	-0.14	-0.19	-0.16	-0.25	-0.31	-0.33	-0.34	-0.24	-0.18	-0.17	-0.14	-0.15	-0.15	-0.12	-0.08	0.13	-0.34	-0.12
12	-0.1	-0.12	-0.12	-0.05	0.27	0.17	0.23	0.26	0.34	0.19	-0.03	0.02	-0.11	-0.04	-0.10	-0.12	-0.19	-0.16	0.09	0.23	0.28	0.29	0.28	0.07	0.34	-0.19	0.07
13	0.1	0.17	0.17	0.15	0.06	0.06	0.04	0.03	0.02	0.03	0.02	0.04	0.06	0.00	0.00	0.07	0.05	0.02	-0.04	-0.07	-0.01	-0.01	-0.01	0.06	0.17	-0.07	0.04
14	0.0	0.06	-0.02	-0.02	-0.02	-0.03	-0.02	-0.04	0.01	0.00	0.05	0.11	0.06	0.16	0.19	0.23	0.22	0.18	0.06	-0.02	-0.08	-0.16	-0.28	-0.41	0.23	-0.41	0.01
15	-0.4	-0.36	-0.40	-0.41	-0.46	-0.44	-0.30	-0.24	-0.19	-0.14	-0.07	-0.06	-0.27	-0.38	-0.32	-0.31	-0.24	-0.14	-0.07	0.03	0.27	0.01	0.08	0.04	0.27	-0.46	-0.20
16	0.0	-0.01	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	-0.02	-0.02	-0.02	-0.02	0.00	0.02	0.04	0.08	0.07	0.20	0.33	0.32	0.14	0.14	0.33	-0.02	0.05
17	0.2	0.13	0.06	0.08	0.08	0.07	0.19	0.15	0.18	0.16	0.13	0.14	-0.01	-0.11	-0.14	-0.15	-0.09	-0.03	-0.06	0.14	0.14	0.14	0.15	0.12	0.19	-0.15	0.07
18	0.1	0.10	0.09	0.09	-0.05	-0.03	0.09	0.16	0.15	0.10	0.10	0.10	0.08	0.07	0.02	0.00	0.09	0.17	0.20	0.24	0.28	0.26	0.29	0.43	0.43	-0.05	0.13
19	0.4	0.54	0.78	0.28	0.45	0.25	0.18	0.16	0.16	0.16	0.07	0.00	-0.03	0.03	0.02	0.08	0.06	0.12	0.05	0.04	0.13	0.12	0.08	0.04	0.78	-0.03	0.18
20	0.0	-0.21	-0.22	-0.28	0.00	0.08	0.10	0.10	0.17	0.18	0.17	0.10	0.12	0.09	0.09	0.15	0.19	0.20	0.22	0.23	0.23	0.21	0.12	0.21	0.23	-0.28	0.09
21	0.2	0.23	0.23	0.20	0.24	0.22	0.23	0.18	0.19	0.17	0.15	0.11	0.05	0.08	0.11	0.16	0.12	0.10	0.15	0.18	0.14	0.10	0.09	0.09	0.24	0.05	0.16
22	0.1	0.09	0.13	0.09	0.05	0.03	0.02	0.07	0.14	0.09	0.03	0.04	0.04	0.06	0.11	0.05	0.05	0.07	0.12	0.15	0.19	0.20	0.26	0.33	0.33	0.02	0.10
23	0.5	0.49	0.14	0.17	0.36	0.35	0.28	0.29	0.23	0.25	0.03	-0.37	-0.45	-0.50	-0.48	-0.56	-0.56	-0.29	0.11	0.28	0.53	0.25	0.16	0.24	0.53	-0.56	0.06
24	0.3	0.28	0.23	0.17	0.19	0.26	0.14	0.27	0.14	0.02	-0.15	-0.27	-0.44	-0.63	-0.54	-0.48	-0.40	-0.30	-0.06	0.05	0.04	0.03	0.11	0.40	0.40	-0.63	-0.03
25	0.1	0.09	0.10	0.08	-0.01	-0.09	-0.11	-0.16	-0.15	-0.14	-0.14	-0.35	-0.30	-0.14	-0.04	-0.07	-0.05	-0.03	0.06	0.06	0.10	0.07	0.07	0.07	0.10	-0.35	-0.04
26	0.1	0.08	0.08	0.13	0.17	0.21	0.24	0.23	0.14	0.18	0.08	0.02	-0.06	-0.09	-0.06	-0.05	-0.01	0.05	0.09	0.26	0.31	0.13	0.24	0.51	0.51	-0.09	0.12
27	0.4	0.14	0.47	0.67	0.52	0.51	0.47	0.38	0.34	0.30	-0.06	-0.27	-0.37	-0.40	-0.37	-0.30	-0.16	0.01	0.02	0.06	0.09	0.09	0.10	0.09	0.67	-0.40	0.11
28	0.1	0.18	0.14	0.18	0.19	0.24	0.25	0.19	0.15	0.13	0.11	0.08	0.02	0.01	0.02	-0.02	0.33	0.34	0.29	0.05	-0.02	0.10	0.44	0.34	0.44	-0.02	0.16
29	0.3	0.29	0.18	0.10	0.13	0.18	0.12	0.14	0.07	0.04	-0.10	-0.23	-0.24	-0.27	-0.38	-0.40	-0.29	-0.23	-0.17	-0.11	-0.15	-0.05	-0.05	-0.04	0.31	-0.40	-0.05
Max.	**1.0**	**1.18**	**1.43**	**1.41**	**0.89**	**0.73**	**0.71**	**0.93**	**1.00**	**1.06**	**0.39**	**0.14**	**0.12**	**0.16**	**0.19**	**0.23**	**0.33**	**0.34**	**0.56**	**0.70**	**0.67**	**0.67**	**0.55**	**0.73**	**1.43**		
Min.	**-0.4**	**-0.36**	**-0.40**	**-0.41**	**-0.46**	**-0.44**	**-0.45**	**-0.32**	**-0.19**	**-0.14**	**-0.19**	**-0.37**	**-0.45**	**-0.63**	**-0.54**	**-0.56**	**-0.56**	**-0.30**	**-0.17**	**-0.14**	**-0.15**	**-0.16**	**-0.28**	**-0.41**		**-0.63**	
Avg.	**0.3**	**0.27**	**0.25**	**0.21**	**0.21**	**0.19**	**0.18**	**0.21**	**0.19**	**0.16**	**0.06**	**-0.08**	**-0.16**	**-0.18**	**-0.16**	**-0.14**	**-0.08**	**0.00**	**0.12**	**0.17**	**0.18**	**0.18**	**0.19**	**0.23**			**0.10**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.1	0.01	-0.07	-0.04	0.02	0.03	0.05	0.03	0.13	0.03	-0.02	-0.08	-0.13	-0.13	-0.11	-0.08	-0.04	-0.05	-0.06	-0.02	0.02	0.03	0.03	0.05	0.13	-0.13	-0.02
2	0.0	0.03	0.03	-0.01	-0.02	-0.02	0.00	0.03	0.05	0.08	0.00	-0.02	0.04	-0.01	-0.07	-0.04	-0.01	0.02	-0.02	0.11	0.23	0.26	0.21	0.36	0.36	-0.07	0.05
3	0.2	0.44	0.24	0.31	0.18	0.09	0.04	0.06	0.17	0.14	0.16	0.04	0.03	0.03	0.09	0.03	0.07	0.11	0.11	0.20	0.19	0.17	0.14	0.13	0.44	0.03	0.14
4	0.1	0.18	0.23	0.10	0.25	0.09	0.16	0.19	0.19	0.24	0.22	0.19	0.13	0.13	0.12	0.07	0.08	0.11	0.14	0.17	0.14	0.09	0.08	0.07	0.25	0.07	0.15
5	0.1	0.15	0.12	0.10	0.05	0.07	0.01	-0.03	-0.07	-0.08	-0.06	-0.07	-0.08	-0.12	-0.13	-0.09	0.09	0.15	0.14	0.19	0.13	0.16	0.13	0.15	0.19	-0.13	0.04
6	0.1	0.10	0.14	0.17	0.16	0.15	0.14	0.30	0.21	0.14	0.16	0.14	0.10	0.09	0.14	0.14	0.15	0.25	0.19	0.21	0.19	0.15	0.14	0.12	0.30	0.09	0.16
7	0.1	0.13	0.18	0.21	0.24	0.24	0.22	0.20	0.29	0.15	-0.01	-0.14	-0.28	-0.01	0.04	-0.10	-0.10	-0.02	0.07	0.07	0.22	0.24	0.29	0.07	0.29	-0.28	0.10
8	0.0	0.06	0.08	0.08	0.13	0.06	0.02	0.28	0.32	0.15	0.08	0.02	-0.05	0.02	0.02	0.01	0.01	0.03	0.04	0.10	0.14	0.17	0.19	0.13	0.32	-0.05	0.09
9	0.1	0.14	0.14	0.17	0.17	0.20	0.22	0.21	0.20	0.16	0.13	0.10	0.05	0.02	-0.04	0.05	0.16	0.12	0.19	0.19	0.30	0.30	0.35	0.32	0.35	-0.04	0.17
10	0.2	0.05	0.00	0.06	0.06	0.15	0.12	0.05	-0.06	-0.01	-0.10	-0.13	-0.32	-0.27	-0.15	-0.10	-0.07	0.17	0.01	0.04	-0.05	-0.04	-0.03	-0.02	0.17	-0.32	-0.02
11	0.0	0.11	0.25	0.28	0.27	0.26	0.26	0.24	0.25	0.19	0.05	-0.07	-0.19	-0.26	-0.22	-0.19	-0.21	-0.08	-0.03	0.01	0.03	0.02	0.03	0.02	0.28	-0.26	0.04
12	0.0	0.05	0.03	0.05	0.05	0.07	0.07	0.03	0.11	-0.11	-0.37	-0.51	-0.60	-0.65	-0.58	-0.57	-0.49	-0.35	0.06	0.48	0.77	0.83	0.51	0.29	0.83	-0.65	-0.03
13	0.1	0.18	0.11	0.00	0.00	0.12	0.16	0.15	0.16	0.04	-0.10	-0.17	-0.23	-0.25	-0.23	-0.19	-0.10	0.03	0.15	0.21	0.21	0.17	0.12	0.24	0.24	-0.25	0.04
14	0.4	0.27	0.19	0.10	0.00	-0.01	-0.01	0.56	-0.03	-0.23	-0.48	-0.67	-0.69	-0.62	-0.48	-0.49	-0.60	-0.38	-0.11	-0.01	0.06	0.08	0.13	0.11	0.56	-0.69	-0.12
15	0.1	0.06	0.00	-0.01	0.00	0.00	0.01	0.02	0.02	-0.02	0.01	-0.04	-0.10	-0.13	-0.09	-0.10	-0.13	-0.05	-0.02	0.01	0.03	0.03	0.05	0.04	0.09	-0.13	-0.01
16	0.0	0.04	0.05	0.06	0.07	0.11	0.15	0.10	0.12	0.13	0.08	-0.19	-0.22	-0.26	-0.31	-0.57	-0.75	-0.72	-0.21	-0.03	0.20	0.56	0.95	0.49	0.95	-0.75	0.00
17	0.6	0.65	0.56	0.49	0.52	0.60	0.64	0.54	0.78	-0.12	-0.42	-0.56	-0.63	-0.71	-0.61	-0.56	-0.71	-0.45	-0.26	-0.13	-0.08	-0.06	-0.06	-0.02	0.78	-0.71	0.00
18	0.0	-0.01	0.01	0.01	0.04	0.05	0.06	0.05	0.04	0.01	-0.03	-0.11	-0.23	-0.19	-0.18	-0.16	-0.11	-0.09	-0.02	0.04	0.07	0.10	0.10	0.10	0.10	-0.23	-0.02
19	0.1	0.12	0.14	0.14	0.11	0.11	0.07	0.04	0.07	0.07	0.02	-0.11	-0.23	-0.24	-0.24	-0.16	-0.07	-0.02	0.00	0.04	0.04	0.05	0.06	0.02	0.14	-0.24	0.01
20	0.0	-0.02	-0.09	-0.10	-0.10	-0.07	-0.08	-0.09	-0.10	-0.15	-0.23	-0.50	-0.46	-0.57	-0.52	-0.54	-0.50	-0.34	-0.30	-0.13	-0.18	-0.12	-0.10	-0.08	-0.02	-0.57	-0.22
21	-0.3	-0.13	-0.17	-0.18	-0.23	-0.02	0.00	0.14	0.42	0.10	0.09	0.07	0.08	0.10	0.08	0.07	0.01	0.01	0.27	0.34	0.24	0.26	0.26	0.23	0.42	-0.33	0.07
22	0.2	0.20	0.21	0.25	0.29	0.36	0.56	0.99	0.61	0.34	-0.09	-0.29	-0.55	-0.76	-0.75	-0.57	-0.57	-0.39	-0.05	0.03	-0.03	0.20	0.15	0.15	0.99	-0.76	0.02
23	0.2	0.39	0.40	0.02	-0.01	-0.05	-0.06	-0.12	-0.02	-0.04	-0.19	-0.45	-0.38	-0.03	-0.11	-0.33	-0.27	0.00	0.07	0.12	0.12	0.07	0.01	0.05	0.40	-0.45	-0.03
24	0.0	0.10	-0.13	-0.14	-0.12	-0.18	-0.09	-0.08	-0.14	-0.17	-0.40	-0.58	-0.58	-0.63	-0.65	-0.44	-0.41	-0.52	-0.21	-0.15	-0.08	-0.08	-0.09	0.00	0.10	-0.65	-0.24
25	0.0	0.06	0.17	0.24	0.03	0.29	0.05	0.03	0.00	-0.20	-0.37	-0.52	-0.78	-0.76	-0.74	-0.51	-0.58	-0.40	-0.02	0.00	0.01	0.02	0.07	0.02	0.29	-0.78	-0.16
26	0.1	0.03	0.05	0.04	0.02	-0.01	-0.02	-0.02	-0.04	-0.11	-0.24	-0.43	-0.67	-0.72	-0.73	-0.67	-0.47	-0.36	0.05	0.10	0.14	0.19	0.21	0.20	0.21	-0.73	-0.14
27	0.2	0.19	0.19	0.18	0.16	0.16	0.17	0.17	0.12	-0.02	-0.14	-0.24	-0.31	-0.47	-0.36	-0.28	-0.25	-0.12	-0.04	0.02	0.07	0.10	0.14	0.13	0.19	-0.47	-0.01
28	0.2	0.19	0.18	0.06	-0.04	-0.09	-0.13	-0.03	-0.13	-0.25	-0.33	-0.43	-0.78	-0.86	-0.83	-0.76	-0.72	-0.56	-0.12	0.03	0.41	0.58	0.39	0.57	0.58	-0.86	-0.15
29	0.4	0.50	0.17	0.03	0.01	0.11	0.03	0.03	0.06	-0.03	-0.03	-0.09	-0.06	-0.11	-0.08	-0.07	-0.02	0.03	0.05	0.04	0.05	0.06	0.09	0.11	0.50	-0.11	0.05
30	0.1	0.08	-0.02	0.03	0.08	0.14	0.11	0.12	0.11	0.07	0.13	0.02	0.03	-0.03	-0.02	-0.10	-0.01	0.05	0.13	0.23	0.22	0.20	0.22	0.23	0.23	-0.10	0.09
31	0.2	0.15	0.16	0.13	0.19	0.20	0.25	0.31	0.27	0.27	0.30	0.26	0.27	0.12	0.20	0.17	0.18	0.18	0.12	0.20	0.31	0.22	0.19	0.25	0.31	0.12	0.21
Max.	**0.6**	**0.65**	**0.56**	**0.49**	**0.52**	**0.60**	**0.64**	**0.99**	**0.78**	**0.34**	**0.30**	**0.26**	**0.27**	**0.13**	**0.20**	**0.17**	**0.18**	**0.25**	**0.27**	**0.48**	**0.77**	**0.83**	**0.95**	**0.57**	**0.99**		
Min.	**-0.3**	**-0.13**	**-0.17**	**-0.18**	**-0.23**	**-0.18**	**-0.13**	**-0.12**	**-0.14**	**-0.25**	**-0.48**	**-0.67**	**-0.78**	**-0.86**	**-0.83**	**-0.76**	**-0.75**	**-0.72**	**-0.30**	**-0.15**	**-0.18**	**-0.12**	**-0.10**	**-0.08**		**-0.86**	
Avg.	**0.1**	**0.15**	**0.11**	**0.09**	**0.08**	**0.10**	**0.10**	**0.15**	**0.13**	**0.03**	**-0.07**	**-0.18**	**-0.25**	**-0.27**	**-0.24**	**-0.23**	**-0.21**	**-0.12**	**0.01**	**0.09**	**0.13**	**0.16**	**0.16**	**0.15**			**0.01**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.2	0.16	0.24	0.20	0.14	0.17	0.23	0.23	0.18	0.14	0.10	0.08	0.11	0.04	0.07	0.06	0.07	0.07	0.10	0.10	0.15	0.17	0.17	0.25	0.25	0.04	0.14
2	0.2	0.26	0.13	0.31	0.23	0.31	0.28	0.29	0.09	-0.11	-0.39	-0.37	-0.67	-0.85	-0.77	-0.79	-0.52	-0.34	-0.24	-0.12	0.02	0.16	0.10	0.08	0.31	-0.85	-0.11
3	0.1	0.16	0.16	0.13	0.04	0.09	0.18	0.18	0.10	0.01	-0.09	-0.11	0.00	0.02	0.03	0.00	0.05	0.12	0.12	0.11	0.13	0.12	0.10	0.12	0.18	-0.11	0.08
4	0.1	0.15	0.12	0.12	0.08	0.18	0.14	0.13	0.13	0.18	0.15	0.10	0.01	0.02	0.01	0.01	0.02	0.02	0.05	0.00	0.00	-0.01	0.04	0.00	0.18	-0.01	0.07
5	0.0	-0.09	-0.11	-0.14	-0.15	-0.10	-0.23	-0.16	-0.18	-0.33	-0.29	-0.58	-0.72	-0.54	-0.49	-0.57	-0.54	-0.41	-0.11	0.07	0.01	-0.05	-0.06	-0.10	0.07	-0.72	-0.25
6	-0.1	-0.18	-0.12	-0.16	-0.13	-0.07	-0.01	0.06	-0.02	-0.24	-0.37	-0.29	-0.25	-0.32	-0.26	-0.33	-0.26	-0.26	-0.02	0.06	0.05	0.10	0.13	0.15	0.15	-0.37	-0.12
7	0.2	0.10	0.13	-0.07	-0.09	-0.11	-0.06	-0.07	-0.15	-0.49	-0.61	-0.70	-0.56	-0.44	-0.49	-0.40	-0.28	-0.23	-0.01	0.01	0.06	0.16	0.15	0.10	0.18	-0.70	-0.16
8	0.1	-0.01	-0.02	0.02	0.13	-0.07	0.05	0.09	-0.25	-0.69	-0.84	-1.00	-1.08	-1.17	-0.84	-1.35	-1.48	-0.65	-0.41	-0.22	-0.27	0.16	0.15	-0.05	0.16	-1.48	-0.40
9	0.0	-0.01	-0.02	-0.05	-0.17	-0.05	-0.05	-0.08	-0.14	-0.44	-0.80	0.77	-0.10	-1.60	-0.08	-0.96	-2.50	-0.80	-0.35	-0.24	-0.09	-0.01	0.02	0.08	0.77	-2.50	-0.32
10	0.1	0.04	0.05	0.05	0.02	0.06	0.15	0.14	0.00	-0.20	-0.39	-0.54	-0.65	-0.61	-0.62	-0.66	-0.58	-0.43	-0.04	0.05	0.09	0.14	0.15	0.17	0.17	-0.66	-0.15
11	0.2	0.16	0.14	0.14	0.16	0.15	0.15	0.14	0.01	-0.21	-0.35	-0.47	-0.46	-0.55	-0.59	-0.46	-0.41	-0.44	-0.05	0.01	0.03	0.05	0.09	0.07	0.17	-0.59	-0.11
12	0.1	0.10	0.11	0.11	0.10	0.12	0.12	0.10	-0.01	-0.12	-0.16	-0.23	-0.39	-0.43	-0.63	-0.77	-1.05	-0.86	-0.28	-0.01	0.07	0.06	0.10	0.11	0.12	-1.05	-0.16
13	0.1	0.12	0.12	0.08	0.02	-0.03	-0.01	-0.01	-0.25	-0.32	-0.45	-0.52	-0.54	-0.36	-0.37	-0.35	-0.27	-0.08	0.09	0.20	0.32	0.34	0.34	0.30	0.34	-0.54	-0.06
14	0.2	0.19	0.20	0.20	0.15	0.15	0.08	0.09	-0.01	-0.03	-0.16	-0.39	-0.52	-0.69	-0.85	-0.97	-1.13	-0.88	-0.35	-0.16	-0.01	0.12	0.14	0.20	0.24	-1.13	-0.18
15	0.2	0.11	0.13	0.08	0.07	0.10	0.14	0.24	0.12	-0.02	-0.02	-0.18	-0.37	-0.82	-0.71	-0.38	-0.24	-0.18	-0.12	-0.12	-0.13	-0.06	-0.06	0.00	0.24	-0.82	-0.09
16	0.0	0.06	0.03	-0.01	0.07	-0.01	-0.04	-0.07	-0.20	-0.36	-0.46	-0.62	-0.82	-0.99	-0.90	-0.98	-0.84	-0.60	-0.24	-0.10	-0.08	0.06	0.08	-0.01	0.08	-0.99	-0.29
17	0.0	0.07	0.05	0.09	0.13	0.18	0.29	0.16	-0.13	-0.50	-0.52	-0.45	-0.80	-0.86	-0.57	-0.72	-0.42	-0.30	-0.10	0.04	0.13	0.23	0.27	0.19	0.29	-0.86	-0.15
18	0.3	0.31	0.42	0.70	0.79	0.41	0.50	0.57	0.09	-0.45	-0.70	-0.95	-0.82	-0.92	-1.17	-1.07	-1.04	-0.90	-0.47	-0.07	0.33	0.45	0.33	0.37	0.79	-1.17	-0.12
19	0.2	0.38	0.53	0.47	0.45	0.59	0.66	0.45	0.25	-0.42	-0.86	-1.21	-1.18	-1.14	-0.91	-0.83	-0.75	-0.94	-0.26	-0.03	0.10	0.46	0.73	0.75	0.75	-1.21	-0.10
20	0.5	0.44	0.56	0.63	0.68	1.04	0.69	0.33	-0.01	-0.46	-0.87	-1.08	-1.29	-1.72	-1.58	-1.10	-0.73	-0.51	-0.27	-0.15	-0.08	0.02	0.04	0.08	1.04	-1.72	-0.20
21	0.1	0.04	0.02	0.01	0.05	0.07	0.12	0.01	-0.15	-0.36	-0.55	-1.21	-1.66	-1.43	-1.18	-0.60	-0.50	-0.42	-0.45	0.03	0.40	0.69	0.59	0.31	0.69	-1.66	-0.25
22	0.7	1.31	0.80	0.53	0.75	0.40	0.15	0.14	-0.42	-0.84	-0.96	-1.24	-1.29	-1.01	-1.16	-1.11	-0.85	-1.32	-0.72	0.12	0.34	0.81	1.16	0.90	1.31	-1.32	-0.12
23	0.8	1.02	1.23	1.35	0.76	0.43	0.31	0.00	-0.42	-0.85	-1.14	-1.07	-1.02	-0.99	-1.13	-0.98	-0.58	-0.77	-0.03	0.59	0.73	0.53	0.39	0.41	1.35	-1.14	-0.02
24	0.2	0.27	0.27	0.26	0.18	0.18	0.19	0.10	0.04	-0.04	-0.17	-0.30	-0.44	-0.40	-0.41	-0.48	-0.35	-0.22	0.00	-0.06	-0.01	0.08	0.10	0.09	0.27	-0.48	-0.04
25	0.1	0.02	-0.05	-0.07	-0.06	-0.06	-0.07	-0.14	-0.17	-0.52	-0.69	-1.13	-1.29	-1.24	-1.15	-1.14	-1.18	-0.73	-0.17	-0.05	0.00	0.09	0.12	0.17	0.17	-1.29	-0.39
26	0.4	0.13	0.06	-0.02	-0.07	-0.11	-0.01	-0.10	-0.19	-0.35	-0.38	-0.35	-0.41	-0.32	-0.30	-0.33	-0.40	-0.37	-0.28	-0.20	-0.11	0.05	0.15	0.17	0.36	-0.41	-0.14
27	0.0	0.11	0.16	0.13	0.05	0.01	-0.03	-0.05	-0.09	-0.10	-0.15	-0.22	-0.18	-0.28	-0.71	-1.09	-0.91	-0.80	-0.64	-0.32	-0.11	0.07	0.15	0.22	0.22	-1.09	-0.20
28	0.3	0.30	0.22	0.25	0.10	0.14	0.29	-0.09	-0.26	-0.71	-0.92	-1.04	-0.98	-0.46	-0.26	-0.29	-0.34	-0.26	-0.12	0.00	0.07	0.13	0.15	0.13	0.30	-1.04	-0.15
29	0.1	0.12	0.11	0.12	0.15	0.18	0.14	-0.07	-0.38	-0.69	-1.14	-1.44	-1.53	-1.53	-1.52	-1.63	-1.48	-1.50	-0.60	-0.38	-0.05	0.25	0.78	0.61	0.78	-1.63	-0.47
30	0.6	0.56	0.48	0.48	0.61	0.53	0.48	-0.17	-0.88	-1.11	-0.82	-1.14	-1.28	-1.52	-1.47	-0.88	-0.96	-1.04	-0.78	-0.60	-0.21	0.15	0.43	0.09	0.61	-1.52	-0.35
Max.	**0.8**	**1.31**	**1.23**	**1.35**	**0.79**	**1.04**	**0.69**	**0.57**	**0.25**	**0.18**	**0.15**	**0.77**	**0.11**	**0.04**	**0.07**	**0.06**	**0.07**	**0.12**	**0.12**	**0.59**	**0.73**	**0.81**	**1.16**	**0.90**	**1.35**		
Min.	**-0.1**	**-0.18**	**-0.12**	**-0.16**	**-0.17**	**-0.11**	**-0.23**	**-0.17**	**-0.88**	**-1.11**	**-1.14**	**-1.44**	**-1.66**	**-1.72**	**-1.58**	**-1.63**	**-2.50**	**-1.50**	**-0.78**	**-0.60**	**-0.27**	**-0.06**	**-0.06**	**-0.10**		**-2.50**	
Avg.	**0.2**	**0.21**	**0.21**	**0.20**	**0.17**	**0.16**	**0.16**	**0.08**	**-0.11**	**-0.36**	**-0.50**	**-0.60**	**-0.71**	**-0.77**	**-0.70**	**-0.70**	**-0.68**	**-0.53**	**-0.23**	**-0.05**	**0.06**	**0.19**	**0.23**	**0.20**			**-0.16**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.3	0.55	0.20	0.25	0.29	0.27	0.12	0.00	-0.31	-0.37	-0.64	-0.97	-1.21	-1.14	-0.77	-0.34	-0.31	-0.28	-0.17	-0.13	-0.05	0.02	0.14	0.18	0.55	-1.21	-0.18
2	0.4	0.24	0.23	0.17	0.23	0.15	0.13	0.13	0.05	0.02	-0.02	-0.20	-0.73	-0.65	-0.47	-0.62	-0.62	-0.26	-0.30	-0.40	0.03	0.22	0.14	0.05	0.43	-0.73	-0.09
3	0.1	0.13	0.21	0.50	0.39	0.58	0.34	0.27	0.08	-0.34	-0.35	-0.33	-0.43	-0.28	-0.16	-0.24	-0.40	-0.17	-0.02	0.03	0.00	0.06	0.08	0.09	0.58	-0.43	0.00
4	0.1	0.15	0.11	0.06	0.09	0.09	0.13	0.13	0.05	-0.02	-0.10	-0.14	-0.18	-0.27	-0.32	-0.35	-0.40	-0.32	-0.25	-0.16	-0.09	0.12	0.27	0.77	0.77	-0.40	-0.02
5	0.7	0.90	0.69	0.47	0.27	0.28	0.20	0.15	-0.01	-0.18	-0.55	-0.62	-0.73	-0.71	-0.61	-0.60	-0.39	-0.40	-0.32	-0.02	0.06	-0.01	0.16	0.20	0.90	-0.73	-0.05
6	0.0	0.08	0.08	0.08	0.25	0.44	0.16	0.00	-0.17	-0.25	-0.50	-0.37	-0.33	-0.30	-1.10	-1.20	-0.62	-0.47	-0.48	-0.27	-0.16	-0.06	0.11	0.20	0.44	-1.20	-0.20
7	0.2	0.26	0.19	0.14	0.12	0.20	0.23	0.12	0.01	-0.07	-0.10	-0.10	-0.13	-0.15	-0.25	-0.31	-0.20	-0.12	-0.03	0.05	0.10	0.20	0.15	0.15	0.26	-0.31	0.03
8	0.2	0.14	0.14	0.11	0.14	0.18	0.15	0.09	-0.01	-0.18	-0.30	-0.28	-0.29	-0.28	-0.30	-0.46	-0.38	-0.35	-0.19	-0.07	0.00	0.05	0.09	0.09	0.18	-0.46	-0.07
9	0.1	0.08	0.10	0.12	0.10	0.06	0.12	0.10	0.06	0.03	-0.01	-0.06	-0.18	-0.21	-0.18	-0.19	-0.08	-0.14	-0.14	0.06	0.14	0.11	0.08	0.18	0.18	-0.21	0.01
10	0.3	0.44	0.39	0.55	0.35	0.21	0.19	0.01	-0.23	-0.46	-0.85	-1.29	-1.03	-0.96	-0.89	-1.14	-1.29	-1.21	-0.52	-0.45	0.40	0.26	0.03	0.28	0.55	-1.29	-0.29
11	0.3	0.30	0.23	0.28	0.12	0.31	0.18	0.17	0.14	0.18	0.29	0.01	-0.22	-0.22	-0.14	-0.07	-0.04	0.05	0.03	0.03	0.10	0.02	-0.18	-0.11	0.32	-0.22	0.07
12	-0.1	-0.22	-0.18	-0.12	-0.16	-0.07	0.02	0.02	-0.05	-0.08	-0.01	0.00	-0.08	-0.08	0.03	0.04	0.08	0.11	0.08	0.13	0.17	0.16	0.18	0.22	0.22	-0.22	0.00
13	0.2	0.21	0.12	-0.24	-0.19	-0.15	0.06	0.17	0.06	0.01	-0.12	-0.13	-0.18	-0.37	-0.40	-0.23	-0.20	-0.32	-0.15	-0.05	0.01	0.00	0.18	0.13	0.21	-0.40	-0.07
14	0.2	0.22	0.19	0.18	0.15	0.15	0.13	0.08	-0.01	-0.07	-0.07	-0.08	-0.16	-0.39	-0.36	-0.38	-0.47	-0.53	-0.19	-0.13	-0.12	0.05	0.13	0.13	0.22	-0.53	-0.06
15	0.2	0.32	0.64	0.74	0.32	0.53	0.71	0.26	-0.19	-0.47	-0.50	-0.43	-0.57	-0.66	-0.85	-0.58	-0.49	-0.30	-0.18	-0.02	-0.02	0.06	0.14	0.10	0.74	-0.85	-0.05
16	0.1	0.14	0.23	0.12	0.10	0.08	0.08	-0.01	-0.11	-0.23	-0.46	-0.85	-1.24	-0.54	-0.67	-0.87	-1.32	-1.56	-1.03	-0.20	0.03	0.15	0.83	1.33	1.33	-1.56	-0.25
17	1.1	1.26	1.10	1.23	1.18	1.00	0.19	-0.48	-0.90	-1.10	-1.34	-1.58	-1.25	-1.04	-1.24	-1.19	-1.14	-1.47	-0.97	-0.40	-0.12	0.07	0.34	0.85	1.26	-1.58	-0.24
18	0.8	0.48	0.58	0.24	0.12	0.15	0.07	0.09	0.02	-0.06	-0.09	-0.20	-0.19	-0.26	-0.64	-0.52	-0.51	-0.84	-0.40	-0.27	-0.18	-0.11	0.17	0.18	0.83	-0.84	-0.06
19	0.6	0.19	0.25	0.16	0.20	0.26	0.05	-0.29	-0.88	-1.21	-1.34	-1.20	-1.32	-1.68	-1.91	-1.57	-1.89	-0.90	-0.35	0.02	0.05	0.10	0.14	0.14	0.58	-1.91	-0.52
20	0.2	0.28	0.31	0.33	0.49	0.57	0.08	-0.37	-0.70	-1.18	-1.37	-1.45	-1.33	-0.98	-1.07	-1.00	-1.41	-1.13	-0.74	0.09	0.51	0.76	0.94	1.23	1.23	-1.45	-0.29
21	1.2	0.89	1.01	1.22	1.12	0.72	0.08	-0.20	-0.81	-1.07	-1.16	-1.18	-1.61	-1.73	-1.44	-1.80	-1.47	-1.49	-1.01	-0.12	0.07	0.24	0.30	0.18	1.22	-1.80	-0.34
22	0.2	0.30	0.50	0.22	0.09	0.07	0.01	-0.48	-0.72	-1.26	-1.56	-1.72	-2.16	-1.96	-1.24	-1.28	-0.89	-0.76	-0.80	-0.37	-0.19	-0.15	-0.11	-0.03	0.50	-2.16	-0.59
23	0.0	0.10	0.20	0.25	0.05	0.00	-0.06	-0.05	-0.09	-0.13	-0.15	-0.05	0.10	0.03	-0.04	-0.11	-0.07	-0.06	0.01	-0.09	-0.08	0.01	0.02	0.04	0.25	-0.15	-0.01
24	0.0	0.05	0.04	0.03	0.02	0.03	0.00	-0.05	-0.06	-0.11	-0.27	-0.28	-0.45	-0.37	-0.26	-0.28	-0.27	-0.63	-0.47	-0.22	0.36	0.40	0.48	0.58	0.58	-0.63	-0.07
25	0.6	0.58	0.64	0.62	0.76	0.90	0.09	-0.45	-0.76	-1.01	-1.13	-1.62	-1.89	-1.98	-2.17	-2.03	-1.72	-1.50	-1.09	-0.32	-0.01	0.00	0.09	0.48	0.90	-2.17	-0.54
26	0.8	0.45	0.63	0.24	0.17	0.08	-0.04	-0.14	-0.51	-0.47	-0.74	-1.02	-1.61	-1.98	-2.23	-2.18	-1.37	-1.12	-0.67	-0.24	-0.04	0.01	0.16	0.16	0.80	-2.23	-0.49
27	0.2	0.14	0.20	0.19	0.09	0.06	0.02	-0.11	-0.23	-0.44	-0.64	-0.75	-0.93	-1.07	-0.92	-1.07	-1.50	-0.77	-0.88	-0.08	0.16	0.28	0.38	0.45	0.45	-1.50	-0.30
28	0.5	0.68	0.84	0.75	0.61	0.61	0.27	-0.13	-0.31	-0.64	-0.46	-0.57	-0.94	-0.91	-0.86	-1.19	-0.94	-0.49	-0.18	-0.08	-0.01	0.12	0.15	0.15	0.84	-1.19	-0.13
29	0.1	0.23	0.28	0.64	0.34	0.28	0.18	-0.26	-0.41	-0.71	-1.03	-0.85	-1.07	-1.32	-1.18	-1.08	-1.50	-1.56	-1.24	-0.31	-0.22	-0.08	0.26	1.20	1.20	-1.56	-0.39
30	0.7	0.54	0.59	0.63	0.77	0.64	0.33	-0.10	-0.32	-0.46	-0.61	-0.95	-0.75	-0.54	-1.33	-1.41	-1.02	-0.56	-0.55	-0.39	-0.30	-0.28	-0.13	-0.07	0.77	-1.41	-0.23
31	-0.1	-0.04	-0.03	0.00	0.05	0.06	0.04	-0.03	-0.06	-0.16	-0.37	-0.66	-0.44	-0.23	-0.29	-0.42	-0.39	-0.38	-0.28	-0.24	-0.18	-0.09	-0.10	-0.02	0.06	-0.66	-0.18
Max.	**1.2**	**1.26**	**1.10**	**1.23**	**1.18**	**1.00**	**0.71**	**0.27**	**0.14**	**0.18**	**0.29**	**0.01**	**0.10**	**0.03**	**0.03**	**0.04**	**0.08**	**0.11**	**0.08**	**0.13**	**0.51**	**0.76**	**0.94**	**1.33**	**1.33**		
Min.	**-0.1**	**-0.22**	**-0.18**	**-0.24**	**-0.19**	**-0.15**	**-0.06**	**-0.48**	**-0.90**	**-1.26**	**-1.56**	**-1.72**	**-2.16**	**-1.98**	**-2.23**	**-2.18**	**-1.89**	**-1.56**	**-1.24**	**-0.45**	**-0.30**	**-0.28**	**-0.18**	**-0.11**		**-2.23**	
Avg.	**0.3**	**0.33**	**0.34**	**0.33**	**0.28**	**0.28**	**0.14**	**-0.04**	**-0.24**	**-0.40**	**-0.53**	**-0.64**	**-0.76**	**-0.75**	**-0.78**	**-0.80**	**-0.75**	**-0.64**	**-0.43**	**-0.15**	**0.01**	**0.09**	**0.18**	**0.31**			**-0.18**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.28	0.32	0.26	0.25	0.24	0.27	0.39	0.27	0.04	0.05	-0.05	-0.02	0.10	0.13	0.10	0.07	0.13	0.20	0.28	0.31	0.28	0.17	0.19	0.39	-0.05	0.18
2	0.2	0.22	0.21	0.21	0.23	0.18	0.14	0.13	0.01	-0.05	-0.13	-0.16	-0.40	-0.57	-0.44	-0.24	-0.26	-0.17	-0.13	-0.15	0.11	0.15	0.15	0.20	0.23	-0.57	-0.02
3	0.2	0.25	0.22	0.29	0.22	0.17	0.12	0.06	0.00	-0.20	-0.39	-0.34	-0.24	-0.41	-0.57	-1.22	-0.96	-0.40	-0.17	-0.04	0.05	0.22	0.31	0.36	0.36	-1.22	-0.10
4	0.5	0.81	0.43	0.04	0.36	0.20	0.04	0.09	0.35	-0.09	-0.08	-0.24	-0.39	-0.70	-0.64	-0.58	-0.39	-0.64	-0.63	-0.36	-0.23	0.02	-0.07	0.07	0.81	-0.70	-0.09
5	0.2	0.15	0.01	0.15	0.39	0.25	0.24	0.15	0.14	0.11	0.13	0.07	0.12	0.12	0.10	0.03	0.00	0.11	0.15	0.12	0.19	0.27	0.34	0.30	0.39	0.00	0.16
6	0.4	0.27	0.51	0.49	0.86	0.95	0.41	0.04	-0.25	-0.87	-0.98	-1.21	-1.83	-1.27	-1.18	-1.18	-1.10	-1.15	-0.48	0.17	0.15	0.33	0.14	0.17	0.95	-1.83	-0.27
7	0.1	0.05	0.04	0.07	0.11	0.15	0.03	-0.09	-0.49	-0.81	-1.33	-1.82	-1.80	-1.46	-1.83	-1.88	-1.26	-0.47	-0.43	-0.43	-0.39	-0.26	-0.17	-0.16	0.15	-1.88	-0.60
8	-0.2	-0.14	-0.16	-0.13	-0.03	0.00	-0.13	-0.30	-0.70	-1.32	-1.12	-1.19	-1.40	-2.01	-1.75	-1.38	-1.48	-0.91	-0.36	0.19	0.20	0.06	0.06	0.08	0.20	-2.01	-0.59
9	0.1	0.07	0.11	0.06	0.03	0.00	-0.04	-0.14	-0.34	-0.58	-0.87	-0.91	-0.82	-0.93	-0.89	-0.88	-0.84	-0.74	-0.36	0.10	0.10	0.14	0.17	0.18	0.18	-0.93	-0.30
10	0.2	0.15	0.14	0.12	0.11	0.11	-0.13	-0.18	-0.66	-1.18	-1.11	-1.22	-1.26	-1.24	-2.01	-1.98	-1.97	-1.13	-0.79	-0.67	-0.14	-0.06	0.00	0.08	0.16	-2.01	-0.62
11	0.3	0.48	0.36	0.50	0.75	0.33	0.15	0.08	0.11	-0.02	-0.24	-0.37	-0.13	-0.09	-0.13	-0.31	-0.20	-0.22	-0.35	-0.39	-0.37	-0.24	-0.18	0.04	0.75	-0.39	-0.01
12	0.4	0.18	0.14	0.15	0.14	0.17	0.00	-0.19	-0.39	-0.58	-1.42	-1.63	-2.12	-1.90	-1.49	-2.00	-1.18	-1.40	-0.96	-0.51	-0.23	-0.07	0.05	0.08	0.36	-2.12	-0.62
13	0.1	0.12	0.10	0.08	0.19	0.20	0.14	0.07	0.00	-0.22	-0.38	-0.44	-0.63	-0.74	-0.82	-1.16	-1.72	-1.49	-1.05	-0.32	0.09	0.53	0.67	0.90	0.90	-1.72	-0.24
14	0.8	0.44	0.25	0.17	0.30	0.23	0.07	-0.14	-0.32	-0.42	-0.61	-0.71	-1.09	-1.27	-1.55	-1.23	-1.16	-1.16	-1.07	-0.77	-0.56	-0.27	0.51	0.44	0.79	-1.55	-0.38
15	0.2	0.20	0.35	0.44	0.29	0.30	0.26	-0.16	-0.51	-0.56	-0.87	-1.20	-1.23	-1.50	-1.58	-1.67	-1.57	-1.35	-0.96	-0.12	-0.04	0.00	0.08	0.06	0.44	-1.67	-0.47
16	0.1	0.13	0.12	0.15	0.16	0.17	-0.15	-0.73	-0.64	-0.82	-1.09	-0.91	-0.70	-0.75	-1.15	-1.48	-1.55	-1.19	-1.06	-0.45	0.05	0.39	1.17	1.71	1.71	-1.55	-0.36
17	1.2	1.15	1.14	1.21	1.15	0.89	-0.32	-1.12	-0.76	-0.78	-1.17	-1.07	-1.19	-1.34	-1.26	-1.16	-1.51	-1.72	-1.36	-0.50	-0.24	-0.05	-0.02	-0.23	1.23	-1.72	-0.38
18	-0.2	-0.06	-0.03	-0.09	-0.04	-0.17	-0.26	-0.32	-0.84	-0.81	-0.97	-0.85	-1.22	-1.45	-2.19	-1.96	-2.01	-1.76	-1.08	-0.15	-0.10	0.00	0.34	1.02	1.02	-2.19	-0.64
19	1.2	1.02	1.16	1.26	0.98	0.89	-0.09	-0.48	-1.20	-1.01	-1.21	-1.61	-1.55	-1.44	-0.56	-0.86	-0.60	-0.96	-1.01	-0.55	-0.14	-0.02	0.04	0.22	1.26	-1.61	-0.27
20	0.9	0.81	0.57	0.48	0.57	0.52	0.24	-0.41	-0.69	-1.40	-0.98	-1.45	-1.55	-1.77	-1.78	-1.43	-1.15	-1.50	-1.25	-0.22	-0.45	-0.28	-0.11	0.47	0.90	-1.78	-0.49
21	0.7	0.53	0.56	0.45	0.19	0.08	-0.05	-0.11	-0.24	-0.39	-0.56	-0.80	-1.16	-1.24	-1.54	-1.53	-1.45	-1.23	-1.15	-0.26	-0.08	0.09	0.73	2.58	2.58	-1.54	-0.25
22	2.7	1.88	1.11	0.57	0.11	0.06	-0.04	-0.09	-0.10	-0.30	-0.49	-0.61	-0.48	-0.63	-0.38	-0.43	-0.77	-0.63	-0.64	-0.20	-0.16	0.05	0.00	0.00	2.72	-0.77	0.02
23	0.1	0.04	0.21	0.24	0.34	0.49	0.13	-0.12	-0.70	-1.61	-0.85	-1.28	-1.64	-2.09	-2.20	-2.02	-1.91	-1.76	-1.52	-0.10	0.09	0.62	1.10	1.12	1.12	-2.20	-0.56
24	1.7	1.19	0.34	0.26	0.22	0.31	0.24	0.09	-0.02	-0.19	-0.38	-0.14	-0.15	0.11	0.05	0.17	0.19	0.21	0.35	0.47	0.52	0.53	0.48	0.44	1.67	-0.38	0.29
25	0.4	0.49	0.76	0.08	0.22	0.48	0.26	0.14	0.20	0.22	0.16	0.17	0.06	-0.09	-0.14	-0.30	-0.01	-0.06	0.09	0.27	0.57	0.48	0.64	0.56	0.76	-0.30	0.24
26	0.6	0.61	0.53	0.51	0.47	0.45	0.50	0.50	0.49	0.36	0.31	0.33	0.25	0.18	0.12	0.14	-0.04	-0.25	-0.13	-0.01	0.08	0.16	0.27	0.32	0.61	-0.25	0.28
27	0.4	0.49	0.36	0.08	0.12	0.14	0.08	-0.08	-0.19	-0.19	-0.17	-0.42	-0.48	-0.51	-0.54	-0.87	-1.45	-1.06	-0.88	-0.63	-0.14	0.12	0.29	0.95	0.95	-1.45	-0.19
28	2.0	1.78	1.60	0.99	1.15	1.24	0.48	0.22	0.00	-0.15	-0.31	-0.36	-0.46	-0.71	-1.04	-0.57	-0.42	-0.44	-0.31	-0.29	-0.07	0.02	0.28	0.53	1.95	-1.04	0.21
29	0.4	0.23	0.21	0.21	0.18	0.11	0.11	-0.06	-0.25	-0.48	-0.43	-0.54	-0.32	-0.43	-0.76	-1.25	-1.40	-0.94	-0.48	-0.06	0.26	0.57	0.24	0.19	0.57	-1.40	-0.19
30	0.3	0.43	0.77	1.00	0.92	1.28	-0.46	-1.26	-1.34	-0.36	-0.83	-0.99	-1.15	-1.29	-1.61	-1.80	-1.73	-1.71	-1.37	-0.23	-0.04	0.14	1.06	2.20	2.20	-1.80	-0.34
Max.	**2.7**	**1.88**	**1.60**	**1.26**	**1.15**	**1.28**	**0.50**	**0.50**	**0.49**	**0.36**	**0.31**	**0.33**	**0.25**	**0.18**	**0.13**	**0.17**	**0.19**	**0.21**	**0.35**	**0.47**	**0.57**	**0.62**	**1.17**	**2.58**	**2.72**		
Min.	**-0.2**	**-0.14**	**-0.16**	**-0.13**	**-0.04**	**-0.17**	**-0.46**	**-1.26**	**-1.34**	**-1.61**	**-1.42**	**-1.82**	**-2.12**	**-2.09**	**-2.20**	**-2.02**	**-2.01**	**-1.76**	**-1.52**	**-0.77**	**-0.56**	**-0.28**	**-0.18**	**-0.23**		**-2.20**	
Avg.	**0.5**	**0.47**	**0.41**	**0.34**	**0.36**	**0.35**	**0.07**	**-0.13**	**-0.30**	**-0.49**	**-0.61**	**-0.73**	**-0.83**	**-0.91**	**-0.99**	**-1.03**	**-1.00**	**-0.87**	**-0.64**	**-0.19**	**-0.02**	**0.13**	**0.29**	**0.50**			**-0.22**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.1	1.60	1.31	1.09	1.21	0.79	-0.12	-0.88	-0.67	-0.47	-0.67	-0.78	-1.15	-1.28	-1.41	-1.47	-1.51	-1.80	-0.78	-0.06	0.18	0.05	0.00	0.48	2.12	-1.80	-0.18
2	0.2	0.08	0.16	0.18	0.18	0.36	0.21	-0.29	-0.51	-0.82	-0.95	-1.33	-1.40	-1.37	-1.48	-1.21	-1.50	-0.93	-0.54	-0.15	-0.02	0.08	0.22	0.81	0.81	-1.50	-0.42
3	0.9	0.84	0.64	0.95	0.90	0.99	0.92	0.86	0.85	0.71	0.72	0.58	0.31	0.21	0.36	-0.12	-0.15	-0.06	-0.05	0.03	0.03	0.13	0.20	0.17	0.99	-0.15	0.45
4	0.1	0.07	0.10	0.12	0.16	0.23	0.48	0.33	0.20	-0.05	-0.17	-0.27	-0.31	-0.22	-0.46	-0.56	-0.08	-0.03	-0.04	-0.03	-0.03	0.02	0.30	0.21	0.48	-0.56	0.00
5	0.1	0.23	0.20	0.10	0.10	0.15	-0.01	-0.10	-0.28	-0.23	-0.45	-0.53	-0.42	-0.45	-0.79	-0.83	-1.17	-0.65	0.19	0.18	0.24	0.41	0.51	1.38	1.38	-1.17	-0.09
6	1.2	0.53	0.57	0.67	1.04	0.42	0.41	0.17	0.18	0.08	-0.14	-0.36	-1.10	-1.09	-0.66	-0.75	-0.38	-0.20	-0.20	-0.01	-0.04	0.03	0.16	0.44	1.20	-1.10	0.04
7	0.2	0.14	0.08	0.10	0.04	-0.05	-0.10	0.02	0.05	-0.10	-0.14	-0.27	-0.72	-0.64	-0.94	-1.16	-1.26	-1.35	-1.06	-0.27	-0.18	0.00	0.09	0.34	0.34	-1.35	-0.30
8	0.4	0.59	0.54	0.51	0.60	0.38	0.19	0.01	-0.10	-0.20	-0.43	-0.48	-0.45	-0.51	-0.52	-0.61	-0.81	-0.50	-0.39	-0.34	-0.12	-0.02	-0.14	-0.07	0.60	-0.81	-0.10
9	-0.1	-0.01	0.09	0.30	0.18	0.14	0.07	-0.27	-0.49	-0.69	-0.66	-0.74	-0.91	-0.72	-0.36	-0.25	-0.25	-0.26	-0.20	-0.08	0.10	0.14	0.28	0.29	0.30	-0.91	-0.18
10	0.2	0.25	0.24	0.17	0.12	0.12	0.12	0.08	0.01	-0.24	-0.38	-0.41	-0.58	-0.77	-0.93	-1.16	-1.03	-0.78	-0.53	-0.41	-0.26	-0.16	-0.02	0.03	0.25	-1.16	-0.26
11	0.0	0.01	0.13	0.30	0.21	0.21	0.24	-0.04	-0.34	-0.61	-0.96	-1.16	-1.01	-2.20	-2.25	-2.10	-1.71	-1.48	-1.30	-0.36	0.00	0.69	1.60	1.97	1.97	-2.25	-0.42
12	2.0	2.17	1.17	1.13	1.11	0.81	0.32	0.04	-0.08	-0.38	-0.29	-0.71	-1.26	-0.90		-0.64		-0.26	-0.18	-0.19	-0.06	0.14	0.21	0.29	2.17	-1.26	0.20
13	0.2	0.30	0.31	0.30	0.36	0.38	0.29	0.17	0.27	0.19	0.05	-0.01	-0.16	-0.20	-0.19	-0.27	-0.27	-0.32	-0.27	-0.23	-0.19	-0.16	-0.12	-0.02	0.38	-0.32	0.02
14	0.1	0.14	0.19	0.24	0.32	0.25	0.12	0.01	-0.13	-0.35	-0.51	-0.74	-0.67	-0.87	-1.06	-1.00	-0.99	-0.95	-0.82	-0.60	-0.45	-0.32	-0.23	-0.06	0.32	-1.06	-0.35
15	-0.1	0.07	0.32	0.25	0.15	0.32	0.05	-0.20	-0.66	-0.66	-0.86	-0.45	-0.38	-0.34	-0.20	-0.23	-0.28	-0.40	-0.13	0.02	0.09	0.16	0.16	0.13	0.32	-0.86	-0.13
16	0.1	0.03	0.02	0.10	0.11	0.25	0.33	0.21	0.09	-0.04	0.03	0.13	0.17	0.02	-0.02	0.08	0.09	0.14	0.19	0.26	0.33	0.38	0.33	0.29	0.38	-0.04	0.15
17	0.3	0.27	0.20	0.25	0.05	0.25	0.24	0.19	0.10	-0.20	-0.73	-1.56	-1.81	-1.62	-1.64	-0.95	-0.62	-0.50	-0.67	-0.28	-0.03	0.06	0.07	0.06	0.34	-1.81	-0.36
18	0.1	0.13	0.13	0.08	0.10	0.08	0.05	-0.07	-0.21	-0.40	-0.55	-0.71	-0.82	-0.84	-0.92	-0.86	-0.78	-0.73	-0.32	0.19	0.21	0.21	0.21	0.20	0.21	-0.92	-0.23
19	0.2	0.18	0.17	0.17	0.21	0.20	0.15	-0.01	-0.50	-1.05	-1.06	-1.55	-1.50	-2.69	-2.25	-1.69	-0.60	-1.57	-0.73	0.46	0.69	0.71	0.42	0.21	0.71	-2.69	-0.48
20	0.2	0.26	0.25	0.28	0.28	0.18	0.05	0.04	0.06	-0.05	-0.05	-0.18	-0.32	-0.55	-1.31	-0.87	-0.73	-0.45	-0.29	0.07	0.26	0.03	0.17	0.18	0.28	-1.31	-0.10
21	0.4	0.85	0.71	0.59	0.46	0.49	0.92	0.68	0.55	0.21	0.00	-0.15	-0.40	-0.83	-0.93	-1.13	-0.62	-0.33	-0.66	0.22	0.31	0.21	0.42	0.23	0.92	-1.13	0.09
22	0.2	0.13	0.16	0.23	0.33	0.74	0.60	0.04	-0.21	-0.79	-0.74	-0.66	-0.39	-0.16	-0.18	-0.18	-0.24	-0.28	-0.19	-0.19	-0.14	0.07	0.05	0.05	0.74	-0.79	-0.07
23	0.1	0.14	0.31	0.62	0.75	0.47	0.30	0.37	0.28	-0.38	-0.32	-0.37	-0.69	-1.10	-1.68	-0.91	-1.08	-0.92	-0.78	-0.50	-0.08	-0.11	0.18	0.43	0.75	-1.68	-0.21
24	0.4	0.58	0.57	0.59	0.61	0.53	0.37	0.50	0.29	0.02	-0.04	0.00	-0.15	-0.32	-0.39	-0.57	-0.78	-0.83	-0.63	0.29	0.21	0.34	1.14	1.12	1.14	-0.83	0.16
25	1.0	0.90	1.13	0.55	1.27	0.71	0.82	0.74	0.39	-0.01	0.04	-1.00	-0.51	-1.08	-1.81	-1.88	-0.83	-0.50	0.04	0.20	0.48	0.39	0.55	0.77	1.27	-1.88	0.10
26	1.0	0.89	0.81	0.17	0.37	0.57	0.17	0.07	0.04	-0.10	-0.45	-0.55	-0.63	-0.73	-0.39	-0.68	-1.05	-0.48	-0.37	-0.43	-0.42	-0.24	-0.12	0.01	1.00	-1.05	-0.11
27	0.1	0.17	0.10	0.17	0.29	0.20	0.02	0.03	0.00	0.06	0.11	0.10	0.11	0.18	-0.04	-0.13	-0.24	-0.20	-0.23	-0.26	-0.14	-0.12	0.19	0.39	0.39	-0.26	0.03
28	0.8	1.05	0.85	0.53	0.49	0.45	0.28	0.16	-0.01	-0.16	-0.61	-1.24	-1.25	-0.70	-1.01	-1.04	-1.09	-1.19	-0.37	0.65	0.74	0.92	1.03	1.27	1.27	-1.25	0.02
29	0.7	0.24	0.22	0.22	0.22	0.26	0.23	0.17	-0.02	-0.16	-0.29	-0.48	-0.60	-0.76	-1.41	-1.10	-0.98	-0.71	-0.45	-0.02	0.74	0.50	0.23	0.21	0.74	-1.41	-0.13
30	0.2	0.13	0.15	0.22	0.18	0.16	0.13	0.12	0.01	-0.28	-0.16	-0.16	-0.16	-0.18	-0.48	-1.34	-0.94	-0.24	-0.28	0.13	0.18	0.22	0.25	0.35	0.35	-1.34	-0.08
31	0.6	0.42	0.17	0.56	0.63	0.82	0.49	0.20	-0.08	-0.60	-0.53	-0.58	-0.48	-0.52	-0.54	-0.39	0.07	0.06	0.22	0.51	0.55	0.75	0.20	0.21	0.82	-0.60	0.12
Max.	**2.1**	**2.17**	**1.31**	**1.13**	**1.27**	**0.99**	**0.92**	**0.86**	**0.85**	**0.71**	**0.72**	**0.58**	**0.31**	**0.21**	**0.36**	**0.08**	**0.09**	**0.14**	**0.22**	**0.65**	**0.74**	**0.92**	**1.60**	**1.97**	**2.17**		
Min.	**-0.1**	**-0.01**	**0.02**	**0.08**	**0.04**	**-0.05**	**-0.12**	**-0.88**	**-0.67**	**-1.05**	**-1.06**	**-1.56**	**-1.81**	**-2.69**	**-2.25**	**-2.10**	**-1.71**	**-1.80**	**-1.30**	**-0.60**	**-0.45**	**-0.32**	**-0.23**	**-0.07**		**-2.69**	
Avg.	**0.5**	**0.43**	**0.39**	**0.38**	**0.42**	**0.38**	**0.27**	**0.11**	**-0.03**	**-0.25**	**-0.36**	**-0.54**	**-0.63**	**-0.75**	**-0.86**	**-0.84**	**-0.73**	**-0.60**	**-0.38**	**-0.04**	**0.10**	**0.18**	**0.28**	**0.40**			**-0.09**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.3	0.20	0.21	0.10	0.04	0.02	0.23	-0.34	-0.47	-0.56	-0.44	-0.48	-0.52	-0.57	-0.62	-0.74	-0.61	-0.51	-0.34	-0.11	-0.08	-0.04	-0.01	0.00	0.26	-0.74	-0.22
2	0.0	0.02	-0.07	-0.08	0.00	0.04	0.05	-0.03	-0.19	-0.17	-0.28	-0.31	-0.51	-0.35	-0.68	-0.52	-0.61	-0.31	-0.33	-0.21	-0.16	-0.15	-0.13	-0.05	0.05	-0.68	-0.21
3	-0.1	-0.13	-0.03	-0.02	-0.07	-0.06	-0.06	0.01	-0.06	-0.23	-0.54	-0.68	-0.75	-0.89	-0.78	-0.86	-0.98	-0.71	-0.53	-0.40	-0.25	-0.08	0.07	0.43	0.43	-0.98	-0.32
4	0.0	0.36	0.21	0.56	0.39	0.24	0.34	0.01	-0.08	-0.09	-0.30	-0.46	-0.34	-0.77	-0.76	-0.71	-0.51	-0.36	-0.36	-0.24	-0.07	-0.05	0.06	0.06	0.56	-0.77	-0.12
5	0.1	0.02	0.02	0.03	0.06	0.10	0.32	0.10	0.17	-0.01	-0.25	-0.39	-0.89	-1.30	-1.22	-1.58	-1.49	-1.33	-0.68	-0.37	-0.19	-0.09	0.41	1.40	1.40	-1.58	-0.29
6	0.3	0.29	0.28	0.27	0.58	0.55	0.08	-0.15	-0.24	-0.64	-1.13	-1.36	-1.31	-1.16	-1.26	-1.42	-1.47	-1.22	-0.77	0.34	0.72	0.61	0.76	0.63	0.76	-1.47	-0.28
7	0.5	0.43	0.71	0.62	0.70	0.47	0.25	0.18	0.04	-0.33	-0.49	-1.63	-2.22	-1.65	-2.09	-1.56	-1.89	-1.38	0.07	1.03	1.18	0.66	0.70	0.41	1.18	-2.22	-0.22
8	1.1	1.39	1.51	1.30	1.50	1.62	1.24	-0.20	-0.67	-1.45	-0.93	-1.11	-1.27	-1.57	-1.61	-1.71	-1.73	-1.59	-1.10	-0.17	0.08	0.18	1.29	2.12	2.12	-1.73	-0.07
9	2.0	2.23	1.78	1.99	1.82	1.43	1.39	-0.09	-0.97	-0.99	-1.02	-0.75	-1.39	-1.48	-1.53	-1.54	-1.30	-1.03	-0.82	-0.53	-0.42	-0.30	-0.13	0.01	2.23	-1.54	-0.07
10	-0.2	-0.16	0.05	0.05	0.00	-0.10	-0.11	-0.10	-0.24	-0.47	-0.76	-0.92	-1.19	-1.30	-1.36	-1.58	-1.50	-1.61	-0.78	0.00	0.10	-0.01	-0.01	0.03	0.10	-1.61	-0.51
11	0.2	0.37	0.41	0.12	0.13	0.33	0.56	0.29	0.04	-0.34	-0.73	-0.72	-1.07	-1.19	-1.42	-1.38	-1.35	-1.28	-0.95	-0.22	1.30	1.88	2.09	1.23	2.09	-1.42	-0.07
12	0.9	0.68	0.70	1.15	0.92	0.87	0.83	0.84	0.64	0.45	-0.35	-0.36	-0.38	-0.44	-0.41	-0.68	-0.44	-0.11	-0.08	0.01	0.13	0.52	1.16	0.39	1.16	-0.68	0.29
13	0.6	0.73	0.54	0.58	0.60	0.52	0.63	0.67	0.49	0.34	0.12	0.16	-0.36	-0.14	0.36	0.65	0.56	0.46	0.40	0.36	0.31	0.62	0.97	0.89	0.97	-0.36	0.46
14	0.6	0.42	0.70	0.26	0.47	1.21	1.15	0.88	0.29	0.09	0.19	0.02	-0.12	-0.09	-0.33	-0.24	-0.20	-0.30	-0.35	-0.36	-0.12	0.17	0.26	0.07	1.21	-0.36	0.19
15	0.0	0.08	0.05	0.05	0.00	0.08	0.19	0.19	0.12	0.01	-0.10	-0.09	-0.24	-0.33	-0.35	-0.48	-0.30	-0.25	-0.25	-0.14	-0.10	-0.03	-0.07	-0.12	0.19	-0.48	-0.09
16	-0.1	-0.21	-0.19	0.09	0.41	0.40	0.37	0.28	0.15	-0.01	-0.10	-0.28	-0.08	-0.22	-0.90	-0.91	-0.54	-0.57	-0.46	0.03	0.00	0.36	0.31	0.45	0.45	-0.91	-0.07
17	0.4	0.27	0.34	0.61	0.52	0.31	0.31	0.36	0.35	0.32	0.20	0.22	0.17	0.29	0.27	0.10	0.01	-0.16	0.11	0.36	0.36	0.44	0.56	0.48	0.61	-0.16	0.30
18	0.5	0.38	0.58	0.45	0.41	0.36	0.51	0.16	0.15	0.13	0.25	0.32	0.17	0.09	0.08	0.05	0.22	0.22	0.40	0.49	0.72	0.73	0.59	0.89	0.89	0.05	0.37
19	0.7	0.73	0.69	0.87	1.22	1.04	0.34	0.63	0.34	0.24	-0.33	-0.40	-0.56	-1.30	-1.05	-0.34	-0.37	-0.10	0.18	0.26	0.28	0.36	0.30	0.25	1.22	-1.30	0.16
20	0.2	0.23	0.22	0.20	0.21	0.21	0.18	0.20	0.15	0.13	-0.05	-0.56	-0.52	-0.66	-0.63	-0.66	-0.54	-0.78	-0.16	0.42	0.36	0.32	0.31	0.32	0.42	-0.78	-0.04
21	0.3	0.30	0.34	0.26	0.30	0.26	0.18	0.14	0.16	0.05	0.00	-0.12	-0.35	-0.53	-1.06	-1.06	-0.82	-0.75	-0.65	-0.47	-0.21	0.00	0.03	0.17	0.34	-1.06	-0.15
22	0.1	-0.04	0.07	0.20	0.22	0.13	0.12	0.14	0.01	-0.46	-0.75	-1.09	-0.98	-1.10	-1.58	-1.45	-1.45	-0.99	-0.83	-0.35	-0.11	0.66	0.70	0.49	0.70	-1.58	-0.35
23	0.5	0.44	0.43	0.39	0.38	0.44	0.48	0.45	0.32	0.04	-0.15	-0.43	-0.55	-0.63	-0.47	-0.36	-0.37	-0.25	-0.20	-0.19	0.01	0.44	0.82	0.74	0.82	-0.63	0.10
24	0.8	1.97	1.64	1.49	1.02	0.82	0.57	0.42	0.20	0.30	-0.15	-0.72	-1.25	-1.23	-1.04	-0.70	-1.24	-0.50	0.24	0.32	0.31	0.48	0.91	1.44	1.97	-1.25	0.25
25	1.2	1.10	1.23	0.49	0.07	0.01	0.08	-0.08	-0.01	-0.11	-0.09	0.15	0.01	-0.18	-0.06	-0.10	-0.14	-0.05	0.02	0.08	0.09	0.15	0.18	0.19	1.23	-0.18	0.17
26	0.3	0.23	0.38	0.28	0.39	0.31	0.26	0.39	-0.02	-0.23	-0.57	-0.70	-0.41	-0.36	-0.60	-0.44	-0.66	-0.89	-0.60	-0.41	-0.22	-0.02	0.31	0.37	0.39	-0.89	-0.12
27	0.5	0.81	0.78	1.03	1.82	0.97	0.87	0.61	0.32	-0.51	-0.71	-1.02	-0.86	-1.35	-1.17	-1.09	-1.17	-0.92	0.41	0.57	0.33	0.33	0.37	0.33	1.82	-1.35	0.06
28	0.3	0.24	0.33	0.39	0.43	0.82	0.71	0.46	-0.11	-0.33	-0.73	-0.93	-0.87	-1.08	-0.83	-0.19	-0.24	-0.29	0.11	0.22	0.25	0.29	0.31	0.31	0.82	-1.08	-0.02
29	0.3	0.34	0.68	0.92	0.86	0.93	0.97	0.75	0.41	-0.36	-0.79	-0.73	-1.08	-1.13	-1.39	-0.90	-0.78	-0.61	0.31	0.32	0.33	0.22	0.22	0.19	0.97	-1.39	0.00
30	0.2	0.23	0.23	0.24	0.26	0.39	0.81	0.61	0.15	-0.52	-1.04	-1.36	-1.09	-0.86	-0.66	-0.40	-0.92	-0.82	0.01	0.24	0.56	0.37	0.32	0.34	0.81	-1.36	-0.11
31	0.4	0.24	0.18	0.08	0.23	0.49	0.49	0.31	0.38	0.40	0.50	0.39	0.46	0.51	0.50	0.51	0.39	0.25	0.31	0.37	0.38	0.36	0.31	0.30	0.51	0.08	0.36
Max.	**2.0**	**2.23**	**1.78**	**1.99**	**1.82**	**1.62**	**1.39**	**0.88**	**0.64**	**0.45**	**0.50**	**0.39**	**0.46**	**0.51**	**0.50**	**0.65**	**0.56**	**0.46**	**0.41**	**1.03**	**1.30**	**1.88**	**2.09**	**2.12**	**2.23**		
Min.	**-0.2**	**-0.21**	**-0.19**	**-0.08**	**-0.07**	**-0.10**	**-0.11**	**-0.34**	**-0.97**	**-1.45**	**-1.13**	**-1.63**	**-2.22**	**-1.65**	**-2.09**	**-1.71**	**-1.89**	**-1.61**	**-1.10**	**-0.53**	**-0.42**	**-0.30**	**-0.13**	**-0.12**		**-2.22**	
Avg.	**0.4**	**0.46**	**0.48**	**0.48**	**0.51**	**0.49**	**0.46**	**0.26**	**0.06**	**-0.17**	**-0.37**	**-0.53**	**-0.66**	**-0.74**	**-0.79**	**-0.72**	**-0.72**	**-0.61**	**-0.25**	**0.04**	**0.19**	**0.30**	**0.45**	**0.48**			**-0.02**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.3	0.35	0.44	0.51	0.39	0.41	0.52	0.56	0.50	0.55	0.44	0.34	0.29	0.21	0.24	0.43	0.31	0.33	0.39	0.46	0.54	0.54	0.55	0.54	0.56	0.21	0.42
2	0.5	0.42	0.45	0.55	0.49	0.50	0.43	0.55	0.48	0.44	0.26	0.32	0.46	0.36	0.36	0.38	0.44	0.39	0.41	0.29	0.17	0.29	0.33	0.33	0.55	0.17	0.40
3	0.3	0.32	0.31	0.33	0.36	0.38	0.41	0.35	0.29	0.26	0.31	0.30	0.24	-0.17	-0.30	-0.13	-0.13	-0.09	0.07	0.11	0.37	0.46	0.21	0.38	0.46	-0.30	0.21
4	0.5	0.33	0.43	1.06	0.97	0.71	0.61	0.54	0.26	-0.27	-0.31	-0.81	-1.22	-1.21	-1.17	-1.10	-1.18	-0.79	-0.29	-0.17	0.34	1.28	1.13	0.88	1.28	-1.22	0.02
5	1.1	1.03	0.82	0.31	0.88	1.37	0.86	0.94	0.27	-0.46	-0.85	-1.10	-1.30	-1.38	-1.51	-1.54	-1.31	-0.95	-0.59	-0.41	-0.30	-0.19	-0.10	-0.03	1.37	-1.54	-0.19
6	0.1	0.03	0.29	0.34	0.10	0.25	0.61	0.70	0.56	0.39	0.34	0.48	0.52	0.42	0.35	0.33	0.28	0.30	0.37	0.25	0.19	0.30	0.27	0.32	0.70	0.03	0.34
7	0.3	0.36	0.33	0.30	0.28	0.33	0.39	0.46	0.51	0.45	0.30	0.20	0.62	0.01	0.40	0.49	0.42	0.22	0.19	0.23	0.13	0.04	0.16	0.30	0.62	0.01	0.31
8	0.2	0.27	0.24	0.14	0.26	0.58	0.34	0.22	0.19	0.01	0.10	0.18	-0.05	-0.08	0.10	0.22	0.26	0.41	0.43	0.41	0.41	0.31	0.38	0.37	0.58	-0.08	0.25
9	0.4	0.40	0.29	0.34	0.29	0.27	0.28	0.22	0.18	0.20	0.22	0.21	0.23	0.18	-0.01	0.07	0.16	0.18	0.15	0.21	0.20	0.09	0.02	-0.03	0.40	-0.03	0.20
10	0.0	0.09	0.37	0.64	0.65	0.63	0.42	0.40	0.14	-0.30	-0.24	-0.24	-0.39	-0.15	-0.36	-0.52	0.28	0.85	0.28	0.41	0.66	1.00	1.11	0.73	1.11	-0.52	0.27
11	0.6	0.37	0.39	0.30	0.27	0.22	0.29	0.43	0.32	-0.01	-0.43	-0.54	-0.79	-1.15	-1.21	-1.36	-0.80	-0.41	-0.11	0.13	0.17	0.01	0.04	0.06	0.62	-1.36	-0.13
12	0.1	0.35	0.29	0.18	0.30	0.29	0.27	0.42	0.40	0.30	0.19	0.18	0.12	0.20	0.19	0.24	0.26	0.40	0.42	0.37	0.38	0.43	0.39	0.39	0.43	0.12	0.30
13	0.4	0.32	0.19	0.18	0.23	0.25	0.20	0.11	0.16	0.22	0.16	0.20	0.18	0.18	0.18	0.49	0.33	0.29	0.35	0.40	0.36	0.41	0.38	0.41	0.49	0.11	0.27
14	0.4	0.39	0.36	0.39	0.35	0.49	0.49	0.49	0.48	0.43	0.29	0.26	0.30	0.20	0.14	0.13	0.24	0.15	0.10	0.22	0.39	0.39	0.17	0.18	0.49	0.10	0.31
15	0.2	0.14	0.09	0.26	0.35	0.37	0.41	0.39	0.40	0.40	0.30	0.40	0.34	0.33	-0.01	0.12	0.26	0.31	0.58	0.65	0.75	0.79	0.31	0.51	0.79	-0.01	0.36
16	0.9	0.56	0.32	0.54	0.86	0.60	0.55	0.51	0.39	0.26	0.13	0.00	0.30	0.09	-0.04	-0.46	-0.26	-0.12	0.19	0.58	0.88	0.74	0.53	0.70	0.89	-0.46	0.37
17	0.7	0.44	0.36	0.23	0.16	0.24	0.19	0.30	0.14	0.08	-0.27	-0.45	-0.42	-0.27	-0.26	0.14	0.27	0.38	0.49	0.45	0.48	0.43	0.36	0.32	0.72	-0.45	0.19
18	0.2	0.23	0.24	0.21	0.23	0.22	0.25	0.28	0.28	0.16	0.20	0.32	0.21	0.21	0.26	0.52	0.46	0.28	0.23	0.25	0.21	0.34	0.48	0.41	0.52	0.16	0.28
19	0.4	0.61	0.59	0.64	0.43	0.40	0.56	0.69	0.47	0.62	0.12	-0.12	-0.27	-0.66	-0.49	-0.25	-0.28	0.04	0.05	0.24	0.37	0.40	0.32	0.40	0.69	-0.66	0.22
20	0.4	0.33	0.31	0.29	0.16	0.19	0.15	0.17	0.20	0.06	-0.02	-0.33	-0.34	-0.36	-0.36	-0.21	-0.16	-0.09	0.25	0.96	0.95	1.42	0.80	1.44	1.44	-0.36	0.26
21	0.8	0.53	0.21	0.21	0.17	0.31	0.46	0.49	0.82	-0.12	-0.60	-0.84	-1.02	-1.38	-1.44	-1.20	-0.92	-0.06	0.24	0.10	0.13	0.58	0.44	0.70	0.82	-1.44	-0.06
22	0.6	0.29	0.36	0.26	0.24	0.27	0.29	0.52	0.27	-0.35	-0.71	-0.91	-0.95	-0.94	-0.75	-1.00	-0.54	-0.23	-0.11	0.21	0.61	1.15	1.06	0.88	1.15	-1.00	0.02
23	0.7	0.32	0.37	0.33	0.15	0.18	0.16	0.26	0.22	0.11	-0.01	-0.12	-0.27	-0.14	-0.24	-0.24	-0.22	-0.24	-0.05	-0.02	0.10	0.52	0.54	0.43	0.71	-0.27	0.12
24	0.3	0.21	0.23	0.11	0.10	0.32	0.24	0.29	0.32	0.24	0.18	0.31	0.23	0.19	0.27	0.31	0.32	0.32	0.40	0.47	0.54	0.53	0.55	0.50	0.55	0.10	0.31
25	0.4	0.42	0.51	0.47	0.44	0.39	0.35	0.40	0.49	0.47	0.48	0.52	0.44	0.39	0.36	0.37	0.36	0.45	0.47	0.56	0.57	0.55	0.58	0.62	0.62	0.35	0.46
26	0.6	0.64	0.62	0.24	0.36	0.33	0.33	0.39	0.43	0.20	0.32	0.20	-0.28	-0.44	-0.54	-0.72	-0.86	-0.46	0.05	0.69	1.66	1.34	1.18	0.95	1.66	-0.86	0.30
27	0.8	0.57	1.02	1.21	0.83	0.95	1.10	1.03	0.94	0.07	-0.54	-0.87	-1.07	-0.95	-0.80	-0.60	-0.47	0.10	1.64	1.65	0.47	0.28	0.34	0.38	1.65	-1.07	0.34
28	0.3	0.40	0.40	0.32	0.29	0.31	0.32	0.54	0.66	0.17	-0.43	-0.81	-0.91	-1.18	-1.32	-1.23	-1.10	-0.44	0.01	0.84	0.64	0.61	0.78	0.77	0.84	-1.32	0.00
29	0.6	0.38	0.42	0.29	0.27	0.28	0.27	0.32	0.35	0.21	0.05	-0.05	-0.19	-0.29	-0.16	-0.23	-0.24	-0.03	0.39	0.64	0.82	0.93	1.19	1.21	1.21	-0.29	0.31
30	1.4	1.68	1.33	0.98	0.53	0.41	0.66	1.40	1.43	0.14	-0.36	-0.71	-0.61	-0.66	-0.62	-0.54	-0.54	-0.17	0.23	0.24	0.39	0.45	0.58	0.84	1.68	-0.71	0.35
Max.	**1.4**	**1.68**	**1.33**	**1.21**	**0.97**	**1.37**	**1.10**	**1.40**	**1.43**	**0.62**	**0.48**	**0.52**	**0.62**	**0.42**	**0.40**	**0.52**	**0.46**	**0.85**	**1.64**	**1.65**	**1.66**	**1.42**	**1.19**	**1.44**	**1.68**		
Min.	**0.0**	**0.03**	**0.09**	**0.11**	**0.10**	**0.18**	**0.15**	**0.11**	**0.14**	**-0.46**	**-0.85**	**-1.10**	**-1.30**	**-1.38**	**-1.51**	**-1.54**	**-1.31**	**-0.95**	**-0.59**	**-0.41**	**-0.30**	**-0.19**	**-0.10**	**-0.03**		**-1.54**	
Avg.	**0.5**	**0.43**	**0.42**	**0.41**	**0.38**	**0.41**	**0.41**	**0.48**	**0.42**	**0.16**	**-0.01**	**-0.12**	**-0.19**	**-0.28**	**-0.29**	**-0.24**	**-0.14**	**0.04**	**0.24**	**0.38**	**0.45**	**0.55**	**0.50**	**0.53**			**0.23**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.0	1.42	2.17	1.35	1.05	0.84	0.62	0.77	0.89	-0.14	-0.51	-0.48	-0.35	-0.51	-0.20	0.17	0.46	0.40	0.38	0.50	0.57	0.59	0.67	0.59	2.17	-0.51	0.51
2	0.5	0.39	1.03	0.95	1.21	2.10	1.03	1.18	1.27	0.25	-0.58	-0.88	-0.80	-0.87	-0.66	-0.78	-0.64	-0.33	-0.09	0.09	0.06	0.08	-0.03	-0.01	2.10	-0.88	0.19
3	0.2	0.07	0.13	-0.07	0.03	0.23	-0.07	-0.08	-0.03	0.07	0.11	-0.21	-0.27	-0.44	-0.53	-0.73	-0.51	-0.30	-0.02	0.05	0.08	0.17	0.28	0.29	0.29	-0.73	-0.07
4	0.3	0.50	1.07	1.46	1.13	1.06	1.01	0.92	0.60	0.06	-0.64	-0.98	-1.10	-0.94	-0.75	-0.61	-0.38	-0.03	0.20	0.24	0.26	0.11	0.06	0.00	1.46	-1.10	0.15
5	0.0	0.07	0.05	0.08	0.06	0.04	0.03	0.05	0.12	-0.05	-0.49	-0.63	-0.78	-1.04	-1.14	-0.97	-1.03	-0.47	1.15	2.03	1.04	0.90	1.07	0.87	2.03	-1.14	0.04
6	1.1	0.87	0.84	0.78	0.84	0.98	1.05	0.87	1.28	0.36	0.01	-0.28	-0.39	-0.51	-0.44	-0.67	-0.41	-0.09	0.06	0.08	0.10	0.12	0.13	0.17	1.28	-0.67	0.28
7	0.4	0.66	0.36	0.34	0.31	0.24	0.14	0.07	0.11	-0.06	-0.22	-0.39	-0.60	-0.76	-0.73	-0.57	-0.41	-0.35	-0.12	0.03	0.17	0.21	0.03	0.12	0.66	-0.76	-0.04
8	0.1	0.06	0.12	0.15	0.15	0.09	0.16	0.13	0.10	0.05	-0.10	-0.30	-0.31	-0.57	-1.06	-0.45	-0.30	0.20	1.86	1.56	0.66	0.36	0.40	0.43	1.86	-1.06	0.15
9	0.3	0.19	0.10	0.09	0.07	0.04	0.04	0.07	0.06	0.04	0.02	0.08	0.13	0.19	0.12	0.06	0.11	0.18	0.21	0.21	0.23	0.25	0.25	0.27	0.27	0.02	0.14
10	0.3	0.27	0.35	0.33	0.08	0.07	0.48	0.69	0.62	0.25	-0.28	0.00	-0.53	-0.33	-0.32	-0.15	-0.18	0.25	0.29	0.64	0.67	0.76	0.53	0.46	0.76	-0.53	0.22
11	0.3	0.22	0.12	0.17	0.28	0.36	0.27	0.19	0.15	0.19	0.17	0.24	0.39	0.49	0.30	0.27	0.29	0.47	0.31	0.31	0.23	0.22	0.12	0.10	0.49	0.10	0.26
12	0.1	0.06	0.04	0.06	0.05	0.05	0.04	0.02	0.02	0.01	-0.05	-0.09	-0.15	-0.24	-0.23	-0.14	-0.15	-0.07	0.00	0.05	0.08	0.10	0.09	0.06	0.10	-0.24	-0.01
13	0.1	0.11	0.06	0.00	0.16	0.22	0.65	0.10	0.30	0.13	-0.08	-0.17	-0.21	-0.24	-0.17	-0.08	-0.08	0.01	0.09	0.14	0.13	0.15	0.09	0.09	0.65	-0.24	0.06
14	0.1	0.14	0.10	0.09	0.00	0.08	0.09	0.08	0.01	0.00	-0.03	-0.06	-0.12	-0.11	-0.12	-0.10	-0.14	-0.05	0.03	0.08	0.11	0.05	0.06	0.06	0.14	-0.14	0.01
15	0.1	0.08	0.06	0.02	0.19	0.38	0.46	0.32	0.15	0.04	-0.14	-0.25	-0.26	-0.37	-0.56	-0.59	-0.39	-0.16	0.03	0.13	0.11	0.04	0.14	0.09	0.46	-0.59	-0.02
16	0.1	0.20	0.13	0.01	-0.04	0.03	0.04	-0.04	0.02	0.01	-0.06	-0.16	-0.28	-0.47	-0.56	-0.52	-0.40	-0.17	0.02	0.06	0.04	0.14	0.26	0.24	0.26	-0.56	-0.06
17	0.4	0.26	0.61	0.25	0.28	0.50	0.92	1.17	0.69	0.20	-0.22	-0.33	-0.49	-0.47	-0.39	-0.33	-0.17	-0.13	0.00	0.07	0.08	0.13	0.12	0.10	1.17	-0.49	0.14
18	0.1	0.10	0.10	0.11	0.10	0.08	0.11	0.12	0.12	0.11	0.02	-0.21	-0.42	-0.30	-0.20	-0.05	0.01	0.14	0.24	0.35	0.42	0.40	0.50	0.62	0.62	-0.42	0.11
19	0.8	1.02	1.80	1.39	1.43	0.81	1.03	1.61	0.88	0.51	0.09	-0.22	-0.37	-0.54	-0.53	-0.28	-0.17	-0.10	0.18	0.50	0.11	0.05	0.05	0.07	1.80	-0.54	0.42
20	0.1	0.20	0.21	0.19	0.36	0.41	0.11	0.02	0.06	0.07	-0.06	-0.04	-0.13	-0.10	-0.15	-0.11	-0.04	-0.01	0.07	0.11	0.07	0.22	0.34	0.46	0.46	-0.15	0.10
21	0.5	0.32	0.27	0.26	0.23	0.21	0.23	0.36	0.29	0.13	0.10	-0.18	-0.37	-0.43	-0.45	-0.40	-0.30	-0.04	0.16	0.15	0.13	0.15	0.12	0.09	0.48	-0.45	0.06
22	0.1	0.04	0.08	0.03	-0.10	-0.02	-0.12	-0.15	0.00	-0.19	-0.39	-0.50	-0.80	-0.95	-0.47	-0.20	-0.17	0.10	0.76	1.17	0.49	0.65	0.51	0.55	1.17	-0.95	0.02
23	0.4	0.26	0.17	0.22	0.43	1.41	1.80	0.85	0.57	0.42	-0.08	-0.27	-0.45	-0.42	-0.40	-0.64	-1.43	-0.49	0.09	0.22	0.22	0.18	0.15	0.00	1.80	-1.43	0.14
24	-0.1	-0.01	0.05	0.00	0.14	0.06	0.08	0.00	-0.34	-0.21	-0.18	-0.34	-0.92	-0.87	-0.73	-0.68	-0.37	-0.21	-0.03	0.33	0.36	0.46	0.58	0.51	0.58	-0.92	-0.10
25	0.1	0.16	0.03	-0.01	0.08	0.09	0.07	0.07	0.06	0.12	0.08	0.00	-0.19	-0.21	0.11	0.09	0.35	0.72	1.26	1.36	1.14	1.10	0.97	0.77	1.36	-0.21	0.35
26	1.0	0.60	0.57	0.56	0.67	0.89	1.96	1.46	1.36	2.05	1.38	-0.05	-0.65	-1.53	-0.34	0.04	-0.79	0.07	0.40	0.33	0.36	0.35	0.38	0.39	2.05	-1.53	0.48
27	0.6	0.30	0.74	0.72	0.40	0.33	0.41	0.69	0.63	0.84	0.16	-0.28	-0.46	-0.49	-0.28	-0.18	-0.68	0.19	0.70	0.26	0.45	0.40	1.19	1.32	1.32	-0.68	0.33
28	0.8	1.21	1.03	1.07	0.99	0.88	1.61	1.22	0.95	1.49	0.20	-0.23	-0.61	-0.64	-0.21	-0.12	-1.62	0.18	2.42	1.56	1.21	1.04	1.28	1.07	2.42	-1.62	0.70
29	1.3	1.46	1.26	1.29	0.86	1.82	1.83	1.48	1.13	1.00	0.19	-0.15	-0.07	-0.14	-0.19	-0.12	-0.07	0.01	0.07	-0.10	-0.08	-0.09	0.00	-0.02	1.83	-0.19	0.53
30	0.0	-0.04	-0.03	0.00	-0.04	-0.02	0.01	0.10	0.13	0.08	0.07	-0.04	-0.10	-0.17	-0.18	-0.11	-0.14	-0.02	0.14	0.13	0.28	0.44	0.32	0.38	0.44	-0.18	0.05
31	0.5	0.47	0.73	0.86	0.91	0.75	0.78	0.97	0.60	0.61	0.15	-0.25	-0.42	-0.32	-0.18	-0.20	-0.56	0.81	0.85	0.61	0.77	1.24	1.07	0.46	1.24	-0.56	0.47
Max.	**1.3**	**1.46**	**2.17**	**1.46**	**1.43**	**2.10**	**1.96**	**1.61**	**1.36**	**2.05**	**1.38**	**0.24**	**0.39**	**0.49**	**0.30**	**0.27**	**0.46**	**0.81**	**2.42**	**2.03**	**1.21**	**1.24**	**1.28**	**1.32**	**2.42**		
Min.	**-0.1**	**-0.04**	**-0.03**	**-0.07**	**-0.10**	**-0.02**	**-0.12**	**-0.15**	**-0.34**	**-0.21**	**-0.64**	**-0.98**	**-1.10**	**-1.53**	**-1.14**	**-0.97**	**-1.62**	**-0.49**	**-0.12**	**-0.10**	**-0.08**	**-0.09**	**-0.03**	**-0.02**		**-1.62**	
Avg.	**0.4**	**0.38**	**0.46**	**0.41**	**0.40**	**0.48**	**0.54**	**0.49**	**0.41**	**0.27**	**-0.04**	**-0.25**	**-0.39**	**-0.46**	**-0.38**	**-0.30**	**-0.33**	**0.02**	**0.38**	**0.43**	**0.34**	**0.35**	**0.38**	**0.34**			**0.18**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.8	0.68	0.51	0.19	0.11	0.14	0.50	1.21	0.68	0.71	0.31	-0.02	-0.22	-0.31	-0.54	-0.44	-0.33	-0.17	-0.07	0.07	0.21	0.46	0.66	1.03	1.21	-0.54	0.26
2	0.4	0.40	0.16	0.12	0.10	0.16	0.23	0.12	0.09	0.11	0.14	-0.04	-0.07	-0.06	-0.13	-0.10	0.00	0.06	0.10	0.08	0.11	0.10	0.08	0.12	0.40	-0.13	0.09
3	0.2	0.15	0.15	0.15	0.16	0.14	0.13	0.11	0.13	0.12	0.08	0.02	-0.06	-0.03	0.01	0.00	0.03	0.07	0.11	0.11	0.15	0.15	0.14	0.13	0.16	-0.06	0.10
4	0.1	0.10	0.09	0.09	0.04	0.07	0.14	-0.05	-0.01	0.26	0.00	-0.21	-0.25	-0.38	-0.33	-0.30	-0.23	-0.09	0.21	0.27	0.21	0.04	0.41	0.28	0.41	-0.38	0.02
5	0.2	0.14	0.11	0.04	0.04	0.02	0.02	0.14	0.04	0.05	0.04	-0.05	0.16	0.02	0.04	0.04	0.04	0.18	0.19	0.19	0.24	0.24	0.16	0.14	0.24	-0.05	0.10
6	0.2	0.28	0.31	0.28	0.28	0.20	0.21	0.24	0.29	0.24	0.21	0.13	-0.02	-0.09	-0.18	-0.06	0.19	0.19	0.16	0.13	0.15	0.13	0.09	0.10	0.31	-0.18	0.15
7	0.2	0.14	0.13	0.13	0.08	0.11	0.18	0.22	0.13	0.14	0.11	0.03	-0.11	-0.27	-0.16	-0.06	-0.03	0.05	0.14	0.04	0.24	0.12	0.09	0.18	0.24	-0.27	0.07
8	0.2	0.23	0.46	0.41	0.40	0.10	0.02	-0.06	0.02	0.12	0.11	0.02	-0.06	-0.07	-0.08	-0.04	-0.02	0.02	0.04	0.03	0.03	0.04	0.03	0.02	0.46	-0.08	0.08
9	0.0	-0.03	-0.01	0.00	0.01	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.00	0.03	0.02	0.04	0.03	0.07	0.11	0.08	0.03	-0.07	-0.04	0.11	-0.07	0.02
10	0.3	0.36	0.30	0.25	0.28	0.27	0.30	0.35	0.30	0.17	0.04	-0.03	0.10	0.19	0.33	0.31	0.28	0.43	0.30	0.20	0.23	0.31	0.30	0.30	0.43	-0.03	0.26
11	0.3	0.35	0.33	0.23	0.23	0.17	0.17	0.11	0.16	0.19	0.23	0.18	-0.05	-0.08	-0.12	-0.18	-0.18	0.03	0.15	0.09	0.20	0.16	0.12	0.08	0.35	-0.18	0.12
12	0.0	-0.03	-0.05	-0.01	0.01	-0.02	-0.03	-0.05	-0.03	-0.08	-0.08	-0.22	-0.27	-0.42	-0.34	-0.22	-0.17	-0.04	0.27	0.38	0.47	0.97	0.87	0.95	0.97	-0.42	0.08
13	0.3	0.43	0.33	0.43	0.13	0.11	0.06	0.25	0.32	0.34	0.19	0.02	0.12	0.06	0.08	0.10	0.17	0.20	0.22	0.20	0.23	0.48	0.54	0.45	0.54	0.02	0.24
14	0.5	0.31	0.47	0.25	0.17	0.22	0.14	0.23	0.41	0.62	0.94	0.26	-0.18	-0.22	-0.11	-0.04	0.02	0.29	0.49	0.46	0.58	0.33	0.39	0.51	0.94	-0.22	0.30
15	0.5	0.60	0.68	0.33	0.37	0.56	0.90	0.86	0.56	0.61	0.57	0.08	-0.07	-0.14	-0.12	-0.02	-0.07	-0.07	-0.11	0.16	0.11	0.09	0.07	0.09	0.90	-0.14	0.27
16	0.1	0.10	0.11	0.07	0.06	0.13	0.17	0.04	0.13	0.16	0.14	0.10	-0.11	-0.22	-0.12	-0.07	0.02	0.25	0.16	0.07	0.08	0.08	0.22	0.25	0.25	-0.22	0.08
17	0.3	0.38	0.42	0.51	0.87	0.83	0.67	0.58	0.56	0.92	0.60	0.22	-0.06	-0.07	-0.01	0.09	0.22	0.46	0.62	0.60	0.62	0.68	0.58	0.59	0.92	-0.07	0.46
18	0.7	0.70	0.78	0.71	0.69	0.71	0.70	0.67	0.64	0.74	0.55	0.11	-0.07	-0.08	0.05	0.12	0.25	0.59	0.91	0.74	0.55	0.49	0.67	0.51	0.91	-0.08	0.52
19	0.6	0.55	0.60	0.59	0.59	0.81	0.81	0.71	0.94	0.76	0.57	0.23	0.10	-0.06	0.12	0.14	-0.03	0.06	0.14	0.28	0.33	0.53	0.30	0.24	0.94	-0.06	0.41
20	0.1	0.16	0.09	0.38	0.60	0.13	0.10	0.17	0.09	0.19	0.05	0.25	0.01	-0.10	-0.03	0.02	0.14	0.28	0.19	0.20	0.21	0.19	0.15	0.04	0.60	-0.10	0.15
21	0.0	0.06	0.05	0.09	0.11	0.11	-0.02	0.01	0.27	0.53	0.10	0.01	-0.22	-0.22	-0.16	-0.13	-0.09	0.01	0.57	0.74	0.61	0.31	0.17	0.18	0.74	-0.22	0.13
22	0.1	0.07	-0.02	0.06	0.18	0.34	0.39	0.33	0.83	1.03	0.76	-0.02	-0.06	-0.15	-0.09	0.04	0.24	0.80	0.95	0.57	0.46	0.26	0.18	0.15	1.03	-0.15	0.31
23	0.2	0.16	0.05	-0.03	-0.03	-0.08	-0.05	-0.07	-0.03	-0.06	-0.07	-0.09	-0.10	-0.04	-0.05	0.00	0.04	0.07	0.10	0.06	0.04	0.06	0.13	0.09	0.16	-0.10	0.01
24	0.1	0.05	0.00	0.04	0.04	-0.04	-0.07	-0.04	0.03	0.09	0.09	0.06	0.07	0.12	0.20	0.17	0.19	0.21	0.21	0.18	0.22	0.33	0.39	0.47	0.47	-0.07	0.13
25	0.2	0.13	0.11	0.09	0.07	0.06	0.07	0.06	0.06	0.05	0.06	0.05	0.04	0.03	-0.04	0.00	-0.03	-0.04	0.02	-0.02	-0.01	-0.01	0.01	0.01	0.19	-0.04	0.04
26	0.0	0.03	0.07	0.12	0.12	0.12	0.15	0.14	0.14	0.13	0.15	0.11	0.06	0.00	-0.03	-0.06	0.05	0.10	0.27	0.01	0.10	0.13	0.26	0.16	0.27	-0.06	0.10
27	0.3	0.38	0.26	0.55	0.55	0.76	0.37	0.57	0.92	0.46	0.11	0.07	0.01	-0.11	-0.10	-0.10	0.01	-0.05	-0.08	0.14	0.07	0.15	0.12	0.14	0.92	-0.11	0.23
28	0.1	0.11	0.11	0.15	0.16	0.18	0.18	0.21	0.21	0.26	0.24	0.41	0.25	0.28	0.37	0.08	0.06	0.13	0.15	0.08	0.02	-0.04	-0.03	0.01	0.41	-0.04	0.16
29	0.0	0.04	-0.02	0.12	0.15	0.12	0.13	0.16	0.12	0.10	0.13	0.12	0.06	0.07	0.05	0.03	0.01	0.01	-0.01	-0.02	-0.01	-0.02	-0.01	-0.03	0.16	-0.03	0.05
30	0.0	-0.03	-0.02	-0.05	-0.01	0.00	0.02	0.01	0.01	0.02	0.04	0.03	-0.03	-0.17	-0.29	-0.20	0.00	0.07	0.07	0.11	0.25	0.38	0.09	0.32	0.38	-0.29	0.02
Max.	**0.8**	**0.70**	**0.78**	**0.71**	**0.87**	**0.83**	**0.90**	**1.21**	**0.94**	**1.03**	**0.94**	**0.41**	**0.25**	**0.28**	**0.37**	**0.31**	**0.28**	**0.80**	**0.95**	**0.74**	**0.62**	**0.97**	**0.87**	**1.03**	**1.21**		
Min.	**0.0**	**-0.03**	**-0.05**	**-0.05**	**-0.03**	**-0.08**	**-0.07**	**-0.07**	**-0.03**	**-0.08**	**-0.08**	**-0.22**	**-0.27**	**-0.42**	**-0.54**	**-0.44**	**-0.33**	**-0.17**	**-0.11**	**-0.02**	**-0.01**	**-0.04**	**-0.07**	**-0.04**		**-0.54**	
Avg.	**0.2**	**0.23**	**0.22**	**0.21**	**0.22**	**0.22**	**0.22**	**0.24**	**0.27**	**0.30**	**0.21**	**0.06**	**-0.03**	**-0.08**	**-0.06**	**-0.03**	**0.03**	**0.14**	**0.22**	**0.21**	**0.23**	**0.24**	**0.24**	**0.25**			**0.17**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.5	0.42	0.41	0.50	0.20	0.13	0.07	0.12	0.32	0.23	0.17	0.07	0.07	0.12	0.01	0.02	0.06	0.09	0.06	0.07	0.11	0.08	0.03	0.02	0.51	0.01	0.16
2	0.1	0.14	0.08	0.03	0.07	0.02	0.03	0.14	0.12	0.16	0.15	0.19	0.11	0.08	0.08	0.10	0.13	0.15	0.15	0.14	0.13	0.14	0.12	0.15	0.19	0.02	0.11
3	0.1	0.15	0.11	0.12	0.12	0.16	0.10	0.08	0.03	0.00	0.03	0.08	0.01	0.07	0.06	0.09	0.09	0.04	0.03	0.05	0.07	0.10	0.08	0.12	0.16	0.00	0.08
4	0.1	0.16	0.19	0.31	0.30	0.28	0.24	0.22	0.18	0.19	0.22	0.20	0.18	0.18	0.22	0.28	0.36	0.39	0.41	0.39	0.36	0.36	0.37	0.40	0.41	0.14	0.27
5	0.4	0.25	0.40	0.32	0.31	0.37	0.39	0.36	0.35	0.25	0.67	0.32	0.23	0.22	0.22	0.25	0.33	0.48	0.32	0.34	0.36	0.37	0.41	0.38	0.67	0.22	0.35
6	0.3	0.23	0.26	0.31	0.32	0.24	0.30	0.28	0.38	0.38	0.36	0.35	0.57	0.44	0.14	0.39	0.49	0.22	0.27	0.21	0.35	0.34	0.39	0.45	0.57	0.14	0.33
7	0.6	0.54	0.45	0.61	0.70	0.65	0.59	0.44	0.57	0.61	0.71	0.57	0.35	0.24	0.20	0.20	0.09	0.07	0.17	0.08	0.08	0.12	0.12	0.23	0.71	0.07	0.37
8	0.1	0.13	0.15	0.14	0.13	0.14	0.13	0.13	0.12	0.14	0.04	-0.01	0.08	0.13	0.16	0.09	0.02	0.01	0.02	0.09	0.15	0.10	0.01	0.01	0.16	-0.01	0.09
9	0.1	0.14	0.17	0.17	0.14	0.13	0.18	0.18	0.12	0.05	0.19	0.05	0.08	0.01	-0.08	-0.09	0.07	0.22	0.37	0.32	0.38	0.19	0.15	0.18	0.38	-0.09	0.14
10	0.4	0.34	0.28	0.23	0.24	0.22	0.15	0.08	0.11	0.16	0.12	0.12	0.08	0.00	-0.03	-0.11	-0.04	0.06	0.19	0.14	0.05	0.01	0.07	0.03	0.35	-0.11	0.12
11	0.1	0.25	0.34	0.37	0.36	0.22	0.43	0.37	0.59	0.32	0.56	0.35	0.16	-0.07	-0.25	-0.18	-0.10	-0.07	-0.07	0.04	0.22	0.55	0.16	0.08	0.59	-0.25	0.20
12	0.2	0.09	0.11	0.14	0.16	0.18	0.18	0.17	0.23	0.28	0.29	0.15	0.00	-0.09	-0.12	-0.12	-0.11	0.04	0.04	0.01	0.06	0.08	0.17	0.17	0.29	-0.12	0.10
13	0.3	0.74	0.30	0.41	0.42	0.48	0.57	0.83	0.84	0.45	0.64	0.30	-0.02	-0.18	-0.31	0.03	0.32	0.59	0.43	0.73	0.68	0.61	0.53	0.70	0.84	-0.31	0.43
14	0.7	0.61	0.73	0.65	0.56	0.53	0.65	0.77	0.64	0.88	0.36	0.23	0.23	0.28	0.23	0.09	0.05	0.00	0.09	0.18	0.09	0.11	0.29	0.39	0.88	0.00	0.39
15	0.4	0.43	0.36	0.20	0.20	0.16	0.12	0.19	0.29	0.19	0.20	0.02	0.11	0.07	0.03	0.20	0.11	0.14	0.01	-0.02	-0.01	-0.03	-0.03	-0.10	0.43	-0.10	0.14
16	-0.1	-0.02	0.04	0.04	0.15	0.13	0.08	-0.05	-0.05	0.09	0.36	0.97	0.54	0.25	0.37	0.54	0.37	0.40	0.74	0.49	0.58	0.69	0.55	0.47	0.97	-0.07	0.32
17	0.5	0.49	0.22	0.30	0.41	0.33	0.25	0.10	0.20	0.22	0.00	0.16	0.16	0.22	0.15	0.19	0.18	0.08	0.07	0.09	0.10	0.23	0.19	0.25	0.49	0.00	0.21
18	0.2	0.21	0.19	0.21	0.17	0.15	0.13	0.36	0.33	0.26	0.29	0.29	0.21	0.15	0.17	0.17	0.17	0.17	0.15	0.18	0.20	0.18	0.14	0.12	0.36	0.12	0.20
19	0.1	0.09	0.09	0.09	0.03	0.05	0.09	0.14	0.10	0.08	0.04	0.05	0.07	0.04	0.03	0.05	0.08	0.09	0.12	0.12	0.10	0.10	0.09	0.05	0.14	0.03	0.08
20	0.0	0.00	0.02	0.11	0.14	0.17	0.19	0.23	0.22	0.24	0.20	0.18	0.16	0.17	0.17	0.29	0.25	0.24	0.39	0.37	0.48	0.66	0.56	0.88	0.88	0.00	0.26
21	0.7	0.71	0.79	0.56	0.70	0.72	0.50	0.32	0.57	0.48	0.28	0.34	-0.17	-0.17	-0.06	0.01	0.40	0.52	0.93	0.78	0.65	0.59	0.56	0.34	0.93	-0.17	0.46
22	0.0	-0.09	-0.07	-0.12	-0.01	-0.03	-0.05	-0.06	-0.07	-0.08	-0.10	-0.09	-0.09	-0.15	-0.14	-0.18	-0.15	-0.09	-0.07	-0.04	-0.01	0.00	-0.02	-0.05	0.00	-0.18	-0.07
23	-0.1	-0.07	-0.07	-0.05	0.07	0.00	0.01	-0.04	-0.02	0.08	-0.01	0.49	0.16	0.13	0.11	0.08	0.08	0.15	0.20	0.18	0.11	0.09	0.03	0.03	0.49	-0.07	0.07
24	0.0	0.07	0.04	0.06	0.07	0.06	0.05	0.03	0.07	0.03	0.02	0.02	-0.10	-0.02	0.11	0.16	0.21	0.44	0.47	0.26	0.15	0.07	0.27	0.10	0.47	-0.10	0.11
25	0.1	0.15	0.18	0.11	-0.04	-0.02	0.01	0.00	0.00	0.02	0.01	-0.05	-0.12	-0.14	-0.15	-0.12	-0.09	-0.05	-0.10	-0.17	0.07	0.00	-0.02	0.05	0.18	-0.17	-0.01
26	-0.1	-0.13	-0.18	-0.15	-0.15	-0.18	-0.23	-0.31	-0.23	-0.16	-0.19	-0.22	-0.35	-0.32	-0.27	-0.31	-0.27	-0.22	-0.07	-0.03	-0.09	-0.09	0.03	0.00	0.03	-0.35	-0.17
27	0.0	0.03	0.05	0.09	0.11	0.13	0.13	0.15	0.17	0.16	0.16	0.14	0.10	0.06	0.10	0.10	0.11	0.15	0.14	0.04	0.18	0.02	0.16	0.13	0.18	0.01	0.11
28	0.3	0.04	0.03	0.15	0.13	0.16	0.13	0.03	-0.01	0.08	0.20	0.08	-0.06	-0.10	0.10	0.05	-0.05	-0.05	0.06	0.29	0.15	0.25	0.05	0.00	0.29	-0.10	0.08
29	0.0	0.02	0.09	-0.13	-0.15	-0.06	-0.16	-0.09	0.13	-0.03	0.04	0.17	0.27	-0.07	-0.13	0.04	0.32	0.68	0.31	0.28	0.37	0.44	0.49	0.59	0.68	-0.16	0.14
30	0.7	0.66	0.84	0.58	0.41	0.23	0.10	0.00	0.86	0.57	1.00	0.59	0.05	-0.10	-0.06	-0.04	0.18	0.40	0.16	-0.06	0.45	0.41	0.30	0.20	1.00	-0.10	0.35
31	0.3	-0.01	-0.05	-0.14	-0.10	-0.09	-0.18	-0.11	-0.06	-0.19	-0.10	-0.11	-0.17	-0.19	-0.21	-0.16	-0.17	-0.19	-0.15	-0.17	-0.18	-0.14	-0.04	-0.03	0.30	-0.21	-0.11
Max.	**0.7**	**0.74**	**0.84**	**0.65**	**0.70**	**0.72**	**0.65**	**0.83**	**0.86**	**0.88**	**1.00**	**0.97**	**0.57**	**0.44**	**0.37**	**0.54**	**0.49**	**0.68**	**0.93**	**0.78**	**0.68**	**0.69**	**0.56**	**0.88**	**1.00**		
Min.	**-0.1**	**-0.13**	**-0.18**	**-0.15**	**-0.15**	**-0.18**	**-0.23**	**-0.31**	**-0.23**	**-0.19**	**-0.19**	**-0.22**	**-0.35**	**-0.32**	**-0.31**	**-0.31**	**-0.27**	**-0.22**	**-0.15**	**-0.17**	**-0.18**	**-0.14**	**-0.04**	**-0.10**		**-0.35**	
Avg.	**0.2**	**0.22**	**0.21**	**0.20**	**0.20**	**0.18**	**0.17**	**0.16**	**0.23**	**0.20**	**0.22**	**0.19**	**0.09**	**0.04**	**0.03**	**0.07**	**0.11**	**0.17**	**0.19**	**0.17**	**0.21**	**0.21**	**0.20**	**0.20**			**0.17**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	63.0	59.0	50.7	47.8	46.7	52.9	44.3	46.3	45.3	46.5	58.4	61.9	76.4	75.0	74.3	76.7	79.3	81.0	82.0	82.3	83.7	84.6	85.9	85.7	85.9	44.3	66.2
2	84.8	85.6	85.9	85.6	86.3	84.7	83.7	83.0	83.4	83.9	82.1	80.5	80.8	79.3	74.7	78.7	77.6	81.1	82.9	84.6	83.8	80.1	78.4	78.7	86.3	74.7	82.1
3	77.8	79.0	78.8	80.2	82.5	85.2	85.8	85.4	86.2	86.1	88.4	89.1	89.5	86.8	86.3	85.2	82.2	84.6	81.9	78.7	78.1	77.5	77.0	78.1	89.5	77.0	82.9
4	77.9	76.6	73.8	76.1	73.4	74.7	74.9	73.5	72.0	73.4	76.4	73.0	73.6	72.5	75.2	73.1	71.2	70.1	71.3	71.9	73.0	74.3	72.5	70.7	77.9	70.1	73.5
5	68.5	64.9	65.3	65.7	66.3	67.6	62.5	57.5	56.8	57.2	57.2	57.0	56.2	55.5	54.7	54.0	54.0	51.7	52.2	51.0	50.1	49.8	49.7	50.6	68.5	49.7	57.3
6	52.2	57.1	57.9	59.3	59.9	61.0	60.5	59.9	58.9	58.2	58.0	57.9	58.8	60.9	63.8	64.3	68.9	69.9	72.9	72.9	72.4	71.9	71.9	72.7	72.9	52.2	63.4
7	75.5	78.1	81.6	83.4	80.4	78.2	79.0	78.9	78.8	79.1	80.9	80.2	81.7	78.6	80.4	77.9	79.0	84.2	84.6	83.1	84.5	81.7	81.7	79.3	84.6	75.5	80.5
8	79.9	78.9	78.8	78.9	77.5	77.0	73.5	73.1	74.3	72.7	75.6	75.8	75.5	72.1	72.4	69.3	71.1	76.4	76.8	76.2	71.8	69.2	70.7	66.4	79.9	66.4	74.3
9	66.7	69.3	73.4	73.9	70.2	78.5	82.3	74.3	74.8	69.3	73.1	76.2	74.6	70.5	68.8	74.6	67.8	59.0	57.2	60.4	61.7	60.3	61.9	63.1	82.3	57.2	69.2
10	61.5	62.2	61.7	61.2	62.6	62.2	60.2	59.6	57.4	56.3	57.9	57.4	61.0	61.6	58.7	55.2	52.9	51.4	53.7	51.1	51.4	52.1	51.4	52.1	62.6	51.1	57.2
11	51.7	50.8	50.9	58.4	64.9	62.8	59.3	54.9	52.4	51.4	57.4	59.3	59.4	61.6	62.3	62.3	61.6	64.5	72.0	77.9	81.8	82.2	76.3	73.9	82.2	50.8	62.9
12	77.3	78.1	80.0	82.5	84.6	89.4	89.0	87.7	87.6	87.2	86.0	86.0	85.7	85.8	85.2	85.7	85.8	80.8	75.5	72.6	62.7	54.1	50.3	50.7	89.4	50.3	78.8
13	53.8	66.9	68.4	68.5	67.7	66.2	71.8	76.5	78.8	68.3	60.9	64.6	70.9	66.5	67.7	61.9	46.0	42.8	40.6	40.6	39.5	62.4	80.0	78.5	80.0	39.5	62.9
14	74.0	71.7	72.7	63.4	62.8	70.5	75.5	75.7	67.2	67.6	68.3	72.4	68.2	70.8	70.1	76.6	81.5	84.2	85.6	85.8	88.4	86.0	76.2	76.0	88.4	62.8	74.6
15	78.6	87.7	89.6	88.9	87.4	83.0	89.9	84.4	92.7	94.8	96.2	95.5	94.6	94.6	94.1	91.1	88.4	90.2	93.5	95.4	94.2	93.7	93.8	94.6	96.2	78.6	91.1
16	96.0	96.3	97.1	97.5	97.4	96.1	96.4	96.0	88.2	74.3	75.3	72.7	67.3	65.2	61.9	60.9	59.0	60.4	64.7	71.0	74.1	73.7	64.0	77.0	97.5	59.0	78.4
17	69.4	67.9	65.3	52.7	52.8	62.2	62.6	42.8	36.3	38.2	46.3	60.6	83.2	87.1	87.9	82.4	78.7	71.2	75.4	85.5	85.5	85.6	88.6	90.3	90.3	36.3	69.1
18	96.0	96.9	98.1	98.1	99.4	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.1	94.7	96.1	98.2	95.2	96.1	98.2	98.7	95.6	91.4	89.1	100.0	89.1	97.5
19	88.6	91.3	89.2	80.5	79.0	75.4	71.3	68.9	66.2	67.6	67.6	59.3	59.2	56.4	60.3	60.7	57.0	53.6	54.5	63.9	82.4	89.0	89.8	89.2	91.3	53.6	71.7
20	90.1	90.8	92.3	92.8	87.4	84.5	86.3	83.4	83.6	82.1	79.2	81.8	81.2	87.0	82.2	87.9	86.8	95.4	98.1	99.0	99.4	98.6	98.2	96.7	99.4	79.2	89.4
21	96.9	99.2	91.8	91.6	95.2	94.3	96.1	96.1	86.7	88.2	84.1	82.7	83.5	79.8	78.1	78.9	79.2	80.6	86.5	84.5	80.4	86.0	93.2	95.4	99.2	78.1	87.9
22	92.3	82.7	72.5	70.6	60.9	69.9	67.6	74.6	78.1	68.1	68.2	90.0	95.0	90.6	72.3	67.8	69.8	66.0	62.7	64.9	64.6	69.7	67.8	59.5	95.0	59.5	72.8
23	56.1	55.5	57.3	59.1	63.0	60.9	59.0	56.7	50.9	41.2	35.3	34.7	35.1	37.0	42.5	49.0	42.1	37.1	29.8	24.0	23.7	26.1	28.4	35.7	63.0	23.7	43.3
24	40.8	46.6	51.4	52.5	58.2	62.5	65.4	57.5	62.2	57.6	48.8	53.0	57.0	67.9	75.2	81.3	85.5	83.5	83.1	88.6	89.5	91.5	89.2	87.9	91.5	40.8	68.2
25	89.0	90.2	90.4	91.0	92.3	90.1	91.6	85.8	76.5	80.0	78.2	70.8	67.1	67.1	61.9	63.7	68.8	68.5	68.3	62.7	58.9	55.5	49.6	47.8	92.3	47.8	73.6
26	43.1	38.5	33.2	45.2	31.2	48.5	55.3	63.4	67.2	64.0	67.9	68.3	66.9	68.4	66.4	64.1	67.9	64.3	68.9	69.4	64.5	65.2	72.9	72.3	72.9	31.2	59.9
27	66.3	65.8	51.7	42.7	39.4	48.5	56.8	54.6	42.1	30.1	30.9	35.0	46.0	67.6	77.5	82.4	83.4	84.1	86.2	87.4	86.3	82.7	83.3	84.9	87.4	30.1	63.1
28	89.8	88.0	92.2	93.2	89.2	90.1	92.3	94.5	95.2	96.0	96.3	96.4	96.9	95.7	95.3	93.6	91.8	90.4	91.4	92.6	92.4	92.6	85.0	76.2	96.9	76.2	92.0
29	76.2	76.9	75.3	75.6	76.0	79.2	79.8	77.6	75.6	71.5	71.6	69.8	65.1	66.6	77.6	84.3	85.0	88.8	89.7	88.6	88.5	88.4	89.2	92.2	92.2	65.1	79.5
30	94.0	95.5	96.9	97.8	97.4	96.2	96.2	94.5	93.4	92.0	87.7	84.8	81.4	82.9	81.3	80.4	79.1	77.5	78.0	75.7	66.1	69.5	72.2	69.1	97.8	66.1	85.0
31	53.4	54.1	57.8	62.7	50.8	47.1	45.6	42.3	44.1	56.7	66.9	59.2	53.7	54.8	52.0	53.3	64.3	53.7	59.0	67.3	74.7	79.4	81.3	80.7	81.3	42.3	58.9
Max.	**96.9**	**99.2**	**98.1**	**98.1**	**99.4**	**99.9**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**98.1**	**95.3**	**96.1**	**98.2**	**95.4**	**98.1**	**99.0**	**99.4**	**98.6**	**98.2**	**96.7**	**100.0**		
Min.	**40.8**	**38.5**	**33.2**	**42.7**	**31.2**	**47.1**	**44.3**	**42.3**	**36.3**	**30.1**	**30.9**	**34.7**	**35.1**	**37.0**	**42.5**	**49.0**	**42.1**	37.1	29.8	**24.0**	**23.7**	**26.1**	**28.4**	**35.7**		**23.7**	
Avg.	**73.6**	**74.3**	**73.6**	**73.5**	**72.3**	**74.2**	**74.7**	**72.9**	**71.4**	**69.7**	**70.4**	**71.2**	**72.4**	**73.0**	**72.8**	**73.3**	**73.0**	**72.3**	**73.4**	**74.4**	**74.4**	**75.1**	**74.9**	**74.7**			**73.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	76.5	79.5	82.5	77.6	83.7	81.2	81.3	82.0	81.1	80.9	79.2	83.9	81.5	80.8	76.0	72.6	66.8	66.6	71.4	70.7	66.7	67.4	69.6	69.6	83.9	66.6	76.2
2	69.8	67.6	72.6	78.8	76.9	67.4	67.0	61.0	69.0	67.3	75.2	72.5	75.1	75.8	69.6	70.6	63.8	44.9	50.3	45.7	44.6	41.9	39.8	38.6	78.8	38.6	62.7
3	41.4	39.2	38.2	43.5	38.8	41.5	37.6	47.4	62.9	60.4	65.8	70.7	70.6	65.5	63.6	64.2	61.1	58.4	63.8	69.8	76.1	77.5	77.8	75.1	77.8	37.6	58.8
4	76.0	75.7	68.1	71.0	70.4	63.5	70.0	67.5	64.2	67.8	66.9	67.7	72.3	52.9	51.3	46.8	43.8	45.6	49.1	57.2	55.8	61.3	62.6	60.6	76.0	43.8	62.0
5	63.9	70.3	74.4	77.0	76.5	74.8	76.2	76.1	73.2	71.6	71.8	70.1	71.3	70.5	67.5	63.7	62.5	66.6	70.1	71.0	72.9	71.7	67.9	60.7	77.0	60.7	70.5
6	55.5	55.6	55.5	49.4	63.5	60.7	41.8	39.1	37.2	38.7	39.6	45.4	43.4	48.1	51.0	47.8	56.3	62.8	64.6	63.4	68.7	67.9	65.8	60.0	68.7	37.2	53.4
7	60.5	60.9	61.3	59.4	60.8	59.1	61.2	61.5	58.9	63.2	62.0	62.1	59.3	60.8	56.0	57.8	61.2	60.1	61.8	64.1	60.3	43.7	35.4	32.0	64.1	32.0	57.6
8	45.7	34.2	46.1	67.5	63.0	30.5	30.7	29.1	28.1	29.6	30.5	31.4	32.5	33.7	34.7	35.5	32.5	32.8	33.5	32.4	35.7	38.4	42.1	36.1	67.5	28.1	36.9
9	37.1	40.1	45.7	50.5	51.7	47.7	44.1	42.2	34.8	32.5	33.2	33.1	28.1	28.5	27.1	31.7	27.6	33.4	37.4	48.8	50.6	61.5	61.2	59.2	61.5	27.1	41.1
10	57.2	56.6	58.1	63.3	68.5	70.1	62.7	62.4	64.3	75.1	75.5	76.7	72.5	68.0	65.2	58.0	57.8	60.7	65.9	64.4	64.1	62.2	68.4	68.9	76.7	56.6	65.3
11	70.0	70.7	71.0	69.8	71.0	74.4	83.5	88.1	89.7	91.1	91.8	90.0	90.7	89.4	88.5	91.0	89.9	92.1	93.2	93.0	93.4	91.9	90.8	89.8	93.4	69.8	85.6
12	87.6	85.7	85.3	79.5	69.4	60.1	34.4	38.3	34.0	32.5	51.4	44.1	54.3	51.2	60.7	68.8	68.1	71.3	65.9	67.3	63.5	69.5	63.4	65.1	87.6	32.5	61.3
13	69.5	60.1	52.3	49.1	53.0	55.7	68.2	79.6	81.0	89.3	86.9	81.7	79.3	90.7	85.5	92.9	92.6	91.7	88.5	89.5	88.0	86.9	87.6	88.0	92.9	49.1	78.6
14	87.4	88.3	89.5	90.0	90.1	90.4	90.1	87.9	89.0	89.1	88.5	94.3	89.3	86.6	83.8	79.8	74.4	73.3	70.2	69.0	68.2	69.4	77.4	78.0	94.3	68.2	83.1
15	73.9	75.0	74.0	71.1	71.9	70.0	70.1	69.0	63.8	61.0	58.2	56.5	50.0	46.7	53.8	61.4	64.7	57.9	67.2	67.5	69.1	74.8	72.7	62.8	75.0	46.7	65.1
16	68.2	64.8	62.8	62.3	65.4	79.0	77.9	80.8	86.8	85.2	83.2	79.8	80.8	80.0	74.2	73.9	75.0	74.4	69.9	62.7	61.0	62.2	76.3	82.0	86.8	61.0	73.7
17	77.6	76.8	78.0	79.2	77.1	76.2	70.4	71.2	66.8	61.2	73.7	85.6	89.6	90.4	90.7	91.7	92.9	92.7	88.2	90.3	89.4	88.8	87.1	84.6	92.9	61.2	82.1
18	81.5	85.5	90.4	87.0	82.5	84.5	85.3	85.6	89.3	92.8	90.6	89.1	86.9	83.6	85.0	89.2	88.1	90.7	91.6	88.1	85.0	74.1	69.0	71.0	92.8	69.0	85.3
19	72.7	83.7	73.3	70.9	66.4	65.1	80.9	82.4	83.6	87.3	89.5	90.6	90.5	89.3	88.1	85.0	81.9	80.0	85.7	85.7	85.2	86.3	88.6	89.8	90.6	65.1	82.6
20	92.3	91.6	91.2	88.6	85.7	86.9	84.5	83.5	72.8	74.2	78.0	64.5	60.2	61.9	60.9	59.5	60.3	61.3	62.2	59.7	58.0	60.5	73.5	64.1	92.3	58.0	72.3
21	58.1	56.8	60.5	63.3	62.9	60.6	61.7	65.0	62.7	65.2	68.6	73.8	86.5	85.3	81.0	86.4	88.9	88.5	87.4	87.9	88.3	89.9	91.7	90.5	91.7	56.8	75.5
22	90.8	88.7	86.9	89.2	91.6	89.6	88.1	85.7	80.7	83.9	88.6	89.8	88.1	87.7	82.2	79.7	74.7	76.2	76.6	82.6	79.9	79.1	77.0	87.2	91.6	74.7	84.4
23	82.6	76.5	73.5	90.5	93.2	90.7	94.5	94.1	91.9	88.0	83.5	86.3	85.3	85.2	85.3	83.8	82.4	85.8	84.5	83.8	82.9	84.4	87.6	86.3	94.5	73.5	85.9
24	86.8	88.0	87.0	86.9	87.0	85.5	86.0	85.7	84.6	84.7	82.4	81.2	77.6	73.7	72.7	71.9	69.5	70.2	76.0	77.3	78.1	77.6	77.7	74.3	88.0	69.5	80.1
25	76.1	77.4	76.5	76.0	76.4	77.2	77.5	78.8	79.3	78.6	80.4	82.7	76.5	66.5	55.9	58.5	60.3	57.4	55.8	57.1	61.9	57.9	55.1	54.0	82.7	54.0	68.9
26	53.4	53.1	53.3	51.6	53.7	54.1	51.8	52.7	59.7	61.6	58.4	54.4	51.7	53.6	51.6	48.6	47.6	50.9	75.3	74.6	70.1	67.9	68.4	73.4	75.3	47.6	58.0
27	76.5	79.3	81.0	75.4	77.8	78.4	81.1	81.4	79.6	76.6	78.1	76.1	75.2	77.4	73.1	67.4	81.7	82.8	83.1	83.6	80.1	78.7	72.3	67.3	83.6	67.3	77.7
28	66.5	66.4	64.9	64.8	63.9	61.4	59.7	60.0	59.5	57.7	56.3	55.9	55.9	57.1	58.7	60.8	66.0	77.8	82.6	92.9	94.9	96.9	97.0	84.1	97.0	55.9	69.2
29	81.5	82.7	83.8	81.4	81.9	84.5	85.6	85.9	86.6	85.8	86.9	86.4	86.2	91.0	95.3	96.1	92.8	93.1	95.3	94.7	90.3	85.9	84.1	80.5	96.1	80.5	87.4
Max.	**92.3**	**91.6**	**91.2**	**90.5**	**93.2**	**90.7**	**94.5**	**94.1**	**91.9**	**92.8**	**91.8**	**94.3**	**90.7**	**91.0**	**95.3**	**96.1**	**92.9**	**93.1**	**95.3**	**94.7**	**94.9**	**96.9**	**97.0**	**90.5**	**97.0**		
Min.	**37.1**	**34.2**	**38.2**	**43.5**	**38.8**	**30.5**	**30.7**	**29.1**	**28.1**	**29.6**	**30.5**	**31.4**	**28.1**	**28.5**	**27.1**	**31.7**	**27.6**	32.8	33.5	**32.4**	**35.7**	**38.4**	**35.4**	**32.0**		**27.1**	
Avg.	**70.2**	**70.0**	**70.3**	**71.2**	**71.5**	**69.7**	**69.1**	**69.8**	**69.5**	**70.1**	**71.5**	**71.6**	**71.1**	**70.1**	**68.6**	**68.8**	**68.4**	**69.0**	**71.3**	**72.2**	**71.8**	**71.6**	**72.0**	**70.1**			**70.4**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	82.0	79.3	78.3	76.5	73.8	61.0	63.1	63.9	68.4	63.4	63.1	66.7	66.9	67.0	68.1	66.2	63.7	76.9	89.2	81.8	76.7	74.4	74.7	75.9	89.2	61.0	71.7
2	73.9	75.8	73.9	82.2	84.7	80.8	81.3	84.7	84.4	81.0	78.9	80.6	80.9	83.6	77.9	74.5	85.8	95.1	97.7	97.5	92.8	89.8	92.5	83.3	97.7	73.9	83.9
3	81.7	84.4	86.0	83.2	77.6	74.4	75.8	76.0	82.4	85.3	86.7	84.7	85.1	84.1	85.0	87.7	90.4	92.4	91.8	87.6	85.9	86.5	87.2	89.4	92.4	74.4	84.6
4	92.0	95.5	92.9	86.7	88.3	85.4	85.5	86.7	85.2	84.0	86.3	84.1	89.7	88.8	87.3	88.0	86.6	87.1	88.5	87.5	86.1	88.5	89.3	91.5	95.5	84.0	88.0
5	89.8	83.9	82.8	86.5	87.7	86.7	89.1	91.2	90.2	90.3	91.4	92.2	93.0	93.0	88.4	86.8	81.3	83.5	86.0	85.8	86.4	88.8	85.6	84.4	93.0	81.3	87.7
6	87.1	87.5	86.5	87.2	82.2	78.6	78.6	81.4	83.4	89.3	95.5	96.1	89.8	84.3	84.5	78.9	76.0	73.1	64.1	62.2	68.7	75.7	74.3	86.1	96.1	62.2	81.3
7	89.6	91.3	91.2	89.2	86.9	86.3	81.1	92.7	95.9	95.9	93.4	89.3	87.3	85.7	89.6	83.7	82.7	83.6	73.9	69.3	72.2	75.3	75.4	71.5	95.9	69.3	84.7
8	67.4	65.6	66.8	66.9	73.0	82.3	90.6	85.8	77.0	77.8	78.4	82.8	76.1	65.8	63.2	63.1	71.7	77.3	79.0	73.6	70.2	63.9	59.2	63.8	90.6	59.2	72.6
9	62.1	61.9	62.4	61.4	62.7	60.3	56.9	55.9	56.5	59.2	58.5	57.7	60.4	60.6	63.0	56.9	55.8	54.3	56.7	59.1	73.4	73.4	77.7	91.2	91.2	54.3	62.4
10	95.3	95.8	96.6	98.4	99.3	99.3	99.2	97.3	91.1	89.2	92.1	94.7	96.1	98.4	99.2	99.8	100.0	98.2	97.0	98.8	99.6	99.7	99.2	98.8	100.0	89.2	97.2
11	98.2	94.9	86.6	80.2	79.6	78.2	75.9	74.0	72.5	72.4	70.6	67.1	66.5	65.6	65.9	65.8	66.2	69.1	69.0	66.5	63.6	63.7	66.7	66.3	98.2	63.6	72.7
12	65.0	65.7	67.2	68.1	68.7	68.8	67.9	69.3	70.3	71.9	71.5	69.8	69.9	70.2	69.5	69.4	69.6	69.4	70.1	72.4	75.7	75.4	77.3	80.0	80.0	65.0	70.5
13	79.9	79.2	79.6	78.4	77.8	71.3	68.3	69.1	67.6	67.3	67.3	65.3	63.1	62.2	60.7	59.1	59.0	59.2	59.2	56.1	57.6	57.0	62.3	67.3	79.9	56.1	66.4
14	69.7	73.4	72.8	73.5	74.7	77.0	77.1	73.2	80.7	78.6	75.1	73.3	69.7	68.9	71.2	68.3	65.7	65.4	63.3	69.0	67.9	63.5	60.2	56.5	80.7	56.5	70.4
15	54.7	58.3	80.6	84.1	82.6	82.8	78.3	76.7	76.6	72.4	69.1	72.2	74.4	77.3	77.3	80.2	83.0	84.3	84.8	83.5	83.4	86.7	84.9	81.6	86.7	54.7	77.9
16	81.1	80.1	80.4	78.2	75.0	70.8	65.3	61.4	61.6	66.0	62.3	59.8	59.0	56.8	54.9	64.8	77.5	80.1	81.5	82.9	83.3	86.0	86.2	82.0	86.2	54.9	72.4
17	80.3	75.4	75.1	73.5	76.1	75.4	74.7	75.1	76.3	73.1	76.7	77.3	76.3	75.3	74.8	71.6	69.6	69.9	74.2	71.5	65.6	62.7	62.6	61.7	80.3	61.7	72.7
18	61.6	61.2	62.4	61.6	62.9	63.7	62.4	63.2	62.0	63.1	61.1	60.5	60.0	60.5	60.1	60.1	60.3	60.4	60.8	59.6	59.7	60.3	59.5	59.5	63.7	59.5	61.1
19	59.2	59.4	60.3	60.8	61.6	61.7	61.2	62.1	61.9	60.3	61.2	61.7	59.0	58.3	57.7	59.8	62.2	62.6	63.3	64.7	64.1	64.9	64.6	69.0	69.0	57.7	61.7
20	74.6	72.9	78.5	83.2	82.3	81.6	87.5	86.4	87.7	87.3	86.4	81.2	81.5	80.4	81.3	80.7	81.2	78.2	77.8	76.0	86.0	91.8	91.8	90.9	91.8	72.9	82.8
21	90.4	88.9	93.0	91.9	93.2	95.1	96.2	94.9	86.2	67.6	59.1	54.4	49.2	45.9	43.6	43.3	36.4	36.5	35.9	35.5	34.2	34.2	36.5	36.6	96.2	34.2	61.6
22	35.6	38.0	39.5	45.6	45.8	42.1	50.1	55.7	53.3	63.7	71.8	71.0	65.0	61.4	57.5	60.2	60.2	58.8	63.0	65.7	67.0	66.0	72.9	76.8	76.8	35.6	57.8
23	76.7	74.9	74.2	75.4	75.8	76.0	77.5	79.2	76.4	68.7	65.6	68.4	63.3	56.0	50.4	48.9	50.6	51.2	52.5	51.3	50.0	50.3	58.9	65.2	79.2	48.9	64.1
24	70.3	63.5	76.9	87.8	94.3	95.2	93.5	87.6	86.3	83.7	80.7	78.1	76.7	71.9	67.2	72.0	76.2	81.9	78.8	76.9	77.7	82.1	93.7	91.8	95.2	63.5	81.0
25	93.1	90.9	91.3	85.3	90.9	88.7	86.6	84.2	84.2	78.8	75.2	67.2	70.0	72.9	73.1	71.7	66.2	69.0	71.6	70.7	72.0	73.5	73.1	72.8	93.1	66.2	78.0
26	74.1	74.9	75.1	74.7	77.0	77.9	77.7	79.5	80.6	80.2	77.8	72.9	66.7	61.9	57.8	58.3	56.2	54.4	54.9	49.4	49.2	48.7	51.2	51.5	80.6	48.7	65.9
27	52.1	52.4	53.8	54.3	55.7	58.3	60.4	59.4	58.6	55.8	54.5	55.2	56.0	56.3	58.3	61.2	63.2	64.3	63.4	62.2	61.8	60.8	59.1	57.7	64.3	52.1	58.1
28	56.5	55.8	56.4	63.8	70.9	72.3	75.4	75.2	77.2	78.2	77.1	73.5	65.2	64.7	64.1	62.8	64.5	64.5	65.4	65.9	68.7	71.1	74.5	72.1	78.2	55.8	68.1
29	77.8	73.1	74.7	78.4	82.6	78.3	76.4	79.8	80.1	80.8	83.5	73.3	80.3	84.7	82.6	74.8	77.2	84.5	87.2	89.9	91.4	91.3	92.0	92.5	92.5	73.1	82.0
30	91.7	89.3	89.1	91.4	89.9	90.1	90.1	90.6	87.5	84.4	86.7	87.3	87.8	85.9	86.5	81.8	87.2	85.0	84.8	85.6	87.0	88.3	88.8	88.3	91.7	81.8	87.7
31	86.6	85.9	85.2	84.3	86.4	93.9	91.8	92.5	93.5	90.4	89.5	89.9	82.1	86.6	85.7	83.8	79.3	85.2	89.4	87.7	83.9	82.0	80.7	81.8	93.9	79.3	86.6
Max.	**98.2**	**95.8**	**96.6**	**98.4**	**99.3**	**99.3**	**99.2**	**97.3**	**95.9**	**95.9**	**95.5**	**96.1**	**96.1**	**98.4**	**99.2**	**99.8**	**100.0**	**98.2**	**97.7**	**98.8**	**99.6**	**99.7**	**99.2**	**98.8**	**100.0**		
Min.	**35.6**	**38.0**	**39.5**	**45.6**	**45.8**	**42.1**	**50.1**	**55.7**	**53.3**	**55.8**	**54.5**	**54.4**	**49.2**	**45.9**	**43.6**	**43.3**	**36.4**	36.5	35.9	**35.5**	**34.2**	**34.2**	**36.5**	**36.6**		**34.2**	
Avg.	**75.8**	**75.1**	**76.4**	**77.2**	**78.1**	**77.2**	**77.3**	**77.6**	**77.3**	**76.1**	**75.7**	**74.5**	**73.1**	**72.1**	**71.2**	**70.5**	**71.1**	**72.8**	**73.4**	**72.5**	**73.0**	**73.4**	**74.6**	**75.4**			**74.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	81.3	81.5	83.2	85.2	86.5	85.7	87.2	88.9	89.5	89.0	89.6	91.0	91.1	91.5	89.5	89.6	89.1	90.0	91.3	93.7	91.2	90.1	92.0	91.6	93.7	81.3	88.7
2	90.9	91.8	96.1	97.2	94.7	92.7	91.8	89.9	86.7	85.4	88.0	81.4	81.5	81.6	78.2	77.9	80.1	87.4	92.4	96.4	96.5	93.0	93.5	91.8	97.2	77.9	89.0
3	93.3	93.0	93.6	94.8	95.4	94.1	88.7	85.1	86.1	86.5	87.4	82.0	86.7	89.3	87.7	88.0	87.2	86.9	85.1	84.4	85.5	87.0	88.6	89.8	95.4	82.0	88.6
4	89.0	88.6	86.2	86.9	86.9	88.5	87.3	89.3	89.8	87.9	85.6	88.4	89.7	91.3	90.0	89.8	89.6	91.6	91.5	94.7	96.4	98.3	84.7	74.6	98.3	74.6	89.0
5	78.6	74.7	72.8	73.4	76.0	79.0	79.6	75.4	70.2	66.3	63.9	60.7	57.4	55.2	57.4	58.5	55.6	52.4	48.3	43.9	45.6	47.3	52.2	54.1	79.6	43.9	62.4
6	54.6	54.8	54.2	54.9	53.0	48.8	48.1	44.2	44.2	40.1	42.8	43.4	41.2	40.4	42.6	43.6	42.8	42.2	44.1	41.6	40.4	38.1	38.6	40.6	54.9	38.1	45.0
7	46.8	59.4	59.7	64.2	65.2	64.0	61.5	61.6	58.7	58.8	58.2	53.2	43.5	41.4	41.2	40.2	40.4	41.8	42.1	40.8	38.9	38.3	40.3	51.3	65.2	38.3	50.5
8	55.4	62.7	66.4	65.9	66.8	67.6	69.4	69.6	68.4	67.7	60.3	51.5	49.5	60.8	66.1	65.7	64.0	67.1	68.5	69.5	73.8	76.7	73.8	71.5	76.7	49.5	65.8
9	62.3	61.2	65.5	66.5	70.8	66.4	66.1	66.4	65.0	61.8	60.5	61.7	63.2	62.2	61.7	58.2	51.6	53.9	52.9	53.6	53.3	54.3	55.0	55.5	70.8	51.6	60.4
10	52.1	47.3	45.3	47.1	48.1	46.8	42.3	43.0	46.5	45.3	44.0	42.9	42.5	45.1	44.5	43.7	44.9	45.1	46.6	44.6	44.3	43.3	43.8	43.7	52.1	42.3	45.1
11	43.7	43.7	41.2	41.4	41.1	40.1	41.5	41.1	41.0	42.7	43.3	43.2	45.7	45.1	45.3	47.4	46.9	47.2	45.0	44.4	44.6	45.0	42.1	42.4	47.4	40.1	43.5
12	41.9	40.2	40.2	39.4	40.7	40.8	41.3	39.2	38.8	36.7	37.3	39.3	39.5	41.4	41.9	40.5	40.1	40.8	41.9	41.0	37.9	35.2	33.3	31.5	41.9	31.5	39.2
13	33.5	37.5	43.1	46.9	58.5	62.5	67.0	68.5	75.4	76.2	81.8	93.0	97.2	98.4	98.8	98.8	97.1	91.1	79.2	75.7	79.0	76.1	74.0	71.7	98.8	33.5	74.2
14	73.9	74.1	70.9	70.2	70.5	71.5	72.5	75.1	75.1	71.6	71.6	74.5	72.7	71.1	68.7	66.4	64.3	63.6	64.6	68.5	67.9	66.2	70.1	69.2	75.1	63.6	70.2
15	70.7	69.5	69.6	64.7	70.1	80.4	83.4	81.8	74.7	93.9	97.7	98.8	99.4	99.1	82.4	65.0	63.3	62.7	61.7	59.5	57.3	48.3	46.9	45.5	99.4	45.5	72.8
16	42.1	37.6	40.9	40.9	35.9	42.4	44.5	44.8	44.9	47.2	46.9	46.2	47.2	50.8	48.2	44.3	44.6	45.3	48.2	50.9	54.7	56.5	57.4	59.4	59.4	35.9	46.7
17	61.2	59.6	60.6	61.6	60.5	60.6	61.6	60.0	57.6	55.8	56.8	61.0	60.2	61.3	66.0	64.9	62.4	59.4	60.5	58.1	52.6	50.9	45.4	41.4	66.0	41.4	58.3
18	61.2	59.9	66.0	66.4	65.6	78.4	78.9	75.0	74.9	70.4	71.5	76.6	73.4	68.7	69.9	66.0	63.1	67.5	69.8	68.6	65.8	65.1	63.2	65.0	78.9	59.9	68.8
19	57.4	57.2	65.9	64.7	69.0	63.9	62.2	72.0	72.1	66.2	66.7	64.5	68.7	70.5	68.2	70.3	68.3	68.4	60.0	58.9	64.9	74.7	73.9	76.1	76.1	57.2	66.9
20	67.6	69.6	66.4	67.0	78.3	77.6	81.6	75.8	74.4	76.3	79.1	84.2	83.8	79.6	78.9	81.9	85.6	88.0	88.7	88.3	87.6	87.3	86.8	85.8	88.7	66.4	80.0
21	86.3	86.0	84.7	85.2	86.1	85.4	86.0	83.7	82.5	80.1	78.9	75.6	73.9	74.0	76.3	78.4	77.8	75.6	79.4	80.7	79.3	81.3	82.2	81.7	86.3	73.9	80.9
22	83.1	88.1	90.3	91.4	92.9	86.5	87.4	89.8	89.3	85.6	82.2	84.0	82.5	85.0	86.8	84.4	84.7	85.0	87.1	82.0	81.0	79.5	83.9	79.0	92.9	79.0	85.5
23	80.3	81.5	77.3	74.4	65.6	70.3	73.7	76.3	73.2	69.6	71.2	66.7	59.1	62.8	56.5	46.8	53.1	63.1	61.9	56.7	53.6	55.8	55.5	42.0	81.5	42.0	64.5
24	40.0	45.5	50.8	51.7	53.4	53.6	51.9	47.7	43.2	44.5	51.4	47.3	47.0	50.9	57.4	62.2	62.0	59.6	55.1	64.7	65.8	68.2	68.6	66.9	68.6	40.0	54.5
25	64.6	67.9	70.8	68.0	64.4	67.5	65.8	68.5	67.2	59.6	54.1	54.7	52.2	47.2	40.9	42.2	43.7	43.6	44.4	47.1	47.9	46.4	46.0	46.1	70.8	40.9	55.0
26	47.2	58.6	61.8	64.3	64.1	65.8	59.8	60.5	68.6	86.1	84.9	89.9	92.9	95.5	96.6	95.8	95.6	96.9	96.8	96.7	93.2	85.7	89.0	89.8	96.9	47.2	80.7
27	89.3	79.0	69.1	69.5	78.3	84.7	85.5	92.1	90.6	81.6	86.8	95.3	94.8	96.3	86.5	83.7	82.7	86.6	82.6	85.0	82.9	79.3	79.7	79.5	96.3	69.1	84.2
28	79.6	78.3	75.4	74.6	75.8	78.0	76.8	74.9	72.1	65.7	62.7	63.2	64.6	60.2	58.3	56.6	56.6	57.2	56.9	56.2	55.8	53.7	52.7	53.2	79.6	52.7	65.0
29	54.3	54.1	52.7	54.5	54.4	54.2	56.6	60.0	67.3	63.0	61.5	61.9	62.4	61.6	58.8	58.5	58.5	57.9	59.9	60.2	62.7	68.0	73.4	74.9	74.9	52.7	60.5
30	75.4	77.4	79.0	79.9	80.6	80.7	81.3	80.7	75.8	73.9	72.8	67.3	64.6	66.5	68.4	72.6	73.8	68.6	64.5	65.3	68.1	66.5	69.9	75.1	81.3	64.5	72.9
Max.	**93.3**	**93.0**	**96.1**	**97.2**	**95.4**	**94.1**	**91.8**	**92.1**	**90.6**	**93.9**	**97.7**	**98.8**	**99.4**	**99.1**	**98.8**	**98.8**	**97.1**	**96.9**	**96.8**	**96.7**	**96.5**	**98.3**	**93.5**	**91.8**	**99.4**		
Min.	**33.5**	**37.5**	**40.2**	**39.4**	**35.9**	**40.1**	**41.3**	**39.2**	**38.8**	**36.7**	**37.3**	**39.3**	**39.5**	**40.4**	**40.9**	**40.2**	**40.1**	40.8	41.9	**40.8**	**37.9**	**35.2**	**33.3**	**31.5**		**31.5**	
Avg.	**65.2**	**66.0**	**66.6**	**67.1**	**68.3**	**69.3**	**69.4**	**69.4**	**68.8**	**67.8**	**68.0**	**68.1**	**67.6**	**68.2**	**67.1**	**66.1**	**65.7**	**66.2**	**65.7**	**65.7**	**65.6**	**65.2**	**65.2**	**64.7**			**67.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	78.0	77.4	80.9	78.4	75.6	76.4	76.0	76.3	75.5	74.9	68.6	67.3	67.1	64.5	64.6	54.5	51.1	49.6	48.8	47.8	52.2	54.1	63.0	65.7	80.9	47.8	66.2
2	78.6	90.0	92.4	87.0	87.3	91.8	92.5	91.1	91.5	90.0	90.1	86.4	88.0	86.4	85.1	87.8	87.2	88.4	86.1	81.4	85.0	89.4	93.2	91.9	93.2	78.6	88.3
3	94.5	93.2	92.8	93.2	87.3	87.3	92.0	89.3	85.2	69.8	56.8	54.6	56.1	51.7	51.9	55.0	59.6	58.4	54.2	56.2	77.1	85.4	86.6	84.3	94.5	51.7	73.9
4	82.8	76.1	77.4	84.9	84.9	84.8	80.7	74.0	70.7	69.4	71.0	69.3	69.8	66.6	64.5	59.8	52.6	52.5	53.6	53.7	55.3	56.7	61.0	64.6	84.9	52.5	68.2
5	67.5	69.8	72.3	71.3	70.0	71.2	72.8	73.9	72.5	72.3	69.6	71.7	68.9	66.8	69.8	74.4	72.1	66.0	66.9	67.8	81.4	86.8	89.6	88.9	89.6	66.0	73.1
6	78.2	74.9	70.7	67.1	77.1	75.2	78.8	88.3	84.7	88.5	86.4	84.2	84.9	87.2	75.2	70.6	71.8	72.3	74.6	80.4	79.3	79.7	73.6	76.1	88.5	67.1	78.3
7	72.7	71.1	65.8	63.7	58.5	64.7	67.6	66.0	61.5	61.1	68.9	65.9	65.1	64.8	64.9	65.7	63.0	60.4	57.2	53.6	59.9	72.1	77.1	82.9	82.9	53.6	65.6
8	85.4	85.2	86.4	85.2	80.4	75.3	73.1	72.7	71.6	74.0	80.0	78.2	75.6	74.5	77.9	73.0	71.8	70.7	71.2	72.0	74.4	70.3	65.3	69.3	86.4	65.3	75.6
9	73.8	75.7	79.4	80.8	80.4	82.9	82.1	81.2	79.2	75.7	76.0	78.7	77.0	69.3	65.2	62.2	68.4	64.0	64.6	78.8	79.5	88.2	90.4	90.6	90.6	62.2	76.8
10	90.7	88.8	89.6	89.5	89.7	92.4	90.9	89.0	87.5	85.6	81.8	77.3	75.0	75.0	71.9	72.9	80.1	86.6	87.2	91.0	85.1	69.0	81.9	83.8	92.4	69.0	83.8
11	74.6	69.6	59.5	59.8	72.7	71.4	68.3	66.8	63.0	75.6	68.3	67.2	70.1	63.9	55.6	55.3	57.7	56.4	57.1	56.2	60.3	69.8	74.1	75.4	75.6	55.3	65.4
12	80.0	81.0	80.2	80.8	83.1	84.4	84.7	85.2	86.5	86.0	85.6	83.0	79.7	76.0	78.5	78.3	79.1	82.7	84.7	84.1	83.9	83.4	86.3	86.5	86.5	76.0	82.7
13	87.1	85.9	86.8	89.3	89.6	88.7	89.7	89.9	89.8	89.4	86.3	83.4	87.7	85.8	84.9	82.6	82.6	78.2	81.6	77.6	69.6	88.3	79.7	78.6	89.9	69.6	84.7
14	80.5	72.6	66.4	63.2	64.1	60.3	58.6	60.1	62.0	59.1	57.6	58.9	69.1	64.5	51.3	49.7	48.0	45.9	49.0	60.1	62.9	61.4	61.8	64.3	80.5	45.9	60.5
15	74.1	80.8	83.8	84.0	69.3	71.6	76.4	88.2	91.2	91.8	92.1	91.2	90.7	87.5	85.4	81.0	77.5	78.3	83.2	89.6	92.6	91.9	91.9	92.3	92.6	69.3	84.8
16	90.2	85.4	83.2	81.2	83.6	81.8	85.6	90.3	88.1	86.8	82.0	78.5	77.2	71.2	73.7	76.5	77.4	75.5	75.3	76.8	76.8	78.8	80.6	79.0	90.3	71.2	80.6
17	83.5	85.8	88.7	83.6	74.5	74.7	76.2	74.0	71.5	71.0	61.6	63.1	74.7	74.6	72.4	75.9	77.5	78.0	79.1	79.9	79.8	78.2	75.6	59.9	88.7	59.9	75.6
18	68.9	73.8	79.1	78.8	79.9	82.5	92.0	93.4	91.8	92.2	89.9	92.5	93.0	92.3	92.4	88.7	84.0	83.2	86.3	83.7	78.5	78.5	81.8	81.5	93.4	68.9	84.9
19	80.2	84.2	85.7	85.2	87.0	88.6	91.0	88.7	84.4	80.1	72.8	70.4	79.6	79.8	68.0	58.9	51.4	45.8	48.2	50.3	49.8	48.3	46.0	45.6	91.0	45.6	69.6
20	46.7	50.4	61.6	67.0	69.5	69.5	68.0	66.1	64.3	61.9	57.4	55.6	57.7	59.8	73.9	73.8	74.4	71.1	68.5	66.3	66.2	72.5	68.1	63.1	74.4	46.7	64.7
21	70.0	73.3	83.3	84.5	84.0	85.8	81.8	77.4	70.0	78.0	76.5	73.7	72.4	65.2	67.1	69.9	76.5	81.5	78.4	80.6	90.4	84.6	70.9	59.8	90.4	59.8	76.5
22	61.3	59.8	58.2	60.2	61.1	61.2	59.0	62.5	69.1	66.2	62.2	61.1	71.3	72.3	69.8	70.2	62.0	61.1	66.4	65.2	67.1	71.1	76.9	75.0	76.9	58.2	65.4
23	80.3	83.0	83.6	84.5	87.3	89.3	90.5	87.3	85.7	87.7	87.0	78.0	70.1	70.3	71.7	72.0	77.7	82.1	84.8	85.7	84.5	81.6	80.5	78.4	90.5	70.1	81.8
24	77.4	78.2	79.1	78.7	80.4	80.7	81.4	83.4	82.3	80.5	82.3	87.0	92.0	90.1	89.2	91.7	91.9	90.4	91.5	89.7	85.6	77.5	75.9	82.1	92.0	75.9	84.1
25	84.1	86.9	87.5	89.5	87.4	85.3	90.9	88.3	83.8	77.7	72.6	72.6	70.7	69.4	65.9	68.5	67.0	65.6	69.7	70.1	66.4	70.4	76.1	68.4	90.9	65.6	76.5
26	67.1	60.9	63.6	63.5	67.4	67.1	66.4	61.9	59.5	60.4	60.8	56.2	53.5	49.8	51.6	51.1	53.3	55.8	59.6	61.2	62.6	64.1	61.7	63.9	67.4	49.8	60.1
27	64.6	66.4	67.7	65.3	60.8	60.5	58.2	52.6	53.8	49.7	51.7	48.3	44.0	43.2	44.8	45.5	44.1	42.9	42.8	44.1	43.3	41.1	42.8	42.3	67.7	41.1	50.9
28	44.3	50.3	53.3	56.9	55.4	55.9	48.4	41.6	40.9	41.8	41.1	41.1	35.6	36.7	37.0	38.6	41.7	38.5	40.6	40.2	38.5	39.4	41.7	42.8	56.9	35.6	43.4
29	42.9	45.2	48.0	56.1	50.0	46.7	53.8	62.7	61.2	61.3	63.0	71.8	73.8	73.1	64.9	63.0	63.3	67.4	67.7	71.1	78.5	83.1	85.3	75.4	85.3	42.9	63.7
30	74.8	78.6	72.7	71.3	70.8	74.7	79.1	79.6	76.1	71.3	68.8	71.4	66.2	55.6	69.4	77.4	86.8	87.2	74.9	76.5	79.0	82.9	84.5	85.8	87.2	55.6	75.6
31	85.0	85.1	86.7	89.3	92.1	93.6	92.9	94.5	94.4	94.4	94.8	95.0	94.1	93.0	94.1	95.1	96.0	95.6	96.3	96.5	96.6	95.5	94.9	95.1	96.6	85.0	93.4
Max.	**94.5**	**93.2**	**92.8**	**93.2**	**92.1**	**93.6**	**92.9**	**94.5**	**94.4**	**94.4**	**94.8**	**95.0**	**94.1**	**93.0**	**94.1**	**95.1**	**96.0**	**95.6**	**96.3**	**96.5**	**96.6**	**95.5**	**94.9**	**95.1**	**96.6**		
Min.	**42.9**	**45.2**	**48.0**	**56.1**	**50.0**	**46.7**	**48.4**	**41.6**	**40.9**	**41.8**	**41.1**	**41.1**	**35.6**	**36.7**	**37.0**	**38.6**	**41.7**	38.5	40.6	**40.2**	**38.5**	**39.4**	**41.7**	**42.3**		**35.6**	
Avg.	**74.8**	**75.5**	**76.3**	**76.6**	**76.2**	**76.6**	**77.4**	**77.3**	**75.8**	**75.0**	**73.0**	**72.0**	**72.6**	**70.3**	**69.4**	**69.0**	**69.3**	**68.8**	**69.4**	**70.6**	**72.3**	**74.0**	**74.8**	**74.0**			**73.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	96.2	91.5	84.7	86.4	85.5	82.6	80.6	81.3	75.0	71.3	68.1	70.5	73.1	65.6	68.4	64.4	64.7	73.0	75.0	75.8	78.1	78.6	81.0	79.4	96.2	64.4	77.1
2	72.6	70.9	69.2	69.3	71.4	73.5	71.0	69.3	67.6	68.0	65.4	61.9	64.7	65.5	62.3	62.2	62.4	67.1	63.7	65.0	65.4	70.2	70.9	61.6	73.5	61.6	67.1
3	66.6	64.4	64.9	68.3	64.7	64.5	67.8	64.7	60.3	57.9	57.7	56.5	69.1	80.7	84.5	85.4	86.7	85.6	85.4	88.6	87.0	88.5	93.1	93.4	93.4	56.5	74.4
4	93.7	95.1	94.1	93.2	92.8	95.1	95.8	94.5	85.9	86.8	77.0	86.5	89.9	88.0	85.4	80.4	79.9	77.5	73.8	84.9	84.7	84.7	89.0	87.3	95.8	73.8	87.3
5	84.9	83.4	86.1	89.8	90.2	89.8	86.1	83.8	81.1	80.7	82.1	86.2	85.6	86.1	86.5	90.1	89.3	86.4	85.0	85.7	84.7	84.1	80.5	82.7	90.2	80.5	85.5
6	83.1	87.4	78.7	88.7	89.9	88.6	87.2	87.0	82.2	79.0	72.2	68.3	65.9	55.9	52.8	48.5	44.3	52.2	64.3	67.9	53.4	58.0	54.7	61.1	89.9	44.3	69.6
7	67.2	70.2	72.4	68.9	64.2	61.2	59.0	58.4	63.1	64.1	64.3	62.0	59.6	60.5	59.5	64.6	81.8	89.4	89.5	91.0	91.3	90.4	88.6	89.1	91.3	58.4	72.1
8	90.9	92.4	93.1	93.7	93.6	93.9	93.7	93.5	89.8	83.6	79.6	72.4	56.9	55.6	68.8	68.4	79.2	53.4	41.4	45.4	44.3	47.4	48.1	47.9	93.9	41.4	72.0
9	48.2	53.3	57.4	64.6	68.0	68.7	68.7	71.3	67.0	63.8	60.2	59.5	57.7	54.4	52.6	51.2	50.5	50.9	53.3	55.7	56.4	56.6	57.4	58.0	71.3	48.2	58.5
10	57.9	58.2	61.8	65.3	67.3	69.1	70.7	75.1	73.4	70.7	69.3	69.1	67.8	72.1	70.8	71.1	71.9	77.1	80.8	81.2	83.2	82.8	83.7	80.7	83.7	57.9	72.1
11	75.3	77.8	84.9	90.1	90.8	91.5	91.3	91.9	91.1	89.8	84.9	93.0	90.5	89.6	88.9	89.1	90.5	89.6	90.0	88.6	89.5	91.4	91.1	91.7	93.0	75.3	88.9
12	86.5	69.8	69.0	67.6	68.8	68.6	68.7	68.0	68.8	66.7	65.1	65.5	64.4	61.6	62.2	60.4	61.2	66.7	74.1	71.4	73.9	70.5	65.3	67.4	86.5	60.4	68.0
13	66.9	67.3	67.4	68.4	80.8	88.4	91.5	91.7	92.6	88.0	82.3	79.7	77.5	76.4	72.1	70.9	66.8	66.2	73.0	80.4	85.2	87.0	86.6	88.3	92.6	66.2	79.0
14	89.0	89.1	88.1	91.3	90.1	83.7	81.7	89.7	88.7	90.0	88.5	83.3	80.9	84.5	86.1	86.7	86.4	87.4	87.9	88.8	89.8	90.6	91.7	91.6	91.7	80.9	87.7
15	89.7	90.3	92.9	93.5	92.4	91.7	85.1	86.4	84.9	83.0	80.6	79.3	78.5	85.9	85.5	85.2	84.5	84.7	85.1	70.0	66.7	66.0	66.7	70.6	93.5	66.0	82.5
16	71.9	70.1	69.4	70.3	71.3	73.7	77.7	79.2	77.3	74.2	85.4	87.9	89.7	88.5	83.1	81.5	76.3	80.7	81.6	87.0	89.0	91.4	90.5	87.5	91.4	69.4	80.6
17	89.5	91.8	94.7	94.7	94.5	95.2	93.5	89.3	90.0	92.7	93.1	94.5	94.6	94.1	94.9	96.2	95.2	92.1	93.3	94.9	93.6	92.6	93.3	97.5	97.5	89.3	93.6
18	98.2	98.4	98.5	98.6	98.7	98.8	98.9	99.0	99.0	99.0	98.8	98.4	96.7	94.0	85.5	87.0	85.9	83.9	81.1	85.3	90.1	91.1	93.2	94.3	99.0	81.1	93.9
19	93.6	94.4	95.4	95.9	96.1	96.6	95.7	88.6	76.0	89.1	87.9	84.5	82.5	84.1	85.9	86.6	84.2	82.3	85.2	84.2	80.1	83.8	86.4	87.6	96.6	76.0	87.8
20	89.0	92.5	93.0	93.0	93.0	94.5	91.3	87.4	87.5	83.7	87.6	81.7	73.4	74.2	79.6	78.9	78.1	76.1	75.6	75.5	78.1	79.7	79.6	79.8	94.5	73.4	83.4
21	80.4	81.4	83.2	81.6	85.8	84.2	86.7	87.6	85.1	83.6	83.6	82.2	81.3	80.8	81.6	85.8	86.8	85.3	86.0	90.0	89.6	87.9	89.5	93.1	93.1	80.4	85.1
22	92.0	86.4	87.7	89.8	90.7	91.0	92.8	89.3	88.5	83.5	81.3	85.6	87.4	90.8	89.5	88.0	90.2	89.6	86.9	83.3	83.7	84.2	82.1	82.6	92.8	81.3	87.4
23	84.8	81.1	85.0	85.7	83.7	88.6	87.5	85.4	80.8	77.2	66.2	69.7	75.2	75.4	75.3	76.6	70.5	78.1	76.6	72.5	73.9	79.1	81.0	74.7	88.6	66.2	78.5
24	77.1	80.5	80.1	81.4	83.5	83.4	82.3	79.2	77.6	77.8	79.1	79.9	83.2	84.1	90.8	90.6	90.8	90.6	88.9	86.7	86.5	78.1	76.5	75.8	90.8	75.8	82.7
25	73.1	75.5	80.6	89.7	88.7	77.9	76.7	80.0	80.0	77.0	68.9	64.0	64.4	58.9	53.8	52.6	51.0	55.3	58.4	61.3	65.3	65.4	77.1	84.9	89.7	51.0	70.0
26	84.6	82.0	81.7	81.9	80.5	81.1	83.1	83.6	82.3	82.0	80.5	81.3	79.7	72.4	65.7	63.0	60.1	56.8	54.7	55.6	55.9	55.7	54.5	55.0	84.6	54.5	71.4
27	55.9	59.0	64.6	82.2	86.1	89.4	90.2	90.8	93.1	93.7	93.4	90.1	85.8	87.4	83.7	79.5	76.2	81.3	84.1	85.0	78.7	76.5	73.2	80.1	93.7	55.9	81.7
28	83.9	84.5	83.5	87.9	88.7	90.8	89.8	80.5	73.7	72.5	70.0	67.3	63.5	60.9	60.7	78.7	83.7	85.0	84.1	87.1	83.7	79.7	82.8	80.5	90.8	60.7	79.3
29	86.5	88.4	85.7	85.8	85.5	85.1	85.0	85.6	88.3	87.0	89.1	87.2	88.9	92.0	89.0	86.3	82.9	83.5	86.4	87.1	83.5	81.7	80.5	76.4	92.0	76.4	85.7
30	74.8	76.9	83.6	88.9	90.4	90.1	87.6	84.4	80.5	82.6	83.8	85.8	83.7	82.6	82.1	81.4	79.1	77.7	76.1	82.6	84.2	81.5	81.2	88.5	90.4	74.8	82.9
Max.	**98.2**	**98.4**	**98.5**	**98.6**	**98.7**	**98.8**	**98.9**	**99.0**	**99.0**	**99.0**	**98.8**	**98.4**	**96.7**	**94.1**	**94.9**	**96.2**	**95.2**	**92.1**	**93.3**	**94.9**	**93.6**	**92.6**	**93.3**	**97.5**	**99.0**		
Min.	**48.2**	**53.3**	**57.4**	**64.6**	**64.2**	**61.2**	**59.0**	**58.4**	**60.3**	**57.9**	**57.7**	**56.5**	**56.9**	**54.4**	**52.6**	**48.5**	**44.3**	50.9	41.4	**45.4**	**44.3**	**47.4**	**48.1**	**47.9**		**41.4**	
Avg.	**80.1**	**80.1**	**81.0**	**83.5**	**84.3**	**84.4**	**83.9**	**83.2**	**81.0**	**80.0**	**78.2**	**77.8**	**77.1**	**76.8**	**76.2**	**76.4**	**76.4**	**76.8**	**77.4**	**78.6**	**78.3**	**78.5**	**79.0**	**79.6**			**79.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	85.0	88.0	88.0	88.2	88.3	89.6	86.5	82.6	83.3	85.9	76.4	67.4	74.5	79.6	80.4	62.3	64.3	58.7	58.6	60.9	72.9	77.5	81.1	79.8	89.6	58.6	77.5
2	76.8	77.5	80.6	81.1	79.5	77.3	79.1	71.0	68.6	73.8	75.8	72.0	61.7	59.9	62.5	66.1	67.9	60.9	59.7	57.5	63.5	62.2	65.1	73.4	81.1	57.5	69.7
3	81.8	83.3	75.0	67.4	52.9	63.8	59.7	63.4	78.9	84.8	83.1	82.1	78.7	73.5	77.2	81.7	85.7	85.3	84.7	84.5	89.1	89.6	87.6	91.2	91.2	52.9	78.5
4	94.1	96.0	97.3	97.8	98.0	98.1	97.2	94.9	92.9	95.7	97.2	97.2	96.2	96.2	95.0	93.5	94.0	94.7	94.1	94.2	96.3	95.7	95.9	96.2	98.1	92.9	95.8
5	96.5	97.2	97.6	97.9	98.0	98.2	98.5	98.7	98.6	97.5	94.3	93.1	91.4	90.4	89.6	88.2	88.5	86.2	87.0	89.3	89.1	87.6	92.3	94.3	98.7	86.2	93.3
6	92.1	93.9	94.1	95.5	95.3	93.6	95.1	91.8	90.8	89.7	88.5	86.3	86.6	89.5	92.7	92.8	91.3	89.7	88.4	88.4	94.1	96.2	97.0	96.5	97.0	86.3	92.1
7	95.4	94.8	94.9	93.6	91.8	94.0	94.7	94.0	92.7	90.9	89.3	86.8	83.5	74.2	71.7	73.9	69.2	67.7	68.3	72.9	77.1	78.5	79.5	83.5	95.4	67.7	83.9
8	85.8	87.1	87.1	88.5	89.0	88.7	86.7	86.2	74.0	74.7	73.9	76.0	73.7	71.7	71.1	68.9	79.0	83.6	78.5	79.3	78.7	78.9	90.2	91.4	91.4	68.9	80.9
9	92.4	92.6	93.8	93.5	93.4	93.8	93.2	91.6	86.8	82.5	80.1	77.2	76.1	79.6	82.7	82.5	78.0	74.5	73.8	69.6	71.7	72.3	74.3	76.4	93.8	69.6	82.6
10	75.7	75.3	75.7	79.6	82.0	81.6	83.0	82.3	82.9	83.8	85.6	78.7	78.9	78.8	82.0	85.2	85.0	84.8	88.1	88.0	88.1	88.2	87.4	88.1	88.2	75.3	82.9
11	90.4	91.4	90.2	88.5	88.8	88.2	89.2	87.6	86.0	87.3	85.8	85.4	87.5	82.0	80.5	78.6	76.1	76.0	77.0	80.3	83.6	79.5	77.0	76.0	91.4	76.0	83.9
12	84.2	86.0	85.4	85.3	85.2	87.9	86.0	84.2	78.0	79.3	78.1	76.3	76.6	78.9		81.5		83.3	82.4	87.4	88.3	90.8	90.0	91.1	91.1	76.3	83.9
13	93.3	93.0	90.2	91.0	92.0	94.1	94.4	95.6	94.4	94.9	94.2	92.7	93.8	94.7	95.5	96.2	95.5	95.8	96.1	95.9	96.5	97.0	97.3	97.3	97.3	90.2	94.6
14	96.9	96.8	97.0	97.1	96.9	96.9	96.9	96.6	96.8	95.7	96.5	96.2	96.4	96.2	95.2	94.9	93.7	93.5	93.4	93.7	93.4	94.6	96.0	96.9	97.1	93.4	95.8
15	96.9	96.5	96.2	95.1	94.7	95.3	96.3	94.4	91.1	83.7	79.0	81.4	82.0	80.8	83.0	82.9	79.2	80.9	79.1	76.8	76.5	79.6	82.4	83.3	96.9	76.5	86.1
16	88.6	94.3	95.1	94.0	93.0	94.3	90.4	91.4	93.4	95.5	95.3	94.2	92.9	93.1	94.4	93.6	92.5	91.9	91.5	89.6	90.0	90.8	90.1	90.3	95.5	88.6	92.5
17	89.9	90.6	93.1	92.9	97.3	85.0	73.1	74.6	73.9	73.8	71.8	68.6	65.7	69.6	67.8	67.7	69.9	72.6	72.7	71.0	71.5	71.2	73.6	73.9	97.3	65.7	76.3
18	76.2	76.9	78.5	74.5	73.2	76.0	72.1	71.4	70.1	68.1	63.9	61.6	59.3	57.2	56.8	57.4	57.3	56.3	58.6	60.7	61.0	61.8	62.3	63.1	78.5	56.3	65.6
19	63.1	63.9	64.7	66.1	67.2	67.1	67.4	67.1	71.9	68.7	62.9	61.8	55.6	57.5	51.8	50.5	68.4	66.0	69.4	57.9	57.8	57.2	53.1	52.3	71.9	50.5	62.1
20	51.2	52.0	55.1	60.2	65.3	59.9	63.0	63.6	64.7	68.4	70.3	74.2	77.8	75.1	68.4	65.0	62.9	59.3	64.0	66.7	65.4	65.2	65.7	67.6	77.8	51.2	64.6
21	74.0	80.5	83.6	90.3	84.4	75.9	80.0	81.3	81.8	76.8	72.1	73.8	72.8	70.0	69.5	70.6	85.3	74.2	64.3	71.1	71.7	68.4	72.0	74.4	90.3	64.3	75.8
22	74.8	74.0	72.4	70.3	71.4	81.2	86.0	84.6	82.9	79.4	87.7	86.3	87.1	89.3	91.6	92.5	92.7	93.5	92.8	92.3	93.0	92.1	95.3	96.6	96.6	70.3	85.8
23	96.7	96.8	96.3	94.9	95.6	95.8	94.7	80.8	77.4	78.5	75.7	75.2	72.2	64.0	59.2	74.4	83.2	86.0	86.2	82.9	84.3	90.2	94.3	92.3	96.8	59.2	84.5
24	92.7	90.2	88.5	87.1	86.0	88.1	91.7	90.9	92.0	93.9	94.2	93.1	91.1	84.7	80.0	78.1	76.7	81.6	80.7	79.3	74.4	86.1	87.6	84.7	94.2	74.4	86.4
25	83.1	82.3	81.4	78.4	76.9	76.7	79.1	76.4	75.9	78.5	76.8	67.6	62.2	53.9	54.5	56.6	54.0	52.1	52.8	54.2	62.9	66.3	67.7	75.0	83.1	52.1	68.6
26	70.9	78.1	77.8	85.4	87.2	85.6	68.2	72.7	71.6	68.8	65.3	64.1	65.4	63.0	66.7	72.6	73.3	75.0	84.3	92.1	92.7	90.6	91.6	87.8	92.7	63.0	77.1
27	80.2	83.8	79.9	80.7	83.8	82.5	94.7	96.2	96.7	96.3	94.4	91.2	90.2	89.7	88.7	89.4	88.0	86.4	85.4	88.9	90.4	91.3	92.1	93.2	96.7	79.9	88.9
28	94.2	94.5	93.6	83.5	80.7	78.5	70.3	68.8	65.6	64.1	64.6	68.1	70.9	57.8	58.1	56.8	54.3	52.2	50.0	51.1	52.2	55.3	55.4	55.1	94.5	50.0	66.5
29	47.4	46.3	47.5	47.3	47.7	47.9	47.2	45.1	43.4	41.0	40.4	40.3	40.1	40.7	52.4	58.4	63.9	59.9	62.0	68.4	50.1	46.1	44.4	43.7	68.4	40.1	48.8
30	44.9	48.3	48.6	48.1	48.3	51.7	53.8	57.0	56.2	56.5	57.7	56.2	55.7	55.6	53.1	48.6	47.9	50.1	50.3	49.3	51.0	52.5	53.3	54.4	57.7	44.9	52.0
31	55.5	56.3	53.8	68.9	78.1	74.7	65.6	57.0	58.6	68.3	57.5	53.0	47.2	47.1	49.1	51.5	52.6	50.4	47.9	48.3	49.5	55.1	49.5	53.7	78.1	47.1	56.2
Max.	**96.9**	**97.2**	**97.6**	**97.9**	**98.0**	**98.2**	**98.5**	**98.7**	**98.6**	**97.5**	**97.2**	**97.2**	**96.4**	**96.2**	**95.5**	**96.2**	**95.5**	**95.8**	**96.1**	**95.9**	**96.5**	**97.0**	**97.3**	**97.3**	**98.7**		
Min.	**44.9**	**46.3**	**47.5**	**47.3**	**47.7**	**47.9**	**47.2**	**45.1**	**43.4**	**41.0**	**40.4**	**40.3**	**40.1**	**40.7**	**49.1**	**48.6**	**47.9**	50.1	47.9	**48.3**	**49.5**	**46.1**	**44.4**	**43.7**		**40.1**	
Avg.	**81.3**	**82.5**	**82.4**	**82.7**	**82.6**	**82.6**	**81.7**	**80.4**	**79.7**	**79.9**	**78.3**	**76.7**	**75.6**	**74.0**	**74.0**	**74.6**	**75.7**	**74.9**	**74.9**	**75.6**	**76.7**	**77.7**	**78.7**	**79.8**			**78.5**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	54.6	57.6	59.8	76.5	91.2	93.9	94.4	94.4	93.4	93.4	94.2	94.8	95.5	94.5	92.9	91.6	90.6	87.7	84.8	83.2	85.1	84.9	85.2	84.9	95.5	54.6	85.8
2	84.2	85.9	90.6	94.0	94.8	94.8	95.6	96.2	96.2	94.0	95.1	92.2	89.1	88.4	85.9	86.5	86.8	86.5	89.4	90.2	91.3	92.9	94.2	94.2	96.2	84.2	91.2
3	95.2	95.5	94.9	93.9	95.0	94.8	95.5	96.6	96.3	95.1	92.0	95.7	96.5	93.8	86.5	90.5	86.9	87.5	89.7	91.9	91.8	91.1	90.2	88.2	96.6	86.5	92.7
4	92.4	93.2	90.1	90.3	91.1	95.3	95.2	95.4	94.2	88.3	89.4	88.3	84.4	87.1	88.8	87.1	84.7	82.5	88.3	93.6	94.8	95.5	96.6	96.7	96.7	82.5	91.0
5	95.3	96.0	97.2	97.7	96.8	96.4	97.0	97.1	94.0	88.6	86.4	89.0	88.7	90.0	89.7	88.6	87.5	86.0	86.6	91.4	90.9	89.6	88.3	93.6	97.7	86.0	91.8
6	90.9	91.2	90.2	89.4	89.5	89.8	91.6	92.4	91.3	87.6	84.0	82.5	83.7	75.0	72.3	68.7	68.6	67.4	72.5	60.3	39.6	43.1	47.5	45.4	92.4	39.6	75.6
7	43.1	41.0	44.7	46.8	49.0	49.4	47.8	44.5	44.5	49.6	49.7	59.7	56.6	47.1	45.5	42.1	43.6	44.1	44.5	48.7	49.7	50.0	46.4	46.5	59.7	41.0	47.3
8	65.9	63.4	65.4	74.8	80.8	76.5	84.3	84.5	73.5	65.1	80.2	82.2	75.4	73.5	70.8	69.9	74.2	78.3	79.6	84.6	83.8	82.2	86.6	85.7	86.6	63.4	76.7
9	84.9	90.0	90.4	93.1	94.3	92.9	92.6	89.8	85.8	83.3	73.2	72.4	74.5	75.0	73.5	72.8	70.2	70.6	78.6	84.2	87.8	87.6	88.5	88.9	94.3	70.2	83.1
10	86.7	85.8	85.6	84.3	85.2	87.7	90.6	88.3	89.9	89.1	87.8	86.6	85.7	80.3	76.9	72.4	66.7	70.0	77.6	80.5	80.6	82.3	84.0	85.6	90.6	66.7	82.9
11	83.9	86.8	88.2	92.8	95.7	94.4	93.5	87.9	87.4	87.9	83.1	83.2	82.3	82.3	81.7	82.3	82.1	80.7	80.9	83.9	87.4	86.8	86.8	86.6	95.7	80.7	86.2
12	89.3	88.7	87.9	80.2	79.8	78.7	80.7	80.6	79.7	74.8	71.0	73.5	78.5	77.5	76.9	76.8	76.0	74.2	75.3	78.4	82.1	85.7	90.3	91.4	91.4	71.0	80.3
13	90.9	92.4	93.1	93.5	93.4	91.3	86.3	77.3	78.9	88.0	86.4	87.8	80.8	79.0	83.1	84.3	87.5	90.2	91.9	90.7	90.5	83.8	79.7	80.5	93.5	77.3	86.7
14	88.6	88.4	89.7	91.7	88.7	87.2	87.8	92.0	95.3	96.3	96.0	95.6	96.0	93.3	93.6	94.8	93.9	92.7	93.7	94.9	94.1	95.5	95.5	96.1	96.3	87.2	93.0
15	97.2	97.8	98.1	98.2	98.2	98.1	97.7	97.4	96.8	97.1	97.4	97.3	97.2	96.8	97.3	97.6	97.7	97.7	97.7	98.0	98.2	98.3	97.8	98.0	98.3	96.8	97.7
16	98.0	98.2	98.1	96.4	95.4	96.2	96.5	95.8	95.5	94.5	91.0	94.8	94.8	92.1	88.7	85.8	85.1	83.5	80.7	78.4	87.2	89.1	90.9	91.5	98.2	78.4	91.6
17	89.8	91.3	93.5	94.3	93.4	93.3	94.4	94.2	94.0	90.3	90.9	87.7	90.9	88.4	87.3	84.4	81.9	80.8	81.4	82.7	82.5	79.0	80.1	82.9	94.4	79.0	87.9
18	80.5	80.0	86.1	91.4	92.0	93.6	93.9	93.2	87.8	85.4	79.6	73.3	70.9	67.6	67.6	67.6	62.3	61.7	57.9	58.8	60.1	63.3	59.1	71.5	93.9	57.9	75.2
19	73.0	69.4	74.8	66.0	73.5	83.0	74.6	79.6	81.4	75.6	76.5	72.4	72.8	66.0	67.5	69.1	69.7	68.6	71.5	75.1	61.6	64.1	59.4	59.8	83.0	59.4	71.0
20	61.7	63.2	62.9	59.6	57.5	56.5	59.1	62.5	65.4	66.9	65.6	71.2	67.3	71.0	75.2	72.1	65.2	66.5	71.2	73.4	63.9	62.0	62.6	62.6	75.2	56.5	65.2
21	65.2	66.5	67.3	67.4	67.0	69.9	68.9	70.2	77.3	79.8	84.9	88.6	92.7	90.1	86.6	84.1	85.3	86.6	91.3	95.6	95.9	92.2	94.3	94.9	95.9	65.2	81.8
22	96.0	96.7	96.5	95.5	91.9	91.2	89.3	86.7	89.2	86.1	85.2	83.4	82.3	85.5	82.1	82.0	87.0	93.9	92.0	92.6	93.5	95.3	80.1	76.8	96.7	76.8	88.8
23	79.9	79.6	82.2	83.5	83.3	81.3	81.1	82.8	85.6	85.1	82.2	82.3	85.3	86.4	87.1	90.3	93.9	94.4	93.8	94.7	96.8	96.8	96.7	96.0	96.8	79.6	87.5
24	95.2	93.0	91.6	93.6	92.5	91.8	91.2	88.9	86.3	73.4	70.0	70.0	75.0	71.8	70.3	65.7	67.0	62.2	60.1	61.2	61.4	71.9	81.0	84.6	95.2	60.1	77.9
25	85.9	86.0	84.1	88.6	92.0	91.5	92.1	92.1	93.0	94.4	95.0	95.2	92.7	94.3	94.8	93.1	92.6	90.6	90.0	91.8	91.8	87.3	87.7	85.9	95.2	84.1	90.9
26	83.7	83.8	88.2	93.6	93.3	89.4	83.1	91.4	94.5	94.3	92.3	89.7	85.2	80.5	79.8	83.9	84.8	81.6	86.0	85.9	83.6	86.1	88.6	90.8	94.5	79.8	87.3
27	89.6	89.7	91.1	92.6	93.5	92.2	93.0	93.7	92.7	89.6	86.2	85.3	80.7	78.1	73.9	72.8	73.8	70.8	75.2	70.6	68.5	70.9	71.4	71.8	93.7	68.5	82.0
28	72.8	72.2	76.2	78.7	81.5	88.7	89.4	89.2	87.0	86.1	85.6	84.6	81.3	78.9	79.6	67.9	65.2	64.1	66.4	66.6	67.3	66.5	65.9	65.9	89.4	64.1	76.1
29	66.4	66.2	80.1	70.6	69.0	69.7	70.7	70.9	67.1	70.7	68.2	56.7	52.1	50.1	49.2	46.3	47.0	50.1	54.9	50.3	48.3	47.1	49.5	48.6	80.1	46.3	59.2
30	47.1	48.4	46.6	50.5	56.0	64.8	75.6	78.0	78.5	77.8	74.2	70.8	74.6	83.6	84.1	75.1	76.3	79.5	70.3	70.3	71.5	72.1	75.2	75.5	84.1	46.6	69.9
31	77.6	77.2	78.3	81.3	83.7	86.9	88.3	91.7	90.0	88.9	85.7	84.9	82.5	79.8	79.7	81.3	81.9	81.4	76.8	70.6	70.8	69.0	67.7	66.5	91.7	66.5	80.1
Max.	**98.0**	**98.2**	**98.1**	**98.2**	**98.2**	**98.1**	**97.7**	**97.4**	**96.8**	**97.1**	**97.4**	**97.3**	**97.2**	**96.8**	**97.3**	**97.6**	**97.7**	**97.7**	**97.7**	**98.0**	**98.2**	**98.3**	**97.8**	**98.0**	**98.3**		
Min.	**43.1**	**41.0**	**44.7**	**46.8**	**49.0**	**49.4**	**47.8**	**44.5**	**44.5**	**49.6**	**49.7**	**56.7**	**52.1**	**47.1**	**45.5**	**42.1**	**43.6**	44.1	44.5	**48.7**	**39.6**	**43.1**	**46.4**	**45.4**		**39.6**	
Avg.	**80.8**	**81.1**	**82.7**	**83.9**	**85.1**	**85.8**	**86.2**	**86.3**	**85.9**	**84.4**	**83.2**	**83.0**	**82.1**	**80.6**	**79.6**	**78.3**	**77.9**	**77.8**	**79.1**	**79.8**	**79.1**	**79.4**	**79.6**	**80.3**			**81.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	66.4	67.1	77.7	80.0	73.8	75.8	81.7	82.3	79.9	84.2	86.2	86.2	86.2	85.8	83.8	85.9	86.6	87.4	87.8	89.4	87.9	86.7	87.6	88.0	89.4	66.4	82.7
2	88.6	89.7	89.5	88.2	87.5	85.4	87.3	88.5	88.0	88.5	91.4	89.5	87.1	88.0	88.3	87.0	86.2	86.7	84.5	84.2	83.6	83.3	86.9	88.8	91.4	83.3	87.4
3	90.2	88.6	88.6	88.6	87.3	86.3	87.1	84.9	85.3	90.0	92.0	91.5	92.3	96.4	97.2	97.1	96.3	93.9	91.3	89.5	90.8	91.4	90.0	91.9	97.2	84.9	90.8
4	94.9	95.7	96.5	95.0	94.3	95.4	95.9	96.1	95.2	96.0	92.4	90.4	88.7	89.3	88.9	88.7	88.4	85.0	85.0	90.6	92.1	94.2	93.7	93.3	96.5	85.0	92.3
5	93.2	92.4	94.3	95.8	95.8	94.4	95.3	96.2	96.5	94.6	91.0	93.2	94.4	93.9	94.0	93.4	94.7	96.3	97.2	97.8	98.1	98.3	98.4	98.6	98.6	91.0	95.3
6	98.6	98.4	97.6	94.9	96.3	97.4	95.0	89.0	83.6	81.1	78.4	80.7	85.8	87.0	86.8	86.5	84.1	84.7	85.2	86.0	85.4	82.8	86.0	89.1	98.6	78.4	88.3
7	87.7	83.4	80.7	80.7	80.5	76.9	80.2	86.3	87.3	85.9	89.6	91.9	84.1	92.6	90.6	86.4	88.0	85.3	86.9	92.7	95.1	97.0	97.3	97.1	97.3	76.9	87.7
8	96.5	95.4	94.7	95.9	96.2	96.6	96.8	97.1	96.8	97.1	95.3	93.1	87.9	81.4	87.3	91.5	93.3	91.0	89.1	88.4	88.2	88.5	87.0	89.6	97.1	81.4	92.3
9	90.6	89.6	88.4	84.1	82.8	86.6	86.3	86.2	88.7	90.2	90.4	91.1	88.1	85.5	91.4	90.5	91.6	90.6	91.2	91.3	93.4	94.2	95.7	96.8	96.8	82.8	89.8
10	96.7	96.4	96.7	91.5	90.3	93.1	95.6	96.2	97.4	98.0	98.1	96.3	91.8	90.7	93.6	91.0	85.6	84.9	72.7	78.0	83.3	83.9	86.8	83.5	98.1	72.7	90.5
11	82.0	78.2	78.6	77.5	73.9	73.7	73.7	76.5	70.5	77.0	81.7	79.1	84.1	85.4	85.4	82.0	85.1	85.8	88.9	86.9	85.5	91.3	91.4	92.9	92.9	70.5	82.0
12	89.3	91.8	90.5	91.5	92.0	89.8	89.4	88.7	89.5	90.2	92.6	92.9	93.2	92.6	92.3	90.7	91.4	89.7	88.9	89.2	89.6	90.3	90.7	88.3	93.2	88.3	90.6
13	90.3	91.6	92.1	91.9	91.3	92.0	92.0	92.5	93.2	92.0	91.4	91.4	91.7	88.5	88.9	87.7	89.8	90.2	89.3	87.5	89.3	89.6	89.7	90.2	93.2	87.5	90.6
14	88.7	84.7	80.2	79.5	76.8	84.2	85.6	84.3	86.6	86.3	84.5	85.4	90.1	92.4	93.8	95.2	93.7	94.3	95.8	95.0	94.6	94.4	96.3	96.6	96.6	76.8	89.1
15	96.9	96.6	96.9	96.0	94.8	94.0	93.7	91.6	94.6	93.8	90.6	87.8	88.4	88.2	90.0	88.8	85.8	88.4	91.4	88.1	86.0	82.3	91.4	87.0	96.9	82.3	91.0
16	80.1	86.6	92.1	90.2	87.8	91.6	93.0	92.3	92.9	93.8	93.8	91.0	80.7	73.1	71.7	69.0	64.3	64.1	67.3	67.6	71.2	72.6	68.4	70.0	93.8	64.1	80.2
17	72.6	72.3	72.4	71.1	71.8	74.8	75.9	77.2	74.8	69.8	71.7	78.1	76.5	79.7	80.1	79.8	86.7	88.4	87.7	88.9	89.5	88.1	90.9	90.3	90.9	69.8	79.5
18	89.7	89.9	89.9	88.9	88.9	89.1	89.0	86.7	80.8	80.2	81.9	75.1	73.7	85.0	89.8	90.1	89.2	91.1	91.6	91.9	91.5	88.8	88.5	88.0	91.9	73.7	87.1
19	88.1	86.7	85.9	85.9	91.8	91.6	89.1	89.5	90.7	93.6	93.3	94.8	91.3	91.7	85.3	73.5	69.4	71.1	72.8	73.0	72.2	73.8	73.5	70.0	94.8	69.4	83.3
20	70.3	71.3	69.1	71.5	70.8	67.8	69.5	70.1	69.1	67.8	69.2	70.6	73.3	68.9	68.4	68.0	63.4	58.0	58.4	65.4	67.7	67.6	61.4	62.8	73.3	58.0	67.5
21	58.7	57.8	51.8	53.0	50.3	52.0	51.1	51.7	71.3	68.4	64.6	58.8	54.9	52.1	48.8	50.4	47.5	51.8	56.9	56.4	59.0	61.3	60.4	56.6	71.3	47.5	56.1
22	56.4	57.9	58.5	58.8	61.3	59.6	61.7	71.3	58.3	75.8	74.0	70.3	64.3	59.3	56.4	58.4	57.2	59.0	66.1	66.8	62.7	70.2	82.2	86.5	86.5	56.4	64.7
23	89.8	92.9	92.1	92.1	94.2	93.7	93.8	94.3	94.3	94.9	95.3	95.2	95.4	94.5	94.9	95.3	94.9	93.9	92.1	93.4	95.3	95.6	96.3	96.5	96.5	89.8	94.2
24	96.8	97.0	96.9	96.8	96.8	94.4	94.3	95.0	94.6	95.1	95.1	92.3	92.0	93.1	91.2	89.1	89.1	88.9	88.4	88.5	86.2	87.3	87.0	83.5	97.0	83.5	92.1
25	82.7	82.4	85.1	83.1	83.0	77.2	76.8	79.5	82.2	82.7	84.6	85.7	85.2	86.0	87.2	85.6	85.8	86.8	87.2	87.9	88.1	88.4	87.3	86.0	88.4	76.8	84.4
26	85.2	87.3	88.4	94.2	93.5	93.8	93.2	91.8	90.3	91.0	86.1	81.7	82.0	76.1	76.2	75.8	80.3	81.7	84.2	87.4	90.5	91.7	94.1	93.5	94.2	75.8	87.1
27	92.3	92.0	90.8	90.1	90.4	90.2	88.8	89.3	90.7	88.4	85.8	82.0	77.7	74.3	68.1	67.5	67.0	60.2	65.8	63.0	42.3	40.2	39.3	36.5	92.3	36.5	73.9
28	36.3	34.8	34.4	34.6	36.5	40.3	41.2	59.3	66.8	66.6	66.6	64.1	64.1	77.4	74.3	73.3	72.0	69.2	71.3	70.2	74.8	71.8	67.7	65.6	77.4	34.4	59.7
29	62.3	63.0	62.7	62.7	65.2	64.5	65.7	63.8	62.7	66.0	65.4	64.2	65.7	63.6	59.1	59.2	60.1	63.1	64.4	66.3	68.8	69.6	68.5	71.4	71.4	59.1	64.5
30	77.4	85.3	87.6	91.1	77.0	81.4	79.4	85.8	85.8	80.0	72.6	65.5	57.9	54.9	54.1	54.3	54.6	54.3	54.1	54.1	55.6	56.7	68.7	79.1	91.1	54.1	69.5
Max.	**98.6**	**98.4**	**97.6**	**96.8**	**96.8**	**97.4**	**96.8**	**97.1**	**97.4**	**98.0**	**98.1**	**96.3**	**95.4**	**96.4**	**97.2**	**97.1**	**96.3**	**96.3**	**97.2**	**97.8**	**98.1**	**98.3**	**98.4**	**98.6**	**98.6**		
Min.	**36.3**	**34.8**	**34.4**	**34.6**	**36.5**	**40.3**	**41.2**	**51.7**	**58.3**	**66.0**	**64.6**	**58.8**	**54.9**	**52.1**	**48.8**	**50.4**	**47.5**	51.8	54.1	**54.1**	**42.3**	**40.2**	**39.3**	**36.5**		**34.4**	
Avg.	**83.0**	**83.2**	**83.4**	**83.2**	**82.4**	**82.8**	**83.3**	**84.5**	**84.6**	**85.3**	**84.8**	**83.7**	**82.3**	**82.2**	**81.9**	**81.1**	**80.7**	**80.5**	**81.1**	**81.8**	**81.9**	**82.4**	**83.4**	**83.6**			**82.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	83.0	84.2	81.9	83.3	86.7	85.1	88.0	83.9	84.2	82.4	83.1	78.6	76.6	70.6	70.7	85.5	86.5	86.1	84.3	83.2	81.4	79.0	78.7	79.4	88.0	70.6	81.9
2	86.3	87.2	82.4	84.2	85.3	88.3	89.7	89.7	90.5	87.8	84.3	80.6	76.3	65.0	58.9	58.1	59.4	62.1	63.6	65.1	66.0	68.0	74.2	72.9	90.5	58.1	76.1
3	66.4	68.0	71.1	72.1	67.8	68.7	71.3	70.9	72.5	76.8	71.4	66.3	67.0	65.9	66.4	65.2	65.2	67.3	64.8	63.1	64.6	63.0	63.6	63.6	76.8	63.0	67.6
4	63.9	69.5	78.9	84.5	86.4	85.8	86.8	87.0	87.5	84.0	79.7	76.5	71.1	65.1	63.0	57.0	49.9	50.2	52.4	58.7	61.3	61.7	69.6	71.8	87.5	49.9	70.9
5	69.8	64.3	63.4	66.5	65.1	63.8	64.9	66.9	67.1	67.1	64.3	62.2	61.5	60.8	57.4	55.7	51.4	54.0	65.1	68.1	75.9	79.2	78.6	79.7	79.7	51.4	65.5
6	77.9	77.4	75.2	76.9	75.9	72.7	73.0	76.1	78.9	68.8	60.1	56.1	53.9	53.5	53.7	52.7	54.0	57.7	61.5	62.8	61.8	60.9	60.6	61.6	78.9	52.7	65.1
7	59.7	61.0	60.8	58.6	56.6	60.9	61.0	61.0	63.9	64.6	61.3	58.7	57.5	58.0	57.9	59.6	59.1	59.2	60.9	62.5	62.5	61.5	62.9	60.7	64.6	56.6	60.4
8	60.5	56.9	57.6	61.4	59.9	56.8	57.4	59.4	53.9	50.3	45.4	39.8	42.9	42.4	41.1	36.4	34.6	38.8	48.1	52.6	58.8	65.0	65.4	64.8	65.4	34.6	52.1
9	62.5	63.6	66.6	65.2	63.6	68.7	78.4	84.8	83.0	84.2	88.1	90.2	91.9	89.5	88.8	90.2	88.6	88.0	89.3	89.2	89.8	89.3	88.9	89.8	91.9	62.5	82.2
10	90.1	91.7	92.1	92.6	95.5	97.2	89.8	89.2	83.0	81.1	78.4	73.8	72.2	73.3	72.8	76.5	76.2	74.9	75.2	79.6	86.7	85.3	83.9	80.1	97.2	72.2	83.0
11	78.9	81.7	87.1	90.5	91.1	90.4	91.6	93.1	92.6	92.3	91.8	89.3	88.4	87.7	88.8	89.5	89.6	85.8	79.4	78.6	77.2	73.8	69.9	67.8	93.1	67.8	85.3
12	67.5	66.2	64.5	61.5	59.4	57.8	55.7	54.9	54.7	54.7	53.4	54.0	53.8	52.2	52.0	51.8	51.6	50.6	46.6	45.9	46.4	46.6	46.2	42.6	67.5	42.6	53.8
13	39.4	44.3	51.4	48.8	40.7	44.3	58.6	67.7	64.3	64.4	60.5	61.3	59.9	61.3	61.9	64.5	79.9	86.8	86.9	85.5	84.5	81.6	85.5	90.7	90.7	39.4	65.6
14	94.4	93.6	92.9	92.7	95.6	95.3	95.8	96.5	97.9	98.4	98.5	98.3	97.6	97.1	95.9	95.1	95.7	95.6	95.6	96.2	97.5	98.2	98.2	98.1	98.5	92.7	96.3
15	97.8	97.7	97.9	98.2	98.0	97.4	97.7	97.9	98.3	98.6	98.6	98.4	96.4	90.9	86.7	80.6	79.1	78.4	81.6	84.1	87.4	88.0	88.1	87.1	98.6	78.4	91.9
16	86.8	88.2	88.7	87.7	86.6	86.8	87.1	86.4	86.6	87.3	86.2	83.6	82.5	78.1	75.7	75.3	75.6	75.7	76.2	77.7	77.7	78.1	79.3	80.5	88.7	75.3	82.3
17	81.4	81.7	83.4	82.3	82.8	83.4	81.4	80.9	81.3	80.7	77.8	76.6	77.7	77.9	76.0	69.9	68.8	72.8	73.6	77.6	78.5	75.9	77.1	74.7	83.4	68.8	78.1
18	71.2	71.7	76.9	76.4	76.0	74.6	73.5	70.9	69.4	65.2	62.8	60.1	57.2	57.0	54.3	54.6	55.0	56.5	54.9	53.9	54.9	53.5	52.8	51.5	76.9	51.5	62.7
19	49.7	64.6	66.4	68.5	67.1	76.6	77.0	66.2	72.6	75.5	72.6	66.2	62.0	62.6	60.8	62.2	65.0	65.7	65.6	76.4	78.2	79.8	80.9	82.0	82.0	49.7	69.3
20	83.3	84.3	84.3	84.1	84.4	84.8	83.2	81.8	80.2	74.4	74.5	68.0	57.5	44.7	48.8	51.1	54.3	60.2	63.1	64.1	66.0	62.6	58.1	62.7	84.8	44.7	69.2
21	64.7	58.6	52.1	57.9	57.2	55.5	52.6	56.4	61.1	58.6	63.2	67.8	64.9	63.1	60.1	57.1	58.8	59.7	59.0	57.4	56.0	51.0	47.1	47.3	67.8	47.1	57.8
22	49.2	52.6	50.1	55.3	57.9	57.7	58.3	56.2	55.3	56.8	55.9	54.0	50.5	49.0	44.3	38.1	30.0	33.8	38.3	48.8	52.4	55.3	60.7	68.3	68.3	30.0	51.2
23	55.4	47.2	47.3	46.5	51.8	54.8	60.5	64.9	68.1	71.2	69.7	67.3	38.8	29.1	30.1	33.6	33.6	40.2	48.4	51.0	50.3	51.7	52.4	59.5	71.2	29.1	51.0
24	60.7	58.9	60.6	60.2	60.5	57.0	58.8	60.8	59.0	56.5	54.7	49.3	46.9	46.5	49.1	48.1	51.2	53.0	51.1	46.8	44.5	43.4	49.3	55.2	60.8	43.4	53.4
25	62.0	59.6	55.9	61.6	82.0	93.8	95.1	95.7	95.8	95.1	95.0	95.2	94.5	93.6	96.2	97.6	98.0	98.3	98.5	98.6	98.5	98.3	97.3	95.1	98.6	55.9	89.6
26	91.5	90.6	90.2	83.0	75.2	66.6	70.2	70.5	79.1	85.1	89.0	85.9	78.1	68.8	69.9	71.3	56.9	54.5	52.9	50.7	52.7	51.3	53.4	52.5	91.5	50.7	70.4
27	56.1	61.9	54.8	61.3	55.7	51.4	51.0	58.5	64.4	66.1	67.6	68.0	66.4	65.8	62.6	59.3	52.8	54.6	63.2	68.0	70.1	71.6	72.0	72.5	72.5	51.0	62.3
28	76.1	78.5	81.4	80.3	74.8	75.8	70.2	67.9	64.8	62.8	67.6	61.6	58.9	56.9	58.2	56.0	43.2	39.9	48.0	55.0	61.1	69.8	60.7	53.9	81.4	39.9	63.5
29	53.1	54.4	57.9	64.7	62.8	55.6	52.6	55.9	59.4	60.0	60.9	67.4	52.1	46.1	42.4	44.6	49.8	57.0	61.9	86.7	94.6	95.9	94.9	95.3	95.9	42.4	63.6
30	94.4	95.5	96.2	95.1	93.2	92.6	91.9	90.5	88.3	88.9	84.5	83.5	82.5	77.9	76.1	71.4	72.1	78.2	77.9	82.8	88.0	89.3	89.6	91.3	96.2	71.4	86.3
31	90.4	90.2	87.6	85.0	86.8	88.5	88.5	87.4	89.9	90.3	90.4	87.3	86.5	81.0	79.2	78.0	76.4	77.6	76.2	77.6	75.9	77.3	81.9	88.4	90.4	75.9	84.1
Max.	**97.8**	**97.7**	**97.9**	**98.2**	**98.0**	**97.4**	**97.7**	**97.9**	**98.3**	**98.6**	**98.6**	**98.4**	**97.6**	**97.1**	**96.2**	**97.6**	**98.0**	**98.3**	**98.5**	**98.6**	**98.5**	**98.3**	**98.2**	**98.1**	**98.6**		
Min.	**39.4**	**44.3**	**47.3**	**46.5**	**40.7**	**44.3**	**51.0**	**54.9**	**53.9**	**50.3**	**45.4**	**39.8**	**38.8**	**29.1**	**30.1**	**33.6**	**30.0**	33.8	38.3	**45.9**	**44.5**	**43.4**	**46.2**	**42.6**		**29.1**	
Avg.	**71.7**	**72.4**	**72.8**	**73.8**	**73.6**	**73.8**	**74.6**	**75.2**	**75.7**	**75.2**	**73.9**	**71.8**	**68.5**	**65.5**	**64.5**	**64.1**	**63.3**	**64.9**	**66.6**	**69.3**	**71.0**	**71.1**	**71.7**	**72.3**			**70.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	85.2	80.7	83.5	82.4	85.7	85.4	82.6	81.6	80.9	88.2	90.6	86.2	77.4	75.9	74.5	72.3	74.1	74.1	75.5	72.6	76.4	79.6	83.0	84.7	90.6	72.3	80.5
2	72.3	72.2	66.5	64.3	63.3	61.9	60.6	60.2	59.4	55.3	51.4	44.8	44.0	46.7	48.6	49.1	50.8	52.4	51.3	47.6	49.3	50.2	49.3	47.2	72.3	44.0	54.9
3	48.0	50.0	48.5	48.6	46.9	46.9	50.6	51.3	50.3	50.3	52.2	53.1	52.4	50.6	49.5	52.3	52.3	51.0	49.8	49.9	49.9	49.6	50.6	56.8	56.8	46.9	50.5
4	59.6	61.5	61.4	60.2	59.4	62.4	61.5	65.3	71.2	71.6	72.2	75.8	74.2	72.1	67.4	75.6	82.3	79.8	79.8	79.1	79.9	80.3	80.9	82.0	82.3	59.4	71.5
5	82.8	83.4	82.5	82.7	82.2	82.4	83.0	81.7	82.0	85.9	82.5	81.3	70.7	59.6	59.5	62.5	60.2	61.1	66.2	66.1	67.5	68.2	68.1	70.0	85.9	59.5	73.8
6	68.7	65.4	65.3	66.5	65.1	58.6	58.5	58.7	59.5	60.2	58.6	55.9	52.7	46.4	44.2	55.2	55.9	50.1	46.2	43.6	44.8	47.1	41.4	36.9	68.7	36.9	54.4
7	34.8	37.5	36.0	34.9	37.3	36.2	32.3	33.7	45.2	48.5	49.1	46.7	51.9	50.7	54.9	54.5	43.3	46.3	55.2	65.8	66.7	68.9	74.0	74.1	74.1	32.3	49.1
8	72.0	72.0	78.7	79.6	80.1	81.5	81.3	82.1	79.5	74.3	73.0	69.2	64.8	62.3	63.4	63.6	63.4	63.1	62.0	61.3	60.6	59.3	59.3	59.4	82.1	59.3	69.4
9	61.3	69.8	74.3	74.7	80.1	77.1	80.0	83.3	88.0	90.3	92.4	93.2	92.9	92.4	93.2	93.4	94.4	95.0	94.9	94.7	93.7	93.0	91.0	85.7	95.0	61.3	86.6
10	73.2	68.4	69.5	70.7	68.4	68.2	67.4	58.5	62.2	77.8	89.4	93.2	95.3	93.1	88.9	86.8	89.2	81.7	79.1	86.2	94.7	88.7	88.0	85.7	95.3	58.5	80.2
11	84.2	83.9	80.7	81.4	79.8	81.8	84.2	86.6	93.4	88.5	88.2	90.9	96.0	97.5	97.6	97.7	96.9	96.4	84.8	84.6	76.8	73.0	72.1	72.4	97.7	72.1	86.2
12	74.7	78.2	77.4	72.9	71.7	71.3	71.2	73.2	71.5	73.0	70.4	74.9	72.1	70.4	70.1	69.3	69.9	69.0	66.6	67.3	67.9	70.9	73.1	76.7	78.2	66.6	71.8
13	79.4	85.0	85.6	80.6	83.4	81.6	83.7	73.6	70.6	69.1	68.7	95.3	95.0	93.9	92.6	91.7	86.7	85.2	86.1	86.5	89.5	85.1	82.7	79.5	95.3	68.7	83.8
14	79.1	84.9	80.0	82.5	90.6	80.5	81.7	87.4	86.7	83.4	77.8	86.5	88.9	87.0	81.6	79.2	83.2	83.5	79.0	77.6	75.8	71.3	75.6	74.3	90.6	71.3	81.6
15	73.8	74.4	77.2	83.5	85.1	85.6	79.7	78.2	75.7	83.2	84.9	83.9	85.1	81.1	77.5	74.0	86.9	89.2	93.4	85.7	84.4	84.5	87.9	84.0	93.4	73.8	82.5
16	83.0	82.1	86.4	86.1	87.2	81.4	81.9	95.7	98.0	98.4	98.5	98.9	98.8	99.0	98.9	95.4	96.7	92.9	89.7	89.7	85.8	84.7	81.5	88.8	99.0	81.4	90.8
17	90.6	88.3	88.0	86.0	84.1	83.9	86.8	87.8	86.0	85.2	84.7	82.0	84.2	81.8	83.9	81.1	77.2	76.7	76.0	76.2	74.6	76.3	83.4	84.4	90.6	74.6	82.9
18	82.5	81.6	77.7	77.6	78.4	74.8	74.8	73.0	74.9	77.6	79.8	76.3	73.9	67.2	70.7	71.6	68.1	71.0	69.8	72.4	75.2	76.6	76.6	76.6	82.5	67.2	74.9
19	69.5	72.6	72.4	72.9	71.6	71.4	74.4	76.0	76.8	80.1	82.5	81.0	77.3	70.4	68.0	64.0	75.3	77.7	77.6	75.1	73.8	72.4	72.3	70.1	82.5	64.0	74.0
20	71.9	70.1	70.2	68.4	70.5	72.9	72.0	75.1	71.5	69.7	65.4	58.7	60.9	61.2	60.7	63.0	63.5	59.6	57.7	56.9	57.7	55.5	55.4	60.8	75.1	55.4	64.6
21	63.8	60.4	60.0	57.8	57.6	60.2	64.8	67.1	69.7	72.3	72.3	74.6	76.7	76.4	76.2	76.5	79.1	80.6	79.5	83.3	85.2	86.4	87.7	86.5	87.7	57.6	73.1
22	84.3	84.7	82.1	80.3	78.7	78.6	75.6	76.1	79.5	80.8	81.9	84.5	80.5	79.4	74.1	70.7	64.9	62.7	64.5	68.7	66.4	67.5	71.8	75.8	84.7	62.7	75.6
23	79.5	81.9	86.8	89.8	90.7	93.1	93.7	93.8	94.0	95.5	96.1	95.4	94.3	91.6	88.3	80.1	76.5	74.5	75.1	77.4	82.3	81.2	81.3	84.2	96.1	74.5	86.5
24	85.4	89.1	90.3	90.6	89.9	91.0	90.6	90.5	89.6	89.6	90.2	90.1	92.9	94.0	92.5	93.5	91.9	90.3	90.4	89.2	89.3	88.8	87.2	87.7	94.0	85.4	90.2
25	82.5	77.4	75.5	72.4	71.8	71.4	71.8	69.4	69.4	68.7	67.9	66.2	66.0	65.2	64.5	58.0	61.1	61.8	60.4	64.7	64.6	62.6	60.2	61.2	82.5	58.0	67.3
26	59.8	57.0	54.0	50.7	49.1	49.0	48.6	47.9	46.1	45.7	45.7	47.0	52.1	53.9	57.2	62.4	65.2	69.4	69.8	68.4	72.0	72.5	73.9	73.4	73.9	45.7	58.0
27	74.1	76.8	78.1	78.2	77.5	76.6	74.6	71.8	70.2	73.8	74.0	72.0	69.8	71.7	67.9	66.6	68.1	81.4	90.5	95.0	85.7	87.0	90.6	91.9	95.0	66.6	77.7
28	89.9	86.7	88.5	87.5	84.2	87.7	82.7	84.4	90.2	90.8	92.5	84.3	83.0	88.9	87.8	94.0	95.5	94.8	94.7	92.5	91.1	94.4	94.8	91.7	95.5	82.7	89.7
29	91.5	85.6	88.8	78.5	74.4	71.4	70.5	68.3	66.7	65.7	65.2	66.7	65.2	63.9	63.2	62.2	61.7	62.4	63.2	63.0	61.7	61.2	61.3	60.1	91.5	60.1	68.4
30	55.2	53.0	53.6	53.8	51.7	52.1	52.7	52.7	48.2	45.7	42.6	43.5	42.6	47.2	50.3	52.2	44.5	45.4	48.3	44.4	39.7	43.8	47.5	43.4	55.2	39.7	48.1
Max.	**91.5**	**89.1**	**90.3**	**90.6**	**90.7**	**93.1**	**93.7**	**95.7**	**98.0**	**98.4**	**98.5**	**98.9**	**98.8**	**99.0**	**98.9**	**97.7**	**96.9**	**96.4**	**94.9**	**95.0**	**94.7**	**94.4**	**94.8**	**91.9**	**99.0**		
Min.	**34.8**	**37.5**	**36.0**	**34.9**	**37.3**	**36.2**	**32.3**	**33.7**	**45.2**	**45.7**	**42.6**	**43.5**	**42.6**	**46.4**	**44.2**	**49.1**	**43.3**	45.4	46.2	**43.6**	**39.7**	**43.8**	**41.4**	**36.9**		**32.3**	
Avg.	**73.8**	**73.8**	**74.0**	**73.2**	**73.2**	**72.6**	**72.5**	**72.8**	**73.6**	**74.6**	**74.7**	**75.1**	**74.4**	**73.0**	**72.3**	**72.3**	**72.6**	**72.6**	**72.6**	**72.8**	**72.8**	**72.7**	**73.4**	**73.5**			**73.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Relative Humidity (%)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	45.2	45.5	43.5	61.4	45.6	62.7	67.3	66.2	64.6	65.5	68.1	67.1	70.6	63.4	63.0	64.0	62.9	62.8	64.8	65.6	66.9	69.0	70.0	68.4	70.6	43.5	62.2
2	68.1	68.0	63.3	62.3	61.1	61.4	58.2	51.5	47.4	44.6	44.0	36.5	35.0	36.8	30.7	32.8	31.8	35.4	38.9	42.3	51.4	60.4	66.5	65.4	68.1	30.7	49.7
3	67.1	66.4	67.9	66.3	66.6	65.9	66.0	71.9	83.1	88.2	88.9	83.7	83.7	93.0	94.5	94.7	94.2	91.6	91.0	89.2	87.7	85.6	85.3	82.8	94.7	65.9	81.5
4	88.1	91.4	89.6	83.3	76.0	73.7	74.0	79.6	82.5	81.4	78.5	77.1	82.0	84.8	85.9	87.9	89.2	87.0	89.1	87.6	89.5	92.2	91.1	92.5	92.5	73.7	84.7
5	93.2	94.9	93.9	90.7	92.6	92.1	92.2	90.4	88.7	90.7	87.3	78.0	79.9	80.3	78.6	79.3	79.1	80.6	82.1	80.8	82.2	81.5	82.4	84.0	94.9	78.0	85.7
6	85.0	84.7	85.3	88.3	90.0	89.8	92.1	90.7	91.0	86.4	86.8	87.8	90.6	92.3	96.3	97.7	97.4	98.4	98.6	98.9	98.8	98.5	98.4	99.0	99.0	84.7	92.6
7	99.2	99.5	99.5	99.5	99.7	99.2	94.2	85.8	88.4	91.0	91.7	93.7	89.2	87.2	90.0	90.2	87.8	89.2	88.4	91.3	92.8	93.3	92.6	86.9	99.7	85.8	92.5
8	85.1	79.5	77.9	76.6	75.0	72.2	72.1	68.7	65.8	63.6	74.9	92.3	83.7	76.0	70.0	72.5	77.3	88.4	88.9	78.5	69.2	72.2	78.2	76.4	92.3	63.6	76.5
9	74.6	69.6	67.4	66.1	66.7	65.2	75.5	90.0	93.2	98.0	98.4	98.3	97.3	97.0	97.3	97.7	97.7	95.7	87.9	79.9	82.6	85.5	71.1	76.2	98.4	65.2	84.5
10	81.2	79.8	75.7	70.9	68.5	69.8	74.5	68.3	59.9	61.8	64.6	63.3	63.3	60.5	57.2	57.0	60.3	61.3	59.7	60.3	64.7	66.8	64.6	63.8	81.2	57.0	65.7
11	61.4	59.3	55.2	52.9	51.8	41.4	41.0	40.6	40.4	37.9	41.4	44.0	49.5	57.1	67.2	70.4	73.0	68.5	67.7	65.7	68.2	57.5	51.6	52.3	73.0	37.9	54.8
12	44.1	42.1	40.1	36.4	36.7	38.2	41.7	64.6	68.7	68.5	69.7	70.6	67.8	66.5	61.5	66.5	71.2	73.7	74.1	74.3	78.3	81.2	82.2	77.1	82.2	36.4	62.3
13	70.6	74.3	78.0	79.6	81.9	81.2	81.6	85.2	85.7	87.7	84.5	85.8	87.3	79.7	81.5	83.9	80.5	85.2	86.2	88.8	89.1	87.9	88.0	87.2	89.1	70.6	83.4
14	88.5	88.8	89.6	87.9	87.0	88.1	85.7	81.5	76.1	72.1	67.2	71.3	71.2	66.8	70.2	70.0	69.0	73.4	72.4	57.2	64.9	63.5	55.4	60.6	89.6	55.4	74.1
15	63.5	67.3	68.1	68.5	71.8	71.1	70.5	75.6	79.1	86.2	89.0	96.3	98.2	98.0	98.8	99.0	98.5	98.4	98.1	97.8	97.5	97.6	98.1	98.7	99.0	63.5	86.9
16	99.0	99.0	98.6	97.9	96.4	95.6	95.7	96.3	96.6	96.7	96.4	95.2	93.5	90.9	90.4	85.4	87.5	80.1	77.5	79.6	79.8	76.6	71.1	63.5	99.0	63.5	89.1
17	52.4	48.7	63.4	61.4	51.6	52.5	64.1	70.3	72.2	75.7	78.0	64.8	59.9	61.5	61.2	57.3	60.2	65.8	64.2	60.9	62.2	58.5	59.7	58.1	78.0	48.7	61.8
18	55.2	54.4	55.9	56.4	57.2	58.0	61.1	56.7	51.0	54.5	59.2	60.0	53.1	54.5	60.1	60.4	61.9	60.9	59.2	61.0	60.9	58.7	57.1	56.2	61.9	51.0	57.6
19	60.5	63.6	65.5	67.4	79.2	76.9	78.8	87.2	84.5	83.9	86.3	84.8	78.5	79.2	79.6	78.5	76.0	71.9	66.3	67.9	68.8	69.0	71.5	77.1	87.2	60.5	75.1
20	82.2	84.4	87.9	84.5	73.9	69.1	68.1	67.5	66.5	63.7	63.4	62.8	63.5	61.3	59.1	60.0	58.4	58.3	62.7	63.0	69.1	74.9	79.0	78.7	87.9	58.3	69.2
21	79.7	83.5	86.8	88.9	91.3	91.8	91.8	89.8	86.5	86.7	87.9	87.0	88.3	87.3	88.7	88.4	81.7	82.9	83.2	83.0	82.8	85.7	87.8	87.8	91.8	79.7	86.6
22	89.4	89.8	88.8	89.9	87.9	88.1	89.5	90.9	93.6	93.6	95.3	95.4	94.8	96.0	95.6	95.9	94.5	92.3	93.5	95.9	94.0	93.8	94.9	94.2	96.0	87.9	92.8
23	94.0	93.5	94.1	94.2	91.6	94.9	95.8	96.9	96.8	96.4	97.5	85.2	76.7	69.2	62.4	59.1	57.8	56.7	57.7	58.8	61.1	62.6	65.5	64.6	97.5	56.7	78.5
24	65.2	68.1	67.2	65.9	62.8	63.9	67.0	69.0	70.5	71.6	72.3	69.8	64.6	58.6	54.1	53.4	55.1	60.3	62.4	47.2	53.8	65.6	64.1	68.1	72.3	47.2	63.4
25	66.7	62.9	55.5	53.3	81.7	91.7	90.6	92.3	89.0	86.1	82.8	84.3	85.8	88.9	92.8	94.3	95.3	95.6	95.5	96.2	77.3	75.2	73.8	71.1	96.2	53.3	82.4
26	68.3	68.3	69.0	68.2	67.5	67.4	68.2	69.9	68.3	69.7	70.0	72.8	71.3	71.4	69.3	69.3	68.3	67.6	63.5	65.4	66.3	64.9	62.0	59.9	72.8	59.9	67.8
27	59.9	54.5	53.2	51.6	49.1	47.7	45.9	44.0	41.8	44.3	44.1	44.6	43.2	44.7	43.4	42.7	44.0	44.3	44.1	47.1	50.9	53.3	53.8	58.3	59.9	41.8	47.9
28	60.1	62.8	59.5	47.7	51.8	51.5	56.6	60.4	63.8	65.6	68.3	70.1	68.4	69.4	61.5	66.8	71.8	70.4	68.7	69.4	70.3	69.5	72.5	72.3	72.5	47.7	64.5
29	72.8	74.3	73.3	76.6	77.2	71.3	76.8	72.2	66.9	72.5	75.0	74.1	74.4	76.1	75.1	69.0	71.2	71.0	75.1	75.8	75.2	76.6	71.2	67.9	77.2	66.9	73.4
30	73.1	75.4	75.2	76.4	78.6	81.0	81.3	79.0	72.9	75.3	71.1	63.0	65.1	66.6	68.1	66.4	66.9	72.7	74.2	77.2	70.2	72.3	74.8	76.1	81.3	63.0	73.0
31	74.3	77.9	81.0	81.8	82.0	82.9	84.9	79.7	77.8	80.1	76.8	76.7	76.6	76.1	77.9	76.4	76.3	77.9	75.6	76.2	75.5	76.0	73.5	74.2	84.9	73.5	77.8
Max.	**99.2**	**99.5**	**99.5**	**99.5**	**99.7**	**99.2**	**95.8**	**96.9**	**96.8**	**98.0**	**98.4**	**98.3**	**98.2**	**98.0**	**98.8**	**99.0**	**98.5**	**98.4**	**98.6**	**98.9**	**98.8**	**98.5**	**98.4**	**99.0**	**99.7**		
Min.	**44.1**	**42.1**	**40.1**	**36.4**	**36.7**	**38.2**	**41.0**	**40.6**	**40.4**	**37.9**	**41.4**	**36.5**	**35.0**	**36.8**	**30.7**	**32.8**	**31.8**	35.4	38.9	**42.3**	**50.9**	**53.3**	**51.6**	**52.3**		**30.7**	
Avg.	**73.2**	**73.3**	**73.2**	**72.7**	**72.6**	**72.8**	**74.3**	**75.2**	**74.6**	**75.5**	**76.1**	**75.4**	**74.4**	**73.9**	**73.6**	**73.8**	**74.1**	**74.8**	**74.6**	**73.6**	**74.3**	**75.0**	**74.4**	**74.2**			**74.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	0	5	20	49	61	33	22	3	0	0	0	0	0	0	61	0	8
2	0	0	0	0	0	0	0	0	0	0	1	9	67	110	118	86	34	3	0	0	0	0	0	0	118	0	18
3	0	0	0	0	0	0	0	0	0	0	0	3	6	9	26	30	12	1	0	0	0	0	0	0	30	0	4
4	0	0	0	0	0	0	0	0	0	0	0	5	31	60	58	43	18	3	0	0	0	0	0	0	60	0	9
5	0	0	0	0	0	0	0	0	0	0	0	19	73	111	116	72	25	4	0	0	0	0	0	0	116	0	17
6	0	0	0	0	0	0	0	0	0	0	0	13	58	64	81	68	25	4	0	0	0	0	0	0	81	0	13
7	0	0	0	0	0	0	0	0	0	0	0	8	20	23	25	20	9	1	0	0	0	0	0	0	25	0	4
8	0	0	0	0	0	0	0	0	0	0	0	12	38	121	62	50	29	4	0	0	0	0	0	0	121	0	13
9	0	0	0	0	0	0	0	0	0	0	1	25	84	132	138	108	53	6	0	0	0	0	0	0	138	0	23
10	0	0	0	0	0	0	0	0	0	0	1	18	37	72	171	130	55	6	0	0	0	0	0	0	171	0	20
11	0	0	0	0	0	0	0	0	0	0	1	11	82	141	148	120	65	17	0	0	0	0	0	0	148	0	24
12	0	0	0	0	0	0	0	0	0	0	1	30	91	124	135	87	64	8	0	0	0	0	0	0	135	0	22
13	0	0	0	0	0	0	0	0	0	0	1	11	31	43	70	131	62	8	0	0	0	0	0	0	131	0	15
14	0	0	0	0	0	0	0	0	0	0	0	5	16	32	30	26	14	3	0	0	0	0	0	0	32	0	5
15	0	0	0	0	0	0	0	0	0	0	0	4	16	29	30	26	17	4	0	0	0	0	0	0	30	0	5
16	0	0	0	0	0	0	0	0	0	0	1	46	125	156	153	129	64	12	0	0	0	0	0	0	156	0	28
17	0	0	0	0	0	0	0	0	0	0	0	6	19	42	49	49	24	7	0	0	0	0	0	0	49	0	8
18	0	0	0	0	0	0	0	0	0	0	0	10	28	34	57	46	24	4	0	0	0	0	0	0	57	0	8
19	0	0	0	0	0	0	0	0	0	0	1	7	16	30	40	70	22	3	0	0	0	0	0	0	70	0	8
20	0	0	0	0	0	0	0	0	0	0	0	1	6	9	10	10	5	1	0	0	0	0	0	0	10	0	2
21	0	0	0	0	0	0	0	0	0	0	1	14	37	48	55	33	17	17	0	0	0	0	0	0	55	0	9
22	0	0	0	0	0	0	0	0	0	0	0	6	26	48	101	106	99	19	1	0	0	0	0	0	106	0	17
23	0	0	0	0	0	0	0	0	0	0	4	51	131	177	186	162	101	14	1	0	0	0	0	0	186	0	34
24	0	0	0	0	0	0	0	0	0	0	0	10	17	24	32	25	22	7	0	0	0	0	0	0	32	0	6
25	0	0	0	0	0	0	0	0	0	0	5	68	71	89	159	65	25	12	1	0	0	0	0	0	159	0	21
26	0	0	0	0	0	0	0	0	0	0	6	60	143	190	197	95	68	27	1	0	0	0	0	0	197	0	33
27	0	0	0	0	0	0	0	0	0	0	1	12	15	21	27	65	18	4	1	0	0	0	0	0	65	0	7
28	0	0	0	0	0	0	0	0	0	0	1	10	37	57	59	58	39	11	1	0	0	0	0	0	59	0	11
29	0	0	0	0	0	0	0	0	0	0	13	86	166	207	211	165	40	15	1	0	0	0	0	0	211	0	38
30	0	0	0	0	0	0	0	0	0	0	8	72	149	209	237	171	91	37	4	0	0	0	0	0	237	0	41
31	0	0	0	0	0	0	0	0	0	0	12	84	169	214	226	199	141	44	4	0	0	0	0	0	226	0	46
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**86**	**169**	**214**	**237**	**199**	**141**	**44**	**4**	**0**	**0**	**0**	**0**	**0**	**237**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**9**	**10**	**10**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**23**	**59**	**86**	**99**	**80**	**42**	**10**	**1**	**0**	**0**	**0**	**0**	**0**			**17**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	10	63	172	216	227	200	145	49	4	0	0	0	0	0	227	0	45
2	0	0	0	0	0	0	0	0	0	0	12	93	179	224	238	212	155	55	5	0	0	0	0	0	238	0	49
3	0	0	0	0	0	0	0	0	0	0	16	87	157	214	243	204	89	58	6	0	0	0	0	0	243	0	45
4	0	0	0	0	0	0	0	0	0	0	18	109	194	239	252	225	167	66	6	0	0	0	0	0	252	0	53
5	0	0	0	0	0	0	0	0	0	0	22	112	197	244	258	232	174	73	6	0	0	0	0	0	258	0	55
6	0	0	0	0	0	0	0	0	0	0	26	123	205	248	263	238	180	79	7	0	0	0	0	0	263	0	57
7	0	0	0	0	0	0	0	0	0	0	28	125	209	256	271	244	185	84	7	0	0	0	0	0	271	0	59
8	0	0	0	0	0	0	0	0	0	0	21	92	160	219	230	168	98	52	11	0	0	0	0	0	230	0	44
9	0	0	0	0	0	0	0	0	0	0	20	82	142	162	201	129	109	51	10	0	0	0	0	0	201	0	38
10	0	0	0	0	0	0	0	0	0	1	34	82	212	262	275	250	193	97	8	0	0	0	0	0	275	0	59
11	0	0	0	0	0	0	0	0	0	0	10	41	74	119	102	109	53	35	5	0	0	0	0	0	119	0	23
12	0	0	0	0	0	0	0	0	0	1	48	158	240	287	297	269	210	90	13	0	0	0	0	0	297	0	67
13	0	0	0	0	0	0	0	0	0	0	22	28	28	44	31	24	16	16	5	0	0	0	0	0	44	0	9
14	0	0	0	0	0	0	0	0	0	0	5	13	25	35	53	51	50	23	7	0	0	0	0	0	53	0	11
15	0	0	0	0	0	0	0	0	0	2	64	169	257	308	318	284	223	116	15	1	0	0	0	0	318	0	73
16	0	0	0	0	0	0	0	0	0	0	7	29	44	57	52	47	47	50	21	1	0	0	0	0	57	0	15
17	0	0	0	0	0	0	0	0	0	0	6	17	30	28	25	35	11	9	3	0	0	0	0	0	35	0	7
18	0	0	0	0	0	0	0	0	0	0	9	24	48	65	56	59	34	14	4	0	0	0	0	0	65	0	13
19	0	0	0	0	0	0	0	0	0	0	4	13	23	26	24	75	57	34	10	0	0	0	0	0	75	0	11
20	0	0	0	0	0	0	0	0	0	1	22	89	76	145	192	130	97	44	17	1	0	0	0	0	192	0	34
21	0	0	0	0	0	0	0	0	0	3	24	40	67	76	83	61	57	36	12	1	0	0	0	0	83	0	19
22	0	0	0	0	0	0	0	0	0	2	11	13	39	58	81	121	110	72	28	3	0	0	0	0	121	0	22
23	0	0	0	0	0	0	0	0	0	11	83	205	288	336	350	324	261	154	16	4	0	0	0	0	350	0	85
24	0	0	0	0	0	0	0	0	0	12	107	215	299	348	364	337	274	166	15	4	0	0	0	0	364	0	89
25	0	0	0	0	0	0	0	0	0	2	16	50	117	130	167	152	124	96	34	5	0	0	0	0	167	0	37
26	0	0	0	0	0	0	0	0	0	7	81	149	189	267	201	181	118	79	40	7	0	0	0	0	267	0	55
27	0	0	0	0	0	0	0	0	0	8	55	108	137	137	143	144	151	74	32	4	0	0	0	0	151	0	41
28	0	0	0	0	0	0	0	0	0	6	54	102	154	143	120	127	106	68	35	7	0	0	0	0	154	0	38
29	0	0	0	0	0	0	0	0	0	10	74	119	83	67	114	107	76	56	28	5	0	0	0	0	119	0	31
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**107**	**215**	**299**	**348**	**364**	**337**	**274**	**166**	**40**	**7**	**0**	**0**	**0**	**0**	**364**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**13**	**23**	**26**	**24**	**24**	**11**	**9**	**3**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**31**	**88**	**139**	**171**	**180**	**163**	**123**	**65**	**14**	**2**	**0**	**0**	**0**	**0**			**41**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	11	66	96	167	165	128	91	62	30	18	5	0	0	0	0	167	0	35
2	0	0	0	0	0	0	0	0	0	17	173	193	93	90	108	77	64	41	18	7	0	0	0	0	193	0	37
3	0	0	0	0	0	0	0	0	0	4	10	12	17	27	67	91	41	22	12	1	0	0	0	0	91	0	13
4	0	0	0	0	0	0	0	0	0	1	8	18	33	42	56	66	44	41	14	2	0	0	0	0	66	0	14
5	0	0	0	0	0	0	0	0	0	3	10	20	32	66	131	143	65	38	14	1	0	0	0	0	143	0	22
6	0	0	0	0	0	0	0	0	0	8	29	87	98	124	96	93	80	36	25	8	0	0	0	0	124	0	28
7	0	0	0	0	0	0	0	0	0	18	58	110	145	134	155	198	154	126	70	14	0	0	0	0	198	0	49
8	0	0	0	0	0	0	0	0	1	17	21	85	168	151	191	208	133	68	30	8	0	0	0	0	208	0	45
9	0	0	0	0	0	0	0	0	2	25	48	108	136	190	273	185	220	139	84	14	0	0	0	0	273	0	59
10	0	0	0	0	0	0	0	0	1	30	57	79	113	105	67	43	19	13	6	1	0	0	0	0	113	0	22
11	0	0	0	0	0	0	0	0	2	46	152	381	427	456	472	460	391	183	79	23	1	0	0	0	472	0	128
12	0	0	0	0	0	0	0	0	3	71	238	338	425	471	485	454	384	245	23	13	1	0	0	0	485	0	131
13	0	0	0	0	0	0	0	0	6	99	237	355	444	489	504	472	401	242	26	15	2	0	0	0	504	0	137
14	0	0	0	0	0	0	0	0	7	91	226	343	417	452	426	406	224	147	77	31	1	0	0	0	452	0	119
15	0	0	0	0	0	0	0	0	5	70	38	109	136	148	96	120	136	61	31	9	1	0	0	0	148	0	40
16	0	0	0	0	0	0	0	0	5	34	84	259	251	326	366	407	354	252	39	19	3	0	0	0	407	0	100
17	0	0	0	0	0	0	0	0	13	153	204	289	379	394	369	321	239	185	89	26	3	0	0	0	394	0	111
18	0	0	0	0	0	0	0	0	8	60	133	222	352	303	304	326	328	215	89	24	3	0	0	0	352	0	99
19	0	0	0	0	0	0	0	0	13	59	114	258	436	443	467	326	196	115	68	30	3	0	0	0	467	0	105
20	0	0	0	0	0	0	0	0	3	22	102	249	263	331	312	250	237	188	111	51	6	0	0	0	331	0	89
21	0	0	0	0	0	0	0	0	5	44	96	170	212	177	234	344	456	301	31	23	5	0	0	0	456	0	87
22	0	0	0	0	0	0	0	0	14	52	100	153	325	469	563	514	423	260	67	38	5	0	0	0	563	0	124
23	0	0	0	0	0	0	0	0	13	137	287	405	497	490	556	550	353	177	111	50	7	0	0	0	556	0	151
24	0	0	0	0	0	0	0	0	12	105	251	361	347	334	383	193	183	263	103	39	5	0	0	0	383	0	107
25	0	0	0	0	0	0	0	0	45	168	282	285	437	509	566	507	464	338	65	61	13	0	0	0	566	0	156
26	0	0	0	0	0	0	0	1	19	74	247	460	537	573	587	555	482	347	32	24	9	0	0	0	587	0	164
27	0	0	0	0	0	0	0	1	46	196	328	433	518	546	508	422	352	230	126	61	15	0	0	0	546	0	158
28	0	0	0	0	0	0	0	2	46	192	328	442	521	555	586	520	461	335	69	43	11	0	0	0	586	0	171
29	0	0	0	0	0	0	0	0	14	44	61	96	88	89	103	125	67	45	37	11	2	0	0	0	125	0	32
30	0	0	0	0	0	0	0	0	10	28	48	91	113	128	183	154	107	87	59	31	8	0	0	0	183	0	44
31	0	0	0	0	0	0	0	1	15	35	45	79	80	80	87	106	55	36	29	14	3	0	0	0	106	0	28
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**46**	**196**	**328**	**460**	**537**	**573**	**587**	**555**	**482**	**347**	**126**	**61**	**15**	**0**	**0**	**0**	**587**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**12**	**17**	**27**	**56**	**43**	**19**	**13**	**6**	**1**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**62**	**132**	**212**	**265**	**286**	**304**	**281**	**231**	**155**	**53**	**23**	**3**	**0**	**0**	**0**			**84**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	1	7	25	31	45	61	78	87	88	84	73	38	22	5	0	0	0	88	0	27
2	0	0	0	0	0	0	0	3	28	106	203	216	370	487	525	449	255	126	52	21	6	0	0	0	525	0	118
3	0	0	0	0	0	0	0	1	21	44	89	104	90	108	120	128	95	55	31	15	3	0	0	0	128	0	38
4	0	0	0	0	0	0	0	1	13	32	77	110	132	125	124	111	82	93	68	36	9	0	0	0	132	0	42
5	0	0	0	0	0	0	0	6	101	219	207	522	628	662	685	645	543	423	53	28	14	1	0	0	685	0	197
6	0	0	0	0	0	0	0	8	106	269	406	523	612	652	664	624	540	425	52	26	14	1	0	0	664	0	205
7	0	0	0	0	0	0	0	10	111	271	408	524	610	650	663	623	539	421	63	33	18	2	0	0	663	0	206
8	0	0	0	0	0	0	0	11	114	274	385	539	606	421	490	636	527	271	111	76	44	2	0	0	636	0	188
9	0	0	0	0	0	0	0	17	147	305	446	565	647	720	712	668	553	441	77	37	19	2	0	0	720	0	223
10	0	0	0	0	0	0	0	16	126	282	419	534	618	658	670	633	558	448	68	27	16	2	0	0	670	0	211
11	0	0	0	0	0	0	0	17	134	290	428	541	626	666	677	638	556	445	77	32	18	3	0	0	677	0	214
12	0	0	0	0	0	0	0	19	134	276	410	533	624	658	660	623	554	440	102	42	23	3	0	0	660	0	213
13	0	0	0	0	0	0	0	12	109	116	178	198	191	181	149	155	167	150	123	59	18	2	0	0	198	0	75
14	0	0	0	0	0	0	0	14	75	160	260	273	420	430	673	732	673	462	197	92	36	4	0	0	732	0	187
15	0	0	0	0	0	0	0	9	24	38	70	116	199	352	551	392	284	215	117	83	52	6	0	0	551	0	104
16	0	0	0	0	0	0	2	41	137	270	400	525	618	662	673	626	556	452	121	58	45	6	0	0	673	0	216
17	0	0	0	0	0	0	1	44	172	338	476	661	605	606	547	584	466	425	142	59	31	6	0	0	661	0	215
18	0	0	0	0	0	0	2	27	98	244	367	499	533	629	635	593	502	357	164	80	27	6	0	0	635	0	198
19	0	0	0	0	0	0	2	43	159	283	413	528	581	647	663	610	533	420	148	55	27	6	0	0	663	0	213
20	0	0	0	0	0	0	3	47	164	302	446	584	737	748	552	366	221	130	56	23	9	3	0	0	748	0	183
21	0	0	0	0	0	0	2	18	48	94	179	328	566	640	596	299	243	175	126	43	24	4	0	0	640	0	141
22	0	0	0	0	0	0	4	64	189	327	458	567	646	682	694	659	587	483	147	30	20	8	0	0	694	0	232
23	0	0	0	0	0	0	5	77	204	340	470	581	662	702	711	675	601	496	153	28	19	8	0	0	711	0	239
24	0	0	0	0	0	0	7	80	205	308	418	476	615	598	609	592	532	330	140	79	35	11	0	0	615	0	210
25	0	0	0	0	0	0	3	26	91	334	478	587	676	718	733	690	612	508	172	39	27	11	0	0	733	0	238
26	0	0	0	0	0	0	2	22	42	77	112	128	137	121	87	84	48	34	28	21	21	5	0	0	137	0	40
27	0	0	0	0	0	0	4	26	91	107	131	140	145	188	188	485	229	315	165	63	29	13	1	0	485	0	97
28	0	0	0	0	0	0	14	98	209	364	488	560	688	742	540	606	543	415	226	117	59	19	1	0	742	0	237
29	0	0	0	0	0	0	13	93	182	259	443	602	676	720	727	690	619	514	214	117	51	14	1	0	727	0	247
30	0	0	0	0	0	0	13	104	233	302	359	547	464	577	525	324	392	331	207	132	62	16	1	0	577	0	191
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**104**	**233**	**364**	**488**	**661**	**737**	**748**	**733**	**732**	**673**	**514**	**226**	**132**	**62**	**19**	**1**	**0**	**748**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**25**	**31**	**45**	**61**	**78**	**87**	**84**	**48**	**34**	**28**	**15**	**3**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**32**	**116**	**222**	**322**	**422**	**493**	**528**	**531**	**501**	**423**	**329**	**115**	**52**	**26**	**5**	**0**	**0**			**172**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	5	42	117	172	231	391	485	382	306	297	289	271	184	131	54	17	1	0	485	0	141
2	0	0	0	0	0	0	4	12	35	58	103	260	372	268	197	380	300	130	213	129	34	3	0	0	380	0	104
3	0	0	0	0	0	0	6	30	101	302	236	212	323	235	151	232	315	113	68	52	31	8	0	0	323	0	101
4	0	0	0	0	0	0	5	37	81	109	147	155	186	233	266	310	325	207	148	110	76	20	2	0	325	0	101
5	0	0	0	0	0	0	9	26	57	95	213	192	209	206	219	251	305	325	241	128	77	16	1	0	325	0	107
6	0	0	0	0	0	0	7	28	84	106	148	125	149	181	891	614	270	258	172	80	61	18	1	0	891	0	133
7	0	0	0	0	0	0	3	19	41	82	74	81	94	99	161	187	130	83	48	32	16	6	0	0	187	0	48
8	0	0	0	0	0	0	6	29	84	217	268	258	249	242	276	361	290	294	159	69	32	14	1	0	361	0	119
9	0	0	0	0	0	0	3	16	40	72	87	120	184	217	187	169	136	122	83	54	43	16	2	0	217	0	65
10	0	0	0	0	0	0	10	46	98	162	301	457	415	409	502	452	362	337	240	121	45	12	1	0	502	0	165
11	0	0	0	0	0	0	8	18	29	48	51	125	231	209	169	106	79	51	51	42	20	9	1	0	231	0	52
12	0	0	0	0	0	0	3	8	19	42	60	114	192	197	146	126	78	57	45	33	18	7	1	0	197	0	48
13	0	0	0	0	0	0	2	5	12	44	126	97	93	182	131	104	114	153	60	41	27	10	2	0	182	0	50
14	0	0	0	0	0	1	8	36	93	135	137	125	179	420	357	416	458	498	146	105	89	18	3	0	498	0	134
15	0	0	0	0	0	1	12	63	115	153	203	265	405	365	420	244	126	107	63	27	36	21	3	0	420	0	110
16	0	0	0	0	0	0	3	20	48	96	229	323	349	186	355	322	545	590	265	37	29	19	7	0	590	0	143
17	0	0	0	0	0	5	62	174	308	448	570	673	750	782	796	764	616	556	274	93	53	37	12	0	796	0	291
18	0	0	0	0	0	1	10	18	37	55	63	79	77	91	168	224	268	284	134	86	49	35	6	0	284	0	70
19	0	0	0	0	0	6	37	114	281	445	571	675	745	767	795	763	695	588	268	35	27	19	8	0	795	0	285
20	0	0	0	0	0	6	67	182	313	450	577	683	756	789	799	750	690	561	270	39	29	20	8	0	799	0	291
21	0	0	0	0	0	9	80	189	315	453	576	675	744	744	759	746	662	550	271	40	29	21	8	1	759	0	286
22	0	0	0	0	0	9	69	181	307	446	570	674	752	777	611	627	498	360	267	96	22	14	3	0	777	0	262
23	0	0	0	0	0	1	5	17	47	53	52	46	47	75	86	83	44	40	45	71	56	36	3	0	86	0	34
24	0	0	0	0	0	1	13	30	40	43	98	132	181	130	166	91	101	158	83	86	30	21	10	1	181	0	59
25	0	0	0	0	0	15	64	215	353	461	580	684	760	787	801	760	689	527	304	70	42	34	8	1	801	0	298
26	0	0	0	0	0	13	73	177	367	363	463	678	776	822	821	786	564	599	337	96	56	38	12	1	822	0	293
27	0	0	0	0	0	15	74	166	274	446	578	683	761	792	809	775	699	578	321	78	49	38	18	1	809	0	298
28	0	0	0	0	0	9	72	167	298	457	373	542	776	788	795	714	455	479	153	111	75	40	21	1	795	0	264
29	0	0	0	0	0	16	57	139	174	255	330	437	595	659	635	488	649	561	320	60	63	52	23	2	659	0	230
30	0	0	0	0	0	13	50	112	262	359	510	603	478	397	661	585	265	162	242	122	64	22	6	0	661	0	205
31	0	0	0	0	0	1	4	10	27	61	127	184	182	125	108	106	82	76	53	27	18	7	4	0	184	0	50
Max.	**0**	**0**	**0**	**0**	**0**	**16**	**80**	**215**	**367**	**461**	**580**	**684**	**776**	**822**	**891**	**786**	**699**	**599**	**337**	**131**	**89**	**52**	**23**	**2**	**891**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**12**	**42**	**51**	**46**	**47**	**75**	**86**	**83**	**44**	**40**	**45**	**27**	**16**	**3**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**4**	**27**	**75**	**144**	**216**	**279**	**347**	**403**	**405**	**437**	**414**	**358**	**312**	**178**	**74**	**44**	**21**	**6**	**0**			**156**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	2	11	18	29	142	95	147	126	68	82	108	160	99	61	50	26	16	6	0	160	0	52
2	0	0	0	0	0	7	30	54	104	123	188	215	389	471	308	212	216	159	120	138	33	19	7	0	471	0	116
3	0	0	0	0	0	2	13	49	84	166	245	198	118	235	240	466	339	121	69	43	32	17	4	1	466	0	102
4	0	0	0	0	0	4	16	47	45	128	108	117	153	294	296	346	293	238	323	141	108	25	8	1	346	0	112
5	0	0	0	0	0	3	9	16	21	36	63	66	53	66	68	73	97	74	68	73	41	29	13	1	97	0	36
6	0	0	0	0	0	9	27	56	134	361	430	583	741	756	807	795	729	625	346	72	79	24	11	3	807	0	274
7	0	0	0	0	1	18	96	190	334	471	591	699	776	793	818	788	286	82	56	34	17	8	3	0	818	0	253
8	0	0	0	0	0	5	18	44	238	460	587	661	490	586	577	541	549	528	233	55	61	63	24	3	661	0	238
9	0	0	0	0	1	10	67	193	364	489	619	707	590	706	725	695	686	642	351	30	24	19	12	3	725	0	289
10	0	0	0	0	1	16	50	66	200	288	333	394	539	458	770	576	537	208	142	119	41	54	23	2	770	0	201
11	0	0	0	0	0	3	11	23	38	66	174	157	118	87	110	161	90	123	128	151	103	48	17	2	174	0	67
12	0	0	0	0	1	21	110	226	358	489	606	705	774	686	697	629	307	286	157	103	63	46	13	2	774	0	262
13	0	0	0	0	0	2	15	44	58	154	204	165	203	201	393	657	571	455	316	46	26	21	15	4	657	0	148
14	0	0	0	0	1	6	29	44	92	96	153	242	357	493	647	466	477	314	244	135	84	35	12	4	647	0	164
15	0	0	0	0	2	16	46	135	213	242	343	372	381	680	811	708	631	522	277	139	100	59	20	3	811	0	237
16	0	0	0	0	1	19	103	234	194	224	483	290	199	368	733	744	625	585	337	92	43	23	15	4	744	0	221
17	0	0	0	0	2	27	120	219	339	480	509	399	463	566	509	493	614	624	334	34	28	22	13	3	624	0	241
18	0	0	0	0	1	11	41	80	183	279	386	356	543	771	754	792	690	626	361	44	34	31	15	4	792	0	250
19	0	0	0	0	2	22	114	235	358	465	593	646	720	616	340	341	368	378	311	138	79	32	22	4	720	0	241
20	0	0	0	0	2	14	53	144	264	431	362	588	684	771	714	481	369	590	373	84	98	38	14	3	771	0	253
21	0	0	0	0	0	3	19	27	84	112	175	261	388	508	669	699	611	430	354	57	60	58	28	4	699	0	190
22	0	0	0	0	0	5	18	54	58	120	170	159	158	274	144	227	326	279	306	128	103	29	21	3	326	0	108
23	0	0	0	0	1	15	28	59	179	431	644	801	838	843	832	798	734	643	390	28	22	17	11	4	843	0	305
24	0	0	0	0	0	3	9	28	47	82	122	89	73	56	83	82	72	56	40	28	19	9	4	1	122	0	38
25	0	0	0	0	0	5	17	34	45	123	120	125	147	250	270	295	166	149	89	39	17	14	6	1	295	0	80
26	0	0	0	0	0	3	13	26	51	83	99	129	173	176	181	159	268	401	286	181	115	66	18	1	401	0	101
27	0	0	0	0	0	3	12	36	52	34	86	199	240	249	315	405	655	384	253	184	68	54	19	3	655	0	135
28	0	0	0	0	1	10	27	63	106	177	340	288	350	548	478	249	174	146	116	52	30	26	8	2	548	0	133
29	0	0	0	0	0	3	15	25	60	92	57	86	70	142	428	648	546	261	79	41	40	34	7	2	648	0	110
30	0	0	0	0	1	17	116	215	309	311	583	706	775	804	820	793	729	633	379	32	25	19	12	4	820	0	303
Max.	**0**	**0**	**0**	**0**	**2**	**27**	**120**	**235**	**364**	**489**	**644**	**801**	**838**	**843**	**832**	**798**	**734**	**643**	**390**	**184**	**115**	**66**	**28**	**4**	**843**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**16**	**21**	**34**	**57**	**66**	**53**	**56**	**68**	**73**	**72**	**56**	**40**	**28**	**17**	**8**	**3**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**1**	**9**	**42**	**89**	**155**	**239**	**316**	**352**	**388**	**451**	**487**	**481**	**431**	**355**	**230**	**83**	**54**	**32**	**13**	**2**			**175**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	1	19	101	213	333	462	594	692	757	811	826	805	738	613	374	98	49	60	23	2	826	0	315
2	0	0	0	0	1	6	53	184	363	438	467	724	864	888	799	592	739	463	249	129	44	10	5	2	888	0	292
3	0	0	0	0	0	1	11	16	23	36	57	78	111	114	117	148	86	95	73	29	21	11	4	1	148	0	43
4	0	0	0	0	0	2	7	15	18	56	55	75	79	106	274	246	75	37	52	27	30	32	5	0	274	0	50
5	0	0	0	0	0	5	27	47	147	208	221	284	251	296	413	637	726	478	169	44	80	56	15	2	726	0	171
6	0	0	0	0	1	7	29	92	157	97	220	380	449	366	185	241	152	118	168	62	45	28	8	1	449	0	117
7	0	0	0	0	0	1	4	17	42	68	106	186	268	349	546	588	656	591	368	136	113	66	28	8	656	0	173
8	0	0	0	0	0	2	23	74	168	154	195	181	230	282	289	330	242	202	152	130	58	19	5	1	330	0	114
9	0	0	0	0	0	8	43	170	290	361	359	429	327	202	106	78	136	151	122	81	20	10	3	0	429	0	121
10	0	0	0	0	0	1	6	21	31	82	87	131	148	217	267	311	274	154	82	56	32	17	5	1	311	0	80
11	0	0	0	0	0	6	22	100	179	217	462	565	421	894	823	759	518	385	337	56	24	23	11	2	894	0	242
12	0	0	0	0	0	5	24	39	95	103	131	293	574	263		162		56	59	28	21	9	1	0	574	0	85
13	0	0	0	0	0	0	2	8	28	23	88	77	63	69	53	83	88	86	47	36	19	10	4	1	88	0	33
14	0	0	0	0	0	1	12	32	44	96	162	306	248	394	403	366	345	312	237	153	93	39	9	1	403	0	136
15	0	0	0	0	0	9	72	143	319	362	483	259	253	248	145	160	185	158	97	56	16	8	2	0	483	0	124
16	0	0	0	0	0	0	2	5	13	21	19	26	32	29	58	54	55	41	29	21	10	3	1	0	58	0	17
17	0	0	0	0	0	1	12	36	78	318	585	848	941	757	687	284	254	237	266	144	74	35	10	1	941	0	232
18	0	0	0	0	0	6	81	205	325	457	566	675	749	784	802	776	711	615	377	27	22	16	8	1	802	0	300
19	0	0	0	0	0	4	54	151	299	428	557	660	742	776	809	777	301	594	270	39	30	13	7	1	809	0	271
20	0	0	0	0	0	10	83	105	101	185	128	139	172	332	760	834	724	596	371	62	48	46	8	0	834	0	196
21	0	0	0	0	0	0	8	20	44	100	150	211	339	709	682	713	317	317	363	77	61	35	12	1	713	0	173
22	0	0	0	0	0	4	30	83	127	212	182	141	91	72	52	91	87	100	78	65	31	14	7	0	212	0	61
23	0	0	0	0	0	1	18	52	89	239	249	451	608	843	824	403	367	299	211	112	15	5	1	0	843	0	199
24	0	0	0	0	0	0	6	25	39	67	114	171	193	224	281	427	500	436	356	67	81	27	7	1	500	0	126
25	0	0	0	0	0	1	10	41	96	150	195	620	352	695	816	875	467	285	90	88	54	39	9	0	875	0	203
26	0	0	0	0	0	0	7	43	82	261	532	541	415	681	237	243	278	124	75	57	45	13	1	0	681	0	151
27	0	0	0	0	0	0	2	10	24	24	30	39	48	76	126	127	186	200	174	144	61	29	7	0	200	0	54
28	0	0	0	0	0	1	38	147	273	406	528	632	708	745	771	771	690	520	322	77	50	25	6	0	771	0	280
29	0	0	0	0	0	2	37	104	274	407	532	639	722	760	767	724	548	382	241	112	85	28	5	0	767	0	265
30	0	0	0	0	0	0	5	37	170	310	238	243	270	296	485	760	589	381	315	132	75	44	12	0	760	0	182
31	0	0	0	0	0	1	10	118	235	363	492	603	685	736	733	486	276	282	213	105	69	42	9	1	736	0	227
Max.	**0**	**0**	**0**	**0**	**1**	**19**	**101**	**213**	**363**	**462**	**594**	**848**	**941**	**894**	**826**	**875**	**739**	**615**	**377**	**153**	**113**	**66**	**28**	**8**	**941**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**13**	**21**	**19**	**26**	**32**	**29**	**52**	**54**	**55**	**37**	**29**	**21**	**10**	**3**	**1**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**3**	**27**	**76**	**145**	**216**	**283**	**364**	**391**	**452**	**471**	**447**	**377**	**300**	**204**	**79**	**48**	**26**	**8**	**1**			**163**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	1	27	65	83	76	63	76	79	100	135	187	162	143	90	47	28	8	1	0	187	0	57
2	0	0	0	0	0	0	3	13	53	60	83	127	222	193	242	173	197	114	69	49	17	10	2	0	242	0	68
3	0	0	0	0	0	0	2	16	45	109	151	213	210	346	314	375	389	261	157	102	55	13	1	0	389	0	115
4	0	0	0	0	0	0	3	17	46	76	110	120	163	231	205	242	169	149	65	28	20	15	2	0	242	0	69
5	0	0	0	0	0	0	7	30	84	169	305	279	525	517	551	699	655	513	199	94	63	20	3	0	699	0	196
6	0	0	0	0	0	0	8	37	213	374	535	622	686	723	742	712	651	537	304	101	34	8	6	0	742	0	262
7	0	0	0	0	0	0	21	105	226	363	491	598	679	739	766	750	697	562	285	39	19	12	3	0	766	0	265
8	0	0	0	0	0	0	13	109	232	364	490	598	680	716	737	708	641	541	257	24	18	11	3	0	737	0	256
9	0	0	0	0	0	0	14	107	230	363	493	601	681	714	714	699	592	515	256	92	40	21	2	0	714	0	256
10	0	0	0	0	0	0	1	9	30	116	222	253	373	409	507	625	546	483	160	42	34	9	0	0	625	0	159
11	0	0	0	0	0	0	1	11	54	157	363	316	487	551	644	532	483	373	239	67	30	10	1	0	644	0	180
12	0	0	0	0	0	0	6	42	66	115	218	237	260	263	254	322	201	136	125	81	35	11	0	0	322	0	99
13	0	0	0	0	0	0	2	16	62	98	157	141	255	186	123	82	52	35	27	29	14	3	0	0	255	0	53
14	0	0	0	0	0	0	1	9	39	52	82	120	162	197	184	147	201	178	114	78	37	8	0	0	201	0	67
15	0	0	0	0	0	0	0	9	20	31	52	79	98	114	100	90	66	75	53	30	12	1	0	0	114	0	35
16	0	0	0	0	0	0	1	23	43	55	55	62	64	160	504	459	217	279	202	66	19	6	0	0	504	0	92
17	0	0	0	0	0	0	1	4	13	52	37	57	54	93	104	161	174	182	75	40	28	6	0	0	182	0	45
18	0	0	0	0	0	0	4	23	66	78	82	106	142	206	201	224	200	182	120	68	35	8	0	0	224	0	73
19	0	0	0	0	0	0	1	19	63	80	201	244	342	589	445	381	338	215	185	101	35	7	0	0	589	0	135
20	0	0	0	0	0	0	1	14	36	101	233	330	281	337	374	407	389	416	187	68	31	6	0	0	416	0	134
21	0	0	0	0	0	0	1	23	51	69	98	120	181	384	641	538	409	290	186	71	21	3	0	0	641	0	129
22	0	0	0	0	0	0	0	13	90	196	235	413	314	449	708	650	541	261	190	79	46	11	0	0	708	0	175
23	0	0	0	0	0	0	0	10	42	117	167	236	295	222	160	134	144	116	108	52	23	2	0	0	295	0	76
24	0	0	0	0	0	0	0	22	68	118	427	501	568	580	488	466	562	443	121	36	46	6	0	0	580	0	185
25	0	0	0	0	0	0	0	4	12	18	22	36	55	41	37	67	67	39	23	9	5	1	0	0	67	0	18
26	0	0	0	0	0	0	0	25	73	88	161	218	242	345	388	209	296	296	94	66	32	4	0	0	388	0	106
27	0	0	0	0	0	0	0	13	67	166	293	314	284	334	435	355	478	324	102	44	26	3	0	0	478	0	135
28	0	0	0	0	0	0	1	17	103	141	383	269	283	311	299	280	365	408	91	36	19	3	0	0	408	0	125
29	0	0	0	0	0	0	0	17	124	264	394	493	577	625	631	600	499	406	81	34	19	2	0	0	631	0	199
30	0	0	0	0	0	0	1	28	85	233	332	404	416	363	297	233	382	295	73	55	23	1	0	0	416	0	134
31	0	0	0	0	0	0	0	1	10	28	69	102	75	101	84	59	58	63	64	29	9	1	0	0	102	0	31
Max.	**0**	**0**	**0**	**0**	**0**	**1**	**27**	**109**	**232**	**374**	**535**	**622**	**686**	**739**	**766**	**750**	**697**	**562**	**304**	**102**	**63**	**21**	**6**	**0**	**766**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**10**	**18**	**22**	**36**	**54**	**41**	**37**	**59**	**52**	**35**	**23**	**9**	**5**	**1**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**27**	**78**	**140**	**226**	**267**	**314**	**359**	**388**	**373**	**349**	**285**	**139**	**57**	**28**	**7**	**1**	**0**			**127**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	3	13	30	67	109	140	159	144	71	63	50	45	15	4	0	0	0	159	0	38
2	0	0	0	0	0	0	0	1	6	13	10	23	31	87	108	95	78	59	34	20	5	0	0	0	108	0	24
3	0	0	0	0	0	0	0	4	16	18	25	61	76	85	92	100	140	132	121	71	22	1	0	0	140	0	40
4	0	0	0	0	0	0	0	7	40	110	198	403	494	485	486	511	511	333	128	68	15	1	0	0	511	0	158
5	0	0	0	0	0	0	0	7	76	168	303	483	513	574	596	590	436	252	57	25	10	0	0	0	596	0	170
6	0	0	0	0	0	0	0	2	13	28	44	38	48	52	65	67	69	70	32	20	4	0	0	0	70	0	23
7	0	0	0	0	0	0	0	1	7	19	24	32	35	53	64	49	89	133	37	20	7	0	0	0	133	0	24
8	0	0	0	0	0	0	0	1	17	98	72	42	130	154	46	33	23	19	22	11	1	0	0	0	154	0	28
9	0	0	0	0	0	0	0	1	8	23	48	59	79	104	104	87	53	28	15	16	5	0	0	0	104	0	26
10	0	0	0	0	0	0	0	1	18	86	119	180	214	190	227	180	170	117	81	39	4	0	0	0	227	0	68
11	0	0	0	0	0	0	0	2	31	162	204	209	410	549	490	521	198	82	33	11	2	0	0	0	549	0	121
12	0	0	0	0	0	0	0	0	8	17	27	48	68	49	52	36	29	24	12	5	1	0	0	0	68	0	16
13	0	0	0	0	0	0	0	0	2	5	9	16	26	31	31	60	49	34	41	18	1	0	0	0	60	0	13
14	0	0	0	0	0	0	0	0	4	12	64	39	26	59	63	62	37	58	41	26	2	0	0	0	64	0	21
15	0	0	0	0	0	0	0	0	6	10	20	34	32	56	83	77	57	45	23	15	1	0	0	0	83	0	19
16	0	0	0	0	0	0	0	0	9	29	61	86	133	203	243	363	342	206	94	29	4	0	0	0	363	0	75
17	0	0	0	0	0	0	0	2	55	113	220	197	174	122	109	60	54	24	11	3	0	0	0	0	220	0	48
18	0	0	0	0	0	0	0	1	20	137	96	63	113	61	30	27	27	18	7	2	0	0	0	0	137	0	25
19	0	0	0	0	0	0	0	0	8	37	57	93	120	286	261	276	308	121	80	32	2	0	0	0	308	0	70
20	0	0	0	0	0	0	0	1	15	119	162	429	335	359	239	150	163	135	58	26	2	0	0	0	429	0	91
21	0	0	0	0	0	0	0	1	43	152	283	395	467	525	558	439	366	187	50	22	2	0	0	0	558	0	145
22	0	0	0	0	0	0	0	1	34	159	279	378	427	385	312	289	220	119	65	20	1	0	0	0	427	0	112
23	0	0	0	0	0	0	0	0	11	22	47	74	153	91	63	78	82	92	39	5	0	0	0	0	153	0	32
24	0	0	0	0	0	0	0	0	3	20	36	63	71	69	68	70	60	42	26	9	0	0	0	0	71	0	22
25	0	0	0	0	0	0	0	0	5	33	42	38	83	93	100	85	85	49	30	7	0	0	0	0	100	0	27
26	0	0	0	0	0	0	0	0	7	50	64	100	198	407	434	424	339	155	39	12	1	0	0	0	434	0	93
27	0	0	0	0	0	0	0	0	19	105	244	348	448	458	474	443	333	154	26	12	0	0	0	0	474	0	128
28	0	0	0	0	0	0	0	0	18	128	246	348	422	497	475	404	337	109	54	12	0	0	0	0	497	0	127
29	0	0	0	0	0	0	0	0	8	42	108	123	184	212	171	213	221	107	38	7	0	0	0	0	221	0	60
30	0	0	0	0	0	0	0	0	15	116	227	332	408	444	440	398	328	136	23	8	0	0	0	0	444	0	120
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**76**	**168**	**303**	**483**	**513**	**574**	**596**	**590**	**511**	**333**	**128**	**71**	**22**	**1**	**0**	**0**	**596**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**9**	**16**	**26**	**31**	**30**	**27**	**23**	**18**	**7**	**2**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**18**	**69**	**113**	**161**	**202**	**230**	**221**	**209**	**176**	**103**	**45**	**20**	**3**	**0**	**0**	**0**			**65**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	15	140	186	214	139	245	122	67	60	64	28	7	0	0	0	0	245	0	54
2	0	0	0	0	0	0	0	0	13	103	208	302	388	430	432	399	325	154	56	9	0	0	0	0	432	0	117
3	0	0	0	0	0	0	0	0	2	14	40	209	179	227	252	305	196	105	52	7	0	0	0	0	305	0	66
4	0	0	0	0	0	0	0	0	7	85	209	317	392	420	420	378	302	125	36	7	0	0	0	0	420	0	112
5	0	0	0	0	0	0	0	0	5	41	251	343	398	458	432	355	307	129	28	5	0	0	0	0	458	0	115
6	0	0	0	0	0	0	0	0	4	35	136	287	373	406	361	393	292	114	25	4	0	0	0	0	406	0	101
7	0	0	0	0	0	0	0	0	5	81	194	289	362	432	375	228	157	96	35	5	0	0	0	0	432	0	94
8	0	0	0	0	0	0	0	0	4	80	191	292	360	403	400	355	280	104	18	3	0	0	0	0	403	0	104
9	0	0	0	0	0	0	0	0	0	7	14	15	15	24	19	20	15	7	3	0	0	0	0	0	24	0	6
10	0	0	0	0	0	0	0	0	3	85	209	235	335	287	193	93	112	38	27	2	0	0	0	0	335	0	67
11	0	0	0	0	0	0	0	0	0	2	4	9	10	20	38	30	24	17	7	0	0	0	0	0	38	0	7
12	0	0	0	0	0	0	0	0	1	35	84	112	199	288	258	154	193	83	29	3	0	0	0	0	288	0	60
13	0	0	0	0	0	0	0	0	2	25	50	63	96	113	86	48	55	51	13	1	0	0	0	0	113	0	25
14	0	0	0	0	0	0	0	0	0	11	33	70	105	91	94	66	53	38	8	0	0	0	0	0	105	0	24
15	0	0	0	0	0	0	0	0	0	10	59	112	123	180	270	191	157	66	15	0	0	0	0	0	270	0	49
16	0	0	0	0	0	0	0	0	0	13	42	79	145	176	153	157	130	52	16	1	0	0	0	0	176	0	40
17	0	0	0	0	0	0	0	0	1	37	100	151	170	214	196	144	65	28	9	0	0	0	0	0	214	0	47
18	0	0	0	0	0	0	0	0	0	9	52	160	320	304	311	255	169	49	12	0	0	0	0	0	320	0	68
19	0	0	0	0	0	0	0	0	0	14	45	123	154	220	169	69	75	62	21	0	0	0	0	0	220	0	40
20	0	0	0	0	0	0	0	0	0	12	43	85	179	158	201	183	103	62	13	0	0	0	0	0	201	0	43
21	0	0	0	0	0	0	0	0	0	12	62	128	238	264	235	171	123	58	15	0	0	0	0	0	264	0	54
22	0	0	0	0	0	0	0	0	0	25	125	220	288	311	277	250	177	53	7	0	0	0	0	0	311	0	72
23	0	0	0	0	0	0	0	0	0	12	100	208	275	273	272	268	192	52	8	0	0	0	0	0	275	0	69
24	0	0	0	0	0	0	0	0	0	23	112	198	260	287	294	199	72	29	6	0	0	0	0	0	294	0	62
25	0	0	0	0	0	0	0	0	0	2	18	57	133	77	35	65	44	28	4	0	0	0	0	0	133	0	19
26	0	0	0	0	0	0	0	0	0	8	62	188	260	295	220	241	171	40	5	0	0	0	0	0	295	0	62
27	0	0	0	0	0	0	0	0	0	13	91	186	251	288	283	242	171	37	5	0	0	0	0	0	288	0	65
28	0	0	0	0	0	0	0	0	0	12	94	187	247	283	262	225	141	39	4	0	0	0	0	0	283	0	62
29	0	0	0	0	0	0	0	0	0	8	83	113	130	120	190	103	58	31	4	0	0	0	0	0	190	0	35
30	0	0	0	0	0	0	0	0	0	2	18	57	78	136	102	98	66	35	3	0	0	0	0	0	136	0	25
31	0	0	0	0	0	0	0	0	0	8	69	157	216	249	233	206	146	31	3	0	0	0	0	0	249	0	55
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**140**	**251**	**343**	**398**	**458**	**432**	**399**	**325**	**154**	**56**	**9**	**0**	**0**	**0**	**0**	**458**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**9**	**10**	**20**	**19**	**20**	**15**	**7**	**3**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**31**	**96**	**167**	**220**	**248**	**232**	**192**	**143**	**61**	**17**	**2**	**0**	**0**	**0**	**0**			**59**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	5	45	119	175	229	279	231	121	35	2	0	0	0	0	0	279	0	52
2	0	0	0	0	0	0	0	0	0	4	40	117	135	175	238	208	87	33	3	0	0	0	0	0	238	0	43
3	0	0	0	0	0	0	0	0	0	2	31	77	153	109	127	140	94	35	3	0	0	0	0	0	153	0	32
4	0	0	0	0	0	0	0	0	0	2	18	53	87	109	93	61	55	16	1	0	0	0	0	0	109	0	21
5	0	0	0	0	0	0	0	0	0	2	33	52	62	82	58	54	109	27	1	0	0	0	0	0	109	0	20
6	0	0	0	0	0	0	0	0	0	1	28	64	120	173	236	124	53	21	1	0	0	0	0	0	236	0	34
7	0	0	0	0	0	0	0	0	0	2	30	99	156	195	206	137	89	24	2	0	0	0	0	0	206	0	39
8	0	0	0	0	0	0	0	0	0	1	9	28	62	67	61	36	24	5	0	0	0	0	0	0	67	0	12
9	0	0	0	0	0	0	0	0	0	0	4	10	19	24	20	12	8	2	0	0	0	0	0	0	24	0	4
10	0	0	0	0	0	0	0	0	0	0	2	4	6	3	6	7	5	4	0	0	0	0	0	0	7	0	1
11	0	0	0	0	0	0	0	0	0	0	5	16	38	50	71	106	90	21	0	0	0	0	0	0	106	0	17
12	0	0	0	0	0	0	0	0	0	1	31	108	154	248	134	87	46	9	0	0	0	0	0	0	248	0	34
13	0	0	0	0	0	0	0	0	0	0	2	6	8	41	51	58	23	5	0	0	0	0	0	0	58	0	8
14	0	0	0	0	0	0	0	0	0	0	13	50	81	90	71	50	29	11	0	0	0	0	0	0	90	0	16
15	0	0	0	0	0	0	0	0	0	0	13	87	155	137	89	51	14	3	0	0	0	0	0	0	155	0	23
16	0	0	0	0	0	0	0	0	0	0	1	10	82	227	177	124	52	9	0	0	0	0	0	0	227	0	28
17	0	0	0	0	0	0	0	0	0	0	14	74	136	166	159	120	54	7	0	0	0	0	0	0	166	0	30
18	0	0	0	0	0	0	0	0	0	0	16	85	150	179	172	132	61	7	0	0	0	0	0	0	179	0	33
19	0	0	0	0	0	0	0	0	0	0	6	26	92	95	64	66	62	12	0	0	0	0	0	0	95	0	17
20	0	0	0	0	0	0	0	0	0	0	5	33	135	168	162	121	54	6	0	0	0	0	0	0	168	0	28
21	0	0	0	0	0	0	0	0	0	0	7	45	128	159	157	104	21	6	0	0	0	0	0	0	159	0	26
22	0	0	0	0	0	0	0	0	0	0	5	42	90	150	154	119	49	4	0	0	0	0	0	0	154	0	25
23	0	0	0	0	0	0	0	0	0	0	1	8	23	38	32	34	13	1	0	0	0	0	0	0	38	0	6
24	0	0	0	0	0	0	0	0	0	0	1	4	2	6	7	7	4	1	0	0	0	0	0	0	7	0	1
25	0	0	0	0	0	0	0	0	0	0	2	12	29	52	76	64	49	11	0	0	0	0	0	0	76	0	12
26	0	0	0	0	0	0	0	0	0	0	3	12	43	68	135	96	42	5	0	0	0	0	0	0	135	0	17
27	0	0	0	0	0	0	0	0	0	0	2	12	22	33	32	23	6	1	0	0	0	0	0	0	33	0	5
28	0	0	0	0	0	0	0	0	0	0	0	3	15	26	37	26	13	1	0	0	0	0	0	0	37	0	5
29	0	0	0	0	0	0	0	0	0	0	1	18	46	92	64	43	17	2	0	0	0	0	0	0	92	0	12
30	0	0	0	0	0	0	0	0	0	0	4	47	109	148	145	105	39	3	0	0	0	0	0	0	148	0	25
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**45**	**119**	**175**	**248**	**279**	**231**	**121**	**35**	**3**	**0**	**0**	**0**	**0**	**0**	**279**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**3**	**6**	**7**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12**	**44**	**84**	**111**	**110**	**85**	**46**	**11**	**0**	**0**	**0**	**0**	**0**	**0**			**21**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Solar (Watts/m^2)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	1	27	61	79	73	39	15	1	0	0	0	0	0	0	79	0	12
2	0	0	0	0	0	0	0	0	0	0	0	5	7	13	20	36	17	1	0	0	0	0	0	0	36	0	4
3	0	0	0	0	0	0	0	0	0	0	0	3	6	11	7	6	5	0	0	0	0	0	0	0	11	0	2
4	0	0	0	0	0	0	0	0	0	0	0	3	7	17	10	10	5	1	0	0	0	0	0	0	17	0	2
5	0	0	0	0	0	0	0	0	0	0	0	4	13	20	21	11	3	0	0	0	0	0	0	0	21	0	3
6	0	0	0	0	0	0	0	0	0	0	0	5	9	16	19	17	9	1	0	0	0	0	0	0	19	0	3
7	0	0	0	0	0	0	0	0	0	0	2	34	87	118	101	60	16	1	0	0	0	0	0	0	118	0	17
8	0	0	0	0	0	0	0	0	0	0	0	2	8	14	18	19	6	1	0	0	0	0	0	0	19	0	3
9	0	0	0	0	0	0	0	0	0	0	0	2	8	18	33	39	12	1	0	0	0	0	0	0	39	0	5
10	0	0	0	0	0	0	0	0	0	0	1	12	24	40	58	45	17	1	0	0	0	0	0	0	58	0	8
11	0	0	0	0	0	0	0	0	0	0	1	20	67	80	99	95	26	2	0	0	0	0	0	0	99	0	16
12	0	0	0	0	0	0	0	0	0	0	2	8	17	19	56	41	15	2	0	0	0	0	0	0	56	0	7
13	0	0	0	0	0	0	0	0	0	0	1	20	67	105	105	70	23	2	0	0	0	0	0	0	105	0	16
14	0	0	0	0	0	0	0	0	0	0	1	20	68	101	107	49	22	2	0	0	0	0	0	0	107	0	15
15	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	10	3	1	0	0	0	0	0	0	10	0	1
16	0	0	0	0	0	0	0	0	0	0	0	10	38	100	42	20	10	1	0	0	0	0	0	0	100	0	9
17	0	0	0	0	0	0	0	0	0	0	0	11	33	15	24	27	9	1	0	0	0	0	0	0	33	0	5
18	0	0	0	0	0	0	0	0	0	0	0	5	22	32	25	15	5	0	0	0	0	0	0	0	32	0	4
19	0	0	0	0	0	0	0	0	0	0	0	4	12	16	17	19	6	0	0	0	0	0	0	0	19	0	3
20	0	0	0	0	0	0	0	0	0	0	0	17	56	56	31	24	12	1	0	0	0	0	0	0	56	0	8
21	0	0	0	0	0	0	0	0	0	0	0	16	101	118	110	73	15	2	0	0	0	0	0	0	118	0	18
22	0	0	0	0	0	0	0	0	0	0	0	2	9	19	20	15	6	1	0	0	0	0	0	0	20	0	3
23	0	0	0	0	0	0	0	0	0	0	0	7	12	37	80	45	12	2	0	0	0	0	0	0	80	0	8
24	0	0	0	0	0	0	0	0	0	0	0	20	108	96	99	61	21	1	0	0	0	0	0	0	108	0	17
25	0	0	0	0	0	0	0	0	0	0	0	4	14	18	21	16	4	1	0	0	0	0	0	0	21	0	3
26	0	0	0	0	0	0	0	0	0	0	0	25	57	65	82	26	14	3	0	0	0	0	0	0	82	0	11
27	0	0	0	0	0	0	0	0	0	0	0	11	60	111	92	61	23	3	0	0	0	0	0	0	111	0	15
28	0	0	0	0	0	0	0	0	0	0	0	9	56	105	42	43	18	3	0	0	0	0	0	0	105	0	11
29	0	0	0	0	0	0	0	0	0	0	0	8	25	99	51	44	29	3	0	0	0	0	0	0	99	0	11
30	0	0	0	0	0	0	0	0	0	0	0	18	72	113	121	89	35	3	0	0	0	0	0	0	121	0	19
31	0	0	0	0	0	0	0	0	0	0	0	11	50	122	125	92	38	4	0	0	0	0	0	0	125	0	18
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**34**	**108**	**122**	**125**	**95**	**38**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**125**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**3**	**6**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**38**	**57**	**55**	**39**	**15**	**1**	**0**	**0**	**0**	**0**	**0**	**0**			**9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	999	998	996	994	994	993	992	991	990	989	988	988	987	986	986	986	985	985	985	985	985	985	985	985	999	985	988.9
2	985	985	985	984	984	984	984	983	983	983	983	983	983	982	982	981	981	981	980	980	979	979	979	979	985	979	982.1
3	979	978	978	978	978	977	977	977	977	977	977	977	977	977	977	977	978	978	978	979	979	979	979	980	980	977	977.8
4	980	980	981	981	981	981	981	981	981	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	980	981.5
5	982	982	982	982	982	982	982	982	981	981	982	982	982	982	982	982	983	983	984	984	984	985	986	986	986	981	982.7
6	987	988	988	988	989	989	989	989	990	990	991	991	991	991	990	990	990	990	989	989	989	989	989	989	991	987	989.3
7	989	989	989	989	989	989	988	988	988	987	987	988	987	987	987	988	989	990	991	992	992	993	994	994	994	987	989.3
8	995	995	995	996	996	996	996	996	996	996	996	996	996	995	995	994	994	994	993	993	992	992	992	991	996	991	994.5
9	991	991	991	990	990	989	989	989	989	989	989	989	989	990	989	990	990	990	990	990	991	991	991	992	992	989	989.9
10	992	992	993	992	992	992	992	993	993	993	994	994	994	995	995	994	995	994	995	995	995	995	995	996	996	992	993.8
11	996	997	997	997	997	997	997	997	997	998	998	999	999	999	999	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	996	998.7
12	1002	1002	1002	1002	1002	1001	1001	1000	1000	1000	1000	1000	1000	999	999	998	998	998	998	998	998	999	999	1000	1002	998	999.8
13	1001	1001	1002	1003	1003	1004	1004	1005	1006	1007	1008	1009	1009	1009	1009	1010	1009	1009	1010	1009	1009	1010	1010	1011	1011	1001	1007.0
14	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1008	1008	1007	1006	1005	1005	1004	1012	1004	1009.6
15	1004	1004	1004	1003	1001	1002	1000	1002	1003	1003	1004	1005	1004	1006	1005	1005	1006	1005	1005	1004	1004	1004	1003	1003	1006	1000	1003.7
16	1002	1002	1003	1003	1005	1005	1006	1007	1008	1010	1012	1014	1016	1016	1017	1018	1019	1020	1020	1021	1021	1022	1022	1022	1022	1002	1012.9
17	1022	1022	1022	1021	1020	1019	1018	1017	1016	1015	1015	1014	1013	1011	1010	1009	1009	1009	1009	1009	1010	1010	1011	1011	1022	1009	1014.4
18	1012	1013	1013	1013	1014	1015	1015	1016	1017	1017	1018	1019	1020	1021	1022	1022	1023	1023	1025	1025	1025	1026	1026	1027	1027	1012	1019.5
19	1027	1027	1027	1027	1027	1027	1026	1025	1026	1026	1026	1026	1026	1027	1027	1026	1025	1025	1025	1025	1025	1024	1024	1024	1027	1024	1025.9
20	1024	1023	1023	1022	1021	1020	1020	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1016	1017	1017	1018	1019	1019	1020	1024	1016	1019.0
21	1021	1021	1022	1022	1022	1022	1022	1021	1021	1021	1021	1020	1019	1018	1016	1015	1014	1013	1012	1011	1012	1012	1011	1011	1022	1011	1017.5
22	1011	1012	1012	1011	1012	1012	1012	1013	1013	1014	1015	1015	1016	1017	1018	1019	1018	1019	1019	1018	1018	1017	1017	1016	1019	1011	1015.2
23	1016	1017	1016	1016	1017	1018	1019	1021	1022	1022	1023	1024	1026	1027	1028	1028	1029	1030	1031	1028	1028	1030	1031	1031	1031	1016	1024.0
24	1031	1031	1030	1030	1028	1027	1026	1025	1023	1021	1020	1019	1018	1017	1016	1014	1013	1012	1010	1009	1008	1008	1006	1006	1031	1006	1018.7
25	1005	1004	1003	1003	1002	1001	1001	1002	1002	1003	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1007	1008	1010	1001	1004.0
26	1011	1012	1012	1013	1015	1016	1016	1017	1018	1019	1020	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1021	1020	1020	1022	1011	1018.7
27	1020	1019	1017	1017	1017	1016	1016	1014	1013	1012	1011	1010	1010	1008	1007	1006	1004	1003	1002	1001	1000	999	998	997	1020	997	1009.2
28	997	995	995	994	994	993	993	993	994	994	995	995	996	996	997	998	998	999	999	1000	1000	1001	1001	1002	1002	993	996.6
29	1002	1003	1003	1004	1004	1004	1003	1004	1003	1004	1004	1003	1003	1002	1002	1002	1001	1001	1000	1000	999	999	999	999	1004	999	1002.0
30	999	999	999	999	1000	1000	1000	1000	1000	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1003	1004	1004	1004	1004	999	1001.5
31	1004	1004	1005	1004	1005	1005	1005	1005	1005	1005	1005	1006	1006	1005	1005	1004	1005	1004	1004	1004	1004	1004	1004	1005	1006	1004	1004.6
Max.	**1031**	**1031**	**1030**	**1030**	**1028**	**1027**	**1026**	**1025**	**1026**	**1026**	**1026**	**1026**	**1026**	**1027**	**1028**	**1028**	**1029**	**1030**	**1031**	**1028**	**1028**	**1030**	**1031**	**1031**	**1031**		
Min.	**979**	**978**	**978**	**978**	**978**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**978**	**978**	**978**	**979**	**979**	**979**	**979**	**979**		**977**	
Avg.	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**			**1003.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1005	1005	1005	1005	1005	1004	1004	1005	1004	1004	1004	1004	1004	1003	1003	1002	1002	1002	1002	1002	1002	1002	1001	1001	1005	1001	1003.2
2	1002	1002	1002	1002	1003	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1007	1008	1008	1008	1008	1002	1004.7
3	1008	1008	1009	1009	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1009	1006	1007.8
4	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1005	1005	1005	1005	1005	1006	1004	1005.1
5	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1003	1002	1002	1001	1001	1001	1000	1000	999	999	1005	999	1002.9
6	999	999	999	998	998	998	998	998	998	998	999	999	999	1000	1000	1000	1000	1000	1001	1001	1001	1002	1002	1003	1003	998	999.5
7	1003	1005	1005	1006	1006	1007	1008	1009	1010	1010	1011	1012	1012	1013	1013	1014	1014	1014	1014	1015	1015	1015	1016	1016	1016	1003	1011.0
8	1016	1017	1017	1017	1017	1017	1016	1016	1016	1017	1016	1016	1015	1015	1014	1013	1013	1011	1011	1011	1009	1007	1007	1006	1017	1006	1013.7
9	1005	1004	1003	1002	1001	1000	999	997	996	995	994	993	992	991	991	990	989	989	988	988	988	989	989	989	1005	988	994.3
10	989	989	990	990	989	990	989	989	989	990	990	990	990	989	989	989	989	989	989	988	988	989	989	989	990	988	989.2
11	989	989	990	990	990	990	990	990	990	990	990	990	990	990	990	989	990	990	990	990	990	991	991	992	992	989	989.9
12	993	993	993	994	995	996	997	997	997	998	999	999	1000	1001	1001	1001	1001	1002	1002	1001	1002	1001	1001	1000	1002	993	998.5
13	999	998	998	996	994	992	990	989	988	987	986	986	985	984	984	983	983	982	982	981	981	981	981	980	999	980	987.1
14	980	980	979	979	979	978	978	978	978	978	978	979	979	980	981	982	981	983	984	985	987	986	987	988	988	978	981.1
15	989	990	993	994	997	998	999	1000	1003	1005	1006	1004	1006	1007	1008	1009	1010	1010	1010	1010	1011	1011	1012	1012	1012	989	1004.0
16	1012	1011	1010	1008	1006	1004	1003	1001	999	998	996	994	993	991	990	991	990	991	992	994	995	997	997	998	1012	990	998.4
17	998	999	998	998	997	996	994	992	990	987	984	983	982	980	980	980	981	982	983	985	987	989	990	991	999	980	988.6
18	992	992	992	991	991	991	991	992	993	994	995	996	996	997	997	997	997	996	996	996	996	996	995	994	997	991	994.4
19	994	993	990	987	986	985	983	981	980	979	977	976	975	974	973	971	969	968	969	970	971	972	974	975	994	968	977.9
20	978	982	984	986	988	989	990	989	989	989	989	989	989	988	987	986	985	983	983	982	982	982	981	981	990	978	985.5
21	980	980	980	979	979	978	978	978	979	980	980	982	983	983	983	984	985	986	987	987	988	989	990	991	991	978	982.9
22	992	993	994	994	995	995	996	997	998	999	1000	1002	1003	1004	1006	1006	1007	1007	1008	1009	1009	1010	1011	1011	1011	992	1001.9
23	1012	1012	1013	1013	1013	1013	1013	1014	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1015	1016	1016	1016	1016	1016	1016	1012	1014.6
24	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1015	1014	1014	1014	1013	1013	1013	1013	1013	1012	1012	1016	1012	1014.3
25	1011	1011	1010	1009	1009	1008	1008	1008	1008	1009	1009	1009	1009	1009	1008	1009	1009	1009	1009	1010	1011	1011	1011	1011	1011	1008	1009.3
26	1011	1011	1011	1010	1010	1010	1009	1009	1008	1007	1007	1006	1006	1005	1004	1003	1002	1002	1001	1001	1001	1001	1001	1001	1011	1001	1005.7
27	1000	1000	1001	1001	1002	1002	1002	1002	1002	1002	1002	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1003	1000	1001.9
28	1002	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1000	1001	1002	1000	1000.5
29	1000	1000	1000	1000	999	998	998	997	997	997	996	996	996	995	995	994	993	993	992	992	991	991	990	990	1000	990	995.4
Max.	**1016**	**1017**	**1017**	**1017**	**1017**	**1017**	**1016**	**1016**	**1016**	**1017**	**1016**	**1016**	**1016**	**1016**	**1016**	**1016**	**1016**	**1016**	**1015**	**1016**	**1016**	**1016**	**1016**	**1016**	**1017**		
Min.	**978**	**980**	**979**	**979**	**979**	**978**	**978**	**978**	**978**	**978**	**977**	**976**	**975**	**974**	**973**	**971**	**969**	**968**	**969**	**970**	**971**	**972**	**974**	**975**		**968**	
Avg.	**999**	**1000**	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**	**999**	**999**			**998.7**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	990	990	990	990	989	990	990	991	991	992	993	993	994	994	994	994	994	994	993	993	993	993	993	993	994	989	992.0
2	992	993	993	993	993	993	994	995	996	997	998	999	999	1000	1000	1000	1000	1000	1001	1001	1002	1002	1003	1004	1004	992	997.9
3	1005	1006	1007	1007	1007	1008	1007	1007	1007	1007	1007	1007	1007	1007	1006	1007	1007	1008	1008	1009	1009	1010	1010	1010	1010	1005	1007.5
4	1010	1011	1010	1009	1009	1009	1008	1008	1008	1009	1009	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1005	1004	1011	1004	1008.0
5	1001	999	998	996	995	994	992	991	989	988	988	988	988	988	988	989	989	990	992	992	993	994	994	995	1001	988	992.1
6	996	996	996	996	996	996	996	996	996	996	995	995	995	994	994	993	992	991	989	988	987	985	984	983	996	983	992.7
7	982	981	980	979	978	977	977	977	977	977	977	977	978	978	978	979	979	980	981	982	983	985	986	987	987	977	979.7
8	989	990	991	992	993	994	995	996	996	997	997	996	996	994	993	992	992	991	990	988	987	986	985	984	997	984	991.8
9	984	983	983	982	982	981	981	981	981	982	982	983	984	985	986	986	986	987	987	988	990	991	992	993	993	981	984.9
10	994	995	996	997	998	999	1000	1000	1001	1002	1002	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	994	1001.4
11	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1005	1007.8
12	1011	1012	1013	1013	1013	1013	1013	1014	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1011	1014.8
13	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1017	1018.4
14	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1020	1020	1019	1018	1018	1017	1016	1016	1015	1015	1014	1014	1020	1014	1018.2
15	1013	1012	1012	1011	1009	1008	1008	1008	1007	1007	1007	1006	1006	1006	1005	1004	1003	1002	1001	1001	1000	999	998	998	1013	998	1005.5
16	997	996	996	995	994	993	993	992	992	992	992	992	991	991	990	990	989	989	989	989	989	989	989	989	997	989	991.5
17	989	989	990	990	990	991	991	991	991	992	992	993	993	993	993	993	993	993	993	993	994	996	996	997	997	989	992.5
18	996	996	996	996	996	996	996	996	996	996	997	997	997	997	997	997	997	997	997	996	997	996	996	997	997	996	996.5
19	996	996	996	996	996	996	996	996	997	997	998	998	998	998	999	1000	999	1000	1000	1000	1001	1001	1001	1002	1002	996	998.3
20	1002	1002	1002	1002	1003	1003	1003	1003	1004	1005	1004	1006	1006	1006	1005	1005	1005	1004	1004	1003	1003	1003	1002	1002	1006	1002	1003.6
21	1001	1001	1000	1000	1000	999	999	999	999	1000	1000	1000	1000	1000	1000	1000	999	999	998	998	998	999	1000	999	1001	998	999.5
22	999	999	998	998	997	997	997	997	996	996	996	997	997	997	996	996	996	996	996	997	997	997	997	997	999	996	996.8
23	998	997	997	997	997	996	995	995	994	994	994	994	994	993	993	993	993	993	992	993	992	993	993	993	998	992	994.3
24	993	994	994	995	995	996	996	996	996	997	997	997	998	998	998	998	998	998	998	999	1000	1001	1001	1003	1003	993	997.3
25	1005	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1005	1008.1
26	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1011	1012.7
27	1015	1015	1016	1016	1016	1017	1016	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1015	1017.3
28	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1020	1020	1020	1019	1020	1020	1021	1019	1020.1
29	1020	1020	1020	1019	1019	1019	1019	1019	1019	1018	1018	1018	1019	1018	1018	1018	1017	1017	1016	1016	1016	1016	1016	1015	1020	1015	1017.9
30	1015	1016	1016	1015	1015	1015	1015	1014	1014	1014	1015	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1017	1017	1017	1014	1015.2
31	1017	1017	1016	1017	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1014	1013	1013	1012	1011	1011	1011	1011	1017	1011	1014.8
Max.	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**		
Min.	**982**	**981**	**980**	**979**	**978**	**977**	**977**	**977**	**977**	**977**	**977**	**977**	**978**	**978**	**978**	**979**	**979**	**980**	**981**	**982**	**983**	**985**	**984**	**983**		**977**	
Avg.	**1003**	**1003**	**1003**	**1003**	**1002**	**1002**	**1002**	**1002**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**			**1002.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1006	1007	1006	1006	1006	1005	1005	1005	1005	1005	1006	1006	1007	1007	1010	1005	1006.9
2	1008	1008	1009	1010	1011	1012	1012	1013	1014	1014	1015	1015	1015	1016	1015	1015	1015	1014	1014	1014	1014	1014	1014	1013	1016	1008	1013.1
3	1013	1013	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1008	1013	1008	1010.8
4	1008	1008	1007	1007	1006	1005	1004	1004	1003	1004	1004	1004	1004	1003	1003	1003	1004	1004	1004	1004	1005	1005	1006	1006	1008	1003	1004.7
5	1007	1008	1008	1006	1007	1008	1008	1008	1008	1008	1008	1009	1008	1008	1009	1009	1008	1008	1007	1007	1007	1006	1007	1007	1009	1006	1007.7
6	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1008	1008	1008	1008	1009	1009	1009	1009	1007	1007.8
7	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1012	1009	1010.9
8	1011	1010	1010	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1006	1005	1005	1005	1004	1004	1003	1003	1003	1003	1004	1011	1003	1006.4
9	1003	1003	1004	1003	1004	1004	1004	1005	1004	1004	1004	1004	1004	1004	1004	1004	1003	1004	1004	1003	1004	1003	1004	1004	1005	1003	1003.9
10	1005	1006	1006	1006	1007	1007	1007	1008	1009	1009	1010	1011	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1005	1010.4
11	1015	1015	1015	1015	1016	1016	1016	1016	1016	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1014	1014	1013	1013	1012	1017	1012	1015.2
12	1012	1011	1010	1010	1009	1009	1008	1008	1007	1006	1006	1006	1005	1006	1005	1004	1004	1004	1004	1004	1004	1003	1004	1004	1012	1003	1006.3
13	1003	1004	1004	1003	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1002	1003	1001	1002	1002	1002	1004	1001	1003.3
14	1003	1004	1004	1003	1003	1003	1004	1004	1004	1004	1005	1006	1006	1006	1006	1005	1005	1006	1005	1005	1005	1005	1005	1005	1006	1003	1004.6
15	1004	1004	1004	1002	1002	1000	1000	1000	1000	999	999	999	999	999	999	999	999	1000	1000	1001	1002	1003	1005	1006	1006	999	1001.0
16	1007	1008	1010	1010	1011	1011	1014	1016	1017	1018	1020	1022	1023	1023	1024	1025	1024	1025	1026	1027	1028	1028	1028	1028	1028	1007	1019.7
17	1027	1028	1029	1030	1031	1031	1032	1033	1034	1035	1035	1036	1037	1037	1038	1038	1038	1038	1038	1037	1038	1038	1038	1038	1038	1027	1034.7
18	1038	1038	1038	1038	1038	1038	1039	1039	1039	1039	1039	1040	1040	1039	1039	1039	1038	1038	1037	1037	1037	1037	1037	1036	1040	1036	1038.2
19	1036	1036	1036	1035	1035	1035	1034	1034	1034	1033	1033	1033	1033	1032	1032	1032	1031	1030	1030	1030	1029	1029	1029	1029	1036	1029	1032.5
20	1028	1028	1028	1027	1027	1027	1026	1026	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1026	1027	1028	1026	1026.9
21	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1026	1026	1026	1026	1027	1027	1026	1026.8
22	1026	1026	1026	1025	1025	1025	1026	1025	1025	1025	1025	1024	1024	1024	1024	1023	1023	1022	1022	1021	1021	1021	1021	1021	1026	1021	1023.7
23	1021	1020	1020	1020	1019	1019	1019	1019	1018	1018	1018	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1014	1021	1014	1017.4
24	1015	1014	1014	1014	1014	1014	1014	1014	1013	1013	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1012	1015	1012	1013.6
25	1012	1013	1013	1012	1012	1012	1011	1011	1010	1011	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1013	1008	1010.2
26	1008	1008	1008	1007	1006	1005	1004	1003	1003	1001	1001	1000	999	999	998	998	997	997	997	996	996	996	995	995	1008	995	1000.6
27	994	994	993	993	993	993	993	993	993	994	994	995	996	996	998	999	1000	1000	1002	1002	1003	1004	1005	1006	1006	993	997.1
28	1006	1007	1007	1008	1008	1009	1009	1009	1010	1010	1010	1010	1010	1011	1011	1011	1011	1010	1010	1010	1010	1011	1011	1011	1011	1006	1009.6
29	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1012	1010	1010.8
30	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1008	1008	1008	1009	1007	1007.9
Max.	**1038**	**1038**	**1038**	**1038**	**1038**	**1038**	**1039**	**1039**	**1039**	**1039**	**1039**	**1040**	**1040**	**1039**	**1039**	**1039**	**1038**	**1038**	**1038**	**1037**	**1038**	**1038**	**1038**	**1038**	**1040**		
Min.	**994**	**994**	**993**	**993**	**993**	**993**	**993**	**993**	**993**	**994**	**994**	**995**	**996**	**996**	**998**	**998**	**997**	**997**	**997**	**996**	**996**	**996**	**995**	**995**		**993**	
Avg.	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1012**	**1012**	**1013**	**1013**	**1013**			**1012.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1005	1005	1004	1004	1004	1004	1004	1004	1003	1008	1003	1006.1
2	1003	1002	1002	1001	1002	1001	1001	1002	1002	1002	1003	1003	1003	1004	1004	1004	1004	1005	1005	1005	1006	1007	1008	1008	1008	1001	1003.6
3	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1007	1006	1007	1007	1007	1007	1006	1009	1006	1008.3
4	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1006	1003	1004.5
5	1003	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1007	1007	1008	1009	1009	1010	1010	1011	1012	1012	1013	1014	1014	1003	1007.2
6	1014	1015	1016	1016	1017	1018	1018	1019	1019	1019	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1014	1019.3
7	1021	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1015	1015	1015	1015	1015	1021	1015	1017.9
8	1015	1014	1014	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1015	1007	1011.1
9	1006	1006	1006	1005	1005	1005	1006	1005	1006	1005	1005	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1005	1005.4
10	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1005	1004	1004.8
11	1004	1003	1003	1002	1002	1001	1000	999	999	999	998	997	996	995	995	994	992	991	989	989	988	988	987	986	1004	986	995.6
12	985	985	984	983	983	982	982	982	982	982	982	981	981	982	983	983	984	984	984	985	986	986	987	988	988	981	983.7
13	989	989	990	991	991	992	993	994	995	996	996	997	998	999	1000	1001	1001	1001	1002	1001	1001	1001	1000	999	1002	989	996.5
14	998	997	996	994	993	992	990	988	987	985	983	982	982	981	981	981	980	980	981	981	982	983	985	986	998	980	986.1
15	987	988	990	991	993	994	996	997	999	1001	1002	1004	1006	1007	1008	1009	1010	1011	1011	1012	1013	1014	1015	1016	1016	987	1003.1
16	1017	1018	1019	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1020	1019	1019	1018	1018	1017	1017	1016	1016	1016	1021	1016	1018.8
17	1016	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1016	1014	1014.2
18	1015	1015	1016	1016	1016	1016	1017	1017	1017	1018	1018	1019	1019	1020	1020	1020	1019	1020	1020	1020	1019	1019	1020	1020	1020	1015	1018.1
19	1020	1020	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1016	1015	1015	1014	1014	1013	1013	1012	1012	1012	1011	1011	1020	1011	1015.6
20	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1009	1009.4
21	1010	1011	1011	1012	1012	1012	1012	1013	1014	1014	1015	1015	1016	1017	1017	1018	1018	1018	1018	1019	1019	1020	1020	1021	1021	1010	1015.4
22	1021	1021	1022	1022	1023	1023	1023	1024	1024	1024	1024	1024	1025	1025	1025	1025	1025	1025	1025	1025	1024	1024	1024	1023	1025	1021	1023.8
23	1023	1022	1021	1020	1019	1018	1018	1017	1017	1017	1016	1017	1018	1020	1020	1021	1022	1022	1022	1022	1022	1022	1022	1022	1023	1016	1020.1
24	1023	1022	1022	1022	1021	1021	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1021	1023	1019	1020.2
25	1021	1022	1022	1022	1023	1023	1023	1024	1024	1024	1025	1025	1025	1025	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1021	1024.5
26	1026	1026	1026	1026	1026	1026	1025	1026	1026	1026	1026	1025	1025	1025	1025	1025	1025	1025	1025	1025	1024	1025	1025	1025	1026	1024	1025.3
27	1025	1024	1025	1026	1024	1025	1025	1024	1025	1025	1025	1025	1025	1025	1024	1024	1024	1024	1023	1023	1023	1023	1023	1023	1026	1023	1024.2
28	1023	1023	1023	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1020	1020	1020	1019	1019	1019	1019	1019	1023	1019	1021.1
29	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1014	1014	1014	1014	1014	1018	1014	1016.0
30	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1017	1017	1014	1014.9
31	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1013	1013	1012	1012	1011	1011	1017	1011	1014.7
Max.	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1025**	**1026**	**1026**	**1026**	**1026**	**1025**	**1025**	**1025**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**	**1026**		
Min.	**985**	**985**	**984**	**983**	**983**	**982**	**982**	**982**	**982**	**982**	**982**	**981**	**981**	**981**	**981**	**981**	**980**	**980**	**981**	**981**	**982**	**983**	**985**	**986**		**980**	
Avg.	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1012**	**1012**	**1012**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**			**1011.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1010	1010	1010	1009	1009	1008	1008	1007	1007	1007	1007	1007	1006	1006	1005	1005	1004	1004	1003	1003	1002	1002	1002	1002	1010	1002	1005.9
2	1002	1001	1001	1001	1000	1000	1000	1000	999	999	999	999	999	998	997	997	997	996	996	996	995	995	995	995	1002	995	998.2
3	995	995	994	994	994	995	995	995	995	995	996	996	997	998	998	998	999	999	1000	1000	1000	1000	1000	1000	1000	994	997.0
4	1000	1000	1000	1000	999	999	999	999	999	999	999	999	999	999	999	999	999	999	999	999	999	1000	1000	1000	1000	999	999.4
5	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	999	1000	1000	1000	1001	1001	999	1000.0
6	1001	1001	1002	1002	1003	1003	1004	1005	1005	1005	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1008	1008	1009	1009	1001	1005.3
7	1009	1009	1010	1009	1009	1010	1010	1010	1011	1011	1012	1012	1013	1013	1013	1015	1016	1017	1017	1017	1017	1018	1018	1018	1018	1009	1013.1
8	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1017	1018	1016	1016.8
9	1017	1018	1017	1017	1018	1018	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1018	1018	1017	1017.3
10	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1020	1021	1021	1021	1022	1022	1018	1019.5
11	1021	1021	1022	1021	1021	1021	1021	1021	1021	1022	1022	1021	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1022	1021	1021.5
12	1021	1021	1020	1020	1020	1020	1019	1019	1020	1019	1019	1019	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1021	1016	1018.3
13	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1015	1017.0
14	1019	1020	1020	1020	1020	1020	1021	1021	1022	1022	1022	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1024	1024	1023	1024	1019	1022.1
15	1023	1023	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1023	1023	1023	1023	1022	1021	1021	1020	1020	1019	1019	1019	1024	1019	1022.2
16	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1019	1017	1017.6
17	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1019	1019	1017	1017.7
18	1019	1019	1019	1018	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1019	1018	1018.5
19	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1018	1020	1018	1019.3
20	1018	1018	1017	1017	1017	1017	1016	1017	1016	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1018	1015	1016.4
21	1014	1014	1014	1013	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1014	1010	1011.0
22	1011	1011	1012	1012	1012	1012	1013	1013	1014	1014	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1011	1014.8
23	1018	1018	1018	1017	1017	1017	1016	1016	1016	1015	1015	1014	1014	1013	1013	1013	1012	1012	1011	1011	1011	1010	1010	1010	1018	1010	1014.0
24	1010	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1010	1010	1010	1010	1009	1009	1009	1009	1009	1008	1011	1008	1009.9
25	1008	1008	1009	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1004	1004	1004	1005	1005	1009	1004	1006.1
26	1005	1005	1004	1004	1004	1004	1004	1003	1003	1003	1003	1004	1004	1004	1004	1003	1003	1003	1003	1003	1004	1004	1004	1004	1005	1003	1003.8
27	1005	1005	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1007	1007	1007	1005	1006.6
28	1007	1007	1007	1006	1006	1006	1006	1006	1007	1007	1008	1008	1008	1009	1010	1011	1012	1012	1013	1014	1014	1015	1016	1016	1016	1006	1009.7
29	1017	1017	1018	1018	1018	1019	1019	1020	1020	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1017	1020.7
30	1023	1023	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1020	1020	1020	1019	1019	1019	1018	1018	1018	1023	1018	1020.7
Max.	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1023**	**1024**		
Min.	**995**	**995**	**994**	**994**	**994**	**995**	**995**	**995**	**995**	**995**	**996**	**996**	**997**	**998**	**997**	**997**	**997**	**996**	**996**	**996**	**995**	**995**	**995**	**995**		**994**	
Avg.	**1013**	**1013**	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**			**1012.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1017	1017	1018	1016	1016.7
2	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1014	1014	1013	1012	1011	1010	1010	1009	1009	1009	1008	1008	1008	1008	1017	1008	1012.6
3	1007	1006	1004	1004	1003	1003	1003	1003	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	1001	1002	1002	1002	1007	1000	1002.3
4	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1003	1001	1002.0
5	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1001	1000	1000	1000	1000	1000	1000	999	1000	1000	1000	1001	1001	999	1000.3
6	1001	1001	1001	1001	1000	1001	1001	1001	1002	1002	1003	1003	1003	1004	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	1000	1003.2
7	1008	1008	1008	1009	1010	1011	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1014	1008	1012.5
8	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1012	1012	1013	1012	1012	1012	1013	1013	1013	1013	1012	1012.4
9	1013	1013	1013	1013	1013	1013	1013	1014	1014	1015	1015	1015	1016	1016	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1013	1015.5
10	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1020	1020	1020	1019	1019	1020	1020	1020	1019	1019	1019	1020	1020	1020	1020	1018	1019.2
11	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1021	1022	1021	1021	1021	1022	1022	1020	1021.2
12	1022	1022	1021	1021	1021	1021	1020	1020	1020	1020	1020	1020	1020	1020		1020		1019	1019	1019	1018	1018	1018	1018	1022	1018	1019.9
13	1019	1019	1019	1019	1018	1018	1018	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1018	1019.5
14	1021	1021	1021	1021	1021	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1020	1020	1020	1020	1021	1020	1020.4
15	1020	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1020	1018	1018.5
16	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1015	1015	1014	1013	1013	1012	1012	1018	1012	1016.0
17	1010	1010	1010	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1008	1008	1007	1007	1007	1010	1007	1009.3
18	1007	1007	1007	1006	1006	1006	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1002	1002	1002	1007	1002	1004.4
19	1002	1001	1001	1000	1000	999	999	999	999	999	999	999	999	999	999	999	999	999	999	999	1000	1000	1001	1001	1002	999	999.6
20	1001	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	1004	1004	1005	1004	1004	1004	1004	1003	1005	1001	1003.5
21	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1003	1005.0
22	1008	1008	1009	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1009	1009	1008	1008	1008	1008	1008	1008	1008	1010	1008	1008.6
23	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007.0
24	1006	1006	1006	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1006	1005	1005.5
25	1005	1005	1005	1005	1004	1004	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1005	1005	1004	1004.6
26	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1008	1008	1005	1006.8
27	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1007	1007.8
28	1010	1010	1010	1010	1009	1009	1009	1009	1009	1008	1009	1008	1008	1008	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1010	1006	1007.9
29	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1005	1005	1006	1005	1005	1006	1006	1006	1006	1005	1005.3
30	1006	1006	1006	1006	1006	1006	1007	1006	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1006	1007	1006	1006.0
31	1006	1007	1007	1008	1007	1007	1007	1006	1006	1006	1007	1007	1006	1007	1007	1006	1006	1006	1005	1005	1005	1005	1006	1006	1008	1005	1006.4
Max.	**1022**	**1022**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1021**	**1022**	**1021**	**1021**	**1021**	**1022**	**1022**		
Min.	**1001**	**1001**	**1001**	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1000**	**1001**		**999**	
Avg.	**1010**	**1010**	**1010**	**1010**	**1010**	**1009**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1009**	**1010**	**1010**	**1009**	**1009**	**1009**	**1010**	**1010**			**1009.6**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1012	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1015	1015	1007	1010.9
2	1015	1016	1016	1016	1016	1016	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1018	1019	1019	1015	1017.4
3	1019	1019	1019	1019	1019	1020	1020	1020	1020	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1019	1020.7
4	1022	1022	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1020	1022	1020	1021.0
5	1020	1020	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1018	1020	1017	1018.0
6	1018	1018	1018	1018	1018	1017	1018	1018	1017	1018	1017	1017	1017	1017	1016	1016	1015	1015	1015	1013	1013	1013	1013	1013	1018	1013	1016.2
7	1013	1013	1013	1013	1013	1012	1013	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1009	1010	1010	1010	1013	1009	1011.4
8	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1011	1009	1009.8
9	1009	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1012	1012	1007	1008.4
10	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1012	1013.7
11	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1011	1010	1009	1009	1008	1007	1007	1006	1006	1014	1006	1011.3
12	1005	1004	1004	1003	1003	1002	1002	1001	1001	1000	1000	1000	1000	999	999	998	998	998	998	997	997	997	997	996	1005	996	1000.0
13	995	995	995	995	995	994	994	995	995	994	994	994	994	994	995	996	996	997	997	997	997	997	998	998	999	994	995.6
14	999	1000	1000	1000	1001	1001	1002	1002	1003	1004	1004	1004	1005	1006	1006	1007	1007	1008	1008	1008	1009	1010	1010	1011	1011	999	1004.8
15	1011	1012	1012	1012	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1011	1014.2
16	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1013	1013	1012	1012	1012	1011	1011	1011	1016	1011	1013.9
17	1011	1010	1010	1009	1009	1008	1008	1008	1007	1007	1007	1007	1007	1006	1006	1005	1005	1004	1004	1003	1003	1003	1003	1002	1011	1002	1006.3
18	1002	1002	1001	1001	1000	1000	999	999	999	999	999	999	999	999	998	998	998	998	998	998	998	999	999	1000	1002	998	999.2
19	1000	1001	1001	1001	1001	1002	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1000	1002.1
20	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	999	999	999	999	1002	999	1000.6
21	1000	999	999	999	999	999	999	1000	1000	1000	1001	1001	1001	1001	1002	1002	1001	1002	1002	1002	1002	1003	1003	1003	1003	999	1000.9
22	1003	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1001	1001	1001	1001	1000	1000	1000	999	1004	999	1002.1
23	999	999	998	998	998	998	998	998	999	999	999	999	1000	1000	1000	1000	1000	1000	999	999	999	998	998	997	1000	997	998.8
24	997	996	996	995	994	994	993	992	992	991	991	991	991	990	990	990	990	990	990	991	991	991	992	992	997	990	992.1
25	992	993	993	994	994	995	995	995	995	996	996	996	996	996	997	996	996	996	996	996	996	996	996	996	997	992	995.3
26	996	996	996	996	996	996	996	997	997	997	998	998	999	999	999	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	996	998.2
27	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1001	1002	1002	1001	1002	1002	1002	1002	1002	1003	1003	1003	1000	1001.1
28	1003	1004	1004	1004	1004	1004	1004	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1008	1009	1009	1010	1010	1003	1006.3
29	1010	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1015	1010	1012.9
30	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1015	1015	1015	1015	1015	1014	1014	1013	1013	1013	1012	1012	1016	1012	1014.5
31	1012	1012	1011	1011	1010	1008	1006	1005	1004	1004	1003	1002	1001	1001	1000	999	999	997	997	997	997	997	997	997	1012	997	1002.7
Max.	**1022**	**1022**	**1022**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**		
Min.	**992**	**993**	**993**	**994**	**994**	**994**	**993**	**992**	**992**	**991**	**991**	**991**	**991**	**990**	**990**	**990**	**990**	**990**	**990**	**991**	**991**	**991**	**992**	**992**		**990**	
Avg.	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**			**1007.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	997	997	997	997	997	997	997	997	998	998	999	999	1000	1000	1000	1001	1001	1002	1002	1003	1003	1003	1004	1004	1004	997	999.7
2	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1007	1007	1006	1005	1004	1004	1003	1001	1001	1000	1000	1000	1000	1000	1007	1000	1003.9
3	999	1000	1000	999	1000	1000	1001	1001	1002	1003	1004	1005	1006	1007	1008	1009	1009	1010	1010	1011	1012	1013	1013	1014	1014	999	1005.7
4	1014	1015	1015	1015	1015	1016	1016	1016	1016	1016	1017	1017	1017	1018	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1014	1016.5
5	1018	1018	1018	1018	1018	1018	1018	1018	1019	1019	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1018	1019.7
6	1022	1022	1022	1021	1021	1021	1020	1020	1019	1018	1018	1017	1017	1016	1014	1013	1011	1010	1010	1008	1007	1006	1006	1005	1022	1005	1015.1
7	1005	1004	1003	1002	1001	1001	1001	1001	1001	1001	1003	1002	1002	1002	1003	1003	1003	1003	1004	1005	1006	1007	1007	1008	1008	1001	1003.2
8	1009	1010	1010	1011	1011	1011	1012	1012	1011	1011	1011	1012	1012	1012	1011	1010	1009	1008	1006	1005	1004	1003	1002	1002	1012	1002	1008.9
9	1002	1001	1001	1000	999	999	998	998	998	998	998	998	998	999	999	999	998	997	997	997	996	996	996	995	1002	995	998.1
10	995	995	994	994	994	994	994	993	993	994	994	994	994	994	994	994	994	994	995	995	996	997	997	998	998	993	994.5
11	998	999	1000	1000	1001	1001	1002	1002	1003	1003	1004	1005	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	998	1003.9
12	1007	1007	1007	1008	1007	1007	1007	1006	1006	1006	1007	1007	1007	1007	1007	1006	1006	1005	1005	1005	1005	1005	1005	1005	1008	1005	1006.3
13	1006	1006	1006	1006	1006	1006	1005	1006	1006	1007	1007	1007	1007	1006	1005	1004	1003	1002	1001	1001	1000	1000	1000	1000	1007	1000	1004.3
14	999	998	999	998	999	999	999	999	1000	1000	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1005	1006	1007	1008	1008	998	1001.5
15	1008	1009	1009	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1010	1010	1013	1008	1010.8
16	1009	1009	1008	1007	1007	1007	1006	1005	1005	1004	1004	1003	1003	1002	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1009	1000	1003.4
17	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1001	1001	1000	999	998	997	996	995	993	1002	993	999.8
18	993	992	991	990	990	989	988	988	988	988	988	988	989	989	991	991	992	992	993	994	995	996	996	996	996	988	991.0
19	997	997	997	997	997	997	997	997	997	997	998	998	998	998	999	999	999	999	999	999	1000	1000	1001	1001	1001	997	998.2
20	1002	1002	1002	1003	1003	1003	1003	1004	1004	1005	1005	1006	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1002	1005.9
21	1010	1010	1010	1010	1011	1011	1011	1011	1012	1012	1013	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1016	1016	1017	1017	1010	1012.9
22	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1018	1018	1018	1018	1018	1018	1017	1017.6
23	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1015	1015	1015	1018	1015	1016.8
24	1015	1014	1014	1013	1013	1012	1012	1012	1012	1012	1011	1011	1011	1011	1010	1010	1009	1009	1009	1009	1009	1009	1008	1008	1015	1008	1010.9
25	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008.3
26	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1007	1007	1007	1007	1007	1007	1009	1007	1008.3
27	1007	1007	1007	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1009	1009	1009	1009	1008	1009	1009	1009	1009	1009	1010	1010	1006	1008.1
28	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1011	1010	1010.1
29	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1011	1010	1009	1009	1008	1008	1008	1008	1007	1007	1006	1011	1006	1009.5
30	1005	1005	1004	1003	1003	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1004	1005	1001	1002.5
Max.	**1022**	**1022**	**1022**	**1021**	**1021**	**1021**	**1020**	**1020**	**1019**	**1019**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1022**	**1022**	**1022**		
Min.	**993**	**992**	**991**	**990**	**990**	**989**	**988**	**988**	**988**	**988**	**988**	**988**	**989**	**989**	**991**	**991**	**992**	**992**	**993**	**994**	**995**	**996**	**995**	**993**		**988**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1007**	**1006**	**1006**	**1006**	**1006**	**1007**	**1007**	**1007**			**1006.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1004	1004	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1004	1004	1003	1003	1003	1002	1006	1002	1004.8
2	1002	1001	1001	1000	1000	999	998	998	997	996	996	995	994	993	992	991	991	990	989	989	988	988	989	988	1002	988	994.4
3	988	988	988	988	987	987	987	987	988	989	990	990	991	991	992	992	993	994	994	994	995	995	996	996	996	987	990.8
4	996	997	997	997	997	997	996	996	996	996	996	996	996	996	996	995	995	995	995	995	995	995	995	995	997	995	995.8
5	995	996	996	995	996	995	996	996	996	996	996	996	997	997	997	997	997	998	998	998	999	999	999	1000	1000	995	996.9
6	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1001	1000	1000.4
7	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1003	1003	1004	1005	1006	1006	1007	1008	1008	1009	1009	1011	1011	1011	1000	1003.9
8	1012	1013	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1018	1012	1016.6
9	1017	1016	1016	1015	1014	1014	1013	1011	1010	1009	1007	1007	1005	1003	1001	999	997	996	994	992	991	990	988	987	1017	987	1003.9
10	986	986	985	985	984	985	986	987	987	989	990	991	991	992	992	992	993	993	993	993	993	994	994	994	994	984	989.7
11	994	994	994	993	993	993	993	993	993	993	993	993	992	992	992	992	992	993	994	996	996	997	997	998	998	992	993.7
12	999	999	1000	1000	1001	1002	1002	1003	1004	1005	1006	1007	1007	1008	1009	1009	1009	1010	1011	1011	1012	1011	1011	1012	1012	999	1006.1
13	1011	1011	1011	1011	1011	1010	1009	1009	1009	1008	1009	1007	1007	1006	1005	1004	1004	1003	1003	1003	1002	1002	1003	1003	1011	1002	1006.6
14	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1000	999	999	999	998	998	997	997	1003	997	1000.8
15	997	997	997	998	998	998	998	998	999	999	999	999	999	1000	999	1000	999	1000	1000	1000	1000	1000	1001	1001	1001	997	999.0
16	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1001	1002.7
17	1004	1004	1004	1004	1004	1004	1005	1005	1004	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1004	1004.3
18	1004	1003	1003	1003	1002	1002	1002	1001	1001	1001	1000	1000	1000	999	998	997	996	996	995	994	994	993	993	992	1004	992	998.6
19	992	992	991	991	990	990	990	990	990	990	991	991	991	992	992	993	993	993	994	995	995	996	997	997	997	990	992.4
20	998	998	998	998	999	999	999	1000	1000	1001	1001	1002	1002	1002	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1005	998	1001.1
21	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1003	1002	1002	1001	1000	998	997	996	995	1005	995	1002.8
22	994	994	994	993	992	991	990	990	990	990	990	991	992	991	992	991	990	990	990	990	989	989	989	988	994	988	990.9
23	988	987	987	987	987	987	987	987	987	987	987	987	987	987	988	988	989	990	991	992	992	993	993	993	993	987	988.7
24	994	995	996	996	997	998	999	1000	1002	1004	1005	1007	1010	1012	1013	1014	1015	1016	1017	1018	1019	1019	1020	1020	1020	994	1007.7
25	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1019	1019	1018	1017	1016	1016	1016	1015	1014	1021	1014	1019.4
26	1013	1012	1011	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1007	1007	1008	1008	1009	1010	1010	1010	1013	1007	1009.3
27	1011	1011	1012	1012	1012	1013	1014	1014	1015	1016	1016	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1017	1018	1011	1015.5
28	1017	1016	1015	1014	1013	1013	1012	1011	1010	1009	1008	1007	1006	1005	1003	1002	1002	1001	1001	1001	1001	1000	1000	1000	1017	1000	1006.9
29	1000	1000	1001	1001	1001	1001	1002	1003	1003	1004	1005	1006	1006	1007	1007	1007	1008	1008	1009	1010	1010	1010	1011	1011	1011	1000	1005.4
30	1011	1011	1011	1012	1012	1013	1013	1013	1013	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1015	1011	1013.7
31	1014	1013	1013	1012	1012	1011	1011	1010	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1014	1006	1008.7
Max.	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1020**	**1019**	**1019**	**1018**	**1018**	**1018**	**1019**	**1019**	**1020**	**1020**	**1021**		
Min.	**986**	**986**	**985**	**985**	**984**	**985**	**986**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**988**	**988**	**989**	**990**	**989**	**989**	**988**	**988**	**988**	**987**		**984**	
Avg.	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1003**	**1003**	**1003**	**1003**	**1003**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**			**1002.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1003	1002	1001	1001	1001	1000	1000	999	999	1006	999	1003.5
2	998	997	997	996	996	995	994	994	994	994	994	994	993	993	993	993	993	993	993	993	993	993	993	993	998	993	994.1
3	993	994	994	994	995	995	996	996	997	998	998	999	999	1000	1000	1001	1001	1001	1002	1002	1002	1003	1003	1003	1003	993	998.6
4	1003	1003	1004	1004	1004	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1006	1003	1004.9
5	1005	1004	1004	1004	1004	1004	1003	1003	1003	1003	1002	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1005	1002	1002.8
6	1002	1002	1002	1001	1001	1000	1000	1000	1000	999	999	999	999	998	998	997	997	996	995	995	995	995	994	994	1002	994	998.2
7	994	995	995	995	997	996	997	998	998	1000	1001	1003	1004	1005	1005	1006	1006	1007	1008	1008	1009	1010	1010	1011	1011	994	1002.4
8	1011	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1010	1009	1009	1008	1007	1006	1005	1005	1004	1002	1001	999	1012	999	1008.4
9	999	998	997	996	995	994	993	992	991	991	991	990	990	989	988	988	988	988	988	988	988	988	988	987	999	987	991.0
10	986	985	984	982	981	979	978	976	976	976	976	976	978	979	979	980	980	980	981	982	982	982	982	983	986	976	980.1
11	982	982	981	981	980	980	980	979	979	979	979	979	979	978	978	978	978	978	978	979	979	980	980	981	982	978	979.4
12	982	983	984	985	985	986	986	987	988	989	990	991	992	993	994	994	995	996	997	998	999	1000	1001	1001	1001	982	991.5
13	1002	1003	1003	1004	1004	1004	1005	1005	1005	1005	1006	1006	1006	1007	1007	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1002	1006.1
14	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1011	1012	1012	1009	1009.3
15	1012	1013	1013	1014	1014	1015	1015	1016	1016	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1012	1016.5
16	1017	1017	1016	1016	1016	1016	1017	1017	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1019	1020	1020	1016	1018.3
17	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1017	1017	1018	1018	1019	1016	1017.8
18	1019	1019	1019	1020	1020	1020	1020	1021	1021	1021	1022	1022	1023	1023	1023	1023	1023	1023	1023	1024	1024	1024	1024	1024	1024	1019	1021.8
19	1023	1023	1023	1022	1022	1021	1020	1019	1019	1019	1018	1018	1017	1016	1015	1015	1015	1014	1014	1013	1013	1012	1011	1011	1023	1011	1017.3
20	1010	1010	1009	1009	1008	1007	1007	1006	1006	1005	1005	1005	1004	1003	1003	1002	1001	1001	1001	1001	1000	1000	999	999	1010	999	1004.2
21	998	998	997	997	997	997	996	996	995	995	994	994	993	992	992	991	990	990	989	989	988	988	988	988	998	988	993.1
22	987	987	987	987	987	988	988	989	989	990	991	991	992	992	993	993	993	994	994	995	995	996	996	997	997	987	991.4
23	997	997	997	997	997	996	995	994	994	993	993	992	991	990	989	988	987	986	985	984	983	982	981	980	997	980	990.3
24	980	979	978	977	976	975	975	975	976	976	977	976	977	977	978	978	979	979	979	980	980	981	981	982	982	975	977.9
25	983	984	985	985	985	986	986	986	986	986	987	987	988	988	988	988	990	990	991	992	991	992	992	993	993	983	987.8
26	994	995	995	996	997	997	998	998	1000	1000	1001	1002	1002	1003	1003	1003	1002	1002	1001	1001	1000	1000	999	999	1003	994	999.5
27	998	997	997	995	994	993	991	991	990	989	989	988	987	985	984	983	982	981	981	981	981	980	980	979	998	979	987.3
28	979	979	979	978	978	978	979	979	980	980	981	981	982	982	982	983	983	983	984	984	985	986	987	987	987	978	981.6
29	988	989	990	990	991	991	992	992	994	995	996	996	998	999	999	1000	1001	1002	1002	1004	1004	1005	1006	1008	1008	988	997.1
30	1008	1009	1010	1009	1009	1009	1009	1009	1009	1011	1012	1013	1012	1012	1015	1015	1016	1017	1017	1018	1019	1020	1021	1022	1022	1008	1013.4
Max.	**1023**	**1023**	**1023**	**1022**	**1022**	**1021**	**1020**	**1021**	**1021**	**1021**	**1022**	**1022**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**		
Min.	**979**	**979**	**978**	**977**	**976**	**975**	**975**	**975**	**976**	**976**	**976**	**976**	**977**	**977**	**978**	**978**	**978**	**978**	**978**	**979**	**979**	**980**	**980**	**979**		**975**	
Avg.	**1000**	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1000**	**1000**	**1000**	**999**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**			**999.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Barometric Pressure (mbar)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1022	1023	1024	1024	1024	1024	1024	1025	1026	1026	1026	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1022	1026.3
2	1028	1028	1027	1027	1026	1025	1025	1024	1024	1024	1025	1024	1023	1023	1022	1022	1022	1022	1021	1021	1021	1022	1021	1022	1028	1021	1023.7
3	1021	1021	1020	1020	1019	1018	1017	1017	1015	1014	1013	1012	1011	1008	1007	1006	1005	1004	1003	1002	1001	1000	1000	1000	1021	1000	1010.7
4	1000	1000	999	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	1002	999	1000.4
5	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	999	999	998	998	998	998	998	998	999	999	1002	998	1000.2
6	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1005	1005	1006	1006	1000	1001.9
7	1006	1006	1007	1007	1007	1007	1007	1007	1007	1008	1009	1009	1009	1010	1010	1010	1009	1010	1009	1009	1009	1008	1008	1007	1010	1006	1008.1
8	1006	1005	1003	1001	998	998	996	994	992	990	988	986	984	982	980	978	976	975	974	973	971	970	969	969	1006	969	985.8
9	968	968	968	967	968	968	968	969	969	970	971	972	972	973	974	975	976	978	979	981	982	984	985	987	987	967	973.8
10	988	990	991	993	994	996	997	998	1001	1002	1004	1006	1007	1009	1010	1010	1012	1013	1014	1014	1015	1016	1017	1018	1018	988	1004.8
11	1019	1020	1021	1022	1023	1023	1024	1024	1025	1025	1027	1027	1028	1029	1029	1030	1030	1031	1031	1032	1033	1033	1034	1035	1035	1019	1027.3
12	1036	1036	1037	1037	1038	1038	1038	1038	1038	1039	1039	1039	1039	1038	1037	1037	1037	1037	1037	1037	1037	1037	1038	1038	1039	1036	1037.5
13	1039	1039	1040	1040	1040	1040	1040	1040	1040	1041	1041	1041	1041	1041	1041	1041	1041	1041	1041	1041	1040	1040	1040	1040	1041	1039	1040.4
14	1040	1040	1040	1039	1039	1039	1038	1038	1038	1038	1038	1039	1038	1038	1038	1037	1037	1037	1037	1038	1038	1037	1037	1037	1040	1037	1038.2
15	1037	1038	1038	1038	1037	1037	1037	1036	1036	1036	1036	1036	1036	1036	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1038	1035	1035.9
16	1034	1034	1034	1034	1034	1034	1034	1033	1032	1032	1032	1032	1031	1030	1030	1029	1028	1028	1028	1028	1028	1029	1029	1028	1034	1028	1031.1
17	1028	1028	1028	1028	1028	1028	1028	1028	1027	1027	1027	1027	1027	1027	1027	1026	1026	1026	1026	1026	1025	1025	1025	1025	1028	1025	1026.8
18	1025	1025	1024	1024	1024	1023	1023	1023	1023	1022	1022	1022	1021	1021	1020	1020	1019	1019	1019	1018	1018	1017	1017	1017	1025	1017	1021.0
19	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1014	1014	1017	1013	1014.5
20	1014	1014	1014	1015	1015	1014	1014	1014	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1014	1016.0
21	1018	1018	1018	1018	1018	1017	1018	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1015	1015	1018	1015	1016.8
22	1015	1015	1014	1014	1013	1012	1011	1011	1010	1010	1010	1010	1010	1009	1009	1008	1008	1007	1007	1006	1005	1004	1003	1002	1015	1002	1009.2
23	1000	998	996	994	992	991	990	990	991	992	993	992	994	994	994	995	996	998	999	1000	1000	1001	1001	1002	1002	990	995.5
24	1003	1004	1005	1006	1007	1007	1008	1009	1009	1010	1011	1011	1012	1012	1012	1013	1013	1013	1011	1010	1011	1010	1009	1009	1013	1003	1009.3
25	1008	1007	1006	1004	1003	1001	999	998	996	995	994	993	992	991	991	991	990	990	990	990	990	990	989	989	1008	989	995.3
26	990	990	991	990	991	991	992	991	991	991	991	992	992	990	991	990	990	990	990	990	989	989	990	989	992	989	990.4
27	990	989	990	989	990	989	989	989	990	990	991	992	993	994	994	995	995	996	996	997	998	999	1000	1000	1000	989	993.1
28	1001	1001	1001	1002	1002	1002	1002	1002	1002	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1001	1003.2
29	1006	1006	1006	1006	1007	1007	1006	1007	1007	1007	1007	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1011	1012	1012	1012	1006	1008.0
30	1012	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1014	1013	1014	1012	1013.5
31	1014	1013	1013	1013	1013	1013	1012	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1012	1013.9
Max.	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1041**	**1040**	**1040**	**1040**	**1040**	**1041**		
Min.	**968**	**968**	**968**	**967**	**968**	**968**	**968**	**969**	**969**	**970**	**971**	**972**	**972**	**973**	**974**	**975**	**976**	**975**	**974**	**973**	**971**	**970**	**969**	**969**		**967**	
Avg.	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**1012.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.7	9.6	10.0	8.7	8.0	4.9	6.9	8.4	7.8	7.1	6.0	5.3	3.1	3.7	2.0	1.7	2.5	3.0	3.1	3.0	3.6	3.3	4.2	3.7	10.0	1.7	5.3
2	3.4	4.7	4.9	3.8	5.7	5.1	5.1	6.0	7.5	7.1	6.2	6.8	8.5	8.4	6.2	7.7	6.7	8.0	7.5	7.8	6.2	4.2	4.0	3.8	8.5	3.4	6.1
3	3.2	4.8	2.8	2.5	2.8	2.0	2.2	2.1	3.4	2.0	1.7	2.3	1.6	1.8	4.1	5.2	5.3	5.3	3.0	3.7	4.7	6.2	5.1	6.4	6.4	1.6	3.5
4	5.6	5.2	2.8	4.7	2.3	1.9	4.1	2.3	1.9	3.0	3.8	1.7	1.9	1.9	4.5	3.2	2.7	1.7	1.6	2.6	2.9	3.0	2.4	2.9	5.6	1.6	2.9
5	3.8	2.7	2.7	4.2	4.3	3.8	4.1	7.2	10.4	12.2	13.7	14.5	14.5	15.5	15.6	16.5	15.6	14.2	14.0	13.2	12.6	13.4	12.4	11.7	16.5	2.7	10.5
6	12.0	10.7	10.2	10.1	11.2	10.8	10.5	10.9	11.9	11.2	10.9	11.5	10.7	9.2	5.9	5.6	2.9	3.1	3.0	3.5	2.2	2.2	1.9	2.2	12.0	1.9	7.7
7	2.5	1.7	3.5	4.4	4.2	4.4	5.6	5.2	1.7	4.4	5.0	4.3	3.3	3.7	4.9	3.5	2.7	2.1	1.9	2.5	3.8	2.6	7.6	3.5	7.6	1.7	3.7
8	4.6	3.8	5.2	6.1	5.7	6.0	2.9	2.3	3.8	3.2	6.5	4.9	4.9	3.9	4.0	3.6	4.1	7.5	8.2	8.9	9.6	8.6	7.8	4.3	9.6	2.3	5.4
9	4.3	5.2	7.2	7.3	6.0	10.0	11.9	9.2	7.5	4.9	8.5	10.4	9.2	7.5	7.1	8.0	5.3	6.6	8.8	10.1	11.4	11.7	11.4	12.6	12.6	4.3	8.4
10	13.6	12.9	11.3	10.5	9.6	10.3	10.4	11.3	12.2	13.4	12.6	11.6	8.5	10.7	11.1	11.3	12.7	13.8	13.6	15.1	13.2	11.8	10.8	8.9	15.1	8.5	11.7
11	8.2	9.5	8.7	7.2	4.9	10.6	10.0	8.8	7.1	5.1	2.8	3.0	3.4	3.4	3.8	4.2	3.9	3.5	3.2	3.4	6.2	7.7	6.0	3.5	10.6	2.8	5.8
12	5.1	5.8	6.3	6.2	5.3	7.5	7.7	7.5	7.2	4.5	1.4	2.7	6.8	4.6	5.1	6.9	7.1	5.1	3.5	3.7	5.9	6.6	9.3	8.7	9.3	1.4	5.9
13	4.1	6.2	6.3	4.6	4.9	3.8	5.5	7.5	7.9	4.0	4.0	3.7	6.0	4.6	4.7	6.3	11.2	11.0	9.9	10.5	9.6	9.4	11.7	9.5	11.7	3.7	7.0
14	8.8	7.8	7.9	5.2	2.5	2.7	6.0	5.7	5.2	4.9	5.4	6.4	6.7	7.6	8.9	9.7	9.4	9.3	9.3	9.6	10.4	10.0	10.7	9.8	10.7	2.5	7.5
15	10.4	10.1	9.8	9.7	9.0	8.5	8.0	6.5	5.4	2.2	1.4	1.7	3.9	3.4	2.4	4.2	2.9	4.6	5.4	5.0	6.4	4.0	3.4	4.6	10.4	1.4	5.6
16	2.6	1.9	0.7	1.9	1.5	2.1	2.5	2.1	2.2	4.8	4.8	2.7	3.1	3.9	3.9	2.5	2.1	3.6	3.2	3.6	2.9	2.4	2.0	4.3	4.8	0.7	2.8
17	5.0	4.5	5.3	5.1	5.7	6.5	7.0	7.6	10.3	10.3	9.5	9.7	10.5	10.6	10.9	10.8	10.3	9.2	7.6	6.7	6.1	6.4	6.1	5.1	10.9	4.5	7.8
18	3.9	1.5	2.4	1.4	0.4	0.3	0.3	0.6	0.7	0.9	1.4	0.9	0.9	1.9	1.5	1.6	1.4	1.1	0.8	1.6	2.7	3.2	2.8	5.1	5.1	0.3	1.6
19	5.6	5.1	6.0	6.3	6.3	7.3	7.9	8.2	8.6	6.2	6.3	7.2	7.0	6.4	7.5	7.8	6.7	6.6	6.0	5.0	6.6	7.8	8.1	6.8	8.6	5.0	6.8
20	7.5	7.4	7.2	7.5	7.5	6.8	7.8	7.6	7.3	7.3	7.5	7.5	8.3	7.7	7.7	7.4	6.6	6.3	6.0	5.7	5.7	3.9	4.7	3.2	8.3	3.2	6.7
21	2.3	3.1	4.6	3.9	4.7	4.9	4.6	4.8	5.2	4.7	5.2	5.6	7.4	7.9	6.8	7.1	7.1	7.8	8.3	9.0	7.4	4.5	3.0	2.8	9.0	2.3	5.5
22	2.8	4.2	6.4	7.1	9.1	7.3	2.5	3.5	2.1	1.8	1.3	3.1	2.0	3.8	7.3	6.7	5.1	10.3	6.8	5.0	3.6	1.7	2.6	3.2	10.3	1.3	4.6
23	6.6	7.1	8.3	5.7	7.1	5.4	5.8	7.8	4.9	6.4	6.4	7.2	6.2	5.9	6.4	12.1	9.4	5.5	6.4	11.8	14.3	7.6	9.9	6.3	14.3	4.9	7.5
24	2.9	2.7	3.4	2.3	3.2	4.0	5.2	4.5	4.9	6.3	6.4	5.6	5.4	5.1	4.8	4.7	5.0	5.5	6.9	7.5	5.6	3.3	3.4	2.9	7.5	2.3	4.6
25	3.9	3.4	1.6	2.6	6.7	3.3	2.0	2.4	4.4	3.0	2.7	4.0	3.8	4.3	3.7	7.0	4.1	5.1	3.9	3.9	5.2	3.7	5.8	7.8	7.8	1.6	4.1
26	5.8	6.2	6.5	3.8	5.4	4.0	2.8	3.3	4.0	3.7	4.5	5.2	4.2	5.3	3.8	2.2	3.5	2.8	2.7	3.4	3.8	3.9	4.1	3.8	6.5	2.2	4.1
27	2.8	4.4	6.5	6.8	2.6	6.3	8.2	9.0	7.5	7.5	7.3	7.6	7.1	8.0	7.7	7.8	8.2	8.9	8.7	8.6	8.7	7.8	7.4	7.3	9.0	2.6	7.2
28	7.5	7.2	7.6	8.3	8.5	8.0	7.0	5.6	4.4	3.1	1.2	1.4	3.1	3.7	3.9	4.0	3.7	3.4	4.0	5.5	6.7	2.7	2.8	6.6	8.5	1.2	5.0
29	2.3	2.8	4.8	2.8	3.9	4.6	4.7	4.6	5.2	5.8	5.3	9.6	8.3	5.4	3.2	2.9	1.9	4.9	4.6	3.0	3.1	2.3	2.1	2.2	9.6	1.9	4.2
30	1.9	2.5	2.6	2.0	2.1	1.9	1.8	2.6	2.8	3.7	4.2	3.6	3.3	4.7	5.3	4.7	3.7	4.1	5.8	5.3	6.3	6.3	3.1	5.4	6.3	1.8	3.7
31	9.3	7.2	6.3	6.0	6.3	9.4	10.2	10.0	5.9	5.2	7.6	6.2	6.9	6.6	8.1	4.2	4.8	7.2	6.3	4.9	4.9	4.1	4.0	3.5	10.2	3.5	6.5
Max.	**13.6**	**12.9**	**11.3**	**10.5**	**11.2**	**10.8**	**11.9**	**11.3**	**12.2**	**13.4**	**13.7**	**14.5**	**14.5**	**15.5**	**15.6**	**16.5**	**15.6**	**14.2**	**14.0**	**15.1**	**14.3**	**13.4**	**12.4**	**12.6**	**16.5**		
Min.	**1.9**	**1.5**	**0.7**	**1.4**	**0.4**	**0.3**	**0.3**	**0.6**	**0.7**	**0.9**	**1.2**	**0.9**	**0.9**	**1.8**	**1.5**	**1.6**	**1.4**	**1.1**	**0.8**	**1.6**	**2.2**	**1.7**	**1.9**	**2.2**		**0.3**	
Avg.	**5.5**	**5.5**	**5.8**	**5.4**	**5.4**	**5.6**	**5.8**	**6.0**	**5.9**	**5.5**	**5.5**	**5.7**	**5.8**	**5.9**	**5.9**	**6.2**	**5.8**	**6.2**	**5.9**	**6.2**	**6.5**	**5.7**	**5.8**	**5.6**			**5.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.4	2.9	3.2	2.4	3.1	2.6	2.2	1.3	2.9	2.8	3.0	3.7	3.3	3.7	3.0	3.5	2.9	2.9	3.1	2.9	2.8	3.1	3.0	3.3	3.7	1.3	2.9
2	2.6	1.8	2.5	3.4	3.0	2.6	2.9	2.7	2.4	2.1	3.8	3.3	6.1	7.1	5.1	7.5	6.9	9.0	7.0	9.6	7.9	7.5	5.7	8.7	9.6	1.8	5.1
3	11.6	13.3	15.3	15.9	13.0	13.9	12.4	7.6	5.8	6.4	6.1	7.3	7.4	5.1	5.1	3.9	3.8	2.3	2.2	1.5	3.6	2.7	2.7	2.1	15.9	1.5	7.1
4	3.4	1.9	3.2	3.5	3.9	3.6	4.3	4.0	4.0	4.3	4.7	4.3	3.8	4.2	3.6	3.2	2.3	2.5	2.1	3.3	3.3	3.8	3.8	2.8	4.7	1.9	3.5
5	3.3	6.0	7.9	9.1	8.1	8.9	10.4	9.9	8.6	7.7	8.2	7.0	7.1	7.2	5.9	3.6	3.9	3.8	3.8	4.0	2.6	2.1	2.3	2.5	10.4	2.1	6.0
6	1.4	1.4	2.0	2.6	3.4	3.1	3.1	2.3	2.9	2.9	3.0	3.2	3.2	3.1	3.0	3.1	5.4	5.4	5.9	4.8	5.9	6.0	3.2	4.8	6.0	1.4	3.5
7	4.7	4.4	4.0	3.8	3.5	4.0	3.8	2.8	3.8	4.0	4.3	4.2	3.6	4.5	1.5	3.4	2.8	2.4	3.2	2.1	2.6	3.0	3.2	2.5	4.7	1.5	3.4
8	3.6	3.7	2.4	5.1	5.2	6.4	7.2	6.9	7.3	7.0	7.0	6.7	7.9	9.3	10.3	10.5	8.8	9.3	9.3	8.1	9.9	11.2	10.7	11.0	11.2	2.4	7.7
9	11.6	11.7	11.6	10.4	11.5	10.9	10.1	10.0	10.7	10.1	8.1	6.3	5.8	4.1	3.8	4.0	3.3	2.1	1.3	3.1	3.2	2.9	2.7	2.7	11.7	1.3	6.7
10	2.6	1.8	1.0	1.5	2.8	3.2	3.5	2.9	2.7	3.6	3.5	4.1	4.7	4.9	3.7	1.8	1.2	1.2	2.2	2.7	2.6	1.5	1.9	1.4	4.9	1.0	2.6
11	1.3	1.4	2.2	1.9	2.2	2.1	1.7	2.2	2.9	2.5	2.9	1.5	2.4	1.9	0.8	3.4	1.8	1.2	2.2	2.5	4.0	4.3	4.8	6.7	6.7	0.8	2.5
12	6.2	8.4	9.1	8.8	11.9	12.3	11.5	11.9	13.1	8.4	8.2	7.9	9.4	9.8	9.1	7.6	5.6	6.7	4.2	3.5	2.8	3.9	6.2	7.8	13.1	2.8	8.1
13	7.0	6.4	7.7	7.7	9.5	8.9	11.4	11.6	11.8	11.2	11.3	11.1	10.5	11.4	9.7	8.4	7.4	7.7	8.8	9.1	8.5	8.7	8.0	6.9	11.8	6.4	9.2
14	7.8	6.8	8.2	7.5	7.5	7.6	6.8	7.8	7.0	7.4	6.4	4.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	4.9	9.3	15.3	15.3	0.2	4.9
15	14.6	14.4	18.0	18.3	20.7	18.7	10.5	8.7	11.2	10.7	13.2	14.0	6.2	3.8	3.6	4.2	4.3	4.6	6.0	5.5	4.0	6.6	6.1	6.5	20.7	3.6	9.8
16	6.5	7.8	8.5	10.0	9.8	10.9	11.6	12.4	12.8	12.7	12.3	12.4	11.9	11.9	12.1	11.2	9.0	8.5	7.2	3.9	3.6	3.9	7.1	5.7	12.8	3.6	9.3
17	5.9	6.0	6.9	7.6	6.7	7.2	7.2	7.5	7.7	9.2	10.1	10.6	10.7	11.7	11.8	11.9	9.6	9.1	7.7	2.6	2.7	1.7	2.0	2.6	11.9	1.7	7.4
18	3.1	3.0	3.6	5.4	7.3	6.9	5.5	5.2	4.6	4.1	3.0	2.7	2.5	3.1	2.1	2.1	2.3	3.9	5.4	5.1	6.0	5.8	4.9	5.0	7.3	2.1	4.3
19	5.2	5.5	5.1	5.0	5.2	9.5	7.9	9.0	9.1	8.6	9.3	10.2	10.7	9.7	10.4	10.9	11.4	11.5	10.2	10.5	9.7	9.7	9.9	9.4	11.5	5.0	8.9
20	8.7	5.8	3.7	3.5	4.7	3.7	3.1	4.0	3.6	4.8	6.1	6.7	5.5	6.4	6.7	7.4	8.6	9.9	9.8	10.2	9.6	9.8	9.4	8.2	10.2	3.1	6.7
21	10.2	9.4	9.6	9.1	9.8	10.6	11.2	11.5	11.6	11.6	11.3	10.4	9.0	8.1	7.6	6.2	6.8	6.7	6.1	5.9	6.7	6.5	6.8	7.4	11.6	5.9	8.8
22	6.5	7.4	6.7	7.5	7.8	8.1	8.0	7.7	7.0	7.5	7.2	6.6	6.0	4.2	4.5	3.7	3.4	3.4	3.6	4.5	4.4	3.7	3.3	3.0	8.1	3.0	5.7
23	3.0	3.3	3.3	3.4	4.1	4.2	3.5	2.2	2.2	2.0	1.7	2.5	3.6	3.2	2.3	1.8	1.4	1.9	2.6	2.2	1.1	2.6	2.9	2.6	4.2	1.1	2.7
24	2.6	2.5	2.8	3.2	3.1	2.8	3.8	3.2	3.8	5.3	5.0	5.1	3.5	2.2	1.9	1.8	2.3	1.8	3.2	3.9	5.1	5.7	3.2	2.3	5.7	1.8	3.3
25	4.2	4.7	4.3	4.5	6.0	6.3	5.4	5.7	5.0	4.9	3.1	1.9	2.0	3.4	9.7	8.3	8.4	8.0	8.2	8.2	7.9	7.9	7.8	7.1	9.7	1.9	6.0
26	7.3	6.7	6.3	6.9	6.5	6.0	5.8	5.5	7.5	6.1	6.2	6.6	6.1	7.2	6.8	5.7	3.8	2.3	4.4	1.2	1.9	3.7	1.7	0.7	7.5	0.7	5.1
27	1.4	2.1	1.2	1.4	2.1	2.3	1.9	2.0	1.8	1.3	2.3	1.7	0.8	1.3	1.1	1.7	5.6	6.7	6.8	7.3	7.8	7.7	8.3	8.6	8.6	0.8	3.5
28	8.2	7.7	6.1	5.6	5.6	5.9	6.5	5.0	5.7	6.2	6.5	5.5	5.3	4.9	4.1	3.4	1.9	1.4	2.0	1.9	1.2	0.6	0.6	2.0	8.2	0.6	4.3
29	1.8	1.6	2.2	2.2	2.6	2.6	2.4	2.6	3.1	3.5	4.6	3.7	2.3	3.1	1.6	2.0	2.5	2.2	2.0	2.2	2.1	2.2	2.2	1.9	4.6	1.6	2.5
Max.	**14.6**	**14.4**	**18.0**	**18.3**	**20.7**	**18.7**	**12.4**	**12.4**	**13.1**	**12.7**	**13.2**	**14.0**	**11.9**	**11.9**	**12.1**	**11.9**	**11.4**	**11.5**	**10.2**	**10.5**	**9.9**	**11.2**	**10.7**	**15.3**	**20.7**		
Min.	**1.3**	**1.4**	**1.0**	**1.4**	**2.1**	**2.1**	**1.7**	**1.3**	**1.8**	**1.3**	**1.7**	**1.5**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.6**	**0.6**	**0.7**		**0.2**	
Avg.	**5.5**	**5.5**	**5.8**	**6.1**	**6.6**	**6.7**	**6.4**	**6.1**	**6.3**	**6.2**	**6.3**	**6.1**	**5.6**	**5.5**	**5.2**	**5.0**	**4.7**	**4.8**	**4.8**	**4.6**	**4.6**	**5.0**	**5.0**	**5.2**			**5.6**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.9	1.9	3.3	3.2	3.4	4.6	3.6	3.8	4.5	5.4	7.3	7.7	7.9	8.2	9.1	9.6	10.2	9.5	9.2	10.3	9.1	9.0	10.3	11.2	11.2	1.9	6.9
2	10.9	11.4	11.2	11.2	10.0	9.5	8.9	6.3	5.9	6.4	6.5	6.2	6.5	6.4	6.0	4.8	5.2	5.3	5.1	5.6	5.3	4.9	5.8	4.0	11.4	4.0	7.0
3	2.3	2.5	1.6	2.7	3.0	4.8	5.8	6.0	6.5	6.3	6.2	6.7	7.2	7.2	6.9	7.4	6.1	5.5	6.1	5.9	5.5	2.9	3.9	3.2	7.4	1.6	5.1
4	2.8	2.9	2.6	6.1	5.5	6.5	4.9	4.9	4.1	3.9	4.3	5.0	6.8	7.4	6.7	7.6	7.8	6.9	6.4	6.5	6.8	7.0	7.4	6.9	7.8	2.6	5.7
5	7.5	8.2	9.0	9.4	10.1	10.4	10.5	10.0	10.2	10.2	9.5	9.1	9.3	9.7	9.5	9.0	8.1	7.2	5.6	4.3	3.8	3.7	3.1	2.8	10.5	2.8	7.9
6	2.7	3.0	2.1	2.1	2.8	2.5	2.9	2.6	3.4	3.7	2.3	5.0	5.1	5.6	4.4	5.3	4.6	4.8	5.8	7.1	8.4	8.1	7.5	7.1	8.4	2.1	4.5
7	7.4	6.5	6.0	5.3	5.2	5.2	3.6	1.7	1.3	1.4	1.6	1.2	0.9	0.6	0.9	1.7	1.7	2.0	3.2	5.7	4.8	6.6	6.0	4.3	7.4	0.6	3.5
8	5.8	8.3	8.2	6.3	2.9	3.2	3.8	3.9	3.4	4.4	4.3	5.2	5.8	7.4	8.1	9.6	10.1	9.9	9.8	11.0	10.8	11.9	11.8	11.8	11.9	2.9	7.4
9	11.6	12.2	12.0	11.2	10.8	10.4	10.5	10.0	10.1	9.5	10.0	9.4	8.6	7.7	7.4	5.7	4.3	4.6	3.1	4.8	3.0	2.7	2.2	1.5	12.2	1.5	7.6
10	3.6	2.2	1.4	1.1	0.6	0.6	1.5	2.4	2.4	2.0	3.8	2.8	1.4	1.1	2.3	2.1	1.0	2.2	2.2	2.4	0.9	1.3	2.8	2.6	3.8	0.6	1.9
11	3.0	2.3	2.6	5.6	5.9	6.4	6.7	8.0	6.8	6.7	7.9	7.3	6.5	6.4	6.8	7.2	6.4	6.8	7.4	6.5	6.3	5.8	7.4	7.6	8.0	2.3	6.3
12	7.6	8.4	7.9	7.1	5.5	6.5	4.6	2.6	2.0	3.4	3.8	3.1	3.4	4.1	3.4	3.4	3.2	2.7	1.6	1.2	1.3	1.0	1.8	2.8	8.4	1.0	3.9
13	3.8	3.7	4.7	5.0	4.4	4.8	6.2	6.7	6.3	7.3	8.2	8.4	8.1	7.9	7.1	7.4	8.9	8.9	8.1	5.4	7.4	6.0	4.6	3.7	8.9	3.7	6.4
14	3.0	4.3	4.0	6.2	6.3	6.6	6.3	2.6	6.1	6.2	5.0	5.0	4.6	3.0	3.3	2.6	1.6	0.8	2.5	3.5	3.9	5.0	4.3	5.1	6.6	0.8	4.2
15	5.5	6.9	7.9	8.2	8.3	8.8	8.7	8.3	8.0	8.1	8.4	7.7	6.9	6.7	6.8	6.8	6.9	6.7	6.7	6.8	6.8	6.8	6.7	7.3	8.8	5.5	7.4
16	7.6	7.6	7.0	7.0	7.3	6.5	5.8	6.4	6.3	5.9	4.6	4.7	3.9	4.2	3.7	3.0	3.2	3.3	3.5	3.1	1.5	1.2	1.7	2.5	7.6	1.2	4.6
17	1.9	2.6	2.9	2.7	2.6	2.8	2.6	2.6	2.3	2.8	2.8	2.4	1.9	2.1	2.2	1.7	1.0	1.5	1.9	5.7	6.8	7.7	8.4	10.3	10.3	1.0	3.4
18	11.0	10.8	10.2	9.6	9.6	9.3	10.1	9.3	9.3	9.3	9.8	8.3	8.5	9.1	9.1	10.2	9.6	9.1	10.2	9.7	9.2	9.0	8.9	8.5	11.0	8.3	9.5
19	8.5	8.2	7.6	7.6	6.6	7.5	6.6	5.3	5.3	7.0	9.1	8.0	8.6	9.3	10.3	10.8	11.3	11.9	11.5	10.5	9.7	9.8	8.4	4.8	11.9	4.8	8.5
20	3.9	4.6	2.7	1.9	2.1	1.8	1.6	1.5	1.9	4.1	3.8	2.8	2.5	3.8	4.7	3.6	4.3	3.1	3.4	2.3	2.8	2.5	2.5	1.8	4.7	1.5	2.9
21	2.6	1.8	1.3	1.9	2.2	1.2	5.9	9.3	8.8	9.8	9.3	8.7	7.8	9.5	9.1	8.3	7.3	4.4	4.3	5.6	9.1	9.3	9.8	9.1	9.8	1.2	6.5
22	9.5	8.6	6.0	5.6	5.0	4.9	3.2	1.2	2.3	1.9	1.4	1.5	2.0	1.5	1.7	2.5	2.6	1.9	2.3	3.3	2.5	6.4	7.2	3.1	9.5	1.2	3.7
23	3.4	1.3	1.2	2.9	4.6	5.5	6.0	9.1	8.3	8.7	8.3	6.9	7.2	10.9	8.7	5.5	5.7	8.2	8.6	7.6	7.3	5.1	4.8	5.7	10.9	1.2	6.3
24	6.2	7.0	4.9	4.1	3.3	4.4	2.9	1.9	1.9	2.4	1.9	2.4	2.5	2.1	2.2	2.3	1.3	2.8	3.3	5.6	5.0	4.6	5.7	7.8	7.8	1.3	3.7
25	2.1	1.2	1.2	1.5	3.4	3.4	4.7	5.6	5.5	5.5	3.9	1.3	1.4	3.2	3.9	3.6	2.6	4.2	4.2	3.8	5.2	5.6	3.4	5.3	5.6	1.2	3.6
26	4.8	5.8	5.1	4.7	5.0	5.6	6.3	6.3	5.8	6.6	6.4	5.1	2.9	3.9	4.1	4.1	3.4	3.3	2.9	4.5	5.5	8.0	9.8	10.8	10.8	2.9	5.4
27	12.0	13.1	13.1	12.9	12.5	11.4	11.1	10.4	9.9	9.0	8.8	8.1	6.9	4.7	6.3	6.8	6.3	7.1	7.8	8.2	8.7	8.2	7.9	8.0	13.1	4.7	9.1
28	8.3	8.4	7.7	5.7	7.0	7.7	8.4	6.2	7.8	9.1	7.9	5.7	3.0	3.7	5.1	4.2	4.5	3.6	2.1	1.4	0.6	1.8	2.4	2.2	9.1	0.6	5.2
29	3.2	2.3	3.4	4.6	4.4	4.1	3.9	3.8	3.7	4.7	4.1	4.0	4.5	3.1	3.6	4.6	4.6	5.0	4.3	4.6	5.0	3.8	4.2	6.6	6.6	2.3	4.2
30	8.6	7.1	6.3	4.9	5.0	4.4	4.4	5.0	6.1	7.2	5.8	7.0	6.4	5.7	6.0	6.6	6.0	5.8	5.3	5.5	6.0	6.4	5.5	5.9	8.6	4.4	6.0
31	6.0	5.7	5.7	5.9	5.7	5.9	6.1	5.4	6.1	5.6	5.6	5.6	4.9	6.2	5.5	5.8	5.9	6.9	7.3	6.6	5.8	6.3	6.6	6.8	7.3	4.9	6.0
Max.	**12.0**	**13.1**	**13.1**	**12.9**	**12.5**	**11.4**	**11.1**	**10.4**	**10.2**	**10.2**	**10.0**	**9.4**	**9.3**	**10.9**	**10.3**	**10.8**	**11.3**	**11.9**	**11.5**	**11.0**	**10.8**	**11.9**	**11.8**	**11.8**	**13.1**		
Min.	**1.9**	**1.2**	**1.2**	**1.1**	**0.6**	**0.6**	**1.5**	**1.2**	**1.3**	**1.4**	**1.4**	**1.2**	**0.9**	**0.6**	**0.9**	**1.7**	**1.0**	**0.8**	**1.6**	**1.2**	**0.6**	**1.0**	**1.7**	**1.5**		**0.6**	
Avg.	**5.8**	**5.8**	**5.5**	**5.6**	**5.5**	**5.7**	**5.7**	**5.5**	**5.6**	**5.9**	**5.9**	**5.6**	**5.3**	**5.6**	**5.6**	**5.6**	**5.3**	**5.4**	**5.4**	**5.7**	**5.6**	**5.8**	**5.9**	**5.8**			**5.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.1	7.6	7.3	7.8	8.0	7.0	6.2	6.3	5.6	6.2	5.9	6.2	6.0	6.3	6.0	5.8	6.0	5.9	5.7	5.2	5.6	5.9	5.1	4.4	8.0	4.4	6.2
2	4.5	3.4	1.5	1.0	1.6	1.9	2.0	2.0	2.3	2.2	1.7	1.5	1.8	2.5	2.5	2.7	1.1	1.4	1.4	1.2	1.8	2.1	2.6	3.0	4.5	1.0	2.1
3	2.0	1.6	2.1	2.6	2.1	2.4	4.0	3.9	4.1	4.2	2.4	3.4	3.2	3.3	3.2	3.3	3.4	4.1	3.5	2.9	2.6	2.7	2.7	4.1	4.2	1.6	3.1
4	4.0	3.9	4.5	4.0	5.1	4.2	4.9	5.2	5.8	5.4	5.4	5.3	5.0	5.2	5.6	5.8	5.3	5.0	5.0	4.2	4.0	2.4	6.0	7.0	7.0	2.4	4.9
5	6.8	7.0	8.8	9.7	9.0	5.6	9.0	7.7	7.6	6.4	8.2	6.3	6.1	8.5	9.4	7.8	5.8	5.0	3.6	4.0	4.9	14.3	15.5	13.2	15.5	3.6	7.9
6	10.0	10.1	8.4	7.4	10.1	8.2	8.9	8.7	8.3	9.6	8.3	8.8	10.4	9.2	10.6	7.9	8.3	6.4	8.6	8.8	7.2	6.6	7.4	7.4	10.6	6.4	8.6
7	4.8	4.3	4.6	5.1	6.2	6.0	6.0	6.4	6.4	6.5	6.3	5.9	5.7	7.5	7.1	7.0	7.8	8.2	7.8	7.2	6.8	5.4	6.1	4.1	8.2	4.1	6.2
8	3.7	4.5	4.7	3.7	4.0	4.9	4.3	3.9	4.8	6.1	5.0	3.7	2.8	1.4	1.1	1.8	1.7	1.5	1.4	1.1	1.7	1.3	2.2	3.8	6.1	1.1	3.1
9	5.0	5.1	5.7	5.8	7.0	6.3	6.5	5.7	5.0	4.5	6.9	0.9	0.2	0.2	1.0	3.4	7.5	7.9	4.6	6.9	5.4	5.1	5.7	5.3	7.9	0.2	4.9
10	7.0	6.3	6.5	5.9	5.1	4.7	7.4	7.5	7.8	6.9	6.2	5.9	4.8	6.4	6.3	5.3	5.1	5.2	5.4	5.9	6.2	6.3	6.6	6.6	7.8	4.7	6.1
11	6.9	7.1	7.1	7.6	6.7	7.8	8.3	7.9	8.6	7.3	7.3	7.8	8.5	6.9	6.8	8.7	7.5	5.9	7.5	7.7	8.3	9.3	8.3	8.1	9.3	5.9	7.7
12	8.2	9.9	8.8	8.2	9.4	9.2	9.0	10.7	9.6	9.9	11.1	13.2	10.3	9.3	10.0	8.9	5.9	7.0	9.0	5.8	8.1	7.4	6.6	7.9	13.2	5.8	8.9
13	8.3	9.6	7.9	6.7	5.3	3.9	4.2	3.1	3.5	1.2	1.2	2.7	1.6	0.6	0.8	3.1	3.5	3.8	3.5	4.4	6.6	8.7	8.5	7.6	9.6	0.6	4.6
14	7.0	11.3	9.8	8.7	10.4	7.8	8.7	6.0	5.3	8.4	6.8	4.6	4.5	3.0	4.2	5.8	5.3	4.2	4.5	7.3	6.9	4.0	2.6	2.7	11.3	2.6	6.2
15	3.4	5.9	4.2	4.5	2.8	2.0	1.3	0.8	2.2	2.9	2.0	1.5	1.4	1.1	4.1	6.7	7.7	9.8	9.8	9.6	10.7	10.0	10.8	11.3	11.3	0.8	5.3
16	6.2	6.6	4.9	5.0	5.8	7.0	8.1	8.4	10.1	14.3	16.1	12.0	12.1	13.1	11.3	6.1	5.2	7.0	7.0	4.4	3.8	3.6	4.7	4.6	16.1	3.6	7.8
17	3.9	3.5	5.3	5.1	3.9	2.3	2.4	3.0	2.8	3.0	4.6	10.2	4.7	7.4	8.0	6.6	6.6	7.3	7.7	6.5	7.9	5.2	4.2	5.8	10.2	2.3	5.3
18	3.8	4.4	2.1	1.4	1.9	1.9	1.5	2.0	1.6	2.2	2.1	1.8	3.1	3.1	3.4	4.3	4.5	4.8	3.9	3.8	1.4	2.9	4.1	4.4	4.8	1.4	2.9
19	4.8	3.9	3.3	3.8	3.4	2.5	2.7	3.7	4.1	3.6	1.8	3.1	4.0	3.7	3.7	3.3	2.8	3.0	2.5	2.0	1.7	1.1	0.7	2.3	4.8	0.7	3.0
20	3.9	4.1	3.0	2.4	1.1	1.2	1.1	1.6	1.1	2.9	4.1	3.0	2.5	2.5	2.3	2.6	2.1	2.4	2.0	1.8	1.1	1.1	1.3	1.6	4.1	1.1	2.2
21	1.0	1.4	2.2	1.2	1.5	1.2	1.1	1.2	1.2	1.0	1.1	1.6	1.9	1.5	1.5	1.6	1.4	1.8	1.7	1.5	0.8	0.8	1.4	1.7	2.2	0.8	1.4
22	1.3	1.2	2.1	2.6	1.7	2.3	2.1	1.4	3.5	3.1	1.3	2.3	3.2	3.8	3.6	3.4	2.5	1.6	2.1	1.5	1.3	1.1	0.8	1.4	3.8	0.8	2.1
23	1.5	0.8	0.7	1.5	3.2	3.4	3.9	3.8	3.8	3.4	2.8	2.0	2.2	1.2	2.9	4.2	3.1	0.8	0.6	1.2	2.1	3.1	3.8	6.7	6.7	0.6	2.6
24	9.5	9.5	9.3	9.5	10.8	11.9	11.3	11.5	12.1	12.1	11.3	9.3	9.0	9.7	10.8	9.1	10.3	9.6	11.0	7.4	7.7	4.2	5.7	6.9	12.1	4.2	9.6
25	6.8	5.1	3.4	4.5	4.2	5.8	7.7	10.2	5.1	6.6	6.5	5.4	6.2	7.9	9.6	9.4	7.5	6.8	7.2	5.7	5.1	5.4	5.9	5.1	10.2	3.4	6.4
26	2.2	4.4	5.0	5.7	5.3	5.4	2.0	2.3	2.3	2.7	2.7	3.2	1.9	2.4	1.3	0.7	2.2	1.5	1.2	0.7	1.8	1.9	1.7	1.1	5.7	0.7	2.6
27	4.1	5.6	6.8	5.7	3.5	3.7	4.5	4.3	3.9	4.4	3.8	3.0	1.8	1.7	2.0	1.4	1.8	1.5	3.5	3.5	3.7	2.6	4.1	3.3	6.8	1.4	3.5
28	3.0	3.2	4.5	3.9	5.8	4.9	3.9	6.6	5.1	3.0	2.9	3.0	4.2	7.8	8.7	8.2	8.2	7.5	6.4	6.8	7.5	7.3	6.8	7.6	8.7	2.9	5.7
29	7.8	8.6	7.9	7.3	6.4	4.9	5.2	4.2	4.5	2.7	2.4	2.8	3.1	2.8	1.5	1.6	1.5	1.3	1.1	0.7	0.7	2.2	1.8	2.0	8.6	0.7	3.5
30	2.1	2.2	2.4	2.5	2.2	2.4	2.3	2.6	1.9	2.4	3.9	4.0	2.6	2.1	1.9	3.0	2.9	1.5	1.4	1.8	1.7	1.1	1.5	2.2	4.0	1.1	2.3
Max.	**10.0**	**11.3**	**9.8**	**9.7**	**10.8**	**11.9**	**11.3**	**11.5**	**12.1**	**14.3**	**16.1**	**13.2**	**12.1**	**13.1**	**11.3**	**9.4**	**10.3**	**9.8**	**11.0**	**9.6**	**10.7**	**14.3**	**15.5**	**13.2**	**16.1**		
Min.	**1.0**	**0.8**	**0.7**	**1.0**	**1.1**	**1.2**	**1.1**	**0.8**	**1.1**	**1.0**	**1.1**	**0.9**	**0.2**	**0.2**	**0.8**	**0.7**	**1.1**	**0.8**	**0.6**	**0.7**	**0.7**	**0.8**	**0.7**	**1.1**		**0.2**	
Avg.	**5.0**	**5.4**	**5.2**	**5.0**	**5.1**	**4.7**	**5.0**	**5.1**	**5.0**	**5.2**	**5.1**	**4.8**	**4.5**	**4.7**	**5.0**	**5.0**	**4.8**	**4.6**	**4.7**	**4.4**	**4.5**	**4.5**	**4.8**	**5.1**			**4.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.6	1.2	3.6	3.8	1.7	1.9	3.1	3.1	2.2	3.3	2.0	1.1	2.8	1.4	1.4	5.6	6.1	6.2	6.5	5.0	3.8	2.9	2.5	2.8	6.5	1.1	3.2
2	1.1	1.3	1.4	1.8	2.3	2.2	1.9	2.8	3.4	3.6	4.1	4.8	3.1	1.6	1.0	1.8	3.6	3.0	2.3	1.5	2.5	2.0	2.1	3.7	4.8	1.0	2.4
3	2.3	2.8	2.1	1.6	1.8	1.3	2.7	3.0	3.7	4.1	3.8	4.3	5.0	6.0	6.3	4.9	5.0	6.8	7.1	9.6	8.9	7.6	7.4	8.2	9.6	1.3	4.8
4	7.8	8.1	8.3	8.4	8.2	7.8	7.5	8.3	9.3	9.7	9.9	9.4	8.9	7.5	6.7	5.5	5.7	4.3	3.4	3.8	3.4	3.1	1.3	0.8	9.9	0.8	6.6
5	1.7	1.6	1.2	2.0	2.9	2.9	2.7	2.1	1.8	2.4	2.3	2.2	1.6	1.2	1.3	1.7	1.4	1.2	1.6	0.8	1.4	0.9	0.6	2.0	2.9	0.6	1.7
6	4.3	3.7	3.2	3.2	1.0	1.2	2.1	1.3	1.4	1.4	1.1	1.3	1.7	2.3	2.3	1.6	1.9	2.0	1.3	1.5	1.9	2.2	1.8	1.4	4.3	1.0	2.0
7	1.8	2.5	3.7	3.4	4.6	3.9	3.6	4.2	5.0	6.7	6.1	6.3	5.7	5.7	5.9	6.1	5.8	5.2	4.1	4.5	5.3	4.2	5.3	5.0	6.7	1.8	4.8
8	6.4	7.0	6.6	7.8	6.9	6.3	6.6	6.7	7.3	7.7	7.7	7.5	6.6	6.0	6.4	7.0	6.7	7.5	7.7	7.9	7.6	7.3	8.0	8.6	8.6	6.0	7.2
9	8.9	8.9	8.3	7.9	9.1	8.7	7.9	7.9	7.0	7.1	7.5	7.3	6.5	7.0	7.4	6.4	5.8	3.5	1.6	6.0	3.6	2.7	3.6	2.3	9.1	1.6	6.4
10	0.9	1.4	0.8	0.6	1.4	1.9	1.7	1.0	1.7	1.6	1.1	0.9	1.1	0.9	1.0	1.0	1.5	1.3	0.6	0.9	1.9	3.6	1.1	1.1	3.6	0.6	1.3
11	1.0	3.6	4.6	4.4	2.0	3.8	6.3	5.7	5.5	4.5	5.6	6.3	7.6	8.3	7.9	8.2	8.4	8.9	10.5	10.9	10.7	11.0	12.3	10.8	12.3	1.0	7.0
12	10.7	11.6	10.8	10.5	11.2	9.8	9.0	9.0	8.7	8.5	7.8	8.1	8.3	7.8	5.9	4.2	6.6	5.6	6.0	5.2	6.1	6.1	5.0	3.8	11.6	3.8	7.8
13	3.4	3.4	2.7	3.9	4.9	5.0	3.7	4.0	3.6	3.0	2.3	2.0	1.7	2.0	2.0	3.0	2.5	2.1	2.4	3.2	3.2	1.8	3.1	4.5	5.0	1.7	3.1
14	4.8	5.6	7.2	7.8	7.7	7.5	8.8	10.0	10.2	11.0	10.6	10.6	11.0	10.3	10.3	11.5	9.9	9.8	9.2	9.0	6.3	4.8	4.1	5.0	11.5	4.1	8.5
15	3.6	1.7	1.0	0.9	4.0	2.9	1.7	1.8	2.2	1.0	1.1	1.5	1.3	1.3	1.2	1.7	2.3	2.6	3.1	2.4	4.6	5.0	3.9	4.4	5.0	0.9	2.4
16	5.0	4.5	2.9	3.5	2.3	2.6	2.0	1.2	1.7	2.0	1.7	1.6	1.8	0.8	1.1	1.4	2.4	2.5	2.6	2.3	2.2	1.8	1.0	1.8	5.0	0.8	2.2
17	0.9	1.0	1.2	1.3	2.4	2.4	2.4	2.6	3.2	3.0	3.4	2.6	2.9	3.5	3.2	3.0	2.8	3.2	2.7	2.1	2.3	1.6	1.4	0.9	3.5	0.9	2.3
18	2.3	2.3	1.3	1.9	3.0	3.4	4.0	3.5	3.1	3.7	2.9	1.5	1.8	1.7	1.9	1.0	0.9	2.6	2.7	1.1	1.5	1.1	1.0	1.6	4.0	0.9	2.2
19	0.9	1.8	1.5	2.3	2.3	2.5	2.6	2.6	2.5	1.9	1.8	2.3	4.7	3.5	3.5	2.5	2.3	2.6	4.1	6.1	6.1	6.2	6.5	5.5	6.5	0.9	3.3
20	5.0	5.0	4.0	3.7	3.3	2.8	3.2	4.2	4.2	2.7	1.8	4.1	3.4	1.9	3.6	3.9	3.6	3.2	2.0	1.3	1.0	0.8	0.7	0.7	5.0	0.7	2.9
21	1.0	1.5	1.2	1.1	1.0	2.2	2.2	1.1	3.5	1.5	2.1	2.4	3.2	3.2	2.5	2.6	2.6	2.5	2.6	2.3	1.8	2.2	3.2	3.7	3.7	1.0	2.2
22	4.9	4.6	3.6	4.9	5.2	8.0	7.3	2.6	3.8	2.5	2.6	3.2	3.3	3.3	2.2	2.6	2.2	1.7	1.7	2.0	1.9	2.6	2.7	3.0	8.0	1.7	3.4
23	3.2	3.9	3.1	5.0	6.5	7.8	8.4	8.5	9.3	9.2	9.1	8.0	5.2	4.3	3.9	2.8	2.0	2.0	2.6	2.6	2.7	3.5	3.8	4.0	9.3	2.0	5.1
24	2.9	3.7	4.0	2.9	3.0	2.4	3.3	3.4	3.2	1.5	1.0	2.2	2.4	2.2	2.0	2.1	1.5	2.3	2.1	1.3	1.8	3.3	3.6	3.7	4.0	1.0	2.6
25	3.8	3.4	3.4	3.5	2.8	2.3	3.3	4.1	3.5	1.9	1.2	2.0	2.5	2.6	2.7	2.6	2.9	2.6	2.4	2.3	2.1	2.5	2.3	1.4	4.1	1.2	2.7
26	2.7	3.1	2.2	5.3	4.5	5.8	6.1	7.7	4.8	4.8	4.6	5.0	4.0	3.6	3.7	3.4	5.0	7.7	9.5	4.5	6.7	9.4	4.5	4.1	9.5	2.2	5.1
27	4.2	5.3	3.7	5.5	7.8	7.5	7.2	7.0	8.3	7.5	7.5	6.6	5.5	5.2	6.4	4.6	3.6	4.4	3.2	2.4	3.4	6.0	5.1	4.0	8.3	2.4	5.5
28	3.1	2.1	1.7	2.2	2.9	2.6	3.4	5.3	6.2	4.8	7.4	8.7	5.6	6.2	6.3	4.6	4.6	6.2	5.1	4.3	4.4	4.1	2.9	4.1	8.7	1.7	4.5
29	6.0	4.7	4.3	2.9	3.4	4.0	3.8	3.7	1.9	1.6	1.3	2.2	2.5	3.3	2.5	3.0	3.0	3.2	2.1	2.0	1.9	1.6	0.9	0.8	6.0	0.8	2.8
30	2.7	2.0	1.7	2.1	3.3	1.6	1.4	1.3	0.8	1.3	3.4	5.1	4.1	3.5	2.0	3.3	3.7	2.7	2.9	2.8	1.8	2.1	2.0	3.2	5.1	0.8	2.5
31	2.3	1.8	3.2	3.3	2.7	2.1	3.1	1.4	1.5	1.1	1.0	1.1	1.2	1.9	2.3	1.8	1.9	2.2	3.3	3.3	1.9	1.4	1.6	1.0	3.3	1.0	2.0
Max.	**10.7**	**11.6**	**10.8**	**10.5**	**11.2**	**9.8**	**9.0**	**10.0**	**10.2**	**11.0**	**10.6**	**10.6**	**11.0**	**10.3**	**10.3**	**11.5**	**9.9**	**9.8**	**10.5**	**10.9**	**10.7**	**11.0**	**12.3**	**10.8**	**12.3**		
Min.	**0.9**	**1.0**	**0.8**	**0.6**	**1.0**	**1.2**	**1.4**	**1.0**	**0.8**	**1.0**	**1.0**	**0.9**	**1.1**	**0.8**	**1.0**	**1.0**	**0.9**	**1.2**	**0.6**	**0.8**	**1.0**	**0.8**	**0.6**	**0.7**		**0.6**	
Avg.	**3.6**	**3.7**	**3.5**	**3.8**	**4.1**	**4.1**	**4.3**	**4.2**	**4.3**	**4.1**	**4.1**	**4.3**	**4.1**	**3.9**	**3.8**	**3.7**	**3.8**	**3.9**	**3.8**	**3.7**	**3.7**	**3.7**	**3.4**	**3.5**			**3.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.5	2.7	5.1	5.7	5.6	5.9	4.9	5.4	5.8	5.1	6.1	5.7	5.6	6.3	6.5	6.4	6.4	5.8	6.3	6.1	6.4	6.9	7.9	8.1	8.1	1.5	5.8
2	8.1	8.0	7.6	7.4	7.5	7.5	7.8	7.4	8.0	7.3	7.5	9.0	8.6	7.8	7.6	8.4	7.7	7.7	5.9	5.6	5.1	5.0	5.3	5.5	9.0	5.0	7.2
3	4.3	5.0	5.0	6.3	6.4	6.8	6.2	6.7	6.0	5.4	4.8	5.8	4.4	3.8	2.8	2.9	2.4	1.8	2.3	2.5	2.2	0.9	1.3	2.0	6.8	0.9	4.1
4	1.5	0.6	1.6	2.5	1.5	2.2	2.7	2.7	2.6	2.5	2.4	3.4	3.3	3.4	3.2	3.7	3.1	1.2	2.4	3.4	1.7	1.4	1.3	0.8	3.7	0.6	2.3
5	0.9	1.2	1.4	0.8	1.9	2.4	2.6	3.1	4.0	3.0	3.7	3.4	2.8	4.4	4.8	3.9	4.2	4.6	5.2	4.4	4.1	3.7	4.6	4.2	5.2	0.8	3.3
6	3.3	3.7	3.5	1.3	1.0	2.0	1.5	1.5	1.9	1.6	1.5	1.3	1.8	4.0	3.5	3.3	3.0	2.8	3.7	2.3	4.1	4.1	5.7	5.6	5.7	1.0	2.8
7	5.8	8.7	10.6	9.9	10.5	11.1	8.4	6.8	5.2	4.8	3.5	2.2	1.9	3.6	3.2	2.2	3.0	2.3	1.7	2.5	1.8	2.2	1.4	1.8	11.1	1.4	4.8
8	2.6	2.6	2.5	2.3	1.1	1.1	0.9	1.1	1.1	1.4	1.3	1.5	3.2	3.0	2.9	2.7	3.0	3.9	2.3	6.0	7.4	5.4	5.6	6.0	7.4	0.9	3.0
9	6.3	7.1	7.4	6.4	7.2	8.8	10.0	8.7	7.6	6.3	5.1	5.4	4.4	4.6	4.9	4.1	4.0	4.9	5.0	5.5	6.0	6.3	6.6	7.1	10.0	4.0	6.2
10	7.7	7.7	8.1	7.2	6.3	5.4	2.8	3.0	2.8	2.4	1.1	1.3	2.5	3.2	2.7	3.3	3.1	2.8	2.7	2.3	1.8	1.5	1.2	1.4	8.1	1.1	3.5
11	0.8	0.4	0.9	0.8	0.8	2.2	2.8	3.3	2.5	1.6	1.8	3.0	2.7	1.8	1.7	1.0	1.3	1.2	1.1	1.0	1.1	1.9	2.3	1.7	3.3	0.4	1.7
12	2.2	5.8	7.2	7.8	7.9	7.3	6.2	6.3	6.4	5.7	3.0	4.0	3.7	1.7	1.4	1.2	1.1	2.8	3.0	1.5	0.8	2.6	6.6	6.9	7.9	0.8	4.3
13	5.9	5.3	6.2	4.5	3.3	4.5	3.2	3.4	2.0	2.4	3.2	1.3	1.6	1.5	1.0	1.0	1.5	1.4	1.9	2.0	1.8	1.5	1.5	0.9	6.2	0.9	2.6
14	1.3	1.6	2.3	1.4	1.7	3.7	3.4	1.6	1.6	2.0	1.3	2.9	2.6	2.4	2.8	2.4	2.0	2.3	2.5	2.4	2.3	1.9	1.1	1.3	3.7	1.1	2.1
15	1.4	1.6	1.6	1.8	4.7	4.3	4.2	4.5	5.4	4.6	4.8	4.3	2.8	2.5	2.3	2.7	3.0	3.5	3.1	4.7	6.1	7.7	8.2	7.7	8.2	1.4	4.1
16	8.3	6.8	6.8	7.5	6.5	4.5	4.5	4.4	3.0	2.3	1.9	1.8	1.6	1.3	1.5	2.9	4.0	3.3	3.2	3.4	4.4	1.3	1.1	0.8	8.3	0.8	3.6
17	0.5	0.8	0.9	0.7	0.9	0.8	1.6	1.8	1.7	3.7	3.6	3.8	3.7	3.8	3.9	4.1	3.9	3.8	3.3	3.0	2.7	2.4	2.5	2.1	4.1	0.5	2.5
18	2.5	1.4	1.2	3.8	2.6	1.9	3.3	1.4	1.7	1.8	2.8	3.2	3.1	2.4	2.7	2.9	2.9	3.4	3.0	2.8	2.4	1.9	1.4	0.6	3.8	0.6	2.4
19	0.6	0.7	0.8	1.0	0.9	1.4	2.1	1.7	2.6	2.2	2.8	2.9	3.1	4.0	3.2	3.0	3.0	2.6	2.6	3.2	3.9	3.4	2.6	2.3	4.0	0.6	2.4
20	1.7	2.9	3.1	3.4	1.4	1.4	1.8	1.5	1.2	1.5	2.5	2.2	1.6	2.0	2.5	1.9	2.0	1.9	1.9	1.1	2.1	2.2	1.8	0.7	3.4	0.7	1.9
21	0.7	1.0	1.6	1.4	0.9	1.5	1.5	1.9	2.3	2.2	2.7	2.3	2.3	2.8	3.3	3.9	3.8	3.8	3.4	2.6	2.1	2.4	0.8	0.9	3.9	0.7	2.2
22	0.9	1.1	1.1	1.0	2.1	2.6	2.2	1.9	2.2	1.3	1.8	1.8	1.8	1.9	1.6	1.3	2.2	2.5	3.9	4.8	4.0	3.1	2.5	2.4	4.8	0.9	2.2
23	1.7	2.5	1.4	1.5	1.4	1.0	0.6	0.9	0.9	1.1	0.9	1.7	1.9	2.3	2.9	2.7	2.5	3.1	3.0	2.6	2.5	1.5	0.7	0.6	3.1	0.6	1.7
24	0.9	1.1	1.2	1.7	1.3	1.9	1.7	1.9	1.8	2.2	1.6	1.5	1.3	2.1	3.4	4.6	4.5	4.2	4.6	4.8	4.0	5.3	5.7	5.5	5.7	0.9	2.9
25	5.7	6.0	4.3	3.9	3.1	3.7	5.2	6.1	6.3	6.0	6.5	6.8	6.6	6.9	7.0	6.3	6.8	5.2	5.3	4.5	5.4	5.7	5.9	5.6	7.0	3.1	5.6
26	5.8	7.0	7.8	8.4	9.0	8.9	8.3	7.7	7.7	8.2	8.4	6.9	6.6	7.4	8.0	8.3	7.6	8.1	7.5	7.4	6.9	6.0	5.3	5.2	9.0	5.2	7.4
27	4.3	4.7	3.5	2.6	2.4	2.1	1.7	2.4	2.5	2.0	1.3	1.7	1.9	2.7	3.0	2.8	3.0	3.0	2.9	3.2	2.5	1.9	2.3	1.6	4.7	1.3	2.6
28	1.4	0.9	1.1	2.2	2.0	1.2	0.9	3.3	3.3	4.3	4.2	3.6	4.1	5.1	3.2	4.2	2.6	2.3	2.1	2.7	2.4	2.0	2.0	2.7	5.1	0.9	2.7
29	3.6	3.4	3.3	2.7	3.2	2.9	2.2	2.0	2.2	1.5	2.3	1.7	1.5	1.0	1.3	1.9	1.7	2.1	2.2	1.8	1.6	1.7	1.4	2.5	3.6	1.0	2.2
30	2.5	1.4	2.6	2.6	2.7	1.9	2.7	2.7	1.7	2.0	2.5	2.8	3.2	3.2	3.3	3.0	3.3	3.4	2.8	2.5	2.9	2.6	1.9	1.2	3.4	1.2	2.6
Max.	**8.3**	**8.7**	**10.6**	**9.9**	**10.5**	**11.1**	**10.0**	**8.7**	**8.0**	**8.2**	**8.4**	**9.0**	**8.6**	**7.8**	**8.0**	**8.4**	**7.7**	**8.1**	**7.5**	**7.4**	**7.4**	**7.7**	**8.2**	**8.1**	**11.1**		
Min.	**0.5**	**0.4**	**0.8**	**0.7**	**0.8**	**0.8**	**0.6**	**0.9**	**0.9**	**1.1**	**0.9**	**1.3**	**1.3**	**1.0**	**1.0**	**1.0**	**1.1**	**1.2**	**1.1**	**1.0**	**0.8**	**0.9**	**0.7**	**0.6**		**0.4**	
Avg.	**3.2**	**3.5**	**3.7**	**3.7**	**3.6**	**3.8**	**3.6**	**3.6**	**3.5**	**3.3**	**3.2**	**3.3**	**3.2**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.2**	**3.3**	**3.2**			**3.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.1	2.3	2.3	1.8	2.1	2.8	3.2	1.5	1.5	3.3	2.6	2.2	3.0	2.2	2.5	1.9	1.8	1.4	1.1	1.6	1.6	3.3	2.4	1.8	3.3	1.1	2.1
2	2.9	2.0	2.1	2.2	2.5	2.4	3.3	2.1	1.5	1.5	2.8	2.7	2.5	2.8	2.8	2.8	4.0	3.1	3.2	3.2	3.2	3.1	1.9	1.7	4.0	1.5	2.6
3	1.6	4.6	6.2	5.7	5.3	4.9	5.2	5.7	4.9	4.2	4.7	4.6	5.0	5.4	4.2	1.9	2.1	3.0	3.2	2.5	3.7	3.0	2.8	1.6	6.2	1.6	4.0
4	2.0	0.9	0.7	0.5	0.7	0.8	0.9	1.2	2.1	2.9	1.6	1.5	0.9	3.6	4.3	4.1	3.8	2.9	2.2	1.8	1.6	0.6	1.4	1.0	4.3	0.5	1.8
5	0.5	0.5	0.7	0.6	0.7	1.6	2.5	1.0	1.0	0.7	1.3	2.6	3.3	2.4	2.1	2.9	2.7	3.5	3.9	1.7	3.3	2.4	1.1	1.1	3.9	0.5	1.8
6	1.0	1.6	2.5	1.4	1.1	1.4	1.1	1.5	2.7	3.5	3.8	2.6	3.0	3.7	3.2	3.2	4.2	3.6	1.8	2.3	1.6	1.7	1.0	0.5	4.2	0.5	2.3
7	1.4	1.8	2.2	5.2	3.7	3.3	1.6	1.6	1.7	1.7	1.3	1.2	1.4	1.4	1.4	2.3	2.8	2.6	2.2	2.4	2.2	1.9	1.8	1.2	5.2	1.2	2.1
8	0.9	1.3	1.2	1.3	0.9	1.5	1.4	2.0	3.2	2.8	2.4	2.7	2.7	4.2	4.3	3.4	5.5	5.3	2.9	1.7	1.6	1.5	2.1	2.0	5.5	0.9	2.5
9	1.6	1.5	1.0	2.5	5.2	6.2	7.4	7.8	7.9	6.7	6.2	7.0	4.4	5.0	6.0	4.6	4.4	4.2	4.1	3.2	2.4	2.4	2.0	3.4	7.9	1.0	4.5
10	4.3	4.0	3.8	4.3	4.9	5.0	3.4	3.8	2.8	2.7	2.2	1.3	1.2	0.8	1.7	2.2	2.2	2.6	2.3	1.9	2.1	1.6	1.7	1.8	5.0	0.8	2.7
11	1.8	1.9	1.1	1.4	1.4	1.4	1.4	1.0	1.5	1.8	1.9	2.4	2.9	2.9	2.8	2.9	2.8	2.9	2.6	2.9	2.4	1.8	0.7	1.0	2.9	0.7	2.0
12	0.9	1.3	1.6	1.9	2.3	2.2	2.6	2.3	1.2	0.8	1.9	1.0	1.3	1.4		1.4		1.3	2.1	2.1	1.6	2.4	2.1	2.9	2.9	0.8	1.7
13	1.5	1.5	2.0	1.5	2.3	2.8	3.8	3.6	3.3	2.7	2.9	2.6	2.7	1.0	0.9	1.7	1.9	1.9	1.6	1.8	1.2	1.5	1.0	0.8	3.8	0.8	2.0
14	0.8	0.6	1.3	1.5	1.5	1.6	1.8	1.7	1.6	0.9	2.2	2.6	2.5	2.4	2.6	2.8	2.9	2.5	2.4	2.5	1.7	2.0	1.9	1.0	2.9	0.6	1.9
15	1.4	0.9	1.0	1.7	3.7	1.6	2.1	5.9	6.4	6.2	6.0	6.0	6.3	7.1	6.8	6.6	4.8	4.2	3.7	4.1	2.8	2.1	3.6	3.3	7.1	0.9	4.1
16	1.9	2.1	1.7	2.3	2.3	3.2	4.2	2.8	2.4	1.5	2.3	3.4	3.4	3.2	2.2	2.8	3.0	3.0	3.8	4.3	3.6	3.5	3.7	4.1	4.3	1.5	3.0
17	4.3	3.9	3.6	2.1	1.7	7.3	6.1	5.1	5.9	8.1	5.7	4.3	5.1	4.3	3.9	3.0	3.6	4.0	3.5	4.2	7.5	8.4	5.6	5.8	8.4	1.7	4.9
18	4.5	5.4	7.2	7.0	7.0	6.7	7.5	7.3	6.9	6.7	5.2	5.2	4.2	4.5	5.0	5.0	4.7	4.1	4.5	3.9	4.9	5.8	6.3	5.4	7.5	3.9	5.6
19	5.1	6.2	6.8	7.1	6.9	6.9	7.2	6.5	4.0	3.6	2.8	2.4	3.1	1.7	2.4	3.5	2.7	1.4	2.3	3.4	2.8	2.6	4.1	7.8	7.8	1.4	4.3
20	7.3	6.8	6.9	6.0	5.7	7.2	4.9	4.2	5.0	7.0	6.5	6.3	7.4	5.0	5.1	7.0	6.4	8.7	7.2	4.6	4.7	3.3	3.8	3.5	8.7	3.3	5.8
21	1.9	1.4	1.2	1.6	3.1	5.4	3.5	2.5	2.4	2.7	5.2	5.0	5.7	5.8	6.0	6.6	6.6	5.8	3.5	2.6	4.1	5.8	4.1	3.2	6.6	1.2	4.0
22	4.5	5.2	7.1	5.8	4.4	2.5	2.2	2.2	2.5	1.7	2.1	1.2	2.0	1.7	1.8	1.5	1.0	0.8	0.6	1.3	1.5	1.3	1.2	2.5	7.1	0.6	2.4
23	2.8	3.1	2.2	0.7	0.7	1.2	1.6	2.4	2.8	2.3	3.1	6.6	6.3	4.9	3.9	5.5	3.8	3.6	1.9	1.4	1.6	2.3	1.5	3.0	6.6	0.7	2.9
24	4.6	4.4	4.9	5.5	5.9	5.3	4.7	3.6	2.9	1.6	3.3	4.0	2.3	1.6	2.0	2.5	4.0	3.6	3.8	2.0	2.9	1.2	1.3	2.3	5.9	1.2	3.3
25	2.5	2.0	2.2	2.5	2.1	2.4	2.6	2.7	1.9	1.6	3.2	4.2	2.4	3.2	2.1	1.7	2.4	3.4	2.6	2.2	2.9	2.7	2.0	1.1	4.2	1.1	2.4
26	2.1	1.1	1.2	2.2	1.6	2.8	7.1	7.7	8.5	7.9	6.6	5.7	4.4	5.3	3.2	1.2	1.2	2.3	3.2	3.8	2.9	2.3	1.4	1.0	8.5	1.0	3.6
27	2.4	1.7	2.0	1.7	1.8	2.4	2.4	3.2	3.7	3.2	2.1	2.8	2.5	1.9	1.6	0.9	1.0	1.9	2.4	3.1	2.8	3.3	3.6	3.1	3.7	0.9	2.4
28	1.3	1.0	1.8	3.6	3.5	3.4	5.9	6.3	7.5	7.6	4.8	1.2	1.8	5.5	5.0	4.9	4.4	2.9	3.0	3.8	3.4	3.0	2.5	2.6	7.6	1.0	3.8
29	4.7	6.4	7.2	8.5	8.4	7.1	8.0	8.2	5.5	5.8	6.2	6.5	5.8	4.1	4.0	3.0	3.3	2.4	3.2	2.4	5.1	4.8	4.8	7.9	8.5	2.4	5.6
30	7.8	7.6	7.4	6.1	8.9	10.9	12.0	10.9	9.1	6.5	4.8	3.8	5.1	5.0	3.9	4.2	4.3	4.7	4.6	7.7	6.4	6.3	4.9	7.2	12.0	3.8	6.7
31	5.3	6.2	6.5	2.7	1.8	2.1	4.8	7.0	6.0	5.5	3.9	5.8	9.7	8.7	7.4	5.9	7.5	6.3	7.4	4.1	3.7	3.4	8.1	6.3	9.7	1.8	5.7
Max.	**7.8**	**7.6**	**7.4**	**8.5**	**8.9**	**10.9**	**12.0**	**10.9**	**9.1**	**8.1**	**6.6**	**7.0**	**9.7**	**8.7**	**7.4**	**7.0**	**7.5**	**8.7**	**7.4**	**7.7**	**7.5**	**8.4**	**8.1**	**7.9**	**12.0**		
Min.	**0.5**	**0.5**	**0.7**	**0.5**	**0.7**	**0.8**	**0.9**	**1.0**	**1.0**	**0.7**	**1.3**	**1.0**	**0.9**	**0.8**	**0.9**	**0.9**	**1.0**	**0.8**	**0.6**	**1.3**	**1.2**	**0.6**	**0.7**	**0.5**		**0.5**	
Avg.	**2.8**	**2.9**	**3.2**	**3.2**	**3.4**	**3.8**	**4.1**	**4.0**	**3.9**	**3.7**	**3.6**	**3.6**	**3.7**	**3.6**	**3.5**	**3.3**	**3.5**	**3.4**	**3.1**	**2.9**	**3.0**	**2.9**	**2.8**	**3.0**			**3.4**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.8	9.9	6.8	3.8	2.3	1.8	1.0	3.1	3.3	3.1	3.6	3.4	3.4	3.0	2.0	2.0	1.7	1.3	1.3	2.2	2.5	2.9	3.0	2.5	9.9	1.0	3.2
2	2.7	1.9	1.7	1.4	1.8	1.4	1.0	1.1	0.9	0.7	0.9	1.4	2.0	2.2	1.2	1.4	1.6	1.5	1.4	1.3	1.4	1.5	2.0	2.1	2.7	0.7	1.5
3	2.9	3.6	3.6	2.9	3.0	1.6	0.7	1.1	2.0	2.8	1.9	1.9	1.9	1.4	1.9	2.3	2.0	2.4	2.1	1.9	1.9	1.4	1.3	1.2	3.6	0.7	2.1
4	1.2	1.7	2.3	1.2	1.0	1.2	2.1	2.4	1.8	1.7	1.9	2.2	1.5	2.4	1.9	2.0	2.0	2.1	2.4	1.1	1.5	1.2	1.0	0.8	2.4	0.8	1.7
5	1.4	1.0	0.6	0.8	1.9	1.1	0.5	0.6	2.9	3.9	4.8	4.2	4.4	3.1	3.3	2.7	2.5	2.7	2.4	2.0	1.8	1.0	1.0	1.1	4.8	0.5	2.1
6	1.1	0.9	2.5	2.7	2.6	2.4	2.1	1.2	1.6	1.2	1.2	2.1	4.1	4.8	4.2	3.2	3.0	2.9	2.9	5.3	9.4	7.5	5.4	6.4	9.4	0.9	3.4
7	3.8	4.6	4.6	4.4	2.8	3.8	5.3	5.1	5.8	5.4	3.9	1.8	2.3	3.1	2.8	2.4	2.6	2.1	1.6	2.2	3.1	5.3	4.0	4.8	5.8	1.6	3.7
8	3.1	2.8	2.2	2.0	1.7	0.7	2.6	2.9	2.7	2.1	2.0	2.6	2.5	2.7	3.3	3.5	3.1	3.3	3.6	3.0	2.6	2.3	1.7	0.9	3.6	0.7	2.5
9	0.9	0.7	0.8	1.4	1.6	1.1	1.6	2.1	1.8	1.5	1.3	1.4	3.3	3.3	3.5	3.8	4.7	3.8	2.7	2.7	3.1	2.5	2.1	1.7	4.7	0.7	2.2
10	2.8	2.7	1.7	1.7	2.1	3.5	3.2	2.5	2.2	1.3	1.7	1.7	1.9	2.1	2.0	2.0	2.1	3.0	2.9	2.1	2.2	1.7	1.9	1.4	3.5	1.3	2.2
11	1.0	1.1	1.1	2.3	2.1	1.8	1.4	2.2	1.0	1.5	1.6	1.9	1.9	2.3	3.0	2.8	2.7	2.7	2.9	2.1	0.8	0.7	1.9	3.0	3.0	0.7	1.9
12	3.6	4.1	3.1	3.6	3.6	3.2	2.7	2.0	1.5	1.7	0.9	2.1	3.7	3.0	3.3	1.6	2.7	4.0	4.3	2.8	2.2	1.5	2.2	2.9	4.3	0.9	2.8
13	1.0	1.2	1.1	1.4	2.8	2.5	4.8	5.5	4.8	2.8	2.3	1.9	1.4	1.8	6.0	6.0	5.8	5.6	4.8	5.1	4.4	4.6	3.4	2.7	6.0	1.0	3.5
14	1.4	1.6	2.0	4.1	3.4	3.0	1.7	1.2	2.8	4.1	4.0	4.0	2.8	2.4	1.6	1.8	2.3	1.4	0.5	0.6	0.5	0.6	0.7	1.1	4.1	0.5	2.1
15	0.6	0.5	1.1	0.3	1.2	1.6	2.7	2.9	2.3	3.2	1.7	2.8	2.0	1.3	2.0	1.3	0.9	0.9	1.7	2.1	1.6	1.0	3.2	1.8	3.2	0.3	1.7
16	1.5	1.9	2.0	1.3	0.6	2.4	1.6	1.2	2.0	1.4	1.4	1.5	1.5	1.2	1.9	2.7	2.4	2.4	2.5	1.8	2.7	1.7	1.2	1.5	2.7	0.6	1.8
17	2.8	2.5	1.9	1.7	2.7	3.2	3.2	3.6	3.2	2.2	3.0	3.2	2.4	3.0	3.5	3.3	2.7	2.2	2.3	2.0	1.7	1.4	1.5	2.7	3.6	1.4	2.6
18	2.5	2.1	1.9	3.7	4.5	4.4	4.2	5.1	5.0	4.8	4.5	4.2	5.2	5.2	4.4	4.7	4.8	4.0	4.6	4.2	3.2	3.2	4.4	3.8	5.2	1.9	4.1
19	3.0	2.9	2.2	2.4	1.8	1.4	3.3	1.6	2.9	3.0	2.3	1.1	1.2	2.4	2.4	1.3	1.0	0.8	0.6	1.5	4.1	4.6	6.5	6.8	6.8	0.6	2.6
20	6.0	7.9	9.2	8.7	8.2	7.8	9.1	9.1	8.3	8.4	6.2	4.2	2.6	2.1	0.9	0.5	2.3	1.6	1.7	1.4	4.0	5.5	5.4	5.7	9.2	0.5	5.3
21	6.6	6.1	5.0	5.8	4.9	5.0	5.1	4.4	3.4	2.9	2.0	1.2	1.7	2.4	2.7	2.8	2.9	2.8	2.6	3.2	2.3	1.6	2.0	1.1	6.6	1.1	3.3
22	1.0	2.2	1.3	1.2	2.1	2.1	2.4	2.2	1.4	0.8	1.2	1.6	1.2	2.3	2.6	3.0	3.4	3.2	2.7	2.1	1.1	1.1	3.2	3.9	3.9	0.8	2.1
23	4.1	3.7	4.1	3.6	3.5	2.8	2.9	2.9	3.1	3.0	3.3	1.9	2.3	2.1	2.4	1.9	2.3	1.8	2.4	1.1	1.1	1.0	1.0	1.8	4.1	1.0	2.5
24	1.8	1.8	1.1	1.6	2.2	2.7	3.7	3.4	3.7	6.5	5.9	2.9	2.8	2.1	1.4	1.9	2.0	3.4	5.3	5.6	5.1	3.4	2.8	2.2	6.5	1.1	3.1
25	2.4	2.3	1.4	1.5	1.8	2.2	1.5	2.0	1.2	2.2	1.9	2.3	3.0	2.2	1.0	1.1	1.0	1.1	1.8	2.0	2.7	2.4	2.2	2.1	3.0	1.0	1.9
26	2.0	2.0	1.6	1.9	1.6	2.0	2.6	1.4	2.1	2.3	2.1	1.1	2.0	4.1	3.0	3.0	2.2	1.4	1.6	1.7	1.8	1.8	1.4	0.9	4.1	0.9	2.0
27	0.9	0.8	0.7	1.0	1.2	1.2	1.3	1.3	0.8	1.0	0.8	1.0	1.5	1.4	0.9	1.4	1.2	1.1	1.3	2.4	4.6	5.1	4.7	3.8	5.1	0.7	1.7
28	3.1	3.4	2.6	2.5	1.8	1.7	1.5	2.3	1.9	2.0	2.1	1.8	1.9	2.6	2.4	3.8	4.4	4.1	4.9	5.7	6.1	5.9	5.5	5.0	6.1	1.5	3.3
29	5.3	4.7	3.0	3.0	3.9	3.0	3.0	4.4	4.0	3.6	3.3	3.0	2.1	2.4	2.8	4.2	3.9	3.8	5.7	5.2	5.1	4.9	5.4	5.6	5.7	2.1	4.0
30	6.2	7.1	7.9	8.5	7.3	3.7	2.7	2.6	3.0	3.7	2.8	1.4	1.8	2.8	3.5	2.6	1.9	2.1	2.6	2.1	2.7	2.5	1.6	2.7	8.5	1.4	3.6
31	2.7	3.7	3.2	3.7	3.2	2.7	5.8	7.0	7.6	7.5	7.5	8.4	8.7	8.5	8.7	9.2	10.0	10.6	10.6	10.8	10.9	10.5	10.3	10.8	10.9	2.7	7.6
Max.	**6.8**	**9.9**	**9.2**	**8.7**	**8.2**	**7.8**	**9.1**	**9.1**	**8.3**	**8.4**	**7.5**	**8.4**	**8.7**	**8.5**	**8.7**	**9.2**	**10.0**	**10.6**	**10.6**	**10.8**	**10.9**	**10.5**	**10.3**	**10.8**	**10.9**		
Min.	**0.6**	**0.5**	**0.6**	**0.3**	**0.6**	**0.7**	**0.5**	**0.6**	**0.8**	**0.7**	**0.8**	**1.0**	**1.2**	**1.2**	**0.9**	**0.5**	**0.9**	**0.8**	**0.5**	**0.6**	**0.5**	**0.6**	**0.7**	**0.8**		**0.3**	
Avg.	**2.8**	**3.0**	**2.7**	**2.8**	**2.8**	**2.5**	**2.8**	**2.9**	**2.9**	**3.0**	**2.7**	**2.5**	**2.6**	**2.8**	**2.8**	**2.8**	**2.8**	**2.8**	**2.9**	**2.9**	**3.2**	**3.0**	**3.0**	**3.1**			**2.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.5	9.8	9.0	8.8	9.3	9.2	8.8	7.9	7.8	6.8	7.8	7.6	8.0	8.3	8.0	7.1	7.5	7.8	6.9	5.5	6.3	6.2	6.4	6.2	10.5	5.5	7.8
2	6.4	6.6	5.1	5.0	5.2	5.3	4.8	3.5	3.0	5.3	3.3	3.8	4.6	5.5	5.7	6.5	6.6	8.0	9.8	11.0	12.2	9.2	8.5	9.3	12.2	3.0	6.4
3	9.1	10.3	9.8	9.8	9.9	9.3	9.3	9.2	9.6	7.0	6.8	6.3	4.8	2.9	2.8	2.4	2.7	1.4	2.9	1.6	1.2	1.9	3.3	1.2	10.3	1.2	5.6
4	1.4	2.0	1.9	1.1	0.8	0.9	1.0	1.0	0.8	1.6	2.0	1.6	2.1	2.8	2.9	3.2	3.1	3.1	2.9	2.4	1.5	0.7	2.2	2.7	3.2	0.7	1.9
5	1.9	0.8	0.7	2.3	1.1	0.9	1.6	1.2	1.8	2.1	1.4	1.7	2.3	3.1	2.9	2.8	3.0	2.9	2.7	2.4	2.3	2.0	0.9	1.4	3.1	0.7	1.9
6	1.7	0.9	2.1	2.8	2.9	2.7	4.3	4.6	5.8	6.3	7.1	7.2	7.1	7.7	8.8	9.4	10.0	9.8	10.1	11.4	11.4	10.2	9.7	9.5	11.4	0.9	6.8
7	10.4	8.5	8.3	9.4	8.4	9.1	9.8	8.6	7.3	7.7	5.3	3.0	3.4	1.6	4.2	4.9	4.8	5.6	3.8	3.6	3.0	2.7	2.7	1.8	10.4	1.6	5.7
8	1.7	3.6	3.7	3.8	2.1	0.8	1.1	3.3	5.4	4.5	4.0	2.5	1.7	2.1	2.8	4.4	4.1	4.6	6.9	8.5	9.3	10.4	9.4	8.8	10.4	0.8	4.6
9	7.6	7.0	8.2	7.8	8.2	6.7	8.6	8.2	8.3	8.3	7.3	6.6	6.6	5.6	2.4	2.5	3.7	3.5	3.7	3.0	2.2	2.2	1.3	1.6	8.6	1.3	5.5
10	3.1	1.9	2.0	4.0	4.2	2.7	0.7	1.3	1.6	1.3	0.7	1.2	1.2	6.7	4.9	0.9	0.2	1.4	4.8	1.6	1.6	2.1	1.8	2.9	6.7	0.2	2.3
11	2.4	5.1	3.4	6.6	7.1	5.8	5.3	3.6	4.9	3.9	2.9	1.1	2.3	2.0	1.8	1.6	2.7	2.4	1.6	1.5	1.7	1.9	1.9	2.1	7.1	1.1	3.1
12	2.3	2.9	2.8	2.5	3.2	3.4	3.2	4.7	6.4	7.2	7.4	7.1	7.3	6.8	7.0	7.4	7.0	7.7	8.0	8.0	7.1	6.2	6.2	6.0	8.0	2.3	5.7
13	4.3	3.3	3.6	3.5	3.1	3.2	3.8	3.9	3.5	3.8	4.1	3.7	4.0	4.3	3.8	5.1	5.3	6.7	7.9	8.7	8.3	7.8	7.9	7.0	8.7	3.1	5.0
14	7.2	8.1	8.3	8.1	8.1	7.6	7.4	7.2	6.3	6.2	6.2	5.7	5.3	5.0	4.4	4.9	3.9	4.0	4.1	4.0	3.7	4.4	4.8	4.3	8.3	3.7	5.8
15	4.3	4.2	3.9	2.9	3.0	3.1	2.8	2.6	3.2	3.7	3.1	4.1	3.4	2.0	1.9	2.2	2.8	2.9	3.0	3.7	3.7	3.7	4.4	4.7	4.7	1.9	3.3
16	3.6	3.6	3.8	1.6	2.4	2.3	2.8	2.9	2.9	3.1	3.0	1.3	3.8	4.6	4.4	2.6	4.8	3.4	3.2	3.1	2.7	2.7	5.6	2.7	5.6	1.3	3.2
17	3.8	3.6	4.9	8.8	7.3	3.1	4.1	3.2	5.0	5.8	2.9	2.5	1.7	2.8	2.8	2.2	2.2	3.2	4.8	4.0	4.0	6.0	6.7	8.5	8.8	1.7	4.3
18	10.3	10.3	9.8	10.1	9.9	9.9	9.3	9.9	10.6	10.7	9.2	9.8	10.8	9.9	7.8	4.3	5.3	5.2	6.9	5.7	2.8	2.9	3.1	3.9	10.8	2.8	7.8
19	2.7	5.2	4.9	4.8	4.7	4.6	4.5	2.6	1.3	1.7	1.2	1.5	0.6	1.2	0.8	2.2	3.1	3.8	3.5	3.6	2.9	3.3	2.6	4.4	5.2	0.6	3.0
20	4.8	5.0	5.9	5.6	6.3	6.7	7.0	5.0	5.0	8.8	9.6	10.3	11.0	11.5	5.8	8.3	5.1	5.2	3.9	2.4	1.9	1.8	2.0	1.4	11.5	1.4	5.8
21	3.7	5.5	6.4	6.6	7.7	7.2	4.9	4.0	1.8	3.8	3.8	2.0	1.6	1.8	1.8	2.5	2.4	2.2	3.4	6.3	6.9	3.0	4.1	4.6	7.7	1.6	4.1
22	4.0	5.3	5.0	7.5	6.8	5.7	5.3	3.9	5.5	4.7	4.4	4.0	3.1	1.7	0.7	1.1	1.4	2.9	2.6	1.6	2.0	1.7	3.0	3.0	7.5	0.7	3.6
23	3.0	2.5	3.7	3.7	3.3	3.1	2.7	2.3	2.4	2.0	2.1	2.4	3.2	2.5	0.9	3.0	1.3	1.2	2.4	2.1	1.0	0.5	1.6	2.0	3.7	0.5	2.3
24	2.3	3.3	4.0	4.7	4.8	4.6	4.5	3.8	3.7	3.9	3.9	4.3	3.9	3.9	3.8	4.4	4.4	4.4	4.8	4.9	5.3	5.0	5.0	5.5	5.5	2.3	4.3
25	5.2	4.8	5.5	6.0	5.7	6.5	5.9	5.2	5.3	5.7	5.4	6.2	7.1	6.3	5.5	5.4	5.3	4.9	4.8	4.8	4.9	5.0	5.6	5.5	7.1	4.8	5.5
26	5.5	5.1	5.2	5.3	5.3	5.6	5.3	5.0	5.1	4.9	3.5	2.5	1.7	3.4	4.3	4.1	3.9	3.8	2.6	1.7	1.7	1.5	1.6	2.1	5.6	1.5	3.8
27	3.4	4.0	2.8	3.1	3.9	3.6	2.9	3.1	2.7	2.6	3.6	3.1	2.0	0.9	2.6	6.4	6.4	4.5	1.5	2.6	4.8	6.6	6.9	6.6	6.9	0.9	3.8
28	7.7	7.5	7.1	6.5	6.3	5.4	6.7	3.4	2.5	2.9	4.3	3.5	1.8	2.6	3.6	4.0	4.2	3.1	2.6	2.2	3.6	4.0	4.0	4.2	7.7	1.8	4.3
29	4.5	5.5	5.2	5.7	5.5	5.9	5.8	5.9	5.7	5.8	5.1	4.8	5.0	4.2	4.1	4.5	4.3	3.3	2.7	2.6	2.3	2.1	2.2	1.3	5.9	1.3	4.3
30	0.9	0.8	1.3	2.2	2.8	3.5	3.2	2.0	2.1	3.1	3.3	2.9	4.5	5.6	6.0	6.9	7.0	5.9	4.2	5.2	4.9	4.3	3.6	3.4	7.0	0.8	3.7
Max.	**10.5**	**10.3**	**9.8**	**10.1**	**9.9**	**9.9**	**9.8**	**9.9**	**10.6**	**10.7**	**9.6**	**10.3**	**11.0**	**11.5**	**8.8**	**9.4**	**10.0**	**9.8**	**10.1**	**11.4**	**12.2**	**10.4**	**9.7**	**9.5**	**12.2**		
Min.	**0.9**	**0.8**	**0.7**	**1.1**	**0.8**	**0.8**	**0.7**	**1.0**	**0.8**	**1.3**	**0.7**	**1.1**	**0.6**	**0.9**	**0.7**	**0.9**	**0.2**	**1.2**	**1.5**	**1.5**	**1.0**	**0.5**	**0.9**	**1.2**		**0.2**	
Avg.	**4.6**	**4.9**	**4.9**	**5.4**	**5.3**	**5.0**	**4.9**	**4.4**	**4.6**	**4.8**	**4.5**	**4.1**	**4.2**	**4.3**	**4.0**	**4.2**	**4.3**	**4.3**	**4.4**	**4.3**	**4.2**	**4.1**	**4.3**	**4.3**			**4.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.5	2.5	2.3	2.9	3.2	3.6	3.6	3.0	2.2	3.9	4.1	3.5	2.8	3.5	3.3	2.0	2.9	3.3	3.5	3.5	3.7	4.1	3.7	3.7	4.1	2.0	3.3
2	3.7	3.0	1.7	2.1	1.4	2.0	3.1	2.5	2.0	1.4	2.0	2.0	2.5	3.2	4.5	4.3	6.5	6.0	6.1	5.1	8.7	5.7	9.3	9.7	9.7	1.4	4.1
3	6.1	6.6	4.4	7.7	6.6	4.6	7.7	6.9	6.4	6.1	4.9	4.0	4.5	4.4	4.2	4.9	5.4	4.4	4.7	5.3	5.8	5.0	5.1	4.9	7.7	4.0	5.4
4	4.6	3.2	2.1	1.9	2.3	2.6	3.0	3.0	3.1	3.5	3.8	3.3	2.3	1.7	1.1	2.0	3.3	3.0	4.1	5.2	4.9	5.2	5.1	6.4	6.4	1.1	3.4
5	6.2	4.5	4.4	4.0	4.7	4.1	4.4	4.5	4.0	4.6	3.9	4.7	5.0	4.6	4.4	3.8	4.3	2.7	1.9	1.3	2.7	3.0	3.2	3.7	6.2	1.3	3.9
6	3.2	3.8	3.4	3.7	3.2	3.2	3.0	3.3	2.4	4.2	6.0	5.4	5.4	3.9	5.1	3.5	3.9	4.3	5.1	5.2	5.8	5.7	5.8	4.4	6.0	2.4	4.3
7	6.1	2.6	3.8	4.3	3.9	5.3	5.6	6.7	6.9	7.5	8.2	6.7	7.2	7.7	8.3	10.1	9.9	7.6	5.8	5.5	4.4	5.0	6.1	5.6	10.1	2.6	6.3
8	6.1	7.0	5.8	5.6	6.4	6.5	6.6	5.9	7.9	9.3	8.7	5.1	6.4	4.5	3.1	4.4	3.7	3.0	1.5	2.7	3.9	4.8	4.2	4.2	9.3	1.5	5.3
9	4.6	4.8	5.4	6.0	7.0	6.7	6.6	7.7	9.3	8.8	9.0	9.7	9.2	9.9	11.1	12.3	10.9	10.4	9.7	10.3	8.9	9.1	9.1	8.7	12.3	4.6	8.6
10	8.1	7.4	6.1	5.6	5.9	2.3	5.5	2.0	5.1	2.4	1.5	4.3	1.9	3.3	1.4	0.8	1.9	3.4	3.4	3.2	3.6	3.9	4.1	3.1	8.1	0.8	3.7
11	2.8	2.0	1.6	2.0	2.4	2.3	2.6	2.1	2.5	2.5	2.9	3.5	3.7	4.9	6.5	7.4	5.5	4.7	6.6	5.7	6.1	6.7	9.4	8.7	9.4	1.6	4.4
12	9.3	9.3	9.1	9.8	9.8	9.1	8.7	9.7	10.0	10.6	8.7	8.8	9.1	8.3	7.4	6.9	7.7	7.8	8.0	9.4	10.1	10.0	12.3	10.6	12.3	6.9	9.2
13	7.9	5.8	5.4	6.3	5.1	4.9	3.0	5.7	4.4	4.8	4.1	5.2	5.2	4.8	5.1	6.6	6.5	6.4	6.0	6.2	7.3	6.8	6.6	6.1	7.9	3.0	5.7
14	5.3	5.9	5.2	5.2	5.6	5.3	5.2	4.9	5.0	4.6	4.9	4.7	4.3	4.4	4.5	3.6	4.2	4.7	5.6	5.5	5.9	6.4	5.9	5.8	6.4	3.6	5.1
15	5.0	4.9	3.9	3.3	2.0	1.0	0.8	1.5	2.0	2.4	3.3	2.9	2.1	2.8	2.9	1.6	1.7	1.0	3.4	2.7	3.2	4.0	2.0	2.9	5.0	0.8	2.6
16	3.0	1.8	2.8	4.2	4.5	4.4	4.9	5.3	4.8	4.8	4.7	3.4	4.8	2.5	1.1	2.2	3.0	3.3	3.2	4.3	5.3	4.9	4.2	4.6	5.3	1.1	3.8
17	3.6	4.8	2.6	4.6	4.2	3.4	2.4	1.7	2.7	3.9	3.2	3.8	5.3	5.2	4.2	3.9	3.8	5.1	4.2	3.9	4.9	4.3	4.5	5.4	5.4	1.7	4.0
18	5.9	6.2	6.3	6.1	5.7	5.7	5.5	6.1	7.6	7.3	7.1	6.9	7.3	7.6	8.1	9.4	8.6	8.4	7.6	6.5	5.0	6.8	5.2	4.1	9.4	4.1	6.7
19	3.4	1.4	1.3	1.7	1.6	2.7	2.2	1.4	2.0	1.8	1.9	1.0	0.8	1.6	1.1	2.1	3.6	3.1	1.9	2.9	3.7	4.5	4.3	4.3	4.5	0.8	2.3
20	3.7	3.2	3.7	4.0	3.1	3.4	4.4	4.2	3.6	3.4	2.5	5.1	6.7	8.3	8.1	9.2	9.8	10.5	10.9	8.4	3.9	2.7	2.6	2.8	10.9	2.5	5.3
21	2.5	4.2	4.7	4.1	5.7	7.3	6.1	3.3	5.0	5.7	3.5	5.2	4.7	4.6	3.5	2.3	2.1	2.9	3.2	5.3	7.0	5.9	7.4	8.2	8.2	2.1	4.8
22	5.5	6.8	6.3	7.6	10.6	8.3	11.6	13.7	8.6	12.1	11.7	12.0	13.1	12.6	8.2	7.4	8.9	6.2	2.6	2.6	4.9	4.6	4.6	4.8	13.7	2.6	8.1
23	5.5	6.4	6.3	4.9	3.1	2.0	1.4	2.0	2.8	3.8	6.0	5.9	5.5	5.4	8.2	8.9	6.2	5.8	5.5	4.9	5.7	6.2	6.3	6.6	8.9	1.4	5.2
24	5.6	5.1	4.2	4.4	4.6	4.0	4.6	6.0	13.2	7.6	4.8	5.3	5.9	7.7	10.9	8.6	7.4	7.4	8.5	4.0	4.3	2.5	2.1	3.0	13.2	2.1	5.9
25	4.3	3.5	4.2	4.6	5.3	6.2	6.1	6.0	5.8	5.1	5.1	6.0	5.8	5.6	6.2	5.6	5.3	5.4	6.1	6.6	7.5	6.7	7.3	7.3	7.5	3.5	5.7
26	7.6	6.2	6.0	5.4	3.3	2.3	1.3	1.4	1.4	1.2	1.5	1.7	2.8	2.7	2.5	1.3	2.8	4.0	4.3	4.8	5.7	5.3	5.1	5.2	7.6	1.2	3.6
27	3.0	4.7	2.4	3.8	5.6	6.2	4.3	3.0	2.9	2.2	4.1	5.6	5.1	5.0	3.6	3.6	2.3	1.6	4.0	4.5	3.8	3.6	2.4	2.0	6.2	1.6	3.7
28	3.4	2.3	2.8	3.1	3.5	3.6	2.0	3.1	3.2	2.2	3.5	3.6	3.2	2.3	1.7	1.9	0.9	1.4	1.4	2.3	2.9	3.3	2.9	3.3	3.6	0.9	2.7
29	3.3	2.7	2.9	3.1	3.7	2.0	2.6	2.4	3.0	2.8	3.6	3.2	3.4	3.2	3.3	2.7	3.1	5.0	4.6	6.2	6.3	6.4	4.9	5.0	6.4	2.0	3.7
30	6.0	6.1	6.1	5.7	5.6	5.1	5.4	5.0	3.3	3.2	4.3	4.3	4.5	4.6	3.8	2.4	0.8	1.3	2.4	2.6	2.9	2.6	2.6	2.5	6.1	0.8	3.9
31	3.0	3.0	2.3	2.2	2.4	2.2	3.1	2.5	2.9	2.0	2.7	3.8	3.4	2.6	2.6	2.0	1.3	1.1	2.5	2.5	2.1	1.2	2.5	3.4	3.8	1.1	2.5
Max.	**9.3**	**9.3**	**9.1**	**9.8**	**10.6**	**9.1**	**11.6**	**13.7**	**13.2**	**12.1**	**11.7**	**12.0**	**13.1**	**12.6**	**11.1**	**12.3**	**10.9**	**10.5**	**10.9**	**10.3**	**10.1**	**10.0**	**12.3**	**10.6**	**13.7**		
Min.	**2.5**	**1.4**	**1.3**	**1.7**	**1.4**	**1.0**	**0.8**	**1.4**	**1.4**	**1.2**	**1.5**	**1.0**	**0.8**	**1.6**	**1.1**	**0.8**	**0.8**	**1.0**	**1.4**	**1.3**	**2.1**	**1.2**	**2.0**	**2.0**		**0.8**	
Avg.	**4.9**	**4.6**	**4.2**	**4.5**	**4.6**	**4.3**	**4.4**	**4.4**	**4.7**	**4.7**	**4.7**	**4.9**	**5.0**	**4.9**	**4.8**	**4.8**	**4.8**	**4.7**	**4.8**	**4.8**	**5.2**	**5.1**	**5.2**	**5.2**			**4.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.9	3.2	2.8	2.5	2.8	4.0	2.7	1.5	2.9	2.6	2.8	2.7	3.2	2.7	4.3	4.5	3.5	5.3	6.4	4.6	3.0	1.8	1.7	1.5	6.4	1.5	3.2
2	4.3	4.3	7.1	8.7	7.6	4.8	3.2	4.7	5.0	4.1	4.9	6.4	7.2	8.8	8.1	7.6	7.6	8.8	9.0	8.9	9.9	10.6	8.6	8.8	10.6	3.2	7.0
3	9.3	9.1	9.5	9.1	9.0	9.0	9.9	10.8	9.9	9.9	10.8	8.8	9.5	9.9	11.9	10.5	9.7	9.1	9.4	8.7	7.6	7.3	7.3	4.4	11.9	4.4	9.2
4	4.4	4.3	4.1	3.6	3.6	3.4	2.5	3.1	1.2	1.9	2.0	2.2	1.4	3.3	2.1	2.6	1.6	1.2	1.6	2.8	4.0	4.6	2.8	3.2	4.6	1.2	2.8
5	3.9	4.0	3.2	3.0	3.0	3.0	3.3	1.8	2.8	4.1	6.1	5.2	4.8	5.1	4.1	4.7	5.0	5.5	5.8	5.3	5.5	5.3	5.8	5.5	6.1	1.8	4.4
6	5.9	5.8	5.6	5.9	6.1	7.4	6.3	6.6	6.6	6.1	5.7	5.3	4.6	4.7	3.9	2.5	1.2	3.2	5.6	6.9	7.0	7.9	7.1	8.7	8.7	1.2	5.7
7	8.0	9.6	9.3	10.2	8.9	10.2	12.5	11.5	11.2	11.5	10.2	8.7	6.2	3.6	4.8	6.1	3.7	5.1	5.5	5.3	3.8	5.6	5.2	4.2	12.5	3.6	7.5
8	4.0	3.6	3.1	3.3	3.2	3.5	3.2	4.6	4.8	4.4	4.6	4.8	4.7	5.9	6.8	6.5	7.4	8.6	9.4	9.4	8.9	9.0	10.9	11.7	11.7	3.1	6.1
9	12.1	11.8	10.8	10.3	11.4	11.4	12.2	11.9	12.2	12.1	11.7	12.0	11.7	11.5	10.9	10.8	10.5	10.2	9.2	8.6	8.6	8.9	9.7	9.5	12.2	8.6	10.8
10	8.5	9.2	9.7	9.9	9.7	10.3	9.9	9.5	9.1	9.1	9.6	10.8	9.0	8.0	3.2	2.7	3.6	3.1	3.6	3.4	3.4	3.4	3.9	3.2	10.8	2.7	6.9
11	4.2	4.4	5.1	4.6	4.4	5.2	5.3	5.2	5.2	6.6	4.8	3.6	3.0	2.7	3.3	2.4	1.4	1.2	4.7	8.2	8.8	9.6	10.1	10.7	10.7	1.2	5.2
12	8.6	8.5	7.9	6.0	5.4	4.7	6.4	8.8	7.8	8.3	7.8	10.0	10.2	7.6	4.5	6.2	7.0	6.1	2.6	2.9	1.9	1.2	1.6	1.7	10.2	1.2	6.0
13	2.3	3.2	4.1	4.3	5.1	5.2	5.9	5.3	5.1	5.4	5.8	4.7	5.9	6.8	5.0	4.8	4.8	4.5	4.0	3.9	3.6	3.6	3.5	4.0	6.8	2.3	4.6
14	4.3	3.6	3.5	4.8	4.5	4.6	4.6	4.4	4.3	4.0	2.3	2.8	3.3	2.8	1.3	0.9	1.7	1.5	1.4	2.3	1.8	2.7	2.7	2.3	4.8	0.9	3.0
15	2.2	1.2	1.0	2.5	2.2	1.7	1.5	2.4	2.4	2.8	3.7	5.0	6.3	5.4	5.0	4.7	5.4	6.6	6.2	6.2	5.3	5.7	6.1	6.6	6.6	1.0	4.1
16	6.2	6.9	6.7	6.8	7.1	6.7	2.3	1.1	1.3	0.4	0.8	1.2	1.7	2.0	1.8	1.7	1.7	2.6	2.2	2.9	3.6	3.9	3.3	3.9	7.1	0.4	3.3
17	3.7	3.3	3.7	3.2	2.3	2.9	3.3	3.7	3.5	2.0	2.6	2.6	3.1	2.9	2.5	2.4	1.9	2.4	3.1	3.4	3.3	3.5	3.4	3.2	3.7	1.9	3.0
18	2.7	2.6	2.6	2.8	3.4	3.3	3.4	3.2	3.2	3.7	3.6	3.5	3.2	3.3	2.5	2.6	2.4	2.2	2.2	2.8	3.2	3.5	3.8	3.7	3.8	2.2	3.1
19	3.3	3.2	3.2	3.1	2.8	2.5	2.3	2.6	2.1	2.6	3.4	3.2	4.0	2.0	2.8	2.3	4.8	4.2	3.6	3.1	3.6	2.8	3.7	3.9	4.8	2.0	3.1
20	4.2	4.1	5.0	2.8	2.8	5.7	6.0	5.0	5.3	4.9	6.0	2.4	4.7	3.8	3.1	3.3	2.4	2.9	5.1	6.8	8.1	5.5	3.9	2.7	8.1	2.4	4.4
21	2.7	5.2	4.6	4.0	7.0	6.7	3.3	2.2	1.9	1.5	2.2	3.2	3.9	5.0	4.3	4.0	4.7	4.0	1.4	1.5	2.1	3.2	3.5	3.5	7.0	1.4	3.6
22	3.9	4.6	4.4	4.0	2.7	2.4	2.3	2.8	1.7	2.1	2.5	4.2	3.1	4.0	4.0	2.3	1.9	1.9	2.0	2.2	2.0	2.1	2.1	2.0	4.6	1.7	2.8
23	2.2	2.0	2.1	2.6	2.4	3.5	4.4	5.6	3.0	3.6	3.8	4.8	5.3	5.7	6.5	6.7	7.1	7.0	6.5	6.8	8.4	8.5	8.0	7.3	8.5	2.0	5.2
24	7.4	7.6	8.9	8.7	9.5	10.5	10.8	10.0	9.1	7.8	7.7	8.1	7.3	7.1	6.0	6.1	5.8	5.6	5.6	6.2	5.1	4.8	4.0	3.2	10.8	3.2	7.2
25	6.1	8.5	8.2	5.4	6.7	8.6	8.2	6.0	5.7	7.1	5.8	7.5	9.8	11.3	11.1	11.0	10.9	9.5	11.2	7.6	9.0	9.2	10.6	9.8	11.3	5.4	8.5
26	11.5	13.0	13.2	14.8	15.0	14.7	15.0	13.6	12.8	10.4	10.6	9.3	6.9	5.2	4.5	2.3	2.8	4.5	2.9	5.5	5.6	4.8	3.9	4.6	15.0	2.3	8.6
27	3.2	3.5	4.0	3.1	2.7	3.1	3.4	2.1	2.3	2.5	3.0	1.9	1.1	3.2	1.5	1.2	1.0	0.9	1.7	4.0	7.4	6.9	6.7	6.4	7.4	0.9	3.2
28	7.6	6.6	6.8	7.2	6.5	5.2	6.2	6.4	6.7	6.3	6.1	5.3	5.7	4.7	2.9	1.9	1.4	1.8	1.3	1.8	1.8	2.0	2.3	3.5	7.6	1.3	4.5
29	4.2	3.9	3.9	6.9	8.7	9.6	11.2	12.9	13.1	13.4	14.7	14.4	13.9	14.9	15.5	14.4	14.6	14.1	13.6	13.2	13.7	12.8	12.5	10.4	15.5	3.9	11.7
30	8.5	10.2	9.4	9.2	11.1	8.6	8.6	7.6	8.5	8.4	8.1	8.3	8.8	10.9	13.9	11.1	8.7	5.1	7.9	5.2	2.6	3.2	5.4	2.8	13.9	2.6	8.0
Max.	**12.1**	**13.0**	**13.2**	**14.8**	**15.0**	**14.7**	**15.0**	**13.6**	**13.1**	**13.4**	**14.7**	**14.4**	**13.9**	**14.9**	**15.5**	**14.4**	**14.6**	**14.1**	**13.6**	**13.2**	**13.7**	**12.8**	**12.5**	**11.7**	**15.5**		
Min.	**2.2**	**1.2**	**1.0**	**2.5**	**2.2**	**1.7**	**1.5**	**1.1**	**1.2**	**0.4**	**0.8**	**1.2**	**1.1**	**2.0**	**1.3**	**0.9**	**1.0**	**0.9**	**1.3**	**1.5**	**1.8**	**1.2**	**1.6**	**1.5**		**0.4**	
Avg.	**5.4**	**5.7**	**5.8**	**5.8**	**5.9**	**6.1**	**6.0**	**5.9**	**5.7**	**5.7**	**5.8**	**5.8**	**5.8**	**5.8**	**5.4**	**5.0**	**4.9**	**5.0**	**5.2**	**5.4**	**5.4**	**5.5**	**5.5**	**5.2**			**5.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (Climatronics) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.2	3.7	3.7	2.4	4.6	3.7	4.8	4.7	3.3	3.3	4.7	2.7	1.3	3.8	3.8	4.8	5.2	4.7	5.1	4.8	4.9	6.1	5.8	5.3	6.1	1.3	4.1
2	5.8	4.7	5.6	6.2	6.8	7.2	7.7	7.4	7.9	7.0	7.1	8.5	11.5	10.0	10.2	9.5	8.8	9.2	8.4	9.3	8.6	7.7	7.3	6.9	11.5	4.7	7.9
3	7.7	7.6	7.8	8.5	8.2	8.2	8.4	7.7	8.7	9.6	9.0	9.3	9.4	9.3	9.5	9.1	9.8	9.6	9.4	9.7	9.7	9.7	9.8	9.6	9.8	7.6	9.0
4	6.9	7.0	6.7	6.0	5.0	5.4	5.3	5.3	5.8	5.5	5.6	6.5	6.8	6.7	6.4	6.3	5.2	5.4	5.0	5.6	5.4	5.8	5.6	5.2	7.0	5.0	5.8
5	5.1	5.6	6.1	6.4	6.0	5.8	6.2	6.0	5.3	6.2	5.2	5.4	5.9	5.9	7.6	6.9	5.8	5.3	7.9	8.0	7.3	6.8	5.4	5.8	8.0	5.1	6.2
6	7.1	7.6	6.7	5.8	5.4	5.7	5.2	4.8	5.0	4.7	5.3	4.7	3.7	3.7	3.8	3.3	2.4	0.9	1.4	1.8	1.5	0.8	0.7	0.5	7.6	0.5	3.8
7	0.5	0.9	0.7	0.8	1.4	2.0	3.2	3.4	2.5	1.8	1.1	1.5	2.2	2.1	3.3	2.9	3.3	3.5	2.3	2.5	4.1	4.2	4.8	5.8	5.8	0.5	2.5
8	7.1	7.1	6.8	8.6	10.5	12.1	12.2	12.2	11.2	11.6	12.2	12.1	12.6	13.6	14.0	13.6	12.8	12.2	10.6	9.3	10.8	13.2	14.6	13.3	14.6	6.8	11.4
9	11.1	9.3	8.3	7.6	6.2	2.9	1.9	2.1	1.3	0.7	0.5	1.4	2.0	0.7	0.8	0.6	0.8	1.0	1.4	1.6	1.8	2.0	3.8	2.7	11.1	0.5	3.0
10	2.1	1.3	1.9	7.8	2.8	3.1	2.9	5.5	6.4	3.1	4.8	5.3	3.8	4.3	4.3	8.1	8.7	4.9	3.2	3.9	6.4	6.9	4.8	5.0	8.7	1.3	4.6
11	3.0	3.2	2.4	3.2	4.4	6.1	2.4	2.1	2.3	5.3	2.6	2.7	3.5	3.4	5.6	4.1	4.4	7.7	8.0	6.5	4.7	2.1	8.8	7.5	8.8	2.1	4.4
12	4.8	8.6	9.2	8.0	8.1	6.8	5.7	4.6	3.7	3.3	3.3	3.1	1.4	2.7	2.3	3.7	3.5	3.3	2.9	1.8	1.8	3.6	1.7	2.2	9.2	1.4	4.2
13	3.3	1.8	3.4	3.2	3.6	3.4	2.6	2.2	2.3	3.5	2.5	3.5	2.5	1.5	1.9	3.2	1.5	2.1	3.3	1.8	2.1	2.7	2.9	1.6	3.6	1.5	2.6
14	1.6	2.1	1.8	2.3	3.5	2.7	1.9	1.5	1.6	2.4	5.8	5.3	1.7	1.8	2.7	6.3	8.2	7.4	7.1	7.5	7.2	7.2	6.7	5.7	8.2	1.5	4.3
15	5.1	4.7	3.7	3.7	3.6	3.3	3.9	3.5	3.8	3.7	4.2	2.8	2.1	2.1	2.5	2.1	1.9	0.9	1.1	2.3	2.0	1.7	0.8	2.1	5.1	0.8	2.8
16	1.6	1.5	2.3	2.9	2.8	2.5	2.1	3.1	3.7	3.9	1.9	1.0	2.3	3.8	3.2	3.3	4.2	5.4	4.0	4.3	4.7	4.6	5.5	6.8	6.8	1.0	3.4
17	6.9	6.1	6.6	6.3	5.9	7.8	7.0	6.0	6.2	6.9	7.9	8.1	8.1	7.4	7.6	8.0	7.2	6.3	7.5	7.3	7.7	7.6	7.4	6.9	8.1	5.9	7.1
18	6.7	7.1	6.9	6.8	6.3	6.0	6.5	5.7	5.2	5.4	5.4	6.0	6.1	6.8	6.4	6.5	6.4	6.7	5.9	6.2	6.4	7.0	7.7	7.7	7.7	5.2	6.4
19	6.7	7.1	7.5	7.7	7.7	8.0	6.7	6.2	6.9	6.7	6.8	6.7	7.2	8.2	8.2	7.8	8.4	8.9	9.2	9.2	9.1	9.3	10.0	9.2	10.0	6.2	7.9
20	9.2	9.4	8.5	8.2	9.1	8.8	7.4	6.2	6.5	5.5	6.4	6.4	5.8	6.0	6.9	5.0	5.2	4.9	4.6	3.4	2.1	1.0	1.1	0.9	9.4	0.9	5.8
21	1.7	1.3	0.8	0.8	1.4	1.3	1.8	2.4	2.2	1.9	2.4	2.4	2.7	2.2	3.1	2.7	1.6	2.1	1.8	2.5	2.6	2.9	3.4	3.9	3.9	0.8	2.2
22	4.9	4.1	5.4	5.6	6.1	6.5	6.0	5.1	5.2	6.0	5.8	4.3	1.9	1.7	0.9	2.7	2.8	3.6	2.6	1.5	2.4	1.1	2.3	5.3	6.5	0.9	3.9
23	7.3	8.2	8.6	7.9	7.0	7.5	6.9	6.1	4.8	1.7	5.3	8.7	5.3	5.6	5.9	5.9	4.2	4.7	4.8	4.2	5.5	3.3	6.1	6.1	8.7	1.7	5.9
24	5.8	2.8	4.1	5.6	6.0	9.0	12.0	6.5	4.9	5.6	4.5	3.4	3.7	6.5	7.0	4.3	2.5	2.2	2.6	7.4	5.1	3.5	1.8	5.0	12.0	1.8	5.1
25	3.9	3.8	3.7	4.6	6.5	6.2	7.2	7.5	7.8	7.2	7.5	7.7	8.4	7.2	5.3	1.7	1.7	2.0	2.0	4.7	6.3	8.6	7.9	10.2	10.2	1.7	5.8
26	7.6	7.7	8.7	6.0	5.5	5.9	8.2	12.3	9.1	7.3	8.1	13.3	9.6	12.2	7.2	9.6	11.8	11.8	7.2	6.1	8.6	9.1	7.7	9.8	13.3	5.5	8.8
27	9.8	10.0	10.2	10.3	10.1	9.7	11.3	12.0	10.0	10.1	8.8	7.3	7.0	7.8	7.9	7.6	6.5	8.3	7.3	3.6	2.4	3.5	2.5	3.3	12.0	2.4	7.8
28	4.2	5.5	5.0	3.9	4.0	3.5	3.9	4.8	5.4	4.1	4.0	4.9	5.1	5.9	2.8	4.0	6.2	5.6	4.7	3.4	3.5	3.2	5.7	5.6	6.2	2.8	4.5
29	5.9	5.4	4.9	6.4	6.9	4.1	7.1	3.9	2.1	3.6	4.5	3.5	2.9	5.1	5.2	3.0	2.9	2.4	3.9	3.7	3.2	2.9	3.1	2.3	7.1	2.1	4.1
30	2.4	2.9	2.6	2.7	3.0	4.9	4.9	5.4	2.1	2.6	1.9	1.4	2.4	3.5	3.2	2.8	2.3	3.1	4.3	6.7	2.8	2.5	4.0	4.1	6.7	1.4	3.3
31	3.4	6.7	6.8	7.8	7.2	6.9	8.7	7.5	6.8	8.6	6.6	7.2	8.3	7.8	7.8	6.3	7.2	7.9	7.2	7.3	7.0	7.0	5.8	6.1	8.7	3.4	7.1
Max.	**11.1**	**10.0**	**10.2**	**10.3**	**10.5**	**12.1**	**12.2**	**12.3**	**11.2**	**11.6**	**12.2**	**13.3**	**12.6**	**13.6**	**14.0**	**13.6**	**12.8**	**12.2**	**10.6**	**9.7**	**10.8**	**13.2**	**14.6**	**13.3**	**14.6**		
Min.	**0.5**	**0.9**	**0.7**	**0.8**	**1.4**	**1.3**	**1.8**	**1.5**	**1.3**	**0.7**	**0.5**	**1.0**	**1.3**	**0.7**	**0.8**	**0.6**	**0.8**	**0.9**	**1.1**	**1.5**	**1.5**	**0.8**	**0.7**	**0.5**		**0.5**	
Avg.	**5.2**	**5.3**	**5.4**	**5.6**	**5.7**	**5.7**	**5.9**	**5.6**	**5.2**	**5.1**	**5.2**	**5.4**	**5.1**	**5.5**	**5.4**	**5.3**	**5.3**	**5.3**	**5.1**	**5.1**	**5.1**	**5.1**	**5.3**	**5.6**			**5.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	24.3	21.9	19.6	22.7	25.2	17.5	21.5	17.9	11.9	15.0	18.1	17.9	29.6	28.5	207.4	30.4	15.4	6.9	7.1	11.7	17.3	17.3	35.0	31.7
2	33.8	33.1	32.8	35.8	40.6	44.9	51.2	50.5	53.2	54.9	57.7	57.1	54.3	54.1	51.5	58.0	57.3	53.4	48.6	51.9	46.0	32.3	29.2	34.2
3	24.8	27.5	24.9	35.4	27.8	38.0	17.2	31.9	28.9	10.9	18.2	32.5	25.5	32.1	57.0	59.9	60.0	53.3	39.9	47.8	49.7	55.8	54.8	58.3
4	52.4	56.4	41.0	60.8	30.0	41.9	47.5	28.6	5.3	36.9	52.3	12.9	7.9	8.3	43.9	46.9	21.8	10.8	0.3	37.5	54.0	87.5	33.7	30.1
5	41.4	23.6	27.3	353.2	358.5	23.6	344.2	322.2	313.0	314.0	316.0	314.6	314.8	315.8	314.0	315.6	313.4	315.1	315.4	315.5	314.7	313.2	315.2	316.5
6	316.4	314.6	316.0	316.3	316.7	317.8	316.5	315.8	316.3	315.9	316.6	317.5	314.8	314.0	328.3	324.7	9.3	24.9	41.8	42.0	30.7	25.1	16.6	18.1
7	12.5	344.6	32.5	55.5	54.8	51.0	54.3	44.0	49.1	74.6	63.9	54.2	42.2	27.0	4.0	32.5	21.1	17.6	5.8	25.2	32.1	339.5	55.2	43.5
8	50.8	27.4	51.1	53.0	65.9	66.3	1.4	18.4	44.5	21.7	62.8	60.6	69.0	49.4	67.7	37.4	57.4	51.1	54.9	63.5	57.9	57.8	61.1	38.7
9	59.1	72.3	59.5	56.0	53.9	56.6	54.2	47.7	47.3	54.2	59.7	56.8	60.5	58.0	50.2	58.1	37.8	310.0	311.1	312.7	315.7	314.9	316.6	315.2
10	315.7	315.5	318.9	314.6	314.7	312.7	317.1	316.5	316.1	315.4	314.8	314.8	315.2	314.6	316.0	316.0	316.2	312.9	314.9	311.2	312.2	314.1	316.6	314.6
11	311.5	313.4	314.3	316.7	335.7	311.4	312.0	310.4	309.9	310.9	16.5	39.2	36.7	44.1	44.7	38.7	29.2	25.9	26.6	28.4	47.4	55.7	48.5	45.2
12	58.3	55.4	59.4	51.1	47.5	59.1	62.4	59.6	59.0	44.2	322.4	48.0	57.8	58.0	58.9	61.9	60.0	45.2	25.2	12.6	357.4	336.6	310.5	311.9
13	6.5	55.1	60.8	53.5	45.7	37.5	51.4	63.7	61.0	39.6	17.6	32.5	48.8	349.2	31.7	5.3	312.3	313.9	311.6	311.9	315.6	23.3	50.2	55.1
14	56.2	48.3	45.8	31.3	359.4	8.2	27.5	30.5	24.8	18.7	12.6	17.9	10.5	27.3	27.9	31.9	30.1	29.7	27.7	24.6	28.0	20.6	6.7	15.2
15	15.8	20.1	20.1	26.4	23.6	30.3	26.5	24.9	25.7	2.0	84.7	27.1	26.6	33.1	23.3	25.4	28.7	25.9	25.8	25.0	27.7	26.9	32.8	29.1
16	25.4	271.5	179.8	206.0	192.3	344.9	26.9	27.2	329.7	51.2	33.8	352.1	32.2	60.6	79.1	57.8	3.6	212.6	49.8	19.7	22.9	16.1	21.4	30.9
17	23.5	31.0	26.8	21.7	20.7	25.4	28.5	357.0	341.1	346.3	357.7	12.3	13.6	15.3	11.0	12.9	9.8	10.2	19.8	22.1	22.4	14.7	26.6	22.9
18	24.0	12.2	358.8	40.4	200.4	25.6	256.8	25.6	40.5	21.1	26.7	21.3	195.1	212.1	212.8	30.9	38.4	222.6	261.2	29.9	29.1	23.0	11.2	21.0
19	33.7	29.0	31.3	26.8	27.7	24.7	13.1	11.7	11.5	23.7	23.9	10.3	11.3	350.1	357.3	329.0	348.7	352.5	7.8	9.7	7.3	9.8	10.1	3.3
20	1.7	359.0	6.5	2.7	355.8	357.7	8.3	2.5	359.2	353.3	352.1	352.4	345.3	12.7	353.7	15.5	16.3	28.8	30.5	28.5	29.2	29.6	26.6	20.1
21	311.2	30.0	17.8	27.4	31.6	28.2	26.5	27.2	14.0	23.4	12.1	356.3	347.8	346.8	359.1	6.9	355.2	6.2	356.5	354.7	327.7	304.1	17.2	260.9
22	266.3	237.4	225.9	221.9	229.6	223.3	231.5	203.1	251.3	246.5	275.1	30.7	13.7	188.8	166.3	166.8	87.6	51.1	61.8	77.5	29.1	325.4	25.2	74.7
23	333.1	17.0	56.6	88.8	155.6	44.8	54.3	52.7	86.4	113.1	46.1	52.7	106.0	79.5	145.2	164.6	170.0	116.7	73.4	308.5	308.3	309.5	312.0	358.9
24	10.5	35.4	34.3	18.3	19.6	23.4	30.7	19.7	21.2	14.2	15.2	26.2	31.7	34.1	15.5	19.6	24.0	18.3	28.8	36.4	31.8	34.3	28.8	25.5
25	25.8	24.4	1.8	236.1	212.4	23.1	6.5	333.2	200.1	356.1	107.9	106.6	167.7	213.4	70.6	203.2	211.7	107.6	79.3	70.8	49.6	122.3	153.5	275.4
26	51.6	351.3	301.1	346.4	314.9	14.0	4.6	28.9	34.8	26.9	46.7	50.0	43.9	47.7	51.1	55.2	35.4	15.8	22.0	24.1	26.0	23.3	18.3	17.1
27	25.3	22.7	27.3	33.2	9.9	13.3	18.9	13.5	12.9	0.7	6.6	358.1	3.7	1.3	6.3	9.8	4.2	3.4	10.2	6.6	5.5	10.8	12.4	14.2
28	14.6	14.7	18.5	20.7	11.3	19.8	21.3	23.8	26.1	30.0	6.4	207.7	168.8	197.7	172.0	184.3	189.5	184.2	193.5	197.4	193.2	8.4	224.7	179.4
29	196.8	144.8	187.7	85.7	76.1	170.2	195.2	168.4	159.1	70.7	309.6	304.5	309.1	332.2	79.8	155.6	127.2	36.5	33.9	18.5	14.3	4.9	343.0	355.7
30	14.0	12.9	24.4	10.1	352.0	12.2	16.4	13.4	10.7	21.7	21.9	22.3	25.4	39.0	55.1	56.6	49.3	57.3	54.5	44.3	3.5	32.8	29.9	6.5
31	311.4	318.1	347.6	13.6	328.7	311.1	305.8	299.9	300.3	359.5	44.2	49.3	79.1	99.7	304.4	326.3	29.1	318.2	328.7	10.0	28.4	21.5	15.5	17.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	12.3	14.7	18.9	20.6	25.9	28.6	27.3	21.6	27.5	27.9	26.2	30.7	38.2	38.1	39.5	34.7	27.4	9.9	12.4	13.7	15.9	24.0	24.9	19.7
2	27.0	22.9	31.2	28.1	27.0	22.2	23.7	23.2	24.5	16.9	13.3	29.8	49.1	56.0	51.1	55.3	25.0	307.1	289.7	304.7	304.0	289.4	320.5	309.1
3	298.8	305.2	308.3	311.0	309.3	306.4	310.9	354.8	27.9	37.6	40.5	46.7	54.1	55.9	45.6	34.0	30.1	15.5	10.7	12.0	31.8	17.1	23.2	19.9
4	26.2	20.4	23.5	27.7	29.5	26.5	31.4	30.0	28.7	32.6	31.5	34.8	32.3	32.0	31.3	30.8	27.5	8.4	8.0	16.9	16.0	17.3	18.4	8.2
5	9.8	40.9	50.1	51.5	48.5	49.6	49.8	48.5	53.0	46.5	45.1	48.5	49.8	52.5	51.7	48.2	49.2	61.2	31.3	33.4	19.4	11.5	25.0	23.2
6	13.7	8.3	28.2	27.1	29.0	28.0	25.8	23.6	21.2	24.3	22.2	27.9	32.9	33.4	34.9	31.0	49.3	44.9	37.9	29.3	39.1	38.9	22.4	25.0
7	22.8	25.6	22.5	13.0	18.5	15.4	17.0	12.5	14.2	22.0	28.9	38.8	36.7	41.5	43.7	39.4	32.8	19.2	25.2	20.8	23.8	22.5	23.9	24.5
8	28.2	23.6	27.5	33.2	21.1	17.1	12.5	11.4	7.6	13.1	11.1	9.6	11.8	14.6	15.5	16.9	12.4	14.0	14.1	11.2	15.8	22.0	29.4	19.5
9	20.1	24.4	26.2	28.4	30.9	25.3	24.2	26.1	27.1	30.4	25.6	16.7	11.2	10.9	5.1	23.5	4.6	345.6	294.6	208.6	332.0	12.8	6.0	4.5
10	1.8	12.8	354.5	4.1	12.8	17.3	11.4	12.8	20.4	18.0	29.3	32.7	33.8	31.0	30.1	43.3	78.6	8.2	6.6	8.6	14.9	6.2	16.2	10.9
11	10.5	4.3	7.3	5.4	8.3	9.8	12.1	18.7	22.1	30.2	36.6	41.4	37.3	39.5	65.0	32.7	38.9	38.4	40.1	40.7	55.7	54.2	61.4	57.8
12	58.6	52.3	53.2	15.1	311.6	314.9	313.9	318.6	313.8	304.5	34.8	355.9	21.8	18.5	58.6	60.8	48.9	54.7	21.5	19.6	246.0	25.8	14.9	10.5
13	14.3	20.0	5.3	6.1	3.3	8.9	2.9	9.8	13.7	15.0	14.2	17.2	17.3	10.3	7.0	6.8	11.2	9.2	359.4	357.7	6.4	2.2	355.0	355.4
14	348.6	357.2	0.0	358.5	355.6	359.5	357.3	350.9	356.3	356.2	1.8	35.8	356.3	321.0	309.2	313.7	312.1	310.2	307.2	304.9	298.6	80.5	165.1	176.5
15	170.7	178.3	182.1	178.1	178.1	176.1	152.2	120.8	71.1	10.7	301.1	294.3	355.1	39.9	42.7	46.1	58.0	24.5	36.8	27.9	14.4	16.9	19.5	358.7
16	22.6	14.4	13.8	17.8	15.2	11.1	12.9	10.5	12.6	16.9	19.7	23.3	25.8	23.7	23.6	26.4	27.9	29.3	21.4	9.3	359.3	3.1	20.7	11.0
17	11.3	2.4	19.1	23.6	22.8	15.4	14.1	19.6	19.5	15.4	22.8	24.4	15.4	13.8	10.6	10.5	7.9	356.0	328.3	323.3	218.6	289.0	288.8	28.5
18	334.5	359.8	321.0	336.2	319.9	328.1	354.9	356.2	3.8	315.1	3.4	349.6	278.0	6.7	328.9	349.9	296.1	8.6	6.7	8.9	11.8	348.6	0.2	19.0
19	21.5	29.5	23.6	19.7	19.2	22.3	26.5	21.9	18.0	13.9	11.3	12.9	14.4	15.5	12.8	14.9	14.8	16.7	12.5	13.8	17.3	15.2	16.4	10.3
20	6.4	322.1	319.8	298.7	331.1	354.3	348.1	339.0	344.8	7.0	6.8	349.0	2.2	9.6	11.6	14.3	17.7	16.1	18.9	19.4	18.1	17.2	13.9	17.7
21	17.8	17.8	19.0	17.4	18.4	17.9	20.5	19.5	19.6	19.6	21.2	20.8	8.1	1.9	7.8	15.0	8.2	357.6	3.3	2.0	357.1	3.9	8.2	8.8
22	12.0	2.5	3.3	10.2	9.3	3.0	8.8	6.9	10.9	12.5	4.4	353.2	335.5	328.5	353.5	2.6	356.7	354.2	336.6	357.1	358.3	1.0	3.4	9.9
23	6.6	344.4	351.6	28.9	27.2	29.5	27.3	21.3	17.9	7.1	25.3	38.7	37.5	39.9	39.8	65.7	84.3	40.3	27.9	27.2	28.0	25.5	22.0	9.1
24	13.9	9.4	18.9	14.8	20.7	12.7	32.2	22.9	32.6	39.8	45.1	51.8	59.4	50.1	46.8	43.4	36.5	42.8	72.0	57.0	67.7	52.9	69.2	347.4
25	56.8	54.7	62.4	63.5	62.4	57.0	63.8	63.3	60.5	59.6	36.0	177.6	210.7	2.8	18.3	15.7	14.5	9.9	13.4	17.5	18.0	9.1	7.9	10.9
26	12.6	12.8	9.9	0.2	355.0	355.7	359.2	8.0	23.3	24.0	18.5	14.4	10.5	18.5	16.0	17.0	16.8	356.3	204.6	348.6	18.3	24.3	351.8	278.3
27	18.2	18.2	17.6	18.7	17.3	12.5	19.0	25.7	20.1	15.9	30.2	37.5	137.2	195.5	180.6	20.0	29.8	22.7	16.7	20.8	22.3	22.1	12.8	11.1
28	13.6	22.5	14.8	16.8	19.1	20.1	22.5	17.9	13.3	5.9	10.8	13.7	16.5	16.9	19.5	12.4	25.9	210.8	207.5	137.9	108.1	222.0	33.4	17.1
29	12.0	21.1	13.1	11.1	13.9	17.2	359.5	12.2	19.0	18.6	35.0	53.8	51.3	42.1	54.5	39.2	37.1	36.9	35.6	40.3	48.0	16.0	65.3	68.5

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	59.0	32.7	52.7	26.8	21.4	22.4	6.3	7.7	11.1	9.3	11.9	16.7	16.4	18.8	21.4	27.4	23.1	19.9	16.4	9.1	15.2	17.9	26.8	32.5
2	23.4	17.2	14.9	10.7	8.9	12.2	0.9	5.2	1.9	11.1	25.8	28.8	28.4	15.4	3.6	5.9	22.8	18.4	21.7	19.8	17.2	19.8	23.1	21.6
3	219.3	25.1	21.9	17.9	18.9	4.6	3.3	355.8	7.1	351.8	355.0	331.1	327.7	343.3	354.1	1.4	5.2	11.8	3.3	3.4	352.2	8.8	329.3	345.6
4	345.3	288.7	329.1	323.5	353.2	338.7	328.7	353.8	343.2	358.5	339.8	346.8	3.5	2.6	357.8	357.3	354.9	356.7	2.9	0.5	355.6	358.0	359.9	8.0
5	18.1	10.4	14.1	12.6	11.9	16.0	14.1	9.3	8.9	8.9	6.6	4.9	7.2	6.4	1.4	358.8	343.4	355.8	339.3	1.9	296.2	352.0	336.4	36.1
6	342.8	345.5	347.8	332.7	325.5	316.7	302.6	359.8	357.8	9.3	5.1	26.6	2.7	354.4	0.5	355.6	11.7	14.4	12.4	16.6	24.0	21.6	15.7	15.8
7	11.5	16.1	19.4	17.3	18.9	19.0	7.8	14.4	252.9	24.9	14.0	26.8	49.5	235.9	127.8	53.7	25.6	127.0	174.3	353.6	130.0	179.0	181.9	7.2
8	317.4	310.8	313.9	313.3	2.0	22.2	36.0	21.3	350.5	0.8	3.1	11.2	19.8	19.0	18.7	20.3	20.4	20.0	18.0	19.1	20.3	20.3	19.9	23.3
9	20.7	21.8	19.7	19.3	20.5	19.7	19.2	17.3	17.0	16.6	16.7	18.3	19.5	20.0	16.6	16.6	17.6	13.9	4.8	357.6	13.2	336.4	5.8	8.1
10	206.7	222.9	199.7	355.4	24.7	34.2	16.1	16.4	11.5	13.3	36.0	35.2	188.3	168.9	31.6	32.3	25.4	351.8	32.5	31.2	39.3	51.3	48.4	44.7
11	37.7	27.7	1.0	314.4	314.1	312.8	316.6	315.3	314.0	316.3	315.9	316.9	318.9	320.0	317.6	315.1	312.4	313.5	315.6	314.8	309.8	308.7	310.9	309.5
12	309.6	315.0	312.2	315.7	312.0	314.2	322.5	12.1	18.3	53.4	49.6	45.4	46.0	39.5	44.1	41.6	45.4	31.3	352.4	346.9	341.3	340.1	358.2	47.2
13	51.3	48.5	45.7	53.0	50.4	306.3	312.7	313.8	316.4	311.1	313.0	316.2	318.8	316.0	316.6	320.3	315.7	312.4	315.5	325.6	312.8	326.0	20.7	34.1
14	17.5	40.8	40.7	51.2	51.3	50.3	44.0	15.7	41.3	44.2	41.0	36.4	40.2	38.4	39.6	46.8	172.1	158.5	26.5	11.4	16.2	14.8	17.7	11.7
15	3.2	12.7	12.9	14.9	15.4	14.6	12.5	9.8	9.2	6.2	349.8	351.5	1.7	12.3	9.7	16.2	11.9	13.4	14.4	13.1	17.0	18.5	20.4	19.0
16	20.5	22.1	24.1	20.5	15.6	12.9	8.6	357.5	9.0	16.1	14.0	23.2	26.5	25.3	26.1	159.8	205.5	201.9	201.6	201.7	228.6	274.6	0.5	21.9
17	26.3	17.8	17.1	17.5	21.3	22.4	16.3	19.5	16.0	22.8	37.1	38.0	39.3	43.3	45.5	51.1	115.4	50.6	61.3	131.7	86.0	324.4	294.3	312.9
18	304.4	306.3	311.3	308.7	311.1	313.3	313.3	310.2	312.9	315.1	314.3	316.3	315.9	317.1	313.9	314.2	315.1	316.8	315.3	313.5	314.2	318.1	318.3	314.4
19	313.9	315.4	315.9	316.0	317.2	312.2	314.6	311.8	317.1	312.7	315.1	314.9	315.4	317.1	314.7	316.5	314.8	313.8	315.9	314.3	316.9	315.6	314.4	330.8
20	324.6	319.1	5.1	31.3	45.0	14.3	13.5	3.3	25.2	44.8	47.0	50.2	46.1	35.5	32.4	33.7	35.9	26.8	28.8	29.4	28.4	20.3	23.1	17.5
21	210.3	253.2	221.5	220.2	219.8	341.2	23.8	23.9	17.1	17.1	18.8	20.7	18.5	21.3	21.9	23.8	17.2	14.8	359.0	10.4	15.0	19.0	20.0	16.9
22	15.2	13.9	13.0	15.9	13.6	13.4	19.9	213.6	280.0	17.8	60.6	57.1	135.2	67.9	45.1	71.1	62.7	51.2	69.1	43.4	64.0	32.4	29.6	44.4
23	40.4	244.0	237.4	220.9	58.6	51.1	51.2	54.5	58.6	22.7	23.2	50.0	20.0	313.8	314.5	327.1	326.2	312.0	314.7	312.0	319.1	329.6	354.5	318.3
24	351.2	321.9	51.9	43.5	23.7	27.5	26.4	269.0	204.2	109.4	109.3	75.5	44.4	51.7	50.3	45.9	43.6	190.9	71.3	51.3	41.4	41.8	41.6	31.3
25	294.6	163.4	272.0	355.0	30.1	10.9	23.4	26.7	27.5	30.5	36.7	84.6	107.6	42.4	38.1	60.8	76.8	74.2	60.7	63.8	52.8	53.1	36.5	54.2
26	39.0	35.7	21.9	17.6	32.4	43.4	50.9	41.3	44.2	47.7	51.6	60.2	55.4	47.4	38.8	41.2	45.5	45.5	32.4	323.3	320.4	309.4	314.9	312.6
27	312.4	311.3	311.6	311.7	310.9	312.3	314.4	313.5	316.1	317.7	315.3	314.8	316.3	334.6	320.4	313.8	316.8	317.5	314.1	315.7	315.8	316.4	315.0	314.9
28	314.7	314.0	315.5	23.0	60.0	59.8	57.9	53.4	55.4	54.4	55.1	56.5	48.7	40.1	35.5	39.3	39.8	40.4	47.8	357.3	320.4	7.8	16.9	29.2
29	29.2	316.9	0.9	20.8	23.2	17.6	23.2	21.8	12.8	13.5	358.7	339.2	328.5	340.5	341.5	329.9	344.5	359.1	327.6	342.9	348.3	351.9	358.6	359.1
30	1.7	333.1	329.3	316.6	331.2	341.2	323.3	348.1	322.4	321.7	340.0	349.9	348.5	338.2	352.6	326.5	359.0	341.2	348.5	356.5	8.2	11.7	10.1	21.6
31	15.5	7.0	6.8	5.0	14.1	27.4	21.5	22.6	20.6	19.3	15.3	16.5	352.2	13.5	10.4	6.7	358.8	8.2	6.5	3.9	356.4	338.7	333.6	347.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	341.6	336.7	356.2	359.8	356.6	356.1	7.9	11.2	3.6	357.1	3.1	7.0	7.0	8.3	1.4	6.8	3.5	8.5	13.9	21.5	11.7	14.2	23.5	25.0
2	23.4	24.7	9.7	4.4	15.8	352.7	4.2	0.7	18.7	14.6	47.2	30.4	48.1	39.7	39.4	40.8	94.7	203.6	192.9	194.9	242.0	322.4	294.7	295.2
3	296.4	25.7	40.2	184.4	239.4	313.5	304.3	342.9	4.2	12.7	4.3	353.9	318.3	337.1	344.6	329.6	340.2	320.8	349.4	357.3	347.1	11.0	349.7	327.7
4	309.0	325.4	332.6	292.8	338.3	355.3	344.7	359.6	4.2	353.8	355.3	10.7	4.5	7.7	5.3	6.0	5.8	10.0	12.6	23.3	30.8	33.4	285.6	2.8
5	137.1	84.8	46.9	51.0	67.5	102.1	173.4	158.1	161.3	89.2	172.5	126.2	68.6	51.2	50.8	57.7	57.8	56.3	54.5	92.6	187.0	189.2	180.4	177.6
6	180.4	185.1	151.7	165.8	149.0	175.6	156.4	80.4	130.1	73.4	94.4	307.5	311.0	306.3	314.2	305.0	310.2	302.0	302.4	305.9	300.3	302.9	309.3	309.7
7	356.1	52.9	48.2	56.7	60.0	55.1	49.3	44.6	36.7	44.7	53.6	38.6	334.4	311.2	314.8	313.5	306.0	305.8	311.1	297.3	305.2	314.4	316.9	16.1
8	36.0	43.3	39.5	27.8	23.4	39.9	32.4	26.1	38.3	44.0	38.2	45.4	50.5	108.6	128.7	193.7	181.4	64.4	199.5	288.1	167.3	332.8	209.3	3.4
9	350.8	0.1	337.9	66.5	117.7	107.3	125.6	224.6	305.7	342.6	71.4	27.2	117.2	91.3	47.2	177.7	170.7	188.9	195.3	196.3	185.9	180.5	150.7	128.8
10	78.3	334.2	336.3	348.8	64.6	300.6	322.8	316.1	309.0	316.4	321.0	319.0	318.1	316.2	317.4	319.1	322.4	315.1	316.1	316.7	315.5	315.8	316.2	315.3
11	314.8	314.5	312.8	312.6	314.1	316.4	316.6	313.9	311.3	317.1	318.8	316.3	315.8	318.5	314.9	312.8	306.2	282.2	308.8	310.0	310.8	310.9	310.2	309.0
12	309.9	312.4	307.5	307.1	310.6	307.9	307.2	308.4	308.0	311.7	315.7	317.3	322.5	346.6	70.7	96.5	149.9	159.2	164.9	142.1	69.4	50.5	310.8	314.8
13	320.3	321.2	319.8	352.4	69.9	34.3	33.6	17.8	51.0	47.8	165.4	36.1	50.5	186.3	168.0	147.8	129.2	155.1	132.7	88.3	187.7	180.1	171.2	177.1
14	165.5	185.7	183.8	183.9	183.3	189.9	179.9	90.9	74.3	198.8	195.2	71.5	192.3	112.1	189.2	195.8	192.1	202.9	210.7	208.1	207.1	145.8	62.5	169.0
15	49.6	354.7	45.5	301.3	346.4	32.3	20.6	340.1	21.9	27.3	22.2	30.5	39.9	85.2	93.4	169.8	185.6	195.9	190.5	200.5	207.1	183.9	267.4	314.3
16	67.2	309.1	80.5	172.2	91.3	151.1	148.0	9.6	146.3	166.5	172.5	169.0	157.8	155.0	160.5	80.6	71.0	59.9	53.1	66.8	87.0	81.3	82.5	197.2
17	199.8	105.5	117.3	65.5	45.1	212.6	194.1	94.3	151.7	130.3	191.9	192.2	189.2	48.2	54.6	83.9	320.0	321.3	306.4	35.4	64.9	50.9	10.1	320.1
18	26.3	24.6	357.9	338.2	347.1	232.2	219.0	22.2	330.1	40.2	49.6	169.6	204.9	203.1	188.6	204.6	208.5	203.6	207.3	223.3	8.3	18.9	27.7	29.3
19	15.8	12.2	28.3	34.8	33.5	23.7	21.5	30.3	28.9	42.2	166.0	156.2	158.8	181.9	207.2	214.7	221.6	212.8	245.9	265.7	237.2	257.1	4.3	31.8
20	26.6	32.7	30.2	32.8	27.0	30.7	218.4	221.8	211.9	138.0	141.8	184.1	188.6	138.2	134.0	148.6	181.8	177.1	201.0	225.5	248.9	288.0	281.1	284.3
21	5.3	279.5	328.1	272.2	311.4	311.5	307.8	6.8	36.9	107.4	94.9	117.1	137.3	161.9	184.9	232.4	225.1	224.1	193.2	213.5	238.4	244.1	229.2	228.0
22	240.7	6.3	27.2	29.4	2.5	222.5	219.1	329.1	37.2	46.9	108.1	190.7	195.6	199.6	200.2	203.8	204.6	200.4	201.0	202.8	214.9	217.0	234.8	30.2
23	24.9	315.8	49.7	9.4	24.2	11.7	10.1	16.1	36.3	39.5	44.7	46.7	48.8	110.3	44.1	34.2	39.0	67.0	211.5	9.4	16.7	7.2	16.2	343.5
24	316.8	318.7	315.3	317.8	317.7	318.1	317.2	317.3	317.3	316.9	316.2	317.9	320.1	320.4	316.6	319.0	301.6	305.9	311.5	304.3	5.7	160.0	180.2	199.7
25	183.0	182.7	149.7	135.0	118.5	54.3	169.1	174.4	137.8	143.0	156.4	132.6	150.2	161.5	167.6	164.5	159.8	154.4	295.5	286.8	302.0	312.4	308.6	310.0
26	325.5	57.2	53.8	54.3	52.2	73.1	305.6	256.4	260.3	44.4	66.4	58.4	51.9	66.3	78.2	114.2	212.0	202.4	208.8	216.4	228.2	63.9	352.9	304.8
27	39.2	352.1	320.5	321.5	29.7	42.7	53.7	65.5	75.6	24.1	43.7	54.0	29.5	202.9	230.8	30.8	46.1	43.5	43.6	41.7	42.5	36.6	64.2	47.1
28	38.3	39.0	58.7	52.1	58.4	56.9	26.3	59.6	67.9	53.2	48.9	50.0	55.3	328.2	319.7	318.0	318.3	318.7	314.9	318.0	318.9	317.8	317.6	317.9
29	318.5	316.0	315.7	314.2	316.6	316.5	319.3	349.5	57.1	43.0	50.4	47.2	44.9	46.1	80.1	69.9	75.1	156.7	32.2	146.4	214.1	24.8	4.0	358.7
30	354.1	354.7	3.6	5.8	13.7	20.2	19.3	36.5	44.2	42.6	40.4	42.6	53.8	146.2	175.9	202.0	197.6	181.8	174.3	56.4	23.5	347.2	8.0	13.1

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	348.0	331.0	13.1	14.0	297.3	215.5	136.3	92.9	76.8	60.3	48.1	118.9	48.6	125.1	170.9	308.0	311.9	307.9	310.6	315.3	347.2	326.1	295.3	310.8
2	309.1	23.4	287.4	239.1	11.7	19.4	207.8	29.8	31.1	22.8	25.9	23.5	37.8	107.2	84.2	69.2	41.9	35.2	14.9	128.8	17.1	240.3	7.1	20.0
3	35.3	10.9	10.9	14.1	268.6	317.2	24.6	22.4	27.6	21.1	12.9	19.8	29.1	23.6	20.1	28.9	46.0	21.5	14.5	30.6	18.4	20.9	15.7	15.5
4	12.6	14.0	11.3	14.2	16.0	16.8	21.4	28.4	30.3	29.9	33.4	32.6	31.9	24.9	24.8	26.6	24.2	25.9	17.9	16.8	8.7	12.3	308.2	248.2
5	19.9	12.5	297.9	0.9	5.3	19.1	13.0	13.5	26.5	28.2	41.4	68.2	53.2	54.0	47.5	49.2	168.1	160.6	44.9	171.1	202.0	196.8	197.2	221.1
6	234.2	232.1	242.2	234.5	243.8	326.5	283.1	207.6	346.4	166.2	107.9	207.8	228.6	221.2	234.2	211.5	223.0	217.8	201.3	224.8	248.0	274.7	348.7	352.4
7	7.2	0.4	353.3	353.3	347.6	350.9	341.6	356.1	8.2	14.3	18.5	8.4	15.4	14.4	15.2	14.4	17.4	11.4	0.8	3.7	25.9	22.6	7.4	9.7
8	4.9	3.9	7.9	12.2	4.9	4.7	6.9	11.2	12.2	19.7	23.4	20.9	20.4	17.0	19.0	21.0	20.0	19.1	17.7	14.3	12.1	11.7	16.1	18.2
9	15.0	14.6	14.0	13.2	16.3	19.0	11.8	12.3	10.3	14.9	15.1	13.9	15.9	17.8	18.7	13.0	10.9	18.6	2.8	213.4	211.8	206.6	207.0	207.9
10	232.7	4.2	354.0	277.5	33.3	17.4	7.9	15.3	32.3	45.5	61.8	93.7	79.0	148.3	151.2	102.5	127.0	170.0	190.0	183.2	18.7	16.9	203.4	217.0
11	346.4	4.8	348.7	348.2	193.0	11.8	354.4	8.0	357.3	58.2	45.0	20.3	14.9	24.9	30.1	30.8	26.4	30.3	27.9	23.4	26.8	30.1	25.1	27.3
12	23.7	23.1	24.9	22.8	20.3	18.2	21.0	23.0	21.8	20.9	14.7	15.4	21.9	24.3	35.2	36.5	33.2	13.7	0.4	11.6	4.5	356.0	356.9	13.7
13	16.0	18.6	13.6	3.4	354.4	345.8	346.9	350.3	4.0	345.1	13.8	42.5	119.2	89.9	93.8	44.4	256.6	53.4	331.8	356.2	355.3	228.1	357.2	8.9
14	9.9	14.6	16.1	22.2	18.4	15.2	17.7	22.5	24.8	23.1	20.5	20.6	19.4	23.7	21.6	23.0	24.0	20.5	20.2	26.1	19.4	15.9	14.2	12.0
15	14.9	7.9	253.3	256.3	305.3	36.6	359.6	14.4	39.6	104.3	177.4	200.2	201.7	196.6	189.0	185.1	98.9	67.7	43.1	2.8	13.5	18.7	22.3	14.9
16	11.6	6.4	358.8	28.4	23.0	348.4	159.5	61.7	103.3	146.3	191.3	99.5	116.6	121.3	200.2	188.4	186.7	199.3	199.8	209.2	226.1	230.5	258.4	18.4
17	294.0	310.2	16.8	13.5	20.1	24.6	25.2	35.3	43.2	47.2	38.3	67.9	189.7	199.8	199.9	201.0	197.6	184.9	192.0	201.1	206.2	209.8	228.3	265.4
18	5.8	25.6	247.9	323.7	10.7	13.1	20.5	4.2	2.6	7.7	349.5	307.5	42.3	117.1	116.9	62.7	233.2	142.0	171.3	217.1	352.3	107.8	243.7	305.4
19	3.8	3.3	28.4	23.8	20.5	20.0	26.2	35.5	40.7	51.0	47.9	150.3	204.1	173.3	173.4	150.2	104.3	330.5	323.5	315.0	312.8	312.0	314.1	315.3
20	327.8	341.8	19.9	15.5	12.4	11.4	17.0	32.8	45.4	57.8	64.3	39.7	42.8	183.3	201.9	195.0	189.4	182.9	196.0	208.3	199.9	216.5	252.1	31.2
21	28.7	29.7	23.0	10.5	23.5	33.4	26.8	162.6	41.4	118.0	166.9	192.8	179.0	172.9	194.7	185.6	198.3	196.1	202.6	209.4	206.1	212.8	243.9	332.3
22	79.4	109.7	100.7	80.8	337.5	308.4	315.6	35.3	63.2	50.4	43.6	41.4	130.8	177.3	204.8	204.6	228.5	207.4	215.1	200.7	46.0	80.8	34.7	14.7
23	7.1	3.7	8.2	7.6	13.9	10.6	16.3	356.7	359.7	1.5	6.0	359.9	13.8	37.2	32.9	52.6	146.3	206.4	357.4	346.8	312.9	224.3	321.2	321.9
24	274.6	311.4	339.3	288.9	265.7	314.6	258.3	253.5	286.0	113.3	182.2	204.8	198.1	201.0	258.0	182.7	156.2	119.1	122.0	185.6	8.8	0.2	1.9	16.8
25	19.8	18.5	22.6	27.2	16.8	23.4	30.1	34.3	39.1	51.2	85.1	168.9	168.9	180.4	178.1	185.2	202.6	189.8	197.0	191.0	223.6	204.8	170.8	350.4
26	2.4	79.2	199.1	59.6	71.5	31.1	280.7	304.3	344.8	182.1	181.9	43.8	88.2	73.1	159.9	118.3	121.1	163.4	176.1	182.6	178.1	177.9	157.8	190.4
27	130.9	164.2	159.9	129.8	278.8	278.7	280.2	317.7	317.6	314.6	311.5	317.2	318.2	319.1	313.9	290.4	108.3	80.8	114.2	182.9	184.8	150.2	176.0	180.7
28	129.5	66.4	358.2	27.5	141.1	168.1	38.2	342.7	315.9	333.9	309.1	314.4	318.0	315.2	313.2	58.6	158.2	314.5	347.3	345.9	49.0	63.7	3.1	313.2
29	305.1	335.9	24.5	37.4	51.5	67.8	30.8	26.7	27.1	44.2	72.9	204.3	195.8	198.7	198.6	193.8	198.2	194.9	197.6	204.9	206.2	213.2	214.5	29.5
30	32.8	37.5	15.0	21.7	26.8	233.7	208.9	203.9	172.4	169.9	207.9	210.4	205.1	237.1	195.0	198.3	205.8	228.2	322.2	292.6	274.5	72.5	349.3	327.5
31	276.4	236.1	339.8	9.6	6.8	348.3	309.5	261.4	324.6	264.4	180.4	73.1	193.1	241.7	163.9	157.9	148.1	142.7	156.5	150.9	173.5	234.6	208.6	236.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	20.8	11.9	356.9	359.9	8.8	3.1	7.9	3.7	4.4	14.0	20.5	27.0	16.9	21.5	18.1	20.9	25.3	16.0	5.9	11.5	12.9	12.8	17.0	13.3
2	15.4	14.1	16.0	14.6	11.1	11.0	14.0	16.1	16.5	16.9	17.8	22.8	28.6	27.0	21.9	23.6	23.5	30.5	20.5	28.6	22.1	27.5	25.1	16.0
3	25.4	21.7	18.8	13.6	15.4	14.6	12.7	13.8	12.0	11.0	24.7	24.3	242.7	215.8	201.3	162.6	186.6	207.1	243.2	255.0	259.7	275.3	4.5	12.7
4	7.2	220.4	258.3	219.0	346.6	21.9	26.2	23.4	11.0	35.6	31.2	212.0	210.6	207.6	206.4	209.1	203.2	162.6	202.5	205.5	190.5	203.0	194.5	165.7
5	311.3	245.9	187.7	256.6	356.4	24.0	14.6	0.2	347.7	9.2	33.0	7.8	11.9	358.6	357.3	7.3	6.7	4.1	12.9	11.3	12.2	19.7	10.2	16.6
6	19.5	19.5	359.7	358.6	353.5	0.4	0.3	23.4	38.9	58.5	62.7	88.6	63.5	332.3	348.4	332.9	305.5	196.8	210.8	104.3	118.3	156.3	298.7	34.0
7	223.6	292.4	302.6	304.1	319.1	312.6	309.1	324.8	21.0	46.9	66.9	113.1	140.0	55.8	42.9	81.0	194.6	219.1	179.0	132.6	100.3	132.3	184.5	182.2
8	113.9	137.9	160.9	109.5	78.9	2.7	322.2	166.9	123.7	120.1	115.0	179.0	96.7	96.9	151.4	197.2	205.4	192.1	3.0	186.4	188.4	180.7	211.5	18.7
9	343.8	338.4	19.0	180.4	358.6	303.3	306.6	316.8	314.3	320.7	324.7	320.3	318.3	324.5	322.3	321.2	313.7	319.5	319.6	318.4	314.4	316.3	316.7	319.1
10	318.1	316.2	317.5	317.7	316.5	319.9	33.6	54.0	53.0	40.5	54.1	146.9	192.1	200.5	187.5	169.0	166.4	174.5	174.2	195.9	229.2	243.8	236.0	240.8
11	293.0	292.7	178.1	234.4	270.3	15.9	17.3	28.3	344.8	345.7	353.9	43.3	12.8	338.6	345.8	309.1	265.3	325.7	138.0	167.4	187.7	203.2	174.5	136.9
12	330.6	306.9	312.7	310.2	312.5	318.1	317.5	319.5	319.0	321.0	38.1	52.2	43.2	69.4	127.5	98.4	101.4	80.4	95.0	132.1	143.7	9.3	314.4	315.1
13	317.9	315.7	314.0	329.7	36.8	30.5	24.0	39.6	12.0	33.2	48.6	43.0	31.4	44.7	48.3	164.2	62.8	82.3	182.9	181.8	217.0	215.4	216.4	271.8
14	238.5	239.7	228.3	247.5	359.0	327.1	351.5	139.2	170.1	134.3	90.7	64.4	52.0	139.5	154.2	183.0	198.8	190.9	175.7	173.5	177.3	199.3	269.0	225.7
15	285.9	233.5	321.6	20.2	27.2	19.8	1.6	32.7	29.7	32.3	35.8	37.7	48.7	181.7	193.0	189.3	195.4	202.2	215.8	349.6	327.5	302.1	317.4	311.9
16	312.8	323.1	315.6	317.4	317.6	334.5	36.8	54.8	38.5	37.5	185.4	187.6	199.7	202.0	183.1	194.0	207.6	195.4	204.5	201.4	188.1	217.5	239.5	333.1
17	202.7	29.1	28.3	3.1	24.8	28.0	32.9	46.7	161.4	149.9	164.7	166.2	187.9	185.1	189.0	189.7	202.3	201.6	201.6	206.3	216.9	219.3	221.6	198.9
18	217.3	243.7	321.7	18.9	27.0	223.4	192.8	191.7	60.6	81.1	178.9	190.4	183.0	198.0	203.8	195.3	202.0	197.8	205.9	216.2	207.3	215.4	216.8	359.1
19	219.4	24.7	13.0	335.6	6.8	20.5	37.5	34.4	34.8	188.1	190.5	179.5	193.2	166.4	236.0	204.1	229.2	199.6	198.3	208.2	216.8	221.3	223.7	242.9
20	289.1	13.0	14.2	21.2	357.7	340.8	4.8	50.0	142.1	124.5	146.5	163.5	191.3	181.3	166.8	175.5	193.5	199.6	194.9	197.1	212.8	209.3	201.3	235.7
21	259.4	14.0	5.9	22.9	221.1	237.4	203.9	197.0	185.3	166.3	179.0	187.0	189.9	195.6	193.9	196.9	192.4	199.2	194.0	190.0	209.8	207.7	208.3	221.6
22	244.4	343.7	30.5	197.7	207.3	207.1	204.5	183.8	175.7	175.0	169.2	174.3	176.6	192.6	200.8	135.0	205.6	166.5	186.1	208.4	207.7	215.1	222.2	222.4
23	231.9	256.6	228.3	262.2	297.2	172.1	272.6	310.2	42.1	116.8	171.1	169.9	166.7	185.8	177.3	190.1	187.2	202.1	206.1	221.8	229.5	214.2	212.8	210.7
24	324.6	323.7	324.0	51.9	49.9	1.4	8.0	3.6	3.7	337.3	5.4	303.1	199.1	338.0	19.8	12.6	14.1	17.3	7.0	356.8	353.2	343.0	348.4	352.9
25	353.9	354.7	359.4	122.5	95.0	14.9	6.1	11.1	1.8	355.5	10.3	24.1	23.2	31.2	38.5	37.9	31.5	25.4	30.3	27.0	12.6	12.0	7.1	6.8
26	7.0	10.6	11.0	10.6	12.0	12.6	14.7	11.8	12.5	16.7	17.2	15.0	21.7	22.7	24.0	24.1	24.2	22.6	21.7	22.2	20.2	19.1	14.0	11.1
27	11.5	2.8	337.6	226.5	194.3	193.7	225.0	158.2	147.4	184.1	226.0	195.6	188.6	200.8	195.2	192.6	187.7	188.6	184.4	203.1	215.3	230.3	236.0	237.2
28	233.2	274.5	302.4	27.5	26.4	24.6	313.4	32.9	137.9	95.7	160.1	78.6	96.1	155.0	137.0	197.1	177.8	175.3	182.0	181.5	267.7	320.2	341.3	322.8
29	18.2	17.4	10.1	11.7	10.4	14.6	3.4	129.8	122.8	116.9	106.5	101.2	70.7	124.9	198.6	193.6	198.9	189.2	183.7	217.7	263.8	285.7	280.2	301.8
30	317.5	339.3	11.8	22.2	24.4	26.1	33.9	38.7	51.0	194.2	197.2	199.1	202.2	193.5	184.6	179.3	188.3	193.5	197.9	205.9	221.2	217.1	211.5	232.4

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	329.7	24.9	28.1	22.8	27.9	29.1	32.1	46.5	144.3	200.1	202.0	200.3	201.6	190.3	191.8	215.5	186.6	129.7	315.9	295.9	245.0	136.5	204.5	30.0
2	16.5	8.3	23.9	57.0	2.4	9.6	8.5	341.3	183.8	184.5	202.4	198.8	210.3	210.3	208.8	206.0	217.4	224.9	227.1	266.0	250.9	294.6	294.3	359.5
3	288.0	18.9	14.4	0.0	359.7	11.6	9.2	20.1	2.9	8.5	15.4	9.6	15.4	11.0	359.7	230.7	210.5	212.0	213.0	216.6	213.7	221.5	263.8	221.4
4	218.3	191.8	216.7	37.9	351.4	210.3	218.5	212.7	212.4	212.0	33.4	44.1	85.8	209.1	210.8	210.8	212.9	237.8	249.3	219.6	195.6	247.4	14.9	20.3
5	244.8	245.5	211.6	212.1	223.9	34.2	34.2	37.0	41.9	189.4	204.7	202.5	194.5	182.8	194.0	193.4	190.4	200.8	203.6	207.4	207.5	208.7	197.4	21.8
6	9.8	23.0	32.1	21.1	9.9	243.4	240.1	219.4	203.3	206.7	203.2	204.9	197.9	188.6	203.8	198.6	216.2	215.7	196.9	210.3	69.3	28.7	35.3	349.7
7	162.6	182.0	199.5	209.3	229.3	189.4	240.5	354.7	343.1	137.9	241.7	4.3	56.5	213.4	208.9	205.9	216.5	211.2	207.1	219.3	208.5	216.0	229.7	235.7
8	231.8	8.0	353.5	336.7	311.8	359.6	251.9	21.7	63.1	78.3	64.4	135.4	135.0	146.4	92.8	16.7	203.6	189.5	199.6	200.5	216.7	220.3	198.9	212.7
9	214.4	199.1	216.2	32.7	22.6	25.0	28.6	29.2	31.0	33.1	25.0	24.7	46.3	48.5	39.3	35.5	8.0	352.8	13.3	336.7	308.1	330.5	359.6	7.4
10	2.8	355.5	359.4	1.5	4.2	4.9	25.9	22.7	42.1	70.1	119.0	139.9	193.2	83.2	143.1	185.5	196.2	177.6	189.5	194.2	207.0	212.0	240.8	234.1
11	146.8	102.4	359.5	3.7	137.8	252.6	235.0	240.5	207.6	195.3	200.1	200.5	196.5	197.4	195.0	197.6	191.4	193.5	197.8	202.7	221.7	208.8	269.7	347.1
12	283.9	358.3	24.0	27.9	29.1	28.3	26.4	30.3	229.5	173.7	346.4	41.6	158.2	166.5		155.5		112.6	1.8	93.4	67.5	103.0	284.3	67.0
13	26.5	50.6	327.3	353.7	355.4	8.9	5.9	13.1	9.7	18.1	17.7	25.9	64.5	165.0	208.1	137.3	148.9	145.5	151.4	148.5	162.3	152.9	200.2	228.7
14	237.5	237.6	3.3	14.2	12.3	19.3	23.1	34.8	43.0	143.0	153.6	160.9	199.1	197.8	193.5	197.8	195.1	199.7	202.0	203.2	199.0	195.2	180.2	209.2
15	213.9	224.7	14.8	28.3	26.8	332.0	355.4	30.3	28.8	31.4	27.6	17.8	18.0	21.7	23.3	23.5	27.4	47.3	39.9	18.1	358.2	340.5	6.3	339.4
16	338.7	272.0	58.9	330.8	334.1	359.6	344.1	330.6	338.2	131.3	68.1	12.8	7.6	353.6	346.2	341.2	356.6	342.3	347.6	335.4	348.6	352.1	322.6	348.8
17	338.1	324.2	339.3	5.4	23.2	305.7	313.9	208.2	41.7	63.8	127.0	102.0	81.5	87.2	101.8	88.2	113.7	95.9	63.3	189.7	196.5	193.1	185.4	175.2
18	161.8	115.1	76.7	306.6	300.2	306.6	305.6	307.5	309.9	314.4	319.9	321.5	316.1	322.4	324.0	321.4	319.2	321.0	309.9	308.2	314.4	316.1	312.1	305.5
19	306.9	308.8	309.2	311.8	315.9	317.2	316.3	317.3	15.0	41.4	30.5	86.5	350.7	104.0	122.1	168.0	113.3	182.3	211.0	132.7	128.8	128.9	303.9	311.9
20	312.6	313.5	312.4	330.4	334.9	315.0	355.0	336.5	43.6	177.2	191.9	194.7	158.3	29.6	87.0	303.7	318.2	321.1	323.1	6.5	47.3	354.4	29.0	12.9
21	17.3	341.0	281.2	273.5	333.3	324.7	64.8	3.0	356.2	198.3	191.8	209.2	208.7	205.5	194.9	195.4	198.7	202.2	161.2	317.9	210.9	181.9	121.0	166.5
22	175.8	309.6	312.5	318.6	320.3	15.4	6.8	18.5	43.3	67.3	146.3	193.4	188.4	186.6	159.5	184.9	193.1	190.2	208.2	203.1	178.5	265.9	312.7	23.9
23	21.6	21.2	1.2	310.8	348.4	3.8	340.2	320.4	130.6	107.2	140.0	209.0	204.3	208.8	153.9	211.6	172.1	182.1	174.8	195.4	182.9	142.2	83.9	0.0
24	13.4	7.6	9.0	11.2	9.9	14.5	20.5	22.6	21.9	347.4	25.5	27.0	31.4	199.5	202.7	211.5	207.6	203.3	207.6	216.3	211.8	197.8	35.5	16.8
25	27.8	11.0	7.3	17.7	11.7	21.7	24.6	9.0	11.9	33.5	32.4	37.6	358.8	23.7	61.8	133.3	224.3	195.0	226.3	223.5	212.4	215.0	216.5	94.7
26	17.2	330.4	39.7	209.2	221.4	351.0	320.4	315.6	312.6	313.4	321.0	323.2	344.3	325.5	324.8	155.1	77.0	58.2	183.5	193.3	146.4	131.1	123.9	221.0
27	306.2	42.5	313.9	7.6	298.4	330.4	22.1	25.2	25.1	17.6	278.9	287.2	297.2	328.9	281.8	77.5	183.3	205.6	208.9	197.7	203.2	196.9	239.2	2.9
28	354.5	309.1	40.8	355.6	343.7	343.9	317.7	332.3	311.1	311.4	338.5	89.0	160.0	316.6	80.3	177.9	191.6	98.1	59.3	51.7	63.4	110.1	165.5	147.8
29	17.1	288.2	295.7	310.4	312.3	311.0	310.6	300.5	5.8	307.1	297.9	316.8	310.3	321.6	120.6	227.0	196.9	204.9	210.7	214.1	170.5	145.6	310.9	313.3
30	308.6	285.4	285.4	313.0	317.5	318.4	307.6	313.3	312.0	95.2	188.0	205.6	177.4	168.0	190.7	161.9	138.2	146.8	168.3	184.9	157.7	178.4	214.9	115.0
31	136.3	269.2	269.1	224.3	232.2	234.4	282.5	292.8	303.0	92.9	253.8	281.9	321.0	305.6	301.5	71.5	157.6	171.8	182.9	171.9	213.4	50.4	334.7	353.7

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	38.9	312.8	315.0	260.9	244.2	198.2	208.0	129.0	124.8	118.7	177.9	172.0	157.7	180.3	170.3	181.1	189.4	187.7	174.7	261.1	250.3	255.6	264.5	262.0
2	256.6	261.6	206.4	224.8	274.5	210.9	93.1	251.0	176.7	178.3	194.9	181.4	197.9	228.4	177.8	196.8	191.8	216.1	190.6	190.8	198.9	193.4	173.1	203.5
3	206.7	181.2	205.0	201.0	171.7	161.2	197.0	3.5	30.5	37.8	76.8	149.0	164.9	200.7	198.6	208.8	203.3	202.0	202.9	215.9	218.6	232.2	252.9	261.8
4	170.2	309.4	99.7	336.1	301.0	25.2	20.8	27.9	24.6	350.7	104.1	153.3	249.6	164.3	200.8	206.7	210.0	216.2	190.9	239.4	278.5	359.9	323.2	300.3
5	244.4	244.1	269.3	37.7	244.3	270.0	358.8	17.5	211.9	213.2	210.8	215.5	210.5	199.2	205.8	197.1	206.4	205.9	206.7	195.4	219.8	221.6	218.8	220.5
6	235.6	258.7	14.3	14.3	8.6	11.7	225.9	210.0	203.5	123.5	140.6	173.0	200.2	204.2	202.7	196.7	199.8	219.0	217.6	211.0	196.0	202.5	207.9	187.8
7	167.6	309.9	134.9	117.5	124.0	254.1	304.4	270.8	301.9	344.4	301.0	116.2	125.6	154.5	98.2	63.9	75.2	86.3	354.1	0.2	295.3	206.8	216.5	325.3
8	17.1	1.1	3.6	25.8	25.5	18.5	32.8	34.6	33.4	60.8	176.2	180.8	204.7	203.3	202.4	194.6	195.1	200.1	202.1	205.2	213.7	223.2	233.1	289.0
9	348.5	246.1	288.9	23.0	26.9	23.2	25.2	34.7	48.0	91.6	81.8	157.0	143.6	169.2	190.8	196.8	157.2	238.2	213.6	172.9	158.0	154.1	147.4	151.4
10	127.9	128.5	51.3	218.4	213.2	212.8	214.4	214.8	206.9	184.1	166.7	185.3	185.7	195.1	204.4	198.6	205.9	198.6	211.0	235.8	249.3	231.4	168.5	212.8
11	223.4	312.0	9.5	43.3	7.0	338.8	334.1	286.0	80.9	113.3	155.0	164.0	196.4	200.0	201.8	203.7	202.8	202.2	202.4	214.2	153.7	12.9	14.9	21.5
12	24.8	23.5	22.8	20.9	19.6	8.8	14.2	12.5	14.4	12.2	49.1	201.0	211.0	210.0	207.1	203.0	204.0	216.7	211.2	212.7	224.2	243.6	5.9	24.1
13	253.0	328.2	7.0	255.1	25.2	15.9	28.3	16.7	21.2	36.2	17.8	9.1	149.8	171.7	32.1	14.1	20.2	18.0	26.1	20.1	24.9	17.4	26.4	20.7
14	214.3	221.2	2.3	30.4	14.8	4.9	314.8	281.3	32.2	29.5	32.8	35.6	33.3	27.6	190.8	203.9	208.0	34.0	71.8	94.3	169.4	222.4	239.2	201.4
15	213.0	25.3	17.9	340.3	31.0	35.6	43.8	31.2	25.3	43.4	46.2	51.2	43.7	44.3	43.5	46.3	191.1	136.0	45.3	41.4	132.3	203.6	163.9	190.7
16	157.5	167.9	170.6	244.0	263.8	27.4	38.0	14.2	28.7	45.7	157.9	161.6	301.3	240.5	173.3	165.8	177.9	188.1	156.5	339.7	106.7	349.6	185.1	358.3
17	20.7	21.3	14.8	5.7	19.5	22.9	18.7	19.2	13.6	346.6	341.7	315.8	350.6	344.7	2.1	330.8	359.0	347.2	4.7	9.9	8.4	292.7	335.2	305.1
18	320.9	309.3	354.5	21.5	23.8	23.8	23.0	34.3	31.8	28.9	24.1	15.6	22.4	24.5	25.6	22.8	25.6	22.1	15.9	18.4	14.5	21.0	15.0	11.4
19	30.6	10.1	18.9	2.0	350.9	233.1	218.6	330.3	25.0	20.3	37.6	50.2	61.5	44.7	48.0	177.3	202.6	207.2	58.6	35.9	345.1	355.7	325.7	323.5
20	331.3	321.5	316.4	314.1	314.9	314.4	315.1	315.3	313.6	314.8	346.1	47.2	54.1	201.5	186.1	110.7	356.3	31.6	18.1	252.2	316.9	317.4	317.9	317.6
21	314.5	321.9	326.3	319.5	327.0	334.5	319.5	328.9	13.4	10.8	11.3	41.9	198.5	219.6	210.1	206.7	206.8	201.7	193.6	188.4	218.6	235.4	119.0	268.4
22	47.2	107.7	337.7	347.5	270.2	230.9	235.6	237.6	103.5	124.1	61.9	52.7	148.2	195.8	200.2	200.5	186.9	204.5	200.8	209.6	201.4	11.5	8.5	20.5
23	25.5	18.0	14.8	6.1	4.4	354.9	3.0	7.2	10.6	24.0	42.0	130.4	198.5	194.9	199.8	205.5	200.8	213.9	206.6	150.1	35.3	7.9	355.2	20.2
24	10.5	0.0	350.3	23.6	16.8	6.7	29.3	14.3	18.5	331.6	311.2	24.8	68.7	67.0	133.4	278.5	87.2	310.7	322.9	320.6	316.1	10.6	2.9	12.6
25	14.0	21.0	10.2	222.7	195.5	189.3	201.2	166.5	239.7	136.8	95.3	33.1	138.4	190.6	188.5	228.0	39.3	245.8	254.6	226.5	241.0	261.1	251.5	266.0
26	292.1	248.4	0.2	29.4	15.2	226.6	234.5	30.5	35.6	40.4	42.0	59.7	193.5	213.9	212.1	209.2	210.0	196.9	176.6	185.9	190.7	209.8	233.7	237.4
27	303.0	301.7	345.6	295.6	0.5	24.9	16.3	12.5	51.0	61.8	143.9	115.4	95.0	117.0	68.3	51.8	66.9	91.7	337.8	319.2	314.0	314.8	314.6	324.3
28	324.1	321.5	323.3	258.5	156.4	40.6	45.0	32.2	44.5	85.3	154.1	108.3	115.8	106.4	108.9	304.8	286.3	303.1	306.8	314.1	315.4	315.3	314.6	314.4
29	314.8	326.7	33.6	29.1	35.6	3.4	6.3	51.1	69.1	88.1	82.9	153.4	137.9	108.3	98.1	167.2	150.0	104.4	71.8	49.8	87.5	324.7	287.8	283.1
30	292.2	313.6	307.0	313.1	315.8	9.4	18.1	13.6	27.1	42.5	55.1	106.3	189.4	203.8	209.1	211.8	194.4	217.2	269.5	249.9	11.7	12.5	137.8	7.1
31	15.5	15.3	9.8	355.8	9.0	344.8	358.3	8.1	6.3	10.5	10.7	10.8	14.0	19.6	20.7	18.5	16.7	20.2	18.2	20.9	22.2	20.0	20.1	20.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	20.4	18.4	16.2	17.9	21.1	18.1	16.2	12.2	14.1	11.5	9.4	10.3	15.0	14.2	13.2	9.4	5.3	1.0	358.3	3.7	353.0	351.8	351.3	352.7
2	359.6	355.3	355.1	355.0	352.3	349.4	348.4	355.2	353.3	349.5	321.5	336.8	348.5	353.9	6.3	13.4	10.7	12.7	15.7	19.1	21.7	19.2	20.5	24.0
3	19.3	16.6	18.2	15.5	15.3	16.3	18.7	19.3	33.0	21.8	16.0	16.1	22.3	32.9	42.0	35.7	40.7	21.8	19.3	351.7	240.6	243.8	212.9	230.0
4	359.8	26.1	18.2	5.2	321.5	237.9	16.8	8.6	322.4	39.1	37.3	170.3	184.4	193.1	196.6	205.3	204.5	215.4	212.1	207.3	217.7	240.9	30.7	25.4
5	27.9	247.8	233.2	31.6	27.1	3.7	27.2	27.2	33.8	43.8	55.3	184.3	197.6	195.9	197.0	196.9	200.3	204.1	205.0	209.7	215.0	222.2	264.3	352.5
6	22.8	13.4	356.4	6.4	29.2	29.8	16.9	11.1	0.9	8.9	13.0	15.5	11.5	12.8	13.6	17.4	18.9	18.6	20.0	19.5	19.2	17.7	19.8	18.0
7	21.6	28.5	26.8	30.3	22.3	21.0	16.7	3.7	1.3	7.2	8.9	69.5	345.9	167.9	4.4	349.0	3.9	14.3	19.9	20.5	33.9	33.0	29.9	16.1
8	2.0	25.7	18.1	20.2	15.1	330.2	336.7	25.6	27.3	28.9	30.4	44.4	0.1	330.2	359.6	353.1	2.5	354.9	3.4	8.6	11.9	16.9	13.5	12.0
9	15.9	22.4	7.4	9.7	15.0	11.6	357.3	359.3	0.8	359.0	4.8	3.5	349.3	355.3	305.2	331.9	348.7	324.7	328.9	310.7	339.7	299.9	250.2	230.7
10	216.7	226.2	14.2	4.2	5.3	12.3	228.6	19.6	30.8	45.5	202.0	217.5	193.1	210.7	192.2	192.2	189.7	150.1	195.1	282.1	323.1	125.5	36.7	226.0
11	232.5	187.3	154.3	315.9	314.7	324.3	328.9	94.5	301.9	19.2	44.2	149.0	178.6	193.5	178.4	186.0	199.1	175.6	42.1	61.8	103.5	75.2	37.9	40.2
12	353.7	10.3	25.3	130.4	22.7	346.1	335.3	347.3	356.3	357.7	4.5	10.4	13.1	15.2	9.6	5.4	8.1	358.0	357.9	356.2	356.1	1.2	0.8	344.5
13	357.1	12.2	342.0	330.2	349.6	357.2	326.2	277.4	26.9	23.6	351.1	7.2	2.3	352.5	341.9	355.6	1.8	7.0	10.9	11.8	12.7	15.2	14.4	9.5
14	11.7	15.7	17.0	13.6	11.9	12.1	9.0	7.1	358.7	347.8	350.9	6.1	2.6	8.3	16.1	20.5	14.6	21.3	25.8	20.2	21.4	23.8	29.2	27.4
15	34.2	28.5	27.9	10.0	8.1	23.3	13.3	358.1	24.8	4.0	336.8	339.9	349.3	349.2	52.1	354.1	338.2	4.1	7.0	359.3	355.6	5.4	28.7	23.6
16	16.8	23.8	29.3	15.1	22.8	20.0	26.0	21.1	28.2	29.6	36.5	357.4	11.1	351.5	184.1	157.4	188.3	167.4	152.9	194.1	55.8	144.8	200.7	158.1
17	82.0	196.5	194.4	198.6	205.8	214.1	200.2	128.9	303.5	306.9	26.3	52.9	107.6	139.5	119.8	81.1	59.9	352.2	355.8	355.7	20.0	353.7	6.7	14.2
18	21.2	18.6	18.4	19.0	15.8	18.0	19.3	21.2	22.1	21.4	25.7	22.9	26.6	22.8	21.4	20.8	26.3	359.1	1.3	348.5	228.8	346.9	357.3	348.3
19	2.4	353.8	347.2	351.2	6.7	6.0	1.7	355.8	260.4	18.9	13.7	41.1	193.1	59.9	83.3	308.0	311.3	320.4	168.5	92.7	208.7	138.6	165.7	100.7
20	128.8	109.0	151.3	135.3	164.1	166.4	177.9	186.2	173.8	191.5	199.3	192.2	209.6	203.7	185.5	196.3	198.5	186.7	213.2	37.3	287.5	251.1	247.6	305.4
21	178.1	200.0	323.1	340.6	311.5	14.6	10.2	2.6	355.2	49.7	58.1	85.7	163.8	121.8	164.8	87.5	186.2	92.3	151.5	181.4	182.7	174.0	204.0	178.7
22	33.3	316.3	332.4	318.7	312.7	315.9	320.5	10.4	330.8	47.0	47.2	51.1	54.7	66.3	148.2	81.9	53.3	210.9	196.3	231.4	269.4	348.1	352.1	0.4
23	18.8	13.0	21.8	24.0	25.8	27.1	27.4	24.3	20.1	29.5	31.8	39.7	38.1	40.6	51.7	209.1	185.0	197.7	219.3	186.6	236.2	358.9	17.1	18.4
24	24.8	26.1	28.9	31.8	26.8	25.4	19.2	20.3	17.4	25.4	23.1	13.6	23.2	24.2	15.1	11.8	11.2	13.1	7.7	11.1	6.0	7.9	10.3	4.7
25	10.0	8.9	4.8	6.5	9.2	3.0	6.8	5.0	2.2	1.3	6.2	1.7	3.3	5.3	15.6	10.1	11.4	7.3	7.6	8.8	18.3	19.3	12.8	5.7
26	5.9	8.4	10.4	22.3	22.3	21.8	27.1	26.6	20.8	28.7	20.4	18.6	53.0	210.4	213.8	213.1	207.8	209.8	216.1	205.7	3.2	21.8	26.4	27.3
27	28.7	27.0	17.2	20.7	21.2	13.0	7.9	6.4	11.1	31.1	44.6	45.0	50.9	102.9	133.0	208.9	204.4	185.8	333.9	346.5	301.0	307.8	316.7	321.5
28	312.1	322.9	324.3	312.2	301.7	303.2	311.5	5.2	15.5	29.1	50.2	52.5	90.8	168.3	151.9	150.3	146.8	156.7	222.9	307.8	7.0	8.8	11.3	12.1
29	9.4	10.6	11.2	12.6	12.3	15.6	15.2	15.0	14.4	10.2	14.9	22.0	28.1	22.5	23.0	31.6	27.6	43.3	7.4	350.3	359.3	2.1	0.1	358.9
30	9.7	351.7	8.1	23.5	15.3	30.0	27.9	12.1	0.1	27.0	69.3	97.2	158.2	171.0	189.0	195.7	195.2	175.7	311.0	309.0	317.0	325.0	7.4	18.2

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	17.2	18.9	13.4	22.1	20.2	24.5	24.8	29.6	28.1	36.3	38.1	35.4	35.6	29.3	23.2	16.1	350.6	0.2	10.7	3.4	359.6	360.0	0.0	14.4
2	27.2	26.8	0.7	22.5	5.7	23.5	22.3	26.7	27.2	35.6	47.6	51.0	40.1	99.4	193.8	178.2	179.6	187.3	187.0	201.1	195.4	197.4	201.7	187.2
3	141.8	181.7	166.6	165.4	149.5	60.0	164.0	168.8	165.0	162.6	113.0	71.7	255.3	163.4	162.4	154.1	181.4	146.2	312.2	310.1	311.9	313.5	317.3	317.7
4	320.0	348.2	0.5	0.0	358.4	353.0	349.8	358.8	4.1	30.7	44.2	47.4	49.7	56.6	74.6	84.3	304.1	311.2	309.4	316.5	320.1	312.2	293.6	250.1
5	188.4	359.7	1.2	96.1	62.1	107.3	55.8	69.4	26.1	176.9	156.4	196.3	200.3	199.9	190.9	193.1	191.4	189.9	1.8	323.1	2.7	3.0	12.6	10.7
6	13.9	14.3	13.4	16.1	21.4	17.4	20.7	15.9	10.4	352.3	318.2	318.8	317.5	313.9	319.9	279.2	303.3	299.6	305.3	296.3	297.4	298.5	299.0	293.6
7	58.0	85.3	168.8	126.5	91.6	87.3	45.6	316.9	103.4	126.5	93.5	117.4	123.2	184.2	185.8	182.7	180.0	185.6	173.4	121.8	134.0	95.7	169.0	78.4
8	105.4	300.7	307.7	176.0	123.3	349.0	67.6	167.5	306.9	310.4	308.7	298.3	284.4	298.9	152.9	305.0	316.0	321.9	336.0	359.5	11.5	24.7	23.4	12.9
9	16.1	26.9	26.0	19.1	16.5	17.0	16.6	10.5	13.1	18.5	19.5	13.3	11.9	8.4	10.7	2.7	2.1	7.9	9.8	12.9	11.8	6.2	6.9	5.8
10	4.8	5.3	7.6	16.3	28.6	28.4	174.7	177.2	188.3	189.6	103.3	192.7	129.8	43.4	91.1	277.9	39.9	29.6	7.0	10.6	23.5	15.3	12.6	2.6
11	334.7	352.1	348.9	319.9	23.3	17.6	3.6	318.3	320.8	316.2	347.6	317.9	351.7	352.9	9.1	14.6	12.0	359.5	311.1	2.8	318.6	312.2	305.9	304.6
12	306.4	301.8	303.9	306.6	305.7	304.6	308.9	302.8	304.6	312.2	296.0	300.4	305.4	308.6	296.7	305.5	296.8	293.0	305.9	314.3	314.1	317.2	317.1	300.8
13	305.0	302.9	155.0	157.6	317.8	339.0	17.4	54.7	30.8	32.2	25.6	32.4	29.4	30.1	20.9	26.4	21.6	10.9	16.0	20.5	16.6	15.2	13.5	12.7
14	19.2	18.0	24.8	25.9	29.8	28.7	27.3	30.5	32.9	32.3	31.3	29.6	31.1	29.1	28.5	28.2	27.3	28.4	25.9	26.3	26.8	29.2	28.7	31.7
15	28.5	25.8	27.1	22.9	7.7	25.5	21.5	18.6	20.3	25.5	32.0	37.0	27.7	34.9	41.7	56.2	58.6	15.2	56.7	28.1	40.9	44.1	9.9	35.5
16	30.4	9.3	29.4	54.1	56.6	50.3	50.6	51.5	54.9	53.6	52.9	49.8	58.0	52.2	49.5	62.3	64.3	58.6	46.1	67.3	60.1	55.2	51.5	45.6
17	45.5	47.0	35.7	49.1	50.1	32.3	13.2	360.0	22.2	31.0	37.2	33.1	41.0	39.6	37.8	32.9	26.0	36.0	29.7	17.7	1.9	1.0	22.8	16.6
18	7.6	6.3	11.9	16.4	20.5	19.6	12.9	9.9	15.0	15.0	23.1	25.0	30.5	32.7	30.8	34.6	32.7	35.7	29.0	23.3	14.7	13.8	18.6	7.4
19	0.8	18.1	339.0	19.3	29.9	28.9	18.8	6.0	25.8	20.6	31.0	42.5	86.4	57.9	83.5	170.7	180.1	28.0	244.7	36.7	43.3	49.5	49.8	47.6
20	39.6	33.8	37.9	41.0	26.1	28.4	52.8	50.5	61.4	7.5	32.7	310.6	321.3	320.7	318.1	319.6	322.9	324.6	322.2	321.8	159.9	219.2	186.0	157.4
21	104.2	27.8	348.3	352.2	352.8	355.7	13.6	346.6	336.2	326.4	33.4	63.9	61.6	56.0	47.1	44.8	48.2	10.7	327.4	318.5	319.6	317.0	316.3	310.9
22	336.8	160.3	100.8	139.7	171.4	135.6	178.2	165.8	155.6	173.6	180.1	184.7	184.2	188.9	132.6	318.9	311.9	310.6	344.7	0.1	17.9	15.0	13.4	28.2
23	20.8	9.7	14.7	10.6	15.6	5.8	0.7	1.4	32.3	34.4	55.7	56.5	325.7	309.1	187.1	193.8	193.7	95.2	61.4	55.0	60.4	63.1	60.8	103.0
24	167.5	173.4	156.9	165.9	89.5	47.1	75.1	154.3	200.0	165.3	71.9	164.8	191.4	203.2	199.2	190.3	206.0	200.7	198.6	189.5	187.0	233.9	260.9	16.1
25	26.6	17.9	22.6	25.3	21.0	30.9	30.1	31.3	33.1	33.7	29.9	29.9	30.7	29.1	27.6	29.4	27.9	25.9	18.5	19.3	16.3	25.4	25.3	26.3
26	20.7	28.6	28.7	23.3	13.4	9.5	349.1	10.3	31.5	31.3	30.1	46.2	126.0	59.1	43.4	87.5	330.8	324.4	322.0	317.0	321.2	319.6	318.7	315.3
27	7.0	37.1	348.0	358.8	315.3	313.0	324.5	17.8	32.6	28.2	62.1	59.6	57.0	55.2	45.8	41.5	28.3	358.5	46.4	46.4	37.6	37.8	8.2	1.2
28	9.4	3.5	10.1	15.0	24.2	31.7	25.2	30.8	33.7	34.7	39.0	41.8	41.4	43.7	47.9	43.6	108.8	14.8	17.9	23.6	25.9	27.1	17.8	17.9
29	20.5	27.7	24.0	27.4	30.1	25.6	29.5	26.9	32.3	32.5	35.6	36.3	37.9	36.3	37.2	25.1	26.9	20.5	21.8	40.5	31.0	31.8	28.4	30.7
30	27.5	29.6	31.7	28.8	27.1	27.6	29.1	23.1	25.7	29.5	33.6	26.3	26.5	30.2	28.4	31.5	140.3	228.5	17.2	32.7	33.7	33.6	31.9	32.7
31	32.0	30.8	27.4	27.6	29.6	28.3	32.0	29.1	32.2	30.1	34.8	39.3	43.2	43.0	42.4	41.6	194.4	321.7	15.7	16.8	13.3	18.0	27.1	33.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	27.2	27.5	29.2	31.1	32.5	33.3	28.9	16.5	27.7	34.9	32.5	34.1	37.4	38.0	147.5	120.6	116.7	178.0	168.3	176.5	73.4	36.0	25.0	359.6
2	179.2	170.8	183.9	177.2	184.1	167.9	179.9	185.0	202.2	195.0	136.6	358.3	307.0	316.3	315.5	318.1	323.3	316.8	315.4	312.1	313.9	312.2	309.6	310.5
3	316.0	320.1	322.1	320.4	318.9	315.7	318.6	319.0	317.1	318.2	315.3	318.0	318.9	318.2	319.1	319.9	319.1	320.7	318.9	318.4	320.4	316.8	318.5	351.0
4	12.5	24.7	25.3	26.2	39.1	40.9	29.9	39.9	292.6	358.1	22.4	32.6	43.1	46.0	32.3	46.0	25.5	357.9	32.3	24.1	50.7	45.3	27.9	19.9
5	35.4	42.1	35.3	17.7	33.2	32.9	34.8	10.3	25.0	27.6	29.9	29.6	15.6	11.6	18.6	18.1	13.1	19.0	20.7	10.3	9.1	12.1	20.1	13.3
6	8.3	13.1	16.8	15.2	16.1	24.9	22.1	21.8	25.3	25.5	28.3	25.1	23.7	18.3	11.1	32.6	302.2	311.5	311.6	320.0	317.1	314.5	296.6	298.2
7	310.0	313.9	315.5	312.8	310.8	311.1	319.1	313.4	316.2	318.1	319.2	321.3	358.4	36.8	57.2	57.8	9.9	310.7	22.5	56.1	26.4	38.5	37.9	37.4
8	28.0	23.8	23.2	17.2	9.6	22.2	23.8	33.1	34.3	29.9	28.2	25.7	19.2	11.2	24.5	16.0	19.0	21.3	20.7	18.0	19.8	19.6	27.3	26.5
9	29.7	30.0	25.7	21.4	24.7	25.5	25.2	22.8	22.0	20.9	19.2	20.9	20.9	20.3	20.6	18.3	17.5	14.7	12.4	12.9	14.4	12.1	9.7	9.3
10	13.4	17.4	21.3	22.0	24.4	28.5	31.9	23.2	21.8	27.3	24.9	23.5	15.7	354.7	339.8	220.3	265.8	1.7	31.4	28.9	355.4	345.6	357.6	1.9
11	341.8	356.5	357.3	0.5	359.6	0.9	3.2	6.2	9.2	7.3	5.4	26.3	32.3	23.9	25.5	26.7	42.3	222.1	207.6	199.4	175.6	183.8	189.0	183.2
12	181.3	196.0	193.5	189.0	177.8	195.3	190.0	192.3	191.9	198.5	187.5	205.0	187.4	172.5	183.9	192.5	184.5	185.8	196.1	209.6	329.4	331.6	13.4	29.0
13	26.4	21.9	23.7	21.5	35.2	33.5	35.8	28.7	29.0	22.2	21.3	26.3	13.3	10.1	12.3	12.5	7.9	14.0	23.7	25.7	26.9	22.3	22.1	12.0
14	16.9	22.4	14.0	24.0	21.6	24.7	28.3	27.5	29.2	18.5	10.9	35.3	36.8	37.9	28.3	52.4	33.2	20.7	18.0	343.5	224.5	194.5	214.3	213.7
15	208.6	336.4	321.1	12.9	8.5	353.2	292.0	17.2	5.6	13.8	18.4	32.9	38.1	33.4	34.0	28.1	28.6	26.2	30.4	18.9	12.3	13.0	11.3	359.5
16	7.0	10.3	12.6	18.8	21.5	17.7	314.1	8.7	28.6	257.1	359.4	15.9	36.0	40.7	43.3	43.0	33.1	23.6	12.7	24.2	27.1	23.7	15.1	27.5
17	23.9	29.3	30.7	23.7	19.0	25.7	26.7	23.0	26.4	20.0	25.8	35.8	38.0	40.4	39.4	35.9	22.5	11.9	16.6	16.3	16.6	27.2	28.5	30.6
18	28.1	25.6	27.8	27.8	28.5	19.8	15.9	11.0	12.1	21.0	20.3	30.9	35.2	38.3	39.7	35.1	23.6	9.1	8.4	13.0	13.7	18.8	23.9	27.3
19	23.1	20.9	22.2	23.1	12.0	2.4	1.3	8.2	2.7	12.9	24.9	12.8	42.3	16.0	44.6	29.5	54.4	49.5	39.9	29.0	27.7	9.9	33.4	30.0
20	38.4	34.4	41.9	13.6	11.4	49.0	42.3	39.5	47.1	57.0	64.4	36.8	53.9	49.4	47.6	53.4	37.9	342.0	327.0	315.3	317.0	318.0	321.4	20.1
21	28.6	314.9	328.7	325.5	317.9	320.5	26.8	19.8	1.7	347.1	2.8	34.9	41.7	58.0	45.7	56.9	56.1	28.7	359.8	335.5	0.9	10.7	20.1	27.1
22	26.7	30.2	32.9	29.2	19.0	25.4	23.9	16.9	2.6	11.8	7.6	36.4	22.2	35.9	35.6	31.4	16.9	9.9	12.2	15.0	12.0	3.7	5.2	7.6
23	19.4	14.5	16.2	27.6	31.7	34.1	32.9	32.7	26.3	30.4	33.1	29.8	29.5	26.5	26.9	14.7	13.0	11.7	15.8	21.5	23.1	8.0	8.3	5.1
24	9.0	10.6	4.1	5.4	9.4	9.2	5.5	5.8	2.0	2.7	2.4	5.2	11.6	7.4	5.6	4.9	5.6	0.9	0.2	357.3	356.5	4.1	7.3	17.6
25	327.5	319.4	317.1	324.1	317.9	320.0	320.1	323.7	331.8	323.3	319.1	318.8	320.8	320.2	310.3	303.5	301.7	303.3	316.9	127.4	80.0	323.2	22.0	67.4
26	311.0	306.0	312.7	313.5	314.9	315.8	316.6	315.2	317.1	315.6	314.1	316.7	318.2	322.8	344.8	17.7	12.7	53.2	45.7	46.6	35.6	23.9	24.8	27.9
27	9.0	12.7	19.9	16.1	10.5	19.5	12.3	44.6	32.1	27.9	27.4	20.7	14.0	26.6	4.3	2.1	16.6	312.5	204.3	9.0	5.4	15.3	22.2	22.9
28	25.9	24.1	25.8	27.1	29.8	23.5	13.3	19.2	20.4	23.7	27.2	20.4	23.0	28.3	10.7	29.0	336.7	214.1	74.7	53.9	11.7	19.5	13.1	33.8
29	49.6	18.3	49.7	316.5	317.8	319.6	321.2	321.2	318.7	318.6	319.3	318.2	316.9	316.6	315.1	314.1	313.8	310.6	305.4	306.2	306.7	304.7	311.5	293.0
30	323.5	305.4	333.1	2.7	343.6	85.9	94.6	113.8	64.5	72.4	3.0	8.0	49.1	148.4	166.4	131.7	99.0	132.7	73.3	117.1	226.9	234.9	206.6	238.7

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	333.3	337.0	335.7	335.0	355.3	27.3	39.0	44.4	17.9	19.4	33.0	36.7	35.6	32.5	30.7	26.8	23.7	26.9	28.3	24.8	25.7	30.0	33.2	33.0
2	31.3	28.7	36.1	35.2	24.3	31.2	29.7	25.5	29.0	18.8	16.2	9.8	358.1	5.9	1.9	2.4	355.0	1.3	4.7	6.0	12.3	16.1	25.8	23.5
3	25.9	17.8	12.1	359.7	6.6	5.6	0.5	3.7	0.2	6.3	12.1	9.3	11.9	11.4	12.7	14.4	14.2	11.9	12.8	12.1	14.0	7.7	14.9	18.6
4	21.0	22.3	20.1	16.6	12.8	7.0	6.9	18.6	11.8	10.3	8.8	3.6	5.1	5.9	12.0	13.0	18.5	11.2	24.4	29.4	19.8	24.3	23.5	18.7
5	21.1	29.8	31.1	32.0	32.8	26.7	27.2	28.9	28.3	36.1	26.6	9.2	11.2	15.4	17.9	22.0	16.4	12.3	3.3	7.2	12.1	12.1	5.8	6.2
6	357.9	356.7	358.9	11.3	20.4	27.2	23.5	19.3	16.3	16.9	15.5	17.0	18.0	22.3	29.6	29.8	28.8	224.5	24.0	24.3	25.0	224.2	208.9	237.1
7	11.7	27.2	182.7	356.7	16.9	32.1	35.1	25.9	28.2	27.4	15.4	22.5	37.6	33.2	37.0	33.0	26.2	26.4	30.8	27.7	29.7	32.7	36.2	20.4
8	2.8	355.8	6.8	19.0	19.3	25.4	26.9	29.8	25.7	28.5	25.7	23.4	23.5	25.4	26.6	28.7	27.0	24.4	24.4	24.2	24.3	24.2	25.0	24.6
9	35.2	30.1	24.0	24.1	11.9	354.7	319.5	252.4	252.3	232.5	44.1	189.1	57.8	347.5	178.8	211.9	355.2	254.2	209.5	253.4	335.6	15.1	347.4	15.0
10	0.1	360.0	330.7	192.7	136.6	67.9	89.2	44.0	43.9	139.8	177.0	51.5	72.1	125.8	50.8	205.2	194.1	205.3	34.3	243.5	194.7	205.8	197.9	214.3
11	223.7	55.6	17.3	240.6	46.6	52.7	46.7	33.5	357.9	64.1	83.4	64.0	75.4	186.4	178.1	86.2	94.3	177.9	188.8	205.7	218.9	187.4	202.2	185.1
12	82.4	314.1	320.0	315.3	318.6	315.0	338.1	27.7	21.8	15.6	11.0	16.1	6.1	19.3	359.2	29.3	32.1	21.0	26.2	26.4	9.9	23.7	47.0	223.2
13	20.5	3.8	18.5	25.1	27.2	29.3	27.1	29.3	24.0	30.6	29.2	31.3	37.6	225.7	186.2	28.2	21.7	24.9	23.7	23.4	30.5	32.6	33.3	31.5
14	30.3	30.1	29.3	28.8	32.4	34.5	24.6	28.4	227.7	9.0	28.7	30.8	40.1	43.5	42.1	30.9	31.4	34.7	32.9	30.6	28.6	30.1	30.7	24.4
15	27.1	29.4	5.4	355.7	10.7	358.0	343.9	14.8	24.5	1.4	7.3	30.3	16.7	30.7	33.7	29.7	35.2	34.2	34.1	35.1	34.6	34.4	17.5	35.2
16	32.8	36.9	34.2	27.4	25.8	19.1	19.7	32.4	36.5	29.6	352.3	324.3	24.9	33.6	20.5	0.3	34.1	39.9	28.4	30.6	32.9	28.1	18.7	8.0
17	5.7	18.6	34.4	32.6	22.7	28.6	24.3	32.9	23.7	21.4	32.7	32.0	34.2	28.5	30.5	31.1	32.3	32.6	32.8	30.8	28.3	29.5	34.4	31.7
18	31.2	29.8	30.8	34.6	36.6	34.6	33.8	20.5	9.4	9.8	26.0	25.1	3.5	356.8	24.1	20.4	17.4	5.6	9.8	15.7	9.2	0.4	1.3	359.6
19	2.7	2.1	1.4	359.4	359.8	356.9	9.9	4.5	0.9	6.9	10.4	14.1	15.3	11.5	13.3	16.1	16.3	19.9	21.6	23.2	17.7	22.8	25.0	22.5
20	17.5	17.2	18.2	23.3	22.2	17.7	22.0	27.0	27.2	24.9	23.3	24.2	27.5	21.2	20.4	21.3	8.4	5.9	25.1	25.6	22.7	23.6	37.4	36.7
21	37.6	34.9	32.2	59.6	32.4	38.7	30.8	32.1	26.1	31.1	29.2	29.6	37.8	41.4	37.7	34.4	15.1	7.9	358.7	5.9	13.2	24.2	25.1	24.2
22	31.6	31.6	31.1	33.5	25.1	30.0	28.3	28.9	30.0	30.2	30.0	30.1	29.3	39.0	198.5	212.0	169.9	190.2	151.2	31.7	23.9	27.7	30.5	27.0
23	28.1	30.2	28.7	30.3	24.0	26.0	29.3	28.5	28.1	341.5	208.1	153.6	115.7	84.4	88.4	189.0	206.0	82.1	81.2	56.3	64.5	21.3	221.0	207.8
24	201.6	185.0	211.1	183.5	190.9	195.8	195.3	190.5	77.8	50.8	47.0	87.3	123.3	59.5	39.0	53.9	99.6	194.0	226.7	308.2	335.2	23.1	16.1	31.0
25	31.6	32.4	16.5	17.3	25.2	22.5	15.8	19.2	16.5	15.2	12.1	27.8	34.3	32.8	31.0	31.6	31.8	29.2	206.9	195.4	207.0	201.8	189.8	181.7
26	184.8	196.7	195.4	192.7	195.7	163.3	158.7	182.7	188.7	150.1	173.3	180.4	183.2	177.3	118.6	180.5	184.2	186.2	131.2	160.0	176.5	181.1	112.8	293.4
27	290.5	294.3	300.6	314.0	317.8	320.5	318.7	318.2	320.1	319.4	320.3	317.9	317.4	317.7	318.2	316.7	316.5	317.8	317.3	14.8	29.0	39.5	29.2	40.5
28	40.6	60.1	45.4	330.0	350.0	4.1	30.3	62.9	65.7	55.2	46.0	67.0	59.2	63.6	24.6	63.2	70.2	65.9	45.9	34.5	49.4	29.3	61.4	57.3
29	54.9	52.3	44.6	56.8	58.0	37.6	60.8	45.9	14.1	42.2	43.6	24.3	26.4	47.5	52.3	16.8	19.2	5.0	28.4	25.2	23.0	21.0	15.5	5.7
30	7.7	11.1	14.6	7.8	22.4	39.2	36.6	41.8	5.4	351.5	8.9	17.8	36.9	46.2	40.9	34.2	27.0	38.4	39.7	57.8	25.4	330.1	39.8	34.1
31	49.3	55.2	51.6	59.1	55.0	54.9	60.0	58.3	57.4	60.3	57.6	59.1	58.9	58.0	58.3	58.8	57.2	56.9	57.3	53.7	52.6	48.7	43.1	43.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.1	10.2	12.0	10.9	11.8	11.5	11.9	12.5	13.3	11.8	11.4	14.9	43.3	20.8	57.1	54.6	22.7	25.2	21.3	18.1	23.7	23.4	18.7	35.5	57.1	9.1	21.1
2	60.9	23.6	34.8	54.6	19.4	19.7	20.1	19.5	12.7	12.6	15.0	13.3	9.3	8.4	17.3	12.9	26.7	10.4	10.9	8.1	19.6	18.5	16.4	22.1	60.9	8.1	20.3
3	16.3	10.4	19.7	29.4	18.6	29.3	42.4	79.2	23.9	48.3	38.2	35.4	36.5	27.2	20.5	12.8	11.8	13.7	29.7	23.7	20.6	13.1	27.0	13.7	79.2	10.4	26.7
4	19.4	18.5	32.0	16.3	27.7	89.5	28.1	36.8	33.0	40.0	35.3	42.1	27.3	43.9	32.0	30.6	18.3	55.7	20.5	39.4	47.5	45.9	61.0	37.9	89.5	16.3	36.6
5	19.1	20.1	23.9	36.3	33.6	27.3	44.5	25.8	14.5	13.5	13.3	14.3	14.3	13.7	13.2	13.6	14.4	13.5	14.0	14.4	14.7	14.9	15.4	14.7	44.5	13.2	19.0
6	14.1	15.3	13.7	14.7	14.9	13.9	13.6	13.3	14.1	13.7	13.0	14.1	12.7	13.4	29.1	25.3	39.0	41.0	18.9	18.4	27.6	32.5	40.1	23.6	41.0	12.7	20.4
7	25.4	47.7	29.3	25.9	24.8	29.9	24.8	26.4	82.5	71.4	44.1	25.2	44.1	40.1	40.5	15.8	22.3	28.8	31.5	39.1	23.3	70.4	20.3	66.8	82.5	15.8	37.5
8	52.8	88.3	39.5	21.2	21.4	27.8	74.9	62.9	46.0	74.2	19.7	48.2	48.6	48.2	50.2	37.3	34.8	30.1	26.3	20.3	16.2	14.7	18.7	77.2	88.3	14.7	41.6
9	51.1	50.0	29.0	32.6	19.9	11.2	9.6	14.0	42.5	49.0	28.6	19.7	11.3	13.3	16.5	13.4	49.9	33.1	21.3	14.6	15.3	13.0	13.4	12.5	51.1	9.6	24.4
10	11.8	12.2	14.0	14.6	15.2	14.0	15.9	15.8	12.7	12.2	12.4	12.9	17.4	14.5	14.7	14.2	13.9	13.0	13.0	12.6	12.8	13.4	13.0	15.4	17.4	11.8	13.8
11	15.3	13.4	13.6	16.1	31.9	14.3	12.9	13.7	17.6	24.3	29.4	28.2	16.8	18.9	18.5	16.9	19.3	21.6	25.5	23.7	22.5	21.2	13.0	38.5	38.5	12.9	20.3
12	33.3	26.2	13.9	17.1	23.1	15.3	10.7	10.7	15.1	22.1	58.0	41.8	14.9	15.9	18.9	12.0	17.2	22.7	39.2	45.7	49.0	38.2	14.4	16.1	58.0	10.7	24.7
13	45.6	24.9	15.8	33.9	35.5	24.8	21.4	17.8	13.0	28.3	40.2	23.7	23.6	52.3	32.2	49.9	14.6	15.3	18.1	16.1	26.7	34.3	14.4	27.7	52.3	13.0	27.1
14	14.8	15.8	17.4	15.6	34.8	29.8	6.5	4.9	6.7	7.6	11.2	11.3	13.8	9.4	9.3	7.4	7.6	7.5	9.6	10.1	6.8	10.4	15.2	11.4	34.8	4.9	12.3
15	11.7	11.8	12.8	8.9	9.7	11.2	10.4	9.7	7.8	28.9	71.9	16.7	8.0	9.4	11.8	12.5	10.6	9.4	6.7	7.5	6.9	13.7	18.7	8.6	71.9	6.7	14.0
16	44.7	91.1	69.2	17.0	44.7	55.2	20.3	27.9	94.5	44.4	38.2	81.4	59.7	43.3	47.4	57.4	62.9	92.7	82.6	23.8	8.7	10.2	13.5	5.2	94.5	5.2	47.3
17	9.9	8.1	8.3	8.4	10.1	7.3	6.1	18.5	15.5	17.1	18.0	14.8	11.8	11.1	13.6	12.6	14.4	15.5	9.3	8.2	7.1	12.9	5.5	8.7	18.5	5.5	11.4
18	8.3	61.7	70.2	81.7	59.2	39.6	75.1	74.7	85.7	78.2	18.9	32.8	25.6	16.6	23.0	70.3	24.2	76.6	73.6	38.8	6.8	11.6	13.8	13.4	85.7	6.8	45.0
19	6.4	6.1	5.2	8.2	8.5	10.8	12.3	12.1	14.6	13.2	15.3	14.6	15.9	22.5	22.4	24.0	28.7	18.7	18.5	24.4	14.6	11.7	12.2	15.5	28.7	5.2	14.8
20	16.1	17.1	14.3	16.9	17.5	28.5	20.6	22.6	22.4	30.5	26.9	25.0	26.4	17.7	26.4	21.7	19.8	10.3	9.5	11.6	15.6	11.7	8.7	12.0	30.5	8.7	18.7
21	94.0	29.5	11.8	7.2	5.3	7.8	8.0	7.2	10.0	12.7	14.7	16.7	14.8	12.2	16.3	15.7	15.9	15.4	18.0	20.4	34.5	58.2	97.7	54.4	97.7	5.3	24.9
22	75.3	30.1	14.3	12.7	9.4	10.7	38.7	14.1	23.8	25.0	40.2	27.0	86.2	63.1	47.0	43.9	73.4	30.6	59.1	62.4	51.9	77.5	71.0	43.5	86.2	9.4	43.0
23	59.9	74.8	39.4	41.8	54.2	36.2	42.0	26.7	44.7	59.0	34.7	43.4	84.1	40.5	43.4	25.1	35.8	60.0	49.9	38.1	20.3	22.7	13.8	51.0	84.1	13.8	43.4
24	16.4	31.9	24.8	23.5	18.8	15.2	6.1	9.4	8.0	11.8	13.1	8.0	7.9	12.3	13.6	10.1	9.4	10.0	8.7	5.8	8.1	11.0	8.1	8.3	31.9	5.8	12.5
25	7.1	7.9	28.6	66.8	10.7	28.5	67.4	70.2	71.0	62.7	65.3	57.1	65.1	63.8	83.7	35.4	56.9	87.4	46.8	56.2	45.4	52.5	64.3	75.5	87.4	7.1	53.2
26	84.5	70.1	57.9	81.9	36.0	23.0	22.1	46.3	28.5	36.0	27.4	8.8	10.1	7.1	10.0	12.9	13.1	14.1	11.0	8.7	8.0	7.3	6.0	9.3	84.5	6.0	26.7
27	12.6	8.4	7.7	8.3	20.6	13.9	9.9	11.4	12.3	18.2	17.5	16.9	15.0	17.1	14.4	14.7	16.1	17.1	13.1	14.7	15.7	11.5	11.1	9.5	20.6	7.7	13.6
28	8.6	9.7	9.4	8.4	10.7	8.8	8.3	7.6	7.4	13.4	32.6	24.2	23.8	14.1	12.0	9.2	7.9	18.3	15.1	6.5	24.3	35.3	63.5	23.2	63.5	6.5	16.8
29	60.1	88.4	32.2	68.4	34.1	53.9	30.6	38.3	45.5	82.8	52.6	18.9	17.0	28.9	67.4	24.8	53.6	6.8	9.0	10.9	11.9	21.5	23.9	27.8	88.4	6.8	37.9
30	28.5	15.5	21.9	28.2	12.8	13.0	18.9	9.3	11.3	7.2	7.9	10.6	10.1	11.7	8.6	12.1	17.1	26.1	13.2	20.0	37.6	27.6	32.8	44.6	44.6	7.2	18.6
31	15.3	23.3	35.1	44.5	33.0	15.7	16.7	16.4	40.4	53.9	35.4	37.3	43.3	49.5	46.6	80.2	35.6	17.5	31.9	33.2	18.4	15.9	16.1	10.4	80.2	10.4	31.9
Max.	**94.0**	**91.1**	**70.2**	**81.9**	**59.2**	**89.5**	**75.1**	**79.2**	**94.5**	**82.8**	**71.9**	**81.4**	**86.2**	**63.8**	**83.7**	**80.2**	**73.4**	**92.7**	**82.6**	**62.4**	**51.9**	**77.5**	**97.7**	**77.2**	**97.7**		
Min.	**6.4**	**6.1**	**5.2**	**7.2**	**5.3**	**7.3**	**6.1**	**4.9**	**6.7**	**7.2**	**7.9**	**8.0**	**7.9**	**7.1**	**8.6**	**7.4**	**7.6**	**6.8**	**6.7**	**5.8**	**6.8**	**7.3**	**5.5**	**5.2**		**4.9**	
Avg.	**30.6**	**31.0**	**24.9**	**28.1**	**23.5**	**23.8**	**24.2**	**25.0**	**28.7**	**33.0**	**29.0**	**25.8**	**27.7**	**25.2**	**28.3**	**25.8**	**26.1**	**27.7**	**25.0**	**22.4**	**21.4**	**25.1**	**25.2**	**26.9**			**26.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.8	8.9	11.3	16.6	8.1	9.4	5.6	21.6	5.0	6.4	7.7	6.2	5.5	4.6	5.8	6.0	8.3	8.4	8.0	8.4	12.2	6.4	5.9	9.0	21.6	4.6	8.5
2	9.3	36.2	34.2	7.3	6.1	9.3	8.7	10.4	26.0	27.3	15.4	13.6	10.6	7.4	12.7	8.9	48.0	22.2	56.9	46.2	69.3	63.3	69.9	36.4	69.9	6.1	27.3
3	21.2	14.9	10.4	10.4	11.1	10.3	12.2	47.3	27.9	26.4	28.6	13.0	11.8	18.2	14.7	9.9	10.8	15.7	22.4	20.7	30.2	19.8	29.9	23.2	47.3	9.9	19.2
4	9.6	15.4	10.0	7.3	6.3	9.5	6.3	7.1	6.7	4.4	3.9	8.3	6.9	6.2	7.3	7.4	15.3	11.7	12.1	8.3	8.1	6.5	10.4	62.3	62.3	3.9	10.7
5	15.0	23.2	11.0	9.7	10.6	10.8	6.1	7.6	9.2	12.5	14.4	12.7	11.9	8.3	12.1	27.4	15.2	32.5	28.2	25.6	29.4	49.6	14.4	18.3	49.6	6.1	17.3
6	52.1	58.1	11.2	7.8	6.6	8.9	9.2	34.8	11.3	8.2	10.2	12.5	8.4	7.4	6.0	13.4	9.1	11.2	16.3	30.9	15.1	14.2	37.8	17.4	58.1	6.0	17.4
7	33.8	24.5	23.0	20.6	26.4	18.4	25.1	24.4	23.3	26.9	18.6	12.2	9.7	9.5	20.4	8.9	10.0	25.1	12.3	20.1	12.9	12.0	9.3	10.4	33.8	8.9	18.2
8	6.6	10.5	13.8	5.9	12.8	10.6	11.9	10.4	14.9	10.8	11.3	14.4	12.8	12.1	11.4	10.7	12.6	13.3	13.2	13.7	11.6	12.9	8.6	10.3	14.9	5.9	11.5
9	10.0	9.4	8.6	9.5	8.9	9.4	9.6	9.4	9.5	8.9	11.2	15.4	15.3	15.7	19.6	12.0	18.1	37.2	39.5	31.0	76.9	15.2	9.5	9.7	76.9	8.6	17.5
10	11.3	14.0	36.3	20.3	8.6	5.9	8.1	8.1	8.7	5.7	9.3	7.0	6.6	6.6	8.8	25.8	57.9	24.7	15.6	9.8	10.5	12.0	15.1	15.5	57.9	5.7	14.7
11	10.8	11.6	10.9	10.8	11.7	9.5	10.9	11.7	8.5	11.3	7.4	14.4	9.8	12.2	46.1	7.6	11.4	13.7	11.1	15.6	11.5	13.1	16.7	13.5	46.1	7.4	13.0
12	20.6	9.8	11.1	40.5	16.1	21.5	19.8	27.3	17.0	61.1	46.4	43.6	40.4	38.6	20.9	26.3	43.9	12.6	23.3	23.5	91.3	30.2	14.9	12.1	91.3	9.8	29.7
13	10.8	15.6	21.7	17.9	19.1	13.7	18.5	14.5	12.1	11.9	12.4	9.7	11.4	12.9	15.1	14.9	11.1	12.7	18.0	16.5	13.5	17.0	17.0	16.5	21.7	9.7	14.8
14	15.5	16.0	16.7	16.5	16.7	17.4	16.2	15.9	16.9	16.3	16.2	10.7	37.9	18.1	14.4	13.1	12.8	13.4	20.4	24.6	40.4	75.2	44.3	26.7	75.2	10.7	22.2
15	27.5	26.8	22.1	20.8	19.0	21.0	40.2	52.4	40.9	67.1	33.4	30.5	94.2	83.3	77.5	18.9	17.1	26.0	20.0	12.1	22.7	18.4	11.4	18.4	94.2	11.4	34.2
16	14.0	12.3	11.9	9.3	11.8	13.2	10.9	14.2	13.1	11.6	9.6	9.6	8.4	9.1	9.8	9.3	9.2	9.3	12.7	16.9	13.5	12.3	11.8	15.5	16.9	8.4	11.6
17	12.5	14.8	10.0	7.4	7.5	10.8	12.7	9.4	10.7	11.5	9.6	11.4	12.2	12.1	15.4	12.8	15.1	17.8	22.0	70.3	45.2	79.1	68.5	84.0	84.0	7.4	24.3
18	73.7	78.5	77.7	46.6	28.0	31.5	41.6	55.8	42.7	85.9	46.5	67.3	64.6	40.4	42.7	48.1	77.3	55.0	29.7	28.9	19.2	15.3	17.5	9.8	85.9	9.8	46.8
19	11.6	7.6	12.6	11.8	16.0	9.7	9.4	9.9	10.5	11.8	13.5	13.4	11.3	11.8	12.4	12.4	12.8	10.5	13.6	14.1	11.8	13.2	11.2	14.4	16.0	7.6	12.0
20	15.5	47.8	68.7	59.3	37.2	38.0	60.2	29.9	34.0	15.5	18.4	15.9	15.9	13.4	12.2	11.6	11.7	12.9	10.9	11.3	11.6	11.4	12.5	10.7	68.7	10.7	24.4
21	11.3	11.6	10.4	11.7	12.2	11.8	10.1	11.6	10.9	10.3	9.4	10.1	14.2	16.4	16.7	12.4	14.4	16.3	15.0	16.9	15.2	15.3	13.2	13.1	16.9	9.4	12.9
22	11.6	16.5	15.2	12.2	12.9	16.6	14.2	14.3	13.0	13.4	15.7	16.1	18.2	37.1	32.4	44.8	37.9	27.1	31.8	28.4	17.7	17.8	24.8	28.1	44.8	11.6	21.6
23	24.5	16.8	13.9	13.4	11.7	5.5	6.8	47.0	36.7	23.2	25.2	5.9	5.3	6.0	8.4	75.9	69.2	8.4	11.5	13.6	35.5	12.4	22.1	28.4	75.9	5.3	22.0
24	21.9	20.5	17.9	20.0	24.6	32.9	22.8	39.1	25.6	18.4	17.5	12.1	21.8	13.4	17.6	12.9	15.8	54.0	63.0	26.0	45.5	19.3	60.6	70.8	70.8	12.1	28.9
25	42.4	22.8	25.6	23.3	15.3	12.5	13.7	12.1	10.9	9.9	17.6	53.6	44.2	85.3	10.7	12.2	11.9	12.3	11.0	9.9	10.7	12.1	13.3	12.8	85.3	9.9	21.1
26	12.8	10.1	11.6	16.5	16.5	15.3	14.9	14.5	8.8	8.3	10.9	11.8	14.0	10.2	12.2	11.4	12.4	95.7	7.1	82.4	38.4	23.2	29.6	62.0	95.7	7.1	22.9
27	22.8	12.7	16.4	15.9	10.8	12.2	13.3	9.5	13.8	49.2	10.4	13.1	77.5	15.8	76.3	24.8	8.3	7.6	10.5	8.9	8.4	8.0	14.3	12.7	77.5	7.6	19.7
28	10.5	8.3	11.5	11.6	9.8	9.7	9.8	11.1	12.4	14.0	13.4	11.9	11.6	12.9	12.1	14.5	64.8	32.8	21.5	76.9	52.4	61.7	33.2	14.5	76.9	8.3	22.6
29	12.3	15.4	19.4	15.7	15.1	18.0	18.9	16.3	20.1	22.6	16.2	18.1	27.4	5.9	15.6	7.9	6.0	5.9	7.7	12.6	92.8	85.2	52.9	52.4	92.8	5.9	24.2
Max.	**73.7**	**78.5**	**77.7**	**59.3**	**37.2**	**38.0**	**60.2**	**55.8**	**42.7**	**85.9**	**46.5**	**67.3**	**94.2**	**85.3**	**77.5**	**75.9**	**77.3**	**95.7**	**63.0**	**82.4**	**92.8**	**85.2**	**69.9**	**84.0**	**95.7**		
Min.	**6.6**	**7.6**	**8.6**	**5.9**	**6.1**	**5.5**	**5.6**	**7.1**	**5.0**	**4.4**	**3.9**	**5.9**	**5.3**	**4.6**	**5.8**	**6.0**	**6.0**	**5.9**	**7.1**	**8.3**	**8.1**	**6.4**	**5.9**	**9.0**		**3.9**	
Avg.	**19.4**	**20.4**	**19.8**	**17.1**	**14.4**	**14.6**	**16.1**	**20.6**	**17.3**	**21.0**	**16.6**	**17.1**	**22.1**	**19.0**	**20.2**	**18.0**	**23.0**	**22.3**	**20.2**	**25.0**	**30.1**	**25.9**	**24.2**	**25.1**			**20.4**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.2	42.1	16.5	18.0	20.3	10.4	15.8	14.1	13.2	11.8	11.8	10.6	13.2	9.0	9.7	8.7	9.7	9.2	10.4	14.3	10.4	11.0	13.2	7.3	42.1	7.3	14.0
2	9.5	11.1	13.1	13.8	14.2	13.3	17.6	17.3	15.2	15.6	10.6	6.6	6.0	14.6	14.5	13.3	9.5	9.3	8.0	9.1	11.0	11.9	8.1	8.8	17.6	6.0	11.7
3	73.5	28.7	72.1	49.2	33.3	16.7	15.2	16.4	18.6	27.7	27.0	26.8	25.7	25.1	23.4	17.3	16.2	13.0	13.9	14.8	17.5	34.0	53.3	45.8	73.5	13.0	29.4
4	56.1	90.3	91.1	38.0	35.1	33.2	47.1	49.4	66.4	53.8	44.3	35.0	17.0	17.5	17.6	17.6	17.4	16.1	14.8	15.7	16.8	16.1	15.6	14.2	91.1	14.2	34.8
5	12.1	15.6	12.8	13.1	14.4	12.9	13.0	14.5	15.7	15.5	16.4	16.6	16.9	15.8	18.3	18.9	17.5	21.1	37.7	52.9	75.7	40.1	58.0	77.2	77.2	12.1	25.9
6	59.6	47.3	74.6	50.6	40.0	49.1	56.4	23.5	26.0	20.8	44.8	7.9	15.9	14.8	15.0	15.0	17.1	11.6	11.4	11.5	10.2	11.4	11.6	10.7	74.6	7.9	27.4
7	11.8	10.5	9.4	10.1	10.8	11.3	14.2	86.5	87.1	23.9	17.2	17.6	22.6	95.5	62.6	50.9	90.3	73.7	79.0	58.1	58.8	32.4	43.1	58.8	95.5	9.4	43.2
8	53.7	16.7	12.7	12.8	42.4	17.9	6.6	26.7	31.5	32.6	26.6	14.5	10.5	10.6	10.5	10.5	10.4	9.3	10.3	11.1	9.7	10.5	11.4	10.4	53.7	6.6	17.5
9	11.0	10.8	11.5	11.7	10.3	11.8	11.6	12.6	12.6	13.3	12.7	11.8	12.2	11.7	15.0	15.2	13.0	16.2	19.7	19.5	27.4	81.4	74.9	56.2	81.4	10.3	21.0
10	6.0	44.1	20.8	75.5	50.8	45.7	30.4	16.9	18.6	21.8	12.9	8.8	76.8	87.0	6.9	7.5	49.9	45.8	33.5	29.9	46.7	20.6	15.5	15.7	87.0	6.0	32.8
11	16.5	23.7	40.9	13.3	13.2	13.2	13.7	13.8	14.6	13.7	14.5	14.2	15.1	14.8	13.9	13.4	14.9	15.5	13.2	17.1	18.5	19.4	14.7	18.3	40.9	13.2	16.4
12	15.7	13.4	13.8	13.7	16.1	15.1	19.7	28.1	29.4	18.1	15.1	13.2	10.1	9.0	6.5	8.3	7.7	21.7	19.9	25.2	53.6	39.4	69.6	57.9	69.6	6.5	22.5
13	30.3	35.7	23.0	14.9	20.9	18.8	14.1	14.8	14.1	14.9	13.2	12.5	12.8	14.0	15.6	14.9	12.5	13.9	14.3	32.3	15.7	29.2	42.0	46.9	46.9	12.5	20.5
14	60.1	39.0	48.3	29.9	18.8	13.7	26.5	42.9	22.7	9.5	6.4	5.1	5.3	6.3	5.8	4.9	56.1	35.3	14.4	10.9	10.5	9.7	8.1	13.9	60.1	4.9	21.0
15	15.6	13.3	12.0	12.2	10.9	9.9	10.9	12.9	13.2	15.4	16.2	16.4	17.1	11.7	11.4	10.8	10.7	13.1	12.7	12.3	9.3	10.4	8.7	9.3	17.1	8.7	12.4
16	8.5	8.7	8.7	9.7	12.4	16.7	14.8	16.5	12.9	10.4	10.9	9.3	8.9	8.7	10.4	91.3	5.8	9.2	9.3	7.8	17.2	36.7	24.5	9.6	91.3	5.8	15.8
17	10.9	11.6	11.1	8.0	7.7	6.6	11.6	7.9	15.9	9.3	3.9	4.3	5.2	4.4	7.2	7.0	42.7	12.3	63.8	71.2	84.0	65.5	57.9	34.4	84.0	3.9	23.5
18	24.4	23.2	19.9	21.7	17.4	15.1	13.3	12.8	13.3	14.2	14.1	14.3	16.0	14.4	14.6	14.6	14.6	14.9	14.4	16.0	15.4	14.6	14.5	15.4	24.4	12.8	16.0
19	14.3	13.7	14.6	15.7	16.2	14.9	16.0	22.1	24.6	17.0	14.0	16.5	15.8	14.6	14.7	13.0	13.8	13.9	13.1	14.6	13.3	13.4	14.2	40.0	40.0	13.0	16.4
20	37.6	26.5	66.2	42.8	28.5	20.3	27.4	37.9	33.3	25.7	28.1	62.9	57.0	13.5	10.7	11.9	8.6	14.7	12.5	26.8	17.9	20.4	33.3	30.4	66.2	8.6	29.0
21	26.9	66.2	64.8	53.7	22.3	97.1	12.9	10.7	11.9	11.1	9.6	9.3	11.3	9.7	9.0	9.7	12.6	13.3	17.4	15.6	12.9	11.3	11.5	12.3	97.1	9.0	22.6
22	13.1	12.6	13.7	11.5	13.8	13.7	48.2	79.3	93.9	49.1	81.7	42.3	75.3	39.0	17.1	50.6	53.1	27.9	70.0	44.7	100.3	18.2	14.8	59.5	100.3	11.5	43.5
23	42.5	77.1	89.1	42.9	30.9	22.0	42.6	10.1	12.4	44.4	36.2	12.5	46.9	15.3	16.3	38.7	39.2	15.6	15.2	17.0	21.2	34.5	52.7	34.5	89.1	10.1	33.7
24	43.5	36.8	19.4	44.1	18.3	9.6	18.1	94.2	36.4	62.7	53.9	58.4	9.0	18.6	14.0	10.0	62.2	28.9	61.9	27.3	49.6	22.6	17.1	17.9	94.2	9.0	34.8
25	86.5	91.7	81.4	62.8	12.8	10.6	7.6	6.1	6.0	5.8	5.7	58.9	54.7	7.9	6.1	20.4	27.8	21.6	21.3	22.9	15.5	13.7	55.8	13.7	91.7	5.7	29.9
26	27.2	16.0	22.0	25.4	24.0	17.3	15.1	20.7	15.1	10.5	12.6	15.6	17.0	14.7	7.2	7.9	12.4	12.8	47.8	51.8	35.4	17.4	13.0	13.0	51.8	7.2	19.7
27	12.9	12.2	11.6	11.4	11.5	14.0	13.6	13.2	12.4	13.4	13.6	12.1	16.2	34.6	19.1	14.2	13.7	13.1	13.4	12.8	14.2	12.9	11.9	13.4	34.6	11.4	14.2
28	13.0	12.7	13.3	51.9	13.5	9.8	10.1	28.8	11.2	7.6	9.8	12.7	11.6	6.6	5.6	6.6	5.9	6.3	12.1	46.6	68.6	12.6	9.3	6.3	68.6	5.6	16.4
29	13.3	19.7	29.5	12.8	14.9	14.5	10.9	9.3	13.8	11.2	20.9	17.3	29.6	35.2	31.1	23.0	20.5	28.3	33.3	33.9	27.7	36.6	26.5	22.9	36.6	9.3	22.4
30	17.5	30.5	31.2	47.7	34.4	41.2	41.5	42.1	29.0	27.0	28.8	29.8	32.2	30.5	28.0	27.2	30.7	32.9	27.0	25.6	20.0	19.2	17.3	12.1	47.7	12.1	29.3
31	10.1	13.0	13.9	16.1	11.8	10.6	13.5	14.5	10.4	12.3	16.3	15.9	28.2	19.2	24.6	24.2	21.9	16.9	15.5	14.7	26.0	32.3	30.3	23.9	32.3	10.1	18.2
Max.	**86.5**	**91.7**	**91.1**	**75.5**	**50.8**	**97.1**	**56.4**	**94.2**	**93.9**	**62.7**	**81.7**	**62.9**	**76.8**	**95.5**	**62.6**	**91.3**	**90.3**	**73.7**	**79.0**	**71.2**	**100.3**	**81.4**	**74.9**	**77.2**	**100.3**		
Min.	**6.0**	**8.7**	**8.7**	**8.0**	**7.7**	**6.6**	**6.6**	**6.1**	**6.0**	**5.8**	**3.9**	**4.3**	**5.2**	**4.4**	**5.6**	**4.9**	**5.8**	**6.3**	**8.0**	**7.8**	**9.3**	**9.7**	**8.1**	**6.3**		**3.9**	
Avg.	**27.7**	**29.5**	**31.7**	**27.6**	**20.7**	**20.2**	**20.3**	**26.3**	**24.2**	**20.6**	**21.0**	**19.7**	**23.0**	**20.8**	**15.6**	**19.3**	**23.8**	**19.6**	**24.6**	**25.3**	**30.0**	**24.5**	**27.5**	**26.1**			**23.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.8	27.3	25.2	22.0	16.9	15.4	14.4	13.4	17.1	15.4	15.6	14.2	13.3	14.0	16.3	13.5	14.1	13.8	9.8	8.3	11.0	11.4	9.1	8.9	27.3	8.3	15.3
2	7.5	10.2	73.4	36.7	21.8	19.5	16.5	14.2	12.8	24.0	34.3	25.5	17.8	3.8	3.7	3.1	78.8	30.4	14.1	35.7	44.7	33.2	56.7	50.6	78.8	3.1	27.9
3	70.7	59.5	51.4	45.5	36.4	50.2	18.0	28.2	18.8	12.4	16.7	27.1	43.3	36.0	30.6	28.9	30.5	25.8	37.3	54.4	58.2	74.2	65.4	46.4	74.2	12.4	40.2
4	75.4	51.9	55.3	74.8	69.4	31.7	36.4	22.5	15.1	20.1	20.1	14.5	13.4	14.1	12.5	13.5	12.4	11.6	10.2	9.5	4.4	47.4	61.1	73.4	75.4	4.4	32.1
5	48.9	53.7	66.3	50.4	40.5	55.4	29.4	36.8	52.2	59.4	30.9	63.1	34.6	19.1	20.2	26.2	35.9	25.8	55.9	54.8	36.6	18.5	32.9	27.6	66.3	18.5	40.6
6	29.0	23.8	35.7	42.3	33.8	54.2	49.7	61.1	54.6	33.1	77.3	30.7	16.5	23.3	17.3	21.6	18.9	23.9	21.2	20.4	24.8	20.3	13.9	15.5	77.3	13.9	31.8
7	56.9	28.8	29.2	17.1	9.6	12.0	23.1	23.4	34.5	11.1	11.1	23.5	37.1	15.3	15.5	19.6	19.3	21.2	21.4	28.8	21.8	13.7	12.4	35.2	56.9	9.6	22.6
8	29.4	18.0	14.7	21.5	17.4	14.0	20.1	17.5	8.4	4.8	5.7	5.1	12.0	35.8	90.9	21.5	23.6	73.3	70.2	73.7	96.6	31.6	48.0	57.1	96.6	4.8	33.8
9	68.5	69.8	72.1	67.5	58.4	53.6	49.0	94.1	79.6	101.8	53.4	54.6	6.8	49.3	78.7	70.9	52.7	33.4	31.5	24.6	42.4	42.0	64.1	63.6	101.8	6.8	57.6
10	41.9	69.0	52.4	71.6	72.3	60.7	12.9	14.7	15.9	19.2	20.8	14.1	17.5	14.3	15.0	17.4	15.2	16.2	14.6	13.8	14.3	14.1	11.8	12.1	72.3	11.8	26.7
11	11.9	13.1	13.8	15.4	17.1	14.5	14.9	15.6	16.4	19.5	18.5	15.2	13.6	14.5	14.6	15.1	26.6	38.5	25.2	19.5	20.9	21.7	16.5	20.2	38.5	11.9	18.0
12	21.2	16.1	17.3	17.0	14.3	16.9	17.1	14.5	17.9	16.9	13.0	13.1	58.6	61.5	40.3	50.8	47.9	45.1	42.1	45.6	30.8	41.7	51.9	23.3	61.5	13.0	30.6
13	32.6	21.5	16.5	52.9	41.7	31.3	20.1	26.7	9.0	39.7	74.9	5.1	24.7	31.8	58.1	48.5	88.9	79.9	94.4	81.2	49.0	31.0	27.2	33.7	94.4	5.1	42.5
14	38.3	25.9	24.3	25.2	24.7	34.5	56.8	52.8	48.7	44.8	54.1	52.5	61.2	89.9	69.5	40.9	44.0	35.3	33.3	14.5	16.4	94.5	60.4	82.1	94.5	14.5	46.9
15	71.4	57.5	56.8	27.5	70.4	23.8	31.9	63.1	23.9	33.3	10.3	11.4	11.1	49.1	64.9	53.3	28.6	15.4	16.0	15.8	11.1	24.9	94.3	34.2	94.3	10.3	37.5
16	83.5	87.6	76.0	62.4	57.7	66.4	66.2	93.9	47.9	22.8	24.8	27.1	26.9	31.3	50.9	49.9	47.2	30.7	28.4	68.4	68.9	77.1	44.5	82.6	93.9	22.8	55.1
17	78.1	98.8	71.5	36.6	63.4	54.0	93.6	80.8	94.2	84.5	25.3	17.0	43.0	25.8	23.2	35.9	46.0	46.3	33.7	57.3	44.1	72.2	71.9	47.0	98.8	17.0	56.0
18	43.4	66.2	60.4	62.3	22.9	37.4	23.1	29.7	99.7	17.8	20.9	33.2	5.9	8.2	16.8	5.9	3.9	5.5	9.0	35.9	81.3	13.9	7.6	6.6	99.7	3.9	29.9
19	11.4	9.9	11.1	5.9	7.2	8.5	6.4	7.1	7.2	11.8	53.2	16.5	21.5	24.7	20.1	18.4	26.1	12.1	29.0	20.2	29.3	49.5	76.4	15.0	76.4	5.9	20.8
20	6.3	5.0	6.5	41.7	33.7	23.0	45.9	15.3	20.7	31.4	18.3	25.1	31.4	31.3	33.0	23.3	28.3	22.4	21.9	28.9	44.6	47.6	64.4	68.9	68.9	5.0	30.0
21	78.9	45.3	48.2	46.5	40.5	48.8	40.9	47.8	70.1	44.3	41.8	33.5	25.5	24.8	29.4	39.3	39.2	61.0	11.2	15.8	20.8	42.1	25.3	9.6	78.9	9.6	38.8
22	31.9	22.9	7.8	9.1	33.9	12.9	8.9	97.8	5.2	10.8	55.3	6.4	3.3	3.0	3.3	4.4	3.5	5.9	6.3	12.6	14.0	15.7	58.8	23.9	97.8	3.0	19.1
23	23.5	82.9	83.1	49.6	7.7	11.9	15.4	14.9	12.5	7.0	5.9	4.9	20.0	44.7	7.1	8.1	7.5	64.7	90.7	35.1	33.8	33.0	19.1	31.4	90.7	4.9	29.8
24	15.0	13.5	13.3	13.9	13.8	14.8	16.3	16.1	16.2	14.4	15.1	17.0	18.4	18.5	15.8	37.6	34.3	34.3	20.7	51.1	49.8	54.2	48.1	25.4	54.2	13.3	24.5
25	28.1	41.8	60.4	64.5	68.0	46.8	69.5	32.2	65.8	48.2	35.1	50.3	51.5	37.8	37.9	35.0	38.2	101.1	33.1	35.3	45.8	21.8	13.8	15.6	101.1	13.8	44.9
26	28.1	22.1	16.2	18.7	22.9	19.7	56.7	39.8	52.9	67.0	65.2	18.4	19.7	20.8	57.0	71.0	11.1	13.2	14.7	26.3	13.3	63.6	43.6	80.7	80.7	11.1	35.9
27	43.3	48.8	22.4	23.2	44.0	32.0	26.0	13.1	21.4	50.9	49.7	15.8	50.4	76.2	59.4	41.6	28.4	25.7	17.2	27.4	46.8	36.9	34.7	65.4	76.2	13.1	37.5
28	61.8	47.3	35.0	50.0	12.7	38.8	77.1	10.6	13.2	16.9	10.3	11.7	10.4	39.5	14.9	14.6	15.0	15.2	16.5	15.1	14.4	15.0	18.0	15.4	77.1	10.3	24.6
29	15.2	14.2	17.2	16.5	14.7	20.1	15.4	33.5	16.5	9.2	11.2	7.7	6.5	7.3	32.3	27.7	24.1	41.2	69.4	64.9	73.7	63.7	30.6	19.2	73.7	6.5	27.2
30	16.5	16.5	14.2	17.6	12.6	8.5	9.8	6.7	6.8	5.5	5.4	3.7	9.0	56.5	14.3	6.6	8.0	27.6	22.6	21.4	30.8	20.8	19.2	22.7	56.5	3.7	16.0
Max.	**83.5**	**98.8**	**83.1**	**74.8**	**72.3**	**66.4**	**93.6**	**97.8**	**99.7**	**101.8**	**77.3**	**63.1**	**61.2**	**89.9**	**90.9**	**71.0**	**88.9**	**101.1**	**94.4**	**81.2**	**96.6**	**94.5**	**94.3**	**82.6**	**101.8**		
Min.	**6.3**	**5.0**	**6.5**	**5.9**	**7.2**	**8.5**	**6.4**	**6.7**	**5.2**	**4.8**	**5.4**	**3.7**	**3.3**	**3.0**	**3.3**	**3.1**	**3.5**	**5.5**	**6.3**	**8.3**	**4.4**	**11.4**	**7.6**	**6.6**		**3.0**	
Avg.	**39.8**	**39.0**	**38.3**	**36.9**	**33.4**	**31.1**	**32.7**	**34.6**	**32.5**	**29.9**	**29.8**	**21.9**	**24.2**	**30.7**	**32.1**	**28.8**	**29.9**	**33.2**	**30.7**	**33.9**	**36.5**	**38.2**	**40.1**	**37.1**			**33.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	22.0	58.3	11.0	9.8	89.3	37.0	85.5	66.2	41.8	33.2	17.4	49.4	17.6	59.5	62.8	33.9	16.0	17.1	14.1	19.2	30.9	37.2	38.5	24.9	89.3	9.8	37.2
2	56.7	50.5	24.9	37.4	54.4	73.2	87.0	28.5	19.8	17.0	13.1	19.7	17.6	76.6	68.6	69.7	33.9	44.0	33.3	78.3	87.9	88.3	53.5	25.1	88.3	13.1	48.3
3	62.8	13.0	17.1	22.5	62.9	90.5	9.1	12.3	11.1	17.1	17.0	12.0	11.2	11.2	10.0	17.8	22.0	10.3	13.0	13.2	14.1	11.2	12.0	11.9	90.5	9.1	21.1
4	13.9	12.8	15.1	13.8	13.7	10.9	11.4	9.8	8.9	9.0	8.3	8.7	8.6	9.3	10.1	10.1	10.9	9.4	16.8	15.4	17.4	13.7	94.1	66.7	94.1	8.3	17.5
5	30.9	24.0	93.6	20.9	12.6	14.7	17.1	24.9	24.6	16.9	29.8	27.0	20.2	33.5	15.3	15.5	82.6	65.9	6.7	84.2	26.6	30.4	63.2	46.2	93.6	6.7	34.5
6	14.0	13.5	16.0	15.7	63.4	37.8	59.0	56.5	44.7	93.0	68.1	33.1	32.6	29.0	46.6	74.0	36.0	30.0	70.6	34.3	52.8	28.5	32.0	82.5	93.0	13.5	44.3
7	37.6	20.0	17.5	17.8	15.8	14.1	15.5	14.4	13.9	15.9	13.8	15.6	11.5	11.8	13.0	14.0	11.9	13.6	14.0	16.0	14.6	15.1	13.1	13.3	37.6	11.5	15.6
8	14.0	16.0	12.4	13.8	15.3	15.9	14.6	12.2	12.8	11.2	9.5	10.6	11.9	14.2	11.8	10.4	10.8	11.4	12.1	12.9	13.6	14.2	14.5	12.5	16.0	9.5	12.9
9	15.3	13.4	13.9	14.1	13.9	12.1	14.4	13.6	14.0	12.5	13.4	11.9	11.5	12.0	11.8	14.1	14.7	29.6	68.1	6.8	9.1	15.3	6.5	8.6	68.1	6.5	15.5
10	92.9	24.8	48.2	47.3	55.8	54.6	20.7	22.3	11.7	9.6	19.0	29.2	38.9	37.6	24.5	48.3	61.1	16.4	58.6	39.0	26.4	22.1	66.1	32.9	92.9	9.6	37.8
11	97.3	25.0	12.3	25.3	83.6	72.0	15.3	14.9	15.4	59.2	16.9	16.2	16.3	18.8	17.1	13.8	13.5	14.4	12.9	14.5	13.5	10.1	13.2	13.2	97.3	10.1	26.0
12	12.9	12.1	11.5	12.4	14.5	13.4	11.8	12.2	12.1	12.9	14.1	13.6	12.0	12.3	17.0	28.2	15.7	17.9	17.7	20.6	20.7	20.2	17.6	20.3	28.2	11.5	15.6
13	36.6	40.0	46.6	21.0	19.8	33.9	34.9	30.1	36.5	66.5	93.5	51.2	70.0	69.4	54.0	72.6	97.2	88.4	84.0	43.2	38.3	81.7	40.4	12.8	97.2	12.8	52.6
14	14.5	13.8	13.6	11.0	11.9	13.4	12.2	11.1	11.0	10.5	13.4	12.3	13.1	11.2	12.3	12.3	12.0	13.6	14.7	10.7	12.1	12.8	12.8	15.6	15.6	10.5	12.6
15	16.0	55.4	62.2	79.3	34.6	62.6	49.2	25.8	32.8	50.5	29.1	9.0	11.1	24.3	27.0	61.0	52.6	53.3	27.3	42.7	12.3	9.3	8.6	9.6	79.3	8.6	35.2
16	12.5	23.4	51.2	59.1	67.4	63.7	70.3	62.2	62.7	44.0	95.0	49.7	32.8	75.7	26.6	22.3	7.6	8.4	6.3	8.8	11.9	10.4	77.6	11.0	95.0	6.3	40.0
17	34.9	66.8	31.9	33.8	15.0	11.4	12.1	7.2	8.2	6.2	3.8	59.9	13.8	4.8	4.6	4.2	5.9	5.4	7.2	7.5	14.6	19.3	19.3	28.8	66.8	3.8	17.8
18	42.9	16.1	46.8	79.5	40.6	13.1	12.1	14.1	18.0	18.1	28.7	79.5	92.5	46.3	21.7	79.9	100.3	20.4	17.3	65.4	39.5	90.7	42.8	33.1	100.3	12.1	44.1
19	20.2	14.2	19.7	10.7	11.0	7.1	7.8	6.7	5.2	6.3	8.1	81.5	6.5	13.8	48.1	60.4	55.0	71.2	36.4	18.5	20.6	19.5	16.2	21.8	81.5	5.2	24.4
20	27.9	37.5	23.3	15.1	14.9	15.9	14.3	14.4	11.8	24.5	22.1	4.7	21.6	48.5	3.7	5.0	12.2	12.2	29.6	20.4	19.6	22.9	57.1	55.8	57.1	3.7	22.3
21	41.4	20.7	41.5	98.3	47.1	19.2	16.4	86.4	5.7	41.4	30.3	29.3	19.4	32.1	12.7	19.6	13.2	8.7	9.1	10.4	6.8	16.8	88.2	86.0	98.3	5.7	33.4
22	54.9	54.3	69.6	80.8	59.6	22.7	15.3	50.9	11.7	9.9	7.3	5.7	47.0	31.1	36.3	33.1	61.9	24.5	47.9	72.4	63.8	31.5	35.0	35.6	80.8	5.7	40.1
23	39.5	26.2	43.0	16.7	20.7	14.8	15.4	16.0	17.8	18.2	16.3	18.6	28.3	30.3	28.3	58.3	73.6	83.2	61.2	42.5	78.1	36.3	48.6	46.8	83.2	14.8	36.6
24	31.9	44.2	34.7	61.5	55.6	58.7	41.5	25.3	30.6	77.1	29.6	9.9	10.5	14.2	42.0	43.2	64.9	13.9	25.6	50.0	53.0	11.2	11.3	7.9	77.1	7.9	35.3
25	7.7	9.2	5.8	7.7	11.8	14.2	8.2	7.0	8.1	9.4	47.4	17.3	18.5	15.8	9.7	16.6	8.1	9.0	13.2	10.0	14.1	16.2	86.8	62.2	86.8	5.8	18.1
26	45.5	78.4	58.0	69.8	68.8	82.2	33.6	27.3	57.2	39.8	52.8	45.3	59.2	36.6	35.8	55.9	61.5	34.5	31.3	47.7	35.0	30.4	44.7	41.7	82.2	27.3	48.9
27	64.7	54.7	60.2	61.8	29.4	20.3	24.7	20.3	19.1	19.5	17.2	20.9	21.2	15.7	25.1	92.2	69.0	84.5	47.6	66.8	66.9	44.2	36.9	43.1	92.2	15.7	42.8
28	54.8	68.6	38.9	81.4	78.6	67.0	88.5	43.8	27.6	40.9	24.8	15.1	21.5	21.3	30.7	89.3	63.2	45.2	48.6	62.5	70.8	70.0	78.6	56.7	89.3	15.1	53.7
29	27.3	37.8	67.4	76.1	60.7	73.2	48.7	19.5	49.6	24.0	43.4	16.8	8.1	6.5	6.9	6.8	7.3	7.9	10.3	12.1	9.2	17.1	32.5	45.8	76.1	6.5	29.8
30	38.2	78.7	75.0	59.4	6.7	90.7	47.2	61.5	44.6	38.1	12.2	7.2	21.8	44.8	19.3	20.4	15.4	24.9	39.7	73.5	88.0	80.2	88.6	35.4	90.7	6.7	46.3
31	74.5	95.3	50.4	27.7	28.4	31.1	39.2	80.0	48.2	86.3	28.4	40.5	39.0	44.3	19.5	32.8	25.0	16.1	9.3	10.9	32.6	30.0	22.9	42.4	95.3	9.3	39.8
Max.	**97.3**	**95.3**	**93.6**	**98.3**	**89.3**	**90.7**	**88.5**	**86.4**	**62.7**	**93.0**	**95.0**	**81.5**	**92.5**	**76.6**	**68.6**	**92.2**	**100.3**	**88.4**	**84.0**	**84.2**	**88.0**	**90.7**	**94.1**	**86.0**	**100.3**		
Min.	**7.7**	**9.2**	**5.8**	**7.7**	**6.7**	**7.1**	**7.8**	**6.7**	**5.2**	**6.2**	**3.8**	**4.7**	**6.5**	**4.8**	**3.7**	**4.2**	**5.9**	**5.4**	**6.3**	**6.8**	**6.8**	**9.3**	**6.5**	**7.9**		**3.7**	
Avg.	**37.3**	**36.1**	**36.6**	**38.8**	**38.0**	**37.5**	**30.7**	**29.0**	**23.8**	**30.3**	**27.2**	**26.5**	**24.7**	**29.4**	**24.9**	**36.6**	**36.6**	**29.2**	**29.2**	**33.2**	**32.7**	**30.9**	**41.1**	**33.9**			**32.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	31.6	24.3	13.9	15.6	13.4	14.7	14.5	15.5	15.4	13.8	12.6	13.0	14.9	15.1	13.3	13.4	13.7	14.0	14.9	15.1	14.1	14.8	13.0	14.4	31.6	12.6	15.4
2	14.7	13.8	13.4	13.0	14.6	14.2	13.2	13.1	13.3	12.9	14.0	10.7	10.2	10.1	10.7	11.7	10.1	9.0	13.3	10.7	11.0	11.5	13.6	13.0	14.7	9.0	12.3
3	10.2	12.5	11.0	13.3	13.6	15.3	13.5	14.3	15.7	17.3	12.3	9.9	85.7	14.2	15.9	9.4	9.6	18.1	27.9	23.0	20.5	54.5	23.2	8.5	85.7	8.5	19.6
4	12.4	67.5	70.4	10.1	63.1	19.6	13.3	12.4	20.6	11.3	36.2	8.4	5.6	5.2	5.0	3.7	4.2	56.5	16.0	5.9	33.6	66.7	24.5	72.2	72.2	3.7	26.9
5	48.0	39.0	31.7	45.6	44.4	25.2	37.4	42.7	16.2	30.9	20.9	16.8	35.2	20.5	15.1	14.0	13.3	15.0	12.3	11.9	11.1	12.6	11.4	11.7	48.0	11.1	24.3
6	14.0	15.0	15.4	59.9	34.6	15.0	23.7	19.2	18.1	31.1	52.5	56.0	26.6	58.7	69.5	63.9	61.2	69.4	39.5	63.5	50.4	55.9	59.9	72.0	72.0	14.0	43.5
7	86.1	37.7	31.9	29.5	18.3	15.6	20.1	26.2	35.6	35.8	16.2	49.8	64.4	24.3	6.6	64.7	42.6	21.4	33.8	24.7	27.3	27.3	35.0	39.1	86.1	6.6	33.9
8	14.0	53.5	18.2	17.1	50.5	34.3	81.4	47.2	34.5	49.6	54.1	62.1	53.9	33.3	36.9	25.0	20.3	39.2	102.9	27.6	28.3	38.2	94.9	79.1	102.9	14.0	45.7
9	71.9	45.4	71.9	101.1	63.6	37.9	29.0	19.0	21.9	19.1	21.3	19.6	27.7	21.9	29.6	35.1	35.7	23.3	19.0	15.4	16.2	14.7	14.3	14.0	101.1	14.0	32.9
10	13.9	14.7	14.6	14.7	15.3	16.4	34.8	17.6	12.1	7.5	21.6	58.2	21.7	8.0	8.3	11.0	11.0	11.5	14.8	12.3	23.0	30.3	29.8	30.2	58.2	7.5	18.9
11	75.9	84.2	56.5	37.6	47.4	23.4	11.6	10.5	45.4	60.2	53.2	6.2	19.4	38.4	61.9	84.1	58.8	31.9	58.7	29.7	14.5	9.3	19.3	34.4	84.2	6.2	40.5
12	87.0	26.1	21.5	15.8	18.3	14.4	15.2	14.2	14.0	19.4	39.4	9.5	5.0	32.2	75.1	35.8	40.8	34.3	30.9	57.7	83.8	51.3	13.3	14.2	87.0	5.0	32.0
13	15.0	17.4	14.6	35.1	34.3	23.1	26.2	19.0	27.8	17.8	10.6	45.7	25.4	11.6	16.4	39.3	26.1	41.2	21.8	24.1	13.0	24.7	18.6	55.6	55.6	10.6	25.2
14	30.2	32.7	26.8	64.6	60.9	76.3	82.2	89.3	86.5	24.8	61.0	27.6	60.7	54.1	9.1	19.0	19.2	10.8	9.2	10.1	15.9	12.6	73.1	90.5	90.5	9.1	43.6
15	74.8	29.4	91.3	48.9	14.9	11.0	28.7	13.0	8.5	8.8	5.5	5.1	39.6	11.9	7.4	7.6	7.1	11.8	24.5	98.6	73.2	32.7	22.3	34.9	98.6	5.1	29.7
16	20.9	27.8	16.9	15.7	16.9	29.6	38.8	7.8	13.2	7.6	21.9	11.0	7.1	10.9	22.5	6.4	4.4	11.7	8.8	10.4	6.8	61.1	17.4	51.3	61.1	4.4	18.6
17	82.5	32.2	53.4	58.4	40.1	56.0	8.2	10.9	56.3	9.3	12.8	14.2	10.2	10.2	7.1	7.6	8.6	7.2	4.0	8.1	9.3	11.5	17.3	17.1	82.5	4.0	23.0
18	19.7	16.4	50.7	15.8	69.3	19.0	25.6	68.6	27.4	53.6	14.6	9.9	10.1	11.7	8.3	9.1	8.3	4.9	7.0	12.6	12.5	8.9	9.1	61.0	69.3	4.9	23.1
19	41.3	61.8	58.0	96.1	77.3	65.3	28.0	64.1	37.0	11.3	9.1	12.4	19.6	29.4	25.1	20.0	17.1	21.3	11.6	11.1	19.7	24.6	26.8	16.6	96.1	9.1	33.5
20	76.1	13.8	28.0	9.4	53.2	68.1	34.2	50.5	55.2	15.8	11.9	16.6	18.0	13.9	11.8	15.3	18.8	25.2	14.9	42.2	17.5	12.7	11.9	43.0	76.1	9.4	28.2
21	72.3	64.1	11.7	26.9	49.7	25.7	12.0	10.9	16.2	7.5	8.0	9.3	7.5	5.6	6.0	5.3	5.0	6.0	6.1	12.3	10.2	10.0	35.1	15.2	72.3	5.0	18.3
22	30.8	35.4	46.3	60.4	14.6	14.3	26.3	25.6	11.4	22.8	26.4	14.1	22.8	14.3	39.6	71.0	9.1	13.8	14.0	4.4	6.5	9.5	9.6	19.6	71.0	4.4	23.4
23	24.0	28.6	26.2	57.7	67.6	75.5	80.6	27.4	76.6	12.9	55.9	22.0	11.0	7.8	7.4	9.0	9.6	7.7	7.3	13.9	18.8	18.5	61.8	71.1	80.6	7.3	33.3
24	57.9	55.1	65.5	34.4	54.4	21.9	46.5	21.7	29.3	52.7	59.3	57.1	61.8	38.3	22.3	15.5	9.9	9.7	12.1	11.9	13.0	16.3	12.7	15.4	65.5	9.7	33.1
25	15.1	13.8	32.8	15.5	61.9	30.1	17.1	12.5	15.7	13.5	15.7	13.2	12.4	14.6	14.0	19.3	17.8	11.9	13.4	14.0	13.1	13.0	13.0	12.9	61.9	11.9	17.8
26	13.1	12.9	13.0	14.2	13.8	15.1	12.9	13.3	12.7	13.2	12.3	12.5	11.2	9.6	11.1	10.8	10.8	11.4	11.5	10.9	12.9	12.9	13.2	13.6	15.1	9.6	12.5
27	13.2	14.6	59.4	16.4	54.2	63.5	51.7	36.7	21.7	29.2	37.0	12.6	14.1	6.9	6.6	6.3	8.2	6.5	8.2	6.1	7.0	14.0	9.2	11.1	63.5	6.1	21.4
28	11.8	42.8	36.1	7.9	29.3	21.4	90.3	74.8	88.2	85.6	85.5	71.6	69.8	46.9	32.8	24.4	13.7	17.3	17.2	33.0	22.0	22.1	34.7	29.6	90.3	7.9	42.0
29	10.9	11.5	9.0	9.9	10.9	10.5	14.6	67.7	14.6	19.3	11.6	16.7	47.1	59.0	45.1	25.6	22.9	17.4	17.7	38.6	47.6	44.5	59.1	40.1	67.7	9.0	28.0
30	23.6	44.7	18.1	10.7	7.6	13.3	6.2	5.2	18.7	6.4	5.8	6.0	5.7	5.8	6.5	6.5	7.0	7.1	8.6	16.8	9.2	10.6	9.7	18.0	44.7	5.2	11.6
Max.	**87.0**	**84.2**	**91.3**	**101.1**	**77.3**	**76.3**	**90.3**	**89.3**	**88.2**	**85.6**	**85.5**	**71.6**	**85.7**	**59.0**	**75.1**	**84.1**	**61.2**	**69.4**	**102.9**	**98.6**	**83.8**	**66.7**	**94.9**	**90.5**	**102.9**		
Min.	**10.2**	**11.5**	**9.0**	**7.9**	**7.6**	**10.5**	**6.2**	**5.2**	**8.5**	**6.4**	**5.5**	**5.1**	**5.0**	**5.2**	**5.0**	**3.7**	**4.2**	**4.9**	**4.0**	**4.4**	**6.5**	**8.9**	**9.1**	**8.5**		**3.7**	
Avg.	**37.1**	**33.0**	**34.3**	**32.4**	**37.6**	**29.5**	**31.3**	**29.0**	**29.3**	**24.0**	**27.3**	**23.3**	**27.5**	**21.5**	**21.6**	**23.0**	**18.2**	**19.5**	**20.1**	**22.6**	**22.1**	**24.9**	**26.9**	**34.0**			**27.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	76.1	10.9	8.6	36.2	9.4	8.1	7.1	17.7	65.9	5.1	10.7	17.5	32.2	37.5	25.7	43.9	44.7	59.9	80.8	77.1	41.3	55.5	46.2	72.0	80.8	5.1	37.1
2	45.4	65.6	40.3	60.6	49.2	40.3	12.1	69.8	40.2	18.0	11.0	14.6	24.6	22.3	18.1	21.7	21.8	32.3	46.9	45.8	57.5	52.6	54.4	55.6	69.8	11.0	38.4
3	48.7	29.6	19.1	26.3	19.9	26.4	18.4	22.7	16.0	16.0	17.1	14.8	13.9	13.9	14.6	86.5	15.5	9.5	11.6	19.0	12.6	14.5	18.4	27.5	86.5	9.5	22.2
4	14.0	77.1	76.7	76.0	83.9	89.2	23.1	20.3	9.8	68.4	14.9	37.9	68.3	5.9	6.0	3.9	11.3	17.0	21.6	30.7	21.9	65.7	17.6	43.8	89.2	3.9	37.7
5	45.7	61.6	62.1	56.2	37.6	26.1	7.8	63.9	59.8	25.9	13.7	6.2	5.9	5.9	10.8	5.6	9.2	3.6	5.4	15.6	6.6	44.0	56.0	39.1	63.9	3.6	28.1
6	81.2	24.7	9.5	70.3	49.5	63.2	78.9	23.3	6.8	6.2	7.6	6.6	8.2	16.4	15.6	14.4	7.9	13.6	17.7	12.6	89.4	18.2	22.2	82.7	89.4	6.2	31.1
7	91.4	29.5	15.0	7.1	13.8	44.2	56.2	47.2	40.9	91.1	74.9	63.5	54.1	82.7	41.8	16.4	14.9	11.9	11.6	11.2	7.7	13.2	9.8	17.7	91.4	7.1	36.2
8	59.8	38.5	29.8	51.0	59.5	64.8	98.8	52.7	73.6	36.6	56.0	46.3	85.4	57.9	69.8	65.7	22.8	12.7	26.0	22.2	15.4	26.2	16.3	30.5	98.8	12.7	46.6
9	40.5	37.9	67.0	31.1	9.6	8.9	6.6	6.2	6.1	6.0	8.9	8.3	17.4	14.8	13.3	14.5	34.6	40.8	30.0	65.0	65.5	47.1	61.4	15.1	67.0	6.0	27.4
10	13.6	13.2	15.8	13.1	13.6	14.5	20.5	15.6	24.0	31.4	69.7	88.7	22.2	66.7	17.8	15.6	13.5	6.1	6.2	9.0	9.4	17.9	23.4	59.8	88.7	6.1	25.1
11	44.0	57.0	78.6	56.4	77.1	20.9	23.4	31.5	17.4	11.1	13.5	14.6	16.0	7.4	8.1	5.5	12.6	7.4	11.3	6.9	8.9	12.8	33.7	45.3	78.6	5.5	25.9
12	52.9	31.6	11.8	13.1	6.4	8.2	14.5	13.7	81.0	66.9	40.4	90.2	69.0	58.8		72.8		81.8	94.7	45.8	93.7	47.0	79.3	52.2	94.7	6.4	51.2
13	47.7	67.4	49.5	70.6	91.7	13.2	10.1	9.9	10.6	10.9	12.9	9.1	43.8	64.5	58.6	25.5	16.6	16.0	16.4	10.0	19.6	17.8	20.2	15.5	91.7	9.1	30.3
14	17.7	19.6	21.5	7.8	9.6	10.7	10.8	8.3	7.6	55.2	11.0	9.2	9.5	6.3	9.5	6.5	6.8	6.5	6.7	5.5	5.7	5.7	8.1	16.2	55.2	5.5	11.7
15	9.9	15.4	23.2	14.1	8.4	86.5	68.2	7.2	8.0	7.7	9.6	12.2	10.3	9.6	9.0	9.6	11.0	17.1	14.0	24.3	80.3	65.9	14.0	33.2	86.5	7.2	23.7
16	87.1	53.8	95.1	56.1	84.8	25.0	25.1	59.1	40.3	82.9	81.1	32.7	40.6	46.6	76.0	57.1	64.9	56.7	57.7	51.8	54.8	44.3	62.7	49.2	95.1	25.0	57.7
17	25.7	43.6	27.0	54.3	19.5	36.9	89.4	97.6	84.7	55.2	64.4	55.2	58.4	59.4	69.4	56.7	79.3	74.1	35.0	58.5	20.0	22.8	37.9	39.5	97.6	19.5	52.7
18	55.5	58.6	43.7	41.5	37.1	42.9	23.8	21.9	17.4	16.4	23.5	20.7	31.5	33.1	23.2	17.7	21.4	22.5	22.0	20.9	13.2	13.2	13.5	18.4	58.6	13.2	27.2
19	19.3	18.8	16.0	15.6	12.7	15.0	14.3	13.8	36.3	39.6	55.8	67.5	70.8	40.7	47.9	34.5	75.4	30.1	56.4	70.4	71.4	70.3	70.9	18.2	75.4	12.7	40.9
20	12.4	13.7	12.6	32.7	32.5	12.9	57.9	50.8	70.2	28.0	22.4	30.2	37.7	74.7	85.2	69.9	52.8	15.5	32.8	60.3	41.1	79.3	30.3	37.4	85.2	12.4	41.4
21	47.4	20.8	75.8	85.0	59.7	39.0	44.8	40.2	47.8	35.9	30.1	13.2	10.5	14.3	26.1	14.8	8.3	17.3	46.8	89.5	76.7	28.8	63.8	53.3	89.5	8.3	41.2
22	103.6	72.5	15.5	15.1	19.0	20.7	18.5	18.3	19.7	20.9	18.7	15.7	27.2	34.9	26.7	26.6	36.3	35.9	53.0	44.5	67.5	66.7	62.3	9.2	103.6	9.2	35.4
23	8.2	8.7	11.9	79.2	58.1	39.9	64.3	71.9	71.6	31.5	70.2	9.9	15.1	36.8	65.2	12.9	14.8	12.0	21.6	60.6	53.3	19.1	41.5	30.5	79.2	8.2	37.9
24	16.3	11.4	11.7	10.9	12.5	12.3	12.1	13.8	17.6	93.0	11.6	10.1	12.4	70.9	7.2	5.5	4.1	5.8	4.8	20.1	12.1	47.9	61.4	19.5	93.0	4.1	21.0
25	14.8	48.7	68.7	24.7	49.9	18.4	12.2	17.1	14.7	32.6	21.3	14.9	77.9	53.5	50.2	78.8	35.0	24.8	19.4	20.1	13.8	12.4	14.0	98.4	98.4	12.2	34.8
26	16.3	75.8	54.6	23.5	29.8	59.8	17.1	15.1	16.3	15.8	18.6	22.2	45.2	18.9	57.6	28.1	34.2	95.9	27.9	15.7	33.7	30.3	35.2	81.1	95.9	15.1	36.2
27	30.0	44.4	44.1	52.9	57.0	71.4	13.5	10.1	9.0	37.8	51.0	49.7	33.9	40.1	36.9	81.6	68.4	20.3	6.8	5.4	6.2	7.2	76.0	12.2	81.6	5.4	36.1
28	47.1	68.5	70.3	57.6	58.7	64.8	31.1	30.9	21.7	18.7	54.7	41.0	63.1	38.5	90.1	31.6	31.5	45.3	53.9	34.0	66.1	50.6	72.2	83.6	90.1	18.7	51.1
29	77.6	35.6	31.8	20.2	17.9	15.2	25.0	27.8	86.5	51.1	28.4	23.4	26.8	48.5	42.7	40.6	19.9	35.2	14.5	23.6	57.7	58.5	83.6	17.3	86.5	14.5	37.9
30	26.7	26.6	26.1	55.2	16.6	14.7	23.9	26.6	33.0	63.1	48.9	24.2	46.8	47.9	49.6	53.7	66.1	61.1	50.4	31.8	66.0	60.6	81.5	68.3	81.5	14.7	44.6
31	76.0	77.1	43.2	64.8	17.2	28.3	56.1	34.4	66.8	55.6	66.2	67.7	16.4	26.7	34.0	82.1	34.7	28.7	20.5	39.6	63.3	84.5	50.4	81.4	84.5	16.4	50.6
Max.	**103.6**	**77.1**	**95.1**	**85.0**	**91.7**	**89.2**	**98.8**	**97.6**	**86.5**	**93.0**	**81.1**	**90.2**	**85.4**	**82.7**	**90.1**	**86.5**	**79.3**	**95.9**	**94.7**	**89.5**	**93.7**	**84.5**	**83.6**	**98.4**	**103.6**		
Min.	**8.2**	**8.7**	**8.6**	**7.1**	**6.4**	**8.1**	**6.6**	**6.2**	**6.1**	**5.1**	**7.6**	**6.2**	**5.9**	**5.9**	**6.0**	**3.9**	**4.1**	**3.6**	**4.8**	**5.4**	**5.7**	**5.7**	**8.1**	**9.2**		**3.6**	
Avg.	**43.6**	**40.6**	**38.0**	**41.3**	**36.2**	**33.6**	**31.8**	**31.0**	**36.2**	**36.6**	**33.5**	**30.3**	**35.3**	**37.3**	**36.9**	**35.5**	**29.7**	**29.6**	**29.8**	**33.8**	**40.4**	**38.7**	**43.2**	**42.7**			**36.1**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	87.5	18.8	36.6	73.3	38.3	66.0	84.8	13.1	15.1	30.0	10.6	7.9	9.8	9.1	15.7	21.3	32.7	27.1	38.1	32.5	43.3	28.2	16.8	33.2	87.5	7.9	32.9
2	21.0	38.2	37.7	55.9	61.7	53.1	99.9	64.7	52.2	62.4	39.7	38.2	24.1	34.5	42.5	30.5	37.8	44.2	18.9	31.7	15.4	13.3	26.2	21.5	99.9	13.3	40.2
3	9.2	11.6	12.6	13.8	13.7	20.2	31.3	60.2	11.8	6.3	51.5	16.9	26.5	16.2	17.5	15.8	6.5	16.3	20.3	9.9	16.5	23.4	32.7	78.5	78.5	6.3	22.5
4	75.3	54.3	95.7	40.8	70.2	19.3	16.7	14.9	40.0	43.7	59.9	27.4	58.3	12.8	16.2	15.7	12.3	15.5	41.8	28.5	26.6	80.3	40.9	60.0	95.7	12.3	40.3
5	21.0	63.9	95.1	74.6	24.8	64.2	46.7	60.7	89.9	8.0	6.2	8.4	7.0	6.8	7.8	14.5	8.9	10.8	12.8	16.7	28.8	59.3	38.7	13.1	95.1	6.2	32.9
6	55.8	90.3	14.0	8.1	11.3	11.6	62.4	23.3	7.4	68.8	31.6	12.4	7.4	10.2	9.5	5.1	8.1	19.6	16.0	35.4	15.3	16.4	21.1	31.4	90.3	5.1	24.7
7	83.1	47.3	75.2	73.9	83.2	60.1	47.4	57.0	30.3	51.8	68.5	20.1	28.4	61.9	60.0	61.5	27.9	25.7	53.1	28.3	85.7	17.4	90.7	33.9	90.7	17.4	53.0
8	21.5	14.4	43.2	21.1	20.3	64.1	10.8	7.6	9.3	32.5	25.3	19.7	12.6	9.0	7.0	7.8	6.6	4.7	6.2	10.9	13.7	15.1	13.7	37.9	64.1	4.7	18.1
9	66.5	62.3	63.1	13.7	12.1	37.0	20.7	14.8	17.2	59.7	47.8	39.9	15.4	17.9	20.1	20.5	14.2	46.1	28.5	27.2	22.5	22.0	41.2	63.0	66.5	12.1	33.1
10	19.4	20.7	94.5	31.3	14.7	8.1	11.2	23.7	12.0	17.7	15.7	12.0	10.7	10.4	11.8	17.6	14.4	10.4	10.8	10.7	14.8	26.6	70.1	61.2	94.5	8.1	22.9
11	61.0	59.4	34.8	33.4	21.8	32.5	25.5	18.7	95.9	41.6	30.1	17.3	14.9	11.3	7.1	8.2	6.9	8.3	5.5	14.5	97.5	18.1	28.1	6.6	97.5	5.5	29.1
12	8.0	8.3	24.9	10.6	8.8	9.5	10.6	12.0	17.9	13.5	41.6	18.9	6.9	9.4	8.8	19.5	13.1	11.2	7.4	11.1	10.5	43.2	27.4	22.5	43.2	6.9	15.7
13	73.3	84.0	48.6	89.7	11.2	43.4	9.6	10.5	11.1	16.2	15.3	15.4	79.9	81.2	12.3	12.3	9.2	12.8	8.3	8.1	7.4	7.4	7.4	32.4	89.7	7.4	29.5
14	35.0	25.4	85.6	7.5	13.1	10.5	61.9	76.6	7.6	7.2	5.9	6.4	9.3	12.5	59.4	5.4	35.9	18.3	42.9	26.5	57.9	46.3	42.9	29.9	85.6	5.4	30.4
15	51.5	21.3	10.7	55.7	33.3	50.0	27.6	17.4	21.5	13.0	20.5	12.7	15.5	16.7	8.7	11.9	79.6	83.6	14.0	8.2	97.7	54.3	14.6	35.4	97.7	8.2	32.3
16	27.3	26.7	35.8	55.5	46.4	19.4	18.6	24.6	12.1	50.1	24.6	35.5	82.1	83.1	15.2	12.0	18.1	20.8	21.5	56.6	28.4	72.1	75.6	43.1	83.1	12.0	37.7
17	7.9	8.5	12.8	12.9	9.6	11.3	12.1	11.5	14.4	38.0	50.7	44.9	44.4	29.3	21.6	35.6	27.4	56.0	31.6	23.1	68.2	54.7	51.8	22.9	68.2	7.9	29.2
18	24.7	17.1	36.5	7.4	6.8	8.7	7.6	5.8	8.1	8.6	10.0	12.6	10.7	9.7	11.0	11.2	10.5	10.7	12.4	12.5	13.1	15.3	16.1	17.3	36.5	5.8	12.7
19	16.3	14.7	26.2	21.7	29.8	53.3	11.1	92.5	15.6	34.5	10.6	66.3	61.5	7.5	22.4	45.2	27.9	83.7	81.1	41.9	34.5	31.9	20.7	18.0	92.5	7.5	36.2
20	28.5	16.3	11.6	12.6	16.9	15.0	12.1	11.3	12.0	13.3	44.6	9.4	26.8	50.9	22.6	74.8	67.2	47.0	21.7	52.2	30.7	12.0	13.4	13.3	74.8	9.4	26.5
21	13.6	15.8	16.2	15.8	27.6	29.4	17.0	28.4	32.7	24.8	17.7	62.7	21.5	13.5	12.1	12.6	9.8	10.2	12.4	7.1	15.9	27.7	54.2	42.5	62.7	7.1	22.6
22	81.3	26.5	71.1	72.2	27.2	9.4	13.2	13.9	63.5	47.7	26.7	6.8	58.5	7.5	7.7	7.6	19.7	11.9	9.9	7.9	76.4	56.6	56.9	37.5	81.3	6.8	34.1
23	21.1	17.0	13.0	15.2	18.3	19.6	22.1	18.0	22.0	21.7	22.9	70.6	31.8	20.3	9.5	16.2	6.1	48.2	6.7	66.3	23.9	70.6	82.3	43.8	82.3	6.1	29.5
24	33.7	46.8	98.2	19.6	12.1	21.3	12.1	18.7	15.8	30.7	29.7	61.0	17.4	27.2	74.4	90.8	41.3	57.9	14.0	13.7	14.6	30.4	16.0	14.0	98.2	12.1	33.8
25	13.2	13.7	35.3	23.4	55.0	62.0	59.5	27.0	56.0	53.8	40.0	42.3	48.5	29.0	68.4	42.6	44.5	39.1	43.1	55.2	24.4	22.6	19.5	33.8	68.4	13.2	39.7
26	28.5	27.0	56.2	9.5	38.0	22.2	21.7	26.7	9.0	5.1	5.9	25.0	32.2	5.0	5.3	8.3	20.8	67.6	15.3	13.7	27.7	24.9	13.8	26.6	67.6	5.0	22.3
27	63.7	48.4	44.2	57.3	17.3	30.7	18.7	30.6	61.5	37.6	39.2	56.9	74.7	40.4	27.6	18.7	30.8	64.4	70.3	25.5	11.6	11.6	11.6	22.7	74.7	11.6	38.2
28	36.4	40.6	84.9	72.5	71.7	37.0	61.8	19.3	44.7	54.3	20.7	58.5	42.9	45.7	53.4	37.4	30.0	27.4	23.8	13.9	13.1	13.5	12.8	17.8	84.9	12.8	38.9
29	19.0	45.5	47.0	48.9	28.5	65.6	55.2	26.2	44.4	43.6	29.9	41.9	36.4	53.4	48.8	43.2	46.5	52.7	37.1	53.6	76.0	75.7	58.2	50.8	76.0	19.0	47.0
30	37.4	28.5	21.4	15.0	14.8	33.2	26.5	22.3	21.3	11.8	10.0	46.2	13.3	11.9	5.8	7.7	18.9	19.7	47.2	80.2	29.9	67.3	82.7	19.9	82.7	5.8	28.9
31	11.5	43.8	58.0	44.1	48.8	54.8	16.0	12.0	12.9	12.8	12.8	12.9	12.3	11.8	12.0	12.1	15.2	12.0	13.5	12.5	12.4	12.9	11.4	11.5	58.0	11.4	20.4
Max.	**87.5**	**90.3**	**98.2**	**89.7**	**83.2**	**66.0**	**99.9**	**92.5**	**95.9**	**68.8**	**68.5**	**70.6**	**82.1**	**83.1**	**74.4**	**90.8**	**79.6**	**83.7**	**81.1**	**80.2**	**97.7**	**80.3**	**90.7**	**78.5**	**99.9**		
Min.	**7.9**	**8.3**	**10.7**	**7.4**	**6.8**	**8.1**	**7.6**	**5.8**	**7.4**	**5.1**	**5.9**	**6.4**	**6.9**	**5.0**	**5.3**	**5.1**	**6.1**	**4.7**	**5.5**	**7.1**	**7.4**	**7.4**	**7.4**	**6.6**		**4.7**	
Avg.	**37.2**	**34.1**	**46.5**	**35.7**	**29.3**	**33.6**	**30.7**	**27.9**	**28.6**	**31.0**	**27.9**	**29.9**	**30.4**	**24.7**	**23.3**	**24.0**	**24.2**	**31.7**	**25.4**	**27.0**	**34.0**	**34.5**	**35.8**	**32.1**			**30.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	12.4	12.0	11.4	12.1	10.8	12.1	11.8	11.8	12.1	13.1	15.2	14.6	12.7	13.2	14.5	13.3	14.9	14.2	13.5	12.6	11.4	12.0	12.6	14.3	15.2	10.8	12.9
2	13.7	12.9	21.4	21.3	15.9	22.0	25.8	32.0	40.2	14.3	76.0	40.6	23.1	14.2	14.8	12.6	14.0	13.2	12.7	13.2	13.1	12.8	10.0	9.9	76.0	9.9	20.8
3	10.1	10.7	10.7	10.9	12.9	11.6	10.8	11.1	8.9	10.3	10.2	10.3	11.4	10.7	8.7	17.4	15.3	28.6	11.9	53.8	38.2	44.2	8.6	28.7	53.8	8.6	16.9
4	37.7	14.4	13.8	56.0	47.4	57.6	42.7	55.4	71.5	12.6	32.8	21.5	13.8	10.0	9.9	6.4	5.7	9.9	10.0	8.0	16.3	82.4	9.4	9.5	82.4	5.7	27.3
5	19.1	89.4	96.1	7.9	69.4	73.2	12.7	15.3	9.9	9.3	14.3	17.8	9.3	8.2	7.9	5.7	7.0	7.7	6.6	10.8	8.6	15.0	42.4	58.6	96.1	5.7	25.9
6	54.1	46.7	36.8	29.2	15.0	20.0	13.1	13.8	14.2	13.6	12.3	12.4	11.6	13.4	15.1	12.3	12.7	11.9	13.1	13.0	11.1	12.4	12.2	12.7	54.1	11.1	18.0
7	14.4	11.0	12.1	11.3	12.8	11.3	12.3	13.8	15.2	13.2	50.9	82.6	39.2	68.8	20.5	12.3	13.7	12.2	9.7	8.8	7.7	10.2	6.7	14.1	82.6	6.7	20.2
8	71.5	9.2	12.6	11.3	31.9	74.3	84.4	11.6	8.4	7.6	11.7	35.0	43.5	77.1	53.5	18.5	15.2	19.1	15.0	14.6	12.9	11.3	12.3	13.1	84.4	7.6	28.2
9	12.1	11.5	15.2	13.2	12.1	12.5	16.4	14.6	14.5	16.0	14.8	15.5	13.3	38.3	94.4	46.0	28.1	32.8	47.5	59.4	59.7	55.1	50.0	26.8	94.4	11.5	30.0
10	10.1	61.9	16.9	16.9	14.6	20.7	67.7	62.6	11.3	34.9	58.1	19.2	66.8	6.0	14.5	42.5	20.0	90.2	67.6	61.3	53.9	69.6	89.5	69.8	90.2	6.0	43.6
11	54.9	25.0	68.5	61.9	20.1	40.0	55.1	76.7	51.2	34.4	11.8	66.6	24.7	22.3	26.2	20.4	18.6	39.1	68.7	60.7	89.0	49.4	57.3	64.7	89.0	11.8	46.1
12	81.0	38.7	62.2	62.7	57.1	57.7	66.8	34.3	16.0	13.7	14.3	11.0	10.4	10.5	12.2	13.7	11.3	15.1	14.9	14.5	15.1	15.1	15.0	16.2	81.0	10.4	28.3
13	27.7	68.2	56.3	66.0	72.8	75.2	79.8	72.7	70.5	83.2	60.9	63.1	66.9	53.0	58.5	18.9	15.9	14.6	11.6	11.8	11.4	10.9	10.8	11.1	83.2	10.8	45.5
14	12.2	11.5	11.6	11.4	13.2	11.3	13.2	12.0	14.4	14.9	14.5	13.4	16.0	11.3	11.1	12.3	13.7	10.3	7.7	9.7	11.9	10.9	12.6	15.4	16.0	7.7	12.4
15	8.3	8.0	10.1	49.6	26.9	22.1	33.6	47.1	17.2	16.8	45.6	18.8	44.9	52.2	62.4	53.2	35.5	33.9	15.3	10.7	10.3	17.9	7.6	9.1	62.4	7.6	27.4
16	11.2	11.0	17.8	63.8	15.8	23.3	15.1	10.7	14.3	8.6	32.8	63.9	61.4	89.4	27.8	59.1	38.8	64.6	58.0	54.2	56.0	87.9	42.6	77.8	89.4	8.6	41.9
17	42.8	56.0	36.5	17.0	22.8	48.9	38.0	61.5	70.5	20.6	53.9	8.1	71.7	17.1	17.6	51.2	56.9	45.6	17.0	29.1	34.4	17.3	13.8	13.2	71.7	8.1	35.9
18	11.9	12.1	11.7	10.4	11.8	11.8	10.8	11.4	10.8	10.4	9.1	10.2	9.7	10.6	13.6	20.9	20.0	17.0	14.1	36.8	89.4	55.1	31.2	33.7	89.4	9.1	20.2
19	82.3	18.7	23.7	15.4	10.8	12.9	11.4	54.1	61.7	8.9	65.2	44.2	34.3	41.8	64.6	59.8	51.8	85.2	52.0	74.0	97.7	75.2	84.3	59.5	97.7	8.9	49.6
20	52.9	58.8	57.1	56.0	30.4	36.0	33.5	41.9	47.6	20.3	14.4	18.8	9.2	15.9	64.9	18.6	21.9	20.8	51.4	68.0	79.8	50.4	55.0	62.8	79.8	9.2	41.1
21	72.9	58.7	39.5	50.2	26.0	65.4	74.6	73.0	53.5	13.7	12.4	72.9	43.5	28.6	37.1	34.0	76.8	63.6	58.5	33.7	23.7	65.0	33.0	87.7	87.7	12.4	49.9
22	81.9	20.4	21.0	9.9	13.2	18.9	20.3	23.7	32.3	10.1	8.4	7.0	8.3	15.0	29.9	30.1	74.9	18.1	11.5	12.9	57.2	28.5	10.5	10.5	81.9	7.0	23.9
23	7.8	11.3	7.7	7.4	7.7	8.0	7.5	7.1	9.2	7.5	8.9	5.8	3.8	4.0	15.4	16.3	39.9	25.7	8.3	23.7	80.7	54.8	9.8	8.3	80.7	3.8	16.1
24	7.7	7.7	8.0	5.3	8.3	9.5	11.3	10.9	9.7	8.5	10.5	9.3	11.3	13.0	10.3	11.7	10.7	10.0	9.6	9.9	12.0	11.9	10.9	13.5	13.5	5.3	10.1
25	10.4	10.3	13.5	12.2	10.8	12.9	11.9	11.4	12.8	12.9	11.4	13.5	13.9	13.7	11.7	11.8	12.3	10.7	10.9	11.4	9.2	12.1	14.3	12.3	14.3	9.2	12.0
26	11.6	11.7	11.6	10.4	8.8	9.9	8.1	7.7	8.8	9.8	9.2	13.1	71.9	7.5	3.7	4.7	5.9	5.4	20.2	46.5	18.8	45.7	22.0	31.2	71.9	3.7	16.8
27	12.1	8.2	12.0	11.7	7.9	9.6	10.0	12.7	16.3	12.5	6.4	6.2	8.1	35.2	90.4	5.6	7.9	65.9	44.7	42.2	54.6	22.8	16.4	16.8	90.4	5.6	22.3
28	14.2	12.1	14.5	24.4	29.5	39.4	16.8	52.5	60.9	42.6	16.2	8.6	78.0	16.1	8.5	8.6	7.8	13.8	31.1	65.2	10.0	11.8	8.7	8.9	78.0	7.8	25.0
29	9.5	11.2	10.4	9.2	10.7	9.4	10.8	9.0	9.5	10.4	12.2	10.0	8.8	12.7	11.1	8.0	9.0	8.4	14.5	11.2	12.9	12.0	10.7	62.1	62.1	8.0	12.7
30	53.5	46.2	43.2	37.9	73.3	29.6	32.0	28.6	54.2	23.9	30.0	41.4	53.8	39.6	28.4	18.9	18.5	44.7	60.2	20.6	12.8	18.7	30.4	9.4	73.3	9.4	35.4
Max.	**82.3**	**89.4**	**96.1**	**66.0**	**73.3**	**75.2**	**84.4**	**76.7**	**71.5**	**83.2**	**76.0**	**82.6**	**78.0**	**89.4**	**94.4**	**59.8**	**76.8**	**90.2**	**68.7**	**74.0**	**97.7**	**87.9**	**89.5**	**87.7**	**97.7**		
Min.	**7.7**	**7.7**	**7.7**	**5.3**	**7.7**	**8.0**	**7.5**	**7.1**	**8.4**	**7.5**	**6.4**	**5.8**	**3.8**	**4.0**	**3.7**	**4.7**	**5.7**	**5.4**	**6.6**	**8.0**	**7.7**	**10.2**	**6.7**	**8.3**		**3.7**	
Avg.	**30.7**	**26.2**	**26.1**	**26.1**	**24.0**	**28.9**	**28.6**	**30.0**	**28.3**	**17.6**	**24.8**	**25.8**	**29.8**	**25.7**	**28.6**	**22.2**	**23.1**	**28.4**	**26.3**	**30.1**	**34.0**	**33.3**	**25.0**	**29.4**			**27.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.6	12.7	17.0	11.0	7.7	6.3	6.7	6.3	14.4	6.5	3.7	4.0	7.5	9.9	11.4	69.2	21.3	13.1	12.5	9.5	11.7	11.6	9.5	10.6	69.2	3.7	12.6
2	7.1	8.5	33.3	39.6	80.7	14.2	10.8	10.5	18.7	33.5	11.7	9.0	33.4	54.1	30.4	41.0	29.3	25.6	24.5	22.7	17.5	26.3	14.2	42.7	80.7	7.1	26.6
3	61.3	33.0	61.8	36.5	64.4	48.0	49.4	45.3	39.4	51.9	71.0	92.2	69.7	91.3	67.6	64.8	44.0	53.7	40.7	21.0	15.5	15.2	13.0	13.1	92.2	13.0	48.5
4	15.4	31.9	29.3	22.6	17.6	19.5	10.6	14.3	11.2	16.5	7.2	7.7	9.6	12.3	32.8	97.4	44.7	40.7	26.6	12.1	11.9	18.1	27.0	52.4	97.4	7.2	24.6
5	63.2	60.7	89.4	75.7	62.5	65.1	73.5	51.4	61.9	93.0	65.7	27.2	25.6	48.8	34.7	40.9	27.9	50.6	31.1	45.7	32.7	14.4	10.8	8.7	93.0	8.7	48.4
6	12.4	6.0	8.2	8.0	12.8	11.2	10.3	12.4	13.6	30.0	13.5	16.5	22.2	46.7	22.8	44.0	35.3	30.3	27.0	31.5	26.7	29.0	28.7	65.6	65.6	6.0	23.5
7	27.8	57.7	62.5	56.7	70.1	66.6	89.1	63.1	67.0	53.2	66.1	78.3	68.0	32.4	27.9	24.3	30.0	35.0	47.2	63.6	74.5	55.0	50.0	73.6	89.1	24.3	55.8
8	59.6	52.5	84.3	57.8	82.7	65.1	76.8	77.0	33.2	22.1	25.3	37.8	45.6	79.6	51.5	45.2	16.7	13.5	14.2	20.7	12.9	9.9	8.6	9.7	84.3	8.6	41.8
9	8.3	10.4	13.0	10.8	12.3	14.6	11.5	13.1	11.8	11.3	11.7	13.0	12.8	14.1	13.7	17.2	16.4	14.0	13.6	10.9	12.1	15.1	12.9	13.8	17.2	8.3	12.8
10	14.4	12.5	13.1	12.8	6.5	53.1	70.3	89.5	38.5	61.9	44.9	19.4	61.2	29.5	66.7	101.8	26.2	9.3	12.1	16.5	9.3	11.3	16.6	43.6	101.8	6.5	35.0
11	64.4	80.5	70.8	37.9	48.6	49.5	41.5	67.0	82.5	79.9	63.8	80.8	34.9	17.6	15.4	11.2	13.9	16.1	22.0	75.6	71.9	55.6	27.7	30.2	82.5	11.2	48.3
12	27.6	29.6	27.1	26.8	24.6	26.2	25.1	30.1	27.8	24.3	36.2	29.2	26.0	29.0	41.1	55.4	34.2	32.3	28.5	21.3	21.7	16.3	18.3	29.8	55.4	16.3	28.7
13	25.2	54.6	90.2	51.6	73.9	58.2	37.9	11.6	22.1	16.7	10.7	5.7	7.1	7.2	11.6	9.8	13.0	13.1	11.7	10.1	10.0	11.0	12.1	12.2	90.2	5.7	24.5
14	10.6	10.2	8.5	7.8	7.6	7.3	7.6	7.7	6.6	5.8	5.8	6.6	7.1	6.7	7.0	8.5	8.8	7.3	8.6	8.5	8.2	6.8	7.4	6.1	10.6	5.8	7.6
15	7.4	10.2	8.9	11.3	10.4	15.7	17.1	7.0	6.7	8.9	7.0	7.8	13.6	9.0	10.0	28.5	26.1	56.5	14.0	24.6	16.1	13.8	23.4	26.3	56.5	6.7	15.8
16	19.3	20.5	25.9	14.8	11.7	17.1	15.2	11.6	11.4	10.3	12.5	16.7	9.5	20.6	37.8	14.1	11.8	18.2	38.0	36.7	11.5	12.6	22.4	19.9	38.0	9.5	18.3
17	29.5	21.4	36.1	21.2	29.1	48.8	32.5	36.7	34.0	16.3	11.5	8.6	4.8	3.7	11.6	10.6	9.7	7.5	10.6	13.2	13.1	13.3	10.4	12.1	48.8	3.7	18.6
18	13.5	12.2	11.0	13.1	12.1	12.9	12.5	13.4	10.1	11.2	10.5	9.7	9.5	8.9	9.8	8.0	9.5	8.0	12.0	14.0	14.4	12.0	10.7	11.6	14.4	8.0	11.3
19	12.1	76.6	84.5	64.8	55.3	24.0	26.9	36.1	20.5	22.9	15.3	33.5	47.8	33.3	46.4	68.9	71.2	14.6	76.7	32.3	19.6	15.3	15.0	19.3	84.5	12.1	38.9
20	19.7	23.4	22.6	20.1	23.9	28.5	12.9	17.0	15.8	53.4	47.6	23.3	19.2	15.2	16.8	13.4	18.0	15.5	15.2	23.1	77.0	76.6	84.2	91.7	91.7	12.9	32.3
21	76.0	63.7	45.1	79.7	42.5	27.7	34.0	66.7	32.3	30.0	45.8	12.1	12.4	9.2	9.2	13.9	13.6	42.4	25.7	13.9	14.8	15.2	15.5	23.9	79.7	9.2	31.9
22	85.4	51.2	65.8	58.4	36.9	49.4	36.0	40.0	56.1	31.8	29.0	27.3	24.4	21.5	63.5	57.4	22.0	16.3	27.5	27.9	13.7	8.2	7.8	10.7	85.4	7.8	36.2
23	12.2	12.3	10.6	12.1	12.7	16.5	30.5	17.9	28.7	19.7	14.0	20.6	29.7	27.9	81.3	32.8	31.6	75.6	45.1	41.5	37.3	36.6	40.1	52.9	81.3	10.6	30.8
24	67.9	66.7	78.0	62.9	64.2	79.5	54.7	80.3	19.8	68.4	66.3	66.0	50.7	35.1	19.4	29.7	35.8	31.0	17.8	37.7	32.4	44.0	87.8	19.4	87.8	17.8	50.7
25	15.6	11.2	10.6	11.0	10.5	8.3	5.6	5.2	4.6	6.6	7.2	6.4	6.6	7.3	7.3	6.8	7.7	8.6	10.2	10.0	12.8	10.7	13.9	10.4	15.6	4.6	8.9
26	11.3	7.7	9.2	14.2	10.8	15.1	47.3	51.3	37.8	20.0	16.1	11.6	88.3	57.6	6.1	41.2	80.6	64.8	33.7	18.5	12.7	15.6	17.3	16.9	88.3	6.1	29.4
27	47.1	49.1	44.4	57.7	17.4	17.5	31.6	34.5	46.3	37.9	15.7	13.5	12.7	12.0	12.6	12.5	17.9	30.1	29.5	36.0	27.3	46.9	56.5	39.3	57.7	12.0	31.1
28	35.2	21.9	19.3	10.2	9.6	8.2	19.5	7.1	6.5	15.3	5.9	4.4	4.0	14.8	16.1	10.4	56.1	16.4	16.0	7.7	6.4	5.5	10.0	8.2	56.1	4.0	14.0
29	4.9	8.9	10.9	7.0	7.1	13.8	6.5	22.2	6.9	8.8	6.0	8.6	4.7	6.2	5.2	14.0	10.4	10.9	13.2	9.1	5.8	5.0	6.9	7.0	22.2	4.7	8.8
30	7.2	6.5	6.1	8.6	7.4	8.3	7.0	9.3	17.5	14.9	11.6	12.4	9.7	8.7	13.3	10.3	84.1	78.2	10.0	9.1	8.7	5.6	8.2	7.3	84.1	5.6	15.4
31	6.1	6.5	15.3	8.9	7.3	9.8	5.0	7.8	6.4	21.3	7.0	3.7	3.9	4.4	5.4	6.4	68.9	64.1	11.6	8.3	8.9	19.6	6.8	6.7	68.9	3.7	13.3
Max.	**85.4**	**80.5**	**90.2**	**79.7**	**82.7**	**79.5**	**89.1**	**89.5**	**82.5**	**93.0**	**71.0**	**92.2**	**88.3**	**91.3**	**81.3**	**101.8**	**84.1**	**78.2**	**76.7**	**75.6**	**77.0**	**76.6**	**87.8**	**91.7**	**101.8**		
Min.	**4.9**	**6.0**	**6.1**	**7.0**	**6.5**	**6.3**	**5.0**	**5.2**	**4.6**	**5.8**	**3.7**	**3.7**	**3.9**	**3.7**	**5.2**	**6.4**	**7.7**	**7.3**	**8.6**	**7.7**	**5.8**	**5.0**	**6.8**	**6.1**		**3.7**	
Avg.	**28.2**	**30.0**	**35.9**	**30.1**	**30.4**	**29.2**	**29.5**	**31.1**	**26.1**	**29.2**	**24.7**	**23.0**	**25.2**	**25.0**	**26.0**	**32.6**	**30.2**	**29.5**	**23.5**	**23.7**	**21.6**	**21.0**	**22.4**	**25.7**			**27.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.9	7.0	8.6	13.3	9.3	6.3	12.5	18.8	9.5	8.0	8.4	8.4	5.6	9.5	56.2	50.5	55.6	28.5	32.1	59.5	86.1	65.6	56.9	65.5	86.1	5.6	28.7
2	55.1	67.9	51.1	38.5	35.3	50.3	53.3	38.2	31.2	46.1	50.9	75.8	39.2	15.2	15.8	15.6	15.7	17.3	16.4	20.7	17.8	16.9	19.9	17.8	75.8	15.2	34.2
3	15.0	15.9	14.0	13.4	14.4	15.1	14.0	13.5	15.2	14.3	13.6	14.9	14.0	13.7	13.4	12.9	14.4	13.6	14.2	14.3	15.2	15.7	15.6	56.1	56.1	12.9	16.1
4	50.2	45.9	42.9	52.2	30.6	21.8	22.4	19.5	35.0	40.2	34.6	22.7	51.7	18.5	21.8	14.8	32.1	29.2	66.2	42.8	30.9	30.7	52.4	63.2	66.2	14.8	36.3
5	29.3	21.1	47.9	73.9	44.4	39.8	33.7	40.5	49.4	14.1	7.9	12.3	15.4	12.8	11.1	11.5	11.3	10.8	12.0	11.2	11.4	12.9	10.9	11.8	73.9	7.9	23.2
6	12.8	10.9	9.7	10.4	10.2	9.7	9.8	10.2	10.9	11.8	12.3	10.9	10.1	15.8	16.4	16.3	97.2	32.1	14.6	19.0	15.1	20.2	28.8	28.0	97.2	9.7	18.5
7	19.3	13.5	18.5	20.6	32.7	32.6	18.9	16.9	17.5	14.4	13.3	15.5	52.2	57.6	26.7	14.5	80.3	53.2	29.5	14.3	26.9	22.4	16.4	21.5	80.3	13.3	27.1
8	31.2	35.1	23.8	17.6	15.2	11.1	15.5	6.3	7.4	9.3	8.0	7.8	12.1	12.8	11.1	12.0	13.0	11.9	10.7	12.3	11.1	11.1	10.3	9.4	35.1	6.3	13.6
9	10.3	9.5	10.2	10.4	9.5	9.5	9.5	9.6	10.7	10.9	10.9	10.4	9.9	10.5	9.5	10.6	10.2	10.9	12.7	12.8	11.1	12.8	13.4	14.6	14.6	9.5	10.8
10	11.5	9.9	10.5	10.6	10.0	9.5	11.0	10.4	13.1	11.6	10.3	10.6	12.3	26.6	73.2	53.5	73.1	57.1	58.2	69.0	58.9	48.8	26.7	58.0	73.2	9.5	31.0
11	30.9	33.5	23.0	22.9	19.9	22.0	17.2	17.0	14.4	12.3	12.7	15.4	7.9	11.3	9.8	12.6	26.4	98.0	20.6	13.7	22.0	20.8	14.1	23.7	98.0	7.9	21.8
12	24.0	18.2	17.0	41.2	46.1	47.1	37.6	20.5	26.3	14.4	20.4	11.5	16.5	27.6	35.7	25.5	29.7	29.1	69.8	68.5	71.6	62.3	47.3	21.5	71.6	11.5	34.6
13	24.5	16.0	10.9	9.5	4.4	4.6	4.0	9.9	8.9	8.0	9.9	11.8	12.3	12.1	12.8	12.8	11.0	10.6	8.5	7.7	9.0	8.2	9.5	9.1	24.5	4.0	10.3
14	7.4	13.9	8.4	9.4	9.6	8.3	8.3	7.6	7.8	10.6	16.7	7.6	5.1	6.7	50.2	78.3	17.8	36.9	69.0	74.5	85.9	66.4	75.7	49.9	85.9	5.1	30.5
15	48.8	62.1	76.8	26.3	17.5	70.4	59.3	23.8	35.8	17.9	8.1	6.0	3.1	6.0	11.5	10.4	8.9	8.2	6.8	12.6	11.1	15.0	14.5	15.5	76.8	3.1	24.0
16	12.3	12.0	12.3	11.7	9.8	10.3	99.0	86.4	20.5	37.0	57.3	38.4	32.9	10.2	17.8	7.6	13.5	11.6	11.4	9.8	7.1	8.8	19.0	7.5	99.0	7.1	23.5
17	7.0	5.3	5.7	10.0	11.2	7.6	4.8	8.7	6.9	12.8	11.1	7.4	3.9	3.8	5.1	6.5	10.0	7.0	5.7	6.4	6.4	7.3	7.8	6.7	12.8	3.8	7.3
18	11.4	21.8	7.2	10.8	7.6	8.3	7.6	7.2	8.3	6.6	6.8	9.2	9.7	6.0	5.8	6.1	11.1	13.4	14.6	11.3	10.7	12.6	10.7	8.3	21.8	5.8	9.7
19	20.2	10.0	14.2	10.4	10.5	16.5	20.6	21.3	19.4	27.2	29.0	49.4	49.2	69.3	39.7	39.1	11.3	16.6	24.2	30.3	27.3	30.1	30.8	27.9	69.3	10.0	26.8
20	24.3	23.3	18.8	30.5	34.7	14.5	21.9	21.3	24.3	24.8	11.9	55.5	23.6	17.0	22.6	19.9	27.0	35.7	33.4	15.6	14.6	18.8	27.6	35.6	55.5	11.9	24.9
21	36.7	25.1	34.5	34.2	19.1	19.5	35.0	32.0	26.1	39.9	22.0	40.7	26.1	20.5	17.5	16.5	17.2	23.2	43.7	46.0	20.6	12.2	16.3	10.6	46.0	10.6	26.5
22	28.6	8.1	6.4	8.4	10.9	10.4	11.4	14.1	22.0	29.5	29.1	22.0	20.3	8.3	5.7	11.2	14.5	14.5	14.1	12.4	31.1	27.7	24.6	22.6	31.1	5.7	17.0
23	28.4	16.5	12.7	11.2	11.1	6.0	6.1	5.4	12.7	8.0	5.3	7.3	7.7	7.1	9.5	11.3	11.2	11.1	11.0	10.2	13.0	11.6	12.2	14.9	28.4	5.3	10.9
24	12.2	13.0	14.2	14.8	11.7	13.3	14.6	15.8	15.4	14.9	14.9	14.7	12.2	13.6	14.1	14.2	14.6	14.9	13.7	13.6	14.2	13.7	10.6	15.2	15.8	10.6	13.9
25	46.4	14.9	13.7	18.5	16.3	12.3	14.9	21.5	30.4	21.2	42.0	16.3	14.0	13.9	23.1	24.7	31.5	45.8	38.8	91.8	81.0	66.3	51.6	36.3	91.8	12.3	32.8
26	54.2	26.9	21.5	16.9	15.3	13.5	11.5	16.8	14.4	16.9	13.8	14.8	15.4	24.9	37.5	21.1	49.5	37.6	76.5	25.0	25.2	23.7	22.5	20.0	76.5	11.5	25.6
27	16.5	16.8	19.9	19.0	17.4	16.3	13.0	89.8	17.5	15.2	12.0	12.0	56.1	10.1	56.8	59.9	54.6	51.5	78.7	65.7	13.6	13.6	9.3	11.0	89.8	9.3	31.1
28	7.3	8.2	8.9	6.7	7.5	9.7	10.5	10.7	9.2	10.3	8.4	9.6	8.0	8.4	85.4	40.7	79.9	69.3	75.4	34.9	36.1	24.5	25.2	25.2	85.4	6.7	25.8
29	20.6	51.8	27.4	21.5	15.8	15.7	14.8	15.0	15.6	18.4	15.6	18.6	17.7	16.9	16.8	20.6	22.2	24.0	26.6	26.5	27.5	30.5	27.6	39.9	51.8	14.8	22.8
30	73.4	47.1	61.4	86.4	65.2	73.1	76.1	69.1	71.9	68.4	85.8	99.4	64.6	62.9	30.0	48.5	31.8	60.2	23.6	63.7	48.6	65.9	23.6	55.4	99.4	23.6	60.7
Max.	**73.4**	**67.9**	**76.8**	**86.4**	**65.2**	**73.1**	**99.0**	**89.8**	**71.9**	**68.4**	**85.8**	**99.4**	**64.6**	**69.3**	**85.4**	**78.3**	**97.2**	**98.0**	**78.7**	**91.8**	**86.1**	**66.4**	**75.7**	**65.5**	**99.4**		
Min.	**7.0**	**5.3**	**5.7**	**6.7**	**4.4**	**4.6**	**4.0**	**5.4**	**6.9**	**6.6**	**5.3**	**6.0**	**3.1**	**3.8**	**5.1**	**6.1**	**8.9**	**7.0**	**5.7**	**6.4**	**6.4**	**7.3**	**7.8**	**6.7**		**3.1**	
Avg.	**25.9**	**22.7**	**21.7**	**22.7**	**19.1**	**20.2**	**23.0**	**23.3**	**20.3**	**19.8**	**20.1**	**21.9**	**21.0**	**18.3**	**25.4**	**23.3**	**29.9**	**29.5**	**31.1**	**30.5**	**28.7**	**26.6**	**24.4**	**26.8**			**24.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (Climatronics)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	89.4	28.0	25.4	65.4	55.2	38.0	23.2	21.6	23.8	12.9	8.3	44.2	12.3	8.1	9.5	10.5	9.7	9.6	7.7	8.7	9.0	6.4	7.5	8.1	89.4	6.4	22.6
2	7.6	10.4	6.6	7.2	9.3	8.1	8.7	8.5	7.9	9.8	11.9	15.1	17.6	15.3	15.1	14.6	16.2	15.5	13.4	12.3	11.9	10.5	7.5	9.1	17.6	6.6	11.3
3	8.5	13.8	10.1	16.4	13.4	14.9	15.5	14.5	14.2	14.5	12.0	13.9	13.3	13.2	10.9	11.1	11.5	12.0	12.1	14.0	11.6	13.6	9.6	9.4	16.4	8.5	12.7
4	9.0	8.4	9.4	12.5	10.5	11.9	11.7	11.1	12.2	11.1	11.5	14.6	12.4	12.5	11.6	13.4	11.2	15.0	12.9	14.1	23.5	18.7	20.2	15.5	23.5	8.4	13.1
5	15.7	9.5	7.3	6.7	6.7	11.7	9.4	6.9	9.3	5.1	10.8	11.2	11.4	10.2	9.6	8.3	9.7	10.4	13.8	12.3	11.4	10.0	14.0	12.9	15.7	5.1	10.2
6	15.8	15.2	13.1	12.9	8.7	7.5	12.1	8.6	8.5	8.5	7.8	9.1	13.0	12.1	7.6	8.6	16.2	74.1	49.7	20.2	38.7	52.6	82.5	53.0	82.5	7.5	23.2
7	88.6	60.9	89.3	80.2	56.9	79.9	26.4	53.4	62.9	55.8	93.9	51.2	7.3	16.2	9.5	13.0	10.5	9.8	30.0	87.4	8.7	10.3	7.2	13.0	93.9	7.2	42.6
8	13.2	16.0	12.0	11.9	10.2	9.8	9.9	9.6	9.6	11.4	10.5	9.9	9.9	9.1	9.7	9.7	8.8	8.6	9.3	8.9	9.9	10.0	9.3	10.0	16.0	8.6	10.3
9	9.2	11.0	10.2	9.1	13.9	17.7	59.5	37.5	80.7	39.6	94.1	78.0	29.8	80.1	48.1	87.6	34.7	71.3	85.0	89.1	83.5	28.5	57.0	61.1	94.1	9.1	50.7
10	67.6	48.9	69.1	24.1	76.9	45.5	59.9	48.5	22.1	77.2	45.1	41.9	44.6	78.0	75.2	20.9	24.9	38.3	93.1	89.1	28.7	26.7	40.8	26.9	93.1	20.9	50.6
11	63.0	76.8	73.0	71.9	94.0	34.3	90.8	93.9	50.1	34.5	73.0	65.2	54.0	56.4	25.0	61.2	69.9	29.4	23.0	21.5	31.3	98.5	24.7	30.7	98.5	21.5	56.1
12	51.7	30.7	19.4	22.1	15.7	17.8	34.5	14.5	15.4	18.5	12.8	14.4	21.7	15.6	18.0	13.6	13.8	12.3	13.8	17.1	23.9	20.6	86.5	101.0	101.0	12.3	26.1
13	21.9	54.6	16.2	13.0	7.0	9.1	11.9	8.1	16.4	7.8	42.0	10.0	18.4	73.0	71.8	10.9	29.5	30.4	10.0	25.5	25.5	7.0	5.6	14.5	73.0	5.6	22.5
14	10.8	7.3	8.8	6.8	6.6	31.1	30.6	41.3	80.8	67.3	11.2	9.9	46.4	16.9	19.1	6.7	6.2	4.5	5.5	7.8	7.9	7.7	8.9	17.4	80.8	4.5	19.5
15	18.3	16.2	18.3	28.5	19.1	24.6	27.9	31.3	22.2	46.8	40.7	24.0	46.3	22.3	8.5	10.0	11.0	36.6	10.7	6.1	10.5	9.6	39.4	10.2	46.8	6.1	22.5
16	9.5	8.1	5.9	8.8	9.0	9.5	11.3	13.2	9.0	8.9	47.4	68.2	16.7	11.9	12.3	11.8	8.6	7.1	13.0	9.5	11.2	12.9	9.3	11.4	68.2	5.9	14.4
17	15.3	14.6	6.8	8.9	14.2	10.9	13.1	12.1	15.6	16.6	6.8	7.3	6.1	10.1	7.8	6.6	6.0	6.2	4.9	6.0	8.1	7.8	5.2	6.4	16.6	4.9	9.3
18	6.0	7.4	6.6	7.0	5.7	8.2	6.7	14.8	15.7	22.5	15.7	10.3	16.4	15.8	12.3	13.6	12.1	13.4	13.6	11.3	11.6	13.7	12.8	15.6	22.5	5.7	12.0
19	14.0	15.8	13.6	15.5	14.5	15.8	12.9	13.4	14.7	12.1	12.3	11.5	10.5	10.5	10.7	9.7	10.9	9.6	10.1	10.3	9.7	9.8	9.6	9.1	15.8	9.1	12.0
20	9.8	10.1	9.6	9.2	9.9	10.0	9.7	9.5	10.0	9.8	10.7	9.7	9.4	9.9	9.5	10.0	10.7	14.0	8.7	9.8	70.2	73.7	83.9	34.0	83.9	8.7	19.2
21	33.7	23.4	85.2	64.0	14.5	14.4	9.8	9.5	12.6	16.5	20.4	8.8	6.1	5.5	6.1	7.3	14.9	12.5	15.7	10.0	13.8	9.6	10.3	9.3	85.2	5.5	18.1
22	7.0	8.7	6.4	5.5	8.6	7.1	8.8	8.6	6.5	7.7	7.2	9.4	11.5	6.7	72.3	8.4	21.1	26.7	61.7	14.3	10.6	37.5	7.9	8.1	72.3	5.5	15.8
23	9.1	8.8	8.9	8.9	10.2	7.9	7.3	6.4	7.5	48.4	7.8	72.7	71.4	46.2	54.0	55.3	81.5	50.0	38.5	37.2	27.8	68.7	69.0	44.6	81.5	6.4	35.3
24	47.8	99.9	68.0	42.2	35.4	26.9	18.4	40.9	42.7	37.5	59.8	43.1	51.4	87.4	25.7	30.4	72.3	82.5	77.9	30.7	38.5	61.5	59.4	8.0	99.9	8.0	49.5
25	6.9	8.5	12.2	9.3	11.4	10.6	10.5	10.0	9.3	10.0	11.5	11.0	5.5	5.1	6.1	16.4	12.6	14.5	21.9	9.3	42.3	29.1	32.1	34.0	42.3	5.1	14.6
26	27.8	32.5	27.6	54.4	59.6	67.1	41.6	27.8	27.7	56.0	41.6	32.7	40.7	43.2	66.2	35.5	37.3	34.9	54.6	58.9	39.7	47.9	71.6	53.3	71.6	27.6	45.0
27	37.0	30.3	28.0	21.7	15.8	14.8	14.0	13.4	15.2	13.1	14.3	16.9	15.1	16.6	16.3	15.3	21.1	14.8	16.2	50.3	53.0	36.3	52.5	46.5	53.0	13.1	24.5
28	33.7	21.5	50.0	38.9	56.8	54.4	69.0	17.8	15.5	44.9	54.8	22.1	21.1	13.7	38.4	41.5	18.6	46.1	40.6	54.9	44.1	74.8	17.6	16.1	74.8	13.7	37.8
29	21.4	27.6	23.0	10.9	12.5	28.6	8.2	19.8	23.3	27.5	22.2	26.3	34.3	22.6	11.9	55.1	38.1	14.8	23.8	20.5	21.0	21.5	9.9	21.9	55.1	8.2	22.8
30	26.5	23.3	21.7	26.1	28.8	26.2	23.8	20.5	19.2	54.5	27.8	61.5	27.2	18.1	15.3	34.4	42.1	38.6	34.0	14.0	36.2	82.3	56.5	41.6	82.3	14.0	33.3
31	57.7	30.5	18.0	13.2	19.9	38.3	12.9	16.4	36.8	12.3	25.3	13.7	8.9	9.7	10.5	16.6	13.4	10.6	13.4	12.5	11.3	16.3	19.4	15.9	57.7	8.9	18.9
Max.	**89.4**	**99.9**	**89.3**	**80.2**	**94.0**	**79.9**	**90.8**	**93.9**	**80.8**	**77.2**	**94.1**	**78.0**	**71.4**	**87.4**	**75.2**	**87.6**	**81.5**	**82.5**	**93.1**	**89.1**	**83.5**	**98.5**	**86.5**	**101.0**	**101.0**		
Min.	**6.0**	**7.3**	**5.9**	**5.5**	**5.7**	**7.1**	**6.7**	**6.4**	**6.5**	**5.1**	**6.8**	**7.3**	**5.5**	**5.1**	**6.1**	**6.6**	**6.0**	**4.5**	**4.9**	**6.0**	**7.9**	**6.4**	**5.2**	**6.4**		**4.5**	
Avg.	**27.5**	**25.1**	**25.2**	**23.7**	**23.6**	**23.0**	**22.9**	**21.4**	**23.1**	**26.4**	**28.1**	**27.0**	**22.9**	**24.9**	**23.4**	**21.5**	**22.7**	**25.0**	**27.1**	**25.6**	**25.3**	**30.1**	**30.6**	**24.8**			**25.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.6	9.5	9.9	8.6	8.0	4.9	6.8	8.3	7.8	7.1	6.1	5.3	3.0	3.7	1.8	1.5	2.4	2.9	3.0	2.9	3.5	3.2	4.1	3.5	9.9	1.5	5.3
2	3.2	4.6	4.8	3.6	5.5	4.9	4.9	5.8	7.3	6.8	6.0	6.6	8.3	8.2	6.1	7.5	6.5	7.8	7.4	7.7	6.1	4.1	3.9	3.8	8.3	3.2	5.9
3	3.1	4.8	2.7	2.4	2.8	1.8	2.1	2.0	3.4	1.9	1.5	2.3	1.5	1.7	4.0	5.1	5.2	5.2	2.8	3.5	4.5	6.1	4.9	6.3	6.3	1.5	3.4
4	5.4	5.0	2.6	4.5	2.2	1.6	3.8	2.2	1.8	2.8	3.6	1.6	1.8	1.7	4.3	3.0	2.7	1.5	1.5	2.4	2.7	2.7	2.2	2.7	5.4	1.5	2.8
5	3.8	2.6	2.5	3.8	4.0	3.7	3.7	6.3	9.0	10.4	11.7	12.4	12.4	13.2	13.3	14.1	13.4	12.3	12.1	11.4	10.9	11.5	10.7	10.2	14.1	2.5	9.1
6	10.4	9.3	8.9	8.9	9.8	9.4	9.2	9.5	10.4	9.7	9.4	10.0	9.2	8.0	5.2	5.0	2.7	2.8	2.9	3.4	2.0	2.1	1.8	2.1	10.4	1.8	6.7
7	2.5	1.5	3.4	4.2	4.1	4.3	5.5	5.1	1.5	4.1	4.7	4.1	3.1	3.4	4.6	3.5	2.6	2.0	1.9	2.5	3.9	2.5	7.7	3.4	7.7	1.5	3.6
8	4.5	3.6	5.0	6.0	5.5	5.8	2.7	2.0	3.5	2.9	6.2	4.6	4.6	3.7	3.7	3.4	3.8	7.2	7.8	8.4	9.1	8.2	7.4	4.0	9.1	2.0	5.2
9	3.9	4.7	6.8	6.9	5.8	9.7	11.5	8.9	7.1	4.5	8.0	10.0	8.8	7.3	6.9	7.7	4.9	5.7	7.6	8.7	9.8	10.0	9.9	10.9	11.5	3.9	7.7
10	11.6	11.1	9.9	9.1	8.3	8.9	9.0	9.8	10.5	11.5	10.8	10.0	7.4	9.2	9.6	9.8	11.0	11.8	11.7	12.8	11.3	10.1	9.4	7.7	12.8	7.4	10.1
11	7.1	8.2	7.6	6.2	4.4	9.1	8.6	7.6	6.2	4.5	2.7	2.9	3.3	3.3	3.7	4.1	3.9	3.4	3.1	3.4	6.0	7.5	5.9	3.2	9.1	2.7	5.2
12	4.7	5.5	6.1	6.1	5.1	7.1	7.3	7.2	7.3	4.7	1.4	2.7	7.2	4.9	5.6	7.1	6.9	5.0	3.3	3.5	5.4	5.9	8.0	7.5	8.0	1.4	5.6
13	3.7	5.9	6.0	4.4	4.7	3.7	5.3	7.1	7.6	3.8	3.8	3.6	5.8	4.2	4.5	5.7	9.6	9.6	8.6	9.0	8.4	9.0	11.3	9.1	11.3	3.6	6.4
14	8.5	7.6	7.7	5.1	2.4	2.6	6.0	5.8	5.2	4.9	5.4	6.4	6.8	7.7	8.9	9.6	9.3	9.3	9.4	9.6	10.2	9.8	10.7	9.8	10.7	2.4	7.4
15	10.3	10.1	9.8	9.8	9.0	8.6	8.1	6.6	5.5	2.2	1.2	1.7	4.1	3.6	2.4	4.4	3.0	4.7	5.6	5.2	6.6	4.0	3.4	4.7	10.3	1.2	5.6
16	2.6	1.8	0.5	1.9	1.4	2.1	2.6	2.1	2.0	4.5	4.5	2.4	2.9	3.7	3.6	2.2	1.9	3.4	2.9	3.5	2.8	2.4	1.9	4.3	4.5	0.5	2.7
17	5.1	4.6	5.3	5.1	5.7	6.6	7.1	7.6	10.0	10.1	9.5	9.6	10.3	10.5	10.8	10.7	10.3	9.1	7.6	6.8	6.2	6.4	6.2	5.2	10.8	4.6	7.8
18	3.9	1.4	2.4	1.3	0.3	0.2	0.2	0.6	0.5	0.8	1.4	0.9	0.9	2.2	1.6	1.6	1.4	1.0	0.7	1.7	2.9	3.4	2.9	5.3	5.3	0.2	1.6
19	5.6	5.2	6.2	6.4	6.4	7.3	7.9	8.2	8.6	6.2	6.3	7.3	7.0	6.4	7.4	7.3	6.5	6.6	6.0	5.0	6.6	7.8	8.1	6.8	8.6	5.0	6.8
20	7.5	7.5	7.2	7.5	7.4	6.5	7.7	7.5	7.2	7.0	7.1	7.2	7.9	7.6	7.4	7.4	6.6	6.4	6.1	5.7	5.7	3.9	4.8	3.2	7.9	3.2	6.7
21	2.2	3.1	4.6	3.9	4.8	5.0	4.7	4.9	5.2	4.7	5.2	5.6	7.4	7.9	6.8	7.1	7.1	7.8	8.3	8.9	6.7	4.0	2.5	2.5	8.9	2.2	5.5
22	2.5	4.0	6.3	6.9	8.9	7.1	2.3	3.4	1.9	1.6	1.1	3.1	1.9	3.6	6.8	6.4	4.7	9.9	6.4	4.7	3.3	1.5	2.3	2.9	9.9	1.1	4.3
23	5.8	6.4	7.9	5.3	6.8	5.0	5.5	7.5	4.5	6.0	6.1	6.9	5.9	5.5	5.9	11.6	8.8	5.0	5.7	10.0	12.1	6.7	8.5	5.7	12.1	4.5	6.9
24	2.9	2.6	3.3	2.1	3.2	4.0	5.2	4.5	4.9	6.3	6.4	5.7	5.4	5.1	4.8	4.7	5.1	5.6	6.9	7.5	5.7	3.3	3.4	2.9	7.5	2.1	4.6
25	4.0	3.4	1.5	2.5	6.7	3.2	1.9	2.3	4.2	2.9	2.4	3.7	3.5	3.9	3.4	6.7	3.8	4.7	3.6	3.6	4.9	3.3	5.5	7.2	7.2	1.5	3.9
26	5.2	5.5	5.9	3.3	4.8	3.9	2.7	3.2	3.9	3.6	4.4	5.2	4.1	5.3	3.7	2.0	3.5	2.7	2.7	3.4	3.8	3.9	4.1	3.8	5.9	2.0	3.9
27	2.8	4.4	6.5	6.9	2.5	6.3	8.2	9.0	7.4	7.4	7.2	7.6	7.2	8.0	7.7	7.8	8.2	8.8	8.7	8.6	8.7	7.8	7.4	7.3	9.0	2.5	7.2
28	7.5	7.2	7.6	8.3	8.5	7.9	7.0	5.7	4.4	3.1	1.1	1.4	3.1	3.8	4.1	4.1	3.8	3.4	4.0	5.6	6.7	2.7	2.7	6.4	8.5	1.1	5.0
29	2.1	2.5	4.6	2.5	3.6	4.4	4.6	4.3	4.9	5.4	4.7	8.5	7.3	4.9	3.0	2.8	1.7	4.9	4.6	3.0	3.1	2.2	1.9	2.1	8.5	1.7	3.9
30	1.8	2.5	2.5	1.8	2.0	1.8	1.6	2.4	2.6	3.6	4.2	3.6	3.4	4.7	5.2	4.5	3.6	3.9	5.7	5.2	5.9	6.1	2.9	5.0	6.1	1.6	3.6
31	8.0	6.3	5.8	5.7	5.6	8.2	8.9	8.8	5.3	4.8	7.4	5.9	6.2	5.9	7.0	3.8	4.6	6.4	5.6	4.7	4.8	4.0	4.0	3.5	8.9	3.5	5.9
Max.	**11.6**	**11.1**	**9.9**	**9.8**	**9.8**	**9.7**	**11.5**	**9.8**	**10.5**	**11.5**	**11.7**	**12.4**	**12.4**	**13.2**	**13.3**	**14.1**	**13.4**	**12.3**	**12.1**	**12.8**	**12.1**	**11.5**	**11.3**	**10.9**	**14.1**		
Min.	**1.8**	**1.4**	**0.5**	**1.3**	**0.3**	**0.2**	**0.2**	**0.6**	**0.5**	**0.8**	**1.1**	**0.9**	**0.9**	**1.7**	**1.6**	**1.5**	**1.4**	**1.0**	**0.7**	**1.7**	**2.0**	**1.5**	**1.8**	**2.1**		**0.2**	
Avg.	**5.2**	**5.2**	**5.5**	**5.2**	**5.2**	**5.3**	**5.6**	**5.7**	**5.5**	**5.2**	**5.2**	**5.4**	**5.5**	**5.6**	**5.6**	**5.9**	**5.5**	**5.8**	**5.6**	**5.9**	**6.1**	**5.4**	**5.5**	**5.3**			**5.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.4	2.9	3.2	2.3	3.1	2.5	2.2	1.1	2.9	2.8	2.9	3.7	3.3	3.7	2.9	3.5	2.9	2.9	3.1	2.9	2.8	3.1	2.9	3.3	3.7	1.1	2.9
2	2.6	1.7	2.5	3.4	3.0	2.5	2.9	2.7	2.3	1.9	3.8	3.3	6.0	7.0	5.1	7.4	6.6	7.9	6.2	8.3	6.9	6.5	4.9	7.5	8.3	1.7	4.7
3	10.3	11.6	13.0	13.4	11.1	11.9	10.6	6.9	5.6	6.2	5.9	7.1	7.2	4.9	5.0	3.9	3.8	2.2	2.0	1.3	3.5	2.6	2.6	2.0	13.4	1.3	6.4
4	3.4	1.8	3.2	3.4	3.8	3.6	4.3	4.0	4.0	4.3	4.7	4.3	3.8	4.3	3.6	3.2	2.3	2.5	2.1	3.3	3.4	3.8	3.8	2.7	4.7	1.8	3.5
5	3.3	5.8	7.7	8.9	7.9	8.7	10.1	9.7	8.4	7.4	8.0	6.8	7.0	7.0	5.8	3.4	3.8	3.6	3.6	3.8	2.4	1.9	2.3	2.5	10.1	1.9	5.8
6	1.3	1.3	1.9	2.6	3.4	3.0	3.1	2.2	2.9	2.9	2.9	3.2	3.2	3.0	3.0	3.1	5.3	5.3	5.7	4.7	5.7	5.8	3.0	4.7	5.8	1.3	3.5
7	4.5	4.3	3.8	3.7	3.4	3.9	3.6	2.7	3.6	3.8	4.1	4.1	3.5	4.4	1.4	3.4	2.7	2.3	3.1	2.0	2.6	2.9	3.2	2.4	4.5	1.4	3.3
8	3.6	3.7	2.4	5.2	5.3	6.4	7.2	6.9	7.3	7.0	7.0	6.7	7.9	9.3	10.2	10.4	8.7	9.2	9.2	8.1	9.7	11.0	10.6	10.8	11.0	2.4	7.7
9	11.4	11.5	11.4	10.3	11.3	10.8	10.0	9.9	10.5	10.0	8.0	6.3	5.7	4.0	3.7	4.0	3.2	2.0	1.1	3.0	3.1	2.9	2.7	2.7	11.5	1.1	6.7
10	2.5	1.7	0.9	1.4	2.8	3.1	3.4	2.9	2.7	3.6	3.5	4.1	4.8	5.0	3.7	1.7	1.0	1.1	2.1	2.7	2.5	1.4	1.8	1.3	5.0	0.9	2.6
11	1.2	1.4	2.1	1.8	2.1	2.0	1.7	2.2	3.0	2.6	3.0	1.3	2.4	1.8	0.6	3.5	1.8	1.1	2.2	2.6	4.0	4.4	4.7	6.6	6.6	0.6	2.5
12	5.9	8.2	8.8	8.3	10.2	10.6	10.0	10.3	11.2	7.3	7.7	7.3	8.9	9.2	8.6	7.2	5.4	6.5	4.1	3.4	2.5	3.8	6.1	7.8	11.2	2.5	7.5
13	7.0	6.4	7.7	7.8	9.5	8.9	11.3	11.4	11.6	11.0	11.2	11.0	10.4	11.5	9.7	9.2	8.3	8.4	9.0	9.1	8.5	8.7	8.1	7.0	11.6	6.4	9.3
14	7.8	6.9	8.3	7.6	7.5	7.6	6.9	7.8	7.1	7.5	6.4	6.4	5.4	7.5	11.5	14.0	14.9	15.7	14.8	14.1	11.4	8.3	8.7	14.5	15.7	5.4	9.5
15	13.8	13.7	17.1	17.4	19.8	17.9	9.7	8.0	10.2	9.5	11.4	12.0	5.4	3.5	3.2	4.1	4.1	4.5	5.9	5.5	3.9	6.7	6.2	6.5	19.8	3.2	9.2
16	6.6	7.7	8.5	9.9	9.7	10.8	11.4	12.2	12.6	12.5	12.1	12.2	11.7	11.7	11.9	11.1	9.0	8.6	7.2	3.9	3.6	3.9	7.1	5.7	12.6	3.6	9.2
17	5.9	6.1	7.0	7.7	6.8	7.2	7.3	7.5	7.7	9.2	10.0	10.5	10.6	11.5	11.7	11.8	9.5	9.2	7.2	2.2	2.4	1.4	1.6	2.2	11.8	1.4	7.3
18	2.7	2.6	3.1	5.0	6.6	6.4	5.3	4.7	4.3	3.5	2.6	2.4	2.1	2.9	1.9	1.9	1.9	3.9	5.3	5.1	6.1	5.8	5.0	5.0	6.6	1.9	4.0
19	5.3	5.6	5.1	5.1	5.2	9.4	7.8	8.9	9.0	8.5	9.3	10.1	10.5	9.6	10.4	10.8	11.2	11.4	10.1	10.4	9.6	9.6	9.8	9.3	11.4	5.1	8.8
20	8.8	5.4	3.4	3.1	4.3	3.4	2.8	3.8	3.4	4.9	6.1	6.8	5.6	6.4	6.7	7.4	8.6	9.8	9.7	10.1	9.5	9.7	9.4	8.1	10.1	2.8	6.5
21	10.0	9.3	9.5	9.0	9.7	10.4	11.0	11.4	11.4	11.4	11.2	10.3	9.0	8.2	7.6	6.2	6.8	6.7	6.1	5.9	6.8	6.6	6.8	7.4	11.4	5.9	8.7
22	6.5	7.4	6.7	7.5	7.8	8.1	8.0	7.7	7.0	7.5	7.3	6.7	5.8	3.8	4.4	3.5	3.2	3.3	3.4	4.4	4.4	3.7	3.3	2.9	8.1	2.9	5.6
23	2.9	3.3	3.3	3.4	4.1	4.3	3.5	2.1	2.1	1.9	1.6	2.5	3.6	3.2	2.2	1.7	1.2	1.8	2.5	2.2	0.9	2.6	2.8	2.4	4.3	0.9	2.6
24	2.5	2.4	2.7	3.1	2.9	2.6	3.7	3.0	3.6	5.1	4.9	5.0	3.4	2.0	1.8	1.7	2.2	1.6	2.9	3.6	4.8	5.5	2.8	2.1	5.5	1.6	3.2
25	3.9	4.4	4.0	4.2	5.7	6.1	5.2	5.5	4.8	4.8	3.1	1.7	1.9	3.3	9.5	8.3	8.3	7.9	8.2	8.1	7.8	8.0	7.8	7.1	9.5	1.7	5.8
26	7.2	6.7	6.3	7.0	6.5	6.1	5.8	5.5	7.5	6.1	6.1	6.6	6.2	7.2	6.7	5.7	3.8	2.2	4.4	1.0	1.8	3.6	1.5	0.5	7.5	0.5	5.1
27	1.3	2.0	1.1	1.3	2.1	2.2	1.7	1.9	1.7	1.1	2.2	1.6	0.6	1.1	0.9	1.6	5.6	6.7	6.8	7.3	7.9	7.7	8.2	8.6	8.6	0.6	3.5
28	8.2	7.7	6.1	5.6	5.6	5.9	6.4	5.0	5.7	6.2	6.5	5.6	5.3	4.8	4.1	3.3	1.8	1.3	1.9	1.7	0.9	0.4	0.4	2.0	8.2	0.4	4.3
29	1.7	1.5	2.1	2.1	2.5	2.5	2.3	2.6	3.0	3.4	4.5	3.6	2.1	3.0	1.5	2.0	2.5	2.2	2.0	2.3	2.1	2.2	2.0	1.7	4.5	1.5	2.4
Max.	**13.8**	**13.7**	**17.1**	**17.4**	**19.8**	**17.9**	**11.4**	**12.2**	**12.6**	**12.5**	**12.1**	**12.2**	**11.7**	**11.7**	**11.9**	**14.0**	**14.9**	**15.7**	**14.8**	**14.1**	**11.4**	**11.0**	**10.6**	**14.5**	**19.8**		
Min.	**1.2**	**1.3**	**0.9**	**1.3**	**2.1**	**2.0**	**1.7**	**1.1**	**1.7**	**1.1**	**1.6**	**1.3**	**0.6**	**1.1**	**0.6**	**1.6**	**1.0**	**1.1**	**1.1**	**1.0**	**0.9**	**0.4**	**0.4**	**0.5**		**0.4**	
Avg.	**5.4**	**5.3**	**5.6**	**5.9**	**6.3**	**6.5**	**6.2**	**5.9**	**6.1**	**6.0**	**6.1**	**6.0**	**5.6**	**5.7**	**5.5**	**5.5**	**5.2**	**5.2**	**5.2**	**4.9**	**4.9**	**5.0**	**4.8**	**5.1**			**5.6**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.8	1.8	3.2	3.2	3.3	4.6	3.6	3.8	4.5	5.4	7.3	7.7	7.9	8.2	9.0	9.5	10.0	9.4	9.1	10.2	9.0	9.0	10.2	11.1	11.1	1.8	6.9
2	10.7	11.2	11.0	11.1	9.9	9.4	8.9	6.4	6.0	6.4	6.6	6.3	6.6	6.4	6.1	4.8	5.3	5.5	5.9	6.0	5.3	5.0	5.8	4.0	11.2	4.0	7.1
3	2.2	2.4	1.4	2.6	2.9	4.8	5.9	6.0	6.5	6.1	6.0	6.3	6.6	6.9	6.8	7.4	6.2	5.5	6.1	6.0	5.5	2.8	3.6	3.0	7.4	1.4	5.0
4	2.6	2.6	2.3	5.6	5.2	6.1	4.4	4.6	3.7	3.6	4.0	4.8	6.8	7.4	6.7	7.6	7.8	6.9	6.5	6.6	6.9	7.1	7.4	6.9	7.8	2.3	5.6
5	7.5	8.2	8.9	9.3	10.0	10.3	10.4	9.9	10.2	10.2	9.5	9.1	9.2	9.7	9.5	9.0	8.0	7.2	5.3	4.0	3.4	3.4	2.8	2.4	10.4	2.4	7.8
6	2.4	2.7	1.7	1.9	2.4	2.2	2.7	2.5	3.3	3.6	2.1	5.1	5.1	5.6	4.4	5.3	4.6	4.9	5.8	7.1	8.3	8.1	7.5	7.1	8.3	1.7	4.4
7	7.4	6.5	6.0	5.3	5.2	5.2	3.5	1.5	1.2	1.3	1.5	1.1	0.7	0.4	0.7	1.6	1.4	1.8	2.8	5.3	4.4	6.3	5.7	3.9	7.4	0.4	3.4
8	5.1	7.2	7.1	5.5	2.7	3.2	3.9	3.9	3.3	4.4	4.2	5.3	5.8	7.4	8.0	9.5	10.0	9.8	9.7	10.8	10.6	11.7	11.6	11.5	11.7	2.7	7.2
9	11.4	12.0	11.8	11.0	10.7	10.3	10.4	9.8	9.9	9.4	9.8	9.3	8.5	7.6	7.4	5.7	4.2	4.5	3.0	4.8	2.9	2.4	2.0	1.4	12.0	1.4	7.5
10	3.6	2.1	1.3	0.9	0.4	0.4	1.3	2.4	2.4	1.9	3.8	2.8	1.3	1.0	2.6	2.6	0.3	2.7	3.0	2.6	0.0	0.0	0.0	0.0	3.8	0.0	1.6
11	0.0	0.0	0.0	0.0	0.0	0.0	5.6	7.5	6.2	6.2	7.2	6.6	6.0	5.9	6.1	6.4	5.6	6.1	6.6	5.8	5.6	5.1	6.5	6.7	7.5	0.0	4.7
12	6.7	7.4	6.9	6.2	4.8	5.6	4.1	2.4	1.9	3.3	3.7	3.0	3.4	4.1	3.4	3.4	3.2	2.6	1.5	1.1	1.1	0.8	1.5	2.6	7.4	0.8	3.5
13	3.6	3.4	4.6	4.9	4.3	4.2	5.4	5.9	5.6	6.4	7.1	7.4	7.2	6.9	6.3	6.6	7.7	7.7	7.1	4.8	6.4	5.3	4.3	3.6	7.7	3.4	5.7
14	2.8	4.2	3.8	6.0	6.2	6.4	6.1	2.4	6.0	6.2	5.0	5.0	4.6	3.0	3.3	2.6	1.4	0.6	2.5	3.5	3.8	5.0	4.3	5.1	6.4	0.6	4.2
15	5.5	6.8	7.8	8.2	8.2	8.7	8.6	8.2	8.0	8.1	8.3	7.7	6.9	6.7	6.9	6.8	6.9	6.7	6.7	6.8	6.8	6.8	6.7	7.3	8.7	5.5	7.3
16	7.7	7.6	7.1	7.0	7.3	6.6	5.9	6.4	6.3	6.0	4.6	4.8	3.9	4.3	3.7	3.0	3.1	3.2	3.5	3.0	1.3	1.1	1.6	2.4	7.7	1.1	4.6
17	1.8	2.5	2.9	2.7	2.5	2.8	2.6	2.6	2.3	2.7	2.8	2.4	1.9	2.0	2.1	1.6	0.8	1.3	1.8	5.2	5.8	6.8	7.3	9.1	9.1	0.8	3.2
18	9.5	9.5	8.9	8.4	8.4	8.1	8.8	8.1	8.0	8.1	8.6	7.3	7.5	8.0	8.0	8.9	8.4	8.0	8.9	8.5	8.0	8.0	7.9	7.4	9.5	7.3	8.3
19	7.4	7.1	6.6	6.7	5.8	6.4	5.8	4.5	4.6	6.2	7.8	6.9	7.5	8.1	8.9	9.3	9.8	10.3	10.0	9.2	8.5	8.5	7.3	4.2	10.3	4.2	7.4
20	3.5	4.0	2.4	1.7	1.9	1.7	1.5	1.5	1.9	4.0	3.7	2.8	2.4	3.9	4.8	3.6	4.4	3.1	3.4	2.2	2.7	2.5	2.5	1.7	4.8	1.5	2.8
21	2.6	1.7	1.2	1.9	2.2	1.0	6.0	9.4	8.8	9.7	9.2	8.6	7.7	9.4	9.1	8.3	7.4	4.5	4.3	5.6	9.1	9.1	9.7	9.0	9.7	1.0	6.5
22	9.3	8.4	6.0	5.5	5.0	4.9	3.1	1.0	2.2	1.8	1.2	1.3	1.9	1.3	1.6	2.4	2.5	1.7	2.1	3.1	2.3	6.3	7.2	2.9	9.3	1.0	3.5
23	3.3	1.1	0.9	2.7	4.4	5.3	5.8	8.9	8.0	8.2	7.9	6.8	6.7	9.4	7.6	4.8	5.0	7.1	7.5	6.6	6.4	4.5	4.3	5.0	9.4	0.9	5.8
24	5.6	6.2	4.8	4.1	3.3	4.5	2.8	1.7	1.8	2.1	1.7	2.2	2.4	1.9	2.1	2.2	1.1	2.6	3.1	5.5	4.8	4.5	5.7	7.8	7.8	1.1	3.5
25	2.0	1.0	1.1	1.4	3.4	3.4	4.7	5.7	5.6	5.7	4.0	1.1	1.2	3.2	3.9	3.5	2.4	3.9	3.9	3.6	5.0	5.5	3.2	5.2	5.7	1.0	3.5
26	4.6	5.7	5.0	4.6	4.9	5.5	6.1	6.1	5.7	6.4	6.3	4.9	2.7	3.8	4.1	4.1	3.3	3.2	2.7	3.8	4.8	7.0	8.5	9.3	9.3	2.7	5.1
27	10.4	11.3	11.3	11.1	10.8	9.9	9.6	9.1	8.6	7.9	7.8	7.1	6.1	4.3	5.5	5.9	5.5	6.3	6.8	7.2	7.7	7.2	6.9	7.0	11.3	4.3	8.0
28	7.2	7.3	6.8	5.4	6.7	7.5	8.2	6.0	7.6	9.0	7.8	5.5	2.9	3.7	5.2	4.3	4.5	3.6	2.0	1.3	0.4	1.7	2.3	2.2	9.0	0.4	5.0
29	3.2	2.1	3.3	4.7	4.5	4.1	3.9	3.8	3.7	4.8	4.0	3.9	4.2	2.9	3.5	4.4	4.6	5.0	4.0	4.5	4.8	3.6	4.1	6.9	6.9	2.1	4.1
30	8.9	6.8	5.8	4.5	4.9	4.5	4.5	5.3	6.1	7.0	5.8	6.9	6.1	5.3	5.7	6.0	5.8	5.4	5.1	5.4	5.9	6.4	5.5	5.9	8.9	4.5	5.8
31	6.0	5.8	5.7	5.9	5.7	6.0	6.1	5.5	6.2	5.6	5.6	5.6	4.7	6.2	5.5	5.7	5.8	7.0	7.3	6.6	5.6	5.9	6.1	6.5	7.3	4.7	5.9
Max.	**11.4**	**12.0**	**11.8**	**11.1**	**10.8**	**10.3**	**10.4**	**9.9**	**10.2**	**10.2**	**9.8**	**9.3**	**9.2**	**9.7**	**9.5**	**9.5**	**10.0**	**10.3**	**10.0**	**10.8**	**10.6**	**11.7**	**11.6**	**11.5**	**12.0**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.3**	**1.0**	**1.2**	**1.3**	**1.2**	**1.1**	**0.7**	**0.4**	**0.7**	**1.6**	**0.3**	**0.6**	**1.5**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**5.4**	**5.4**	**5.1**	**5.2**	**5.1**	**5.3**	**5.5**	**5.3**	**5.4**	**5.7**	**5.6**	**5.3**	**5.0**	**5.3**	**5.4**	**5.4**	**5.1**	**5.1**	**5.1**	**5.4**	**5.3**	**5.4**	**5.5**	**5.4**			**5.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.7	7.0	7.0	7.7	8.0	7.1	6.2	6.3	5.6	6.2	5.9	6.3	6.0	6.3	6.0	5.8	6.0	5.9	5.7	5.2	5.6	5.9	5.2	4.4	8.0	4.4	6.2
2	4.6	3.4	1.4	0.8	1.5	1.8	2.0	2.0	2.2	2.1	1.6	1.4	1.7	2.4	2.5	2.7	0.9	1.3	1.3	1.1	1.7	1.8	2.4	2.7	4.6	0.8	2.0
3	1.6	1.3	1.9	2.4	1.9	2.0	3.5	3.7	4.1	4.1	2.4	3.3	2.8	3.0	3.0	3.0	3.2	3.7	3.3	2.7	2.3	2.3	2.4	3.7	4.1	1.3	2.8
4	3.6	3.5	4.1	3.6	4.8	4.1	4.6	5.2	5.8	5.4	5.4	5.4	5.1	5.2	5.7	5.8	5.4	5.0	5.0	4.2	4.1	2.3	5.8	6.5	6.5	2.3	4.8
5	6.3	6.4	7.9	8.9	8.4	5.1	8.6	7.3	7.1	5.9	7.8	5.8	5.7	8.2	9.1	7.4	5.4	4.7	3.3	3.6	4.6	13.6	14.7	12.4	14.7	3.3	7.4
6	9.4	9.7	7.9	7.1	9.6	7.7	8.1	7.9	7.5	8.8	7.5	7.7	9.0	8.0	9.3	6.9	7.2	5.6	7.6	7.7	6.3	5.8	6.5	6.4	9.7	5.6	7.7
7	4.3	4.2	4.4	4.9	6.0	5.8	5.9	6.3	6.2	6.5	6.2	5.8	5.2	6.5	6.2	6.1	6.8	7.2	6.9	6.4	5.9	4.7	5.4	3.9	7.2	3.9	5.7
8	3.6	4.4	4.6	3.6	3.9	4.8	4.3	3.7	4.8	6.2	5.0	3.7	2.7	1.1	0.8	1.7	1.6	1.3	1.2	0.8	1.5	1.2	2.0	3.4	6.2	0.8	3.0
9	4.4	4.6	5.0	5.2	6.5	5.7	5.9	5.0	4.4	4.1	4.2	0.5	0.0	0.0	0.0	0.3	7.2	7.6	4.3	6.6	5.1	4.7	5.2	4.7	7.6	0.0	4.2
10	6.3	5.5	5.8	5.2	4.6	4.1	6.7	6.5	6.7	5.9	5.4	5.1	4.1	5.6	5.6	4.7	4.6	4.5	4.7	5.2	5.4	5.5	5.8	5.7	6.7	4.1	5.4
11	6.0	6.1	6.2	6.6	5.8	6.8	7.2	6.8	7.3	6.3	6.4	6.8	7.4	6.0	5.9	7.5	6.6	5.3	6.5	6.6	7.2	8.2	7.2	7.1	8.2	5.3	6.7
12	7.1	8.6	7.5	7.0	7.9	7.8	7.7	9.0	8.2	8.6	9.5	11.3	9.1	8.2	9.3	8.2	5.4	6.5	8.5	5.2	7.6	6.9	5.8	6.9	11.3	5.2	7.8
13	7.6	8.5	7.0	6.2	5.0	3.7	4.1	3.1	3.5	1.0	1.0	2.8	1.6	0.4	0.6	3.0	3.3	3.4	3.3	4.1	6.3	8.3	8.1	7.3	8.5	0.4	4.3
14	6.6	10.9	9.4	8.4	9.9	7.4	8.2	5.6	5.0	8.0	6.4	4.3	4.2	2.7	3.9	5.5	5.0	4.0	4.3	7.2	6.8	3.8	2.3	2.4	10.9	2.3	5.9
15	3.2	5.6	4.0	3.9	2.5	1.9	1.2	0.6	2.1	2.9	2.0	1.4	1.3	0.9	3.7	6.2	7.6	9.6	9.7	9.3	10.5	9.7	9.6	9.9	10.5	0.6	5.0
16	5.5	5.8	4.4	4.7	5.3	6.4	7.3	7.6	9.4	13.6	15.3	11.4	11.5	12.4	10.8	5.7	4.8	6.6	6.6	4.0	3.4	3.2	4.3	4.2	15.3	3.2	7.3
17	3.5	3.1	5.0	4.8	3.6	2.1	2.1	2.7	2.5	2.7	4.4	10.0	4.5	7.3	7.7	6.1	5.7	6.5	6.7	5.9	7.5	4.9	3.8	5.1	10.0	2.1	4.9
18	3.7	4.2	1.8	1.1	1.7	1.8	1.4	1.9	1.4	2.1	2.0	1.6	3.0	3.0	3.4	4.3	4.5	4.8	3.9	3.7	1.2	2.8	4.1	4.4	4.8	1.1	2.8
19	4.8	3.9	3.3	3.9	3.4	2.4	2.7	3.8	4.1	3.7	1.7	3.0	3.8	3.6	3.6	3.2	2.7	2.9	2.4	1.8	1.5	0.9	0.4	2.3	4.8	0.4	2.9
20	3.9	4.1	3.0	2.3	1.0	1.1	1.0	1.4	0.9	2.6	3.9	2.8	2.3	2.2	2.0	2.4	2.0	2.2	1.8	1.6	0.9	0.9	1.1	1.3	4.1	0.9	2.0
21	0.7	1.1	1.9	1.0	1.2	1.0	0.8	1.0	0.9	0.8	0.8	1.4	1.6	1.3	1.3	1.4	1.2	1.6	1.6	1.3	0.6	0.6	1.2	1.6	1.9	0.6	1.2
22	1.1	1.0	2.0	2.6	1.6	2.2	1.9	1.3	3.5	3.1	1.1	2.2	3.2	3.9	3.7	3.5	2.4	1.5	2.1	1.4	1.0	0.9	0.7	1.2	3.9	0.7	2.0
23	1.4	0.6	0.5	1.4	3.2	3.4	3.9	3.7	3.8	3.4	2.7	1.9	2.1	0.9	2.9	4.2	3.1	0.5	0.4	1.0	2.0	3.0	3.8	6.1	6.1	0.4	2.5
24	8.2	8.3	8.0	8.3	9.3	10.4	9.8	10.0	10.5	10.4	9.7	8.1	7.9	8.5	9.4	8.0	8.9	8.4	9.4	6.4	7.3	3.8	5.5	6.6	10.5	3.8	8.4
25	6.6	4.9	3.2	4.2	3.9	5.4	7.2	9.7	4.6	6.1	6.1	4.9	5.8	7.5	9.1	8.8	7.0	6.2	6.3	5.0	4.6	4.7	5.0	4.4	9.7	3.2	5.9
26	1.9	4.2	4.9	5.6	5.2	5.2	1.8	2.1	1.9	2.6	2.4	3.1	1.9	2.5	1.4	0.6	2.5	1.6	1.4	0.9	2.2	2.1	1.7	0.9	5.6	0.6	2.5
27	4.1	5.0	5.9	5.0	3.4	3.5	4.4	4.2	3.8	4.1	3.5	2.9	1.6	1.5	1.8	1.2	1.6	1.3	3.4	3.4	3.6	2.3	3.9	3.1	5.9	1.2	3.3
28	2.8	3.0	4.3	3.6	5.7	4.6	3.7	6.4	4.9	2.9	2.9	3.0	4.2	6.9	7.6	7.2	7.2	6.6	5.6	5.9	6.6	6.4	5.9	6.6	7.6	2.8	5.2
29	6.8	7.5	6.9	6.4	5.6	4.3	4.6	3.8	4.5	2.7	2.3	2.8	3.1	2.8	1.3	1.4	1.2	1.0	0.8	0.4	0.5	2.1	1.6	1.9	7.5	0.4	3.2
30	2.1	2.1	2.4	2.5	2.2	2.3	2.2	2.6	1.9	2.4	4.0	4.0	2.6	2.0	1.8	2.9	2.8	1.3	1.3	1.6	1.5	0.9	1.4	2.1	4.0	0.9	2.2
Max.	**9.4**	**10.9**	**9.4**	**8.9**	**9.9**	**10.4**	**9.8**	**10.0**	**10.5**	**13.6**	**15.3**	**11.4**	**11.5**	**12.4**	**10.8**	**8.8**	**8.9**	**9.6**	**9.7**	**9.3**	**10.5**	**13.6**	**14.7**	**12.4**	**15.3**		
Min.	**0.7**	**0.6**	**0.5**	**0.8**	**1.0**	**1.0**	**0.8**	**0.6**	**0.9**	**0.8**	**0.8**	**0.5**	**0.0**	**0.0**	**0.0**	**0.3**	**0.9**	**0.5**	**0.4**	**0.4**	**0.5**	**0.6**	**0.4**	**0.9**		**0.0**	
Avg.	**4.6**	**5.0**	**4.7**	**4.6**	**4.7**	**4.4**	**4.6**	**4.7**	**4.6**	**4.8**	**4.6**	**4.5**	**4.2**	**4.4**	**4.6**	**4.5**	**4.5**	**4.3**	**4.3**	**4.0**	**4.2**	**4.1**	**4.4**	**4.7**			**4.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.5	0.9	3.7	3.8	1.5	1.7	2.9	3.0	1.9	3.2	1.9	0.9	2.7	1.2	1.2	4.9	5.3	5.4	5.6	4.4	3.5	2.6	2.2	2.4	5.6	0.9	2.8
2	0.8	1.1	1.2	1.6	2.1	2.0	1.7	2.7	3.3	3.6	4.1	4.9	3.0	1.4	0.8	1.7	3.6	2.9	2.1	1.2	2.3	1.9	2.1	3.7	4.9	0.8	2.3
3	2.2	2.8	2.0	1.4	1.6	1.1	2.7	3.0	3.7	4.1	3.8	4.3	5.0	6.0	6.3	4.8	4.8	6.8	7.1	9.5	8.9	7.6	7.4	8.2	9.5	1.1	4.8
4	7.8	8.1	8.3	8.4	8.2	7.8	7.5	8.3	9.2	9.6	9.9	9.4	8.9	7.6	6.7	5.6	5.7	4.3	3.4	3.8	3.4	3.1	1.2	0.6	9.9	0.6	6.5
5	1.6	1.5	1.1	1.9	2.9	2.8	2.6	2.0	1.7	2.3	2.2	2.0	1.5	1.0	1.1	1.6	1.2	1.0	1.5	0.6	1.3	0.7	0.3	1.8	2.9	0.3	1.6
6	4.2	3.6	3.1	3.2	0.9	1.0	1.9	1.1	1.2	1.2	0.9	1.1	1.5	2.1	2.1	1.3	1.7	1.8	1.0	1.3	1.7	2.0	1.6	1.2	4.2	0.9	1.8
7	1.7	2.4	3.7	3.4	4.5	3.9	3.5	4.3	5.0	6.7	6.1	6.3	5.8	5.7	6.0	6.1	5.8	5.2	4.1	4.6	5.3	4.2	5.4	5.0	6.7	1.7	4.8
8	6.5	7.0	6.7	7.8	6.9	6.3	6.6	6.8	7.3	7.8	7.7	7.5	6.7	6.0	6.5	7.0	6.7	7.5	7.7	7.9	7.6	7.4	8.0	8.5	8.5	6.0	7.2
9	8.9	8.9	8.3	7.9	9.1	8.6	7.9	7.8	7.0	7.1	7.4	7.2	6.5	7.0	7.3	6.4	5.8	3.4	1.4	6.0	3.5	2.6	3.6	2.2	9.1	1.4	6.3
10	0.7	1.3	0.6	0.4	1.2	1.7	1.6	0.9	1.6	1.4	0.9	0.7	0.8	0.7	0.8	0.8	1.4	1.2	0.4	0.7	1.8	3.7	0.8	0.9	3.7	0.4	1.1
11	0.8	3.6	4.7	4.3	1.7	3.6	6.4	5.8	5.5	4.3	5.5	6.3	7.6	8.2	7.8	8.1	8.4	8.9	10.4	10.8	10.6	11.0	12.1	10.7	12.1	0.8	7.0
12	10.6	11.4	10.7	10.4	11.0	9.7	8.9	9.0	8.6	8.4	7.8	8.1	8.3	7.8	5.9	4.1	6.5	5.6	6.0	5.1	6.0	6.1	5.1	3.8	11.4	3.8	7.7
13	3.2	3.2	2.6	3.9	4.8	4.8	3.6	3.9	3.5	2.7	2.1	1.8	1.4	1.8	1.8	2.8	2.1	1.8	2.1	3.0	3.1	1.6	3.0	4.5	4.8	1.4	2.9
14	4.8	5.7	7.2	7.7	7.6	7.5	8.8	9.9	10.1	10.9	10.5	10.5	10.8	10.2	10.3	11.4	9.8	9.7	9.2	9.0	6.3	4.9	4.1	5.1	11.4	4.1	8.4
15	3.5	1.5	0.8	0.7	3.5	2.6	1.5	1.7	2.1	0.8	1.0	1.4	1.2	1.1	1.0	1.5	2.0	2.4	3.0	2.4	4.6	5.0	3.9	4.4	5.0	0.7	2.2
16	5.1	4.4	2.6	3.3	2.0	2.4	1.8	1.0	1.4	1.7	1.4	1.3	1.5	0.5	0.9	1.3	2.3	2.4	2.6	2.1	2.0	1.7	0.8	1.7	5.1	0.5	2.0
17	0.7	0.9	1.0	1.1	2.4	2.3	2.4	2.6	3.2	3.0	3.5	2.5	2.9	3.5	3.2	3.0	2.8	3.1	2.6	2.0	2.2	1.4	1.2	0.7	3.5	0.7	2.3
18	2.2	2.3	1.1	1.7	2.9	3.4	4.0	3.6	3.1	3.7	2.7	1.3	1.5	1.4	1.6	0.7	0.7	2.5	2.6	0.9	1.3	0.9	0.8	1.4	4.0	0.7	2.0
19	0.8	1.7	1.4	2.2	2.3	2.5	2.5	2.5	2.5	1.8	1.7	2.2	4.6	3.5	3.4	2.4	2.1	2.3	3.7	5.4	5.3	5.4	5.6	4.9	5.6	0.8	3.0
20	4.5	4.5	4.0	3.8	3.3	2.7	3.2	4.2	4.1	2.6	1.6	4.1	3.3	1.8	3.6	3.9	3.7	3.2	1.9	1.1	0.8	0.6	0.4	0.5	4.5	0.4	2.8
21	0.8	1.3	1.0	0.9	0.8	2.1	2.1	0.9	3.6	1.3	1.9	2.2	3.1	3.1	2.4	2.5	2.5	2.4	2.5	2.2	1.7	2.0	2.9	3.2	3.6	0.8	2.1
22	4.4	4.1	3.3	4.5	4.5	7.0	6.3	2.3	3.7	2.5	2.6	3.2	3.3	3.3	2.0	2.4	1.9	1.5	1.5	1.7	1.7	2.3	2.5	2.8	7.0	1.5	3.1
23	3.0	3.8	2.8	5.0	6.5	7.8	8.3	8.6	9.3	9.3	9.1	8.0	5.1	4.2	3.8	2.6	1.7	1.7	2.2	2.3	2.4	3.3	3.4	3.7	9.3	1.7	4.9
24	2.5	3.4	3.7	2.5	2.7	2.1	3.0	3.2	2.8	1.3	0.8	2.1	2.3	2.1	1.8	1.9	1.2	2.1	1.9	1.1	1.7	3.4	3.7	3.7	3.7	0.8	2.4
25	3.9	3.4	3.4	3.5	2.8	2.2	3.3	4.1	3.5	1.8	1.0	1.9	2.4	2.5	2.8	2.5	2.8	2.6	2.3	2.2	2.0	2.4	2.2	1.3	4.1	1.0	2.6
26	2.6	2.8	1.8	4.9	4.0	5.4	5.5	6.7	4.3	4.5	4.3	4.7	3.8	3.3	3.5	3.1	4.8	7.4	9.2	4.2	6.4	9.0	4.2	3.9	9.2	1.8	4.8
27	3.8	5.0	3.3	5.0	7.3	7.0	6.6	6.2	7.3	6.5	6.5	5.8	4.8	4.6	5.6	4.1	3.2	3.9	2.8	2.1	3.2	5.8	4.8	3.7	7.3	2.1	5.0
28	2.7	1.8	1.6	1.9	2.6	2.3	3.1	4.9	5.5	4.2	6.5	7.5	5.0	5.5	5.6	4.2	4.3	5.5	4.7	3.8	4.0	3.7	2.5	3.6	7.5	1.6	4.1
29	5.3	4.2	4.0	2.6	3.0	3.5	3.5	3.6	1.7	1.5	1.1	2.1	2.5	3.3	2.5	3.0	3.0	3.1	2.0	1.9	1.8	1.5	0.7	0.6	5.3	0.6	2.6
30	2.7	1.9	1.5	1.9	3.3	1.4	1.2	1.1	0.5	1.1	3.3	5.1	4.0	3.3	1.8	3.4	3.7	2.6	2.6	2.4	1.4	1.8	1.8	2.9	5.1	0.5	2.4
31	2.0	1.5	2.8	3.2	2.6	1.9	2.8	1.2	1.3	1.0	0.9	0.9	1.0	1.6	2.2	1.6	1.7	2.1	3.3	3.2	1.8	1.3	1.5	0.9	3.3	0.9	1.8
Max.	**10.6**	**11.4**	**10.7**	**10.4**	**11.0**	**9.7**	**8.9**	**9.9**	**10.1**	**10.9**	**10.5**	**10.5**	**10.8**	**10.2**	**10.3**	**11.4**	**9.8**	**9.7**	**10.4**	**10.8**	**10.6**	**11.0**	**12.1**	**10.7**	**12.1**		
Min.	**0.7**	**0.9**	**0.6**	**0.4**	**0.8**	**1.0**	**1.2**	**0.9**	**0.5**	**0.8**	**0.8**	**0.7**	**0.8**	**0.5**	**0.8**	**0.7**	**0.7**	**1.0**	**0.4**	**0.6**	**0.8**	**0.6**	**0.3**	**0.5**		**0.3**	
Avg.	**3.4**	**3.5**	**3.4**	**3.7**	**3.9**	**3.9**	**4.1**	**4.1**	**4.2**	**3.9**	**3.9**	**4.1**	**4.0**	**3.7**	**3.6**	**3.6**	**3.7**	**3.8**	**3.7**	**3.5**	**3.5**	**3.6**	**3.2**	**3.3**			**3.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.4	2.6	5.1	5.8	5.7	6.0	5.0	5.5	5.9	5.1	6.1	5.7	5.6	6.3	6.5	6.5	6.4	5.9	6.3	6.1	6.4	6.9	7.9	8.1	8.1	1.4	5.8
2	8.0	8.0	7.6	7.4	7.5	7.5	7.8	7.4	8.0	7.3	7.5	9.0	8.6	7.8	7.6	8.3	7.7	7.8	5.9	5.6	5.1	5.0	5.3	5.5	9.0	5.0	7.2
3	4.3	5.0	5.0	6.3	6.4	6.8	6.2	6.7	6.0	5.5	4.8	5.8	4.4	3.8	2.8	2.9	2.3	1.7	2.1	2.3	2.1	0.7	1.2	2.0	6.8	0.7	4.0
4	1.4	0.4	1.4	2.4	1.3	2.1	2.7	2.7	2.6	2.4	2.3	3.3	3.2	3.3	3.2	3.7	3.0	1.0	2.3	3.3	1.6	1.3	1.2	0.6	3.7	0.4	2.2
5	0.6	1.0	1.3	0.5	1.7	2.3	2.5	3.0	3.9	3.0	3.6	3.4	2.7	4.4	4.9	3.9	4.2	4.6	5.2	4.4	4.1	3.7	4.6	4.2	5.2	0.5	3.2
6	3.3	3.8	3.5	1.1	0.8	1.9	1.4	1.3	1.8	1.5	1.4	1.1	1.6	3.5	3.0	2.9	2.6	2.6	3.7	2.0	3.8	3.7	5.1	4.9	5.1	0.8	2.6
7	5.0	7.7	9.3	8.5	9.2	9.4	7.2	6.1	5.0	4.5	3.3	1.9	1.7	3.6	3.1	2.1	2.8	2.2	1.5	2.3	1.5	1.9	1.2	1.6	9.4	1.2	4.3
8	2.4	2.5	2.4	2.1	0.9	0.9	0.6	1.0	0.9	1.1	1.0	1.2	2.9	2.8	2.7	2.5	3.0	3.6	2.0	5.8	7.2	5.1	4.9	5.3	7.2	0.6	2.7
9	5.6	6.4	6.9	5.6	6.4	7.6	8.7	7.6	6.6	5.6	4.6	4.8	3.8	4.1	4.4	3.6	3.6	4.3	4.4	4.8	5.3	5.5	5.8	6.3	8.7	3.6	5.5
10	6.8	6.7	7.1	6.3	5.5	4.8	2.6	2.8	2.7	2.4	0.9	1.1	2.4	3.2	2.7	3.3	3.1	2.8	2.6	2.2	1.7	1.3	1.0	1.2	7.1	0.9	3.2
11	0.6	0.3	0.6	0.6	0.7	2.1	2.7	3.3	2.4	1.4	1.6	3.0	2.6	1.6	1.5	0.8	1.1	1.0	0.9	0.8	1.0	1.8	2.2	1.5	3.3	0.3	1.5
12	1.9	5.1	6.3	6.7	6.8	6.5	5.5	5.6	5.7	5.0	2.8	3.9	3.7	1.5	1.3	0.9	0.8	2.6	2.8	1.2	0.6	2.3	5.7	6.0	6.8	0.6	3.8
13	5.1	4.6	5.4	3.9	3.1	4.5	3.1	3.3	1.9	2.3	3.1	1.1	1.5	1.4	0.9	0.8	1.4	1.2	1.8	1.9	1.7	1.3	1.3	0.6	5.4	0.6	2.4
14	1.2	1.5	2.2	1.2	1.4	3.4	3.0	1.4	1.3	1.8	1.1	2.7	2.5	2.3	2.7	2.3	1.9	2.2	2.5	2.3	2.3	1.8	0.9	1.1	3.4	0.9	2.0
15	1.2	1.4	1.4	1.5	4.8	4.3	4.1	4.6	5.4	4.7	4.9	4.3	2.7	2.4	2.2	2.7	3.0	3.5	3.0	4.3	5.6	6.7	7.3	6.8	7.3	1.2	3.9
16	7.3	6.1	6.0	6.6	5.8	4.0	4.3	4.3	3.0	2.3	1.8	1.7	1.5	1.2	1.3	2.9	4.0	3.3	3.1	3.3	4.3	1.0	0.9	0.6	7.3	0.6	3.4
17	0.3	0.6	0.7	0.5	0.7	0.6	1.5	1.7	1.6	3.5	3.5	3.8	3.7	3.7	3.8	4.0	4.0	3.8	3.3	2.9	2.6	2.2	2.3	2.0	4.0	0.3	2.4
18	2.4	1.2	1.1	3.8	2.4	1.8	3.3	1.3	1.5	1.6	2.8	3.2	3.1	2.3	2.7	2.8	2.8	3.4	2.9	2.8	2.3	1.8	1.2	0.4	3.8	0.4	2.3
19	0.4	0.5	0.6	0.8	0.7	1.3	2.0	1.5	2.6	2.1	2.7	2.8	3.0	3.9	3.0	2.9	2.9	2.5	2.6	3.2	3.8	3.2	2.5	2.2	3.9	0.4	2.2
20	1.5	2.9	3.0	3.4	1.1	1.2	1.6	1.3	1.0	1.3	2.3	2.0	1.4	1.9	2.5	1.9	1.9	1.8	1.8	0.9	2.0	2.1	1.6	0.5	3.4	0.5	1.8
21	0.4	0.8	1.5	1.3	0.6	1.4	1.3	1.7	2.3	2.2	2.7	2.2	2.2	2.8	3.3	3.9	3.7	3.8	3.4	2.6	1.9	2.2	0.6	0.8	3.9	0.4	2.1
22	0.7	0.9	0.9	0.7	2.0	2.5	2.2	1.8	2.1	1.2	1.6	1.7	1.7	1.8	1.5	1.1	2.1	2.4	4.0	4.9	3.9	3.1	2.4	2.3	4.9	0.7	2.1
23	1.5	2.3	1.2	1.3	1.2	0.8	0.4	0.7	0.7	0.9	0.6	1.5	1.8	2.2	2.9	2.7	2.4	3.0	3.0	2.5	2.4	1.3	0.5	0.3	3.0	0.3	1.6
24	0.7	0.9	1.0	1.5	1.0	1.8	1.5	1.8	1.7	2.0	1.3	1.2	1.1	1.8	3.4	4.7	4.6	4.3	4.7	4.9	4.1	5.2	5.7	5.5	5.7	0.7	2.8
25	5.7	6.1	4.3	3.6	2.8	3.6	5.3	6.1	6.4	6.1	6.6	6.8	6.7	6.9	7.0	6.3	6.8	5.3	5.3	4.5	5.4	5.8	6.0	5.7	7.0	2.8	5.6
26	5.9	7.0	7.8	8.4	9.0	8.9	8.2	7.8	7.7	8.1	8.4	6.9	6.6	7.4	8.0	8.3	7.6	8.1	7.6	7.5	6.9	6.0	5.3	5.3	9.0	5.3	7.4
27	4.3	4.7	3.5	2.5	2.1	1.8	1.4	2.2	2.3	1.9	1.1	1.6	1.7	2.6	3.0	2.7	3.0	3.0	2.9	3.2	2.4	1.8	2.2	1.5	4.7	1.1	2.5
28	1.2	0.7	0.9	2.2	2.0	1.0	0.6	2.9	2.8	3.8	3.8	3.2	3.6	4.8	2.9	4.2	2.5	2.2	2.0	2.5	2.2	1.8	1.8	2.4	4.8	0.6	2.4
29	3.6	3.5	3.3	2.7	3.3	2.9	2.2	1.8	1.9	1.3	2.0	1.5	1.2	0.7	1.1	1.8	1.5	2.0	2.1	1.6	1.4	1.5	1.2	2.2	3.6	0.7	2.0
30	2.2	1.2	2.5	2.6	2.7	1.8	2.6	2.6	1.5	1.9	2.4	2.8	3.1	3.2	3.2	3.0	3.3	3.3	2.7	2.4	2.8	2.5	1.7	1.0	3.3	1.0	2.5
Max.	**8.0**	**8.0**	**9.3**	**8.5**	**9.2**	**9.4**	**8.7**	**7.8**	**8.0**	**8.1**	**8.4**	**9.0**	**8.6**	**7.8**	**8.0**	**8.3**	**7.7**	**8.1**	**7.6**	**7.5**	**7.2**	**6.9**	**7.9**	**8.1**	**9.4**		
Min.	**0.3**	**0.3**	**0.6**	**0.5**	**0.6**	**0.6**	**0.4**	**0.7**	**0.7**	**0.9**	**0.6**	**1.1**	**1.1**	**0.7**	**0.9**	**0.8**	**0.8**	**1.0**	**0.9**	**0.8**	**0.6**	**0.7**	**0.5**	**0.3**		**0.3**	
Avg.	**2.9**	**3.2**	**3.5**	**3.4**	**3.3**	**3.5**	**3.4**	**3.4**	**3.3**	**3.1**	**3.1**	**3.2**	**3.1**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.0**	**3.1**	**2.9**			**3.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.0	2.2	2.2	1.6	2.0	2.7	3.2	1.3	1.4	3.3	2.5	2.1	2.8	1.9	2.4	1.6	1.5	1.1	0.8	1.4	1.4	3.0	2.2	1.6	3.3	0.8	2.0
2	2.8	1.8	1.9	2.0	2.4	2.2	3.3	2.0	1.3	1.3	2.8	2.6	2.3	2.6	2.7	2.7	4.0	2.9	3.0	2.9	3.0	2.8	1.7	1.5	4.0	1.3	2.4
3	1.4	4.6	6.3	5.5	5.4	4.9	5.2	5.7	5.0	4.2	4.7	4.6	5.0	5.4	4.2	1.8	2.0	3.0	3.1	2.4	3.7	3.0	2.6	1.5	6.3	1.4	4.0
4	1.9	0.7	0.6	0.3	0.5	0.6	0.7	1.0	2.0	2.9	1.5	1.3	0.7	3.6	4.3	4.2	3.8	2.8	2.1	1.7	1.5	0.5	1.3	0.8	4.3	0.3	1.7
5	0.3	0.3	0.5	0.4	0.5	1.5	2.4	0.8	0.8	0.5	1.1	2.6	3.2	2.4	2.0	2.9	2.7	3.5	3.9	1.5	3.2	2.2	0.8	0.9	3.9	0.3	1.7
6	0.8	1.5	2.4	1.2	0.9	1.2	1.0	1.3	2.7	3.4	3.8	2.5	2.9	3.8	3.2	3.1	4.2	3.6	1.7	2.2	1.5	1.6	0.9	0.3	4.2	0.3	2.2
7	1.1	1.7	2.1	5.3	3.6	3.1	1.4	1.5	1.5	1.4	1.0	1.0	1.1	1.1	1.2	2.2	2.7	2.6	2.1	2.4	2.1	1.8	1.6	1.0	5.3	1.0	1.9
8	0.7	1.2	1.1	1.2	0.7	1.3	1.2	1.8	2.8	2.5	2.1	2.4	2.4	3.8	3.9	3.2	5.5	5.3	2.8	1.6	1.5	1.4	2.0	1.8	5.5	0.7	2.2
9	1.4	1.3	0.8	2.4	5.2	6.3	7.5	7.9	8.0	6.8	6.3	7.1	4.3	4.9	6.0	4.6	4.3	4.0	4.0	2.9	2.1	2.2	1.8	3.5	8.0	0.8	4.4
10	4.4	4.0	3.8	4.4	5.0	5.0	3.4	3.8	2.7	2.5	1.9	1.1	1.1	0.5	1.5	2.1	2.2	2.6	2.2	1.8	2.0	1.4	1.5	1.6	5.0	0.5	2.6
11	1.5	1.6	0.8	1.2	1.1	1.2	1.3	0.7	1.4	1.7	1.8	2.3	2.6	2.8	2.7	2.8	2.8	2.8	2.6	2.8	2.3	1.6	0.5	0.8	2.8	0.5	1.8
12	0.7	1.1	1.4	1.8	2.2	2.1	2.5	2.2	1.0	0.5	1.7	0.7	1.0	0.6		1.1		1.0	1.8	1.8	1.3	2.0	1.8	2.7	2.7	0.5	1.5
13	1.4	1.2	1.8	1.2	2.1	2.8	3.9	3.6	3.3	2.7	2.9	2.6	2.5	0.8	0.7	1.5	1.7	1.7	1.4	1.6	1.0	1.3	0.8	0.6	3.9	0.6	1.9
14	0.6	0.4	1.2	1.5	1.4	1.5	1.7	1.6	1.5	0.7	2.0	2.5	2.4	2.3	2.6	2.7	2.8	2.5	2.3	2.4	1.6	1.9	1.8	0.8	2.8	0.4	1.8
15	1.2	0.6	0.8	1.5	3.7	1.4	1.9	6.0	6.5	6.3	6.0	6.0	6.3	7.1	6.9	6.6	4.8	4.1	3.7	4.1	2.5	1.9	3.7	3.1	7.1	0.6	4.0
16	1.6	1.8	1.4	2.0	2.0	3.2	4.0	2.5	2.1	1.2	2.0	3.3	3.2	3.0	1.9	2.5	2.7	2.7	3.4	4.0	3.3	3.3	3.5	3.8	4.0	1.2	2.7
17	4.0	3.5	3.3	1.9	1.6	6.4	5.3	4.4	5.2	7.6	5.2	3.9	4.6	3.9	3.5	2.7	3.4	3.7	3.3	3.9	7.3	8.1	5.2	5.5	8.1	1.6	4.5
18	4.1	4.8	6.5	6.1	6.1	5.9	6.6	6.3	6.0	5.9	4.6	4.6	3.7	4.0	4.5	4.4	4.1	3.6	3.9	3.4	4.3	5.1	5.4	4.7	6.6	3.4	4.9
19	4.4	5.4	5.9	6.2	6.0	6.1	6.3	5.6	3.8	3.4	2.5	2.1	2.7	1.5	2.1	3.3	2.6	1.2	2.1	3.1	2.5	2.2	3.7	6.8	6.8	1.2	3.8
20	6.3	6.0	5.9	5.3	5.1	6.2	4.4	3.8	4.6	6.7	6.3	6.1	7.1	4.4	4.6	6.2	5.5	7.7	6.5	4.2	4.5	2.9	3.6	3.3	7.7	2.9	5.3
21	1.7	1.1	1.0	1.4	2.7	4.8	3.2	2.2	2.1	2.5	5.0	4.9	5.6	5.7	5.9	6.5	6.6	5.8	3.2	2.4	3.9	5.6	3.7	2.9	6.6	1.0	3.8
22	4.0	4.5	6.1	5.2	3.9	2.4	2.1	2.1	2.4	1.5	1.9	1.1	1.9	1.5	1.6	1.4	0.6	0.5	0.0	0.9	0.9	0.6	0.7	2.3	6.1	0.0	2.1
23	2.7	3.0	2.0	0.2	0.0	0.6	1.0	1.9	2.3	1.7	2.6	6.5	6.3	4.8	3.7	5.5	3.8	3.6	1.8	1.2	1.4	2.2	1.3	3.0	6.5	0.0	2.6
24	4.6	4.5	4.9	5.5	6.0	5.3	4.7	3.6	2.8	1.4	3.2	4.0	2.2	1.4	1.9	2.5	3.9	3.5	3.8	1.8	2.8	1.0	1.2	2.3	6.0	1.0	3.3
25	2.4	1.8	2.1	2.4	2.0	2.3	2.5	2.7	1.8	1.5	3.1	4.2	2.2	2.9	1.9	1.5	2.2	3.2	2.5	2.0	2.9	2.6	1.9	0.9	4.2	0.9	2.3
26	2.1	0.9	1.0	2.0	1.5	2.4	6.4	6.7	7.4	6.9	5.9	5.1	4.0	4.8	2.8	1.0	1.0	2.2	3.1	3.7	2.7	2.1	1.1	0.7	7.4	0.7	3.2
27	2.0	1.6	1.6	1.5	1.6	2.2	2.4	3.2	3.7	3.2	1.8	2.4	2.2	1.7	1.3	0.5	0.7	1.8	2.3	3.1	2.7	3.2	3.4	3.0	3.7	0.5	2.2
28	1.1	0.7	1.5	3.3	3.2	3.0	5.1	5.7	6.5	6.6	4.2	0.9	1.5	4.8	4.4	4.8	4.2	2.6	2.7	3.5	3.1	2.7	2.2	2.2	6.6	0.7	3.3
29	4.4	5.7	6.3	7.4	7.4	6.1	7.1	7.2	4.8	5.2	5.4	5.7	5.1	3.6	3.7	2.8	3.3	2.2	3.1	2.3	4.8	4.5	4.0	6.9	7.4	2.2	5.0
30	6.8	6.9	6.6	5.3	7.7	9.6	10.6	9.7	7.9	5.7	4.3	3.5	4.6	4.5	3.5	3.8	3.9	4.3	4.2	7.2	5.7	5.8	4.3	6.5	10.6	3.5	5.9
31	4.8	5.5	5.7	2.4	1.6	1.9	4.4	6.4	5.7	5.2	3.6	5.0	8.4	7.6	6.5	5.3	7.2	6.0	7.2	3.8	3.4	3.0	7.2	5.5	8.4	1.6	5.1
Max.	**6.8**	**6.9**	**6.6**	**7.4**	**7.7**	**9.6**	**10.6**	**9.7**	**8.0**	**7.6**	**6.3**	**7.1**	**8.4**	**7.6**	**6.9**	**6.6**	**7.2**	**7.7**	**7.2**	**7.2**	**7.3**	**8.1**	**7.2**	**6.9**	**10.6**		
Min.	**0.3**	**0.3**	**0.5**	**0.2**	**0.0**	**0.6**	**0.7**	**0.7**	**0.8**	**0.5**	**1.0**	**0.7**	**0.7**	**0.5**	**0.7**	**0.5**	**0.6**	**0.5**	**0.0**	**0.9**	**0.9**	**0.5**	**0.5**	**0.3**		**0.0**	
Avg.	**2.5**	**2.6**	**2.9**	**2.9**	**3.1**	**3.4**	**3.8**	**3.7**	**3.6**	**3.4**	**3.3**	**3.4**	**3.4**	**3.3**	**3.3**	**3.2**	**3.3**	**3.2**	**2.9**	**2.7**	**2.8**	**2.7**	**2.5**	**2.7**			**3.1**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.0	8.5	5.9	3.4	2.0	1.5	0.8	2.8	3.0	2.8	3.7	3.5	3.3	3.0	1.9	1.9	1.6	1.1	1.0	2.0	2.3	2.7	2.8	2.3	8.5	0.8	2.9
2	2.5	1.6	1.5	1.1	1.5	1.1	0.6	0.7	0.4	0.2	0.4	1.2	1.9	1.9	0.6	1.1	1.4	1.3	1.2	1.2	1.2	1.4	1.8	2.0	2.5	0.2	1.2
3	2.8	3.6	3.5	2.8	3.0	1.4	0.2	0.5	1.9	2.8	1.7	1.7	1.7	1.2	1.8	2.2	1.9	2.4	1.9	1.8	1.8	1.2	1.1	0.9	3.6	0.2	1.9
4	0.9	1.4	1.9	0.9	0.6	1.0	2.0	2.3	1.6	1.4	1.6	1.9	1.1	2.2	1.8	1.8	1.9	2.0	2.3	0.8	1.2	0.9	0.6	0.3	2.3	0.3	1.4
5	1.2	0.7	0.1	0.3	1.6	0.7	0.1	0.3	2.7	3.9	4.8	4.1	4.4	3.1	3.2	2.7	2.4	2.7	2.3	1.7	1.3	0.3	0.5	0.1	4.8	0.1	1.9
6	0.3	0.4	2.5	2.7	2.6	2.3	1.9	0.5	1.2	0.8	0.7	1.9	4.1	4.7	4.1	3.1	2.9	2.8	2.8	5.1	9.3	7.4	5.3	6.2	9.3	0.3	3.1
7	3.4	4.3	4.2	4.0	2.4	3.4	4.7	4.5	5.0	4.8	3.4	1.5	2.0	2.8	2.5	2.1	2.4	1.9	1.4	2.1	2.9	5.2	3.6	4.2	5.2	1.4	3.3
8	3.0	2.7	2.0	1.9	1.4	0.2	2.5	2.8	2.6	1.9	1.8	2.5	2.4	2.6	3.3	3.4	3.0	3.3	3.5	2.9	2.5	2.2	1.6	0.4	3.5	0.2	2.4
9	0.4	0.4	0.3	1.3	1.5	0.8	1.3	2.0	1.7	1.3	1.0	1.2	3.1	3.2	3.4	3.8	4.6	3.5	2.5	2.5	2.9	2.3	1.8	1.3	4.6	0.3	2.0
10	2.5	2.4	1.3	1.3	1.9	3.4	3.1	2.2	2.0	0.6	1.4	1.6	1.8	2.0	1.9	1.9	2.0	2.9	2.8	2.0	2.0	1.5	1.6	1.1	3.4	0.6	2.0
11	0.6	0.6	0.7	2.2	2.0	1.3	0.8	1.9	0.4	0.9	1.3	1.8	1.7	2.2	3.0	2.7	2.6	2.6	2.9	1.9	0.3	0.2	1.7	3.0	3.0	0.2	1.6
12	3.6	4.1	2.9	3.6	3.6	3.3	2.7	2.0	1.2	1.6	0.4	1.9	3.6	2.9	3.2	1.4	2.7	4.0	4.3	2.7	2.1	1.1	1.9	2.7	4.3	0.4	2.6
13	0.3	0.6	0.6	0.7	2.8	2.3	4.8	5.6	4.9	2.7	2.2	1.8	1.0	1.5	6.0	6.1	5.9	5.7	4.8	5.2	4.4	4.7	3.5	2.7	6.1	0.3	3.4
14	0.9	1.3	1.6	4.1	3.4	3.0	1.3	0.8	2.8	4.1	4.1	4.1	2.8	2.3	1.2	1.4	2.1	1.1	0.0	0.0	0.0	0.0	0.0	0.5	4.1	0.0	1.8
15	0.1	0.0	0.4	0.0	0.5	1.2	2.6	2.8	2.1	3.2	1.6	2.7	1.9	0.9	2.0	1.1	0.7	0.4	1.4	2.1	1.3	0.7	3.1	1.7	3.2	0.0	1.4
16	1.2	1.7	1.8	1.1	0.3	2.2	1.5	1.0	1.9	1.2	1.0	1.1	0.9	0.2	1.5	2.7	2.3	2.3	2.3	1.4	2.4	1.3	0.6	1.2	2.7	0.2	1.5
17	2.7	2.5	1.8	1.7	2.6	3.2	3.2	3.6	3.2	1.9	2.7	2.9	2.2	2.8	3.4	3.0	2.6	1.9	2.1	1.7	1.4	0.7	1.0	2.3	3.6	0.7	2.4
18	2.3	1.7	1.5	3.7	4.6	4.4	4.2	5.2	5.1	4.8	4.5	4.2	5.2	5.2	4.4	4.7	4.9	4.0	4.6	4.2	3.2	3.2	4.4	3.8	5.2	1.5	4.1
19	2.9	2.9	2.1	2.3	1.4	1.0	3.2	1.2	2.9	2.8	2.3	0.5	0.7	2.4	2.3	0.8	0.1	0.1	0.0	1.1	3.7	4.2	5.8	6.0	6.0	0.0	2.2
20	5.3	6.9	7.9	7.5	7.1	6.8	7.8	7.8	7.0	7.3	5.6	4.2	2.3	1.5	0.1	0.0	1.7	1.0	1.3	0.6	3.5	4.8	4.7	5.0	7.9	0.0	4.5
21	5.7	5.4	4.4	5.1	4.3	4.5	4.5	3.9	3.2	2.8	1.8	0.7	1.5	2.3	2.6	2.7	2.8	2.7	2.6	3.2	2.2	1.3	1.6	0.3	5.7	0.3	3.0
22	0.4	1.8	0.6	0.7	1.8	1.8	2.3	2.0	1.1	0.0	0.6	1.4	0.7	2.3	2.5	3.0	3.3	3.1	2.7	2.0	0.6	0.5	2.8	3.7	3.7	0.0	1.7
23	4.1	3.8	4.2	3.7	3.5	2.7	2.8	2.9	3.1	2.8	3.2	1.6	2.0	2.0	2.3	1.8	2.2	1.5	2.3	0.5	0.5	0.4	0.4	1.5	4.2	0.4	2.3
24	1.4	1.4	0.5	1.2	2.1	2.7	3.7	3.5	3.7	5.8	5.2	2.5	2.5	1.8	0.7	1.4	1.6	2.9	4.7	4.9	4.5	3.3	2.7	2.0	5.8	0.5	2.8
25	2.4	2.3	1.2	1.0	1.4	1.9	1.1	1.8	0.8	1.9	1.6	2.1	2.9	2.0	0.3	0.4	0.2	0.3	1.4	1.5	2.6	2.1	1.9	1.9	2.9	0.2	1.5
26	1.6	1.8	1.3	1.8	1.3	1.6	2.4	1.0	1.9	2.2	2.0	0.5	1.6	4.1	2.9	3.0	2.0	1.1	1.5	1.6	1.7	1.7	0.9	0.2	4.1	0.2	1.7
27	0.1	0.0	0.2	0.3	0.5	0.7	0.9	0.9	0.0	0.4	0.1	0.5	1.0	1.0	0.6	1.1	0.5	0.6	0.9	2.0	4.0	4.4	4.0	3.3	4.4	0.0	1.2
28	2.7	2.8	2.2	2.1	1.5	1.3	1.1	2.1	1.6	1.5	1.9	1.5	1.6	2.2	2.0	3.3	3.9	3.5	4.3	5.0	5.4	5.1	4.7	4.4	5.4	1.1	2.8
29	4.5	4.2	2.8	2.7	3.7	2.7	2.7	4.2	3.5	3.2	3.0	2.7	1.7	2.0	2.4	4.0	3.6	3.4	5.3	4.7	4.5	4.3	4.7	5.0	5.3	1.7	3.6
30	5.5	6.3	7.0	7.4	6.2	3.4	2.5	2.4	2.9	3.7	2.7	0.6	1.3	2.7	3.5	2.5	1.6	1.9	2.1	1.7	2.5	2.2	1.1	2.6	7.4	0.6	3.2
31	2.6	3.5	2.9	3.4	3.0	2.5	5.8	7.0	7.7	7.5	7.5	8.4	8.7	8.5	8.7	9.2	9.9	10.5	10.5	10.6	10.8	10.4	10.2	10.7	10.8	2.5	7.5
Max.	**6.0**	**8.5**	**7.9**	**7.5**	**7.1**	**6.8**	**7.8**	**7.8**	**7.7**	**7.5**	**7.5**	**8.4**	**8.7**	**8.5**	**8.7**	**9.2**	**9.9**	**10.5**	**10.5**	**10.6**	**10.8**	**10.4**	**10.2**	**10.7**	**10.8**		
Min.	**0.1**	**0.0**	**0.1**	**0.0**	**0.3**	**0.2**	**0.1**	**0.3**	**0.0**	**0.0**	**0.1**	**0.5**	**0.7**	**0.2**	**0.1**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**		**0.0**	
Avg.	**2.4**	**2.6**	**2.3**	**2.4**	**2.5**	**2.3**	**2.6**	**2.7**	**2.7**	**2.7**	**2.4**	**2.2**	**2.4**	**2.6**	**2.6**	**2.6**	**2.6**	**2.5**	**2.7**	**2.6**	**2.9**	**2.6**	**2.7**	**2.7**			**2.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.4	9.7	9.0	8.7	9.2	9.2	8.7	8.0	7.8	6.9	7.8	7.7	8.0	8.3	7.9	7.2	7.6	7.8	6.9	5.5	6.3	6.3	6.4	6.3	10.4	5.5	7.8
2	6.4	6.7	5.0	5.0	5.2	5.2	4.6	3.3	2.8	5.3	3.1	3.5	4.4	5.5	5.8	6.6	6.7	8.0	9.7	10.9	12.0	9.1	8.5	9.3	12.0	2.8	6.4
3	9.1	10.2	9.8	9.7	9.9	9.3	9.2	9.1	9.6	7.0	6.8	6.3	4.8	2.9	2.8	2.3	2.7	1.1	2.9	1.3	0.8	1.7	3.2	0.5	10.2	0.5	5.5
4	1.0	1.9	1.8	0.6	0.2	0.3	0.4	0.5	0.1	1.1	1.9	1.2	2.0	2.8	2.9	3.1	3.0	3.1	2.9	2.3	1.1	0.1	2.0	2.7	3.1	0.1	1.6
5	1.7	0.0	0.3	2.2	0.5	0.1	1.3	0.7	1.6	1.9	0.9	1.5	2.2	3.0	2.9	2.8	2.9	2.8	2.6	2.3	2.2	1.7	0.0	0.9	3.0	0.0	1.6
6	1.3	0.2	1.9	2.7	2.9	2.7	4.4	4.6	5.9	6.4	7.2	7.2	7.2	7.7	8.8	9.3	9.9	9.8	10.1	11.2	11.3	10.1	9.7	9.5	11.3	0.2	6.8
7	10.4	8.5	8.3	9.3	8.4	9.0	9.8	8.6	7.3	7.8	5.1	2.7	3.2	1.2	4.2	4.9	4.8	5.6	3.8	3.6	3.0	2.7	2.6	1.5	10.4	1.2	5.7
8	1.3	3.6	3.7	3.8	2.0	0.1	0.7	3.3	5.5	4.5	4.0	2.2	1.4	1.8	2.6	4.3	4.1	4.5	7.0	8.5	9.3	10.3	9.4	8.8	10.3	0.1	4.4
9	7.6	7.1	8.1	7.8	8.2	6.8	8.6	8.3	8.3	8.3	7.3	6.7	6.5	5.5	1.9	2.1	3.5	3.1	3.3	2.5	1.8	1.8	0.8	1.4	8.6	0.8	5.3
10	3.1	1.6	1.5	4.0	4.3	2.6	0.1	1.1	1.5	1.0	0.2	0.5	0.7	6.7	4.8	2.6	0.5	0.0	3.4	1.3	1.4	1.8	1.5	2.6	6.7	0.0	2.0
11	2.2	4.9	3.0	5.7	6.3	5.2	4.6	3.4	4.2	3.8	2.8	0.9	2.2	1.9	1.6	1.4	2.6	2.2	1.3	1.2	1.4	1.6	1.6	1.8	6.3	0.9	2.8
12	2.0	2.8	2.6	2.1	3.0	3.1	2.8	4.5	6.4	7.2	7.4	7.2	7.4	6.9	7.1	7.4	7.1	7.8	8.0	8.0	7.1	6.2	6.2	5.8	8.0	2.0	5.7
13	4.2	3.1	3.2	3.1	2.8	2.9	3.4	3.5	3.1	3.3	3.7	3.3	3.5	3.9	3.5	5.0	5.4	6.8	7.9	8.7	8.3	7.9	8.0	7.0	8.7	2.8	4.8
14	7.2	8.1	8.3	8.1	8.1	7.6	7.4	7.2	6.4	6.1	6.2	5.8	5.3	5.1	4.5	4.9	3.9	4.0	4.2	4.0	3.7	4.5	4.9	4.4	8.3	3.7	5.8
15	4.4	4.2	4.0	2.8	2.9	3.1	2.7	2.4	3.2	3.7	2.8	3.9	3.1	1.8	1.7	1.9	2.5	2.7	3.0	3.7	3.7	3.8	4.5	4.8	4.8	1.7	3.2
16	3.7	3.6	3.8	1.5	2.3	2.2	2.8	2.9	2.9	3.1	2.9	1.1	3.5	4.1	4.2	2.4	4.6	3.1	2.9	2.8	2.4	2.4	5.2	2.4	5.2	1.1	3.0
17	3.4	3.3	4.7	8.6	7.2	2.8	3.9	2.9	4.5	5.0	2.6	2.3	1.6	2.6	2.5	2.0	1.9	3.1	4.8	3.9	3.9	6.0	6.8	8.5	8.6	1.6	4.1
18	10.2	10.3	9.8	10.0	9.8	9.8	9.3	9.8	10.5	10.6	9.1	9.7	10.7	9.9	7.8	4.3	5.2	5.2	6.9	5.5	2.5	2.6	2.9	3.6	10.7	2.5	7.8
19	2.4	5.2	4.7	4.7	4.7	4.7	4.5	2.5	1.1	1.6	1.1	1.3	0.4	1.1	0.6	1.8	2.7	3.5	3.3	3.1	2.5	2.9	2.2	3.9	5.2	0.4	2.8
20	4.4	4.5	5.4	5.2	5.9	6.3	6.7	4.8	4.8	8.5	9.4	10.0	10.7	11.2	5.5	8.1	5.0	5.0	3.6	2.1	1.6	1.6	1.8	1.2	11.2	1.2	5.6
21	3.3	5.1	5.8	6.0	6.6	6.7	4.4	3.6	1.6	3.7	3.6	1.8	1.4	1.5	1.6	2.3	2.1	2.0	3.2	6.1	6.7	2.7	4.0	4.4	6.7	1.4	3.8
22	3.5	4.6	4.6	6.6	5.8	4.9	4.5	3.8	4.8	4.7	4.4	4.0	3.1	1.5	0.5	0.9	1.2	2.9	2.5	1.4	1.8	1.6	3.0	3.0	6.6	0.5	3.3
23	3.0	2.4	3.7	3.6	3.3	3.0	2.6	2.3	2.4	2.0	2.0	2.4	3.2	2.4	0.6	2.9	1.1	1.1	2.3	2.0	0.8	0.3	1.5	2.0	3.7	0.3	2.2
24	2.2	3.3	4.0	4.8	4.8	4.6	4.5	3.8	3.8	3.9	4.0	4.3	3.9	3.9	3.8	4.4	4.5	4.4	4.8	4.9	5.4	5.1	5.1	5.5	5.5	2.2	4.3
25	5.3	4.9	5.5	6.0	5.7	6.5	5.9	5.2	5.3	5.7	5.5	6.3	7.1	6.4	5.5	5.4	5.3	4.9	4.9	4.8	4.9	5.0	5.6	5.5	7.1	4.8	5.5
26	5.6	5.2	5.2	5.4	5.3	5.6	5.4	5.0	5.1	5.0	3.5	2.5	1.6	3.3	4.3	4.1	3.9	3.7	2.4	1.5	1.6	1.3	1.5	1.9	5.6	1.3	3.7
27	3.4	4.0	2.7	3.1	4.0	3.6	2.9	3.1	2.7	2.5	3.6	3.1	1.9	0.6	2.4	6.3	6.4	4.4	1.3	2.3	4.2	5.8	6.1	5.8	6.4	0.6	3.6
28	6.6	6.7	6.4	5.6	5.5	4.7	5.7	2.9	2.3	2.7	4.3	3.4	1.7	2.5	3.5	4.0	4.1	3.0	2.5	2.2	3.6	4.0	4.1	4.3	6.7	1.7	4.0
29	4.5	5.5	5.2	5.8	5.5	6.0	5.8	6.0	5.8	5.9	5.2	4.9	5.1	4.2	4.1	4.6	4.3	3.3	2.7	2.5	2.3	2.0	2.2	1.2	6.0	1.2	4.3
30	0.7	0.6	1.1	2.1	2.5	3.4	3.1	1.9	2.0	3.0	3.0	2.6	4.2	5.4	5.7	6.8	6.8	5.6	3.7	4.5	4.3	3.8	3.4	3.4	6.8	0.6	3.5
Max.	**10.4**	**10.3**	**9.8**	**10.0**	**9.9**	**9.8**	**9.8**	**9.8**	**10.5**	**10.6**	**9.4**	**10.0**	**10.7**	**11.2**	**8.8**	**9.3**	**9.9**	**9.8**	**10.1**	**11.2**	**12.0**	**10.3**	**9.7**	**9.5**	**12.0**		
Min.	**0.7**	**0.0**	**0.3**	**0.6**	**0.2**	**0.1**	**0.1**	**0.5**	**0.1**	**1.0**	**0.2**	**0.5**	**0.4**	**0.6**	**0.5**	**0.9**	**0.5**	**0.0**	**1.3**	**1.2**	**0.8**	**0.1**	**0.0**	**0.5**		**0.0**	
Avg.	**4.5**	**4.7**	**4.8**	**5.2**	**5.1**	**4.7**	**4.7**	**4.3**	**4.4**	**4.7**	**4.4**	**4.0**	**4.1**	**4.2**	**3.9**	**4.2**	**4.2**	**4.2**	**4.3**	**4.2**	**4.1**	**3.9**	**4.2**	**4.1**			**4.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.5	2.4	2.2	2.9	3.2	3.6	3.5	3.0	2.1	4.0	4.2	3.6	2.8	3.5	3.3	1.9	2.8	3.3	3.5	3.6	3.7	4.1	3.7	3.7	4.2	1.9	3.3
2	3.7	2.9	1.6	2.0	1.2	1.9	3.1	2.4	1.9	1.3	1.8	1.9	2.3	2.9	4.3	4.0	6.3	5.9	6.0	4.9	8.4	5.5	9.0	9.1	9.1	1.2	3.9
3	5.6	6.3	4.1	7.3	6.1	4.1	7.4	6.4	6.0	5.8	4.4	3.5	4.0	3.9	3.6	4.4	5.0	3.9	4.2	4.6	5.0	4.3	4.4	4.2	7.4	3.5	4.9
4	4.0	2.9	2.0	1.8	2.2	2.5	3.0	3.0	3.0	3.5	3.8	3.2	2.2	1.5	0.9	1.6	2.9	2.6	3.5	4.5	4.3	4.5	4.6	6.0	6.0	0.9	3.1
5	5.8	4.0	3.7	3.5	4.2	3.6	3.9	4.1	3.5	4.3	3.7	4.4	4.9	4.4	4.3	3.6	4.1	2.5	1.8	1.1	2.5	3.0	3.2	3.8	5.8	1.1	3.7
6	3.2	3.8	3.5	3.7	3.2	3.2	3.0	3.3	2.4	3.8	5.2	4.8	4.7	3.5	4.5	3.1	3.4	3.8	4.4	4.6	5.1	5.0	5.1	3.9	5.2	2.4	3.9
7	5.9	2.2	3.5	3.8	3.4	4.6	4.9	5.9	6.1	6.6	7.4	6.0	6.6	7.2	7.9	9.7	9.5	7.2	5.2	5.1	3.9	4.5	5.6	4.9	9.7	2.2	5.7
8	5.5	6.1	5.0	5.2	5.7	5.8	5.9	5.2	6.9	8.0	7.5	4.6	5.5	4.0	2.8	3.9	3.2	2.6	1.3	2.6	3.9	4.8	4.2	4.2	8.0	1.3	4.8
9	4.6	4.9	5.4	6.0	6.9	6.7	6.6	7.7	9.3	8.8	9.0	9.6	9.2	9.9	11.0	12.2	10.8	10.4	9.7	10.3	8.9	9.1	9.0	8.7	12.2	4.6	8.5
10	8.2	7.4	6.2	5.6	6.0	2.1	5.1	1.9	5.0	2.1	1.2	4.2	1.7	3.2	1.2	0.5	1.8	3.4	3.4	3.3	3.6	3.9	4.1	2.8	8.2	0.5	3.7
11	2.6	1.7	1.3	1.7	2.1	2.0	2.4	1.8	2.1	2.3	2.5	3.2	3.5	4.9	6.5	7.4	5.5	4.6	5.8	5.1	5.3	5.8	8.1	7.6	8.1	1.3	4.0
12	7.9	8.1	7.9	8.4	8.5	7.8	7.5	8.4	8.7	9.2	7.6	7.7	7.9	7.2	6.6	6.0	6.8	6.9	6.9	8.1	8.8	8.6	10.7	9.3	10.7	6.0	8.0
13	6.8	5.1	4.9	5.8	4.5	4.4	2.8	5.6	4.4	4.8	4.1	5.3	5.3	4.9	5.1	6.6	6.5	6.4	5.9	6.2	7.3	6.8	6.6	6.3	7.3	2.8	5.5
14	5.5	6.2	5.4	5.3	5.7	5.3	5.3	5.0	5.2	4.8	5.0	4.8	4.3	4.4	4.6	3.6	4.2	4.8	5.6	5.5	6.0	6.5	6.0	5.9	6.5	3.6	5.2
15	5.0	4.9	4.0	3.3	1.9	0.8	0.7	1.4	1.9	2.3	3.3	2.8	2.0	2.7	2.9	1.4	1.6	0.8	3.3	2.6	3.1	3.9	1.8	2.7	5.0	0.7	2.6
16	2.9	1.7	2.7	4.1	4.3	4.3	4.7	5.2	4.6	4.7	4.6	3.3	4.7	2.3	0.9	2.0	2.9	3.2	3.0	4.0	5.1	4.8	4.0	4.4	5.2	0.9	3.7
17	3.4	4.6	2.4	4.4	4.0	3.2	2.2	1.5	2.6	3.9	3.2	3.8	5.4	5.3	4.2	3.9	3.8	5.2	4.1	3.9	5.0	4.3	4.5	5.4	5.4	1.5	3.9
18	5.9	6.2	6.3	6.1	5.7	5.7	5.5	6.1	7.5	7.3	7.1	6.9	7.3	7.7	8.1	9.4	8.6	8.4	7.6	6.5	5.0	6.8	5.2	4.1	9.4	4.1	6.7
19	3.4	1.2	1.1	1.6	1.4	2.6	2.1	1.2	1.9	1.7	1.8	0.8	0.5	1.5	0.9	2.0	3.5	3.1	1.7	2.7	3.5	4.4	4.2	4.1	4.4	0.5	2.2
20	3.6	3.1	3.5	3.9	2.9	3.3	4.2	4.0	3.4	3.0	2.3	4.4	5.9	7.3	7.1	8.1	8.8	9.4	9.7	7.4	3.5	2.3	2.3	2.6	9.7	2.3	4.8
21	2.2	3.9	4.3	3.6	5.4	7.1	5.8	3.0	4.5	5.0	3.3	5.0	4.6	4.5	3.5	2.1	2.0	2.6	2.8	4.6	6.1	5.2	6.5	7.0	7.1	2.0	4.3
22	4.9	6.4	5.7	7.1	10.0	7.6	10.9	12.7	7.8	11.3	11.2	11.5	12.5	12.1	7.6	6.7	7.7	5.3	2.4	2.5	4.9	4.6	4.7	4.8	12.7	2.4	7.6
23	5.5	6.4	6.3	4.9	3.1	2.0	1.2	1.9	2.6	3.7	5.9	5.7	4.8	4.7	7.6	8.5	5.9	5.4	5.0	4.5	5.3	5.7	5.9	6.1	8.5	1.2	4.9
24	5.0	4.7	3.8	4.0	4.3	3.6	4.2	5.6	12.6	7.1	4.3	4.8	5.4	7.3	10.5	8.2	7.1	7.0	8.3	3.9	4.1	2.4	1.8	3.0	12.6	1.8	5.5
25	4.3	3.5	4.2	4.6	5.4	6.4	6.3	6.2	5.9	5.2	5.2	6.1	5.9	5.7	6.5	6.1	5.6	5.5	6.1	6.6	7.5	6.7	7.3	7.3	7.5	3.5	5.8
26	7.5	6.3	6.0	5.4	3.3	2.3	1.2	1.2	1.2	1.0	1.4	1.6	2.7	2.6	2.4	1.1	2.5	3.6	3.8	4.2	5.0	4.7	4.4	4.5	7.5	1.0	3.3
27	2.7	4.4	2.1	3.4	4.8	5.4	3.7	2.8	2.7	2.0	3.9	5.5	5.0	4.9	3.5	3.5	2.2	1.5	3.7	4.4	3.7	3.4	2.2	1.9	5.5	1.5	3.5
28	3.3	2.2	2.7	3.1	3.5	3.5	1.9	3.1	3.2	2.2	3.5	3.6	3.2	2.2	1.5	1.8	0.6	1.3	1.3	2.3	2.9	3.4	2.9	3.3	3.6	0.6	2.6
29	3.4	2.6	2.9	3.1	3.6	1.9	2.6	2.3	3.0	2.7	3.6	3.3	3.4	3.2	3.3	2.7	3.1	5.0	4.6	6.3	6.5	6.6	5.0	5.2	6.6	1.9	3.7
30	6.1	6.3	6.3	5.8	5.7	5.2	5.4	5.0	3.3	3.1	4.3	4.3	4.5	4.7	3.8	2.4	0.6	1.1	2.3	2.6	2.9	2.6	2.5	2.4	6.3	0.6	3.9
31	2.9	3.0	2.2	2.1	2.4	2.1	3.1	2.4	2.9	2.0	2.7	3.8	3.4	2.6	2.5	1.9	1.1	0.9	2.4	2.5	2.1	1.0	2.5	3.3	3.8	0.9	2.4
Max.	**8.2**	**8.1**	**7.9**	**8.4**	**10.0**	**7.8**	**10.9**	**12.7**	**12.6**	**11.3**	**11.2**	**11.5**	**12.5**	**12.1**	**11.0**	**12.2**	**10.8**	**10.4**	**9.7**	**10.3**	**8.9**	**9.1**	**10.7**	**9.3**	**12.7**		
Min.	**2.2**	**1.2**	**1.1**	**1.6**	**1.2**	**0.8**	**0.7**	**1.2**	**1.2**	**1.0**	**1.2**	**0.8**	**0.5**	**1.5**	**0.9**	**0.5**	**0.6**	**0.8**	**1.3**	**1.1**	**2.1**	**1.0**	**1.8**	**1.9**		**0.5**	
Avg.	**4.7**	**4.4**	**4.0**	**4.3**	**4.3**	**4.0**	**4.2**	**4.2**	**4.5**	**4.4**	**4.5**	**4.6**	**4.7**	**4.7**	**4.6**	**4.5**	**4.5**	**4.4**	**4.5**	**4.5**	**4.9**	**4.8**	**4.9**	**4.9**			**4.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.9	3.2	2.7	2.5	2.7	4.0	2.6	1.4	2.9	2.6	2.8	2.7	3.2	2.7	4.1	4.1	3.2	5.2	6.2	4.3	2.7	1.6	1.5	1.2	6.2	1.2	3.0
2	4.0	4.0	6.6	8.3	7.3	4.4	2.9	4.4	4.7	3.7	4.5	5.8	6.3	7.6	7.0	6.7	6.7	7.6	7.7	7.7	8.4	9.0	7.3	7.5	9.0	2.9	6.3
3	8.0	7.9	8.3	8.0	7.8	7.7	8.6	9.3	8.5	8.6	9.2	7.6	8.3	8.5	10.2	9.1	8.4	7.9	8.2	7.5	6.7	6.3	6.4	3.9	10.2	3.9	8.0
4	4.0	4.0	3.8	3.4	3.5	3.3	2.4	3.0	1.0	1.7	1.8	2.1	1.2	3.2	2.0	2.5	1.4	1.0	1.3	2.7	3.9	4.4	2.7	3.0	4.4	1.0	2.6
5	3.7	3.8	3.0	2.8	2.8	2.9	3.1	1.6	2.7	4.0	6.2	5.2	4.8	5.2	4.1	4.7	5.0	5.5	5.8	5.3	5.5	5.3	5.8	5.5	6.2	1.6	4.3
6	6.0	5.9	5.6	5.9	6.1	7.3	6.3	6.5	6.6	6.1	5.7	5.2	4.6	4.7	3.9	2.5	1.0	2.7	4.8	6.2	6.1	7.0	6.3	7.7	7.7	1.0	5.4
7	6.9	8.2	8.1	8.9	7.8	8.9	10.9	9.8	9.5	9.8	8.8	7.6	5.5	3.3	4.6	5.9	3.3	4.7	5.4	5.1	3.7	5.5	5.2	4.1	10.9	3.3	6.7
8	3.8	3.4	2.9	3.3	3.2	3.5	3.1	4.7	4.9	4.5	4.7	4.8	4.7	5.9	6.8	6.5	7.3	8.5	9.3	9.3	8.8	9.0	10.8	11.5	11.5	2.9	6.0
9	11.9	11.6	10.6	10.1	11.2	11.3	12.0	11.7	12.0	12.1	11.7	12.1	11.9	11.7	11.3	11.6	11.6	11.8	10.9	10.4	10.3	9.7	9.7	9.5	12.1	9.5	11.2
10	8.4	9.2	9.6	9.8	9.6	10.2	9.8	9.4	9.0	9.1	9.6	10.8	9.3	8.0	2.9	2.5	3.4	2.8	3.3	3.1	3.3	3.2	3.8	2.9	10.8	2.5	6.8
11	3.9	4.2	5.0	4.5	4.3	5.2	5.3	5.2	5.2	6.6	4.9	3.6	3.0	2.7	3.3	2.3	1.3	1.0	4.5	8.1	8.5	9.4	10.0	10.4	10.4	1.0	5.1
12	8.3	8.4	7.7	5.8	5.1	4.4	6.1	8.5	7.6	8.2	7.6	9.9	10.0	7.4	4.3	6.1	6.8	5.9	2.4	2.7	1.7	1.0	1.4	1.6	10.0	1.0	5.8
13	2.2	3.2	4.1	4.3	5.1	5.3	6.0	5.4	5.1	5.5	5.8	4.9	6.3	7.4	5.4	5.2	5.0	4.5	4.0	3.9	3.6	3.6	3.5	4.0	7.4	2.2	4.7
14	4.3	3.6	3.6	4.8	4.5	4.6	4.6	4.4	4.3	4.0	2.2	2.7	3.3	2.8	1.1	0.6	1.6	1.3	1.2	2.1	1.6	2.5	2.6	2.1	4.8	0.6	2.9
15	2.1	1.0	0.8	2.5	2.1	1.6	1.3	2.3	2.2	2.8	3.7	5.1	6.4	5.6	5.0	4.8	5.5	6.7	6.3	6.3	5.4	5.8	6.2	6.6	6.7	0.8	4.1
16	6.2	6.9	6.7	6.8	7.1	6.7	2.2	0.9	1.2	0.0	0.5	1.1	1.5	1.9	1.7	1.6	1.6	2.6	2.2	2.9	3.6	3.8	3.3	3.9	7.1	0.0	3.2
17	3.6	3.3	3.7	3.1	2.2	2.8	3.3	3.8	3.5	1.9	2.5	2.6	3.1	2.9	2.5	2.3	1.8	2.3	3.1	3.4	3.3	3.4	3.4	3.1	3.8	1.8	3.0
18	2.7	2.5	2.5	2.7	3.4	3.3	3.5	3.2	3.2	3.7	3.6	3.4	3.1	3.3	2.5	2.6	2.4	2.1	2.2	2.8	3.2	3.4	3.9	3.7	3.9	2.1	3.0
19	3.3	3.3	3.2	3.1	2.8	2.5	2.3	2.5	2.0	2.5	3.2	3.1	3.8	1.8	2.7	2.1	4.7	4.1	3.4	3.0	3.4	2.6	3.4	3.8	4.7	1.8	3.0
20	4.1	4.0	4.9	2.7	2.6	5.6	5.9	4.8	5.2	4.6	5.7	2.1	4.5	3.6	3.0	3.2	2.3	2.5	4.4	5.9	7.0	4.8	3.4	2.6	7.0	2.1	4.1
21	2.6	4.5	4.1	3.5	6.1	5.8	3.1	2.0	1.7	1.3	2.1	3.0	3.8	4.7	4.2	3.8	4.5	3.9	1.2	1.3	2.1	3.1	3.4	3.5	6.1	1.2	3.3
22	3.8	4.6	4.5	4.0	2.7	2.3	2.2	2.7	1.5	2.0	2.4	4.1	3.0	4.1	4.0	2.2	1.9	1.8	2.0	2.1	2.0	2.0	2.0	1.9	4.6	1.5	2.7
23	2.1	1.9	2.1	2.6	2.4	3.6	4.5	5.8	3.1	3.7	3.9	5.0	5.4	5.9	6.7	6.8	7.1	7.0	6.6	6.8	8.4	8.5	8.1	7.3	8.5	1.9	5.2
24	7.4	7.7	9.0	8.8	9.5	10.5	10.7	10.0	9.1	7.8	7.7	8.2	7.3	7.1	6.0	6.0	5.8	5.7	5.7	6.3	5.1	4.8	4.1	3.2	10.7	3.2	7.2
25	5.4	7.5	7.1	4.7	5.8	7.5	7.2	5.4	5.0	6.2	5.1	6.5	8.5	9.7	9.5	9.4	9.4	8.2	9.7	6.4	7.7	7.9	9.7	8.9	9.7	4.7	7.4
26	10.0	11.3	11.2	12.4	12.7	12.5	12.7	11.6	11.0	9.0	9.1	8.1	6.0	4.6	4.0	2.2	2.7	4.3	2.6	5.3	5.5	4.6	3.8	4.4	12.7	2.2	7.6
27	3.1	3.5	4.0	3.0	2.7	3.1	3.4	2.0	2.2	2.4	3.0	1.8	0.9	3.2	1.4	0.9	0.7	0.8	1.4	4.1	7.5	6.9	6.8	6.5	7.5	0.7	3.1
28	7.8	6.7	6.9	7.4	6.6	5.2	6.3	6.5	6.7	6.3	6.2	5.3	5.8	4.8	2.9	1.8	1.2	1.6	1.1	1.6	1.7	1.8	2.2	3.5	7.8	1.1	4.5
29	4.1	3.6	3.8	5.9	7.5	8.3	9.7	11.1	11.2	11.5	12.6	12.2	11.9	12.8	13.1	12.2	12.3	12.0	11.7	11.3	11.7	11.1	10.8	9.0	13.1	3.6	10.1
30	7.3	8.9	8.2	7.9	9.8	7.5	7.6	6.8	7.7	7.6	7.2	7.2	8.1	10.1	13.1	10.4	8.1	4.7	7.4	4.8	2.4	3.1	5.2	2.6	13.1	2.4	7.2
Max.	**11.9**	**11.6**	**11.2**	**12.4**	**12.7**	**12.5**	**12.7**	**11.7**	**12.0**	**12.1**	**12.6**	**12.2**	**11.9**	**12.8**	**13.1**	**12.2**	**12.3**	**12.0**	**11.7**	**11.3**	**11.7**	**11.1**	**10.8**	**11.5**	**13.1**		
Min.	**2.1**	**1.0**	**0.8**	**2.5**	**2.1**	**1.6**	**1.3**	**0.9**	**1.0**	**0.0**	**0.5**	**1.1**	**0.9**	**1.8**	**1.1**	**0.6**	**0.7**	**0.8**	**1.1**	**1.3**	**1.6**	**1.0**	**1.4**	**1.2**		**0.0**	
Avg.	**5.1**	**5.4**	**5.5**	**5.4**	**5.6**	**5.7**	**5.6**	**5.6**	**5.4**	**5.3**	**5.5**	**5.5**	**5.5**	**5.6**	**5.1**	**4.8**	**4.6**	**4.7**	**4.9**	**5.1**	**5.2**	**5.2**	**5.2**	**5.0**			**5.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Speed (RMYoung) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.9	3.5	3.4	2.2	4.3	3.5	4.7	4.6	3.2	3.3	4.7	2.6	1.1	3.8	3.8	4.8	5.2	4.8	5.1	4.8	5.0	6.2	5.9	5.3	6.2	1.1	4.1
2	5.9	4.7	5.6	6.3	6.8	7.3	7.8	7.5	7.9	7.0	7.1	8.4	11.3	9.9	10.2	9.5	8.7	9.2	8.4	9.3	8.6	7.8	7.4	6.9	11.3	4.7	7.9
3	7.8	7.7	7.9	8.5	8.2	8.2	8.4	7.7	8.7	9.7	9.0	9.3	9.5	9.6	10.1	9.7	10.2	9.6	9.3	9.6	9.7	9.7	9.7	9.5	10.2	7.7	9.0
4	6.9	7.1	6.8	6.1	5.0	5.4	5.4	5.3	5.9	5.5	5.6	6.6	6.8	6.8	6.4	6.4	5.2	5.4	5.1	5.6	5.4	5.9	5.6	5.2	7.1	5.0	5.9
5	5.2	5.7	6.2	6.5	6.1	5.9	6.3	6.1	5.4	6.3	5.3	5.5	6.0	5.9	7.6	6.9	5.9	5.4	8.0	8.1	7.3	6.8	5.5	5.9	8.1	5.2	6.2
6	7.2	7.6	6.8	5.8	5.4	5.7	5.3	4.8	5.0	4.6	5.3	4.8	3.7	3.7	3.8	3.3	2.3	0.6	1.2	1.5	1.3	0.6	0.4	0.2	7.6	0.2	3.8
7	0.3	0.7	0.5	0.6	1.2	1.8	3.1	3.1	2.3	1.6	0.9	1.3	2.2	1.9	3.3	2.8	3.3	3.5	2.2	2.3	4.1	4.2	4.9	5.9	5.9	0.3	2.4
8	7.1	7.1	6.9	8.5	10.4	11.9	11.9	12.0	11.1	11.4	12.1	12.4	12.6	13.3	13.7	13.3	12.5	12.1	10.6	9.2	10.7	12.9	14.3	13.1	14.3	6.9	11.3
9	11.0	9.3	8.2	7.6	6.1	2.8	1.7	2.0	1.1	0.4	0.0	1.2	1.9	0.5	0.6	0.3	0.7	1.1	1.6	1.5	1.7	2.1	3.3	2.5	11.0	0.0	2.9
10	1.9	1.5	1.7	7.5	2.5	2.8	2.6	5.1	6.2	2.7	4.6	5.0	3.5	4.1	3.9	7.8	8.4	4.7	2.9	3.7	6.1	6.6	4.6	4.8	8.4	1.5	4.4
11	2.8	2.9	2.2	3.0	4.2	5.8	2.1	1.9	2.1	5.0	2.2	2.4	3.2	3.2	5.5	3.9	4.1	7.4	7.7	6.3	4.5	1.9	8.6	7.2	8.6	1.9	4.2
12	4.4	7.5	8.0	7.0	7.1	5.8	5.0	4.6	3.7	3.2	3.3	3.0	1.2	2.7	2.2	3.6	3.4	3.3	2.8	1.7	1.7	3.5	1.5	2.0	8.0	1.2	3.8
13	3.2	1.7	3.3	3.1	3.6	3.4	2.6	2.2	2.3	3.5	2.4	3.5	2.4	1.3	1.8	3.2	1.4	2.0	3.2	1.7	1.9	2.7	2.9	1.5	3.6	1.3	2.5
14	1.6	2.1	1.7	2.3	3.5	2.6	1.8	1.3	1.3	2.2	5.8	5.3	1.5	1.7	2.7	6.4	8.3	7.5	7.2	7.5	7.3	7.2	6.8	5.8	8.3	1.3	4.2
15	5.1	4.7	3.7	3.6	3.6	3.2	3.6	3.4	3.7	3.5	4.2	3.3	0.7	2.4	2.9	2.4	2.4	1.0	1.3	3.0	2.5	2.1	0.9	2.7	5.1	0.7	2.9
16	2.0	1.9	3.1	3.9	3.6	3.2	2.7	4.1	5.1	5.3	2.3	1.1	3.0	5.1	4.3	4.3	5.5	6.9	4.7	4.9	5.1	4.7	5.5	6.8	6.9	1.1	4.1
17	6.8	6.1	6.6	6.3	5.9	7.8	7.1	6.0	6.2	6.9	8.0	8.1	8.2	7.4	7.7	8.1	7.3	6.4	7.6	7.4	7.7	7.6	7.5	7.0	8.2	5.9	7.2
18	6.8	7.1	7.0	6.9	6.4	6.1	6.6	5.7	5.2	5.4	5.5	6.0	6.1	6.7	6.4	6.6	6.4	6.7	5.9	6.3	6.4	7.1	7.8	7.8	7.8	5.2	6.5
19	6.7	7.2	7.6	7.8	7.7	8.0	6.7	6.3	6.9	6.8	6.8	6.7	7.2	8.2	8.1	7.8	8.3	8.8	9.1	9.1	9.0	9.2	9.8	9.1	9.8	6.3	7.9
20	9.1	9.4	8.5	8.1	8.9	8.8	7.4	6.3	6.5	5.4	6.4	6.4	5.8	6.0	6.8	5.1	5.3	5.0	4.6	3.4	2.0	0.8	0.9	0.7	9.4	0.7	5.7
21	1.5	1.2	0.6	0.5	1.2	1.2	1.7	2.3	2.1	1.8	2.3	2.4	2.7	2.1	3.1	2.6	1.5	2.0	1.8	2.5	2.6	3.0	3.4	3.9	3.9	0.5	2.1
22	4.9	4.1	5.5	5.7	6.2	6.6	6.0	5.1	5.3	6.1	5.9	4.4	1.8	1.7	0.7	2.8	2.9	3.7	2.6	1.4	2.4	0.9	2.4	5.5	6.6	0.7	3.9
23	7.4	8.2	8.6	7.9	7.1	7.5	7.0	6.2	4.9	1.7	5.6	8.3	4.9	5.2	5.4	5.5	3.8	4.3	4.4	3.9	5.2	2.9	5.7	5.8	8.6	1.7	5.7
24	5.5	2.5	3.8	5.2	5.7	8.6	11.5	6.2	4.5	5.2	4.1	3.1	3.3	6.3	6.7	4.1	2.2	1.9	2.4	6.4	4.5	3.4	1.6	5.0	11.5	1.6	4.7
25	4.0	3.8	3.7	4.6	6.6	6.3	7.3	7.5	7.9	7.3	7.5	7.7	8.5	7.3	5.5	1.7	1.7	2.1	2.1	5.0	6.2	8.3	7.6	9.7	9.7	1.7	5.8
26	7.4	7.3	8.3	5.6	5.1	5.5	7.7	11.8	8.6	6.7	7.6	12.4	9.2	11.4	6.7	9.1	11.0	11.1	6.7	5.6	8.0	8.5	6.7	8.5	12.4	5.1	8.2
27	8.7	8.7	8.9	8.9	8.8	8.5	9.7	10.3	8.7	8.7	7.6	6.3	6.0	6.7	6.9	6.6	5.6	7.2	6.3	3.3	2.2	3.3	2.4	3.1	10.3	2.2	6.8
28	4.0	5.3	4.7	3.4	3.7	3.2	3.6	4.6	5.2	3.9	3.7	4.6	4.9	5.7	2.6	3.8	5.9	5.3	4.5	3.1	3.3	3.0	5.5	5.5	5.9	2.6	4.3
29	5.8	5.2	4.8	6.3	6.7	3.9	6.9	3.7	2.0	3.4	4.4	3.4	2.7	5.1	5.2	2.8	2.7	2.4	3.8	3.6	3.1	2.8	3.1	2.2	6.9	2.0	4.0
30	2.3	2.8	2.5	2.6	2.8	4.7	4.8	5.4	2.0	2.4	1.8	1.2	2.3	3.4	3.1	2.6	2.2	2.9	4.1	6.5	2.6	2.3	3.8	3.9	6.5	1.2	3.1
31	3.1	6.4	6.6	7.5	6.9	6.6	8.4	7.2	6.5	8.3	6.3	7.0	8.0	7.6	7.6	6.1	7.0	7.6	7.0	7.0	6.8	6.8	5.6	5.9	8.4	3.1	6.8
Max.	**11.0**	**9.4**	**8.9**	**8.9**	**10.4**	**11.9**	**11.9**	**12.0**	**11.1**	**11.4**	**12.1**	**12.4**	**12.6**	**13.3**	**13.7**	**13.3**	**12.5**	**12.1**	**10.6**	**9.6**	**10.7**	**12.9**	**14.3**	**13.1**	**14.3**		
Min.	**0.3**	**0.7**	**0.5**	**0.5**	**1.2**	**1.2**	**1.7**	**1.3**	**1.1**	**0.4**	**0.0**	**1.1**	**0.7**	**0.5**	**0.6**	**0.3**	**0.7**	**0.6**	**1.2**	**1.4**	**1.3**	**0.6**	**0.4**	**0.2**		**0.0**	
Avg.	**5.1**	**5.2**	**5.3**	**5.5**	**5.5**	**5.6**	**5.7**	**5.5**	**5.1**	**5.0**	**5.1**	**5.3**	**4.9**	**5.4**	**5.3**	**5.3**	**5.2**	**5.2**	**5.0**	**5.0**	**5.0**	**5.0**	**5.2**	**5.5**			**5.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

January *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	25.6	23.5	21.2	24.0	26.4	19.1	23.2	19.7	13.9	16.8	19.9	19.7	31.0	29.8	211.3	30.5	16.9	8.7	9.0	13.3	18.8	18.9	36.1	33.1
2	35.5	34.1	34.1	36.6	41.7	46.3	52.5	51.7	54.5	56.3	59.0	58.6	55.5	55.3	52.7	59.5	59.2	54.8	49.8	53.3	47.4	33.7	30.5	35.1
3	26.0	28.7	26.3	36.6	29.0	39.5	17.8	33.6	30.6	12.6	18.9	33.7	25.8	33.1	58.7	61.5	61.4	54.9	41.3	49.3	50.6	57.2	56.4	59.7
4	53.8	57.9	43.1	62.4	31.4	44.2	49.4	30.1	6.7	39.2	53.8	14.3	9.5	9.9	45.8	48.4	23.1	10.3	1.8	38.8	55.6	89.0	35.1	31.3
5	42.7	25.0	28.1	355.3	1.1	25.1	346.3	324.8	315.5	316.6	318.9	317.3	317.6	318.7	316.9	318.3	316.0	317.6	318.0	318.1	317.2	315.6	317.8	319.0
6	318.7	316.7	318.4	318.8	319.1	320.2	319.0	318.0	318.6	318.0	319.1	319.9	316.9	316.4	330.8	327.0	11.2	26.7	42.9	43.5	31.7	26.4	17.9	19.7
7	14.0	345.8	34.2	57.3	56.5	52.6	56.0	45.8	54.3	75.4	66.0	55.9	44.0	29.1	6.0	33.8	22.4	19.2	7.4	26.9	33.8	341.7	56.9	44.0
8	52.6	29.7	53.2	54.7	68.0	68.2	3.4	21.3	46.3	24.7	64.7	62.2	70.8	50.6	69.6	39.2	59.5	52.6	56.5	65.2	59.6	59.1	62.5	39.8
9	60.5	73.7	61.3	57.7	55.4	58.2	55.6	48.9	48.5	56.0	61.3	58.2	61.8	59.3	51.5	59.5	39.6	312.3	313.1	315.3	318.1	317.3	319.3	317.8
10	318.2	317.9	321.9	316.9	317.3	315.1	319.6	319.3	318.7	318.0	317.5	317.4	317.7	317.2	318.7	318.9	318.8	315.6	317.6	314.0	314.6	316.7	319.2	317.4
11	314.2	316.0	317.0	319.5	338.7	313.9	314.5	312.8	312.3	313.2	18.4	40.6	37.9	45.3	46.2	40.2	30.8	27.3	28.0	30.0	49.1	57.4	49.8	47.4
12	60.0	57.0	61.2	52.6	49.2	60.9	64.3	61.5	60.7	45.5	323.0	51.3	59.4	59.5	59.8	63.5	61.7	46.9	27.1	14.2	0.2	339.4	313.1	314.5
13	8.3	56.2	62.5	55.3	46.7	38.9	52.7	65.6	62.6	41.1	19.4	33.9	50.1	351.7	33.5	7.9	315.2	316.9	314.3	314.7	318.5	25.4	51.4	56.8
14	57.9	49.7	47.3	32.5	0.8	9.7	28.5	31.6	26.3	20.5	14.7	19.6	12.6	28.4	29.0	32.7	31.1	30.7	29.0	26.0	29.2	22.5	9.1	17.2
15	17.7	21.8	21.9	27.8	25.3	31.6	27.8	26.3	27.1	4.1	83.2	28.6	28.0	34.1	24.7	26.9	29.8	27.3	27.1	26.3	29.1	28.4	34.3	30.4
16	27.0	272.1	191.4	209.8	196.7	345.8	28.0	28.3	326.0	52.7	35.2	354.7	32.0	62.1	80.3	59.1	4.3	217.1	48.8	20.7	23.9	17.4	22.6	32.0
17	25.5	32.3	28.3	23.6	22.5	26.7	29.8	359.8	343.6	349.6	0.7	14.6	15.7	17.4	13.1	15.0	12.0	12.7	21.6	23.7	24.1	16.9	28.0	24.6
18	25.7	13.8	356.0	41.2	218.8	31.6	287.3	27.8	37.1	24.7	28.4	26.2	201.6	216.1	216.5	31.6	36.6	228.6	265.0	29.4	30.5	24.5	13.0	22.3
19	34.6	29.9	32.2	28.1	29.1	26.4	15.2	14.3	13.3	25.3	25.4	12.5	13.7	352.9	359.8	332.0	351.1	355.1	10.3	11.8	9.9	12.4	12.6	6.0
20	4.4	1.9	9.0	5.3	358.6	1.0	10.7	5.6	2.1	356.9	355.2	355.9	348.6	15.0	357.0	17.8	18.3	30.2	31.9	30.1	30.9	30.9	28.1	21.9
21	312.6	31.6	19.9	28.9	32.6	29.5	28.0	28.7	16.3	24.8	14.4	359.0	350.3	349.5	2.0	8.9	357.7	8.6	359.2	357.7	330.9	305.8	13.2	262.9
22	268.7	239.9	229.0	224.8	232.2	226.3	235.2	207.2	254.3	249.2	278.2	32.0	13.3	193.1	169.4	170.0	88.6	52.2	63.5	78.9	30.2	328.8	25.1	76.2
23	335.6	18.7	58.3	91.0	158.8	45.9	55.6	53.9	88.2	115.1	48.0	53.6	107.9	80.9	148.1	167.7	173.4	118.9	75.6	311.3	310.8	312.3	314.9	1.5
24	12.3	37.0	36.0	19.6	20.9	24.7	31.8	21.5	22.9	16.4	17.3	27.6	32.7	35.4	17.4	21.3	25.5	20.4	30.0	37.3	32.8	35.4	30.1	26.9
25	27.2	25.9	3.5	232.8	216.3	24.5	7.2	336.9	205.0	358.3	110.4	108.4	171.9	216.5	71.3	206.9	215.4	108.1	81.2	72.1	51.2	124.9	156.8	276.9
26	54.1	352.1	302.8	348.1	317.7	16.0	6.2	29.4	36.4	28.4	48.5	51.4	44.9	48.9	52.6	56.8	36.9	17.3	23.4	25.7	27.6	25.1	20.4	19.0
27	26.7	24.4	28.9	34.5	11.6	15.4	20.9	15.9	15.3	3.8	9.0	0.6	6.1	3.8	8.9	12.0	6.7	6.4	12.8	9.2	8.0	13.2	14.8	16.6
28	16.9	17.0	20.6	22.5	13.9	21.6	23.2	25.6	27.6	31.6	8.2	212.9	172.6	202.0	175.9	188.3	193.6	188.2	197.8	201.8	197.0	10.5	227.5	182.8
29	201.8	147.3	191.5	88.5	78.2	174.2	198.8	171.9	162.4	71.9	312.1	307.1	311.9	335.5	81.7	158.8	130.4	37.5	35.0	20.7	16.2	6.8	346.1	358.2
30	15.6	14.7	25.8	12.0	354.2	14.2	18.6	15.6	12.7	23.4	23.5	23.9	26.7	40.1	56.7	58.2	50.9	58.6	56.0	45.7	5.8	34.5	31.2	8.4
31	314.1	321.2	350.6	16.0	331.7	314.1	308.1	302.6	303.7	2.3	46.1	50.5	81.1	101.7	307.3	329.5	31.0	321.6	331.4	12.4	29.9	23.3	17.1	18.9

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	14.3	17.1	20.7	22.3	27.4	30.3	28.5	24.1	28.8	29.1	27.6	31.8	39.2	39.1	40.5	36.0	29.0	12.4	14.3	15.5	17.9	25.9	26.6	21.5
2	28.8	20.3	31.1	29.5	28.1	23.8	25.4	24.9	25.9	18.5	15.0	30.9	50.3	57.5	52.6	56.8	27.6	309.8	292.5	306.8	306.3	291.7	321.8	311.5
3	300.9	307.9	311.3	313.9	311.9	309.2	313.8	357.0	29.3	39.0	41.7	47.8	55.4	57.2	46.8	35.0	31.2	17.2	12.1	12.7	33.1	18.4	23.7	21.2
4	27.4	21.6	24.9	28.6	30.4	28.0	32.5	31.0	30.0	33.5	32.5	35.7	33.2	33.1	32.5	32.0	29.5	10.6	9.5	18.6	17.5	18.9	19.9	9.8
5	11.4	42.3	51.6	53.0	49.9	50.9	51.1	49.7	54.7	48.0	46.4	49.7	50.9	53.6	53.0	49.5	50.7	63.0	32.6	34.9	21.0	14.2	26.3	24.2
6	15.2	13.6	29.6	28.3	30.1	29.1	27.1	23.0	22.8	25.6	23.2	28.9	33.7	34.1	35.7	32.3	50.8	46.4	39.1	30.8	40.5	40.0	23.7	26.4
7	24.0	26.7	24.0	14.7	19.8	17.0	18.7	13.9	15.8	23.7	30.1	39.6	37.5	42.4	45.4	40.6	34.0	20.9	26.3	21.5	25.2	24.0	25.1	25.5
8	29.8	25.3	28.7	34.4	23.1	19.1	15.0	14.0	9.8	15.5	13.6	11.7	13.9	16.6	17.3	18.7	14.5	15.8	16.3	13.2	17.5	23.1	30.2	21.1
9	21.7	25.4	26.8	29.2	31.3	26.3	25.4	27.1	28.1	31.3	26.7	18.1	13.1	13.0	6.9	24.9	7.0	347.0	296.5	212.4	333.0	14.2	7.3	5.8
10	3.4	14.3	355.9	4.8	13.9	17.1	12.9	14.6	21.9	19.5	30.0	33.6	34.5	31.8	31.2	44.1	77.9	9.6	8.5	10.5	16.7	7.4	17.9	12.5
11	12.3	5.9	9.1	7.3	10.3	11.9	14.1	20.3	23.8	31.1	37.5	42.8	38.3	40.8	65.9	33.7	39.8	39.3	40.7	41.8	57.3	55.7	63.3	59.3
12	60.0	53.6	54.7	16.8	314.1	317.7	316.8	321.3	316.6	306.6	36.3	358.5	23.2	20.5	59.9	61.8	50.1	56.3	22.8	21.0	255.9	26.9	17.0	12.7
13	16.4	21.7	7.5	8.5	5.5	10.9	5.1	12.0	15.9	16.9	16.3	19.0	19.2	12.4	9.1	9.1	13.7	11.8	2.1	0.3	8.7	5.2	357.6	358.0
14	351.2	359.4	2.3	1.2	358.3	2.3	359.9	353.6	359.1	359.0	4.9	37.2	359.3	323.9	312.0	316.4	315.0	312.8	309.8	307.1	300.6	83.8	168.2	180.2
15	174.2	181.9	185.7	181.7	181.7	179.4	155.1	123.1	73.5	13.0	303.0	296.3	358.9	40.7	44.3	47.5	59.6	26.5	38.5	29.5	16.5	18.9	21.5	1.2
16	24.1	16.5	16.0	19.8	17.5	13.5	15.3	13.3	15.3	19.0	21.6	25.0	27.2	25.3	25.2	27.9	29.3	30.9	23.1	11.3	1.8	5.4	22.5	13.3
17	13.8	4.9	21.2	25.6	24.6	17.3	16.9	21.7	21.5	17.7	24.4	26.1	17.6	16.0	13.0	12.8	10.3	358.6	331.0	327.0	222.9	292.2	292.1	27.5
18	334.5	0.8	320.9	338.2	322.8	331.8	357.4	358.2	6.0	315.5	5.3	351.1	280.7	8.7	330.9	352.0	296.5	11.1	8.9	11.5	13.6	351.3	2.8	21.0
19	23.2	30.7	25.2	21.3	20.7	23.6	27.5	23.3	19.8	15.8	13.6	15.0	16.5	17.3	14.9	16.7	16.7	18.4	14.9	15.7	19.2	17.2	18.2	12.3
20	8.8	324.7	320.8	300.0	333.6	356.2	350.7	341.5	347.6	9.2	9.4	351.6	4.5	12.0	13.7	16.3	19.4	17.9	20.8	21.4	20.0	19.0	15.8	19.6
21	19.6	19.8	20.7	19.0	20.2	19.6	22.1	21.1	21.2	21.3	22.6	22.4	10.4	4.4	10.2	17.0	10.5	0.0	5.9	4.4	0.3	6.6	10.9	11.1
22	14.1	4.9	5.8	12.3	11.6	5.6	11.4	9.6	13.2	14.6	6.8	356.0	338.5	331.7	356.3	4.7	359.8	357.3	339.3	359.4	1.1	3.9	6.1	12.4
23	9.1	347.7	353.9	30.1	28.6	30.7	28.6	22.8	18.5	8.8	26.5	39.7	38.2	41.0	41.2	65.4	85.4	41.9	29.2	28.5	25.1	26.6	23.8	10.1
24	15.1	10.9	20.4	16.3	22.3	14.3	33.4	24.7	34.3	41.2	46.2	52.9	60.6	51.3	48.1	44.8	38.1	46.2	73.4	59.1	69.4	54.3	70.8	349.3
25	59.1	56.4	64.0	65.2	64.0	58.6	65.7	65.1	62.1	61.2	37.2	181.7	213.9	7.8	20.0	17.5	16.3	12.2	15.4	19.4	19.9	11.3	10.3	13.1
26	14.7	15.1	12.0	2.7	357.4	358.4	1.7	10.1	24.9	25.5	20.3	16.6	12.9	20.1	18.0	18.9	18.9	346.3	208.9	351.3	19.4	26.2	353.5	267.3
27	20.3	19.7	18.2	19.9	18.7	14.0	20.0	26.5	21.5	15.0	31.2	39.1	141.7	200.2	186.8	22.0	31.0	24.3	18.7	22.5	23.9	23.6	14.5	13.4
28	15.9	24.0	16.9	18.6	20.8	22.0	23.9	19.6	15.3	8.1	13.1	15.9	18.3	18.6	21.1	14.4	27.1	214.8	211.9	141.7	107.5	233.0	19.1	18.6
29	13.5	22.4	14.6	12.7	15.5	18.7	1.3	13.9	20.6	20.2	36.0	55.1	53.2	43.3	55.3	40.3	38.0	37.7	36.5	41.2	44.5	16.8	66.8	70.4

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	60.4	34.2	54.1	27.9	22.8	24.0	8.6	10.1	13.2	11.3	14.2	18.7	18.1	20.7	23.0	28.4	24.5	21.6	18.3	11.6	17.4	19.7	27.9	33.3
2	24.8	19.0	16.7	12.7	11.4	14.4	3.6	7.4	4.1	13.2	27.2	29.9	29.7	17.3	6.1	8.3	24.4	20.3	23.2	21.5	19.4	21.7	24.7	23.6
3	224.7	25.5	21.3	17.7	20.4	6.8	5.4	358.4	9.9	354.8	358.1	333.8	330.4	346.4	357.4	4.4	7.5	14.1	5.8	5.8	355.0	10.7	332.2	348.3
4	348.1	287.8	329.6	325.9	356.4	342.1	331.6	356.0	346.3	1.3	342.4	349.5	5.8	5.0	0.4	360.0	357.5	359.8	5.6	3.0	358.6	0.7	2.3	10.4
5	20.0	12.5	16.1	14.7	14.1	17.9	16.1	11.8	11.5	11.0	9.2	7.4	9.3	8.9	3.9	1.2	346.6	359.1	342.0	3.2	298.9	354.6	338.2	34.7
6	344.8	347.3	348.6	336.9	327.3	318.6	304.6	2.2	0.9	11.4	9.1	28.0	5.3	357.0	3.3	358.1	13.8	16.7	14.7	18.4	25.3	23.3	17.7	17.8
7	13.8	18.2	21.3	19.1	20.6	20.7	10.0	11.1	260.7	26.0	15.6	28.1	50.8	226.3	132.0	55.4	22.0	131.7	177.2	356.9	132.5	182.6	186.0	9.7
8	319.5	313.5	317.0	316.5	4.5	23.6	37.1	23.3	353.2	3.4	5.5	13.4	21.7	20.5	20.4	22.0	22.2	21.8	19.9	20.9	22.1	21.8	21.6	24.6
9	22.2	23.2	21.4	21.0	22.0	21.4	21.1	19.3	18.8	18.5	18.4	20.1	21.2	21.7	18.5	18.4	19.5	15.7	7.6	0.6	15.4	338.1	7.7	9.2
10	210.8	226.0	203.9	0.2	26.4	30.2	17.7	18.2	13.3	15.1	37.1	36.2	195.3	176.9	32.6	33.2	252.9	354.0	34.0	29.1	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	318.9	318.2	317.0	319.4	318.7	320.2	321.9	323.5	320.8	318.2	315.6	316.5	318.9	317.6	312.4	311.0	313.6	312.2
12	312.3	318.1	315.2	319.0	315.2	317.7	325.7	13.9	20.3	55.2	50.6	46.3	47.1	40.4	45.2	42.9	46.7	32.9	354.4	348.7	342.3	341.9	359.4	47.7
13	53.1	50.4	47.3	54.7	52.0	308.8	315.8	317.0	319.8	313.9	316.0	319.3	322.5	319.0	320.0	323.8	319.5	315.6	318.8	329.0	315.9	329.3	23.2	35.9
14	19.6	43.0	42.6	52.1	53.1	51.8	45.7	17.3	42.5	45.5	41.7	37.0	41.0	39.7	41.2	48.5	176.2	164.8	28.3	13.6	18.4	17.1	19.9	14.1
15	5.5	14.8	15.0	16.9	17.5	16.6	14.9	12.2	11.6	8.6	352.7	354.2	4.4	14.5	12.1	18.3	14.5	15.9	16.6	15.1	19.3	20.6	22.3	21.0
16	22.6	23.8	25.6	22.3	17.5	15.1	11.2	359.9	11.3	18.2	16.1	24.7	27.9	26.9	27.6	167.5	210.0	206.3	205.8	206.4	232.2	277.2	1.6	23.3
17	27.6	19.7	19.2	19.2	23.1	23.8	17.8	20.9	17.4	24.0	37.9	38.8	40.5	44.6	47.1	52.8	118.7	52.1	62.4	135.0	86.6	327.1	296.6	315.6
18	307.2	309.0	313.8	311.2	313.9	316.1	316.2	313.3	315.8	318.3	317.4	319.4	319.1	320.3	316.8	317.3	318.0	319.9	318.1	316.5	317.2	321.2	321.5	317.5
19	316.6	318.2	319.1	319.0	320.0	315.1	317.7	314.6	319.5	315.8	318.0	317.9	318.4	320.4	317.8	319.7	317.8	316.9	318.9	317.3	320.1	318.4	317.1	333.3
20	327.2	321.8	7.2	33.8	46.0	16.5	15.1	5.1	26.6	46.4	48.3	51.7	47.4	36.6	33.7	34.9	36.9	28.4	30.3	30.8	29.9	21.9	24.7	19.4
21	213.9	257.6	225.7	223.8	222.7	339.8	25.6	25.6	19.3	18.8	20.6	22.4	20.3	23.0	23.5	25.2	19.3	17.0	1.2	12.6	17.2	20.6	21.7	18.9
22	17.2	15.9	15.1	17.9	15.5	15.6	21.5	221.0	284.4	20.1	60.5	58.2	139.0	70.0	46.6	72.4	63.5	53.1	71.3	44.9	58.9	33.9	31.0	45.6
23	41.3	246.7	238.1	223.9	60.5	52.7	53.0	56.1	60.3	24.8	25.2	51.2	22.3	316.9	317.6	330.2	328.8	314.8	317.7	315.0	322.2	332.8	357.3	321.1
24	353.9	324.9	53.7	43.7	25.4	28.9	27.5	271.4	207.5	111.4	109.4	77.0	45.7	53.6	51.8	47.3	44.2	194.2	73.2	52.9	42.8	43.4	43.0	33.1
25	294.3	176.9	271.1	354.7	31.8	13.2	25.3	28.3	29.0	31.8	37.9	87.4	110.5	43.9	39.4	62.7	79.0	76.8	63.1	66.0	54.7	55.1	38.2	56.2
26	40.4	37.1	23.4	19.7	34.0	45.0	52.7	42.9	45.8	49.3	53.1	61.9	57.0	48.8	39.9	42.4	47.3	47.3	34.4	326.0	323.2	312.5	318.1	315.8
27	315.4	314.3	314.9	314.9	314.1	315.6	317.7	316.5	319.1	320.8	318.1	318.1	319.5	337.7	324.0	316.7	319.8	320.8	317.1	319.0	318.7	319.4	318.1	317.6
28	317.7	316.9	318.8	25.0	62.2	62.0	59.9	55.6	57.5	56.1	56.8	58.1	50.1	41.4	36.7	40.8	41.4	42.0	49.6	358.9	318.5	9.4	18.5	30.5
29	30.9	319.5	3.5	23.2	25.2	20.0	25.4	24.0	15.3	16.2	1.8	342.3	331.2	343.6	344.3	332.8	347.0	2.4	331.0	346.1	351.2	354.7	1.1	2.8
30	5.1	336.7	332.3	318.9	333.6	343.7	325.4	350.8	325.5	324.6	342.9	352.6	351.3	341.3	355.7	329.8	1.5	344.6	351.8	359.7	11.0	14.4	12.7	23.1
31	17.9	9.4	9.3	7.5	16.4	28.8	23.2	24.3	22.6	21.4	17.5	18.8	355.8	15.7	12.7	9.2	1.7	10.5	9.2	6.2	359.1	341.7	336.6	350.2

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	345.1	340.0	359.5	2.8	359.4	359.0	10.5	13.9	5.9	359.9	5.9	9.4	9.9	10.8	4.3	9.0	5.9	11.0	16.1	23.4	14.2	16.6	25.3	26.7
2	25.0	26.2	8.7	9.2	17.3	354.3	5.8	2.2	20.4	16.3	48.7	31.0	49.2	40.9	40.7	42.2	92.5	207.6	197.2	198.8	244.6	325.1	296.2	296.9
3	298.0	27.8	41.3	188.6	241.5	316.6	306.8	345.7	6.6	14.7	6.8	356.5	320.3	340.5	347.5	332.3	342.8	323.7	351.8	359.8	348.8	12.7	351.7	329.7
4	310.7	328.2	335.6	293.9	339.9	357.7	347.4	2.2	6.8	357.0	358.1	13.5	7.1	10.3	7.8	8.3	8.2	12.6	15.1	25.1	32.2	33.9	287.6	5.2
5	139.7	86.9	48.4	52.8	69.7	104.5	176.9	161.5	165.0	91.3	176.0	129.7	70.6	52.6	52.4	59.7	59.9	58.4	56.8	94.5	190.7	193.1	184.1	181.5
6	184.0	189.0	155.0	169.7	152.2	179.3	159.9	82.2	133.6	75.6	96.6	309.6	313.8	309.3	317.5	307.6	313.1	304.6	304.7	308.6	302.9	305.2	312.3	312.6
7	359.1	55.2	50.5	58.8	62.2	57.1	51.4	46.4	38.7	46.0	55.0	40.0	337.9	314.3	317.8	316.8	308.8	308.9	313.8	299.4	307.7	317.5	320.1	18.3
8	37.5	45.1	41.0	29.6	25.1	41.1	33.6	27.7	39.3	45.0	38.9	46.5	51.8	111.5	138.0	197.4	185.4	61.7	208.3	289.6	185.0	335.1	213.6	6.9
9	352.3	1.9	339.9	67.7	120.5	109.8	128.6	225.0	308.4	316.5	79.7	190.4	163.6	0.0	78.8	99.5	172.0	189.9	196.5	197.6	187.1	181.3	151.4	128.3
10	78.2	333.6	336.2	347.6	64.9	300.3	323.0	316.4	309.0	316.6	321.0	319.5	318.3	316.5	318.0	319.9	322.9	315.5	316.5	317.2	315.5	316.0	316.5	315.4
11	315.3	314.5	312.9	312.6	314.2	316.9	316.8	313.9	311.2	317.1	319.5	316.4	316.2	318.7	315.1	313.4	306.3	281.5	308.8	309.8	311.0	310.8	310.1	308.8
12	310.0	312.2	307.2	306.8	310.7	307.8	307.1	308.2	307.8	311.5	315.7	317.3	322.1	346.2	70.2	96.1	150.4	159.7	165.9	142.0	69.2	50.6	310.4	314.8
13	320.2	321.4	320.0	352.5	69.4	33.8	33.0	17.3	50.7	47.2	174.3	35.5	49.7	190.0	172.8	149.9	130.6	156.0	132.4	87.4	189.6	181.2	172.3	178.6
14	166.5	187.0	185.0	185.0	184.3	191.0	181.4	90.3	73.6	200.3	196.1	70.8	194.0	111.9	192.2	197.2	194.0	203.9	211.9	209.8	209.0	153.3	61.2	171.1
15	48.6	354.0	45.7	301.2	347.2	32.4	20.0	348.1	21.8	26.6	21.7	29.9	39.4	85.1	92.3	170.5	187.1	197.5	192.1	202.3	209.0	185.2	266.1	314.5
16	64.4	307.8	79.6	173.4	91.9	151.9	148.7	5.2	146.9	167.6	173.6	170.0	158.3	155.6	161.2	79.9	70.5	59.4	52.6	66.7	86.9	80.8	82.2	199.7
17	202.3	105.2	116.7	64.7	42.7	212.7	196.4	94.7	154.3	129.6	193.3	193.5	190.3	47.5	54.5	83.8	319.6	321.1	305.7	34.8	64.6	51.0	8.8	319.3
18	26.0	24.3	356.8	336.1	346.8	233.9	222.6	21.8	317.7	40.1	49.1	170.8	207.3	205.4	190.6	207.0	210.9	205.8	209.5	222.5	8.3	18.4	27.3	29.0
19	16.0	12.5	28.2	34.3	33.1	23.5	21.2	30.1	28.7	41.7	167.5	157.6	159.9	183.5	208.7	216.1	222.5	214.5	246.2	265.5	238.8	256.3	2.3	31.5
20	26.3	32.4	29.9	32.4	26.5	30.1	221.4	223.9	215.8	137.7	142.7	185.9	190.5	139.0	134.9	149.7	183.4	178.9	202.8	225.6	251.7	287.8	286.2	289.2
21	356.5	277.0	328.3	271.2	311.2	311.5	309.4	6.9	34.5	107.6	92.8	118.1	137.9	163.7	186.6	233.2	226.6	225.2	195.2	215.9	239.7	252.1	232.1	230.1
22	245.4	5.8	26.6	28.8	2.1	224.5	220.9	331.7	36.5	46.2	108.4	192.0	197.5	201.6	202.3	205.8	206.2	201.2	202.5	205.2	217.9	220.4	239.1	28.5
23	25.5	310.2	32.8	11.1	23.8	11.4	9.8	15.7	35.5	38.7	44.1	46.4	48.5	111.3	44.0	33.9	38.8	59.9	263.0	9.5	16.3	7.2	16.2	344.0
24	316.8	318.8	315.4	317.9	317.5	318.3	317.0	317.1	317.2	317.0	315.8	317.9	319.9	320.4	316.6	318.8	301.5	305.7	311.2	303.8	5.5	161.2	181.6	201.2
25	184.3	184.0	150.7	135.6	119.5	53.1	171.1	175.6	139.5	144.0	157.0	133.1	151.0	162.7	168.5	165.2	160.1	156.8	295.4	286.6	301.2	311.8	308.1	309.8
26	325.8	57.3	53.6	54.0	51.9	73.2	304.7	257.4	260.4	43.7	65.9	58.2	51.8	66.0	76.5	102.9	213.8	204.2	210.6	214.1	229.3	63.2	353.8	306.5
27	39.7	352.2	320.8	321.8	29.9	42.5	53.7	65.5	75.7	23.9	43.5	53.8	29.4	211.6	232.5	29.6	45.0	43.3	43.5	41.7	42.2	36.3	64.2	46.0
28	37.7	38.5	58.9	51.7	58.4	56.7	26.2	59.7	68.0	52.7	48.3	49.4	54.9	328.2	319.8	318.3	318.7	318.8	314.7	317.8	319.3	317.6	317.8	317.7
29	318.5	315.9	315.4	314.0	316.7	316.4	319.2	349.7	57.3	42.5	50.0	46.7	44.5	45.9	78.9	69.9	75.0	158.1	33.6	150.0	221.3	24.6	4.1	358.7
30	354.1	354.6	3.5	5.7	13.6	20.0	19.3	36.0	43.8	42.0	39.9	42.1	53.8	147.7	177.8	204.0	199.5	183.7	176.2	56.8	24.0	346.7	8.1	12.9

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	348.0	330.8	13.7	14.3	302.5	217.2	137.4	92.8	76.9	60.3	47.9	119.6	48.0	125.5	173.8	308.1	311.5	307.7	310.3	314.9	347.4	326.3	294.3	310.3
2	309.9	24.3	286.8	240.7	10.3	19.8	214.1	29.6	31.2	22.7	25.9	23.6	37.6	107.9	83.8	65.7	41.8	35.3	15.1	132.0	11.4	244.5	6.9	20.0
3	35.3	11.1	10.9	13.7	269.9	335.4	24.8	22.8	27.8	21.0	13.2	20.0	29.0	23.6	20.3	29.0	45.8	21.7	14.8	30.3	18.3	20.8	16.0	15.8
4	12.7	14.5	11.5	14.4	16.2	17.0	21.4	28.1	29.9	29.5	33.1	32.2	31.5	24.7	24.6	26.4	24.1	25.8	18.0	16.9	8.9	12.4	331.7	256.0
5	20.2	12.1	291.6	1.3	5.5	18.9	13.1	14.7	26.6	28.3	41.6	68.0	52.7	53.2	46.4	49.3	171.8	165.0	44.8	184.4	203.6	199.9	198.4	220.2
6	234.7	232.9	242.5	235.4	246.7	326.2	282.9	209.2	346.9	168.2	106.3	209.2	229.1	222.5	234.3	215.1	224.1	219.8	204.1	226.5	247.9	274.5	349.4	346.9
7	7.4	0.8	353.6	353.8	347.8	351.2	341.7	356.2	8.8	14.2	18.5	8.6	15.8	14.9	15.3	14.8	17.7	11.8	1.4	4.0	25.5	22.5	7.9	10.1
8	5.4	4.3	8.5	12.6	5.3	5.1	7.3	11.6	12.7	19.7	23.3	20.8	20.5	17.2	18.9	21.2	20.3	19.3	18.0	14.5	12.6	12.2	16.0	18.3
9	15.2	14.9	14.4	13.4	16.6	18.9	12.1	12.9	10.7	15.3	15.4	14.4	16.2	18.1	18.9	13.3	11.2	19.9	4.0	215.5	213.9	208.6	209.4	210.6
10	264.5	4.2	4.8	282.9	25.4	16.9	7.3	14.8	31.9	45.2	61.5	92.9	77.9	149.7	152.4	103.0	128.1	171.5	194.3	183.9	21.7	17.0	208.5	219.0
11	351.7	4.6	348.6	348.8	196.9	12.7	354.7	8.4	357.5	57.8	44.5	20.2	15.0	24.9	29.7	30.2	26.1	29.9	27.2	22.9	26.4	29.8	24.7	27.0
12	23.2	22.9	24.6	22.7	20.3	18.4	21.0	22.8	21.9	20.9	14.9	15.5	21.7	24.0	34.9	36.3	32.8	13.4	0.7	11.8	4.8	356.5	357.3	13.8
13	16.0	18.7	13.7	3.3	355.1	346.0	347.3	350.7	3.9	346.5	10.4	42.2	120.4	89.5	95.7	43.5	258.1	52.8	332.4	356.7	355.3	226.2	358.5	9.3
14	10.2	15.1	16.3	22.1	18.6	15.2	17.7	22.3	24.3	22.7	20.4	20.7	19.4	23.4	21.7	23.2	24.3	21.1	20.6	26.7	20.1	16.8	14.9	12.8
15	15.5	10.0	250.7	263.3	305.1	37.8	359.5	15.4	40.4	104.7	179.9	202.3	203.7	198.8	191.5	185.9	100.4	68.1	43.6	3.3	14.6	19.6	23.1	16.0
16	13.0	7.5	358.9	28.0	23.8	348.7	160.0	60.6	103.4	147.6	196.1	100.5	116.9	122.5	202.6	189.9	187.9	200.6	201.6	211.4	227.4	232.2	262.4	19.1
17	294.6	313.8	16.9	16.1	20.6	25.1	25.5	35.3	43.3	47.5	38.3	67.6	191.5	201.9	202.0	202.9	199.4	186.2	193.8	203.3	208.0	211.7	230.5	264.7
18	5.9	26.2	249.4	323.8	12.7	14.1	21.3	5.0	3.2	8.8	349.7	307.8	37.5	116.9	117.9	60.2	227.8	143.5	173.3	224.0	352.9	112.8	250.0	305.1
19	4.2	3.6	28.6	23.9	20.7	19.9	26.0	35.2	40.5	51.1	47.9	153.0	206.2	174.9	174.9	151.0	105.3	330.6	323.2	314.7	312.3	312.0	314.0	315.6
20	327.9	342.0	20.3	15.3	12.2	11.1	17.0	32.6	45.4	58.1	64.8	39.5	42.8	185.1	203.9	196.5	190.6	184.0	197.9	210.1	201.7	219.4	260.3	27.7
21	30.3	30.0	23.4	1.9	26.6	33.2	26.9	170.2	41.3	118.8	168.6	194.2	181.0	174.4	196.3	187.4	199.9	197.4	204.3	211.0	208.0	214.2	244.4	330.7
22	79.6	110.8	102.0	81.8	337.7	308.3	315.5	35.8	63.9	50.6	43.6	41.4	132.7	179.0	206.0	205.5	228.5	209.0	216.3	203.9	44.3	81.4	34.6	14.8
23	7.0	4.1	7.9	8.3	14.7	11.8	16.8	356.9	0.5	2.3	7.0	0.8	13.9	37.3	33.2	52.0	147.9	208.0	356.8	347.2	311.7	225.2	321.4	321.8
24	274.4	311.1	339.2	289.5	267.0	314.3	258.8	253.5	285.3	114.8	184.1	206.8	200.1	203.0	258.2	184.4	156.2	120.6	123.4	187.4	9.8	0.8	2.3	17.8
25	20.6	19.1	23.3	27.7	17.4	23.7	30.2	34.4	39.2	51.6	84.2	171.1	171.4	182.4	180.2	187.0	204.7	191.4	199.1	193.2	225.3	206.4	172.6	351.7
26	2.7	79.0	199.9	60.0	72.3	30.8	281.0	304.4	344.4	183.9	183.0	43.8	88.6	73.8	161.4	119.2	122.4	164.8	177.6	183.9	179.4	179.4	159.3	191.9
27	132.5	165.3	162.0	130.8	278.4	278.5	280.1	317.8	317.7	314.7	311.4	316.7	318.0	319.0	313.9	289.3	109.6	80.8	114.7	184.2	187.4	151.5	177.4	181.8
28	131.6	67.3	358.0	24.9	143.3	169.1	35.4	342.4	315.6	334.1	309.2	314.4	318.0	315.1	312.9	57.9	159.8	314.2	347.3	345.1	50.0	64.4	2.1	313.1
29	304.5	336.0	25.4	39.1	52.3	65.5	31.0	27.0	27.8	43.1	72.2	206.2	197.9	201.0	200.9	196.1	200.4	196.8	199.5	207.0	208.6	215.2	215.5	32.7
30	32.9	31.3	14.0	21.5	27.2	238.4	211.3	204.5	176.9	173.3	210.2	213.0	207.1	237.7	196.8	200.1	208.0	229.7	321.9	292.4	271.5	73.0	347.2	327.8
31	277.1	244.1	339.8	9.9	7.6	348.4	308.8	257.2	325.3	269.9	183.3	72.8	196.2	242.5	166.4	159.8	150.7	144.7	158.9	153.2	176.4	235.9	210.5	240.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	20.4	12.2	357.1	0.3	9.9	4.3	8.8	4.3	5.2	14.6	20.7	26.8	17.1	21.9	18.7	21.3	25.5	16.4	7.1	12.3	13.9	13.6	17.6	14.1
2	16.4	14.6	16.7	15.1	12.1	12.0	14.3	16.2	16.7	17.1	18.0	22.3	28.1	26.6	21.7	23.1	23.1	29.9	20.6	28.3	22.3	27.5	24.7	16.4
3	24.8	21.5	19.0	13.9	15.6	14.9	13.1	13.9	12.5	11.4	24.5	24.1	246.1	217.3	202.9	164.4	188.0	208.7	243.6	254.7	259.7	275.3	4.4	12.8
4	6.8	238.7	254.3	220.6	346.3	21.8	26.0	22.9	11.2	35.2	30.1	213.9	212.6	210.0	208.6	211.2	205.3	164.3	204.7	207.7	193.4	204.5	196.2	174.2
5	311.1	243.9	189.3	265.9	356.4	24.0	15.1	359.8	347.3	9.1	32.7	7.9	11.8	358.3	357.1	7.9	7.6	4.5	13.5	12.1	13.2	20.2	11.2	17.4
6	20.1	19.9	359.9	359.8	356.5	0.2	359.6	23.9	39.5	58.3	62.2	89.2	63.8	332.0	348.1	332.8	304.2	198.2	212.1	104.2	119.5	157.5	298.3	35.2
7	224.2	292.2	302.3	303.9	319.0	312.6	308.8	324.9	21.0	47.4	67.3	113.8	141.5	56.3	42.9	81.0	195.8	220.3	181.2	134.2	101.3	133.6	186.1	182.8
8	115.1	139.5	162.6	110.6	80.0	3.0	334.3	171.7	125.3	120.7	116.2	181.4	96.8	97.8	153.1	198.1	207.1	193.3	287.3	187.6	189.4	181.7	211.6	19.5
9	344.4	338.1	18.9	176.3	358.3	302.9	306.2	317.0	313.8	320.5	324.3	319.7	318.5	324.2	322.1	321.0	313.6	319.5	319.4	318.4	314.1	316.0	316.8	318.8
10	318.1	316.0	317.3	317.5	316.4	319.9	33.4	54.2	53.4	39.8	54.3	148.0	193.9	202.5	189.0	170.8	168.1	176.1	175.9	197.5	230.3	244.0	237.1	241.6
11	282.0	303.9	177.0	239.2	270.6	16.2	17.8	28.1	344.8	345.9	353.6	43.2	13.2	338.9	345.5	306.3	267.5	326.1	140.0	171.4	189.6	205.2	176.1	138.6
12	326.5	306.2	312.1	309.8	312.2	317.8	317.2	319.1	318.7	320.5	38.5	52.2	42.9	69.7	132.1	98.5	101.6	80.9	96.0	134.7	121.0	9.5	314.5	315.1
13	318.1	315.4	313.9	329.6	37.3	30.3	24.2	39.9	11.8	33.2	48.9	44.0	31.8	45.0	48.5	166.3	64.0	82.7	184.5	183.2	218.8	217.8	218.8	273.6
14	240.3	240.6	229.8	249.9	359.5	327.1	351.0	133.6	173.4	135.5	91.4	64.2	50.6	141.8	156.5	184.7	199.8	192.5	177.3	175.2	179.0	200.8	276.7	236.9
15	287.6	234.0	325.5	19.9	27.4	20.6	2.2	32.7	29.6	32.1	35.4	37.3	48.5	183.3	194.3	190.4	196.9	203.6	216.9	346.4	326.6	300.9	317.1	311.5
16	312.8	323.1	315.7	317.2	317.5	334.8	37.3	55.4	38.4	37.2	187.1	188.9	201.6	203.3	184.7	195.3	209.7	196.9	206.5	203.3	189.0	219.3	242.0	333.7
17	235.4	33.8	30.4	15.6	24.3	22.8	32.8	46.9	163.3	152.1	166.6	168.0	189.2	186.3	190.2	191.0	204.0	203.1	203.4	208.5	218.4	220.8	222.8	200.3
18	218.8	245.0	320.8	18.9	27.0	224.9	194.3	193.7	60.8	78.9	180.4	191.8	184.2	199.4	205.7	196.7	203.5	199.2	207.6	217.6	209.1	217.4	219.6	11.9
19	220.7	24.3	13.2	334.6	0.4	22.3	38.5	33.1	34.4	189.5	192.0	180.7	194.7	168.0	236.0	205.6	230.1	200.9	199.7	210.2	217.8	222.0	224.0	243.8
20	290.0	13.5	15.0	21.5	358.4	341.4	5.2	49.5	143.1	125.7	148.5	165.5	192.6	182.9	168.9	177.0	194.8	200.5	195.9	200.8	214.5	210.8	203.1	233.9
21	240.3	9.5	6.2	23.1	226.1	238.6	206.0	198.7	187.1	168.3	180.3	188.4	191.2	197.3	195.4	198.4	193.7	201.0	195.2	190.9	212.0	210.1	213.2	224.5
22	244.5	343.9	25.9	204.3	209.1	208.8	205.7	185.4	177.2	177.0	170.9	176.0	178.2	194.1	202.5	140.8	207.5	168.1	187.5	210.6	209.7	216.7	223.3	223.3
23	233.2	256.5	229.5	263.4	299.5	177.0	296.1	305.7	46.7	117.5	170.9	171.9	168.6	186.8	178.5	191.2	188.0	203.4	207.8	223.1	230.4	216.0	210.7	226.8
24	334.3	324.7	334.4	52.1	49.8	1.6	8.2	3.8	4.8	336.1	5.3	303.5	198.5	337.7	20.0	13.5	14.9	17.9	8.0	357.0	353.2	343.1	348.0	353.2
25	354.3	354.7	359.4	123.5	96.5	15.6	7.1	12.6	2.8	355.8	11.2	24.6	24.0	31.4	38.6	38.3	31.9	26.3	30.7	27.6	13.6	13.1	8.3	7.8
26	8.0	11.9	12.2	12.0	13.3	13.5	15.8	13.1	13.7	18.0	18.1	16.1	22.6	23.5	24.8	25.0	25.0	23.6	22.3	22.9	20.9	19.8	15.0	12.3
27	12.7	3.2	337.1	227.7	194.9	194.7	226.3	159.7	149.0	185.8	226.2	197.5	190.4	202.7	196.9	194.0	188.9	189.8	185.7	205.2	217.1	231.7	237.2	239.3
28	235.5	274.9	305.0	27.8	25.6	24.7	312.5	32.8	140.6	95.5	161.2	79.0	96.5	156.2	138.4	198.8	179.3	176.9	183.6	183.5	267.4	320.2	341.1	323.2
29	19.0	18.1	11.2	12.8	11.4	15.6	4.0	130.9	123.8	117.1	107.3	101.6	70.6	118.7	199.8	195.1	200.3	190.8	185.2	218.4	265.2	284.8	280.4	301.7
30	317.5	342.1	11.9	22.3	24.2	26.1	33.6	38.2	49.6	195.9	199.0	201.1	204.2	195.2	185.7	180.3	189.2	194.7	199.3	207.7	222.3	218.7	213.6	235.1

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	330.6	25.3	28.5	23.7	28.3	29.5	32.4	46.8	145.9	202.1	203.8	202.1	203.2	192.6	193.5	216.5	187.4	128.1	313.1	296.4	245.3	137.1	205.8	31.1
2	16.6	8.3	24.3	57.6	2.0	9.5	9.5	342.3	184.9	186.2	204.1	200.4	210.8	211.5	210.1	207.0	218.6	225.4	228.0	265.3	250.5	293.8	293.9	0.4
3	287.2	19.2	14.7	1.0	0.1	11.6	9.8	20.2	2.9	8.8	16.0	10.5	16.3	12.1	359.8	229.4	212.2	213.9	214.9	218.0	215.3	222.7	263.3	223.0
4	219.6	202.2	229.5	11.4	352.1	230.7	223.0	215.3	214.1	214.6	33.6	44.1	88.0	211.3	212.8	212.8	214.7	237.8	249.5	220.6	202.2	255.4	15.7	21.4
5	235.3	244.5	211.7	205.5	225.2	33.9	34.0	34.1	39.1	192.1	206.0	204.2	195.8	183.4	195.8	194.6	191.3	202.5	205.5	209.2	209.5	212.1	201.8	18.1
6	7.4	24.0	31.9	20.6	13.0	244.2	240.5	217.9	205.5	208.8	205.1	206.8	199.5	190.0	205.4	200.3	217.7	215.8	198.1	212.1	59.0	28.7	35.6	345.7
7	167.9	183.7	201.0	211.3	229.8	191.0	240.7	353.8	343.0	141.0	241.5	4.2	57.9	212.3	209.7	207.2	217.6	212.8	208.7	220.7	210.6	217.9	231.2	237.6
8	234.6	9.8	355.8	337.1	316.4	360.0	252.1	22.0	63.2	78.2	64.6	136.5	134.2	146.4	92.9	17.0	205.4	190.8	201.2	202.4	218.1	221.1	200.7	213.7
9	216.4	200.9	215.7	30.9	22.9	25.2	28.8	29.2	30.7	32.7	25.4	24.9	46.4	48.5	39.4	35.5	8.2	353.0	13.7	335.5	309.8	330.8	359.0	8.1
10	3.5	355.4	359.7	2.4	4.8	5.7	26.3	23.0	42.6	70.7	121.6	142.6	194.7	86.8	144.2	187.0	197.6	178.9	190.7	195.6	208.6	213.4	241.5	233.9
11	147.1	103.4	1.6	1.6	139.9	253.1	236.0	241.8	209.1	197.0	201.5	202.2	197.9	199.0	196.4	199.2	192.8	194.8	199.4	204.7	222.6	211.1	272.3	343.2
12	282.0	0.9	23.9	27.4	28.8	27.9	26.5	30.3	234.5	176.8	346.8	44.2	156.4	150.4		0.0		119.4	1.0	94.1	64.0	104.0	284.2	67.3
13	26.2	49.9	326.4	351.5	352.0	9.6	7.1	13.9	10.8	18.5	18.2	25.7	64.8	171.5	210.7	140.9	150.7	147.1	153.2	150.5	164.2	154.8	202.4	231.7
14	240.5	232.9	5.4	14.6	12.9	19.4	23.2	34.5	42.9	145.4	155.6	162.9	200.9	199.5	195.0	199.3	196.7	201.4	203.9	205.3	200.7	196.8	181.4	211.8
15	216.0	226.3	15.9	27.4	27.2	329.1	357.7	30.2	28.9	31.1	27.5	18.5	18.6	22.2	23.7	23.9	27.6	47.3	40.0	18.3	357.3	340.6	6.6	339.1
16	340.7	271.5	50.5	329.2	333.2	359.8	344.3	330.7	338.5	129.2	68.9	12.8	7.4	353.6	345.6	343.3	356.8	342.4	346.6	334.7	348.3	351.8	322.3	348.7
17	338.1	323.5	339.0	5.5	23.6	305.0	313.6	204.1	41.4	63.9	127.6	101.5	81.6	86.9	103.6	88.2	114.4	96.1	63.6	191.1	197.7	194.3	186.2	176.6
18	162.5	115.5	77.2	305.5	299.6	305.4	304.6	306.6	308.8	313.4	319.1	320.7	315.7	321.9	323.6	321.0	318.6	320.2	309.1	307.4	313.8	315.5	311.3	304.3
19	306.0	307.7	308.2	310.8	315.1	316.7	315.7	316.6	14.9	41.6	30.8	86.8	350.3	104.6	123.1	169.5	115.1	183.6	212.3	134.4	129.9	128.5	303.0	311.1
20	312.0	312.6	311.7	329.9	334.8	314.4	354.8	337.2	44.1	178.4	193.2	195.6	159.3	30.7	89.6	303.3	317.2	321.1	322.9	6.2	47.2	353.9	29.5	12.8
21	16.2	339.9	284.7	274.5	331.1	324.4	63.9	2.5	356.3	199.2	193.0	210.7	210.2	207.1	196.6	196.8	200.2	203.6	161.8	319.1	210.8	183.0	120.6	167.8
22	235.3	306.8	311.9	318.2	320.0	15.7	7.0	18.9	43.6	67.4	147.8	195.5	190.2	187.7	162.2	186.9	186.8	191.0	170.9	192.8	158.4	283.4	21.0	24.1
23	21.9	21.4	1.8	336.1	0.0	24.0	343.2	324.9	131.2	108.0	141.9	210.8	205.9	210.9	154.8	213.3	173.6	183.6	176.5	198.4	184.0	143.6	84.4	0.1
24	13.9	8.7	9.9	12.1	10.7	15.1	20.8	22.7	22.3	340.6	25.6	27.0	31.2	200.7	204.6	213.4	209.7	205.0	209.4	217.8	213.3	198.3	35.0	16.9
25	28.2	18.8	8.8	18.1	11.7	22.0	24.4	9.2	12.2	34.5	32.3	37.3	358.5	23.3	62.0	134.2	225.2	196.0	226.8	224.4	214.1	216.3	218.0	51.4
26	17.2	330.1	40.8	210.1	223.1	350.8	320.0	315.1	311.8	312.8	320.6	322.7	343.6	325.0	324.1	156.7	77.7	54.7	185.3	194.7	147.5	132.2	122.4	224.1
27	305.4	42.6	313.2	7.5	297.4	329.9	22.5	25.4	25.2	17.8	277.9	285.5	296.3	328.0	282.2	108.3	185.7	207.8	211.0	199.4	205.3	198.7	236.6	3.1
28	351.9	327.3	43.1	356.3	344.0	343.9	316.7	331.9	310.2	310.6	337.4	88.4	160.9	315.6	80.3	179.2	192.3	98.5	58.4	52.2	63.3	110.7	167.5	146.4
29	17.0	286.7	294.4	309.5	311.8	310.4	309.8	299.6	3.0	306.4	297.2	315.7	309.7	320.3	121.1	226.7	198.3	205.6	212.1	214.8	171.3	146.3	310.4	312.7
30	308.1	284.4	284.7	311.1	316.8	317.8	307.1	313.3	311.4	89.0	143.9	174.9	137.8	112.0	121.2	90.6	72.6	83.0	98.1	161.3	109.4	133.3	61.1	81.4
31	72.8	339.8	296.4	37.6	266.5	16.8	344.4	318.7	349.6	58.2	345.7	306.2	319.7	304.0	299.3	69.3	156.8	171.1	182.1	170.8	211.8	47.8	332.5	350.7

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	38.3	311.0	313.1	258.5	243.0	198.4	216.3	128.0	123.8	117.5	177.3	171.7	157.6	179.8	170.2	180.9	189.3	187.9	171.0	259.0	248.6	253.3	261.9	260.0
2	254.8	258.7	207.5	224.4	273.3	210.0	189.6	234.9	169.8	142.8	194.9	179.9	197.5	224.0	183.3	198.7	194.3	219.3	191.5	190.4	198.6	193.4	172.9	203.1
3	206.6	180.7	204.9	200.8	171.3	161.2	188.9	23.6	29.0	35.8	70.3	148.0	164.9	199.3	198.5	208.7	203.2	201.8	202.5	215.9	218.0	231.4	251.4	271.9
4	162.4	311.6	87.1	333.0	301.4	23.9	19.2	26.6	30.2	359.3	86.9	151.3	258.9	164.5	200.8	206.2	209.8	216.0	190.3	230.1	276.3	358.3	322.5	282.4
5	244.2	239.9	257.7	35.2	243.2	279.8	6.6	24.6	212.8	213.4	211.1	215.4	210.7	199.0	205.8	196.8	206.6	205.6	206.5	194.3	212.6	173.8	216.4	230.2
6	253.2	87.2	13.6	13.8	7.7	11.0	223.1	213.7	205.7	158.2	138.2	173.0	200.3	204.4	202.8	196.4	199.8	218.8	217.4	208.9	195.8	202.2	207.6	187.0
7	168.9	307.7	133.8	117.9	121.6	252.4	301.9	267.9	299.7	342.5	299.4	113.2	125.4	153.8	96.7	62.4	73.6	84.9	353.3	358.4	300.2	206.5	214.3	323.1
8	15.1	359.9	7.9	25.3	26.1	19.3	30.5	32.6	31.5	54.4	183.9	180.9	204.9	203.5	202.7	194.4	194.6	199.9	202.2	205.5	213.7	223.0	233.3	265.8
9	12.2	248.6	331.4	21.4	25.6	21.0	25.3	33.1	46.2	86.6	78.5	156.5	143.3	169.2	190.9	197.0	157.1	236.4	212.7	173.1	157.9	153.1	147.6	129.4
10	127.2	127.5	78.8	210.7	212.7	213.2	214.5	214.4	206.4	180.0	165.0	185.2	185.6	194.9	204.4	198.4	205.9	198.4	211.4	235.1	248.0	230.9	169.3	213.7
11	215.0	321.2	19.1	41.6	8.0	339.4	331.4	283.6	120.8	119.4	161.1	164.3	196.2	200.1	202.0	203.7	202.8	202.2	202.4	213.8	272.4	12.3	15.4	20.3
12	23.6	22.4	22.6	19.8	18.4	8.0	13.0	11.4	11.0	10.9	25.9	206.4	211.6	210.1	207.6	199.3	203.9	216.7	211.7	212.7	223.9	224.8	14.3	20.7
13	175.2	359.9	13.9	25.4	23.8	16.2	26.8	16.0	20.3	34.8	16.6	8.0	139.6	180.3	30.6	13.5	19.2	16.9	24.5	19.0	23.6	16.3	25.1	18.8
14	218.3	222.3	25.6	29.0	13.8	3.4	351.7	351.9	30.6	28.2	31.2	33.7	31.4	26.0	199.2	203.9	206.6	33.5	0.0	89.7	0.0	0.0	231.1	202.1
15	217.7	39.3	7.2	0.0	27.2	43.8	45.1	29.7	23.8	41.7	42.8	49.7	42.2	42.8	41.8	44.7	178.6	207.7	45.0	39.3	86.7	199.7	163.9	191.5
16	162.3	162.5	170.9	244.4	257.0	30.1	36.9	16.1	27.2	37.2	148.5	159.8	292.9	212.6	175.3	166.0	178.2	188.3	156.6	348.4	105.8	355.0	144.1	1.9
17	19.6	20.0	13.5	4.1	18.2	21.6	18.0	18.3	12.5	345.5	339.8	313.5	353.4	344.1	1.1	329.0	357.5	351.3	3.4	8.7	355.8	317.8	333.1	300.7
18	319.2	308.3	353.8	20.1	22.2	22.0	21.3	32.0	29.5	27.1	22.6	14.5	20.6	22.6	23.6	21.1	23.5	20.3	14.5	17.0	13.6	19.2	14.0	9.9
19	28.5	8.5	16.8	0.4	346.4	227.7	218.4	302.6	23.4	17.4	35.9	27.0	47.7	43.0	41.6	203.7	207.0	195.0	0.0	36.1	343.9	354.8	324.5	322.0
20	330.2	320.0	314.5	312.1	313.3	312.7	313.2	313.5	311.9	312.8	344.4	45.6	52.6	217.1	165.2	0.0	311.2	12.4	20.4	248.6	316.7	315.7	316.3	315.8
21	312.3	320.2	324.7	317.6	325.7	332.7	317.6	327.2	12.2	9.7	9.7	102.9	198.3	219.7	210.1	207.5	207.1	202.0	193.5	188.1	218.3	232.6	122.9	263.1
22	72.8	108.4	319.7	338.6	268.4	230.6	235.0	237.0	108.5	77.5	48.0	51.4	184.0	195.8	200.2	200.7	186.6	204.6	200.8	210.1	204.6	4.7	359.2	19.1
23	24.0	16.8	13.8	5.3	3.1	353.4	1.4	6.1	9.1	23.0	40.3	128.6	204.3	194.9	200.0	205.7	201.2	203.4	207.1	179.0	30.8	29.4	34.1	24.9
24	16.3	11.6	18.4	21.7	15.6	4.8	27.8	13.2	17.2	329.7	308.8	22.0	66.8	62.3	88.0	305.8	82.5	310.7	321.3	318.7	314.3	9.3	1.5	10.7
25	12.8	19.4	15.1	217.2	190.9	187.0	194.7	165.7	238.3	127.6	93.3	34.7	138.5	189.2	186.2	226.2	81.7	253.7	256.0	233.4	240.0	257.5	251.1	264.8
26	291.1	245.7	8.7	27.9	23.3	231.4	234.5	32.5	34.2	38.6	40.4	40.2	209.7	214.3	212.6	209.7	211.5	194.2	175.8	185.8	190.7	209.4	233.0	228.2
27	280.6	295.0	12.1	356.6	4.5	19.9	16.2	15.4	20.3	40.8	154.0	127.0	91.9	117.1	54.7	50.7	59.4	102.2	341.5	320.1	312.3	313.0	313.1	322.4
28	323.0	320.0	321.3	258.9	158.7	38.3	34.5	30.8	37.9	85.7	154.3	109.9	113.4	103.7	110.9	304.2	283.9	301.2	304.5	312.1	313.5	313.4	312.6	312.3
29	312.9	325.3	33.5	25.2	34.3	3.4	10.8	49.8	67.8	85.9	81.6	151.8	140.0	107.7	96.7	167.8	149.2	103.6	70.5	48.2	86.9	320.2	285.0	280.7
30	289.8	311.0	305.0	311.2	314.1	8.1	16.5	12.6	25.7	40.8	53.5	105.2	191.5	204.1	209.6	212.1	195.3	215.9	269.6	249.1	10.1	20.6	132.3	8.1
31	14.7	14.8	8.4	354.8	7.7	343.1	357.1	7.6	5.6	10.0	10.0	10.2	13.2	18.4	19.5	17.4	15.5	19.0	17.2	19.4	20.6	18.7	18.8	19.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	19.1	17.2	15.1	17.0	19.9	17.1	15.2	11.6	13.1	10.8	8.6	9.7	14.0	13.3	12.3	8.8	4.5	359.9	356.8	3.0	350.8	349.5	349.5	351.0
2	358.5	353.5	353.8	353.7	350.8	347.7	347.1	353.5	351.1	347.8	324.1	335.4	347.2	352.3	5.6	12.5	9.9	11.8	14.9	17.8	20.2	17.8	19.4	22.6
3	18.2	15.7	17.3	14.4	14.4	15.2	17.6	17.9	30.8	20.6	14.8	15.2	20.7	31.2	39.9	34.2	38.8	18.5	17.9	5.5	240.4	239.1	213.0	226.0
4	12.1	24.6	17.0	358.8	14.3	283.4	14.1	19.1	144.4	41.4	34.7	170.4	184.2	193.0	196.5	205.5	204.6	215.3	212.3	207.1	217.6	223.7	27.8	24.2
5	26.9	35.4	28.2	29.9	23.4	30.3	26.6	21.2	32.6	40.9	53.6	184.7	197.4	195.8	196.8	196.5	200.1	204.2	205.3	209.6	215.3	219.0	239.9	13.7
6	28.8	27.9	359.3	7.0	27.4	28.8	16.1	10.1	359.4	7.9	11.9	14.3	10.6	11.6	12.2	16.3	17.4	17.3	18.5	18.1	17.9	16.4	18.3	16.6
7	20.0	26.6	25.3	28.0	20.8	19.4	15.5	2.6	0.5	6.2	7.2	65.5	343.0	167.7	2.4	346.8	3.1	13.7	18.9	19.5	31.9	31.1	28.2	10.8
8	14.0	24.5	17.0	19.0	14.3	35.4	358.2	23.9	25.6	27.1	28.6	41.5	359.1	331.1	358.3	351.4	1.4	353.6	2.5	7.7	10.9	15.9	12.7	11.2
9	14.9	21.0	6.4	8.8	14.2	11.0	356.0	358.1	359.5	357.8	3.9	2.6	347.4	353.7	302.1	334.7	346.8	322.5	324.1	313.4	336.1	295.1	251.7	230.6
10	216.8	221.0	12.0	2.8	4.4	10.8	270.0	30.0	29.0	37.8	167.5	218.0	190.3	211.2	193.3	292.7	325.0	0.2	185.6	282.5	323.3	126.9	37.3	228.4
11	233.1	188.9	156.0	316.1	315.2	324.3	329.5	95.4	301.9	20.6	45.6	151.5	180.4	195.2	180.1	187.7	201.1	177.4	44.6	63.6	101.5	76.1	39.0	41.1
12	356.2	11.4	27.5	131.8	24.4	347.4	334.5	348.7	358.1	359.5	6.9	13.0	15.5	17.3	11.9	7.6	10.8	359.9	359.8	358.1	358.0	3.4	3.0	346.2
13	358.6	13.6	343.2	330.4	350.2	0.3	328.2	276.7	27.0	24.6	352.1	9.1	3.9	353.5	342.3	357.1	4.0	9.1	13.3	14.2	15.0	17.4	16.8	12.0
14	14.0	17.9	19.3	15.9	14.3	14.5	11.3	9.5	0.6	349.2	352.3	8.2	4.6	10.6	17.8	22.2	16.6	23.1	27.2	22.2	23.2	25.7	30.9	28.9
15	35.7	30.2	29.6	12.2	9.8	24.8	14.8	359.9	26.5	6.0	337.9	341.4	350.9	349.8	52.9	355.2	339.9	5.8	8.7	1.1	357.0	6.9	30.1	25.2
16	18.8	25.7	30.7	15.6	24.1	21.4	27.2	22.4	29.1	30.9	37.2	2.0	12.0	351.9	185.6	159.2	190.0	168.6	153.4	195.4	57.0	146.3	202.4	161.1
17	83.0	198.1	196.2	200.4	207.4	215.8	201.7	130.4	303.7	306.9	27.6	54.3	109.5	140.7	120.9	82.7	62.6	354.0	357.3	357.0	21.3	354.9	8.7	16.1
18	22.8	20.6	20.4	20.8	17.9	19.7	21.0	22.9	23.7	23.1	27.0	24.5	28.0	24.6	22.9	21.9	27.8	0.9	2.8	350.3	229.7	347.4	358.6	349.6
19	3.0	355.1	348.7	352.8	9.0	8.0	3.3	357.5	257.1	19.9	14.1	43.8	196.9	60.9	81.0	308.2	311.2	321.3	170.2	92.5	210.2	139.5	166.1	101.7
20	129.9	109.7	152.1	135.8	165.4	167.8	179.5	187.6	175.2	193.4	201.3	194.0	211.7	205.7	187.6	198.2	200.1	188.4	214.5	38.2	288.9	252.7	248.5	305.1
21	179.1	202.1	323.5	341.5	311.6	15.8	11.4	2.9	356.4	51.0	59.4	86.4	165.2	122.6	166.8	88.8	186.5	93.8	153.4	183.1	184.4	174.5	205.2	180.4
22	35.2	316.6	333.8	319.4	313.0	316.6	321.5	12.1	331.5	48.3	48.4	52.6	56.3	67.9	148.7	83.1	54.2	212.1	197.8	233.8	270.6	348.7	352.5	1.8
23	20.2	15.1	23.3	25.6	27.1	28.5	28.8	25.7	21.8	31.0	33.0	40.9	39.7	42.0	52.6	211.5	187.0	199.3	220.9	188.6	247.2	349.2	18.4	19.8
24	26.3	27.5	30.3	33.5	28.4	27.1	21.3	22.3	19.4	26.9	24.8	15.9	25.0	26.0	17.2	13.9	13.4	15.3	10.0	13.6	8.3	10.2	12.5	7.0
25	12.2	11.3	7.0	8.7	11.7	4.7	8.9	7.2	4.2	3.1	8.5	3.6	5.4	7.3	17.6	12.2	13.4	9.4	10.0	11.0	20.2	21.1	14.7	7.9
26	8.1	10.8	12.7	23.9	24.0	23.5	28.4	27.8	22.6	30.2	22.4	20.2	54.0	212.7	215.8	215.2	210.0	212.1	217.8	207.6	3.9	21.7	27.4	27.8
27	29.9	28.1	18.2	21.8	22.4	14.5	9.3	7.5	12.2	32.0	45.7	46.2	52.1	104.1	137.2	211.1	206.4	187.6	334.2	347.3	301.4	308.0	317.0	322.5
28	312.5	324.1	325.2	312.7	302.2	302.8	311.9	6.7	16.6	29.7	51.5	53.6	91.9	170.4	153.7	152.0	148.2	158.5	224.5	309.0	9.2	10.7	13.6	14.2
29	11.7	12.7	13.5	14.8	14.4	17.6	17.4	17.3	16.6	12.6	17.0	23.7	29.5	24.0	24.5	32.9	29.0	44.5	9.0	350.7	0.0	3.2	1.0	357.3
30	8.7	347.0	7.8	24.5	16.9	31.5	29.0	12.9	0.3	28.3	70.7	97.5	158.9	172.6	191.0	197.6	197.1	177.0	311.2	309.4	317.7	326.3	9.1	19.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	18.6	19.8	14.7	23.1	21.4	25.7	25.9	30.8	28.8	37.8	39.4	36.9	37.1	30.9	24.8	18.0	352.0	1.6	12.4	5.3	1.3	1.6	1.5	16.3
2	28.4	28.3	359.1	22.3	3.2	24.6	23.4	27.8	27.2	37.2	48.9	52.4	40.7	100.9	195.8	179.9	181.1	188.8	188.7	202.5	197.2	198.9	203.6	188.7
3	143.2	183.3	168.1	167.1	151.0	60.9	165.4	170.2	166.6	164.0	113.7	72.6	256.2	164.0	164.0	155.5	183.1	146.6	312.6	310.2	311.9	313.7	317.7	318.3
4	321.0	349.5	1.1	1.4	359.5	354.1	350.1	359.9	5.7	32.0	45.3	48.6	50.9	57.8	75.1	82.2	304.0	311.6	309.8	317.2	320.9	312.4	293.9	251.0
5	190.1	1.2	4.3	95.8	64.5	109.1	57.6	71.3	28.5	178.6	158.1	197.7	202.1	201.6	192.6	194.3	193.0	191.7	3.0	320.2	3.5	4.4	14.1	12.4
6	15.5	16.1	15.0	17.8	22.6	19.0	21.8	17.3	11.6	353.5	318.9	319.1	317.6	313.8	320.2	279.8	303.6	299.4	305.5	296.1	297.3	298.7	298.9	292.7
7	59.2	86.8	169.5	127.5	93.6	88.7	48.8	317.0	104.2	127.6	94.0	118.1	124.7	186.2	187.6	184.7	181.5	187.3	174.3	122.9	135.4	96.5	170.4	80.5
8	106.5	300.8	307.8	177.5	122.0	350.4	68.1	168.4	307.3	310.5	308.6	298.2	284.6	300.1	154.8	305.5	316.4	322.6	336.5	0.2	13.3	26.1	25.0	15.3
9	18.3	28.3	27.4	20.8	18.4	18.9	18.6	12.5	15.1	20.3	21.2	15.4	13.9	10.5	12.8	4.7	4.1	10.1	12.1	15.1	13.9	8.4	9.1	8.0
10	7.0	7.8	10.1	18.1	29.7	25.3	176.9	178.5	190.1	189.4	104.9	194.6	130.7	44.7	87.3	240.8	41.6	31.0	9.0	11.9	25.3	17.5	14.5	4.8
11	335.8	351.3	346.8	320.1	24.0	17.8	4.2	317.3	320.6	317.1	348.7	318.6	352.8	354.2	11.0	16.3	13.8	1.1	311.1	3.9	319.3	312.6	305.7	305.1
12	306.6	302.1	304.0	306.1	306.0	304.7	309.3	302.7	304.9	312.7	295.9	300.4	305.8	308.9	296.9	306.3	297.1	292.8	306.3	314.7	314.4	317.9	317.7	301.1
13	305.2	303.2	155.1	158.7	318.8	339.5	17.9	55.8	32.1	33.6	27.0	33.6	30.9	31.3	22.5	27.7	23.0	13.1	17.7	21.9	18.4	17.2	15.6	14.4
14	20.6	19.7	25.9	27.1	30.9	29.9	28.6	31.6	34.0	33.3	32.5	31.0	32.2	30.3	29.7	29.4	28.7	29.6	27.4	27.6	28.5	30.6	30.0	33.0
15	29.9	27.2	28.5	24.3	9.6	26.9	22.2	19.9	21.7	26.7	32.9	38.1	28.9	36.1	42.6	57.1	59.3	17.2	58.0	29.3	41.9	45.0	10.9	36.7
16	31.6	10.3	30.5	55.1	57.7	51.4	51.6	52.6	56.1	54.7	54.1	51.0	59.2	53.4	48.4	63.7	65.5	60.2	47.4	68.7	61.2	56.3	52.6	46.8
17	46.8	48.1	36.7	50.2	51.5	33.9	14.1	0.1	23.5	32.2	38.2	34.3	42.0	40.7	39.0	34.0	27.4	37.0	30.7	19.4	3.8	2.8	24.3	18.2
18	9.7	8.3	13.9	18.3	21.9	21.1	14.8	12.0	16.9	17.0	24.6	26.3	31.4	33.5	31.8	35.5	33.6	36.5	30.0	24.4	16.3	15.7	20.3	9.3
19	2.3	15.3	339.5	18.6	33.0	29.6	19.7	6.4	26.5	21.4	31.9	41.1	84.4	57.8	84.0	172.6	181.9	29.4	242.4	37.9	44.2	50.5	51.1	48.9
20	40.5	35.0	39.2	42.1	27.3	29.4	54.0	51.9	62.7	9.3	33.9	311.0	322.2	321.7	318.7	320.5	323.8	325.8	323.3	322.6	162.5	222.2	186.4	158.6
21	104.5	29.3	349.2	353.5	354.2	357.0	14.8	347.4	336.8	327.0	35.3	65.2	62.6	57.2	48.2	45.8	49.2	11.3	328.2	319.1	320.5	317.7	316.8	311.5
22	337.2	161.7	101.6	140.9	172.9	136.8	180.0	167.5	156.9	175.0	181.8	186.5	185.8	190.8	133.6	319.3	312.6	310.7	345.1	1.4	19.6	16.5	15.1	29.1
23	22.2	11.4	16.5	12.5	17.1	6.7	1.7	2.4	33.5	35.1	57.0	57.8	326.8	309.7	188.5	195.4	195.3	96.0	62.6	55.7	61.5	64.4	61.6	103.7
24	169.3	174.9	158.1	167.2	90.0	46.6	76.0	155.9	202.0	166.9	73.9	167.0	192.9	204.9	201.0	192.1	207.6	202.2	200.3	191.1	188.7	235.3	262.2	17.5
25	27.9	19.2	24.0	26.7	22.7	32.2	31.4	32.4	34.5	35.0	31.4	31.1	31.9	30.3	29.0	30.8	29.2	27.2	20.4	20.9	17.9	26.9	26.5	27.5
26	22.3	29.6	29.9	24.6	14.9	10.4	348.6	12.1	33.1	32.1	30.9	47.1	126.0	60.3	44.5	87.1	331.1	324.4	322.8	317.4	322.1	320.5	319.0	315.7
27	8.3	38.5	349.1	359.5	315.9	313.1	325.1	18.6	33.4	29.2	63.5	60.9	58.2	56.5	46.9	42.8	29.3	359.6	47.7	47.7	38.6	38.7	9.5	0.7
28	10.3	4.6	11.3	16.4	25.6	32.7	26.3	31.7	34.6	35.9	39.9	42.9	42.5	44.4	49.1	43.7	108.9	16.2	18.5	24.5	26.8	28.1	19.1	19.3
29	21.5	28.7	25.3	28.3	31.1	26.7	30.4	28.0	33.4	33.5	36.6	37.4	38.9	37.4	38.2	26.0	28.0	21.7	23.4	41.5	32.1	33.0	29.8	31.9
30	28.9	30.7	32.9	30.1	28.4	28.7	30.3	24.6	27.1	30.4	34.6	27.7	27.8	31.4	29.6	32.6	141.0	236.3	19.1	33.7	34.8	34.9	33.0	33.7
31	33.1	31.8	28.1	28.6	30.4	29.2	32.8	30.1	33.1	31.7	36.0	40.3	44.2	44.1	43.5	42.5	198.1	322.7	17.2	18.1	14.6	18.6	28.5	34.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	28.4	28.6	30.4	32.4	33.5	34.3	29.5	17.1	28.7	36.0	33.4	35.2	38.6	39.1	149.0	121.7	116.8	179.5	169.9	178.1	75.0	35.1	25.8	357.0
2	180.7	173.1	185.5	178.6	185.6	169.4	181.9	185.9	203.6	196.0	137.7	358.5	307.3	316.9	316.1	318.9	323.8	317.1	315.9	312.2	314.4	312.6	309.7	311.0
3	316.6	320.9	323.0	321.4	319.7	316.2	319.2	319.7	317.9	318.9	315.8	318.5	319.6	319.1	319.8	321.0	320.0	321.7	319.8	319.0	321.4	317.4	319.1	351.7
4	13.3	26.5	26.1	27.1	40.3	42.1	31.0	41.1	292.4	358.7	23.8	33.7	44.1	47.1	33.3	47.3	26.3	359.1	34.0	25.2	52.0	46.9	29.2	20.9
5	36.7	43.4	36.6	21.5	34.9	33.9	35.8	11.4	25.4	28.7	31.2	31.0	17.3	13.2	20.1	19.5	14.7	20.3	22.1	12.1	11.1	13.7	21.1	15.1
6	10.2	15.0	18.4	17.1	17.7	25.8	23.4	22.8	26.6	26.6	29.2	26.1	25.0	19.6	12.7	33.7	307.9	312.8	312.0	320.6	318.0	315.0	296.8	298.4
7	310.4	314.0	316.0	313.5	311.6	311.8	319.9	314.3	316.8	319.1	320.1	322.3	359.2	37.9	58.7	59.0	9.5	311.2	24.0	57.5	27.0	40.0	39.0	38.6
8	29.3	24.9	24.1	18.5	11.1	23.5	24.8	34.2	35.5	31.3	29.4	26.9	20.7	13.0	25.8	17.7	20.4	22.6	22.1	19.5	21.2	21.2	28.3	27.4
9	30.6	31.1	26.9	22.8	25.8	26.8	26.4	24.2	23.2	22.1	20.3	22.0	21.9	21.2	21.5	19.5	18.9	16.3	14.1	14.2	16.2	13.5	11.6	11.1
10	15.2	19.2	22.9	23.2	25.8	29.2	32.5	24.0	22.7	27.8	25.7	24.4	17.0	356.4	339.8	222.5	267.1	2.8	31.9	29.9	356.5	346.3	359.0	3.7
11	343.4	357.9	359.2	2.3	1.5	3.0	5.3	8.1	11.2	9.5	7.5	27.7	33.5	25.3	26.9	27.9	43.4	199.2	209.5	201.1	177.3	185.5	190.6	184.8
12	182.9	197.7	195.0	190.5	179.3	196.4	191.7	194.1	193.7	200.2	189.3	207.0	189.3	174.4	185.2	194.3	186.1	187.3	197.8	211.1	329.1	331.6	13.6	30.4
13	27.6	23.4	25.1	23.2	36.5	34.9	37.1	30.3	30.4	23.8	23.1	27.7	15.4	12.3	14.0	14.4	10.1	16.0	25.3	27.5	28.6	23.9	23.7	14.1
14	19.0	23.6	16.1	25.6	23.3	26.2	30.0	29.0	30.6	20.2	12.1	36.7	37.9	38.9	32.2	51.3	34.3	21.1	15.8	344.7	225.9	195.1	215.9	214.9
15	210.0	329.2	327.6	14.7	9.7	354.7	293.4	18.3	6.6	15.1	19.7	34.0	39.5	34.9	35.5	29.6	30.0	27.6	31.8	21.0	14.3	15.0	13.3	1.1
16	9.2	12.3	14.6	20.5	23.2	19.6	317.7	2.6	36.5	0.0	30.7	20.5	36.3	42.0	45.9	44.0	34.1	25.1	14.1	25.9	28.5	25.2	16.8	28.7
17	25.3	30.4	32.2	25.3	22.5	29.2	27.9	24.5	27.5	16.5	27.2	37.2	39.2	41.5	40.2	37.0	23.7	13.4	17.9	17.7	18.2	28.3	29.6	31.4
18	29.4	27.2	28.8	28.6	29.0	20.5	16.9	12.4	13.4	21.7	21.2	31.6	36.2	39.2	40.7	36.4	24.7	10.2	9.3	13.8	14.9	19.6	24.7	27.7
19	24.0	21.5	22.8	23.7	13.1	3.1	2.0	9.1	3.2	13.6	25.5	13.6	43.6	16.6	45.0	29.9	55.5	50.4	40.7	29.4	28.6	11.0	34.5	30.9
20	39.6	35.3	42.9	14.5	12.4	50.0	43.3	40.4	48.2	58.0	65.7	36.8	55.0	50.2	48.6	54.6	38.9	343.1	328.0	316.0	318.0	318.6	322.2	21.1
21	29.4	315.6	329.6	326.2	318.6	321.5	27.6	20.5	2.4	347.9	3.6	35.6	42.7	58.9	46.7	57.8	57.4	29.7	356.5	336.1	1.8	12.0	20.9	27.9
22	27.4	31.1	33.6	30.1	20.4	26.2	25.0	18.2	3.5	11.5	8.2	37.5	23.5	36.8	36.5	32.4	18.0	10.8	13.2	15.9	12.9	5.0	6.1	8.4
23	20.1	15.4	17.5	28.8	32.9	35.2	34.1	33.9	27.8	31.5	34.2	31.2	30.9	28.0	28.6	16.9	15.1	13.8	17.8	23.3	24.8	10.4	10.7	7.2
24	11.4	12.8	6.3	7.8	11.9	11.5	7.6	7.9	4.0	4.7	4.6	7.5	13.8	9.6	7.7	7.0	7.5	2.9	2.1	359.1	358.0	6.1	9.7	19.8
25	328.9	320.2	318.0	325.3	319.0	321.2	321.2	324.8	333.3	324.5	320.3	319.9	321.9	321.1	310.9	303.8	302.0	303.7	318.0	129.4	81.8	323.5	22.9	68.6
26	310.6	306.3	313.0	314.2	315.4	316.5	317.2	315.8	317.9	316.0	314.9	317.3	318.7	323.6	346.1	18.6	12.8	54.6	46.7	47.7	36.5	24.7	25.6	28.6
27	10.4	13.9	21.5	17.5	11.3	20.6	13.4	39.5	32.6	28.4	28.0	21.2	5.5	27.8	2.4	6.1	12.7	313.1	207.7	10.7	7.5	17.0	23.9	24.5
28	27.5	25.6	27.5	28.6	31.2	25.1	15.3	21.0	22.2	25.3	28.7	22.2	24.7	29.9	12.3	30.7	336.1	214.1	80.2	54.9	12.4	20.5	14.1	34.7
29	50.7	19.6	51.1	317.5	318.7	320.5	322.5	322.0	319.5	319.0	320.1	319.0	317.5	317.1	315.6	314.3	314.2	311.0	305.4	306.2	307.1	304.9	311.4	292.8
30	323.6	305.7	334.1	3.7	345.1	87.4	94.6	116.0	65.7	74.3	3.3	7.3	50.0	150.0	167.9	132.9	100.4	133.9	74.7	117.9	227.2	236.2	207.8	239.5

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	336.5	338.1	336.7	334.8	356.6	28.0	39.9	45.5	18.9	20.4	33.7	36.0	36.3	33.6	31.9	28.0	25.0	28.2	29.6	26.2	27.0	31.2	34.4	34.1
2	32.4	30.0	37.4	36.4	25.9	32.5	31.1	27.3	30.6	20.9	18.1	11.9	360.0	7.9	4.1	4.3	356.8	3.4	6.9	8.1	14.5	18.2	27.2	25.1
3	27.3	19.5	14.5	1.9	8.7	7.8	2.3	5.7	2.2	8.4	14.5	11.5	14.0	13.5	14.8	16.7	16.7	14.1	15.2	14.2	16.1	10.1	17.2	20.6
4	22.9	24.0	22.1	18.6	15.1	9.4	9.0	20.3	14.1	12.6	11.3	5.9	7.3	8.1	14.3	15.3	20.5	13.2	26.1	31.1	21.7	26.0	25.3	20.8
5	22.8	31.3	32.9	33.6	34.3	28.5	29.0	30.5	29.9	37.5	28.6	11.6	13.6	17.7	20.0	23.8	18.5	14.7	5.4	9.3	14.3	14.4	7.9	8.5
6	359.1	358.3	0.6	13.6	22.3	28.6	25.2	21.2	18.5	19.0	17.7	19.2	19.9	24.4	30.8	31.1	30.5	225.8	25.6	24.6	26.1	226.2	226.2	231.5
7	332.6	27.9	219.6	4.0	17.0	31.5	36.6	27.5	29.6	27.6	17.0	22.8	38.5	34.4	38.0	34.1	27.7	27.9	31.4	23.5	31.0	34.0	37.5	22.3
8	5.0	357.6	9.1	20.8	21.2	26.9	28.2	31.2	27.4	30.0	27.2	24.8	25.1	26.8	28.1	30.1	28.3	26.0	25.9	25.9	25.7	25.7	26.5	26.1
9	36.4	31.4	25.7	25.8	13.9	355.8	320.0	253.3	295.7	228.5	0.0	169.6	58.5	335.3	181.2	235.0	1.8	253.1	209.8	249.2	331.0	15.9	348.7	15.6
10	359.4	1.0	332.7	194.3	139.0	69.1	90.9	45.8	45.0	140.7	179.5	52.7	73.4	127.9	51.3	206.8	195.8	206.7	32.3	244.6	196.0	207.1	199.2	215.9
11	223.7	56.5	17.1	242.2	45.4	53.4	47.4	32.4	358.8	65.1	84.4	64.5	77.0	188.5	179.9	87.1	95.2	179.7	190.4	207.1	220.3	190.6	203.8	186.8
12	83.5	314.5	320.4	315.7	319.2	315.6	339.3	28.4	22.6	16.8	12.6	17.8	6.8	20.4	0.2	30.0	33.0	22.3	27.0	27.0	12.5	24.5	50.5	226.1
13	21.4	4.0	19.6	26.0	28.0	30.0	27.7	29.6	24.8	31.2	28.6	31.6	38.3	231.1	187.8	29.1	22.9	25.2	24.3	24.0	30.3	32.6	33.5	31.0
14	30.9	30.3	29.3	28.9	32.7	34.4	24.8	29.2	224.8	8.2	29.5	31.7	41.4	44.9	43.4	32.0	32.6	35.8	34.2	31.9	30.0	31.5	32.1	25.9
15	28.7	31.1	7.2	357.4	12.4	359.5	345.4	16.4	26.2	3.2	9.1	31.4	9.1	32.1	35.1	31.1	35.9	33.5	35.2	35.9	35.4	35.1	23.1	36.1
16	33.9	37.7	35.0	28.8	27.0	20.7	21.4	33.0	37.0	30.6	350.0	327.5	25.9	34.1	21.8	1.9	34.3	40.1	29.3	31.6	33.8	29.3	20.6	10.2
17	7.8	20.4	35.7	33.8	24.3	30.0	25.9	34.2	25.2	23.2	34.2	33.3	35.5	30.0	32.0	32.6	33.8	33.9	34.2	32.4	30.0	31.1	35.9	33.4
18	32.7	31.4	32.3	36.0	38.0	35.8	35.1	22.5	11.6	11.5	27.8	26.8	5.3	358.4	26.0	22.3	19.5	7.9	12.2	17.8	11.6	2.6	3.4	1.5
19	4.7	4.1	3.6	1.2	1.8	358.6	12.2	6.9	2.8	9.5	12.6	16.4	17.5	14.0	15.6	18.4	18.4	21.9	23.4	24.8	19.8	24.6	26.5	24.2
20	19.5	19.6	20.3	24.9	23.9	19.9	23.6	28.6	28.7	26.5	25.0	25.8	29.0	23.4	22.3	23.2	10.7	8.0	26.9	27.3	23.4	22.3	21.9	33.4
21	38.5	36.2	24.1	48.2	32.6	39.2	31.8	33.1	27.6	32.2	30.3	31.1	39.1	42.6	39.1	35.9	16.5	8.6	358.8	7.7	14.7	25.9	26.8	25.8
22	32.8	32.9	32.6	34.7	26.7	30.8	29.3	29.7	30.7	30.8	30.7	30.7	30.2	39.4	209.2	213.9	171.6	191.9	152.4	32.6	25.2	30.0	31.4	27.9
23	28.9	30.9	29.5	31.2	25.4	27.2	30.4	29.5	29.2	342.0	210.3	156.2	117.2	85.7	89.6	190.0	205.4	83.8	82.3	57.0	65.4	22.6	223.3	209.3
24	202.6	187.7	212.5	185.3	192.3	197.7	197.1	191.9	78.7	51.8	47.7	87.8	124.3	59.6	39.7	55.2	100.6	194.9	228.2	308.7	336.3	24.0	17.0	32.0
25	32.5	33.5	18.4	19.2	26.3	23.9	17.8	20.9	18.7	17.2	14.3	28.9	35.0	33.4	31.5	32.2	31.9	29.8	208.8	197.0	208.9	203.6	191.4	183.2
26	186.4	198.1	196.7	194.2	197.2	166.2	160.4	184.4	190.3	151.5	174.7	182.0	184.4	178.9	119.3	181.9	185.6	187.8	132.2	161.2	177.7	182.3	113.4	293.6
27	290.1	294.3	300.7	314.4	318.3	321.3	319.4	318.9	321.0	320.1	321.0	318.6	318.3	318.4	319.0	317.5	317.1	318.6	318.0	15.3	29.1	40.6	32.9	41.2
28	41.2	61.3	46.7	330.5	350.5	5.4	31.6	64.0	66.8	56.5	47.3	68.3	60.3	64.8	25.5	64.2	71.6	66.4	46.9	35.5	51.1	31.5	62.6	58.3
29	56.3	53.7	45.6	58.0	59.1	38.6	62.0	46.7	14.8	43.0	44.7	25.2	27.5	48.6	53.2	17.7	20.2	6.0	29.1	26.3	23.9	21.9	16.8	6.4
30	8.4	12.0	15.2	8.7	23.0	40.2	37.7	42.8	6.1	351.3	9.7	15.3	38.0	47.1	41.7	35.2	27.4	39.7	40.8	59.1	25.8	331.0	40.5	34.5
31	50.4	56.1	52.7	60.3	56.2	56.1	61.4	59.7	58.9	61.6	58.9	60.4	60.1	59.1	59.5	59.9	58.3	58.1	58.6	54.8	53.7	49.8	44.1	44.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.5	9.1	9.9	10.2	10.7	10.9	10.9	10.3	11.7	10.9	10.6	14.6	43.2	20.8	53.6	52.4	22.4	24.9	20.8	17.5	23.2	22.5	18.5	35.4	53.6	8.5	20.1
2	60.4	23.3	35.1	55.3	19.5	19.7	20.2	20.1	13.4	13.3	15.7	14.0	9.8	9.0	17.8	13.4	26.7	10.9	11.4	8.3	19.8	18.1	15.9	22.1	60.4	8.3	20.5
3	15.7	9.9	18.8	27.8	18.2	28.8	42.6	75.3	23.7	47.6	37.1	35.2	32.9	26.6	20.6	13.1	12.2	14.0	30.2	23.8	21.0	13.9	26.8	14.4	75.3	9.9	26.3
4	19.7	18.4	31.9	17.1	27.8	88.3	27.9	37.0	33.1	39.5	35.6	41.0	26.9	43.9	31.8	30.8	18.4	54.3	20.9	39.1	45.7	46.4	58.7	37.1	88.3	17.1	36.3
5	19.1	19.9	23.3	35.7	32.8	26.9	43.3	26.3	15.2	14.1	14.1	15.1	15.1	14.4	14.2	13.9	15.1	14.3	14.7	14.8	15.4	15.8	15.6	15.2	43.3	13.9	19.3
6	15.3	15.4	14.5	15.3	15.6	14.6	14.1	14.1	14.8	14.1	13.6	14.5	13.3	14.0	28.8	25.7	38.9	40.4	19.1	18.9	28.2	31.6	38.5	23.0	40.4	13.3	20.7
7	25.0	47.3	29.4	26.0	24.8	30.1	25.2	26.3	82.3	72.2	43.8	25.3	43.8	39.8	39.7	15.6	22.4	28.5	31.4	38.8	22.9	69.5	20.2	66.1	82.3	15.6	37.4
8	53.2	88.1	39.1	21.5	22.1	27.8	74.9	61.5	45.7	73.1	19.8	47.6	48.6	47.8	50.7	37.5	34.9	29.6	26.2	20.2	16.3	15.2	18.8	76.7	88.1	15.2	41.5
9	50.1	50.1	29.2	32.9	19.8	11.8	10.2	14.5	42.6	49.1	29.0	20.3	11.9	13.7	16.9	13.9	50.1	33.4	22.2	15.2	15.6	13.7	13.7	12.9	50.1	10.2	24.7
10	12.3	12.9	14.5	15.4	16.4	14.8	16.7	16.6	13.6	12.8	13.0	13.4	18.1	15.5	15.2	14.5	14.9	14.0	13.5	13.2	13.5	14.5	13.5	16.1	18.1	12.3	14.5
11	16.2	14.5	14.1	16.5	32.2	15.0	13.5	14.4	18.0	24.2	29.4	27.6	16.7	19.1	18.9	16.9	18.9	21.3	25.2	23.3	22.8	21.4	13.5	37.7	37.7	13.5	20.5
12	33.3	25.8	14.5	17.4	23.2	15.9	11.3	11.4	15.4	21.9	57.7	41.0	15.5	16.3	18.0	12.4	17.6	23.1	38.9	45.3	48.7	37.7	15.5	16.8	57.7	11.3	24.8
13	45.0	25.3	16.3	34.4	34.9	24.7	21.5	18.2	13.5	28.4	40.0	24.0	23.3	52.1	31.8	49.6	15.2	16.2	18.5	17.3	27.6	33.1	14.7	27.9	52.1	13.5	27.2
14	15.0	16.0	17.4	15.2	35.0	30.9	6.2	4.5	6.2	7.4	9.1	9.8	11.8	8.6	8.5	7.2	7.3	7.3	9.1	9.2	6.4	9.0	11.2	9.8	35.0	4.5	11.6
15	10.4	10.2	11.8	8.3	9.2	10.2	9.7	9.0	7.5	28.8	72.1	16.2	7.3	9.2	11.2	12.3	10.2	8.7	6.2	6.9	6.4	13.1	18.4	8.1	72.1	6.2	13.4
16	42.0	89.7	46.1	16.2	44.4	53.5	20.2	27.3	93.9	44.7	38.3	79.0	59.2	43.6	47.8	57.6	62.8	91.8	82.5	23.0	8.1	10.1	13.3	5.2	93.9	5.2	45.8
17	9.2	7.5	7.8	7.5	9.0	6.9	5.7	17.0	13.8	16.5	15.0	14.2	9.9	8.7	11.5	11.0	10.8	12.0	8.1	7.6	6.5	10.9	5.0	8.0	17.0	5.0	10.0
18	7.5	61.8	65.5	81.7	44.9	28.3	58.0	45.9	4.1	77.2	18.9	27.2	21.2	16.1	23.0	67.9	14.8	54.1	70.4	34.5	6.1	11.0	13.0	12.0	81.7	4.1	36.0
19	6.2	5.8	5.0	7.6	7.6	10.0	10.4	10.2	11.8	11.7	14.6	12.3	14.7	21.7	21.4	24.2	28.0	17.0	17.3	23.5	11.6	9.9	10.1	13.0	28.0	5.0	13.6
20	13.0	15.1	12.2	15.1	16.7	26.6	19.7	21.2	21.1	30.1	26.1	24.7	25.7	15.4	25.2	20.2	19.0	9.6	9.1	10.8	15.1	11.1	8.1	11.6	30.1	8.1	17.6
21	92.3	19.2	10.3	6.7	5.2	7.4	7.5	6.6	9.1	11.7	13.9	15.4	14.9	12.2	15.0	13.8	14.0	13.6	14.8	19.9	34.4	58.5	96.4	54.1	96.4	5.2	23.6
22	74.5	29.5	14.2	12.3	9.5	10.5	35.0	14.1	23.3	24.3	36.9	24.8	84.8	63.1	47.6	44.1	74.2	30.5	59.7	62.9	50.1	75.6	69.7	44.1	84.8	9.5	42.3
23	59.4	74.7	39.8	42.3	54.8	36.4	42.3	26.9	45.4	59.7	34.2	43.5	85.6	41.2	44.3	25.9	36.7	60.7	50.0	38.2	20.6	22.9	14.5	50.3	85.6	14.5	43.8
24	15.8	31.6	24.6	22.7	18.2	14.7	5.9	8.6	7.4	10.2	11.8	7.7	7.7	12.0	12.6	9.4	8.7	8.8	8.2	5.8	7.7	11.0	7.6	8.0	31.6	5.8	12.0
25	6.2	7.5	28.4	54.7	10.4	28.3	66.2	69.7	70.3	62.3	65.4	57.8	65.1	61.8	83.8	34.0	56.6	88.6	47.6	57.2	45.6	53.1	64.8	75.1	88.6	6.2	52.5
26	84.9	69.7	58.1	80.9	36.4	22.1	21.9	46.1	28.4	36.5	26.9	9.1	10.4	7.5	10.4	13.0	13.0	13.6	10.6	8.1	7.6	6.5	5.8	8.6	84.9	5.8	26.5
27	12.4	7.7	7.1	8.1	20.4	12.4	8.7	8.9	10.6	15.8	15.7	15.2	13.0	15.2	12.7	11.6	13.5	15.9	10.7	11.6	11.3	9.8	9.7	8.0	20.4	7.1	11.9
28	7.8	8.9	7.8	7.7	9.2	8.5	7.4	7.0	7.0	13.4	31.8	23.8	24.4	14.3	12.1	9.4	8.1	18.6	15.4	6.7	24.7	33.9	61.8	23.8	61.8	6.7	16.4
29	58.8	88.8	31.6	68.9	34.4	54.8	30.3	38.8	45.9	82.6	52.9	19.7	17.8	29.1	67.5	25.5	52.8	7.0	8.7	10.2	11.0	20.5	23.2	27.2	88.8	7.0	37.8
30	27.7	15.0	21.5	27.8	13.3	12.3	18.1	8.8	11.1	6.9	7.3	10.0	9.6	11.5	9.0	12.6	17.6	26.7	13.6	19.9	36.9	26.7	32.6	44.0	44.0	6.9	18.4
31	16.0	23.8	34.3	43.9	32.7	16.5	17.2	16.9	40.6	52.8	35.0	37.6	43.1	49.7	46.9	80.7	35.0	18.0	32.0	32.9	18.2	15.4	15.5	10.1	80.7	10.1	31.9
Max.	**92.3**	**89.7**	**65.5**	**81.7**	**54.8**	**88.3**	**74.9**	**75.3**	**93.9**	**82.6**	**72.1**	**79.0**	**85.6**	**63.1**	**83.8**	**80.7**	**74.2**	**91.8**	**82.5**	**62.9**	**50.1**	**75.6**	**96.4**	**76.7**	**96.4**		
Min.	**6.2**	**5.8**	**5.0**	**6.7**	**5.2**	**6.9**	**5.7**	**4.5**	**4.1**	**6.9**	**7.3**	**7.7**	**7.3**	**7.5**	**8.5**	**7.2**	**7.3**	**7.0**	**6.2**	**5.8**	**6.1**	**6.5**	**5.0**	**5.2**		**4.1**	
Avg.	**30.1**	**30.4**	**23.7**	**27.5**	**22.9**	**23.2**	**23.3**	**23.7**	**25.8**	**32.7**	**28.6**	**25.2**	**27.3**	**25.0**	**28.0**	**25.5**	**25.5**	**26.7**	**24.7**	**22.1**	**20.9**	**24.6**	**24.7**	**26.5**			**25.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.8	8.4	10.4	16.3	7.8	9.0	5.5	15.3	4.9	6.2	7.1	5.8	5.7	4.8	6.2	5.9	7.7	7.7	7.1	7.7	11.5	5.9	5.5	8.6	16.3	4.8	7.9
2	9.1	24.4	32.2	7.2	6.1	9.0	8.2	10.3	26.0	27.3	14.9	13.4	10.6	7.7	13.2	9.4	47.1	22.8	56.1	46.6	69.1	63.2	69.9	36.7	69.9	6.1	26.7
3	22.1	16.0	11.4	11.2	12.2	11.2	13.2	47.0	27.4	25.9	28.2	13.5	12.3	18.9	15.1	9.5	10.3	14.5	22.2	20.5	30.5	19.7	29.3	22.9	47.0	9.5	19.4
4	9.4	15.6	9.2	7.2	6.4	8.9	6.3	7.1	6.5	4.5	3.9	8.4	6.6	5.8	6.9	7.2	14.8	10.6	11.3	8.4	7.4	6.2	10.3	60.9	60.9	3.9	10.4
5	14.0	23.4	11.4	10.1	11.0	11.2	6.7	8.2	9.9	12.8	14.4	13.1	12.2	9.0	12.7	27.3	15.5	31.7	28.4	25.2	29.4	46.7	14.0	18.8	46.7	6.7	17.4
6	44.3	50.1	11.6	7.6	6.7	8.7	9.3	26.8	11.0	8.1	10.3	11.9	8.0	7.1	6.0	13.3	9.4	11.5	16.0	30.9	15.2	14.3	37.8	16.6	50.1	6.0	16.4
7	33.4	24.3	22.0	20.0	25.1	17.8	24.2	24.0	22.9	26.6	17.9	12.6	9.9	9.7	20.3	9.1	9.8	23.9	12.1	20.2	12.3	11.7	9.1	10.6	33.4	9.1	17.9
8	6.2	10.1	13.4	5.8	11.3	9.3	10.3	9.4	12.5	9.4	9.7	13.0	10.6	11.5	9.6	9.4	10.9	10.3	10.7	12.7	10.7	11.1	7.9	9.2	13.4	5.8	10.2
9	8.1	8.4	7.8	8.6	8.4	8.1	9.1	9.0	9.0	8.6	10.0	14.4	14.3	14.4	18.5	11.8	17.6	36.8	39.0	29.4	76.2	14.9	8.7	7.5	76.2	7.5	16.6
10	9.9	13.2	32.9	20.4	8.7	5.7	7.0	7.4	8.2	5.4	9.0	6.8	6.4	6.4	8.1	25.2	56.4	23.3	14.9	10.1	9.6	11.6	14.8	15.2	56.4	5.4	14.0
11	10.0	11.1	10.5	10.2	11.0	9.8	10.7	11.1	8.2	10.8	7.5	14.5	9.9	12.2	45.4	7.6	11.5	13.9	11.4	15.9	11.9	13.5	16.7	14.1	45.4	7.5	12.9
12	21.4	10.3	11.8	40.4	16.2	21.9	20.7	27.5	17.8	61.2	46.0	43.0	39.4	37.9	21.3	28.2	44.4	13.0	22.6	22.9	90.3	29.9	13.7	10.9	90.3	10.3	29.7
13	10.1	14.1	19.6	16.3	17.4	12.7	15.7	11.6	10.0	9.9	9.5	9.1	9.9	10.9	12.0	12.2	9.4	10.5	14.0	14.0	11.1	14.7	14.4	14.7	19.6	9.1	12.7
14	13.6	14.4	13.3	13.2	14.5	14.7	13.4	14.3	13.9	14.7	14.0	10.9	37.5	19.0	15.0	13.4	13.6	13.9	21.1	25.0	40.8	75.5	45.1	27.2	75.5	10.9	21.3
15	28.1	27.4	22.6	21.3	19.4	21.5	41.0	52.9	41.4	67.2	34.0	31.3	93.1	82.7	76.9	18.8	17.5	25.9	19.7	11.8	21.9	17.7	10.3	16.5	93.1	10.3	34.2
16	12.1	11.0	9.8	8.1	10.2	10.7	9.7	10.4	11.1	9.6	8.4	8.7	8.3	8.2	8.7	8.8	8.8	8.5	11.4	16.2	12.1	12.0	11.5	13.5	16.2	8.1	10.3
17	10.9	13.7	9.4	6.9	6.9	9.9	11.0	8.8	9.8	10.0	8.7	10.3	10.2	10.5	11.4	11.6	12.4	17.4	21.8	68.7	44.0	77.1	65.9	82.4	82.4	6.9	22.9
18	72.5	77.4	77.1	46.7	28.6	31.9	41.1	54.8	41.6	85.3	46.0	66.6	64.9	40.0	42.5	46.9	75.8	53.1	29.3	28.1	17.5	14.6	16.6	8.9	85.3	8.9	46.2
19	9.9	7.2	11.9	10.2	15.3	9.0	8.7	8.8	9.7	10.2	11.0	11.0	9.2	10.1	10.6	10.6	10.7	9.8	11.5	11.4	10.0	10.4	9.7	10.3	15.3	7.2	10.3
20	12.5	48.0	68.6	58.8	37.5	37.4	59.9	29.8	34.0	14.1	16.5	16.1	12.3	12.0	10.3	10.2	10.5	10.5	9.9	9.1	10.2	9.8	10.5	9.7	68.6	9.1	23.3
21	10.3	9.8	9.8	10.5	9.7	10.8	9.5	9.9	9.6	10.0	8.4	9.1	11.1	13.8	14.0	11.7	12.7	14.3	13.2	14.4	14.4	12.5	11.0	10.5	14.4	8.4	11.3
22	9.6	13.4	12.9	11.2	11.3	14.4	11.4	12.0	11.5	10.3	13.4	14.7	18.4	36.9	32.0	44.4	37.4	26.8	31.2	27.4	16.6	16.9	24.1	27.2	44.4	9.6	20.2
23	23.7	17.0	12.7	13.2	11.0	5.2	6.3	45.5	35.3	22.8	24.8	6.1	5.5	6.2	8.5	76.5	70.8	8.4	11.6	13.4	25.9	12.7	21.5	27.6	76.5	5.2	21.3
24	22.3	19.8	17.4	19.0	23.9	32.6	22.9	37.9	25.3	18.0	17.7	12.5	22.1	13.7	17.5	13.1	15.6	54.9	63.7	26.5	46.2	19.5	60.1	69.3	69.3	12.5	28.8
25	42.2	23.1	26.1	23.9	15.8	13.1	14.3	12.8	11.5	10.3	17.4	54.2	42.6	77.7	9.9	10.7	9.6	10.1	9.5	8.7	8.7	10.5	10.5	10.6	77.7	8.7	20.2
26	10.6	9.1	9.9	14.0	14.0	13.7	11.8	13.9	8.2	7.8	10.1	10.3	11.7	9.6	10.9	10.4	11.1	94.9	7.1	77.2	36.9	22.8	28.7	50.4	94.9	7.1	21.0
27	21.7	12.3	16.2	15.7	10.8	11.5	13.1	9.3	14.0	45.2	10.2	12.4	69.1	15.2	71.4	24.8	8.0	7.1	9.4	8.0	7.3	7.8	12.5	10.9	71.4	7.1	18.5
28	9.5	7.9	9.8	10.8	9.1	9.0	8.5	9.6	10.6	12.1	12.0	10.3	11.1	11.5	11.4	13.6	64.5	30.6	21.2	76.6	44.8	51.0	20.5	13.5	76.6	7.9	20.4
29	11.7	15.0	19.0	15.1	14.2	17.5	18.3	15.1	19.3	21.9	16.1	18.3	27.4	6.1	15.3	8.1	6.3	6.0	7.5	12.5	93.0	83.4	53.0	48.8	93.0	6.0	23.7
Max.	**72.5**	**77.4**	**77.1**	**58.8**	**37.5**	**37.4**	**59.9**	**54.8**	**41.6**	**85.3**	**46.0**	**66.6**	**93.1**	**82.7**	**76.9**	**76.5**	**75.8**	**94.9**	**63.7**	**77.2**	**93.0**	**83.4**	**69.9**	**82.4**	**94.9**		
Min.	**6.2**	**7.2**	**7.8**	**5.8**	**6.1**	**5.2**	**5.5**	**7.1**	**4.9**	**4.5**	**3.9**	**5.8**	**5.5**	**4.8**	**6.0**	**5.9**	**6.3**	**6.0**	**7.1**	**7.7**	**7.3**	**5.9**	**5.5**	**7.5**		**3.9**	
Avg.	**18.2**	**19.2**	**19.0**	**16.5**	**13.8**	**14.0**	**15.4**	**19.3**	**16.6**	**20.2**	**15.8**	**16.6**	**21.0**	**18.3**	**19.4**	**17.6**	**22.4**	**21.5**	**19.5**	**24.1**	**28.8**	**24.8**	**22.9**	**23.6**			**19.5**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.8	42.0	17.1	17.4	19.9	9.9	14.0	13.6	12.2	11.4	10.4	9.2	11.8	8.6	8.7	8.4	9.0	8.7	9.2	11.7	9.2	9.7	11.7	7.0	42.0	7.0	13.2
2	8.4	9.3	10.5	10.8	11.8	10.8	14.3	16.6	14.1	14.3	10.2	6.1	5.4	13.3	12.0	11.1	8.9	8.9	7.0	7.8	9.9	10.5	7.5	8.1	16.6	5.4	10.3
3	73.0	21.3	69.8	45.9	33.6	14.5	13.3	14.7	17.2	27.1	25.8	26.6	25.6	25.2	22.2	15.7	14.9	11.8	11.7	12.3	17.5	34.1	53.6	44.2	73.0	11.7	28.0
4	55.7	90.3	89.7	38.0	34.1	33.0	47.2	48.5	66.3	53.3	44.2	33.9	14.2	15.8	14.3	14.2	14.8	13.9	12.5	13.6	14.3	13.6	15.0	12.0	90.3	12.0	33.4
5	10.5	13.3	11.1	11.2	11.6	11.3	10.3	12.4	12.0	12.7	13.6	12.7	13.1	13.1	15.4	13.6	15.8	19.7	37.2	52.4	75.7	38.5	57.3	77.1	77.1	10.3	23.8
6	57.6	46.8	74.3	50.4	40.0	45.4	55.9	22.5	25.1	19.6	40.6	7.4	14.4	13.8	14.4	13.7	16.1	10.3	10.0	10.0	9.3	10.4	10.3	9.4	74.3	7.4	26.2
7	10.3	9.8	8.3	8.9	10.0	10.1	13.2	83.8	82.6	23.8	16.5	16.9	22.7	69.4	63.0	51.3	88.4	74.1	80.1	58.2	59.3	32.7	43.4	58.8	88.4	8.3	41.5
8	54.7	17.5	13.6	13.7	41.5	17.1	6.7	26.0	31.3	32.2	26.1	13.1	9.4	10.0	9.7	9.6	8.6	8.7	8.7	9.5	8.8	9.2	9.9	9.8	54.7	6.7	16.9
9	9.7	9.6	9.3	10.5	9.6	10.5	10.2	10.7	10.6	11.1	11.1	10.4	10.3	10.0	13.1	12.6	12.8	13.9	19.0	18.3	26.4	80.1	73.1	56.2	80.1	9.3	19.5
10	5.8	42.8	20.5	75.6	41.4	40.2	27.1	16.8	17.7	21.3	13.1	8.9	77.4	87.1	6.5	7.1	36.9	45.5	33.0	23.6	0.0	0.0	0.0	0.0	87.1	0.0	27.0
11	0.0	0.0	0.0	0.0	0.0	0.0	13.5	14.8	15.3	14.3	15.1	14.7	15.6	15.4	14.4	13.8	15.5	16.2	13.6	17.9	19.3	20.5	15.3	19.1	20.5	0.0	11.8
12	16.3	14.1	14.4	14.3	17.3	15.6	20.3	27.3	28.8	18.9	15.6	13.6	10.5	9.2	6.8	8.5	8.2	21.4	19.3	24.8	53.5	37.6	68.5	56.6	68.5	6.8	22.6
13	30.1	35.9	23.2	15.3	21.0	19.4	15.1	15.8	15.1	15.6	14.0	13.0	13.3	14.7	16.1	15.3	13.2	14.8	15.0	30.8	16.5	28.9	41.1	45.8	45.8	13.0	20.8
14	60.2	37.8	48.2	28.9	19.0	14.2	26.5	42.3	21.1	9.8	6.7	5.2	5.7	6.4	5.8	5.1	56.8	36.3	14.0	9.8	8.9	8.6	7.5	13.1	60.2	5.1	20.7
15	13.8	11.6	9.6	10.9	9.4	8.5	9.1	12.0	9.8	12.0	15.1	14.5	14.5	9.9	9.9	9.7	9.5	11.0	10.1	10.3	8.3	8.7	8.3	8.0	15.1	8.0	10.6
16	7.4	7.4	7.8	8.4	11.3	15.0	12.4	13.7	11.2	9.2	10.2	8.7	8.1	8.1	9.4	92.5	5.9	9.2	9.3	7.9	16.9	35.9	24.1	9.2	92.5	5.9	15.0
17	10.6	11.2	10.8	7.4	7.4	6.3	11.0	7.8	15.4	8.8	4.2	4.5	5.2	4.5	7.4	7.2	43.8	12.6	63.5	72.1	84.2	65.1	58.9	34.2	84.2	4.2	23.5
18	25.4	23.7	20.6	22.5	18.4	16.1	14.1	13.7	14.0	15.0	15.2	15.2	16.6	15.2	15.7	15.6	15.2	15.3	15.0	16.3	16.9	15.2	15.3	16.3	25.4	13.7	16.8
19	15.0	14.5	15.7	16.2	17.1	15.9	16.5	23.2	25.7	18.0	14.6	17.3	16.6	15.3	15.6	13.9	14.7	14.7	14.0	15.1	14.4	13.8	14.8	39.8	39.8	13.8	17.2
20	37.7	26.9	65.0	42.7	28.3	19.6	27.7	37.5	33.0	26.0	26.4	63.2	57.2	13.5	10.5	11.8	8.7	14.2	12.0	26.4	18.0	19.6	32.8	30.4	65.0	8.7	28.7
21	22.9	64.4	59.9	50.4	21.3	89.3	11.8	9.6	10.3	9.2	9.0	8.6	10.0	8.4	7.9	8.6	11.7	12.7	17.3	13.2	11.5	10.6	10.0	11.3	89.3	7.9	20.8
22	10.8	10.8	12.0	10.3	11.8	12.2	47.8	78.1	93.1	47.1	80.4	41.2	76.2	36.8	17.1	51.0	53.7	27.9	70.4	43.5	100.5	18.2	14.1	60.3	100.5	10.3	42.7
23	38.0	73.5	83.0	42.0	32.2	23.1	42.9	10.7	13.0	43.8	35.4	12.9	45.3	16.2	16.9	38.7	39.5	16.4	15.7	17.4	21.6	35.1	52.6	34.7	83.0	10.7	33.4
24	43.5	36.7	19.5	42.9	17.8	9.4	18.1	92.4	36.5	62.9	53.3	58.9	9.2	18.6	14.2	10.4	62.8	29.3	62.2	27.3	48.5	22.5	17.1	17.1	92.4	9.2	34.6
25	85.7	88.0	78.5	61.4	12.5	9.9	7.2	5.7	5.8	5.5	5.7	60.1	56.3	8.2	6.2	20.7	27.9	21.9	21.4	23.3	15.8	14.1	55.2	14.2	88.0	5.5	29.6
26	27.2	15.9	21.1	23.9	23.7	17.5	16.1	21.1	15.5	11.0	13.1	16.0	17.7	15.2	7.4	8.2	12.7	13.2	47.6	51.3	35.8	18.1	13.6	13.6	51.3	7.4	19.9
27	13.8	13.0	12.6	12.5	12.6	15.0	14.6	13.8	13.0	13.6	14.2	13.0	16.8	34.8	19.2	14.8	14.7	13.6	14.2	13.5	14.7	13.4	12.7	14.4	34.8	12.5	14.9
28	13.6	13.3	13.9	51.7	14.1	10.3	10.7	29.1	11.3	8.1	10.2	13.1	12.0	6.9	5.7	6.8	6.2	6.5	12.5	47.1	63.7	11.9	8.8	6.0	63.7	5.7	16.4
29	12.7	20.1	29.0	12.0	14.5	13.2	10.1	8.9	12.8	9.7	20.3	16.9	29.7	34.4	30.7	23.2	20.0	28.0	33.2	32.3	26.9	36.3	26.3	21.5	36.3	8.9	21.8
30	14.6	30.7	31.7	47.6	34.0	40.2	41.4	40.7	29.4	27.0	27.8	28.7	32.1	30.3	27.3	27.5	30.3	32.7	26.4	24.6	18.8	18.6	15.9	11.1	47.6	11.1	28.7
31	9.4	11.5	13.2	14.8	10.1	9.5	11.9	13.1	9.4	11.0	14.9	14.6	27.3	18.9	23.4	23.3	20.6	14.9	11.6	13.5	25.2	32.3	30.1	23.7	32.3	9.4	17.0
Max.	**85.7**	**90.3**	**89.7**	**75.6**	**41.5**	**89.3**	**55.9**	**92.4**	**93.1**	**62.9**	**80.4**	**63.2**	**77.4**	**87.1**	**63.0**	**92.5**	**88.4**	**74.1**	**80.1**	**72.1**	**100.5**	**80.1**	**73.1**	**77.1**	**100.5**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**6.7**	**5.7**	**5.8**	**5.5**	**4.2**	**4.5**	**5.2**	**4.5**	**5.7**	**5.1**	**5.9**	**6.5**	**7.0**	**7.8**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**26.5**	**27.9**	**29.5**	**26.4**	**19.6**	**18.8**	**19.7**	**25.7**	**23.5**	**20.1**	**20.4**	**19.3**	**22.6**	**19.6**	**15.1**	**18.9**	**23.1**	**19.3**	**24.1**	**24.4**	**28.1**	**23.4**	**26.6**	**25.3**			**22.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	25.7	27.0	24.5	20.6	14.7	14.7	12.4	11.5	16.1	14.7	13.0	12.2	10.9	11.3	14.0	11.7	12.1	11.1	8.7	7.5	8.7	9.8	7.8	8.5	27.0	7.5	13.7
2	6.9	9.7	72.1	30.5	21.6	19.6	16.0	14.4	12.4	23.7	34.5	22.3	17.9	4.0	3.9	3.1	74.9	29.4	13.8	35.5	43.3	33.5	56.7	51.0	74.9	3.1	27.1
3	70.2	58.7	52.1	46.1	34.4	51.0	18.7	27.5	17.9	10.7	16.5	26.0	43.5	36.1	30.1	28.7	30.2	26.0	37.1	54.4	57.6	73.9	65.7	46.5	73.9	10.7	40.0
4	74.6	52.3	55.1	74.5	68.8	31.2	35.9	21.5	13.0	19.2	19.8	12.8	13.0	12.2	11.8	12.4	11.2	10.3	8.8	9.0	4.2	46.8	61.2	73.4	74.6	4.2	31.4
5	49.2	53.4	66.8	50.4	40.4	56.4	29.6	37.1	52.4	60.2	31.2	63.1	35.4	20.1	20.7	26.8	36.9	26.1	56.5	55.4	36.3	18.6	33.4	28.1	66.8	18.6	41.0
6	29.5	24.3	36.5	42.7	34.2	54.6	50.5	61.1	55.5	33.8	77.4	31.2	17.2	24.1	18.1	22.4	19.3	24.6	21.7	21.0	25.3	21.2	14.7	16.2	77.4	14.7	32.4
7	56.4	28.8	29.1	17.6	10.2	12.4	22.9	23.2	33.9	11.5	11.4	22.8	36.6	16.0	16.7	20.0	20.3	21.8	21.5	29.2	22.2	14.5	12.9	34.1	56.4	10.2	22.8
8	28.3	18.3	14.7	20.9	16.3	14.3	19.5	17.3	8.7	5.2	6.1	5.5	12.4	36.8	89.9	18.6	23.6	71.0	65.5	69.3	96.4	31.7	46.7	56.6	96.4	5.2	33.1
9	67.8	69.6	71.8	67.6	58.5	55.2	49.2	93.4	79.4	101.9	27.8	6.6	0.0	0.0	3.9	20.3	53.9	33.9	32.1	24.9	43.1	41.9	64.7	64.2	101.9	0.0	47.2
10	42.3	69.1	52.5	71.1	72.2	60.2	13.8	15.3	16.5	20.2	21.4	14.5	18.2	15.2	15.5	17.6	15.5	16.4	15.3	14.5	15.1	15.2	12.8	13.1	72.2	12.8	27.2
11	12.9	14.0	14.6	16.2	17.7	15.4	15.2	16.5	17.2	19.8	18.8	16.1	14.4	14.9	15.3	15.8	27.0	38.6	25.3	20.3	21.5	22.3	17.0	20.5	38.6	12.9	18.6
12	21.6	16.6	17.9	17.8	15.0	17.3	17.5	15.0	18.5	18.3	13.7	14.2	58.6	61.3	40.7	51.3	49.0	46.0	42.7	46.3	30.9	42.5	51.9	23.9	61.3	13.7	31.2
13	32.8	21.9	16.5	53.0	42.2	31.7	20.2	25.8	9.5	33.4	72.4	5.2	24.0	28.5	51.2	47.9	89.4	79.5	94.9	82.2	49.1	31.4	27.5	34.1	94.9	5.2	41.9
14	39.1	26.5	24.7	25.6	25.2	34.4	57.3	52.9	49.2	44.7	54.1	52.7	61.3	90.6	69.7	41.4	44.1	35.5	32.8	14.4	16.5	94.8	60.2	80.3	94.8	14.4	47.0
15	70.8	57.6	56.9	27.9	70.1	21.0	31.2	52.9	24.0	33.1	10.0	11.5	11.0	44.4	64.7	53.9	29.2	15.9	16.4	16.0	11.3	25.4	93.6	34.6	93.6	10.0	36.8
16	84.4	87.5	76.8	63.2	58.3	67.1	67.4	93.6	48.5	23.2	25.2	27.3	27.4	32.0	51.4	50.5	47.2	30.8	28.6	68.2	66.6	76.9	44.5	82.4	93.6	23.2	55.4
17	77.8	99.4	72.2	36.6	63.7	52.4	92.4	80.9	94.5	84.1	25.6	17.3	43.9	26.0	23.6	36.4	46.2	46.7	33.8	57.5	44.4	72.6	71.7	47.1	99.4	17.3	56.1
18	43.1	65.4	59.7	60.0	22.5	36.8	20.6	29.7	98.4	17.4	21.1	34.0	6.2	8.5	17.2	6.2	4.0	5.7	8.9	29.6	71.0	12.6	7.2	6.5	98.4	4.0	28.8
19	11.3	8.8	10.7	6.0	7.2	8.3	6.5	6.6	6.8	12.1	53.7	17.0	21.9	25.2	19.9	18.2	25.7	12.0	28.2	20.0	28.5	36.9	41.6	15.2	53.7	6.0	18.7
20	6.3	5.1	6.4	41.0	32.9	23.4	44.1	15.1	18.2	31.6	19.2	25.0	31.7	31.9	31.8	23.4	28.2	22.7	21.9	26.3	39.9	47.3	56.8	63.1	63.1	5.1	28.9
21	71.5	41.8	44.1	41.7	35.8	48.8	33.1	46.8	68.4	40.0	40.8	31.3	25.9	25.5	29.5	37.1	38.1	60.0	11.6	15.4	20.2	25.8	21.7	9.4	71.5	9.4	36.0
22	22.4	22.5	7.8	9.2	33.5	12.7	9.0	93.3	5.2	10.8	55.8	6.6	3.4	2.9	3.3	4.4	3.5	6.3	6.5	12.4	14.2	15.4	58.2	13.2	93.3	2.9	18.0
23	15.8	77.1	69.2	45.3	7.3	11.1	14.9	14.0	12.1	7.3	6.1	4.8	17.9	43.4	7.4	7.8	7.5	53.5	81.9	33.1	33.8	29.6	18.8	31.2	81.9	4.8	27.1
24	15.7	14.0	14.3	15.2	14.4	15.5	16.9	16.8	16.9	15.1	15.9	17.9	18.8	19.1	16.3	37.9	35.1	34.3	21.6	50.7	49.7	54.5	48.2	25.6	54.5	14.0	25.0
25	28.6	42.1	60.6	65.3	68.8	47.0	69.8	32.9	66.0	48.8	35.4	50.9	52.0	38.4	38.4	35.7	38.7	101.1	32.8	35.6	45.8	22.4	14.7	16.7	101.1	14.7	45.3
26	28.5	22.2	16.5	18.9	22.9	20.0	55.4	38.9	52.2	63.9	64.7	18.6	19.6	21.1	55.8	61.9	11.5	13.5	14.5	17.5	13.0	63.7	40.2	77.0	77.0	11.5	34.7
27	41.9	48.6	22.9	24.1	43.8	32.4	25.6	13.4	21.3	50.9	49.5	16.2	46.2	72.3	56.9	37.2	26.8	23.7	17.4	25.3	46.5	36.7	33.6	64.8	72.3	13.4	36.6
28	61.5	46.3	34.1	49.2	13.3	38.5	77.3	10.9	13.5	17.5	10.8	12.0	10.5	39.6	15.7	15.1	15.5	16.1	17.3	15.6	15.0	15.6	18.8	16.1	77.3	10.5	24.8
29	15.5	14.9	18.1	17.4	15.3	19.7	16.2	34.0	16.7	9.6	11.5	7.9	6.6	7.4	30.1	27.9	23.6	41.6	67.3	63.1	69.7	63.1	30.6	19.3	69.7	6.6	27.0
30	16.2	16.9	14.2	17.6	12.6	8.4	9.3	6.8	6.8	5.6	5.5	3.8	9.3	57.5	14.2	6.7	8.3	27.0	22.9	21.6	31.1	18.7	19.4	22.6	57.5	3.8	16.0
Max.	**84.4**	**99.4**	**76.8**	**74.5**	**72.2**	**67.1**	**92.4**	**93.6**	**98.4**	**101.9**	**77.4**	**63.1**	**61.3**	**90.6**	**89.9**	**61.9**	**89.4**	**101.1**	**94.9**	**82.2**	**96.4**	**94.8**	**93.6**	**82.4**	**101.9**		
Min.	**6.3**	**5.1**	**6.4**	**6.0**	**7.2**	**8.3**	**6.5**	**6.6**	**5.2**	**5.2**	**5.5**	**3.8**	**0.0**	**0.0**	**3.3**	**3.1**	**3.5**	**5.7**	**6.5**	**7.5**	**4.2**	**9.8**	**7.2**	**6.5**		**0.0**	
Avg.	**39.0**	**38.7**	**37.8**	**36.5**	**33.1**	**31.1**	**32.3**	**34.0**	**32.3**	**29.6**	**29.0**	**20.2**	**23.9**	**28.9**	**29.3**	**26.6**	**29.9**	**32.7**	**30.3**	**33.1**	**35.7**	**37.2**	**38.4**	**36.5**			**32.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	21.3	56.2	10.4	9.6	85.5	36.8	86.0	66.7	39.4	33.4	17.7	49.9	16.7	59.9	62.4	33.5	16.7	17.9	14.9	20.0	31.2	37.4	36.6	25.4	86.0	9.6	36.9
2	52.5	45.6	24.5	34.4	53.6	71.5	85.0	28.8	19.5	16.3	12.5	18.6	17.3	77.6	65.4	70.4	33.3	41.9	33.4	75.2	85.3	87.4	53.7	24.9	87.4	12.5	47.0
3	63.1	12.4	16.5	22.6	62.5	79.6	8.9	11.9	10.7	17.1	16.5	11.6	11.0	10.5	9.9	17.5	22.0	10.1	11.4	12.2	12.9	10.8	11.4	10.9	79.6	8.9	20.2
4	12.2	11.8	13.7	11.4	11.3	10.7	10.2	9.4	8.7	9.0	7.9	8.5	8.4	9.3	9.5	9.4	10.5	8.9	15.6	14.5	17.0	12.9	82.5	62.1	82.5	7.9	16.1
5	29.4	24.1	85.4	20.5	13.1	14.7	16.8	21.9	24.4	16.6	29.3	27.0	20.5	33.4	14.4	14.6	82.9	64.9	6.5	78.2	26.8	29.4	49.1	39.9	85.4	6.5	32.7
6	13.6	13.2	15.6	14.9	63.3	37.5	58.7	56.2	44.2	92.4	67.6	32.4	31.3	28.8	45.5	73.7	35.6	29.1	68.1	34.5	51.0	27.0	32.5	77.3	92.4	13.2	43.5
7	37.7	19.4	18.1	17.6	14.9	14.1	15.8	13.3	13.7	14.9	12.6	13.9	10.4	10.9	10.9	13.1	10.6	12.8	13.3	14.8	14.6	14.5	12.4	11.0	37.7	10.4	14.8
8	14.0	13.7	11.6	11.4	13.9	13.3	11.9	9.7	11.2	9.4	8.7	10.1	10.4	13.0	11.3	8.9	9.8	10.5	11.0	11.7	12.2	12.3	13.2	11.4	14.0	8.7	11.4
9	13.1	11.8	11.7	11.6	11.9	11.7	12.9	11.9	12.8	11.5	11.9	11.3	10.4	11.1	10.6	13.0	13.1	27.4	66.5	6.5	8.7	15.1	6.5	8.8	66.5	6.5	14.2
10	91.4	24.9	25.9	34.1	46.7	53.8	20.5	22.0	11.5	9.6	18.8	29.2	36.1	38.0	25.3	48.3	61.7	15.9	34.0	37.9	18.4	21.8	60.4	32.0	91.4	9.6	34.1
11	81.5	25.0	12.9	25.2	78.3	72.0	14.0	14.0	12.9	59.2	17.2	15.8	15.4	18.3	16.3	13.2	12.5	14.2	12.0	13.3	12.7	9.5	11.6	12.3	81.5	9.5	24.6
12	11.0	11.2	10.8	11.0	12.2	11.5	11.2	10.9	11.2	11.6	12.2	11.9	11.1	11.6	16.8	28.0	15.6	16.6	17.4	20.1	20.4	19.1	18.1	20.4	28.0	10.8	14.7
13	35.5	37.5	45.0	20.3	19.1	33.9	34.8	30.1	36.7	66.8	92.0	48.4	70.2	70.2	51.2	72.9	96.4	88.3	83.2	43.2	38.3	79.3	39.7	12.4	96.4	12.4	51.9
14	13.1	13.4	11.8	10.1	10.4	12.6	11.3	9.6	9.6	9.9	11.7	11.0	11.6	10.4	10.7	10.3	11.2	11.9	12.6	9.9	11.1	11.2	11.2	11.6	13.4	9.6	11.2
15	14.3	47.6	55.1	69.8	35.0	62.4	49.2	25.9	32.6	50.9	29.1	8.9	11.0	24.0	26.3	60.0	47.5	53.3	27.0	42.6	10.2	8.5	8.1	9.0	69.8	8.1	33.7
16	10.5	22.9	51.2	58.5	65.4	62.7	68.3	61.4	61.8	43.9	94.0	47.0	31.9	69.5	25.5	21.7	7.8	8.7	6.6	8.6	11.8	10.3	70.3	10.0	94.0	6.6	38.8
17	31.8	65.0	30.6	31.6	14.6	10.9	11.9	7.2	8.7	6.4	4.1	60.8	14.0	4.7	4.6	4.3	6.2	5.7	7.6	7.8	14.2	19.2	18.7	26.2	65.0	4.1	17.4
18	43.3	15.8	45.1	79.8	37.6	11.9	11.2	12.8	18.9	17.5	28.8	77.1	90.3	44.7	22.0	72.6	92.0	20.6	17.2	57.7	38.5	86.1	37.6	33.1	92.0	11.2	42.2
19	20.1	13.3	19.6	10.4	10.6	6.9	7.5	6.7	5.6	6.4	8.3	82.7	6.6	13.5	48.6	61.1	55.3	71.5	36.8	18.6	20.4	20.2	16.8	22.0	82.7	5.6	24.6
20	28.0	37.9	22.4	14.5	13.6	15.2	13.3	14.4	12.2	24.5	22.0	5.1	19.0	44.3	3.6	5.3	12.6	12.3	28.8	20.5	19.9	22.3	52.2	40.9	52.2	3.6	21.0
21	30.9	16.1	40.1	97.7	31.0	19.2	15.6	84.5	6.2	41.3	30.6	28.9	19.3	32.4	12.9	19.5	13.2	8.8	9.4	10.3	6.8	16.6	87.0	86.2	97.7	6.2	31.9
22	55.6	54.3	69.7	81.4	59.5	23.0	15.6	51.4	11.4	10.2	7.5	6.1	47.8	30.6	35.7	32.9	60.9	24.2	45.6	71.6	56.5	31.6	35.3	35.3	81.4	6.1	39.7
23	39.6	26.3	42.9	15.4	19.9	11.7	11.6	16.2	16.8	15.0	12.1	15.9	27.5	30.5	28.5	58.4	72.9	83.2	60.9	42.9	77.4	35.9	49.0	46.5	83.2	11.6	35.7
24	32.3	44.3	35.0	60.6	55.3	58.6	40.7	24.8	30.7	77.5	30.1	9.9	10.6	14.2	41.1	43.4	63.1	14.2	26.0	47.2	51.8	9.5	11.2	7.1	77.5	7.1	35.0
25	7.5	8.6	5.3	7.5	11.6	14.0	8.1	6.7	8.3	9.6	47.5	16.8	18.3	15.5	9.6	16.5	8.2	9.2	13.3	10.3	13.7	16.5	86.2	58.1	86.2	5.3	17.8
26	43.3	78.8	56.5	70.0	68.9	83.1	33.6	27.5	57.0	40.0	53.5	44.6	59.8	36.9	35.7	56.1	62.0	34.1	31.5	47.8	34.7	30.4	44.7	40.5	83.1	27.5	48.8
27	64.5	54.6	60.8	61.4	29.7	20.0	24.5	20.3	19.1	19.5	18.0	21.2	21.9	16.5	25.4	92.2	68.6	84.0	46.6	66.4	65.9	44.9	37.0	43.3	92.2	16.5	42.8
28	54.2	68.3	36.6	78.7	77.9	66.6	86.6	44.2	27.4	40.9	25.0	15.6	22.0	21.8	30.8	89.8	62.5	45.6	48.6	63.0	71.3	70.0	77.7	56.6	89.8	15.6	53.4
29	27.8	38.3	67.6	77.0	60.8	73.2	49.0	19.4	48.9	19.4	40.9	16.9	8.4	6.7	6.9	7.2	7.6	8.2	10.7	12.2	8.8	16.9	30.3	35.2	77.0	6.7	29.1
30	37.8	64.2	73.6	57.5	6.6	86.6	45.3	55.9	40.4	36.5	12.0	7.0	21.6	44.3	19.2	20.3	15.2	24.3	38.6	72.7	87.2	79.0	88.6	35.3	88.6	6.6	44.6
31	71.8	93.2	49.4	27.9	28.3	28.4	39.5	74.9	47.6	81.8	26.6	36.4	36.2	43.1	19.2	33.2	22.4	16.6	9.4	11.2	32.0	28.1	22.5	31.3	93.2	9.4	38.0
Max.	**91.4**	**93.2**	**85.4**	**97.7**	**85.5**	**86.6**	**86.6**	**84.5**	**61.8**	**92.4**	**94.0**	**82.7**	**90.3**	**77.6**	**65.4**	**92.2**	**96.4**	**88.3**	**83.2**	**78.2**	**87.2**	**87.4**	**88.6**	**86.2**	**97.7**		
Min.	**7.5**	**8.6**	**5.3**	**7.5**	**6.6**	**6.9**	**7.5**	**6.7**	**5.6**	**6.4**	**4.1**	**5.1**	**6.6**	**4.7**	**3.6**	**4.3**	**6.2**	**5.7**	**6.5**	**6.5**	**6.8**	**8.5**	**6.5**	**7.1**		**3.6**	
Avg.	**35.6**	**34.5**	**34.7**	**37.2**	**36.2**	**36.4**	**30.0**	**28.1**	**23.2**	**29.6**	**26.7**	**25.8**	**24.1**	**28.9**	**24.4**	**36.2**	**35.8**	**28.9**	**27.9**	**32.4**	**31.7**	**30.1**	**39.1**	**31.5**			**31.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	31.7	24.1	14.8	14.5	11.4	13.7	12.8	14.2	14.2	13.2	11.7	12.4	13.0	14.0	12.2	11.9	12.3	11.8	14.0	12.7	12.7	12.8	11.3	12.3	31.7	11.3	14.2
2	12.3	12.3	11.6	10.7	11.7	11.1	11.4	10.9	11.5	11.3	11.8	9.3	10.0	9.5	8.8	10.3	9.5	8.7	11.8	9.8	10.0	11.1	12.7	11.5	12.7	8.7	10.8
3	9.4	11.1	9.5	11.4	11.7	13.2	12.7	12.2	14.6	15.9	11.8	9.1	85.2	13.6	16.0	9.3	10.0	18.5	27.7	22.5	20.1	43.7	22.4	6.9	85.2	6.9	18.3
4	11.5	62.3	67.8	9.8	58.8	19.4	12.8	12.1	20.5	11.1	34.8	8.0	5.4	5.5	5.0	3.7	4.1	57.3	16.1	6.0	30.1	50.7	24.2	59.4	67.8	3.7	24.8
5	43.8	26.9	31.7	30.4	44.5	24.9	37.6	42.7	16.7	30.7	21.2	16.7	35.3	20.4	15.2	12.1	12.9	14.8	10.7	11.5	9.6	11.4	9.4	10.7	44.5	9.4	22.6
6	12.8	14.9	16.4	56.8	33.0	15.1	24.1	18.6	17.9	29.9	52.8	56.6	26.8	58.9	69.2	63.9	60.1	68.3	39.4	62.2	50.8	54.8	59.8	72.6	72.6	12.8	43.2
7	84.7	37.9	31.8	29.7	18.7	15.5	20.7	26.8	35.7	35.3	16.6	48.9	64.8	24.3	7.0	65.3	42.0	20.9	33.3	25.3	27.5	27.7	33.3	38.0	84.7	7.0	33.8
8	14.1	53.1	17.6	17.2	49.6	31.0	73.3	45.7	35.0	47.7	53.3	58.9	54.0	33.8	37.2	23.9	20.2	38.8	101.2	27.7	28.3	38.1	94.0	79.7	101.2	14.1	44.7
9	71.5	46.3	71.9	100.7	64.3	37.7	29.2	19.3	22.0	18.9	21.3	19.8	27.3	22.0	30.0	35.6	35.7	23.5	19.3	15.7	16.8	15.0	14.8	14.4	100.7	14.4	33.0
10	14.2	15.1	15.1	15.2	15.9	16.8	34.7	18.3	12.7	8.0	21.6	58.8	21.5	8.3	8.5	10.6	10.5	11.0	14.4	12.6	22.3	29.7	29.2	29.1	58.8	8.0	18.9
11	65.9	42.4	50.3	31.1	45.1	22.6	10.5	9.9	45.3	60.0	52.8	6.6	19.5	38.3	58.6	80.3	55.4	28.2	51.9	27.4	13.9	9.4	19.0	34.2	80.3	6.6	36.6
12	83.5	26.4	22.3	16.2	18.8	14.9	15.4	14.6	14.7	19.7	38.8	9.8	5.3	32.3	74.0	35.2	40.7	34.7	31.2	57.6	73.4	50.7	14.2	14.8	83.5	5.3	31.6
13	15.7	17.9	15.2	35.6	34.6	23.3	26.3	19.0	28.2	17.9	11.2	32.2	24.7	11.8	15.7	38.8	26.5	40.6	21.5	23.8	12.7	24.7	18.2	51.3	51.3	11.2	24.5
14	29.2	31.6	26.5	63.7	60.3	75.0	82.8	87.7	86.6	25.0	62.1	26.4	60.5	54.9	9.1	18.9	19.1	11.0	8.9	9.6	15.8	13.0	65.9	89.2	89.2	8.9	43.0
15	73.2	27.9	88.3	49.5	14.8	10.0	28.9	12.3	8.1	8.3	5.5	5.3	40.0	11.8	7.8	7.9	7.5	11.9	23.9	98.8	74.0	33.1	22.7	34.9	98.8	5.3	29.4
16	21.4	28.7	17.4	16.3	17.6	29.5	38.8	8.3	13.6	7.6	21.8	11.2	7.3	10.6	22.6	6.8	4.5	12.1	9.1	11.0	7.2	58.9	16.6	50.6	58.9	4.5	18.7
17	58.8	24.1	39.9	40.7	27.6	50.4	7.8	11.2	57.1	9.4	12.3	13.9	10.5	10.2	7.5	8.0	9.0	7.4	4.1	8.1	8.8	11.5	17.0	17.3	58.8	4.1	19.7
18	19.5	15.4	49.7	15.8	67.3	18.1	25.3	65.7	27.5	51.3	14.1	10.1	10.1	11.9	8.7	9.6	8.7	5.2	7.0	11.8	12.5	8.5	9.1	50.6	67.3	5.2	22.2
19	27.1	50.0	44.6	92.0	71.0	55.5	24.5	59.4	36.9	11.4	9.2	12.0	19.7	29.8	24.8	19.9	17.3	20.9	11.8	10.9	19.5	24.4	26.2	16.7	92.0	9.2	30.6
20	75.0	14.3	26.9	8.7	51.9	65.1	33.6	49.7	55.9	16.2	12.2	16.0	17.6	13.6	11.4	14.9	18.9	24.8	15.1	34.8	17.0	12.3	12.1	37.5	75.0	8.7	27.3
21	52.5	59.1	11.7	26.7	49.3	24.8	11.9	11.1	16.5	7.0	7.7	9.5	7.7	5.8	6.4	5.5	5.2	6.3	6.4	12.7	10.0	9.9	30.9	14.7	59.1	5.2	17.1
22	28.2	35.3	42.9	53.4	14.4	14.1	25.8	25.1	11.1	22.8	26.3	13.3	22.3	14.2	37.1	68.7	9.3	13.4	14.3	4.2	6.4	9.0	9.4	19.2	68.7	4.2	22.5
23	23.7	28.5	25.7	56.9	65.2	76.7	70.0	21.1	71.6	13.1	56.3	22.7	10.8	7.8	7.2	9.2	9.7	7.9	7.4	13.5	18.8	18.4	51.1	53.0	76.7	7.2	31.1
24	37.7	52.6	54.2	34.1	51.8	21.4	44.8	21.7	28.4	52.4	58.4	56.9	59.3	38.6	21.9	14.2	8.7	8.0	11.0	12.3	12.9	16.7	12.6	14.6	59.3	8.0	31.1
25	15.0	13.2	32.9	15.8	62.4	30.2	15.1	10.0	14.4	14.0	14.1	12.9	11.6	14.0	14.1	19.0	17.5	11.0	12.9	13.3	12.2	11.3	10.5	11.9	62.4	10.0	17.1
26	12.9	11.5	11.2	11.6	11.6	12.2	10.5	10.4	10.9	11.8	10.9	10.9	9.6	9.4	9.9	10.1	8.8	10.0	9.9	10.3	10.9	11.6	12.2	12.0	12.9	8.8	10.9
27	12.0	13.7	58.8	16.0	52.9	61.3	49.7	36.6	22.0	29.0	30.5	12.5	13.9	7.0	6.8	6.6	8.4	6.8	8.3	6.3	6.7	14.0	9.3	10.9	61.3	6.3	20.8
28	11.8	37.4	30.3	7.8	25.1	21.2	86.7	74.2	88.4	86.1	84.8	72.4	69.8	46.9	33.3	24.6	13.6	17.0	17.1	33.4	21.6	22.6	34.6	30.1	88.4	7.8	41.3
29	9.8	10.4	8.1	9.2	9.6	9.2	14.1	67.7	15.0	19.3	11.5	17.7	47.3	54.8	43.6	25.1	22.7	17.2	17.6	37.1	46.6	43.6	57.5	40.5	67.7	8.1	27.3
30	24.0	37.8	18.7	9.8	7.3	13.0	6.1	5.6	16.6	6.1	5.9	6.4	5.8	6.1	6.8	6.2	7.3	7.5	8.8	16.8	8.5	10.1	9.7	17.4	37.8	5.6	11.2
Max.	**84.7**	**62.3**	**88.3**	**100.7**	**71.0**	**76.7**	**86.7**	**87.7**	**88.4**	**86.1**	**84.8**	**72.4**	**85.2**	**58.9**	**74.0**	**80.3**	**60.1**	**68.3**	**101.2**	**98.8**	**74.0**	**58.9**	**94.0**	**89.2**	**101.2**		
Min.	**9.4**	**10.4**	**8.1**	**7.8**	**7.3**	**9.2**	**6.1**	**5.6**	**8.1**	**6.1**	**5.5**	**5.3**	**5.3**	**5.5**	**5.0**	**3.7**	**4.1**	**5.2**	**4.1**	**4.2**	**6.4**	**8.5**	**9.1**	**6.9**		**3.7**	
Avg.	**33.4**	**29.4**	**32.1**	**30.3**	**35.9**	**28.2**	**29.9**	**28.1**	**29.0**	**23.7**	**26.8**	**22.6**	**27.2**	**21.3**	**21.2**	**22.5**	**17.9**	**19.2**	**19.5**	**22.0**	**21.2**	**23.6**	**25.7**	**31.9**			**25.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	66.0	10.6	8.3	29.1	9.0	8.0	7.0	17.3	67.1	5.0	11.1	17.4	31.7	38.1	25.4	43.2	43.2	56.3	72.1	75.7	40.0	56.3	45.2	72.3	75.7	5.0	35.6
2	45.8	64.5	40.1	58.7	48.5	39.8	11.0	69.4	39.1	17.9	11.2	14.2	22.9	22.1	17.3	21.0	21.0	31.3	45.6	45.2	56.6	52.5	52.9	49.8	69.4	11.0	37.4
3	47.7	29.6	19.1	26.2	20.1	26.2	17.3	21.8	15.7	15.4	15.6	14.3	13.7	12.5	14.5	84.6	15.3	9.0	11.2	18.2	12.0	13.8	18.0	26.9	84.6	9.0	21.6
4	13.3	64.1	54.3	68.2	74.0	76.9	20.9	18.8	9.5	68.2	14.4	36.8	66.3	5.9	5.8	3.8	10.7	16.9	21.3	29.2	15.8	64.8	17.1	41.9	76.9	3.8	34.1
5	34.7	56.8	60.6	32.2	34.2	17.6	7.6	51.8	54.1	22.8	13.8	6.3	6.2	6.1	11.4	6.0	9.6	3.8	5.4	15.4	6.5	40.2	48.0	30.7	60.6	3.8	24.2
6	75.3	19.7	9.4	65.0	44.9	59.9	76.0	19.1	7.1	6.4	7.8	6.6	8.4	16.5	15.3	14.6	7.4	11.1	16.8	12.4	87.7	18.1	20.0	59.4	87.7	6.4	28.5
7	86.1	29.5	15.2	6.9	13.4	44.2	47.1	47.5	37.4	91.0	73.5	62.0	53.1	81.3	41.0	16.4	14.4	12.0	11.5	10.5	7.5	12.9	9.8	17.6	91.0	6.9	35.1
8	53.7	32.9	25.1	50.3	54.3	57.7	97.0	51.5	72.9	35.0	55.8	46.4	85.3	58.0	69.5	65.6	22.9	13.1	26.3	22.1	15.0	25.6	16.5	30.1	97.0	13.1	45.1
9	38.4	38.0	63.6	23.1	9.3	8.2	6.2	5.7	5.6	5.5	8.1	7.9	17.6	15.1	13.3	14.3	34.4	40.8	28.9	64.4	65.0	47.3	56.9	14.8	65.0	5.5	26.3
10	12.0	13.2	15.8	11.7	12.5	12.6	19.7	14.7	24.0	31.9	68.0	87.3	21.6	55.6	18.1	15.5	13.5	5.9	6.3	9.1	9.4	17.3	22.8	57.4	87.3	5.9	24.0
11	39.4	53.2	75.1	50.2	75.5	20.0	22.8	29.4	17.2	11.1	13.1	15.5	18.3	7.6	8.2	5.7	12.9	7.8	11.7	7.0	8.4	12.5	25.1	40.2	75.5	5.7	24.5
12	48.7	29.4	11.5	12.4	6.1	7.9	14.2	12.9	80.1	64.0	40.8	85.3	66.2	46.6		0.0		74.1	95.1	45.0	91.4	45.6	77.0	52.2	95.1	0.0	45.7
13	48.0	62.4	46.8	64.3	90.6	13.0	8.8	8.8	8.7	10.0	11.8	8.7	44.3	42.0	57.0	24.5	16.9	16.3	16.7	10.3	19.7	17.9	19.9	15.0	90.6	8.7	28.4
14	16.1	14.7	18.9	7.7	8.9	10.8	10.4	7.9	7.7	55.9	11.2	8.9	9.8	6.4	9.7	6.7	7.2	6.7	6.9	5.6	5.8	6.0	7.8	15.3	55.9	5.6	11.4
15	9.5	10.6	20.5	9.0	7.7	85.2	65.9	6.7	7.3	7.3	8.9	10.7	10.3	9.0	8.7	9.1	10.6	17.2	14.0	24.2	79.2	64.3	14.2	33.7	85.2	6.7	22.7
16	84.1	53.4	93.6	54.9	83.6	25.5	25.6	59.0	39.1	68.8	81.6	31.5	40.8	46.4	74.5	55.0	64.2	55.7	57.9	51.4	54.5	44.6	61.6	48.9	93.6	25.5	56.5
17	26.4	44.2	26.7	53.9	19.2	33.9	88.8	97.0	85.3	55.5	64.2	56.2	58.3	59.7	69.1	56.6	79.9	74.0	35.3	58.2	20.4	23.2	37.8	39.7	97.0	19.2	52.6
18	55.5	58.7	43.7	41.5	36.7	43.0	24.5	22.7	18.4	17.1	22.9	20.4	31.1	32.6	23.2	18.0	22.1	22.9	22.5	21.3	13.9	14.1	14.1	18.9	58.7	13.9	27.5
19	19.7	19.8	16.8	16.3	13.4	15.4	14.9	14.6	37.2	39.7	56.1	67.8	70.4	40.4	48.0	35.0	75.8	30.0	56.0	69.8	70.8	67.7	71.0	18.4	75.8	13.4	41.0
20	13.2	14.3	13.4	33.2	32.9	13.6	58.6	51.1	71.0	28.1	22.4	30.0	37.8	75.3	84.9	69.8	53.4	16.4	33.6	59.8	40.9	80.5	30.5	37.6	84.9	13.2	41.8
21	44.6	20.5	73.5	82.0	57.2	39.4	42.6	39.8	47.4	35.9	30.3	12.9	10.3	14.4	26.2	14.9	8.6	17.2	46.2	87.9	75.4	28.9	61.9	53.6	87.9	8.6	40.5
22	103.1	73.1	16.2	15.3	19.8	20.2	18.7	18.1	19.8	20.8	19.1	15.3	26.9	34.1	23.2	26.2	20.9	31.8	1.7	34.6	37.6	37.5	4.3	8.4	103.1	1.7	26.9
23	7.7	8.0	12.8	27.9	0.0	16.2	42.1	64.0	69.5	26.1	70.5	10.1	14.9	36.9	65.8	12.5	14.7	11.9	21.6	58.5	52.4	19.5	40.5	29.2	70.5	0.0	30.6
24	14.1	10.2	9.9	9.0	10.5	11.2	11.6	13.6	17.0	88.7	10.6	9.3	12.2	69.1	7.4	5.3	4.2	5.9	4.9	19.4	11.9	43.0	46.4	18.8	88.7	4.2	19.3
25	13.2	24.2	64.1	23.1	49.9	17.5	11.6	16.8	14.5	29.6	21.1	14.9	77.5	53.3	50.7	79.2	33.6	24.7	18.7	19.4	13.3	11.9	13.5	85.8	85.8	11.6	32.6
26	15.6	75.1	51.7	23.0	29.7	59.4	17.8	15.7	17.1	16.4	18.5	22.8	45.6	19.6	57.6	29.1	33.9	93.5	27.7	15.6	34.0	31.0	32.1	72.7	93.5	15.6	35.6
27	30.5	42.9	41.9	52.6	56.7	71.6	12.7	9.5	8.4	37.5	49.7	48.6	33.7	40.2	33.7	68.3	28.8	12.5	6.5	5.7	6.4	7.6	70.8	12.5	71.6	5.7	32.9
28	38.3	56.8	66.0	58.3	59.4	65.1	31.8	31.4	22.2	19.3	55.4	41.4	62.0	39.0	90.5	31.5	31.4	45.3	50.0	33.0	66.6	50.9	72.1	83.5	90.5	19.3	50.0
29	78.0	35.4	32.1	20.7	18.5	16.2	25.4	28.5	87.3	51.0	28.9	24.0	27.0	48.2	43.2	39.2	19.8	34.5	14.5	23.5	57.5	58.1	83.4	18.1	87.3	14.5	38.0
30	27.1	26.4	26.1	55.2	16.9	15.3	24.7	26.9	32.9	56.8	60.3	44.1	56.4	46.4	64.3	46.2	37.1	39.2	48.2	40.2	62.6	62.5	84.7	49.2	84.7	15.3	43.7
31	47.9	77.1	55.7	66.7	65.8	87.6	62.0	35.5	57.2	24.7	84.7	74.4	16.3	27.2	34.1	82.4	35.7	29.1	20.7	39.0	62.5	84.1	51.3	81.6	87.6	16.3	54.3
Max.	**103.1**	**77.1**	**93.6**	**82.0**	**90.6**	**87.6**	**97.0**	**97.0**	**87.3**	**91.0**	**84.7**	**87.3**	**85.3**	**81.3**	**90.5**	**84.6**	**79.9**	**93.5**	**95.1**	**87.9**	**91.4**	**84.1**	**84.7**	**85.8**	**103.1**		
Min.	**7.7**	**8.0**	**8.3**	**6.9**	**0.0**	**7.9**	**6.2**	**5.7**	**5.6**	**5.0**	**7.8**	**6.3**	**6.2**	**5.9**	**5.8**	**0.0**	**4.2**	**3.8**	**1.7**	**5.6**	**5.8**	**6.0**	**4.3**	**8.4**		**0.0**	
Avg.	**40.4**	**37.7**	**36.4**	**37.1**	**34.8**	**33.5**	**30.5**	**29.9**	**35.4**	**34.3**	**34.2**	**30.7**	**35.4**	**35.7**	**37.0**	**32.3**	**26.8**	**28.0**	**27.6**	**33.3**	**38.7**	**37.4**	**39.6**	**39.8**			**34.4**

Total Hours in Month 744 **Hours Data Available** 742 **Data Recovery** 99.7%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	87.2	19.5	36.9	72.6	36.2	60.9	80.9	13.3	15.5	30.1	10.3	7.6	9.9	8.9	15.4	21.2	32.4	26.5	35.2	31.3	42.1	26.8	16.5	32.6	87.2	7.6	32.1
2	21.3	37.3	34.5	41.7	54.4	50.3	67.6	54.2	12.4	9.5	20.5	36.8	23.9	25.6	29.2	27.5	35.1	35.6	17.8	31.1	15.4	13.3	25.9	21.1	67.6	9.5	30.9
3	9.2	11.7	12.8	14.2	13.4	20.1	9.2	7.5	11.5	6.3	50.0	14.3	26.5	14.7	17.4	15.8	6.7	16.0	20.1	9.7	16.1	22.3	31.9	67.3	67.3	6.3	18.5
4	63.2	51.3	81.0	31.7	46.0	19.2	16.7	14.5	30.4	34.3	49.5	26.7	38.9	11.0	16.3	15.6	12.4	15.0	39.9	21.4	26.9	66.8	34.0	25.6	81.0	11.0	32.8
5	19.6	40.6	29.9	49.4	24.2	57.5	7.4	26.1	85.1	7.6	6.2	8.2	7.2	7.0	8.1	14.6	9.2	11.1	12.5	16.7	23.3	35.2	21.2	2.7	85.1	2.7	22.1
6	31.3	64.9	13.7	7.8	10.8	10.5	54.6	6.0	5.8	51.1	21.6	10.1	7.3	10.5	9.9	5.4	8.5	19.1	15.7	30.6	15.6	16.4	20.7	31.6	64.9	5.4	20.0
7	82.9	46.7	75.6	72.7	82.7	59.5	47.8	55.6	30.4	51.7	61.7	19.6	26.9	61.1	57.8	57.5	27.9	26.2	48.3	28.4	78.4	17.2	89.4	34.7	89.4	17.2	51.7
8	19.1	14.9	14.4	16.8	9.8	5.7	10.6	7.2	8.5	27.8	12.9	19.7	12.7	9.2	7.2	8.3	6.8	4.8	6.6	11.0	13.6	14.7	13.7	12.2	27.8	4.8	12.0
9	21.7	18.9	32.0	13.7	12.0	10.1	16.8	14.0	16.8	55.9	44.8	40.4	16.1	17.8	20.3	20.7	14.2	45.0	26.7	26.8	22.0	18.4	34.9	25.1	55.9	10.1	24.4
10	19.9	21.0	57.3	25.1	13.1	7.8	10.8	21.3	11.5	12.2	13.1	10.9	10.6	10.5	11.8	18.0	14.6	10.6	10.7	10.5	14.7	25.3	61.1	56.6	61.1	7.8	20.0
11	39.2	19.5	11.9	32.5	15.9	25.6	18.9	18.6	47.3	12.7	23.6	17.3	14.9	11.5	7.4	8.6	7.2	8.6	5.6	13.4	56.5	3.9	13.8	6.5	56.5	3.9	18.4
12	7.7	7.8	17.4	10.1	8.5	9.4	10.2	11.9	15.5	13.4	10.9	10.2	6.9	9.3	8.8	13.0	12.8	10.6	7.3	10.8	10.5	9.4	7.2	13.1	17.4	6.9	10.5
13	39.7	49.5	10.4	29.2	10.9	31.6	9.3	10.1	10.4	16.0	14.9	15.0	77.3	73.4	12.0	10.3	8.2	12.8	8.2	7.8	6.8	6.8	6.8	32.5	77.3	6.8	21.3
14	24.0	12.3	37.4	7.0	12.4	11.1	24.2	41.5	7.1	6.6	5.3	6.1	8.6	12.1	35.1	5.0	19.0	7.0	0.0	1.4	0.0	0.0	12.3	20.9	41.5	0.0	13.2
15	2.4	0.0	4.7	0.0	4.2	9.9	20.0	17.1	22.2	13.2	15.6	12.9	15.7	15.7	9.1	12.2	71.9	20.0	11.9	8.4	72.3	21.4	14.6	35.0	72.3	0.0	17.9
16	21.3	15.2	28.4	40.1	17.6	16.4	18.3	19.0	11.7	26.4	18.8	31.0	59.2	34.3	12.2	11.8	17.9	20.7	13.4	26.9	28.3	57.7	35.7	33.3	59.2	11.7	25.7
17	7.3	8.0	13.0	13.3	9.5	10.9	11.3	11.0	14.2	29.9	50.4	44.0	35.2	28.3	21.3	35.7	25.3	51.3	31.5	20.5	45.4	36.1	32.4	19.6	51.3	7.3	25.2
18	24.7	15.8	28.9	6.7	6.5	8.1	7.0	5.7	7.8	7.8	8.9	11.8	9.5	8.7	10.1	10.3	9.1	9.6	10.9	12.5	11.7	15.0	15.4	17.0	28.9	5.7	11.6
19	16.2	15.0	24.8	21.6	19.2	9.5	10.9	81.7	14.9	30.0	10.3	10.6	37.2	7.8	4.5	6.0	1.4	2.5	0.0	25.3	35.6	31.8	21.5	18.8	81.7	0.0	19.0
20	29.4	16.7	12.5	13.3	17.3	16.1	12.9	12.2	12.9	14.0	44.8	9.8	23.1	41.1	4.5	0.0	41.3	33.9	15.3	34.3	21.9	12.7	13.9	14.0	44.8	0.0	19.5
21	14.6	16.4	16.7	16.5	27.3	29.5	17.6	28.8	32.9	24.8	16.8	51.2	21.3	13.1	12.0	12.8	9.8	10.4	12.8	7.3	15.4	25.6	38.4	16.6	51.2	7.3	20.4
22	35.0	21.7	43.0	53.2	25.0	9.5	13.0	13.8	61.9	10.2	4.1	6.4	38.1	7.7	8.0	8.0	20.3	12.2	10.3	8.1	5.3	26.9	44.5	37.6	61.9	4.1	21.8
23	20.7	16.5	13.3	15.0	18.9	20.0	22.3	18.2	22.3	20.5	22.5	68.7	15.2	20.2	9.9	16.0	6.3	9.5	6.4	8.4	4.3	4.8	15.7	10.9	68.7	4.3	16.9
24	11.6	21.3	6.6	13.0	11.7	22.0	11.6	18.5	15.5	31.1	29.5	59.2	16.6	22.2	45.3	79.5	31.2	56.5	14.4	14.1	15.0	30.4	16.2	12.3	79.5	6.6	25.2
25	11.9	13.3	9.7	20.4	49.0	60.7	45.7	24.2	49.1	40.8	39.5	40.7	49.1	27.7	22.2	26.7	10.4	13.2	18.2	37.1	23.6	18.6	16.8	24.3	60.7	9.7	28.9
26	27.0	25.2	40.7	9.0	10.7	14.2	17.4	17.2	8.7	5.6	6.2	4.5	4.0	4.8	5.3	8.1	19.0	65.4	14.0	13.7	27.2	24.6	11.8	5.6	65.4	4.0	16.3
27	4.4	0.7	9.1	4.8	10.9	6.5	10.9	14.0	0.2	11.2	9.4	39.5	67.2	39.3	11.5	17.6	11.9	57.2	44.0	19.9	12.5	12.4	12.5	22.6	67.2	0.2	18.8
28	36.3	37.3	75.0	71.1	70.5	24.5	43.3	17.7	34.5	49.6	20.7	54.7	39.9	42.8	46.4	33.0	29.8	27.9	24.3	14.6	13.9	13.8	13.6	19.0	75.0	13.6	35.6
29	19.9	46.0	45.2	38.4	22.2	62.1	47.8	26.1	43.5	42.3	30.0	39.8	32.3	42.8	44.7	39.7	45.1	50.7	37.3	53.9	75.1	74.1	57.8	51.5	75.1	19.9	44.5
30	37.4	28.8	21.6	15.8	15.5	33.1	25.8	21.8	21.5	11.8	10.2	38.3	9.8	12.2	5.9	7.8	18.2	17.5	42.9	74.7	28.9	59.8	56.7	16.7	74.7	5.9	26.4
31	10.7	43.7	56.4	43.3	47.4	52.5	16.2	11.2	12.3	11.2	11.8	11.7	11.1	10.6	11.3	11.1	12.0	10.6	11.6	11.3	11.6	11.7	9.9	10.8	56.4	9.9	19.2
Max.	**87.2**	**64.9**	**81.0**	**72.7**	**82.7**	**62.1**	**80.9**	**81.7**	**85.1**	**55.9**	**61.7**	**68.7**	**77.3**	**73.4**	**57.8**	**79.5**	**71.9**	**65.4**	**48.3**	**74.7**	**78.4**	**74.1**	**89.4**	**67.3**	**89.4**		
Min.	**2.4**	**0.0**	**4.7**	**0.0**	**4.2**	**5.7**	**7.0**	**5.7**	**0.2**	**5.6**	**4.1**	**4.5**	**4.0**	**4.8**	**4.5**	**0.0**	**1.4**	**2.5**	**0.0**	**1.4**	**0.0**	**0.0**	**6.8**	**2.7**		**0.0**	
Avg.	**26.4**	**24.4**	**29.5**	**26.4**	**23.7**	**25.3**	**23.8**	**21.3**	**22.4**	**23.1**	**22.4**	**25.1**	**24.9**	**21.4**	**17.4**	**18.6**	**19.2**	**23.2**	**18.5**	**20.7**	**25.5**	**24.3**	**26.4**	**24.1**			**23.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.9	10.5	10.8	11.0	9.6	10.5	10.4	11.9	11.2	10.8	12.9	12.9	10.9	10.2	11.8	11.7	13.6	13.6	13.4	11.3	13.2	11.9	12.4	12.9	13.6	9.6	11.7
2	13.5	13.8	21.5	21.7	16.8	21.7	26.1	31.5	34.9	14.1	65.3	38.8	23.1	14.8	13.1	10.4	11.5	11.8	11.6	11.7	11.1	11.4	9.4	8.7	65.3	8.7	19.5
3	9.8	10.1	9.4	10.3	10.7	9.8	9.9	10.3	8.4	9.3	9.5	9.7	10.5	10.3	8.9	15.5	15.3	20.8	11.5	12.5	20.6	40.4	8.3	10.0	40.4	8.3	12.6
4	16.3	14.0	13.9	15.0	5.7	43.9	7.2	5.9	2.2	5.4	29.2	14.7	13.6	10.3	10.3	6.6	5.9	9.3	9.7	7.1	6.4	4.3	8.5	9.1	43.9	2.2	11.4
5	16.6	17.8	3.4	7.4	4.7	0.9	7.7	7.7	8.1	8.7	13.1	15.8	9.6	8.6	8.3	5.9	7.3	7.9	6.8	10.8	8.4	11.7	1.0	17.8	17.8	0.9	9.0
6	18.9	5.4	33.3	27.3	14.5	19.4	12.2	12.7	13.4	12.6	11.2	10.7	11.0	12.0	13.4	11.1	11.0	10.9	11.2	11.1	10.4	12.0	11.0	10.2	33.3	5.4	13.6
7	12.9	10.3	11.7	10.8	11.1	10.5	10.4	13.5	13.9	11.9	47.2	77.8	32.6	47.0	13.3	13.1	11.9	10.7	9.4	8.0	7.6	10.0	6.2	7.0	77.8	6.2	17.5
8	20.7	8.7	11.6	11.3	31.3	1.7	67.8	10.9	7.5	6.9	11.0	31.2	30.6	73.2	51.3	19.0	16.4	17.8	15.1	13.5	12.2	10.0	11.5	11.2	73.2	1.7	20.9
9	10.3	10.3	13.7	12.1	11.6	11.2	15.2	13.3	15.5	14.2	13.3	14.4	14.2	38.6	86.7	31.9	27.1	30.0	40.7	44.9	49.6	49.9	36.5	24.1	86.7	10.3	26.2
10	9.6	15.1	12.7	17.5	13.7	20.3	24.0	8.0	11.0	5.7	2.9	12.2	19.6	6.0	13.3	7.4	13.1	3.8	54.1	59.5	53.8	69.8	87.7	68.7	87.7	2.9	25.4
11	51.1	24.6	67.9	62.1	20.7	40.1	55.4	77.0	52.3	34.6	11.9	66.3	24.8	22.0	25.8	20.1	18.3	39.2	68.8	59.3	87.8	47.6	57.0	64.8	87.8	11.9	45.8
12	80.0	38.4	61.1	62.8	53.2	58.6	67.0	34.7	14.8	14.5	10.6	8.5	8.7	9.1	10.9	9.3	9.0	12.9	12.2	13.3	14.1	13.7	13.0	16.7	80.0	8.5	27.0
13	28.2	68.5	57.7	66.1	72.6	75.8	80.2	72.0	71.2	83.1	61.7	63.6	67.6	53.3	58.6	17.5	15.9	13.2	10.9	8.9	8.8	9.8	9.0	10.2	83.1	8.8	45.2
14	11.0	10.2	10.1	11.3	11.4	10.7	11.3	11.4	13.5	14.8	14.6	12.5	14.3	9.4	9.8	11.8	13.2	9.6	7.2	8.9	11.1	10.3	12.2	14.7	14.8	7.2	11.5
15	7.7	7.6	9.5	48.6	26.8	22.5	33.4	47.4	16.8	16.7	44.9	19.4	43.3	51.6	63.4	53.5	35.6	34.3	14.1	10.0	10.5	18.3	7.3	8.6	63.4	7.3	27.2
16	10.5	10.0	17.1	63.4	15.8	22.8	14.6	10.4	14.7	8.3	32.6	59.8	61.7	89.7	27.3	59.0	38.7	64.6	57.6	54.2	56.3	87.0	40.5	76.8	89.7	8.3	41.4
17	42.9	54.9	36.6	17.0	22.8	48.2	37.9	61.2	70.7	20.9	54.4	8.2	71.6	17.6	17.6	49.9	54.0	44.7	16.2	29.0	33.7	15.8	13.1	12.0	71.6	8.2	35.5
18	10.1	10.9	10.7	9.0	9.7	10.4	9.3	9.9	9.6	9.4	8.5	9.6	9.3	9.6	13.2	20.6	19.6	15.4	13.6	36.5	88.1	53.5	31.4	34.0	88.1	8.5	19.2
19	81.3	18.6	23.9	15.8	10.2	9.7	9.9	54.0	57.3	8.3	65.1	33.5	25.9	41.3	60.2	59.3	49.6	85.2	51.9	72.1	96.4	75.1	82.9	59.2	96.4	8.3	47.8
20	52.8	58.8	57.6	56.3	30.6	36.0	33.8	42.0	47.7	20.5	14.5	19.0	9.3	16.1	65.1	18.5	21.9	21.1	50.7	68.3	79.5	49.8	53.7	59.2	79.5	9.3	41.0
21	72.1	58.3	39.8	50.9	26.1	66.1	74.5	73.8	52.8	14.0	12.6	73.1	43.5	28.7	37.7	34.0	74.0	63.3	58.1	33.8	23.7	65.1	32.7	87.3	87.3	12.6	49.8
22	82.6	21.5	21.4	10.8	14.3	19.9	20.6	23.7	32.7	10.4	8.7	7.2	8.3	15.2	30.2	30.2	71.7	17.7	11.7	13.3	56.9	28.6	11.7	10.5	82.6	7.2	24.1
23	6.9	10.3	7.2	7.0	7.6	7.5	7.2	6.8	8.7	7.5	8.9	5.6	3.8	4.0	12.8	14.6	37.8	25.7	7.9	23.5	73.1	44.7	9.1	7.9	73.1	3.8	14.8
24	7.7	7.3	7.8	5.1	8.0	8.9	10.7	10.2	8.7	8.0	10.0	8.4	10.8	12.0	9.4	10.8	8.9	8.3	9.6	9.6	10.7	9.7	9.2	11.1	12.0	5.1	9.2
25	8.2	9.4	10.5	11.1	10.5	12.2	11.6	11.4	9.9	11.5	9.8	11.3	12.3	11.9	10.5	11.0	11.0	9.3	9.9	9.6	8.3	10.8	11.9	10.8	12.3	8.2	10.6
26	10.4	9.3	10.4	9.7	8.0	9.0	7.7	7.3	8.0	9.4	8.5	12.8	71.9	7.6	3.5	4.6	6.0	5.5	20.2	46.0	18.2	41.2	21.8	30.3	71.9	3.5	16.1
27	11.7	7.9	11.6	11.0	7.4	8.8	9.0	13.3	16.1	12.5	6.5	6.3	8.2	34.6	90.9	5.6	8.1	66.0	43.5	42.3	55.2	23.4	16.7	17.6	90.9	5.6	22.3
28	15.1	12.7	15.0	25.2	29.8	39.9	17.5	52.5	61.5	42.0	16.2	8.7	76.6	16.0	8.9	9.0	8.2	13.9	30.5	64.9	8.4	10.3	6.7	7.2	76.6	6.7	24.9
29	8.0	9.2	8.8	9.2	9.2	8.5	9.2	8.3	7.7	10.0	10.5	8.8	8.4	11.9	9.9	7.7	8.6	8.5	14.2	11.9	13.3	11.2	11.1	52.2	52.2	7.7	11.5
30	49.0	33.2	29.5	38.2	72.5	28.6	31.9	28.3	52.5	23.9	30.2	40.0	54.4	39.8	28.6	19.2	18.4	45.0	60.5	21.2	13.5	19.3	30.5	8.7	72.5	8.7	34.0
Max.	**82.6**	**68.5**	**67.9**	**66.1**	**72.6**	**75.8**	**80.2**	**77.0**	**71.2**	**83.1**	**65.3**	**77.8**	**76.6**	**89.7**	**90.9**	**59.3**	**74.0**	**85.2**	**68.8**	**72.1**	**96.4**	**87.0**	**87.7**	**87.3**	**96.4**		
Min.	**6.9**	**5.4**	**3.4**	**5.1**	**4.7**	**0.9**	**7.2**	**5.9**	**2.2**	**5.4**	**2.9**	**5.6**	**3.8**	**4.0**	**3.5**	**4.6**	**5.9**	**3.8**	**6.8**	**7.1**	**6.4**	**4.3**	**1.0**	**7.0**		**0.9**	
Avg.	**26.2**	**19.9**	**21.9**	**24.5**	**19.9**	**23.1**	**24.8**	**26.0**	**25.1**	**16.0**	**21.9**	**24.0**	**27.0**	**24.4**	**27.5**	**20.0**	**22.1**	**24.7**	**25.1**	**27.6**	**32.0**	**29.2**	**22.5**	**26.0**			**24.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.8	12.5	17.1	10.7	7.0	6.1	6.5	6.3	14.5	6.5	3.7	4.0	7.3	9.6	10.8	68.7	21.6	11.8	10.6	9.1	9.9	9.0	9.3	10.4	68.7	3.7	12.1
2	6.9	8.3	25.6	27.9	62.0	14.0	10.3	10.5	15.0	22.8	11.8	9.2	32.5	54.3	29.5	39.9	29.2	25.6	24.6	22.8	17.5	26.5	14.2	43.2	62.0	6.9	24.3
3	61.7	33.3	62.1	36.6	64.4	46.6	49.8	45.6	39.8	52.4	70.3	91.4	69.1	91.3	67.4	65.0	44.0	53.6	41.5	21.2	16.2	15.8	14.2	14.1	91.4	14.1	48.6
4	16.2	32.3	29.3	23.4	18.0	19.5	10.6	14.3	10.6	16.5	7.3	7.7	9.6	12.4	31.8	95.9	44.6	39.7	26.8	12.9	12.6	18.9	27.4	51.6	95.9	7.3	24.6
5	63.9	60.5	90.6	75.5	61.9	64.9	72.8	50.9	61.6	93.2	65.8	27.9	25.6	48.6	35.1	39.4	28.1	48.6	31.3	27.1	33.2	14.0	9.8	7.8	93.2	7.8	47.4
6	12.7	5.2	8.0	7.6	12.4	11.3	9.7	11.9	12.7	30.7	14.1	17.0	23.0	46.4	23.3	44.4	35.5	30.8	27.8	32.1	27.1	29.9	29.3	65.8	65.8	5.2	23.7
7	27.7	56.7	62.7	56.1	69.0	65.3	88.6	63.7	66.5	53.1	66.2	78.2	68.3	32.3	28.2	24.5	30.3	35.1	47.2	64.0	74.7	54.1	49.6	73.4	88.6	24.5	55.7
8	59.6	53.4	84.4	57.7	83.2	66.1	76.8	77.0	33.7	22.7	26.1	38.0	46.0	80.1	51.2	45.4	17.6	14.2	13.8	20.5	12.2	9.4	7.8	8.9	84.4	7.8	41.9
9	7.8	9.9	12.6	9.9	11.4	12.0	11.1	11.4	10.0	9.7	10.5	11.8	10.3	12.6	11.3	12.4	13.6	12.0	11.6	10.3	10.7	12.5	12.8	10.6	13.6	7.8	11.2
10	11.5	10.0	11.4	11.4	6.2	46.5	70.2	88.3	38.7	59.3	45.1	19.5	60.6	29.4	61.8	89.6	23.5	8.9	11.4	16.1	8.4	10.8	16.0	43.9	89.6	6.2	33.3
11	64.5	79.5	68.8	38.0	47.3	48.2	40.3	65.3	82.2	80.2	63.2	80.4	34.5	17.0	12.4	10.0	11.4	15.8	22.7	76.9	71.9	56.7	27.8	31.0	82.2	10.0	47.7
12	28.1	29.3	27.5	27.6	25.1	26.4	25.6	30.5	28.4	24.1	36.7	29.8	26.5	29.2	41.2	55.8	34.0	32.6	28.8	22.0	22.2	16.9	19.0	30.5	55.8	16.9	29.1
13	25.7	54.2	89.9	51.7	74.1	58.4	36.9	11.7	21.5	16.2	10.2	5.4	6.6	6.8	11.0	8.8	11.3	11.0	11.0	8.9	9.6	10.2	11.3	11.7	89.9	5.4	23.9
14	9.2	9.2	7.9	7.3	7.2	6.9	7.2	7.7	6.4	5.7	5.6	5.9	6.7	6.3	6.6	8.2	8.4	6.8	8.1	8.3	7.8	6.4	7.1	5.8	9.2	5.6	7.2
15	7.0	9.6	8.6	10.3	9.8	15.6	16.7	6.5	6.0	8.4	6.8	7.5	13.3	8.7	10.1	24.0	25.3	49.1	14.0	24.5	16.0	13.6	23.3	25.5	49.1	6.0	15.0
16	19.0	19.8	25.8	15.0	12.0	17.1	15.2	11.7	11.4	10.6	12.5	16.9	9.8	20.9	34.6	14.5	11.9	18.5	37.3	36.7	11.7	13.0	21.6	19.8	37.3	9.8	18.2
17	29.2	21.3	36.2	21.4	29.0	48.3	32.9	35.4	34.0	15.8	11.4	8.4	4.8	3.7	11.3	10.4	9.3	7.4	10.2	12.5	11.1	12.3	9.7	11.7	48.3	3.7	18.2
18	12.0	12.5	10.7	11.4	11.4	11.9	11.2	11.9	9.1	9.3	9.7	8.9	9.1	8.8	9.4	7.8	9.4	7.9	11.5	12.8	12.9	11.6	9.7	10.4	12.9	7.8	10.5
19	11.2	68.4	84.0	61.5	43.4	23.5	27.0	36.0	20.7	22.9	15.3	28.6	46.1	30.4	46.6	69.4	71.5	14.0	75.8	32.1	19.9	15.8	15.1	19.7	84.0	11.2	37.4
20	19.7	23.3	22.9	19.9	23.9	28.4	13.2	16.9	16.2	54.1	45.9	23.9	19.4	15.8	17.4	14.2	18.3	16.3	15.8	23.6	76.3	74.3	84.0	91.5	91.5	13.2	32.3
21	76.2	64.2	44.8	79.9	42.7	27.7	33.9	67.1	32.7	30.6	45.2	12.4	12.7	9.4	9.4	14.1	13.8	42.5	26.1	14.8	15.7	15.8	16.4	24.2	79.9	9.4	32.2
22	85.6	51.7	64.4	58.6	37.3	49.8	36.4	40.4	56.4	32.5	29.3	27.5	24.6	21.5	63.6	57.6	22.6	17.0	27.8	28.1	13.3	7.5	7.2	10.4	85.6	7.2	36.3
23	10.9	11.4	9.5	10.5	11.9	16.5	29.1	18.5	28.2	19.7	13.9	21.0	30.1	28.7	80.5	33.0	31.5	75.5	44.5	41.7	37.5	36.4	39.7	52.9	80.5	9.5	30.6
24	68.1	66.8	77.9	62.4	63.7	78.8	54.2	80.1	20.1	68.3	66.0	66.3	50.4	34.9	19.5	29.5	35.5	30.8	17.8	37.3	31.3	42.9	86.0	18.8	86.0	17.8	50.3
25	14.9	9.7	9.9	10.7	10.2	7.8	5.3	5.0	4.4	6.3	6.9	6.1	6.3	7.0	6.8	6.7	7.2	8.0	9.3	9.2	11.5	10.2	12.6	9.4	14.9	4.4	8.4
26	10.3	7.5	8.7	13.4	9.8	15.0	45.6	50.0	37.0	17.6	15.8	11.5	88.9	57.5	6.2	39.6	80.8	65.0	33.7	19.2	13.6	16.3	17.7	17.6	88.9	6.2	29.1
27	45.9	48.9	44.0	57.2	18.1	18.1	32.1	34.8	45.8	38.5	15.7	13.7	12.9	12.2	12.8	12.4	17.1	30.4	29.7	35.7	27.3	46.6	55.1	33.3	57.2	12.2	30.8
28	35.8	21.8	18.7	10.3	9.1	8.5	19.6	6.9	6.7	13.5	5.8	4.4	4.0	12.9	15.4	9.5	53.3	16.6	15.1	7.3	6.3	5.4	9.5	7.6	53.3	4.0	13.5
29	4.4	8.9	10.7	6.9	6.9	12.4	6.5	21.5	7.1	8.6	6.0	8.7	4.7	6.1	5.2	13.1	9.5	10.0	12.7	9.2	5.5	5.0	6.4	6.8	21.5	4.4	8.4
30	6.8	6.3	5.9	7.8	7.0	7.7	6.7	8.9	17.1	14.4	11.3	11.7	9.4	8.1	12.5	9.9	79.6	71.4	9.6	8.9	8.8	5.7	8.2	7.6	79.6	5.7	14.6
31	6.3	6.6	13.3	9.2	7.8	9.9	5.3	7.7	6.5	18.1	7.0	3.7	3.9	4.6	5.4	6.5	66.9	63.0	11.2	8.1	9.0	19.3	6.7	6.9	66.9	3.7	13.0
Max.	**85.6**	**79.5**	**90.6**	**79.9**	**83.2**	**78.8**	**88.6**	**88.3**	**82.2**	**93.2**	**70.3**	**91.4**	**88.9**	**91.3**	**80.5**	**95.9**	**80.8**	**75.5**	**75.8**	**76.9**	**76.3**	**74.3**	**86.0**	**91.5**	**95.9**		
Min.	**4.4**	**5.2**	**5.9**	**6.9**	**6.2**	**6.1**	**5.3**	**5.0**	**4.4**	**5.7**	**3.7**	**3.7**	**3.9**	**3.7**	**5.2**	**6.5**	**7.2**	**6.8**	**8.1**	**7.3**	**5.5**	**5.0**	**6.4**	**5.8**		**3.7**	
Avg.	**27.9**	**29.5**	**35.3**	**29.3**	**29.1**	**28.7**	**29.3**	**30.8**	**25.8**	**28.5**	**24.6**	**22.8**	**25.1**	**24.8**	**25.4**	**31.6**	**29.6**	**28.7**	**23.2**	**23.0**	**21.3**	**20.7**	**22.1**	**25.3**			**26.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.7	6.9	8.4	13.0	9.2	6.5	11.7	18.3	9.4	8.1	8.5	8.3	5.6	9.3	56.0	50.5	55.1	28.5	32.3	59.1	85.1	63.9	56.2	64.8	85.1	5.6	28.4
2	55.3	66.0	50.9	38.3	35.0	49.7	53.4	38.3	30.7	45.4	50.8	75.8	39.5	15.9	16.2	16.1	16.7	17.8	17.5	20.9	18.0	17.4	20.1	18.2	75.8	15.9	34.3
3	15.6	16.8	15.1	14.3	15.0	15.8	14.9	14.7	15.6	14.9	14.5	15.9	14.9	14.3	14.3	13.7	15.3	14.3	15.1	15.2	16.0	16.1	16.3	56.3	56.3	13.7	16.9
4	50.1	46.5	42.7	52.1	30.5	22.1	22.1	19.3	35.3	40.1	34.0	22.6	46.9	18.8	22.1	14.8	25.2	28.5	65.4	43.0	31.4	30.5	50.9	63.5	65.4	14.8	35.8
5	29.5	21.2	48.0	72.4	44.2	39.5	33.2	40.9	47.6	13.6	7.6	12.3	14.6	12.1	10.2	10.5	10.7	9.9	10.9	10.2	9.5	11.7	9.6	11.2	72.4	7.6	22.5
6	11.1	9.3	8.6	8.7	9.4	9.3	9.2	9.7	10.5	11.1	11.7	10.4	9.6	14.4	16.3	15.7	93.3	25.8	15.4	19.7	16.0	20.9	29.4	28.1	93.3	8.6	17.7
7	20.1	14.4	19.1	20.7	32.9	33.2	19.5	17.4	18.1	15.4	13.7	16.7	52.8	57.7	26.6	14.8	80.0	53.8	28.7	14.6	25.2	22.0	16.4	21.3	80.0	13.7	27.3
8	30.8	35.2	23.5	17.0	13.4	10.7	15.5	6.2	7.4	9.0	7.4	7.6	11.5	11.1	10.2	11.2	11.5	10.2	10.2	10.5	10.1	10.5	9.8	8.8	35.2	6.2	12.9
9	10.1	9.0	9.8	9.5	8.9	9.1	9.0	8.9	9.2	10.0	9.3	9.3	8.4	9.2	8.6	9.1	8.7	9.4	9.5	9.5	9.7	11.1	11.5	10.8	11.5	8.4	9.5
10	9.4	9.6	10.1	9.7	9.4	9.2	10.6	9.8	11.7	10.6	9.8	9.1	10.7	25.8	71.8	52.7	72.9	56.9	56.4	68.9	58.7	48.6	26.2	57.4	72.9	9.1	30.3
11	30.5	33.9	23.1	21.8	18.8	21.8	16.4	16.0	12.2	10.9	12.7	14.9	7.8	10.9	9.4	12.1	25.8	92.4	19.5	13.7	22.1	20.7	13.9	23.8	92.4	7.8	21.0
12	24.0	18.2	16.9	40.9	46.2	46.7	37.5	20.3	26.3	14.4	20.1	11.5	16.4	27.7	35.8	25.4	29.8	29.3	67.7	66.7	71.3	58.8	43.8	21.1	71.3	11.5	34.0
13	23.1	15.5	10.5	8.8	4.2	4.1	4.0	9.3	8.3	7.6	9.4	11.0	11.2	11.0	12.0	10.9	10.6	9.7	8.1	7.3	8.5	7.8	9.2	8.0	23.1	4.0	9.6
14	6.6	13.2	7.3	8.7	8.8	7.7	7.9	7.1	7.5	10.7	16.6	7.0	4.8	6.4	41.7	69.5	17.5	35.9	67.3	74.6	84.2	64.6	75.2	48.9	84.2	4.8	29.1
15	48.4	55.1	69.8	25.7	17.5	69.2	55.2	23.1	35.9	17.6	7.8	5.8	3.0	5.6	11.1	9.9	8.6	7.5	6.5	11.4	10.4	14.3	14.0	14.8	69.8	3.0	22.8
16	11.0	11.2	10.5	10.5	8.9	9.5	98.4	68.4	12.2	0.0	5.8	11.9	12.0	9.9	15.0	7.6	13.3	11.1	10.6	9.9	7.3	8.6	18.6	8.2	98.4	0.0	16.3
17	7.6	6.6	6.6	10.7	12.9	10.3	5.8	8.8	7.4	23.6	17.0	8.2	3.8	3.8	5.2	6.3	9.7	6.9	5.4	6.0	5.8	7.2	7.5	6.8	23.6	3.8	8.3
18	11.7	17.8	7.4	10.9	7.7	7.4	7.1	6.3	7.4	6.0	6.3	9.0	9.5	6.1	5.8	5.8	10.7	12.6	13.9	11.5	10.1	12.3	9.8	8.0	17.8	5.8	9.2
19	18.3	9.4	13.8	9.8	9.5	17.2	20.2	21.6	19.1	27.1	28.5	48.9	49.1	63.4	34.9	39.2	11.5	17.1	23.3	30.5	26.8	29.4	30.7	27.6	63.4	9.4	26.1
20	24.0	23.3	18.9	30.4	34.8	14.4	22.0	20.9	24.0	25.1	12.2	52.5	23.8	17.3	22.6	20.2	27.3	35.7	33.5	16.1	15.1	19.8	27.9	35.3	52.5	12.2	24.9
21	36.9	25.5	34.6	34.7	19.5	19.8	35.0	32.0	26.3	38.0	22.1	40.6	26.2	20.7	17.6	17.0	17.3	23.2	34.5	42.3	21.2	10.8	15.6	10.5	42.3	10.5	25.9
22	28.0	7.7	6.3	8.1	10.4	10.1	10.7	13.9	22.2	29.6	29.3	21.7	19.5	8.1	5.5	10.8	14.3	13.8	13.9	12.4	31.1	26.8	24.7	22.8	31.1	5.5	16.7
23	27.6	16.3	12.8	10.6	10.9	5.8	5.8	5.2	11.8	7.7	5.1	6.9	7.3	6.7	8.9	10.4	10.5	10.6	10.4	9.3	11.7	9.9	10.9	14.7	27.6	5.1	10.3
24	11.9	10.9	11.5	12.5	10.2	10.9	12.3	13.0	13.7	14.9	12.7	11.8	10.4	10.7	13.7	13.3	14.1	13.5	13.3	13.0	14.3	13.4	9.0	13.4	14.9	9.0	12.4
25	46.7	15.6	14.5	19.2	17.4	12.8	15.5	21.8	30.7	21.7	41.6	17.0	15.3	14.6	23.8	25.2	32.0	46.3	38.9	91.3	80.6	66.8	51.6	36.5	91.3	12.8	33.2
26	54.9	27.5	21.8	17.0	16.3	14.3	12.5	17.8	14.9	17.7	14.3	15.6	15.8	25.2	37.8	20.8	47.6	36.6	75.0	25.0	25.2	23.1	22.6	19.7	75.0	12.5	25.8
27	16.6	16.0	19.7	19.1	17.1	16.2	12.6	86.9	14.1	15.5	11.5	11.8	47.7	9.5	52.2	53.0	51.2	50.7	77.1	64.6	11.2	12.3	9.1	9.9	86.9	9.1	29.4
28	6.8	7.7	8.5	6.2	7.3	9.0	9.5	10.0	8.5	9.7	7.7	8.3	7.5	7.8	85.1	40.0	78.6	68.7	73.0	29.0	35.7	24.4	24.8	25.1	85.1	6.2	25.0
29	20.1	51.9	27.1	22.4	16.6	16.4	14.9	15.7	16.3	18.8	16.3	18.7	18.1	17.2	17.7	20.9	22.3	24.9	27.3	26.7	27.8	30.9	28.5	40.2	51.9	14.9	23.2
30	73.8	47.8	61.5	87.3	66.1	73.0	76.2	68.6	71.9	67.9	86.4	98.6	64.4	63.4	30.4	48.5	31.7	60.0	23.7	63.6	46.4	65.7	23.4	54.3	98.6	23.4	60.6
Max.	**73.8**	**66.0**	**69.8**	**87.3**	**66.1**	**73.0**	**98.4**	**86.9**	**71.9**	**67.9**	**86.4**	**98.6**	**64.4**	**63.4**	**85.1**	**69.5**	**93.3**	**92.4**	**77.1**	**91.3**	**85.1**	**66.8**	**75.2**	**64.8**	**98.6**		
Min.	**6.6**	**6.6**	**6.3**	**6.2**	**4.2**	**4.1**	**4.0**	**5.2**	**7.4**	**0.0**	**5.1**	**5.8**	**3.0**	**3.8**	**5.2**	**5.8**	**8.6**	**6.9**	**5.4**	**6.0**	**5.8**	**7.2**	**7.5**	**6.8**		**0.0**	
Avg.	**25.6**	**22.2**	**21.3**	**22.4**	**19.0**	**20.1**	**22.6**	**22.3**	**19.5**	**18.8**	**18.3**	**20.7**	**19.6**	**17.8**	**24.6**	**22.5**	**29.1**	**28.7**	**30.1**	**29.9**	**28.2**	**26.0**	**23.9**	**26.3**			**23.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port 1 Meterological Station - Wind Sigma (RMYoung)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	88.5	28.6	25.5	63.4	55.3	38.3	23.3	21.7	23.7	12.2	8.3	42.3	12.1	7.8	8.9	9.8	9.1	9.2	7.3	8.0	7.9	6.1	7.3	7.8	88.5	6.1	22.2
2	7.7	10.0	6.4	6.9	8.5	7.7	8.3	7.8	7.2	9.4	11.0	13.9	17.7	10.8	11.7	15.1	15.2	12.8	12.7	10.9	9.8	8.8	7.0	8.3	17.7	6.4	10.2
3	8.1	12.1	9.1	15.3	11.6	14.5	13.7	14.3	13.5	12.1	9.9	11.7	10.4	10.9	10.1	9.8	10.0	10.4	10.6	10.4	10.1	10.9	8.8	9.2	15.3	8.1	11.1
4	8.7	8.0	8.9	12.2	9.4	10.1	10.4	10.2	10.0	10.4	10.4	11.5	11.6	11.0	9.5	11.7	10.0	14.5	12.2	13.5	23.2	18.4	20.1	14.3	23.2	8.0	12.1
5	15.1	8.1	6.8	6.2	6.3	10.8	8.8	6.5	8.7	4.9	9.9	10.2	9.8	9.8	8.9	7.5	8.9	9.2	11.5	11.7	9.7	9.2	12.4	11.4	15.1	4.9	9.3
6	15.4	13.7	11.6	12.2	7.9	7.2	11.5	7.9	7.5	7.9	7.0	7.9	12.2	10.5	7.2	8.3	15.6	54.9	33.9	18.1	36.5	34.5	67.5	14.4	67.5	7.0	18.0
7	61.8	59.6	64.1	77.0	57.4	79.1	25.6	53.1	62.7	51.3	82.9	47.4	7.9	16.4	9.8	13.0	9.9	9.2	24.2	78.3	8.4	9.9	6.9	12.0	82.9	6.9	38.7
8	11.9	14.2	11.0	10.3	10.0	9.5	9.5	9.1	9.2	10.9	9.7	8.9	8.8	9.1	9.2	9.0	8.5	8.2	8.5	8.6	9.1	9.5	9.2	9.3	14.2	8.2	9.6
9	8.9	10.4	9.4	8.5	12.9	17.6	60.4	37.6	69.5	11.7	0.0	71.8	31.1	75.5	47.6	69.6	33.9	68.3	84.1	87.0	81.4	29.4	57.3	61.1	87.0	0.0	43.5
10	63.3	48.2	68.8	24.1	76.5	44.9	59.0	47.9	21.9	77.3	44.1	41.7	44.8	78.1	75.4	20.7	24.8	37.0	93.6	87.8	28.7	26.6	40.3	26.7	93.6	20.7	50.1
11	61.2	76.9	72.0	71.2	94.2	34.7	90.5	93.3	50.3	34.3	72.2	65.6	53.4	56.4	25.0	61.4	70.5	29.8	22.8	21.4	29.9	98.3	24.5	30.8	98.3	21.4	55.9
12	51.4	31.4	19.9	23.1	16.3	19.0	35.4	14.2	14.3	17.8	12.4	13.7	21.9	15.3	18.0	13.0	13.4	11.0	13.0	17.1	21.5	20.7	86.1	100.8	100.8	11.0	25.9
13	21.7	54.1	16.1	11.7	6.6	8.8	11.4	8.1	15.8	7.7	36.5	9.6	18.2	66.1	72.3	10.2	25.6	12.3	9.4	24.8	23.8	7.3	5.8	13.2	72.3	5.8	20.7
14	10.8	7.5	8.5	6.7	6.8	28.0	27.0	37.6	74.8	64.8	10.9	9.7	40.5	16.9	18.9	6.4	5.8	4.5	5.2	7.3	7.5	7.4	8.5	17.6	74.8	4.5	18.3
15	17.8	15.5	18.4	28.3	18.3	25.1	28.1	30.6	21.3	46.9	41.1	23.2	34.0	22.0	8.1	9.5	10.3	30.1	9.5	5.6	9.8	9.5	40.2	9.7	46.9	5.6	21.4
16	8.9	7.8	5.5	8.2	8.4	9.0	10.5	12.6	8.6	8.3	51.9	68.7	16.2	10.8	11.5	9.8	7.9	6.8	12.4	8.9	11.1	12.5	8.9	9.9	68.7	5.5	14.0
17	14.6	14.2	6.7	8.6	13.1	10.3	12.9	11.3	15.2	16.1	6.6	7.0	5.8	9.4	7.4	6.2	5.7	6.0	4.7	5.4	7.3	7.4	5.0	6.0	16.1	4.7	8.9
18	5.8	7.0	6.3	6.6	5.5	8.1	6.6	13.8	15.8	22.0	14.7	8.9	15.0	15.9	11.6	13.4	10.3	11.8	12.0	10.5	10.2	12.0	10.7	13.9	22.0	5.5	11.2
19	11.5	12.4	13.0	14.1	13.5	14.0	12.4	12.3	13.1	11.9	10.1	9.8	9.5	9.9	9.4	9.2	9.4	9.1	9.2	9.2	9.0	9.2	9.0	8.6	14.1	8.6	10.8
20	8.5	9.0	8.7	9.0	9.2	9.0	9.3	8.7	9.3	9.2	9.6	8.9	8.6	9.4	8.8	9.6	10.7	11.4	7.7	9.2	70.1	61.2	64.0	23.7	70.1	7.7	16.8
21	30.7	22.9	81.5	57.6	11.8	13.0	10.1	9.4	12.5	14.7	19.9	8.7	6.1	5.5	5.8	7.1	15.1	16.8	17.4	10.8	13.9	9.1	9.5	8.7	81.5	5.5	17.4
22	6.7	8.3	6.0	5.2	7.9	6.7	8.3	8.0	6.1	7.4	6.7	8.7	11.0	6.7	64.9	8.3	21.2	26.2	62.0	13.9	9.9	26.3	7.5	7.3	64.9	5.2	14.6
23	8.5	8.6	8.4	8.6	9.2	7.1	6.5	6.0	6.9	48.6	7.7	72.8	71.5	46.2	54.4	54.9	81.6	49.3	38.6	36.4	28.1	68.6	68.7	44.4	81.6	6.0	35.1
24	46.8	99.0	66.6	42.1	35.4	27.0	18.4	41.0	42.9	37.7	59.3	41.5	51.5	87.3	25.7	30.5	72.2	80.6	77.6	31.6	38.7	61.3	57.4	7.6	99.0	7.6	49.2
25	6.8	8.2	11.5	8.7	10.9	9.5	9.0	8.6	8.5	9.1	9.8	10.4	5.4	5.0	6.0	15.9	11.9	14.1	17.9	9.3	42.3	29.6	32.2	34.3	42.3	5.0	14.0
26	27.9	32.2	27.3	54.8	59.1	67.0	41.7	28.0	27.6	56.2	41.8	33.1	40.3	43.7	66.9	35.7	37.5	35.0	54.7	58.6	39.8	48.2	71.0	53.8	71.0	27.3	45.1
27	37.3	30.4	28.1	22.0	16.3	15.4	15.0	14.3	15.9	14.2	15.4	17.2	15.8	17.2	16.5	15.9	21.6	15.3	16.8	49.4	51.9	36.3	46.6	46.6	51.9	14.2	24.6
28	33.7	21.9	50.0	39.7	57.6	54.9	68.4	18.0	15.9	44.8	54.9	22.5	21.0	14.0	38.7	41.0	18.8	43.7	41.2	54.8	43.7	73.9	18.0	16.3	73.9	14.0	37.8
29	21.4	26.8	23.1	11.2	12.8	28.4	8.3	19.9	23.5	27.9	22.2	26.4	34.7	22.5	12.2	54.7	38.5	15.0	23.8	20.4	21.0	21.6	9.3	21.9	54.7	8.3	22.8
30	26.3	23.5	21.8	25.7	28.7	26.4	23.8	20.7	19.6	54.3	27.8	50.6	27.4	17.9	15.2	35.1	41.8	37.5	34.5	14.3	36.3	81.6	56.5	40.2	81.6	14.3	32.8
31	57.4	30.4	18.3	13.5	19.9	37.5	13.1	16.7	37.1	12.7	25.2	14.0	9.2	9.9	10.7	16.9	13.7	11.1	14.0	12.8	11.7	16.4	19.5	15.9	57.4	9.2	19.1
Max.	**88.5**	**99.0**	**81.5**	**77.0**	**94.2**	**79.1**	**90.5**	**93.3**	**74.8**	**77.3**	**82.9**	**72.8**	**71.5**	**87.3**	**75.4**	**69.6**	**81.6**	**80.6**	**93.6**	**87.8**	**81.4**	**98.3**	**86.1**	**100.8**	**100.8**		
Min.	**5.8**	**7.0**	**5.5**	**5.2**	**5.5**	**6.7**	**6.5**	**6.0**	**6.1**	**4.9**	**0.0**	**7.0**	**5.4**	**5.0**	**5.8**	**6.2**	**5.7**	**4.5**	**4.7**	**5.4**	**7.3**	**6.1**	**5.0**	**6.0**		**0.0**	
Avg.	**26.0**	**24.5**	**23.9**	**23.0**	**23.1**	**22.5**	**22.5**	**20.9**	**22.2**	**25.0**	**24.2**	**25.7**	**22.1**	**24.1**	**22.8**	**20.6**	**22.2**	**22.9**	**25.9**	**24.7**	**24.6**	**28.4**	**28.9**	**22.8**			**23.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Pebble Port Meteorological Station - Daily Total Precipitation (mm)

January2008- December 2008

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	-	-	-	-	-	-	0.0	18.5	1.8	0.0	0.0
2	-	-	-	-	-	-	-	0.8	18.8	0.3	0.0	0.0
3	-	-	-	-	-	-	-	0.0	32.8	0.3	0.0	4.3
4	-	-	-	-	-	-	-	2.5	0.3	0.0	0.0	2.5
5	-	-	-	-	-	-	-	8.1	0.0	0.0	0.0	5.8
6	-	-	-	-	-	-	-	0.0	11.9	0.0	0.0	12.7
7	-	-	-	-	-	-	-	0.0	11.2	0.0	0.3	0.0
8	-	-	-	-	-	-	-	0.0	22.4	0.0	0.0	1.0
9	-	-	-	-	-	-	-	0.0	18.5	5.3	3.0	2.0
10	-	-	-	-	-	-	-	0.0	6.4	17.0	29.2	0.0
11	-	-	-	-	-	-	-	1.3	0.0	46.0	3.0	0.0
12	-	-	-	-	-	-	-	0.3	36.6	0.0	0.3	0.0
13	-	-	-	-	-	-	-	5.3	70.9	2.8	3.0	0.0
14	-	-	-	-	-	-	-	7.4	16.0	10.9	0.0	0.0
15	-	-	-	-	-	-	0.0	31.2	8.9	3.6	0.3	5.6
16	-	-	-	-	-	-	66.5	0.5	0.5	0.0	3.6	0.3
17	-	-	-	-	-	-	11.2	6.6	17.8	0.0	0.0	0.0
18	-	-	-	-	-	-	0.0	0.0	37.8	0.0	0.0	0.0
19	-	-	-	-	-	-	0.0	0.0	6.9	0.0	0.0	0.0
20	-	-	-	-	-	-	0.8	0.0	0.0	0.0	0.0	0.3
21	-	-	-	-	-	-	2.8	7.1	0.0	0.0	0.0	0.0
22	-	-	-	-	-	-	6.1	3.0	0.5	0.0	0.0	3.0
23	-	-	-	-	-	-	7.1	1.8	4.6	0.3	0.8	4.1
24	-	-	-	-	-	-	17.0	0.0	11.9	0.0	32.5	0.0
25	-	-	-	-	-	-	0.0	2.8	11.7	0.0	2.0	3.6
26	-	-	-	-	-	-	0.0	0.0	6.1	0.3	0.0	0.0
27	-	-	-	-	-	-	15.0	0.0	0.0	0.3	1.0	0.0
28	-	-	-	-	-	-	0.0	0.0	0.0	0.0	4.3	0.0
29	-	-	-	-	-	-	0.0	0.0	0.0	1.0	2.5	0.0
30	-		-	-	-	-	0.0	0.0	0.0	0.0	1.3	0.3
31	-		-		-		2.8	9.4		0.0		0.0
Total	-	-	-	-	-	-	129.3	88.1	370.8	89.6	87.1	45.5

Pebble Port Meteorological Station - Daily Total Pan Evaporation (mm)

January2008- December 2008

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	-	-	-	-	-	-	1.7	0.0	0.0	-	-
2	-	-	-	-	-	-	-	0.0	0.0	2.3	-	-
3	-	-	-	-	-	-	-	0.8	0.0	1.4	-	-
4	-	-	-	-	-	-	-	0.0	0.7	2.4	-	-
5	-	-	-	-	-	-	-	0.0	1.5	1.6	-	-
6	-	-	-	-	-	-	-	4.3	0.0	2.0	-	-
7	-	-	-	-	-	-	-	5.9	0.0	2.4	-	-
8	-	-	-	-	-	-	-	3.9	0.0	0.0	-	-
9	-	-	-	-	-	-	-	3.1	0.0	0.0	-	-
10	-	-	-	-	-	-	-	2.5	0.0	0.0	-	-
11	-	-	-	-	-	-	-	0.0	1.6	0.0	-	-
12	-	-	-	-	-	-	-	1.3	0.0	0.0	-	-
13	-	-	-	-	-	-	-	0.0	0.0	0.0	-	-
14	-	-	-	-	-	-	-	0.0	0.0	0.0	-	-
15	-	-	-	-	-	-	2.4	0.0	0.0	0.0	-	-
16	-	-	-	-	-	-	0.0	0.0	0.0	0.0	-	-
17	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-
18	-	-	-	-	-	-	6.2	2.4	0.0	-	-	-
19	-	-	-	-	-	-	5.0	2.4	0.0	-	-	-
20	-	-	-	-	-	-	4.8	3.1	2.3	-	-	-
21	-	-	-	-	-	-	0.0	0.0	3.4	-	-	-
22	-	-	-	-	-	-	0.0	0.0	1.6	-	-	-
23	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-
24	-	-	-	-	-	-	0.0	2.4	0.0	-	-	-
25	-	-	-	-	-	-	3.9	0.0	0.0	-	-	-
26	-	-	-	-	-	-	3.4	0.7	0.0	-	-	-
27	-	-	-	-	-	-	0.0	2.0	3.4	-	-	-
28	-	-	-	-	-	-	6.5	2.6	3.6	-	-	-
29	-	-	-	-	-	-	8.1	5.2	3.0	-	-	-
30	-		-	-	-	-	6.8	2.4	2.9	-	-	-
31	-		-		-		3.6	0.0		-		-
Total	-	-	-	-	-	-	50.6	46.7	24.0	12.1	-	-

Appendix E

Validated Manual Particulate Data

Not Applicable.

APPENDIX 26G

2008 Annual Data Report, Pebble Williamsport Station, for the Pebble Project Meteorological Monitoring Program

2008 Annual Data Report
Pebble Williamsport Station

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

April 2009

Pebble Williamsport Station
2008 Annual Data Report

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

April 2009

prepared for

The Pebble Limited Partnership,
care of Pebble Mines Corp.
Anchorage, Alaska

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Dominic Shallies
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4/2/09
Date

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4/13/09
Date

CONTENTS

Executive Summary **1**

1.0 Introduction **4**

1.1 Project Summary 4
1.2 Measurements Method Table 5
1.3 Variations from the Quality Assurance Project Plan 5

2.0 Station Performance Summary **10**

2.1 Significant Project Events 10
2.2 Missing, Invalid, and Adjusted Data 11
2.3 Network Data Completeness 11
2.4 Precision Statistics 14
2.4.1 Monitoring Network Precision Statistics 14
2.4.2 Analytical Laboratory Precision Statistics 14
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 14
2.5 Accuracy Statistics 14
2.5.1 Instrument Calibration Statistics 14
2.5.2 Independent Quality Assurance Audits 14

3.0 Monitoring Data Network Summary **19**

3.1 Air Quality Data Summary 19
3.2 Meteorological Data Summary 19
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 19
3.2.2 Temperature Climatology 32
3.3.3 Other Meteorological Parameters 37

4.0 References **42**

List of Figures

1-1. Map of the Pebble Project Area 7
1-2. Map of the Pebble Williamsport Station 8
1-3. Pebble Williamsport Meteorological Monitoring Station 9
3-1. 2008 Pebble Williamsport Wind Roses 22
3-2. Quarterly Pebble Williamsport Wind Roses (Climatronics) 23
3-3. Quarterly Pebble Williamsport Wind Roses (RM Young) 24
3-4. 2008 Wind Rose Superimposed on Site Map 31

3-5. Hourly Average 2-Meter and 10-Meter Temperatures 35
3-6. Hourly Average Vertical Temperature Difference 36
3-7. Hourly Average Relative Humidity 39
3-8. Barometric Pressure 40
3-9. Hourly Average Solar Radiation 41

List of Tables

E-1. Meteorological Data Capture – Valid Hours per Month 2
E-2. Meteorological Data Capture – Percent Data Capture 3
1-1. Meteorological Measurement Methods 6
2-1. Chronology of Significant Events 10
2-2. Percentage of Final Data Flagged 12
2-3. Pebble Williamsport Station Percent Data Capture 13
2-4. August 28, 2007 Performance Audit Summary 16
2-5. April 10, 2008 Performance Audit Summary 17
2-6. September 15, 2008 Performance Audit Summary 18
3-1. Average and Maximum Wind Speeds 20
3-2. Average and Maximum Wind Speeds at Seldovia Airport 20
3-3. 2008 Annual Wind Rose Analysis Table (Climatronics) 25
3-4. Quarter A Wind Rose Analysis Table (Climatronics) 26
3-5. Quarter B Wind Rose Analysis Table (Climatronics) 26
3-6. Quarter C Wind Rose Analysis Table (Climatronics) 27
3-7. Quarter D Wind Rose Analysis Table (Climatronics) 27
3-8. 2008 Annual Wind Rose Analysis Table (RM Young) 28
3-9. Quarter A Wind Rose Analysis Table (RM Young) 29
3-10. Quarter B Wind Rose Analysis Table (RM Young) 29
3-11. Quarter C Wind Rose Analysis Table (RM Young) 30
3-12. Quarter D Wind Rose Analysis Table (RM Young) 30
3-13. 2-Meter Temperature Summary 33
3-14. 10-Meter Temperature Summary 34
3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary 38

List of Appendices

A Data Processing Specifications and Statistical Formulae
B Precision Data
C Accuracy Data
D Validated Continuous Data Summaries
E Validated Manual Particulate Data

Executive Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG, Inc., dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration (PSD) quality meteorological monitoring for the Pebble Williamsport station began on July 20, 2007 and will be ongoing. This report provides details of the 2008 calendar year of meteorological measurements collected from January 1, 2008 through December 31, 2008 at a possible port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble Williamsport meteorological monitoring station. The Pebble Williamsport meteorological monitoring station met all PSD requirements during the monitoring year.

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	744	744	744	744	744	744	744	744	744	744	744	744
February 2008	696	696	696	696	696	696	696	696	696	696	696	696
March 2008	744	744	744	744	744	744	744	744	744	744	744	744
April 2008	718	718	718	717	717	717	718	718	718	720	720	720
May 2008	744	744	744	744	744	744	744	744	744	744	744	744
June 2008	720	720	720	720	720	720	720	720	720	720	720	720
July 2008	729	729	729	729	729	729	729	729	729	729	729	729
August 2008	744	744	744	744	744	744	744	744	744	744	744	744
September 2008	718	718	718	718	718	718	718	718	718	720	720	720
October 2008	744	744	744	744	744	744	744	744	744	744	744	744
November 2008	720	720	720	720	720	720	720	720	720	720	720	720
December 2008	744	744	744	744	744	744	744	744	744	744	744	744
Monitoring Year	**8,765**	**8,765**	**8,765**	**8,764**	**8,764**	**8,764**	**8,765**	**8,765**	**8,765**	**8,769**	**8,769**	**8,769**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
April 2008	99.7%	99.7%	99.7%	99.6%	99.6%	99.6%	99.7%	99.7%	99.7%	100%	100%	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**
July 2008	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
September 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%
Quarter C	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.3%**	**99.3%**	**99.3%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**

[1]CLM = Climatronics wind speed and wind direction sensor.
[2]RMY = R.M. Young wind speed and wind direction sensor.

1.0 Introduction

1.1 Project Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc, dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring project currently consists of seven PSD-quality meteorological monitoring stations. Four stations are located in the deposit area; Pebble 1, Pebble 4, Pebble 5, and Pebble 6. Three stations are located in the proposed Port area; Pebble Port, Williamsport, and North Head. Data from the additional non-PSD meteorological monitoring station, Pebble 3 and Pebble 5A, are being used for engineering and mine design purposes. This report focuses on the first year of measurements collected at the Williamsport station from January 1, 2008 through December 31, 2008. A separate annual data report has been prepared for each of the other meteorological monitoring stations.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble Williamsport station.

The Pebble Williamsport station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C]);
- Air temperature, ten meters above ground level (degrees Celsius [°C]);
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]));
- Wind speed (meters per second [m/s]);
- Wind direction (degrees [°]);
- Wind direction standard deviation (wind sigma [σ_θ]);
- Relative humidity (percent [%]);
- Solar radiation (Watts per square meter [W/m^2]); and
- Barometric Pressure (millibar [mb]).

Measurements of these parameters will provide at least one year of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble Williamsport station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble Williamsport station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble Williamsport station.

1.3 Variations from the Quality Assurance Project Plan

During the 2008 monitoring year, no variations occurred from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]

[1] Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.

[2] Instantaneous barometric pressure measurements are collected for one second during every hour.

Figure 1-1. Map of the Pebble Project Area

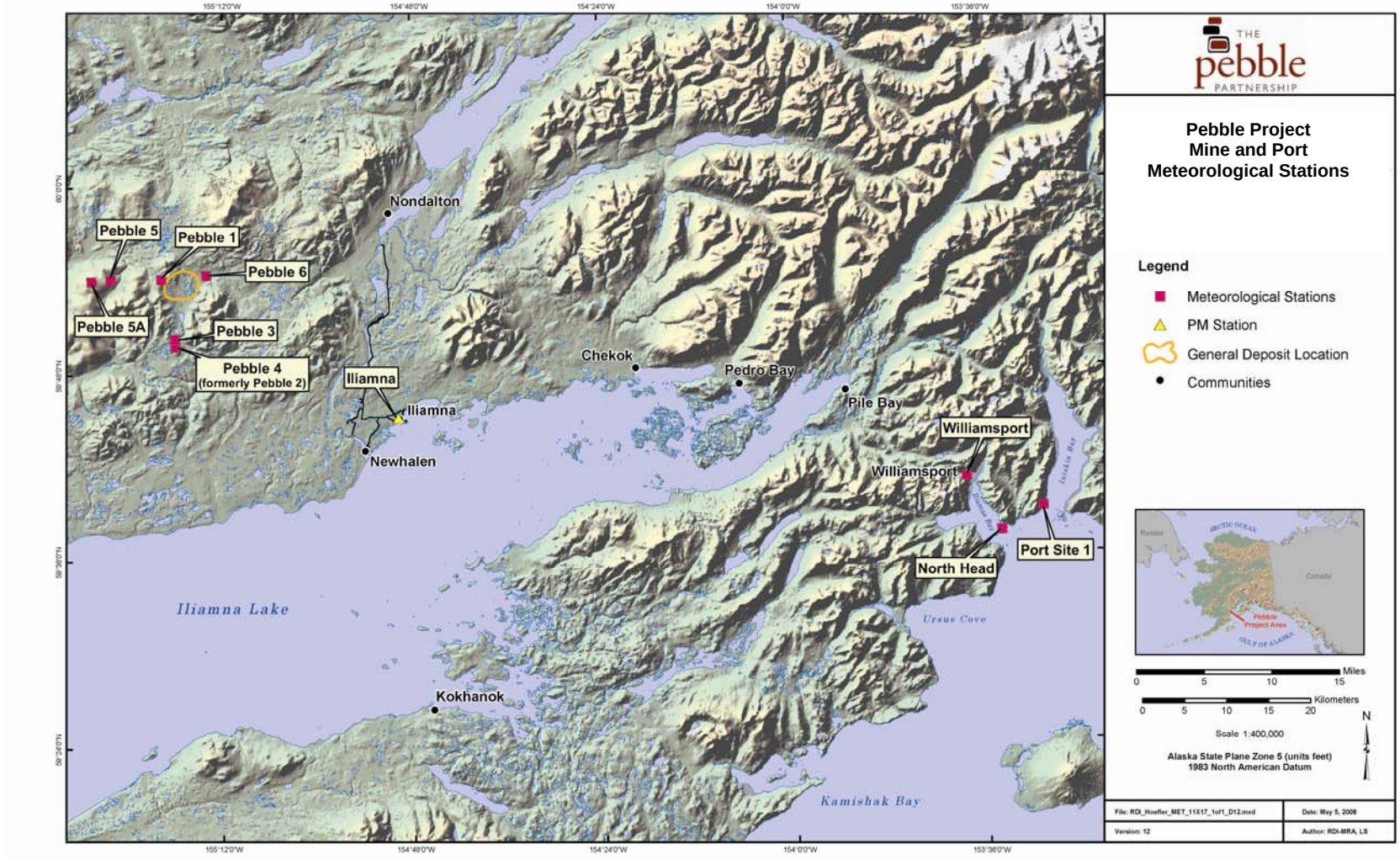


Figure 1-2. Map of the Pebble Williamsport Station

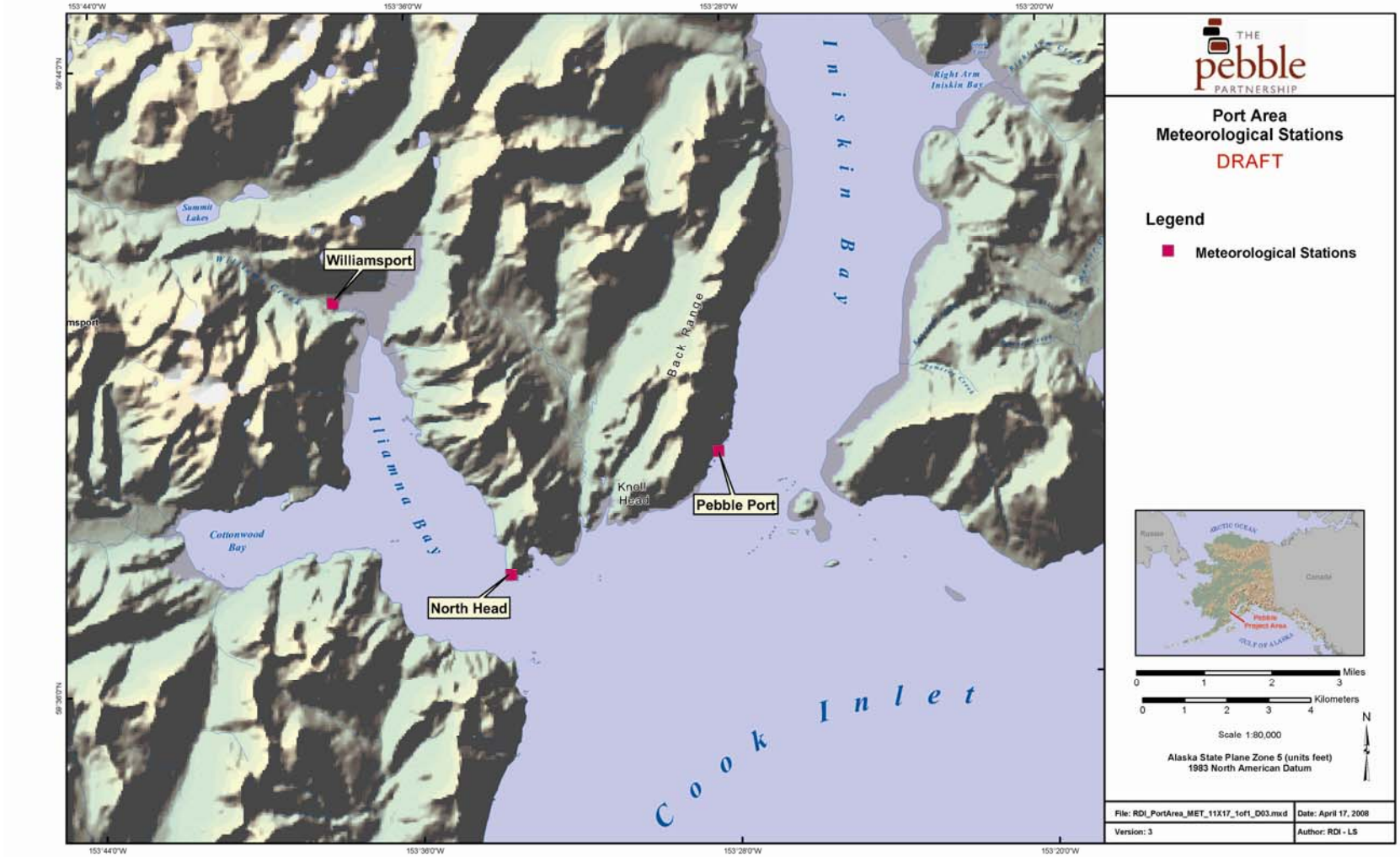


Figure 1-3. Pebble Williamsport Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble Williamsport station relevant to the 2008 meteorological monitoring year.

Table 2-1. Chronology of Significant Events

Date	Event
January 1, 2008	Beginning of 2008 monitoring year.
March 24, 2008	Site visit to restore communications.
April 2, 2008	Updated datalogger program, probable loss of the 10:00 data hour.
April 10, 2008	Full audit performed (all parameters passed). Data logger time was found to be off by one hour and was corrected.
April 30, 2008	Install 10' Yagi pole, aimed Yagi up at repeater. Updated and tested radio.
May 16, 2008	Installed a new 10' mast for the station Yagi antennae. Radio communication tests were performed after the installation. Communication was improved.
June 12, 2008	Relocated Williamsport Repeater to restore communication.
September 15, 2008	Full audit performed (all parameters passed).
October 16, 2008	Turned on TEG.
December 31, 2008	End of 2008 monitoring year.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble Williamsport station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the second monitoring year at the Pebble Williamsport station.

The Pebble Williamsport meteorological monitoring station met all PSD requirements during the monitoring year.

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	1.8%
	<0.5 m/s variation for 12 consecutive hours	0.5%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	1.4%
	< 10° variation over 18 consecutive hours	1.2%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.0%
	< 0.1 m/s variation for 3 consecutive hours	1.3%
	< 0.5 m/s variation for 12 consecutive hours	0.2%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.0%
	< 1° variation over 3 consecutive hours	1.5%
	< 10° variation over 18 consecutive hours	1.3%
Temperature (2 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.0%
	Value is > record high, < record low	0.0%
Temperature (10 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	1.3%
	Value is > record high, < record low	0.0%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	0.7%
	Value is < -0.8°C during the night	0.0%
	Value is > 5°C, < -3°C	0.0%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.2%
	> 5°C variation from previous hour	0.3%
	< 0.5°C variation for 12 consecutive hours	1.6%
	Equals ambient temperature for 12 consecutive hours	0.3%
Solar Radiation	> 0 W/m^2 at night	0.0%
	Greater than the maximum possible value for date	0.0%
Barometric Pressure	> 1060 mb (sea level)	0.0%
	< 940 mb (sea level)	0.0%
	> 6 mb variation for 3 consecutive hours	0.0%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

Table 2-3. Pebble Williamsport Station Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
April 2008	99.7%	99.7%	99.7%	99.6%	99.6%	99.6%	99.7%	99.7%	99.7%	100%	100%	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**
July 2008	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
September 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%
Quarter C	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.3%**	**99.3%**	**99.3%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A performance audit was performed on all station sensors on August 28, 2007 to check sensor operation against certified audit equipment. All sensors passed except the Climatronic Wind Direction sensor. The cross-arm was misaligned by approximately 180° during initial installation, based upon in-situ azimuth test, and the wind vane was also jarred during removal causing the -12 degree error. The cross-arm was re-aligned to north and the vane was re-aligned to the cross-arm. The instrument was then re-audited. The results of the performance audit are presented in Table 2-4.

The first annual performance audit for 2008 was conducted at the Pebble Williamsport station on April 10, 2008, on all instruments. All sensors passed. During this audit, the data logger time was found to be off by one hour and was corrected. The results of this audit are presented in Table 2-5.

The second annual performance audit for 2008 was conducted at the Pebble Williamsport station on September 15, 2008 on all instruments. All sensors passed. The results of this audit are presented in Table 2-6.

The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or

from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. All complete performance audit reports are available in Appendix C.

A technical systems audit was performed during the September 15, 2008 performance audit. During each of these audits, the power supply, DAS, communications system, and audited sensors all worked properly. The systems audit found that the station is well-planned, equipped with PSD quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

Table 2-4. August 28, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:02	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.08	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.08	Pass
Air Temperature Difference	≤ ±0.1	°C	0.05	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	1.0	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	0.002	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (New bearings)	≤ 0.104	oz-in	0.06	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	181.9[1]	Fail
Wind Direction Accuracy	≤ ±5	Degree	12.6[2]	Fail
Wind Direction Linearity	≤ 3	Degree	12[2]	Fail
Wind Direction Accuracy	≤ ±5	Degree	1.2	Pass
Wind Direction Linearity	≤ 3	Degree	0.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	3.2	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.006	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	181.5	Fail[1]
Wind Direction Accuracy	≤ ±5	Degree	2.6	Pass
Wind Direction Linearity	≤ 3	Degree	1.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-4.8	Pass
Barometric Pressure	≤ ±3	Mbar	1.4	Pass
Solar Radiation	≤ ±5+Res	% input	-7.0[3]	Pass

[1] Cross-arm/monitor misaligned by approximately 180° during initial installation.
[2] Climatronics vane jarred during cross-arm dismount, causing the linearity error.
[3] Max percent error value of 7.0 within limit of 5% input + resolution, see audit.

Table 2-5. April 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:02	Fail[1]
2-m Temperature Accuracy (E3381)[1]	≤ ±0.5	°C	0.16	Pass
10-m Temperature Accuracy (E3381)	≤ ±0.5	°C	0.16	Pass
Air Temperature Difference (E3381)	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.5	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	g-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	g-cm	3.5	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-2.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.0	Pass
Wind Direction Linearity	≤ 3	Degree	0.4	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.5	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	g-cm	0.6	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	9.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-4.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.7	Pass
Barometric Pressure	≤ ±3	Mbar	2.0	Pass
Solar Radiation	≤ ±5+Res	% input	-8.3	Pass[2]

[1] DAS time corrected to Alaska Standard Time.
[2] Max percent error value of 8.3 within limit of 5% input + resolution, see audit.

Table 2-6. September 15, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:06	Pass
2-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.45[1]	Pass
10-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.45[1]	Pass
Air Temperature Difference (In Situ)	≤ ±0.1	°C	0.10[1]	Pass
2-m Temperature Accuracy (New)	≤ ±0.5	°C	0.31	Pass
10-m Temperature Accuracy (New)	≤ ±0.5	°C	0.31	Pass
Air Temperature Difference (New)	≤ ±0.1	°C	0.04	Pass
Relative Humidity/Dew Point	≤ ±1.5	°C	0.7	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (In Situ)	≤ 7.5	gm-cm	5.0	Pass
Wind Dir. Azim. Alignment (In Situ)	≤ ±5	Degree	1.9	Pass
Wind Direction Accuracy (In Situ)	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity (In Situ)	≤ 3	Degree	0.4	Pass
Wind Direction Torque (New Bearings)	≤ 7.5	gm-cm	4.0	Pass
Wind Direction Accuracy (New Bearings)	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity (New Bearings)	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Alignment (Post Audit)	≤ ±5	Degree	1.9	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	gm-cm	0.5	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	10.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.0	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	2.1	Pass
Barometric Pressure	≤ ±3	Mbar	2.6	Pass
Solar Radiation	≤ ±5+Res	% input	7.5[2]	Pass

[1] Thermistors very close to limits, replaced.

[2] Maximum error within limit of 5% of input + resolution, see audit.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a statistical summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the second year of meteorological monitoring at the Pebble Williamsport station. The mean hourly average wind speed during the monitoring year was 5.27 meters per second (m/s) and 4.93 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 15.68 m/s and 14.69 m/s were measured by the CLM and RMY sensors, respectively, on January 8, 2008. Table 3-2 provides the mean and maximum daily wind speeds at the Seldovia meteorological station, located approximately 100 kilometers (km) from the Pebble Williamsport Station. During the monitoring year the mean daily average wind speed at the Seldovia airport was 1.25 m/s, while the maximum daily average wind speed was 10.28 m/s on January 21, 2008 and March 3, 2008.

Table 3-1 indicates that the RMY statistical values are generally 95 percent of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (greater than 95 percent) when wind sigma values were less than 30 degrees. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Table 3-1. Average and Maximum Wind Speeds

Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speeds (m/s) (RMY)
Quarter A	6.90	6.45	15.68	14.69
Quarter B	5.17	4.82	13.97	13.40
Quarter C	3.90	3.63	13.65	13.06
Quarter D	5.13	4.81	14.40	13.45
Monitoring Year	**5.27**	**4.93**	**15.68**	**14.69**

Table 3-2. Average and Maximum Wind Speeds at Seldovia Airport

Monitoring Period	Mean Hourly Average Wind Speed (m/s)	Maximum Hourly Average Wind Speed (m/s)
Quarter A	1.50	10.28
Quarter B	1.25	9.39
Quarter C	0.86	8.05
Quarter D	1.38	8.05
Monitoring Year	**1.25**	**10.28**

Figure 3-1 provides wind roses for the CLM and RMY wind instruments during the 2008 monitoring year collocated at the Pebble Williamsport station. Winds were predominantly from the west with other minor wind components. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by predominant wind component from the west with minor wind components from the east and northwest directions. Quarter B and C wind roses display a minor wind component from the northeast direction. Quarter C wind rose displays an additional minor wind component from the southeast direction.

Tables 3-3 through 3-7 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-8 through 3-12 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the 2008 year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble Williamsport site and vicinity. The wind rose is centered over the Pebble Williamsport station and shows that, on an annual basis, winds at the site predominantly blow from the west and east, with a lesser northwest component.

Figure 3-1. 2008 Pebble Williamsport Wind Roses

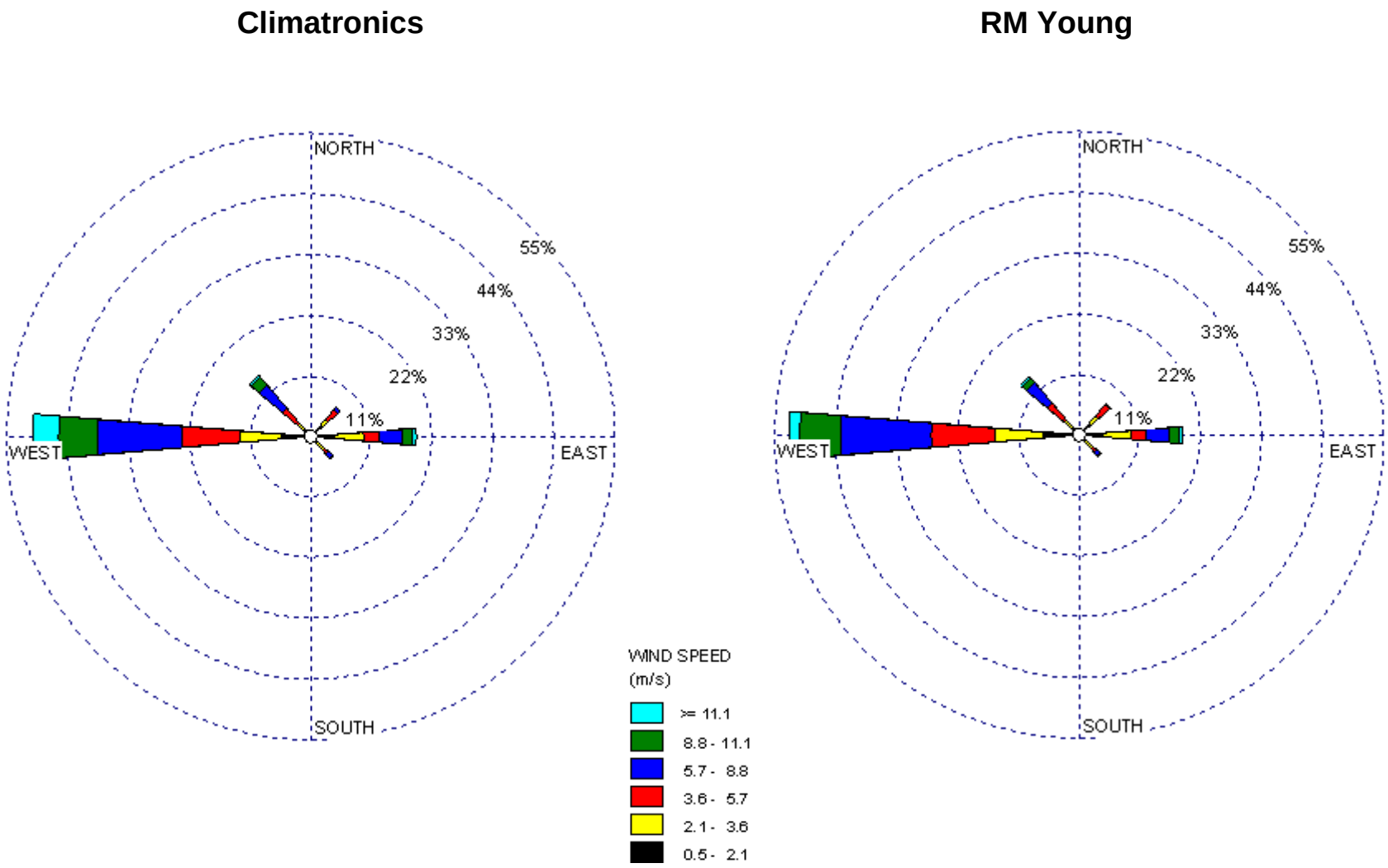
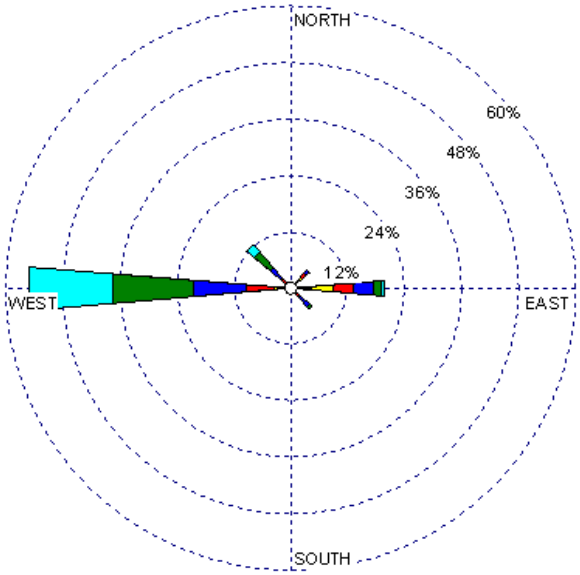
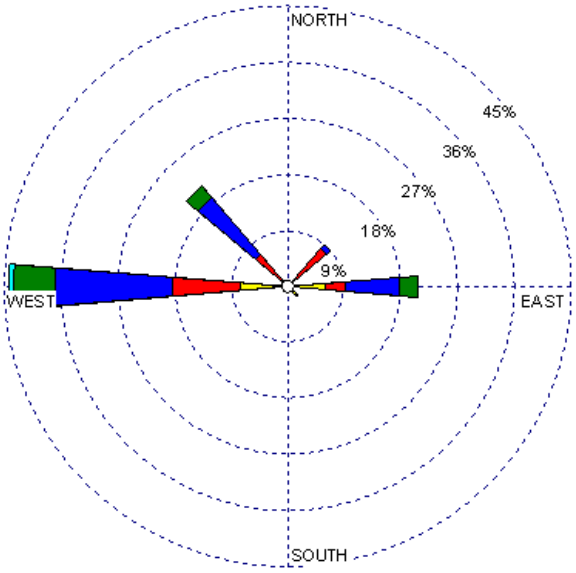


Figure 3-2. Quarterly Pebble Williamsport Wind Roses (Climatronics)

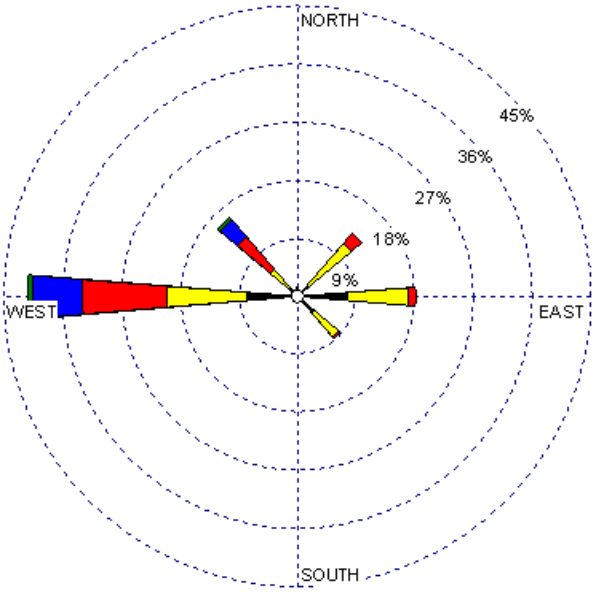
Quarter A (1/1/2008 – 3/31/2008)



Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)

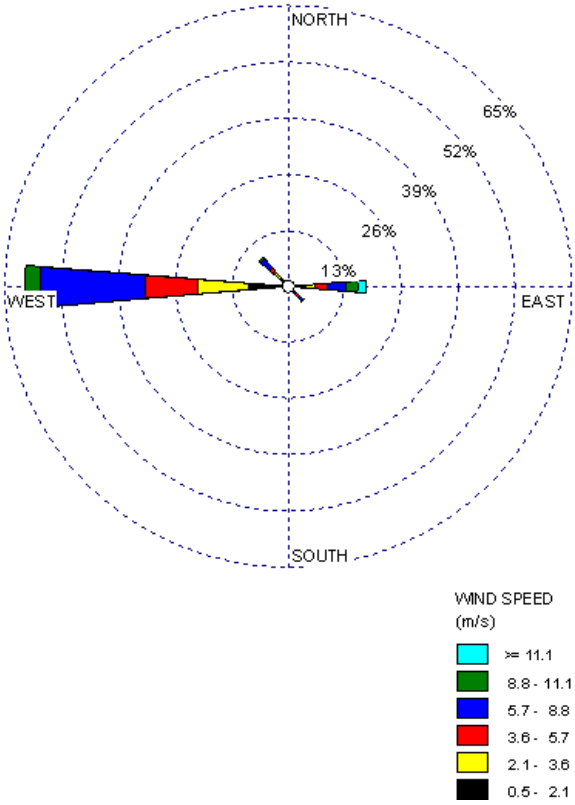
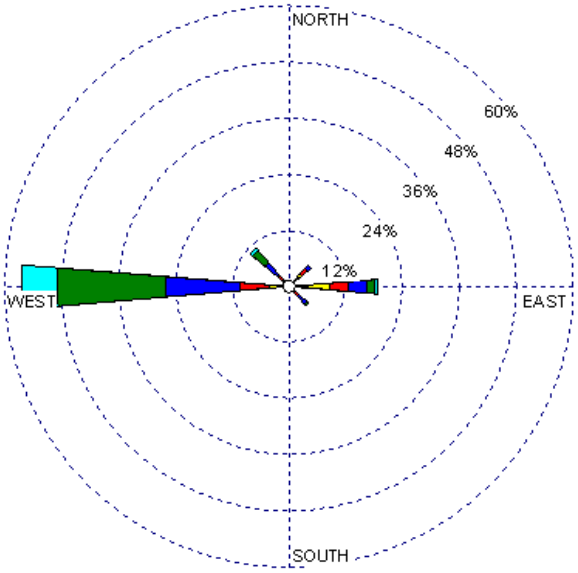
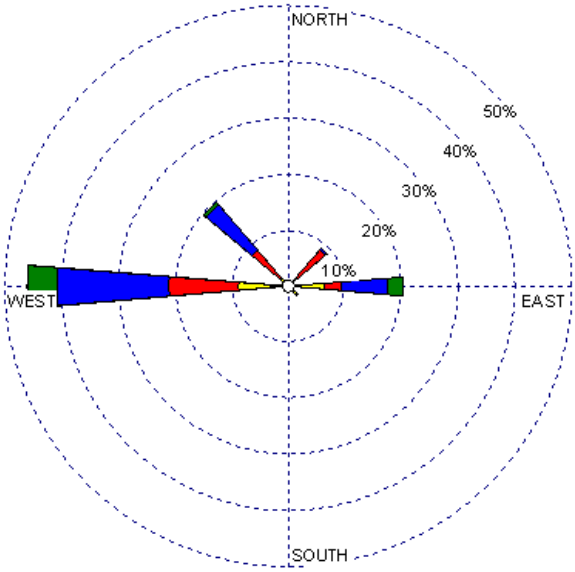


Figure 3-3. Quarterly Pebble Williamsport Wind Roses (RM Young)

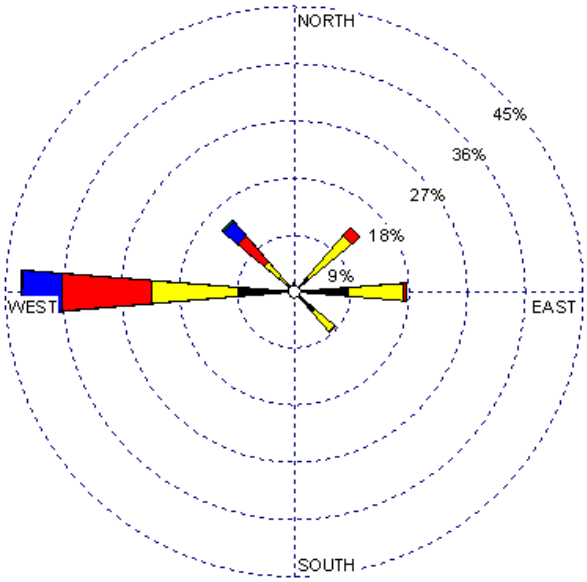
Quarter A (1/1/2008 – 3/31/2008)



Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)

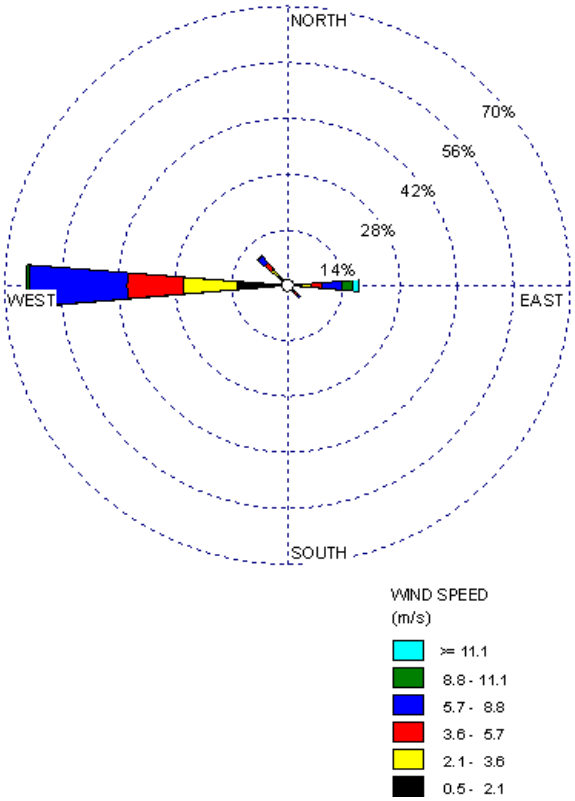


Table 3-3. 2008 Annual Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Williamsport (Climatronics) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.44%	0.14%	0.24%	0.00%	0.00%	0.00%	0.81%
NE	1.22%	2.95%	2.47%	0.51%	0.00%	0.00%	7.15%
E	4.37%	5.25%	2.81%	4.20%	1.86%	0.64%	19.14%
SE	1.22%	2.30%	0.78%	0.98%	0.20%	0.00%	5.49%
S	0.30%	0.24%	0.00%	0.00%	0.00%	0.00%	0.54%
SW	0.27%	0.24%	0.07%	0.03%	0.00%	0.00%	0.61%
W	5.39%	7.59%	10.33%	15.31%	6.88%	4.64%	50.14%
NW	1.52%	1.63%	3.76%	5.32%	1.93%	0.58%	14.74%
Sub-Total:	14.74%	20.33%	20.46%	26.36%	10.87%	5.86%	98.61%
Calms (<0.5m/s):							0.47%
Total:							100.00%

Table 3-4. Quarter A Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Williamsport (Climatronics) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.27%	0.13%	0.00%	0.00%	0.00%	0.00%	0.40%
NE	0.94%	2.15%	1.34%	0.94%	0.00%	0.00%	5.38%
E	4.44%	4.70%	4.03%	4.17%	1.75%	0.67%	19.76%
SE	0.27%	1.21%	1.21%	2.69%	0.67%	0.00%	6.05%
S	0.67%	0.13%	0.00%	0.00%	0.00%	0.00%	0.81%
SW	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%
W	2.02%	1.61%	5.78%	11.29%	16.80%	17.61%	55.11%
NW	1.34%	0.13%	1.34%	3.09%	4.17%	2.15%	12.23%
Sub-Total:	10.22%	10.08%	13.71%	22.18%	23.39%	20.43%	100.00%
Calms (<0.5m/s):							0.00%
Total:							100.00%

Table 3-5. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Williamsport (Climatronics) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.54%	0.00%	0.40%	0.00%	0.00%	0.00%	0.94%
NE	0.67%	0.94%	6.45%	0.81%	0.00%	0.00%	8.87%
E	1.21%	4.70%	3.36%	8.47%	2.96%	0.00%	20.70%
SE	0.40%	1.61%	0.13%	0.13%	0.00%	0.00%	2.28%
S	0.27%	0.13%	0.00%	0.00%	0.00%	0.00%	0.40%
SW	0.40%	0.40%	0.27%	0.13%	0.00%	0.00%	1.21%
W	2.42%	5.11%	10.75%	18.68%	6.45%	0.81%	44.22%
NW	0.40%	0.94%	5.51%	11.83%	2.42%	0.13%	21.24%
Sub-Total:	6.32%	13.84%	26.88%	40.05%	11.83%	0.94%	99.87%
Calms (<0.5m/s):							0.02%
Total:							100.00%

Table 3-6. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Williamsport (Climatronics) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.67%	0.40%	0.54%	0.00%	0.00%	0.00%	1.61%
NE	2.42%	8.47%	2.02%	0.00%	0.00%	0.00%	12.90%
E	7.80%	9.14%	1.21%	0.00%	0.00%	0.00%	18.15%
SE	3.49%	4.84%	0.40%	0.00%	0.00%	0.00%	8.74%
S	0.13%	0.67%	0.00%	0.00%	0.00%	0.00%	0.81%
SW	0.27%	0.13%	0.00%	0.00%	0.00%	0.00%	0.40%
W	7.93%	12.10%	12.90%	7.66%	0.67%	0.00%	41.26%
NW	1.88%	3.63%	6.59%	3.49%	0.54%	0.00%	16.13%
Sub-Total:	24.60%	39.38%	23.66%	11.16%	1.21%	0.00%	100.00%
Calms (<0.5m/s):							0.00%
Total:							100.00%

Table 3-7. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble Williamsport (Climatronics) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.28%
NE	0.83%	0.14%	0.00%	0.28%	0.00%	0.00%	1.25%
E	4.03%	2.36%	2.64%	4.17%	2.78%	1.94%	17.92%
SE	0.69%	1.53%	1.39%	1.11%	0.14%	0.00%	4.86%
S	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%
SW	0.14%	0.42%	0.00%	0.00%	0.00%	0.00%	0.56%
W	9.31%	11.67%	11.94%	23.89%	3.47%	0.00%	60.28%
NW	2.50%	1.81%	1.53%	2.78%	0.56%	0.00%	9.17%
Sub-Total:	17.92%	17.92%	17.50%	32.22%	6.94%	1.94%	94.44%
Calms (<0.5m/s):							0.61%
Total:							100.00%

Table 3-8. 2008 Annual Wind Rose Analysis Table (RM Young)

Station ID: Pebble Williamsport (RM Young) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.41%	0.17%	0.24%	0.00%	0.00%	0.00%	0.81%
NE	1.56%	3.08%	2.61%	0.34%	0.00%	0.00%	7.59%
E	4.40%	5.12%	2.68%	4.10%	1.83%	0.51%	18.63%
SE	1.46%	2.07%	0.75%	0.88%	0.10%	0.00%	5.25%
S	0.34%	0.17%	0.00%	0.00%	0.00%	0.00%	0.51%
SW	0.24%	0.24%	0.03%	0.03%	0.00%	0.00%	0.54%
W	6.64%	8.64%	11.45%	16.36%	7.22%	1.93%	52.24%
NW	1.86%	1.86%	4.00%	4.84%	1.12%	0.24%	13.92%
Sub-Total:	16.90%	21.34%	21.75%	26.56%	10.26%	2.68%	99.49%
Calms (<0.5m/s):							0.17%
Total:							100.00%

Table 3-9. Quarter A Wind Rose Analysis Table (RM Young)

Station ID: Pebble Williamsport (RM Young) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.40%	0.13%	0.00%	0.00%	0.00%	0.00%	0.54%
NE	1.48%	2.15%	1.61%	0.94%	0.00%	0.00%	6.18%
E	4.03%	4.57%	4.17%	3.63%	1.75%	0.67%	18.82%
SE	0.27%	1.08%	1.48%	2.42%	0.40%	0.00%	5.65%
S	0.67%	0.13%	0.00%	0.00%	0.00%	0.00%	0.81%
SW	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%
W	2.15%	2.28%	5.91%	15.73%	22.72%	7.53%	56.32%
NW	1.34%	0.00%	1.88%	3.49%	3.36%	0.81%	10.89%
Sub-Total:	10.62%	10.35%	15.05%	26.21%	28.23%	9.01%	99.46%
Calms (<0.5m/s):							0.06%
Total:							100.00%

Table 3-10. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble Williamsport (RM Young) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.27%	0.00%	0.54%	0.00%	0.00%	0.00%	0.81%
NE	0.54%	1.21%	6.85%	0.40%	0.00%	0.00%	9.01%
E	1.34%	4.97%	3.23%	8.06%	2.69%	0.00%	20.30%
SE	0.40%	1.61%	0.13%	0.13%	0.00%	0.00%	2.28%
S	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%
SW	0.40%	0.40%	0.13%	0.13%	0.00%	0.00%	1.08%
W	3.23%	5.65%	12.23%	19.62%	5.11%	0.13%	45.97%
NW	0.67%	1.21%	6.72%	10.48%	0.54%	0.13%	19.76%
Sub-Total:	7.26%	15.05%	29.84%	38.84%	8.33%	0.27%	99.60%
Calms (<0.5m/s):							0.05%
Total:							100.00%

Table 3-11. Quarter C Wind Rose Analysis Table (RM Young)

Station ID: Pebble Williamsport (RM Young) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.67%	0.54%	0.40%	0.00%	0.00%	0.00%	1.61%
NE	3.09%	8.74%	1.61%	0.00%	0.00%	0.00%	13.44%
E	8.47%	8.47%	0.67%	0.00%	0.00%	0.00%	17.61%
SE	4.44%	3.90%	0.27%	0.00%	0.00%	0.00%	8.60%
S	0.13%	0.54%	0.00%	0.00%	0.00%	0.00%	0.67%
SW	0.13%	0.13%	0.00%	0.00%	0.00%	0.00%	0.27%
W	8.74%	13.58%	13.84%	6.18%	0.13%	0.00%	42.47%
NW	1.88%	4.44%	5.24%	2.96%	0.40%	0.00%	14.92%
Sub-Total:	27.55%	40.32%	22.04%	9.14%	0.54%	0.00%	99.60%
Calms (<0.5m/s):							0.05%
Total:							100.00%

Table 3-12. Quarter D Wind Rose Analysis Table (RM Young)

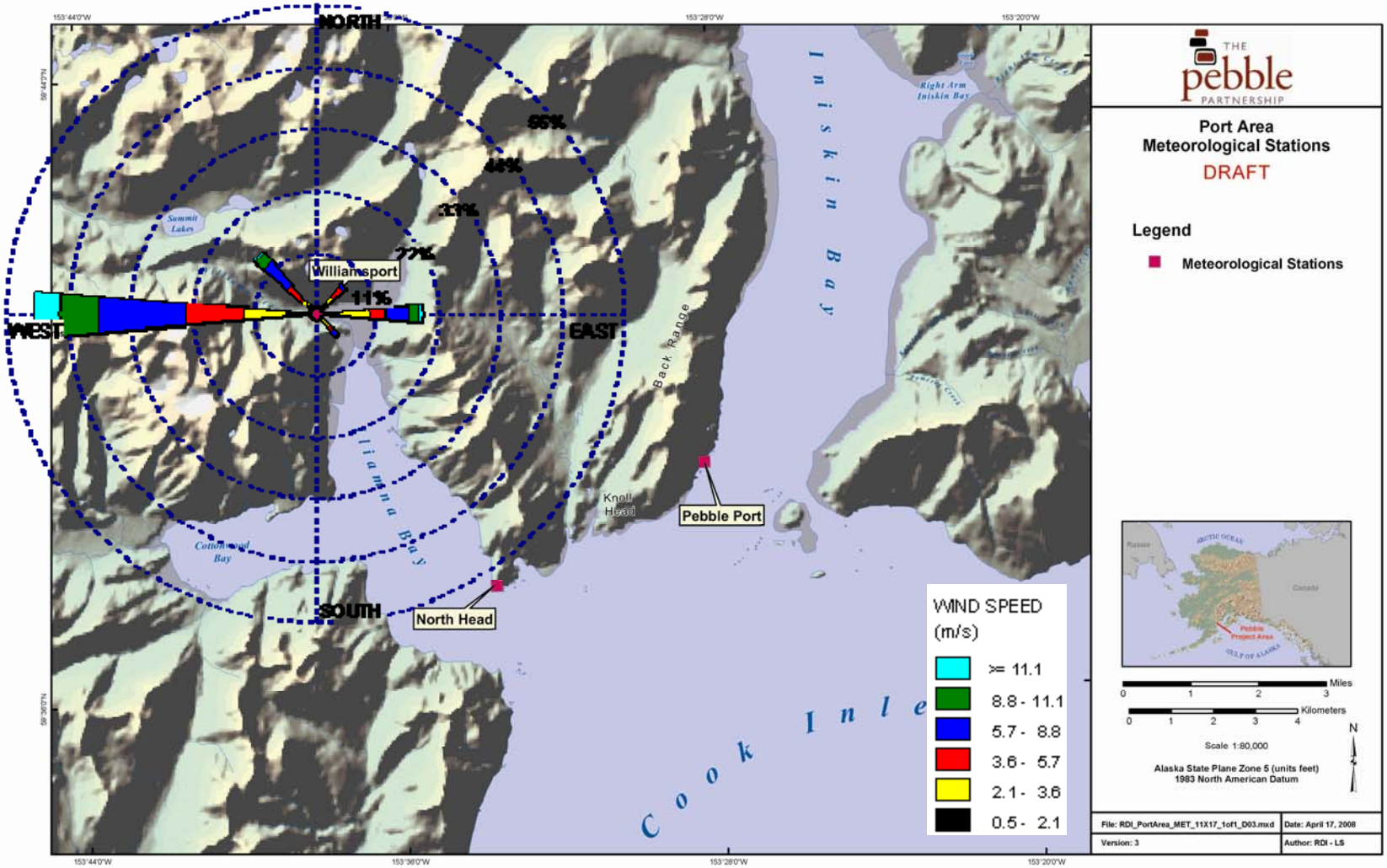
Station ID: Pebble Williamsport (RM Young) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.28%
NE	1.11%	0.14%	0.28%	0.00%	0.00%	0.00%	1.53%
E	3.75%	2.36%	2.64%	4.72%	2.92%	1.39%	17.78%
SE	0.69%	1.67%	1.11%	0.97%	0.00%	0.00%	4.44%
S	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%
SW	0.14%	0.42%	0.00%	0.00%	0.00%	0.00%	0.56%
W	12.64%	13.19%	13.89%	24.17%	0.69%	0.00%	64.58%
NW	3.61%	1.81%	2.08%	2.36%	0.14%	0.00%	10.00%
Sub-Total:	22.36%	19.58%	20.00%	32.22%	3.75%	1.39%	99.31%
Calms (<0.5m/s):							0.08%
Total:							100.00%

Figure 3-4. 2008 Wind Rose Superimposed on Site Map



3.2.2 Temperature Climatology

Tables 3-13 and 3-14 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The 2008 annual mean temperature was 1.8°C at the 2-meter height. This annual mean temperature is slightly lower in comparison to the annual mean temperature of 2.5°C observed at the Seldovia meteorological station from January 1, 2008 through December 31, 2008. Hourly average temperatures at the Pebble Williamsport station varied from a maximum of 22.2°C on July 29, 2008 to a minimum of -26.2°C on January 12, 2008.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months. Figure 3-5 also includes a plot of average daily temperatures recorded at the meteorological monitoring station in Seldovia, Alaska. Both the Pebble Williamsport station and the Seldovia meteorological monitoring station are located in the Cook Inlet maritime climate zone.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 5.1°C measured on February 8, 2008. The greatest negative temperature difference was -1.4°C measured on June 17, 2008.

Table 3-13. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Maximum Temperature (°C)	Minimum Temperature (°C)
January 2008	3.2	-25.2	-9.5	5.0	-26.2
February 2008	4.5	-21.7	-7.1	6.1	-23.5
March 2008	4.0	-15.1	-3.0	5.6	-16.9
Quarter A	**4.5**	**-25.2**	**-6.5**	**6.1**	**-26.2**
April 2008	6.1	-7.9	-0.4	9.9	-11.6
May 2008	11.5	1.0	6.7	15.1	-0.5
June 2008	11.9	6.9	9.2	15.7	3.4
Quarter B	**11.9**	**-7.9**	**5.2**	**15.7**	**-11.6**
July 2008	17.5	9.1	11.6	22.2	3.3
August 2008	17.4	10.9	12.3	19.9	4.3
September 2008	12.2	6.2	9.2	14.8	2.7
Quarter C	**17.5**	**6.2**	**11.0**	**22.2**	**2.7**
October 2008	7.8	-7.8	0.1	9.2	-12.3
November 2008	3.7	-15.3	-4.2	6.6	-16.1
December 2008	4.9	-15.9	-3.4	6.8	-22.5
Quarter D	**7.8**	**-15.9**	**-2.5**	**9.2**	**-22.5**
Monitoring Year	**17.5**	**-25.2**	**1.8**	**22.2**	**-26.2**

Table 3-14. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Maximum Temperature (°C)	Minimum Temperature (°C)
January 2008	3.4	-25.2	-9.5	5.2	-26.3
February 2008	4.9	-21.7	-6.8	6.5	-23.5
March 2008	4.1	-15.3	-3.0	5.8	-16.9
Quarter A	**4.9**	**-25.2**	**-6.4**	**6.5**	**-26.3**
April 2008	6.2	-8.2	-0.5	9.4	-11.8
May 2008	11.3	0.7	6.6	14.4	0.7
June 2008	12.2	6.6	9.2	14.9	4.2
Quarter B	**12.2**	**-8.2**	**5.1**	**14.9**	**-11.8**
July 2008	17.5	9.0	11.6	22.0	4.8
August 2008	17.4	11.1	12.3	19.6	6.4
September 2008	12.6	6.5	9.4	14.3	4.0
Quarter C	**17.5**	**6.5**	**11.1**	**22.0**	**4.0**
October 2008	8.1	-6.9	0.4	9.2	-9.3
November 2008	4.1	-15.4	-4.0	6.9	-16.1
December 2008	5.4	-15.9	-3.1	7.5	-22.5
Quarter D	**8.1**	**-15.9**	**-2.2**	**9.2**	**-22.5**
Monitoring Year	**17.5**	**-25.2**	**1.9**	**22.0**	**-26.3**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

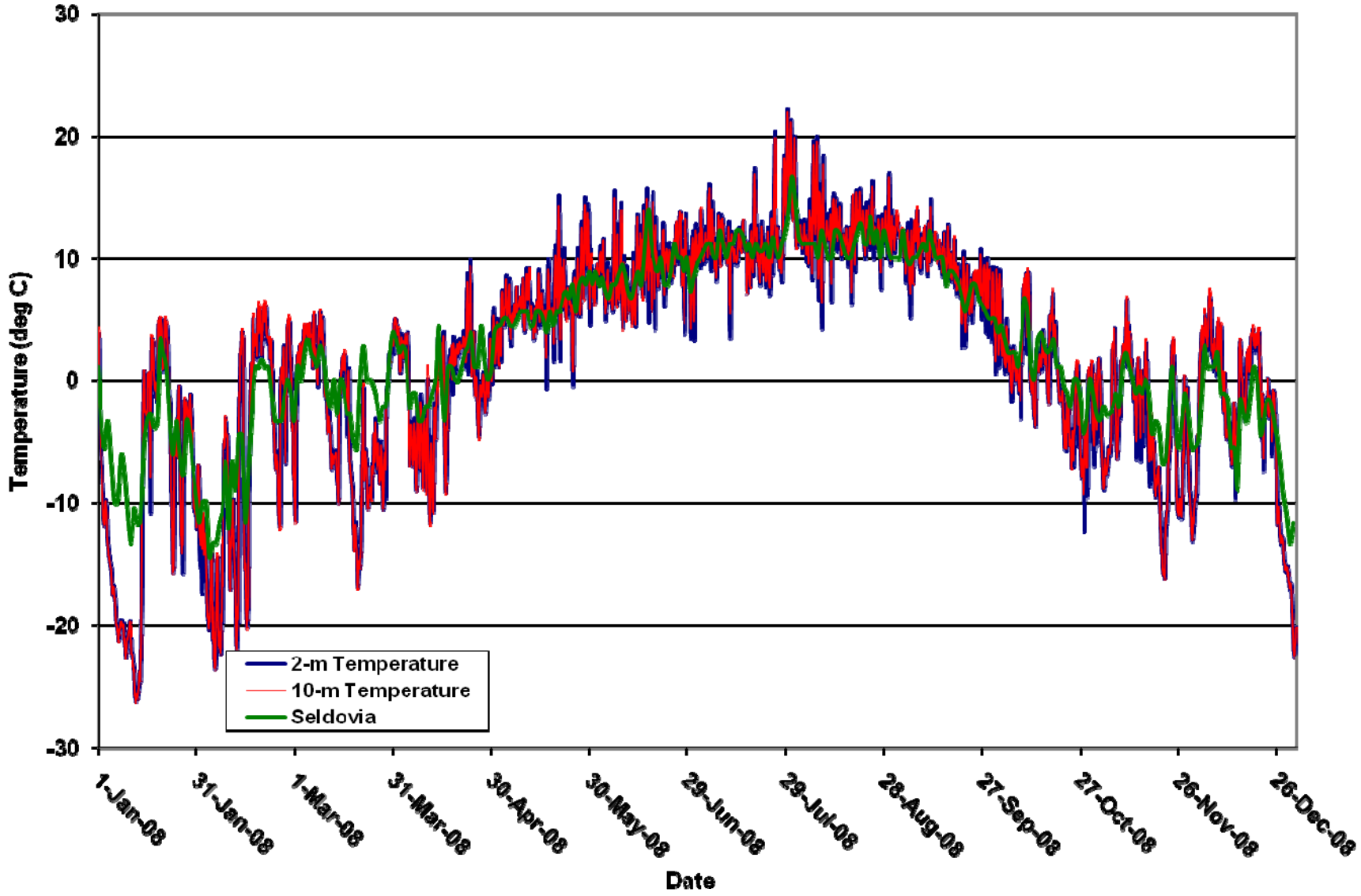
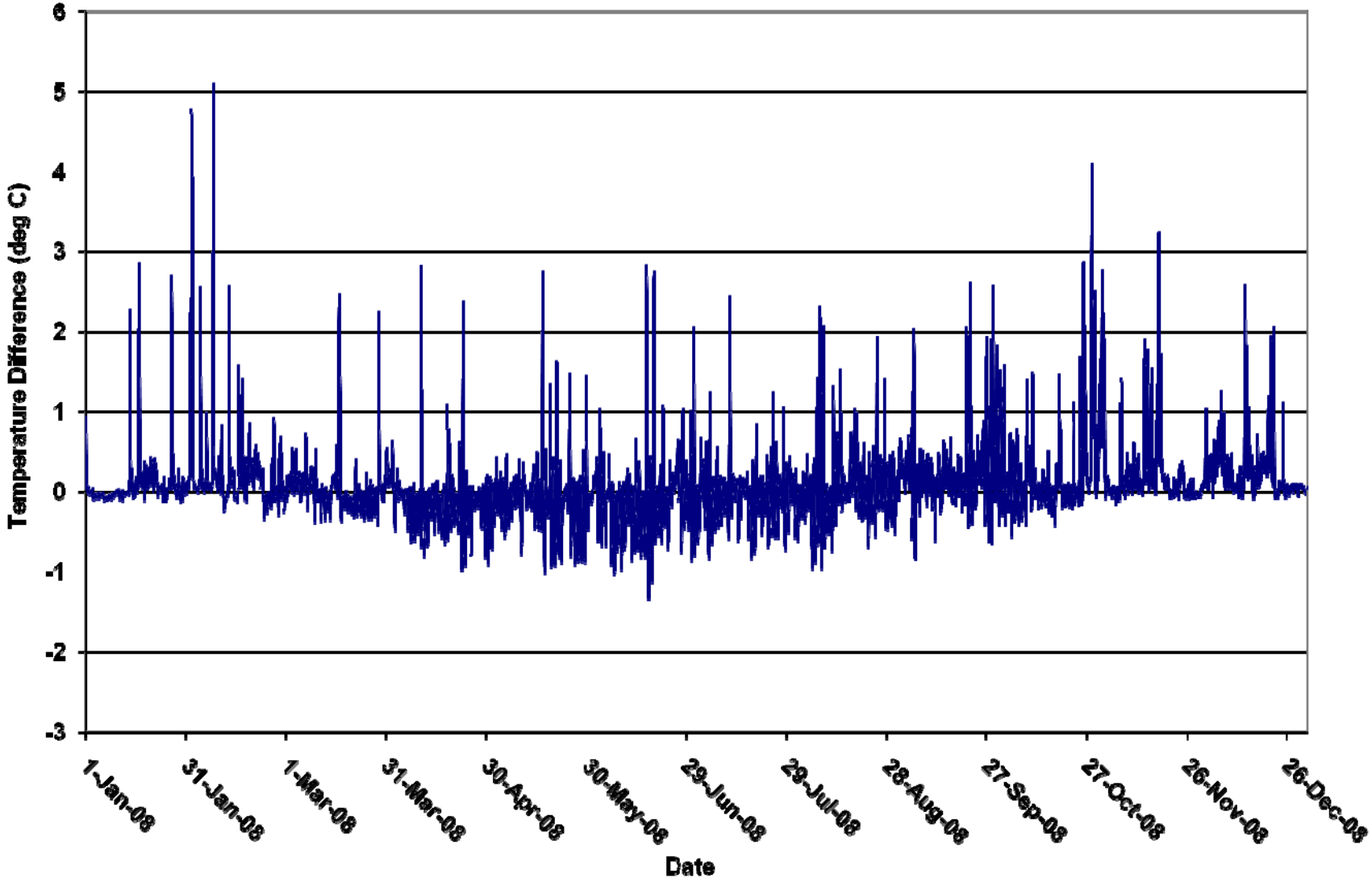


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble Williamsport station include relative humidity, barometric pressure, and solar radiation.

Table 3-15 provides a summary of the relative humidity, barometric pressure, and solar radiation at the Pebble Williamsport station during the 2008 monitoring year.

Figure 3-7 is a plot of the annual hourly average relative humidity. The lowest relative humidity value measured at the Pebble Williamsport site was 25.9 percent on January 17, 2008. The mean relative humidity during the monitoring year was 74.8 percent. The mean relative humidity at the Seldovia meteorological station for the monitoring period was 81 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 968 mb on February 19, 2008, to a maximum of 1,042 mb observed on December 13, 2008. The mean barometric pressure during the monitoring year was 1,008 mb. The mean barometric pressure at the Seldovia meteorological station for the monitoring period was 1,007 mb.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 925 W/m^2 recorded on June 9, 2008 at 2:00 pm. The mean hourly average solar radiation for the monitoring year was 87 W/m^2.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Table 3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary

Period	Mean Relative Humidity (%)	Minimum Relative Humidity (%)	Maximum Relative Humidity (%)	Mean Barometric Pressure (mb)	Minimum Barometric Pressure (mb)	Maximum Barometric Pressure (mb)	Mean Solar Radiation (W/m^2)	Maximum Solar Radiation (W/m^2)
January 2008	73.3	25.9	99.8	1,005	979	1,034	9.5	134.1
February 2008	67.7	26.1	95.3	1,000	968	1,018	23.4	329.5
March 2008	74.8	47.6	98.0	1,004	977	1,023	77.3	598.4
Quarter A	**72.0**	**25.9**	**99.8**	**1,003**	**968**	**1,034**	**37.0**	**598.4**
April 2008	68.9	34.5	97.0	1,014	995	1,040	176.4	745.2
May 2008	70.4	34.5	98.5	1,012	982	1,028	170.0	841.0
June 2008	76.8	28.2	98.7	1,014	996	1,026	194.6	925.0
Quarter B	**72.0**	**28.2**	**98.7**	**1,013**	**982**	**1,040**	**180.2**	**925.0**
July 2008	78.8	40.8	97.8	1,011	1000	1,023	156.9	885.0
August 2008	80.9	35.5	97.4	1,008	992	1,023	125.8	738.1
September 2008	80.3	47.5	98.6	1,008	989	1,024	55.8	669.7
Quarter C	**80.0**	**35.5**	**98.6**	**1,009**	**989**	**1,024**	**113.2**	**885.0**
October 2008	75.2	30.6	98.2	1,004	985	1,022	35.1	417.2
November 2008	76.9	47.4	97.7	1,001	975	1,025	11.0	127.8
December 2008	73.7	29.3	99.0	1,013	968	1,043	4.8	59.9
Quarter D	**75.2**	**29.3**	**99.0**	**1,006**	**968**	**1,043**	**17.0**	**417.2**
Monitoring Year	**74.8**	**25.9**	**99.8**	**1,008**	**968**	**1,043**	**86.7**	**925.0**

Figure 3-7. Hourly Average Relative Humidity

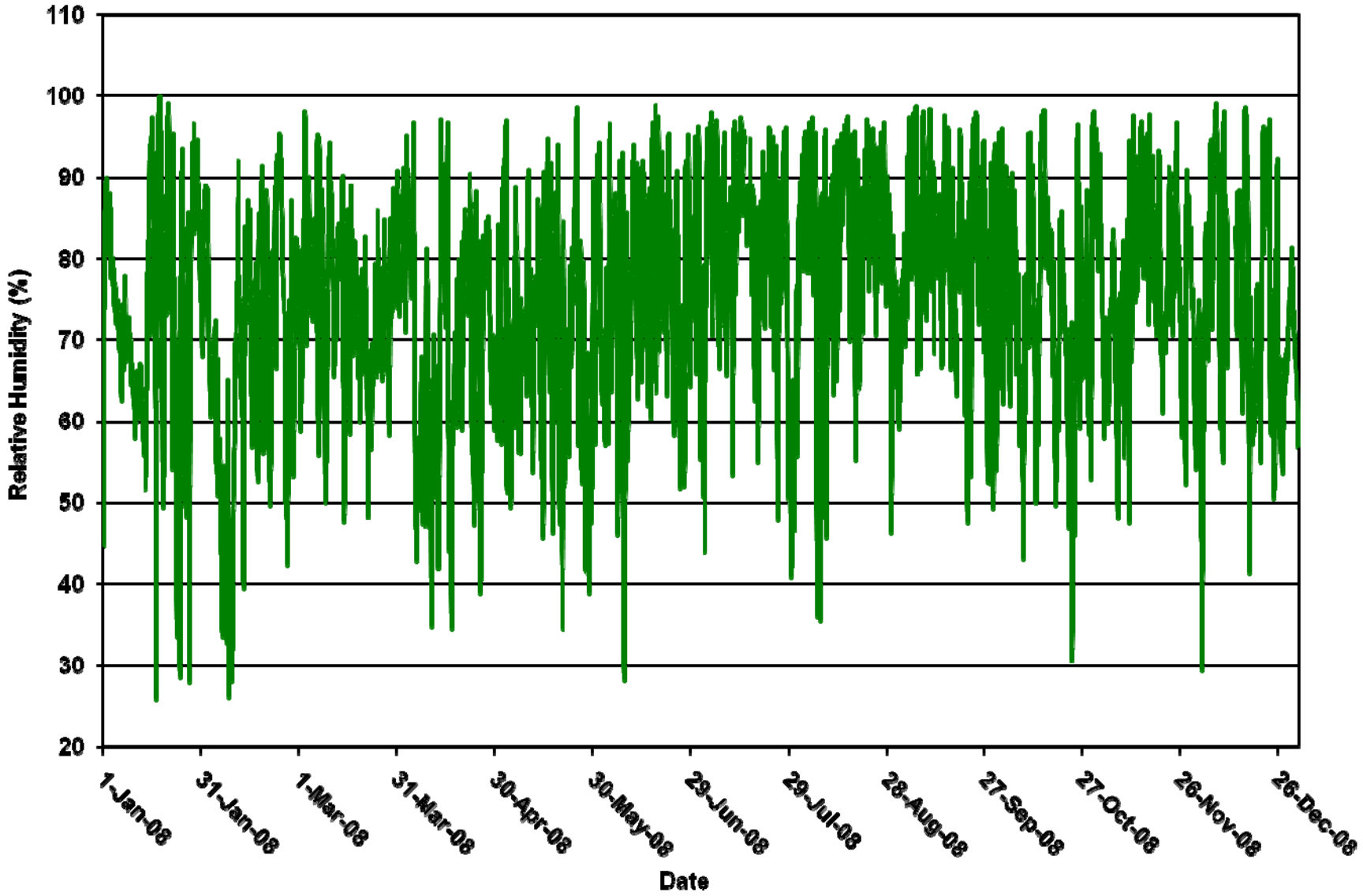


Figure 3-8. Hourly Average Barometric Pressure

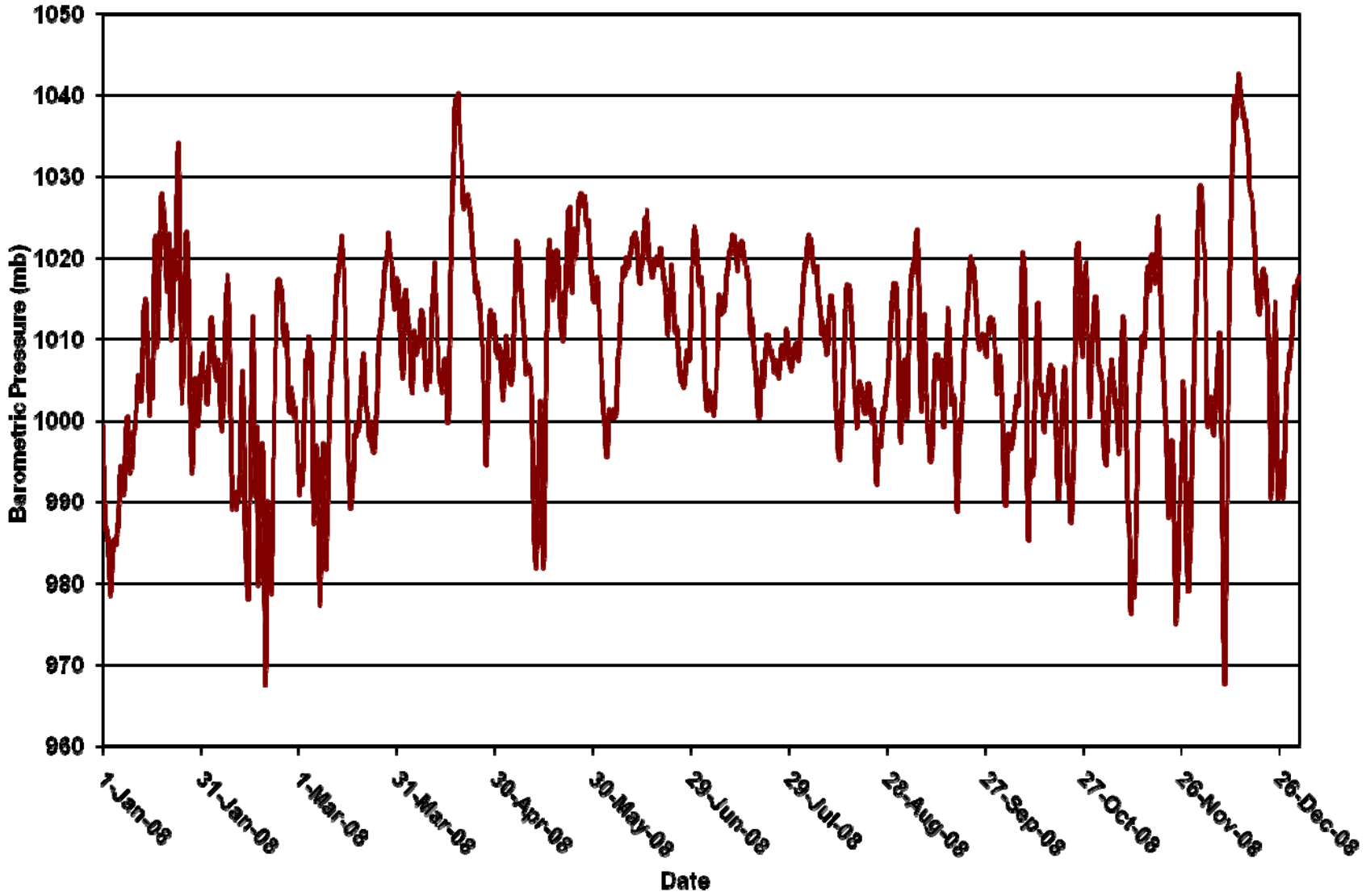
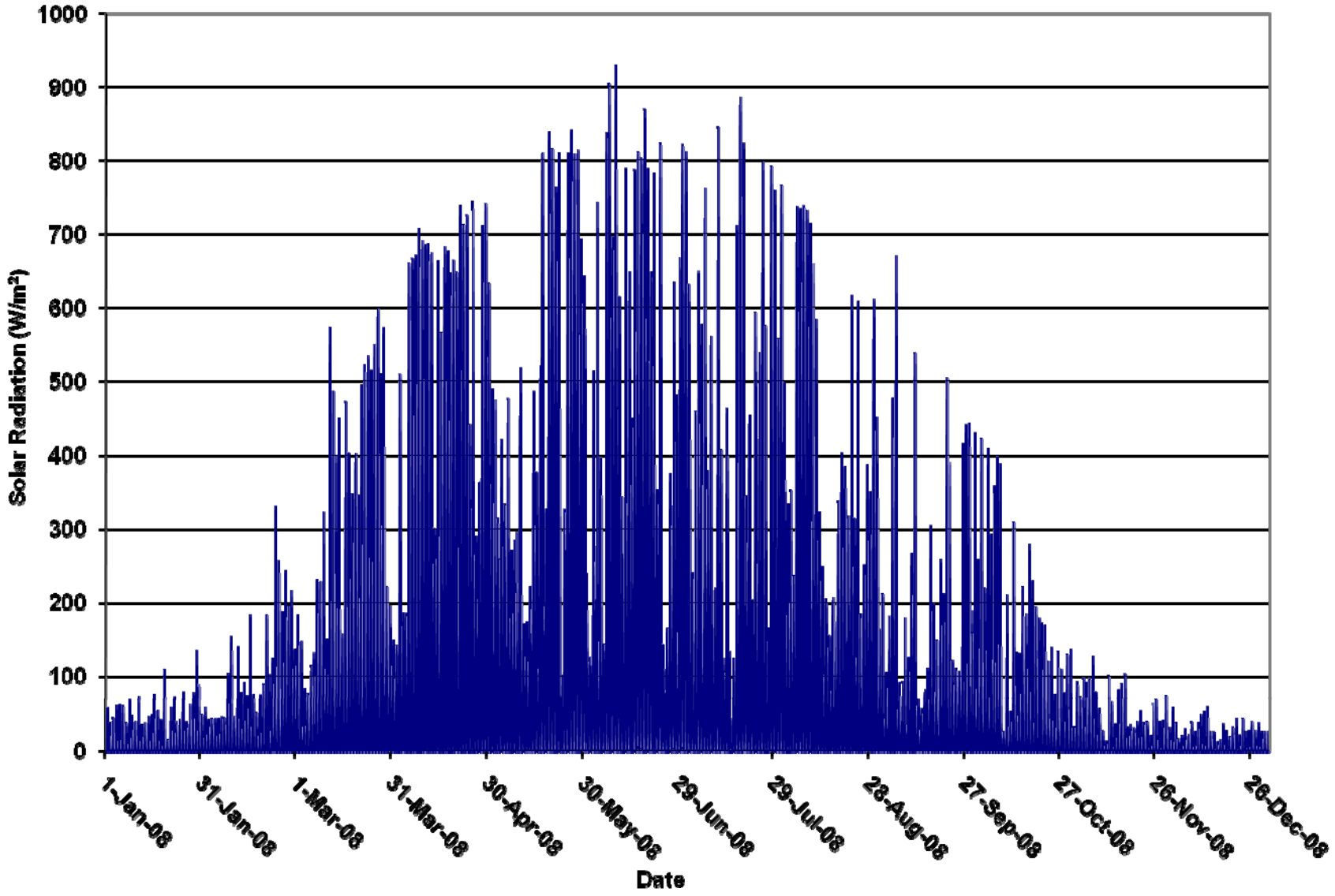


Figure 3-9. Hourly Average Solar Radiation



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Appendix A

Data Processing Specifications and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Table A-1. Station Performance Summary – Data Recovery 2008

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
February 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
April 2008	99.7%	99.7%	99.7%	99.6%	99.6%	99.6%	99.7%	99.7%	99.7%	100%	100%	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**100%**	**100%**	**100%**
July 2008	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
September 2008	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100%	100%	100%
Quarter C	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.2%**	**99.3%**	**99.3%**	**99.3%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
December 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Monitoring Year	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**

[1]CLM = Climatronics wind speed and wind direction sensor.

[2]RMY = R.M. Young wind speed and wind direction sensor.

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

CONTENTS

1. Pebble Williamsport Station August 2007 Quality Assurance Systems Audit and Performance Audit

2. Pebble Williamsport Station April 2008 Quality Assurance Performance Audit

3. Pebble Williamsport Station September 2008 Quality Assurance Systems Audit and Performance Audit

Pebble Williamsport PSD Meteorological Monitoring Station

August 2007

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble Williamsport
PSD Meteorological Monitoring Station
August 2007
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Williamsport Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Williamsport August 28, 2007 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Williamsport monitoring station located near a potential mine port site.

The Williamsport station is located at Williamsport, where Williams Creek drains into Iliamna Bay. The station is located on native fill graded flat for the Williamsport wharf. The Williamsport station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' west of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble Williamsport station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble Williamsport station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

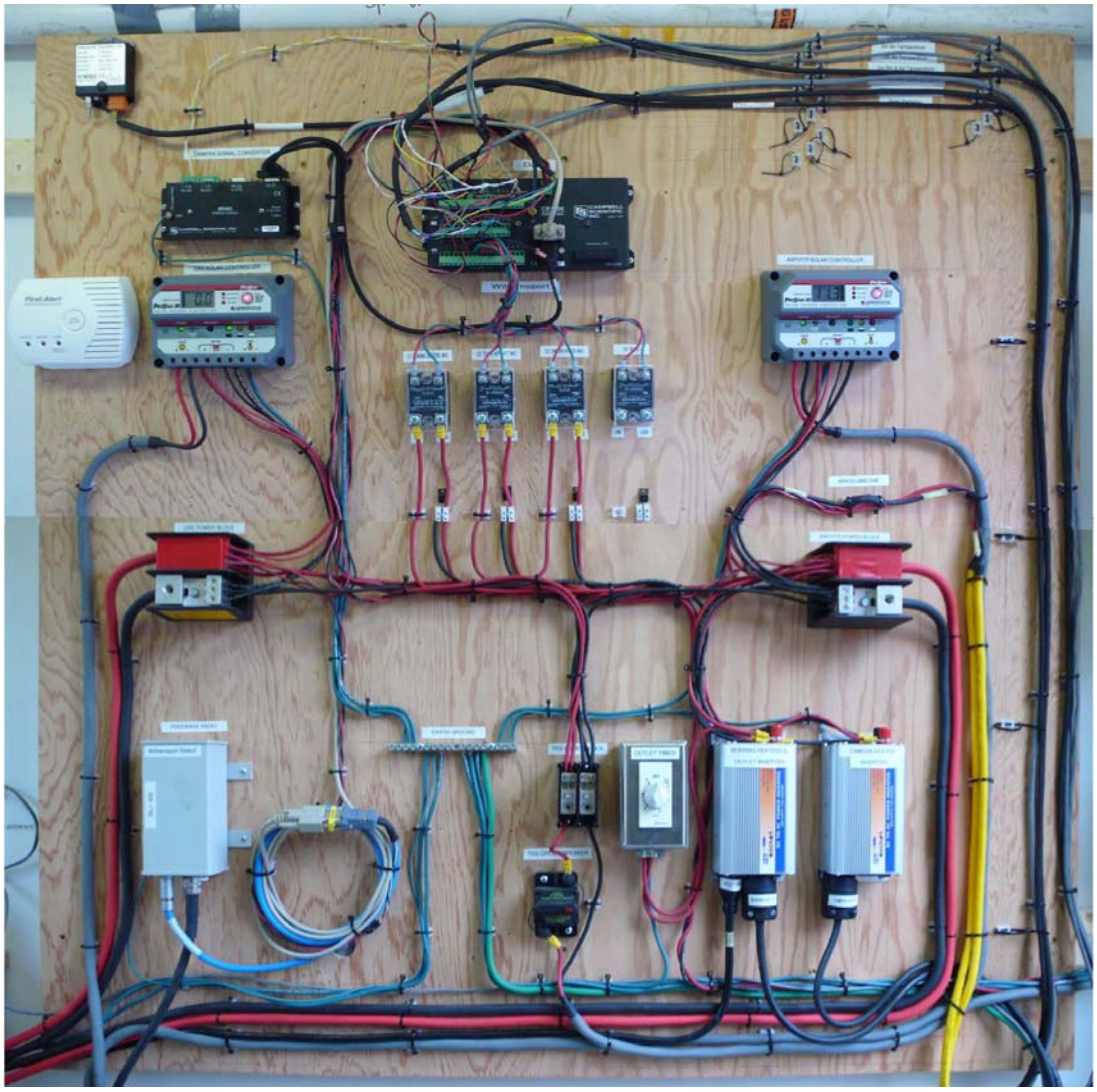
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the Williamsport station was conducted in late August 2007. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Williamsport meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4’ by 4’ plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Williamsport Station DAS Wiring Panel



The Campbell Scientific CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of three 70-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar

controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Two solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the solar power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program, although not updated to include Williamsport. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. The Pebble Williamsport station is representative of the generic Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and most meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the

sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Williamsport station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Williamsport station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Maintain complete equipment manuals for station in digital or paper form
- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audits were conducted at the Williamsport station on August 28, 2007, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and with the exception of the wind directions, yielded errors below PSD limits. Both the Climatronics and RM Young wind direction sensors were misaligned by approximately 180° during the July, 2007 installation. Additionally, the Climatronics vane was jarred during the crossarm dismount causing a linearity error. Both instruments were realigned and re-audited, passing all subsequent tests. Summary audit results are contained in Tables 3-2 and 3-3, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- Be aware of the fundamental Climatronics crossarm and the RM Young wiring box's relationship to north.

Table 3-2 Williamsport August 28, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:02	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.08	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.08	Pass
Air Temperature Difference	≤ ±0.1	°C	0.05	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	1.0	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	0.002	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	0.060	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	181.9	Fail[1]
Wind Direction Accuracy	≤ ±5	Degree	12.6	Fail[2]
Wind Direction Linearity	≤ 3	Degree	12.0	Fail[2]
Wind Direction Accuracy	≤ ±5	Degree	1.2	Pass[3]
Wind Direction Linearity	≤ 3	Degree	0.6	Pass[3]
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	3.2	Pass[3]
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.006	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	5.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	181.5	Fail[1]
Wind Direction Accuracy	≤ ±5	Degree	2.6	Pass
Wind Direction Linearity	≤ 3	Degree	1.6	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-4.8	Pass[3]
Barometric Pressure	≤ ±3	Mbar	1.4	Pass
Solar Radiation	≤ ±5+Res	% input	-7.0[2]	Pass

1. Crossarm/monitor misaligned by approximately 180° during initial installation.
2. Climatronics vane jarred during crossarm dismount, causing the linearity error.
3. Instruments realigned and re-audited.
4. Max % error value of 7.0 within limit of 5% input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

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"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Pebble Williamsport PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Williamsport station is locate on native fill near the Williamsport wharf, where Williams Creek drains into Iliamna Bay. The station is built on relatively flat ground with Alder trees nearby.

1.2 Site Location

1.2.1 Coordinates

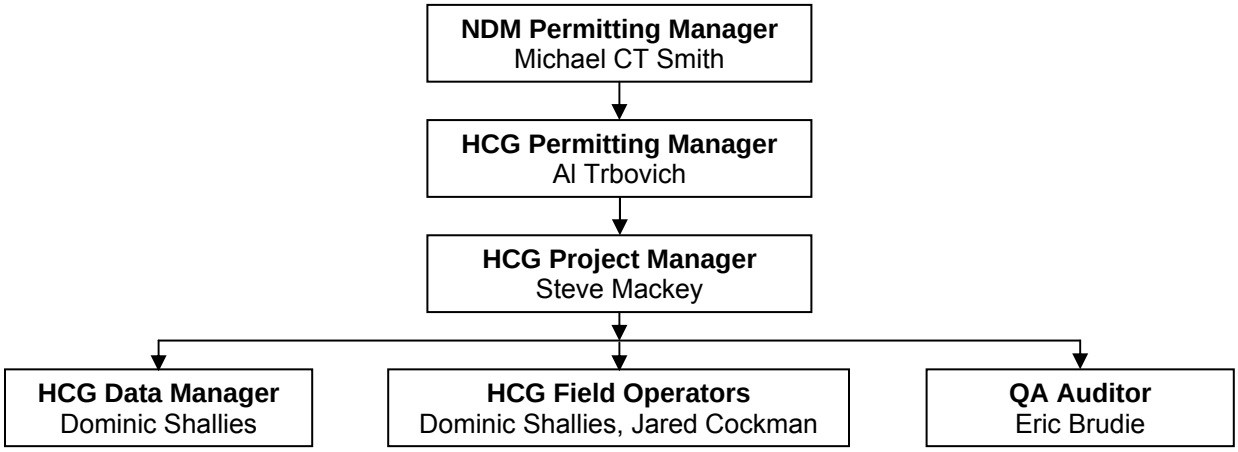
Indicated by Operator	Determined by Auditor
59° 41' N	59° 40.973' N
153° 38' W	153° 37.918' W
Elevation: 25 feet	Elevation: 25 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: Locked building at a very remote location.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR1000	8520
DAS Wiring Panel	Campbell Scientific	CR1000	8246
Temperature (2-meter)	Met One	062MP	G2670, ID #2/2
Temperature (10-meter)	Met One	062MP	G2670, ID #1/2
Relative Humidity	Vaisala	HMP45AC	C0620021
Temperature Aspirators	Met One	076B-4	G4716 & G4410
New Primary Wind Speed	Climatronics	F460-100075	5209
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2332
Primary Wind Direction	Climatronics	F460-100076	4877
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1484
Wind Sigma	Campbell Scientific	DAS Calculated	11725
Backup Wind Speed/Direction	RM Young	05305 Wind Mon-AQ	80509
Backup Wind Spd Prop	RM Young	08254	67643
Barometric Pressure	Vaisala	PTB101B	C0910005
Solar Radiation	LI-COR	Li-200SX	PY56189

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 70-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by two 70-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble Williamsport PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: Graded natural fill.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

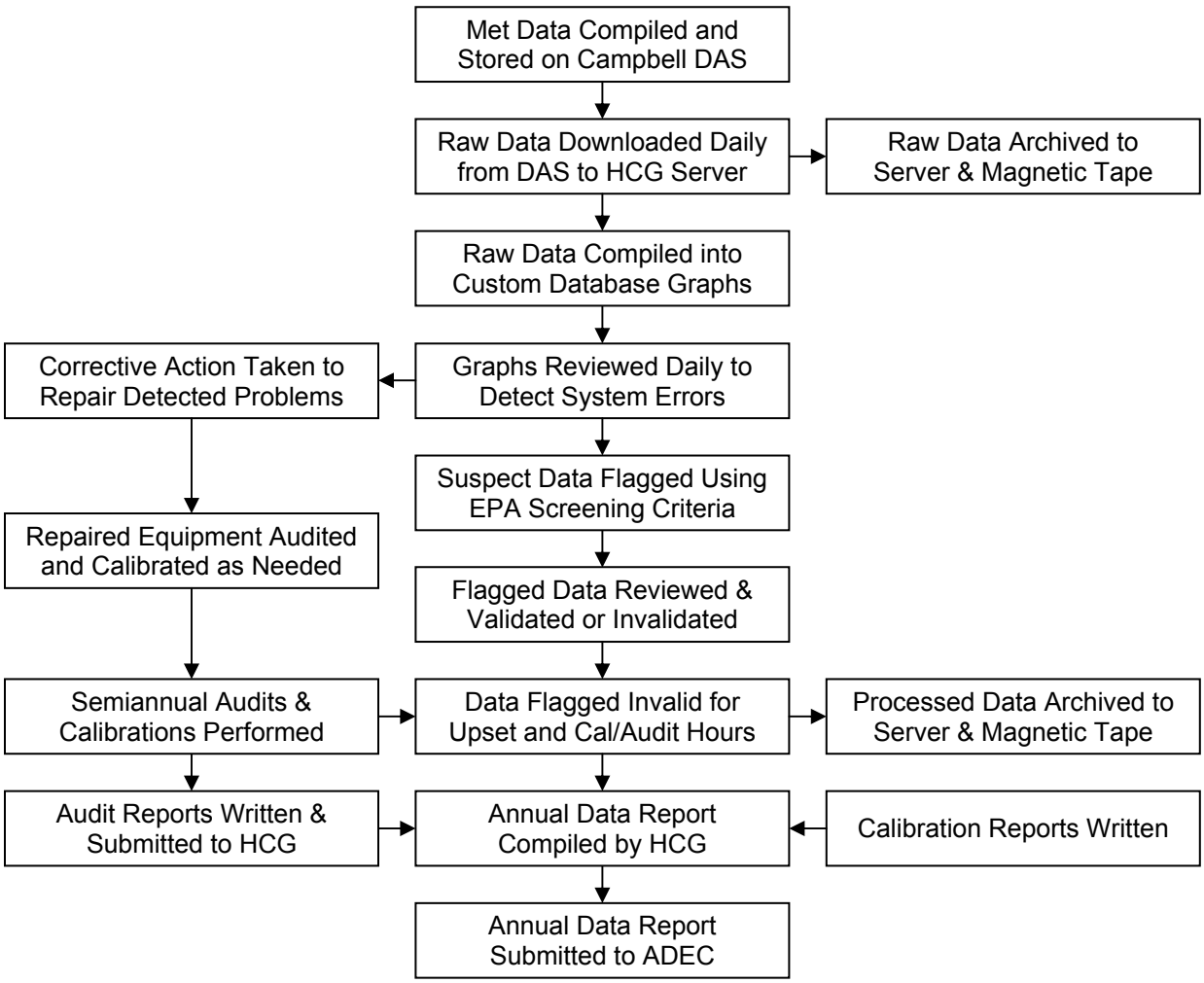
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Aug 28, 2007
Witnesses: Dominic Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing? ■ Yes □ No Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use? ■ Yes □ No Comments: None.

Are adjusted and unadjusted data sets maintained? ■ Yes □ No Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.
- Maintain all equipment manuals in the field or on the field computer.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 28, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
9:31:00	9:31:02	**0:00:02**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 1.9 **Meters** **Upper Height:** 9.8 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G2670 # 2/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G2670 # 1/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1120
End: 1200

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	38.90	38.96	0.06	Pass	38.96	0.06	Pass	0.00	Pass
Warm	15 to 25	23.48	23.50	0.02	Pass	23.50	0.02	Pass	0.00	Pass
Ice Bath	0	-0.06	0.02	0.08	Pass	0.02	0.08	Pass	0.00	Pass
Cold	-15 to -25	-19.78	-19.70	0.08	Pass	-19.70	0.08	Pass	0.00	Pass
Very Cold	-35 to -45	-42.05	-42.10	-0.05	Pass	-42.05	0.00	Pass	0.05	Pass
		Max Abs. Error		0.08	**PASS**		0.08	**PASS**	0.05	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 1.9 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45AC	**S.N.#:**	C0620021	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1050	60.7	15.2	8.0	66.5	15.2	9.0	1.0	Pass
1122	56.4	16.8	8.4	60.1	16.6	8.8	0.4	Pass
						Max Abs. Error	1.0	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 28, 2007

● *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (As-found)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5209	**Cup #:**	2332	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4877	**Vane #:**	1484	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0 **E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1540 End: 1542

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Peak 2935	251.4	70.1	181.3	Fail
Peak 2735	291.7	109.8	181.9	Fail
Saddle 1210	110.1	291.6	181.5	Fail
Peak 3830	80.6	258.4	177.8	Fail
Compass	7.5	187.6	180.1	Fail
Compass	174.0	354.4	180.4	Fail
			Max Abs. Error	**FAIL**
			Mean Abs. Error	**ALERT**

Time: Begin: 930 End: 1100

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	168.9	-11.1	Fail
West	270.0	258.7	-11.3	Fail
North	360.0	349.3	-10.7	Fail
East	90.0	79.0	-11.0	Fail
North	360.0	348.7	-11.3	Fail
West	270.0	259.7	-10.3	Fail
South	180.0	168.9	-11.1	Fail
East	90.0	79.1	-10.9	Fail
	Max Abs. Error		**11.3**	**FAIL**
	Mean Abs. Error		**11.0**	**FAIL**

Time: Begin: 1510 End: 1520

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	17.6	-12.4	Fail	330.0	318.8	-11.2	Fail
60.0	47.8	-12.2	Fail	360.0	348.9	-11.1	Fail
90.0	77.8	-12.2	Fail	30.0	17.6	-12.4	Fail
120.0	108.3	-11.7	Fail	60.0	47.8	-12.2	Fail
150.0	138.4	-11.6	Fail	90.0	77.9	-12.1	Fail
180.0	168.2	-11.8	Fail	120.0	108.3	-11.7	Fail
210.0	197.9	-12.1	Fail	150.0	138.4	-11.6	Fail
240.0	227.5	-12.5	Fail	180.0	168.1	-11.9	Fail
270.0	257.4	-12.6	Fail	**Max Abs. Error**		**12.6**	**FAIL**
300.0	287.8	-12.2	Fail	**Mean Abs. Error**		**12.0**	**FAIL**

Time: Begin: 1520 End: 1525

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	0.002	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.060	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Tested after re-alignment.				
			Max Abs. Error	
			Mean Abs. Error	

Time: Begin: N/A End: N/A

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Crossarm misaligned by ~180° during initial installation, based upon in-situ azimuth test and the wind vane was also jarred during removal causing the -12° error. The vane was re-aligned to the crossarm and the crossarm to north and the instrument re-audited.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 28, 2007

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (As-left)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5209	**Cup #:**	2332	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4877	**Vane #:**	1484	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22			N/A	
100	2.57			N/A	
200	4.92			N/A	
400	9.62		N/A		
1000	23.72		N/A		
2000	47.22		N/A		
	Max Abs. Error				

Time: Begin: N/A End: N/A

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Tested after re-alignment.				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	180.6	0.6	Pass
West	270.0	271.4	1.4	Pass
North	360.0	0.7	0.7	Pass
East	90.0	90.3	0.3	Pass
North	360.0	1.0	1.0	Pass
West	270.0	271.1	1.1	Pass
South	180.0	180.5	0.5	Pass
East	90.0	90.6	0.6	Pass
	Max Abs. Error		**1.4**	**PASS**
	Mean Abs. Error		**0.8**	**PASS**

Time: Begin: 1510 End: 1520

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.2	0.2	Pass	330.0	331.1	1.1	Pass
60.0	59.6	-0.4	Pass	355.0	356.2	1.2	Pass
90.0	90.3	0.3	Pass	30.0	30.0	0.0	Pass
120.0	121.2	1.2	Pass	60.0	59.8	-0.2	Pass
150.0	150.2	0.2	Pass	90.0	90.1	0.1	Pass
180.0	180.5	0.5	Pass	120.0	120.7	0.7	Pass
210.0	210.7	0.7	Pass	150.0	150.4	0.4	Pass
240.0	240.5	0.5	Pass	180.0	180.5	0.5	Pass
270.0	270.9	0.9	Pass	**Max Abs. Error**		**1.2**	**PASS**
300.0	301.1	1.1	Pass	**Mean Abs. Error**		**0.6**	**PASS**

Time: Begin: 1520 End: 1525

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	0.002	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	0.060	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	110.3	0.2	Pass
Peak 3830	80.6	79.1	-1.5	Pass
Peak 2735	291.7	288.5	-3.2	Pass
Peak 2935	251.4	249.2	-2.2	Pass
Compass	15.5	12.8	-2.7	Pass
Compass	168.5	167.5	-1.0	Pass
Time: Begin: 1630	**Max Abs. Error**		**3.2**	**PASS**
End: 1650	**Mean Abs. Error**		**1.8**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Linearity and azimuth tested after vane realingned and crossarm error corrected.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 28, 2007

● *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.6 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 80509	**Prop #:** 67643	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.0	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1152 End: 1155

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Peak 2935	251.4	71.0	180.4	Fail
Peak 2735	291.7	110.2	181.5	Fail
Saddle 1210	110.1	291.0	180.9	Fail
Peak 3830	80.6	259.8	179.2	Fail
Compass	7.5	187.5	180.0	Fail
Compass	174.0	354.4	180.4	Fail
Time: Begin: 930		**Max Abs. Error**	**181.5**	**FAIL**
End: 1100		**Mean Abs. Error**	**180.4**	**ALERT**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.2	0.2	Pass	150.0	148.3	-1.7	Pass	270.0	268.0	-2.0	Pass
60.0	59.6	-0.4	Pass	180.0	178.1	-1.9	Pass	300.0	297.4	-2.6	Pass
90.0	89.2	-0.8	Pass	210.0	208.1	-1.9	Pass	330.0	327.5	-2.5	Pass
120.0	118.6	-1.4	Pass	240.0	238.1	-1.9	Pass	355.0	352.6	-2.4	Pass
				Time: Begin: 1120				**Max Abs. Error**		**2.6**	**PASS**
				End: 1125				**Mean Abs. Error**		**1.6**	**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.006	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	5.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	110.7	0.6	Pass
Peak 3830	80.6	80.8	0.2	Pass
Peak 2735	291.7	286.9	-4.8	Pass
Peak 2935	251.4	247.5	-3.9	Pass
Compass	15.5	15.6	0.1	Pass
Compass	168.5	167.5	-1.0	Pass
Time: Begin: 1630		**Max Abs. Error**	**4.8**	**PASS**
End: 1650		**Mean Abs. Error**	**1.8**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Direction sensor misaligned by ~180° during initial installation, based upon in-situ azimuth test. Error corrected and azimuth re-tested.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Aug 28, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C1020007 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1230	30.04	29.95	1014.19	1015.60	1.4	Pass
1650	29.99	29.90	1012.49	1013.10	0.6	Pass
			Max Abs. Error		1.4	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

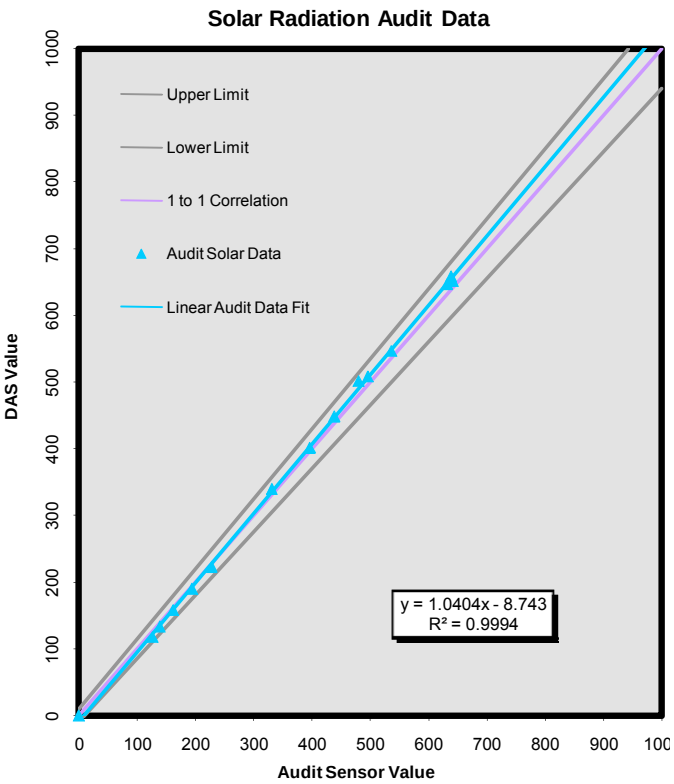
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

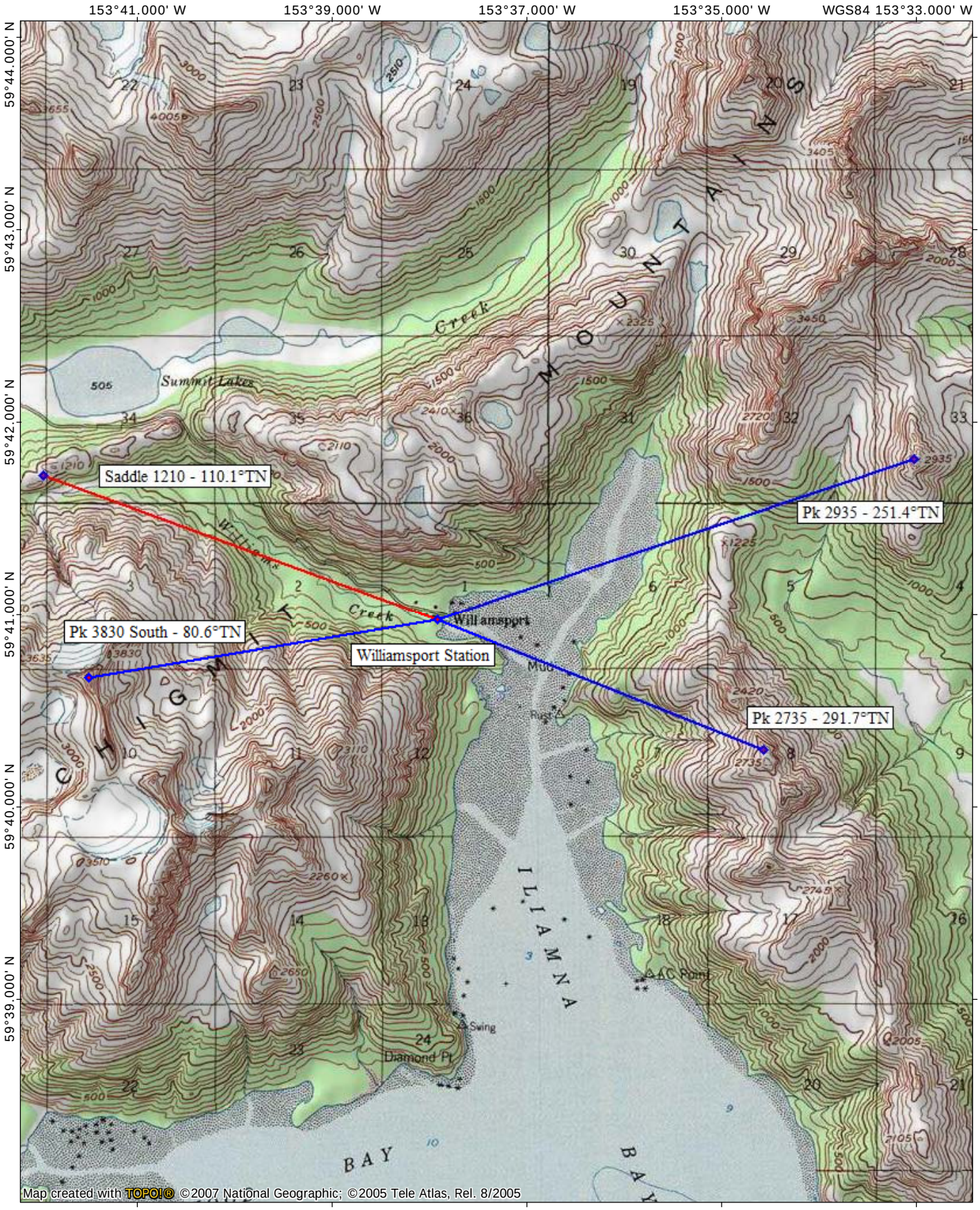
Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56188 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
914	138.9	133.3	-5.6	±16.9	-4.0%	Pass
1020	161.6	157.8	-3.8	±18.1	-2.4%	Pass
1042	227.7	222.8	-4.9	±21.4	-2.2%	Pass
1153	479.4	501.2	21.8	±34.0	4.5%	Pass
1155	637.8	658.3	20.5	±41.9	3.2%	Pass
1243	631.0	646.7	15.7	±41.6	2.5%	Pass
1338	640.9	650.9	10.0	±42.0	1.6%	Pass
1557	495.6	508.1	12.5	±34.8	2.5%	Pass
1720	330.7	339.4	8.7	±26.5	2.6%	Pass
1725	0.0	0.0	0.0	±10.0	n/a	Pass
1000	126.4	117.5	-8.9	±16.3	-7.0%	Pass
1100	194.2	189.8	-4.4	±19.7	-2.3%	Pass
1200	395.9	401.2	5.3	±29.8	1.3%	Pass
1600	535.5	546.5	11.0	±36.8	2.1%	Pass
1700	437.8	448.3	10.5	±31.9	2.4%	Pass
Corr. Val	**0.9997**	**Max Abs. Percent Error**			**7.0%**	**PASS**
R² Value	**0.9994**	**Intercept**	**-8.7**	**Slope**	**1.0404**	**PASS**



Begin Date: 08/28/07 **End Date:** 08/28/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: 1300 to 1500 hour logged data lost due to program change.


TOPO! map printed on 10/17/07 from "Williamsport_Station.tpo"
153°41.000' W
153°39.000' W
153°37.000' W
153°35.000' W
WGS84 153°33.000' W
59°44.000' N
59°43.000' N
59°42.000' N
59°41.000' N
59°40.000' N
59°39.000' N
Saddle 1210 - 110.1°TN
Pk 2935 - 251.4°TN
Pk 3830 South - 80.6°TN
Williamsport Station
Pk 2735 - 291.7°TN
Summit Lakes
Creek
Williamsport
Mud
Diamond Pt
AC Point
Swing
ILIAMNA
BAY
MOUNTAIN
CHIGMIT
Map created with TOPO!® ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0.0 0.5 1.0 1.5 miles
0.0 0.5 1.0 1.5 2.0 2.5 km
TN MN
18°
10/17/07

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

Black unit

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

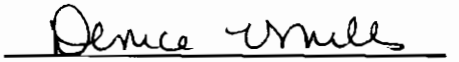
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

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STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Pebble Williamsport Station
April 2008
Quality Assurance Performance Audit

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

Pebble Williamsport
PSD Meteorological Monitoring Station
April 2008
Quality Assurance Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

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TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Relative Humidity 3
2.1.4 Wind Speed 4
2.1.5 Wind Direction 4
2.1.6 Barometric Pressure 6
2.1.7 Solar Radiation 6

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 8

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 Williamsport April 10, 2008 Performance Audit Summary 7

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for The Pebble Limited Partnership, care of Pebble Mines Corporation (PMC); in support of the Pebble Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Williamsport monitoring station located near a potential project port site.

The Williamsport station is located at Williamsport, where Williams Creek drains into Iliamna Bay. The station is located on native fill graded flat for the Williamsport wharf. The Williamsport station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' west of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble Williamsport station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for PMC to serve as a quantitative review of the Pebble Williamsport station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit; instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the Williamsport station on April 10, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and all sensors yielded errors below the PSD limits. The time on the DAS was one hour fast due to being reset to Daylight Saving Time on March 26, 2008. The data set was shifted one hour forward of Alaska Standard Time by the HCG polling computer, but should be recoverable by adjusting the data timestamp. Table 2-2 contains summary data from the field audit and complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- Manually adjust DAS clocks and ensure that the reference computer is always set to Alaska Standard Time.

Table 2-2 Williamsport April 10, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:02	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.16	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.16	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.5	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	3.5	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-2.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.0	Pass
Wind Direction Linearity	≤ 3	Degree	0.4	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.5	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	gm-cm	0.6	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	9.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-4.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.9	Pass
Wind Direction Linearity	≤ 3	Degree	0.9	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	-2.7	Pass
Barometric Pressure	≤ ±3	Mbar	2.0	Pass
Solar Radiation	≤ ±5+Res	% input	-8.3	Pass[2]

1. DAS time set one hour forward to Alaska Standard Time.
2. Max % error value of 8.3 within limit of 5% input + resolution, see audit.

3.0 REFERENCES

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APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 10, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Data polling server reset DAS clock ahead one hour to Daylight Saving Time on 3/26/08, need to adjust data set. DAS SN# 8520, Wire Panel SN# 8246.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
9:09:00	10:09:02	**1:00:02**	**FAIL**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 1.9 **Meters** **Upper Height:** 9.8 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G2670 # 2/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G2670 # 1/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1355
End: 1435

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	43.07	43.23	0.16	Pass	43.23	0.16	Pass	0.00	Pass
Warm	15 to 25	19.63	19.62	-0.01	Pass	19.62	-0.01	Pass	0.00	Pass
Ice Bath	0	0.08	0.13	0.05	Pass	0.13	0.05	Pass	0.00	Pass
Cold	-15 to -25	-19.06	-19.11	-0.05	Pass	-19.11	-0.05	Pass	0.00	Pass
Very Cold	-35 to -45	-36.13	-36.15	-0.02	Pass	-36.15	-0.02	Pass	0.00	Pass
		Max Abs. Error	0.16	**PASS**			0.16	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 1.9 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45AC	**S.N.#:**	C0620021	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1103	53.7	-7.3	-14.1	57.6	-7.3	-14.0	0.1	Pass
1228	49.5	-5.4	-13.4	53.2	-5.8	-13.8	-0.4	Pass
1324	47.4	-4.7	-13.2	51.8	-5.2	-13.7	-0.5	Pass
						Max Abs. Error	0.5	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 10, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5209	**Cup #:**	2332	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4877	**Vane #:**	1484	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.9	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.72	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1330 End: 1332

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	111.2	1.1	Pass
Peak 3110	38.6	37.5	-1.1	Pass
Peak 2745	304.1	303.9	-0.2	Pass
Peak 2935	251.4	249.1	-2.3	Pass
Compass - Brass Cap	15.0	15.0	0.0	Pass
Compass	190.0	188.3	-1.7	Pass
Time: Begin: 1130 End: 1200	**Max Abs. Error**		**2.3**	**PASS**
	Mean Abs. Error		**1.1**	**GOOD**

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	181.2	1.2	Pass
West	270.0	270.5	0.5	Pass
North	360.0	0.7	0.7	Pass
East	90.0	91.0	1.0	Pass
North	360.0	1.6	1.6	Pass
West	270.0	270.3	0.3	Pass
South	180.0	180.9	0.9	Pass
East	90.0	90.5	0.5	Pass
	Max Abs. Error		**1.6**	**PASS**
	Mean Abs. Error		**0.8**	**PASS**

Time: Begin: 1334 End: 1136

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.0	-1.0	Pass	330.0	330.0	0.0	Pass
60.0	59.5	-0.5	Pass	355.0	355.3	0.3	Pass
90.0	89.9	-0.1	Pass	30.0	29.4	-0.6	Pass
120.0	120.2	0.2	Pass	60.0	59.4	-0.6	Pass
150.0	149.6	-0.4	Pass	90.0	89.8	-0.2	Pass
180.0	179.8	-0.2	Pass	120.0	120.1	0.1	Pass
210.0	209.4	-0.6	Pass	150.0	149.7	-0.3	Pass
240.0	239.4	-0.6	Pass	180.0	179.9	-0.1	Pass
270.0	269.5	-0.5	Pass	**Max Abs. Error**		**1.0**	**PASS**
300.0	299.9	-0.1	Pass	**Mean Abs. Error**		**0.4**	**PASS**

Time: Begin: 1342 End: 1344

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	<0.2	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	3.5	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	111.7	1.6	Pass
Peak 3110	38.6	36.2	-2.4	Pass
Peak 2745	304.1	305.3	1.2	Pass
Peak 2935	251.4	248.9	-2.5	Pass
Compass	173.5	172.5	-1.0	Pass
Time: Begin: 1535 End: 1545	**Max Abs. Error**		**2.5**	**PASS**
	Mean Abs. Error		**1.7**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 10, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.6 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 80509	**Prop #:** 67643	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Honeywell 366-3m	**S.N.#:** 5103				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 17.9	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1220 End: 1223

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	111.6	1.5	Pass
Peak 3110	38.6	36.1	-2.5	Pass
Peak 2745	304.1	302.9	-1.2	Pass
Peak 2935	251.4	246.9	-4.5	Pass
Compass - Brass Cap	15.0	15.6	0.6	Pass
Compass	190.0	186.7	-3.3	Pass

Time: Begin: 1130 End: 1200 **Max Abs. Error** **4.5** **PASS** **Mean Abs. Error** **2.3** **GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.3	0.3	Pass	150.0	149.2	-0.8	Pass	270.0	269.2	-0.8	Pass
60.0	59.4	-0.6	Pass	180.0	179.7	-0.3	Pass	300.0	298.2	-1.8	Pass
90.0	89.5	-0.5	Pass	210.0	209.7	-0.3	Pass	330.0	328.1	-1.9	Pass
120.0	119.3	-0.7	Pass	240.0	239.4	-0.6	Pass	355.0	353.2	-1.8	Pass

Time: Begin: 1215 End: 1219 **Max Abs. Error** **1.9** **PASS** **Mean Abs. Error** **0.9** **PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	0.6	**PASS**
New	1.0	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	9.0	**PASS**
New	11.0	0.153	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	111.3	1.2	Pass
Peak 3110	38.6	39.7	1.1	Pass
Peak 2745	304.1	304.5	0.4	Pass
Peak 2935	251.4	248.7	-2.7	Pass
Compass	173.5	174.3	0.8	Pass

Time: Begin: 1535 End: 1545 **Max Abs. Error** **2.7** **PASS** **Mean Abs. Error** **1.2** **GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 10, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C1020007 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1005	29.90	29.81	1009.4	1011.39	2.0	Pass
1515	29.98	29.89	1012.2	1013.90	1.7	Pass
			Max Abs. Error		2.0	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

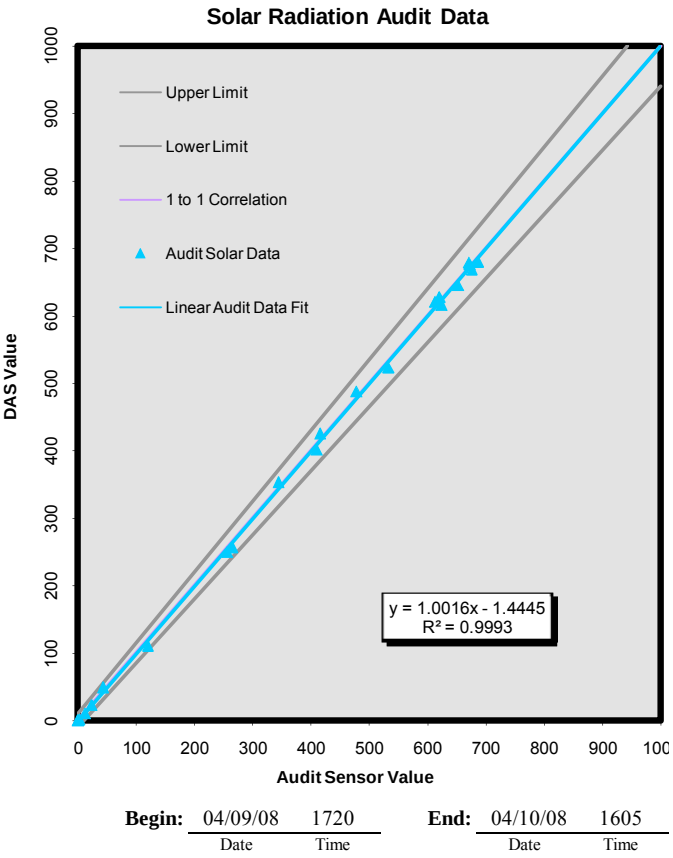
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56188 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

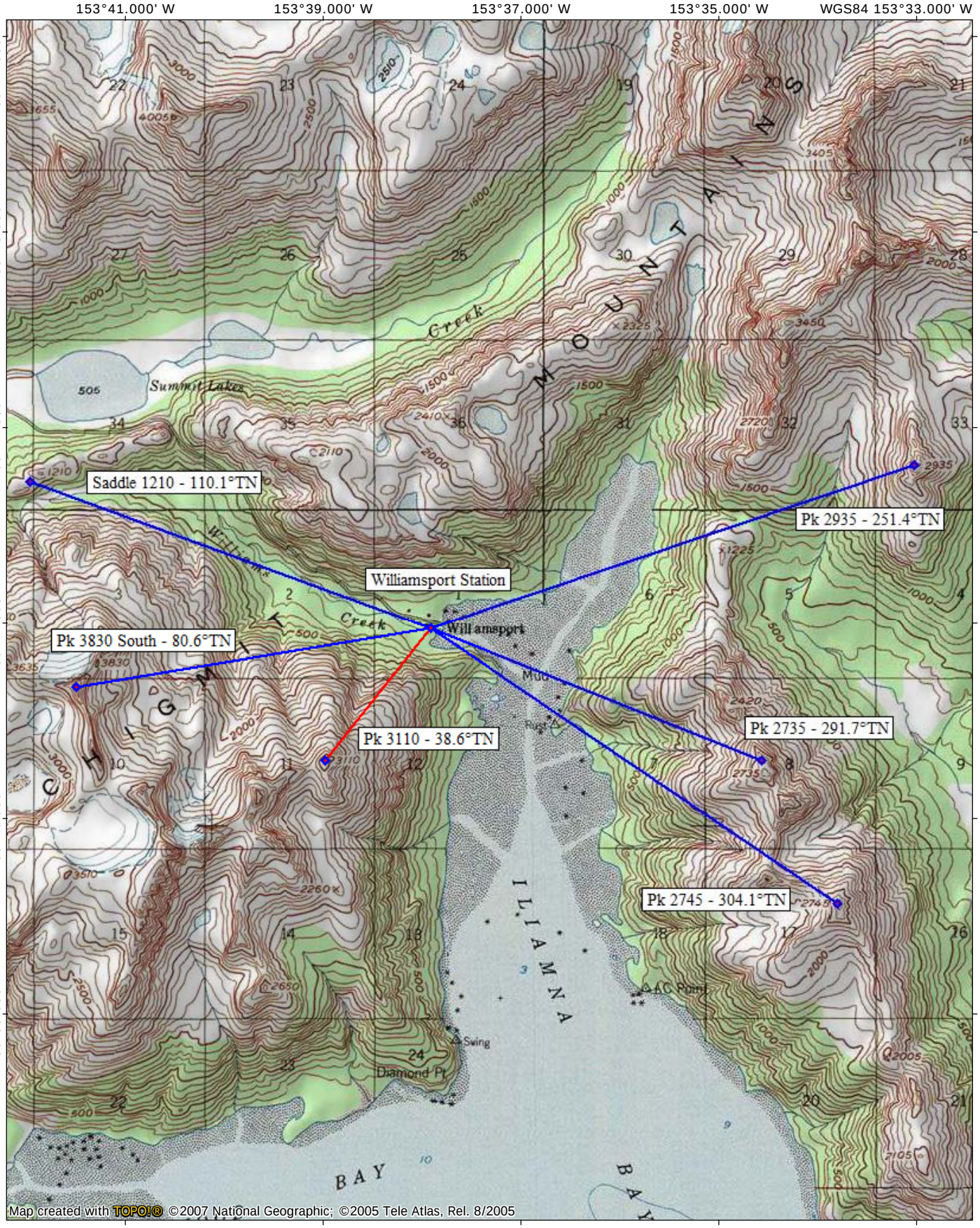
SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1004	344.5	352.8	8.3	±27.2	2.4%	Pass
1035	415.8	425.0	9.2	±30.8	2.2%	Pass
1106	477.5	487.3	9.8	±33.9	2.1%	Pass
1231	620.1	627.2	7.1	±41.0	1.1%	Pass
1336	671.8	675.7	3.9	±43.6	0.6%	Pass
1457	670.7	678.6	7.9	±43.5	1.2%	Pass
1603	612.6	620.3	7.7	±40.6	1.3%	Pass
1900	256.3	249.3	-7.0	±22.8	-2.7%	Pass
2000	43.3	48.8	5.6	±12.2	n/a	Pass
2100	23.4	22.3	-1.1	±11.2	n/a	Pass
2200	3.0	1.3	-1.7	±10.1	n/a	Pass
2300	0.0	0.0	0.0	±10.0	n/a	Pass
700	0.2	0.0	-0.2	±10.0	n/a	Pass
800	12.4	10.0	-2.4	±10.6	n/a	Pass
900	120.4	110.4	-10.0	±16.0	-8.3%	Pass
1000	265.0	256.3	-8.7	±23.3	-3.3%	Pass
1100	409.6	401.3	-8.3	±30.5	-2.0%	Pass
1200	532.3	522.9	-9.4	±36.6	-1.8%	Pass
1300	623.7	615.5	-8.2	±41.2	-1.3%	Pass
1400	675.6	668.3	-7.3	±43.8	-1.1%	Pass
1500	686.3	679.6	-6.7	±44.3	-1.0%	Pass
1600	652.0	645.0	-7.0	±42.6	-1.1%	Pass
Corr. Val	**0.9997**	**Max Abs. Percent Error**			**8.3%**	**PASS**
R² Value	**0.9993**	**Intercept**	**-1.4**	**Slope**	**1.0016**	**PASS**



Begin: 04/09/08 (Date) 1720 (Time) **End:** 04/10/08 (Date) 1605 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

TOPO! map printed on 04/20/08 from "Williamsport_Station.tpo"



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 miles
0.0 0.5 1.0 1.5 2.0 2.5 km

TN MN 18°
04/20/08

APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

Black unit

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 28 Nov 2007
Inspection Interval One Year

Tested By EJC

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150 Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Ester Gozon

Ester Gozon, Quality Manager

Printed: 10/12/2007

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Easter Gozon

Easter Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner Name: HOEFLER Consulting Group

Address: 340 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER:

MODEL NUMBER: 5008

SERIAL NUMBER: 5080199319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

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EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: K. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Pebble Williamsport Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

for the:

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corporation

prepared by:

Hoefler
CONSULTING GROUP

Pebble Williamsport
PSD Meteorological Monitoring Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 9
3.1.7 Solar Radiation 9

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble Williamsport Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 Williamsport September 15, 2008 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for Pebble Limited Partnership (PLP) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the Williamsport monitoring station located near a potential mine port site.

The Williamsport station is located at Williamsport, where Williams Creek drains into Iliamna Bay. The station is located on native fill graded flat for the Williamsport wharf. The Williamsport station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' west of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble Williamsport station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR1000 DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for PLP to serve as an official review of the Pebble Williamsport station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

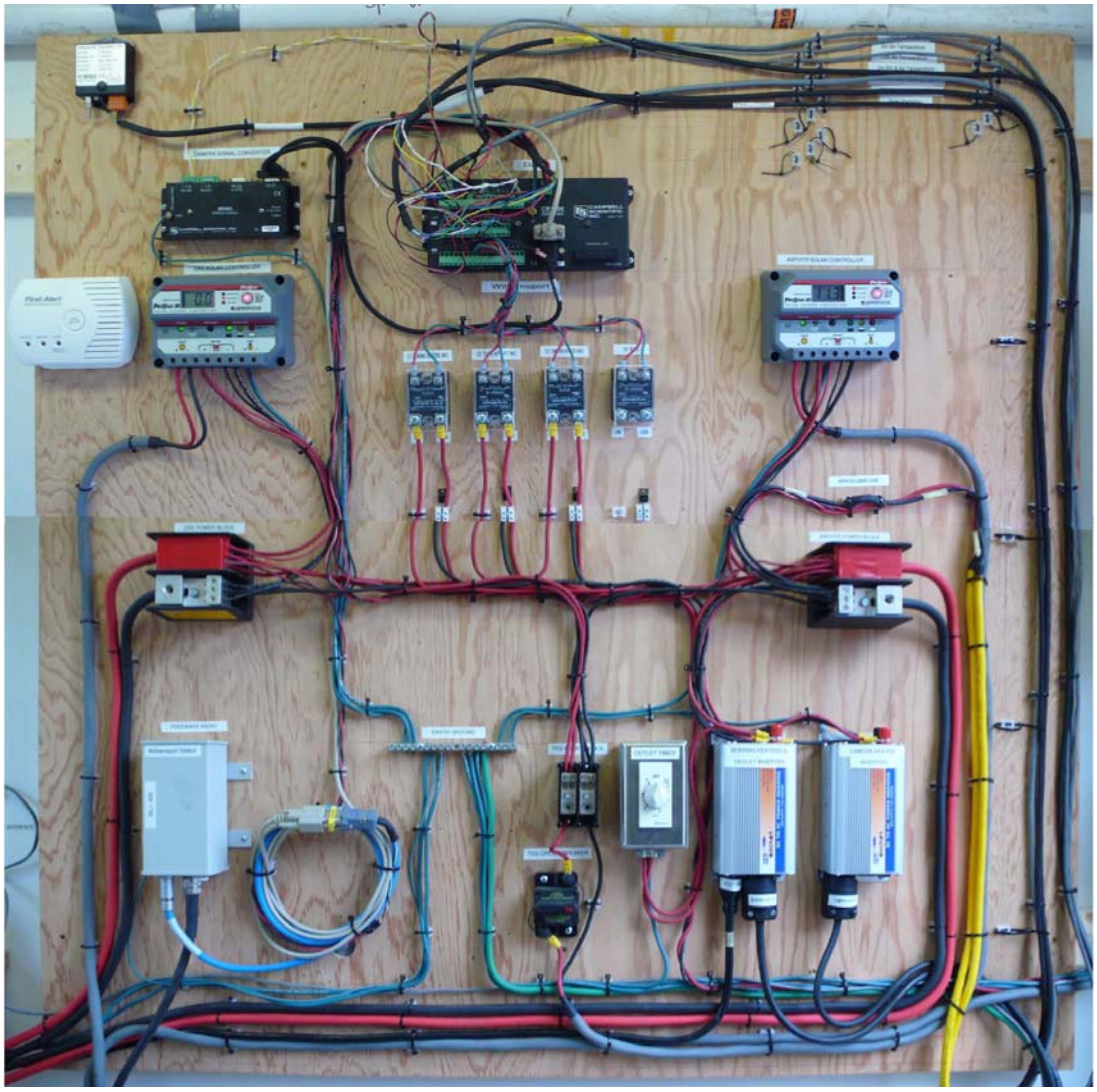
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the Williamsport station was conducted in September 2008. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble Williamsport meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4’ by 4’ plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble Williamsport Station DAS Wiring Panel



The Campbell Scientific CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of three 70-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Two solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar

controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the solar power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program, although not updated to include Williamsport. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. The Pebble Williamsport station is representative of the generic Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and most meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data

ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The Williamsport station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the Williamsport station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Maintain complete equipment manuals for station in digital or paper form
- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6" diameter by 9" high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of

discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change.

An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audit was conducted at the Williamsport station on September 15, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below PSD limits. Summary audit results are contained in Table 3-2, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 Williamsport September 15, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:06	Pass
2-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.45	Pass[1]
10-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.45	Pass[1]
Air Temperature Difference (In Situ)	≤ ±0.1	°C	0.10	Pass[1]
2-m Temperature Accuracy (New)	≤ ±0.5	°C	0.31	Pass
10-m Temperature Accuracy (New)	≤ ±0.5	°C	0.31	Pass
Air Temperature Difference (New)	≤ ±0.1	°C	0.04	Pass
Relative Humidity (Dew Point)	≤ ±1.5	°C	0.7	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque (In Situ)	≤ 7.5	gm-cm	5.0	Pass
Wind Dir. Azim. Alignment (In Situ)	≤ ±5	Degree	1.9	Pass
Wind Direction Accuracy (In Situ)	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity (In Situ)	≤ 3	Degree	0.4	Pass
Wind Direction Torque (New Bearings)	≤ 7.5	gm-cm	4.0	Pass
Wind Direction Accuracy (New Bearings)	≤ ±5	Degree	1.3	Pass
Wind Direction Linearity (New Bearings)	≤ 3	Degree	0.5	Pass
Wind Dir. Azim. Alignment (Post Audit)	≤ ±5	Degree	1.9	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	gm-cm	0.5	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	10.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.0	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	2.1	Pass
Barometric Pressure	≤ ±3	Mbar	2.6	Pass
Solar Radiation	≤ ±5+Res	% input	7.5	Pass[2]

1. Thermistors very close to limits, replaced.
2. Maximum error within limit of 5% of input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

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"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Pebble Williamsport PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble Williamsport station is locate on native fill near the Williamsport wharf, where Williams Creek drains into Iliamna Bay. The station is built on relatively flat ground with Alder trees nearby.

1.2 Site Location

1.2.1 Coordinates

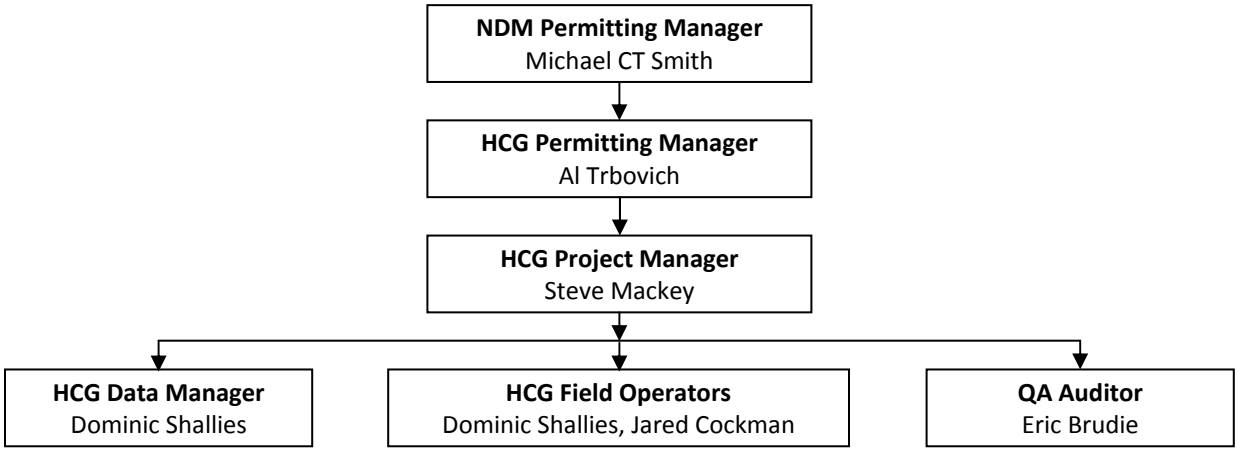
Indicated by Operator	Determined by Auditor
59° 41' N	59° 40.973' N
153° 38' W	153° 37.918' W
Elevation: 25 feet	Elevation: 25 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: Locked building at a very remote location.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR1000	8520
DAS Wiring Panel	Campbell Scientific	CR1000	8246
Old Temperature (2-meter)	Met One	062MP	G2670, ID #2/2
Old Temperature (10-meter)	Met One	062MP	G2670, ID #1/2
New Temperature (2-meter)	Met One	062MP	G9578, ID #1/2
New Temperature (10-meter)	Met One	062MP	G9578, ID #2/2
Relative Humidity	Vaisala	HMP45AC	C0620021
Temperature Aspirators	Met One	076B-4	G4716 & G4410
Primary Wind Speed	Climatronics	F460-100075	5209
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2332
Primary Wind Direction	Climatronics	F460-100076	4877
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1484/1486
Wind Sigma	Campbell Scientific	DAS Calculated	8520
Backup Wind Speed/Direction	RM Young	05305 Wind Mon-AQ	80509
Backup Wind Spd Prop	RM Young	08254	67643
Barometric Pressure	Vaisala	PTB101B	C1020007
Solar Radiation	LI-COR	Li-200SX	PY56188

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on telephone grid.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 70-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by two 70-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble Williamsport PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: Graded natural fill.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

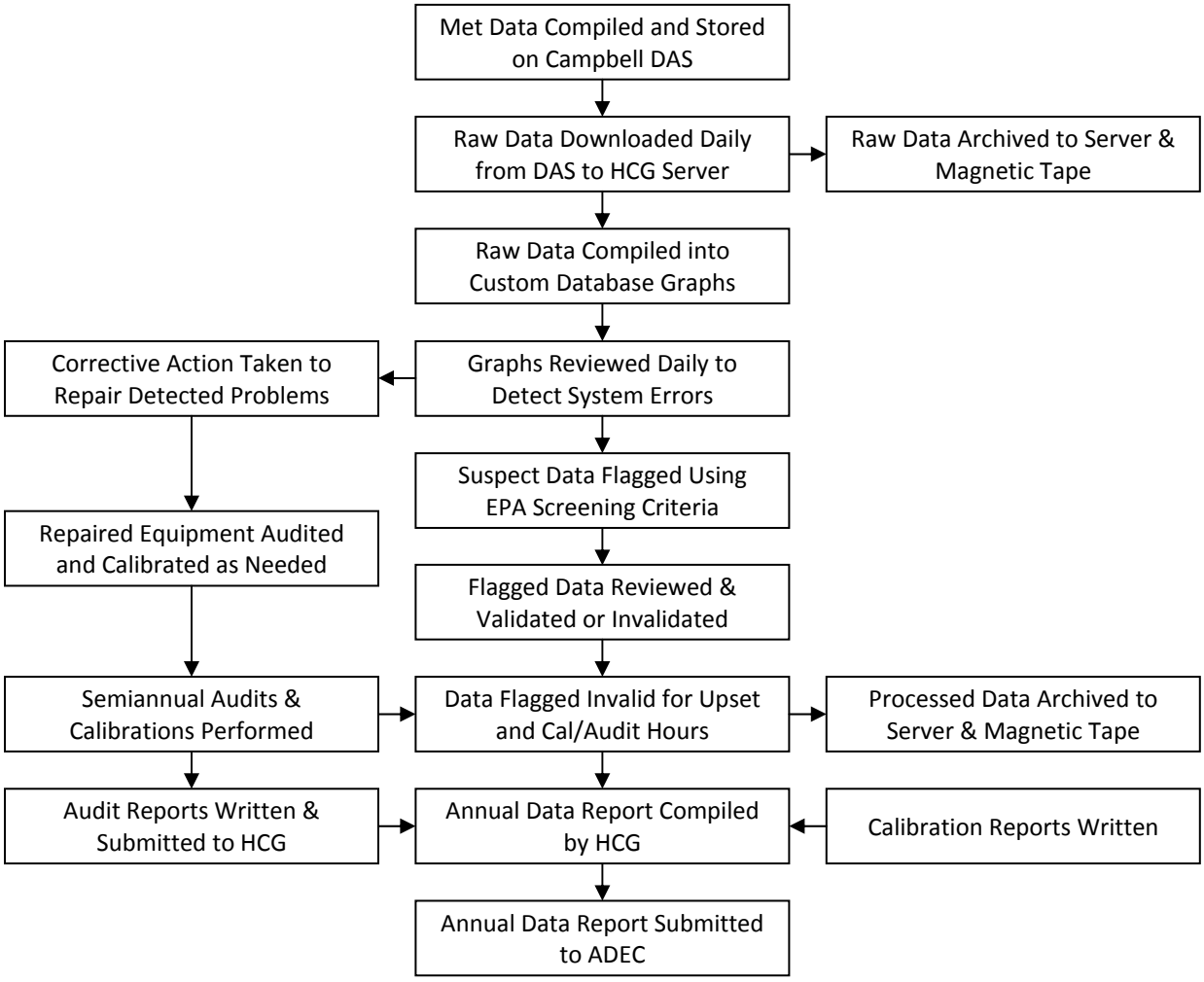
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits & cals?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 15, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are written procedures for data handling available for the project? ■ Yes □ No Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing? ■ Yes □ No Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use? ■ Yes □ No Comments: None.

Are adjusted and unadjusted data sets maintained? ■ Yes □ No Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are

permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.
- Maintain all equipment manuals in the field or on the field computer.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 15, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
11:59:30	11:59:24	**-00:00:06**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 1.9 **Meters** **Upper Height:** 9.8 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G2670-2 / G9578-1 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G2670-1 / G9578-2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1244
End: 1318

THERMISTOR COLLOCATED STANDARD TEST (G2670)

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	38.99	39.44	0.45	Pass	39.44	0.45	Pass	0.00	Pass
Warm	15 to 25	21.56	21.66	0.10	Pass	21.66	0.10	Pass	0.00	Pass
Ice Bath	0	0.22	0.20	-0.02	Pass	0.22	0.00	Pass	0.02	Pass
Cold	-15 to -25	-13.85	-13.95	-0.10	Pass	-13.95	-0.10	Pass	0.00	Pass
Very Cold	-35 to -45	-25.25	-25.62	-0.37	Pass	-25.52	-0.27	Pass	0.10	Pass
		Max Abs. Error	0.45	**PASS**		0.45	**PASS**	0.10	**PASS**	

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1340
End: 1353

THERMISTOR COLLOCATED STANDARD TEST - REPLACEMENTS (G9578)

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	37.06	37.37	0.31	Pass	37.37	0.31	Pass	0.00	Pass
Warm	15 to 25	17.75	17.80	0.05	Pass	17.80	0.05	Pass	0.00	Pass
Ice Bath	0	0.18	0.20	0.02	Pass	0.20	0.02	Pass	0.00	Pass
Cold	-15 to -25	-15.37	-15.36	0.01	Pass	-15.36	0.01	Pass	0.00	Pass
Very Cold	-35 to -45	-32.91	-33.01	-0.10	Pass	-33.05	-0.14	Pass	-0.04	Pass
		Max Abs. Error	0.31	**PASS**		0.31	**PASS**	0.04	**PASS**	

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: Sensors very close to limits. Replaced with new sensors and re-audited.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 1.9 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** C0620021 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST

Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1154	79.3	10.7	7.3	79.9	11.3	8.0	0.7	Pass
1208	78.6	10.8	7.3	79.6	11.3	7.9	0.6	Pass
					Max Abs. Error		0.7	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 15, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (In Situ)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5209	**Cup #:**	2332	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4877	**Vane #:**	1484	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.8	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1345 End: 1347

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	112.0	1.9	Pass
Compass - Brass Cap	14.5	13.1	-1.4	Pass
Compass	267.0	267.8	0.8	Pass
Compass	192.0	193.5	1.5	Pass

Time: Begin: 1130 End: 1145 **Max Abs. Error** **1.9** **PASS** **Mean Abs. Error** **1.4** **GOOD**

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	182.1	2.1	Pass
West	270.0	272.7	2.7	Pass
North	360.0	1.3	1.3	Pass
East	90.0	91.8	1.8	Pass
North	360.0	1.3	1.3	Pass
West	270.0	270.8	0.8	Pass
South	180.0	181.9	1.9	Pass
East	90.0	92.8	2.8	Pass
	Max Abs. Error		**2.8**	**PASS**
	Mean Abs. Error		**1.8**	**PASS**

Time: Begin: 1246 End: 1251

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.1	-0.9	Pass	330.0	331.0	1.0	Pass
60.0	59.5	-0.5	Pass	355.0	356.3	1.3	Pass
90.0	89.3	-0.7	Pass	30.0	29.9	-0.1	Pass
120.0	120.3	0.3	Pass	60.0	59.6	-0.4	Pass
150.0	149.6	-0.4	Pass	90.0	90.1	0.1	Pass
180.0	179.6	-0.4	Pass	120.0	120.6	0.6	Pass
210.0	209.6	-0.4	Pass	150.0	149.9	-0.1	Pass
240.0	240.2	0.2	Pass	180.0	180.0	0.0	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	300.5	0.5	Pass	**Mean Abs. Error**		**0.4**	**PASS**

Time: Begin: 1301 End: 1303

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	0.2	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	5.0	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
No Post-Audit				
New bearings installed				

Time: Begin: N/A End: N/A **Max Abs. Error** **Mean Abs. Error**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Wind direction sensor bearings replaced for routine maintenance.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 15, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (Replacement Parts)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5209	**Cup #:**	2332	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4877	**Vane #:**	1486	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.8	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22			N/A	
100	2.57			N/A	
200	4.92			N/A	
400	9.62		N/A		
1000	23.72		N/A		
2000	47.22		N/A		
	Max Abs. Error				

Time: Begin: N/A End: N/A

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
No In Situ Audit				
New bearings installed				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	182.5	2.5	Pass
West	270.0	271.9	1.9	Pass
North	360.0	2.3	2.3	Pass
East	90.0	92.7	2.7	Pass
North	360.0	2.0	2.0	Pass
West	270.0	272.5	2.5	Pass
South	180.0	182.5	2.5	Pass
East	90.0	91.9	1.9	Pass
	Max Abs. Error		**2.7**	**PASS**
	Mean Abs. Error		**2.3**	**PASS**

Time: Begin: 1405 End: 1407

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.9	-0.1	Pass	330.0	330.7	0.7	Pass
60.0	60.0	0.0	Pass	355.0	355.1	0.1	Pass
90.0	90.4	0.4	Pass	30.0	29.9	-0.1	Pass
120.0	121.1	1.1	Pass	60.0	60.2	0.2	Pass
150.0	150.6	0.6	Pass	90.0	90.9	0.9	Pass
180.0	180.0	0.0	Pass	120.0	121.3	1.3	Pass
210.0	210.5	0.5	Pass	150.0	150.4	0.4	Pass
240.0	240.4	0.4	Pass	180.0	181.0	1.0	Pass
270.0	270.1	0.1	Pass	**Max Abs. Error**		**1.3**	**PASS**
300.0	300.7	0.7	Pass	**Mean Abs. Error**		**0.5**	**PASS**

Time: Begin: 1357 End: 1400

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	N/A	**N/A**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	N/A	**N/A**
New	7.5	0.104	4.0	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	111.8	1.7	Pass
Compass - Brass Cap	14.5	13.1	-1.4	Pass
Compass	279.0	277.1	-1.9	Pass
Compass	201.5	203.1	1.6	Pass
Time: Begin: 1445	**Max Abs. Error**		**1.9**	**PASS**
End: 1500	**Mean Abs. Error**		**1.6**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: New wind direcrtion bearings and vane.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 15, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.6 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	80509	**Prop #:**	67643	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	17.8	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1214 End: 1216

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	110.7	0.6	Pass
Compass - Brass Cap	14.5	15.5	1.0	Pass
Compass	267.0	266.5	-0.5	Pass
Compass	192.0	190.5	-1.5	Pass

Time: Begin: 1130 End: 1145 **Max Abs. Error** **1.5** **PASS** **Mean Abs. Error** **0.9** **GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	31.5	1.5	Pass	150.0	149.1	-0.9	Pass	270.0	268.6	-1.4	Pass
60.0	60.9	0.9	Pass	180.0	178.3	-1.7	Pass	300.0	298.0	-2.0	Pass
90.0	90.1	0.1	Pass	210.0	208.6	-1.4	Pass	330.0	329.0	-1.0	Pass
120.0	120.5	0.5	Pass	240.0	238.4	-1.6	Pass	355.0	354.5	-0.5	Pass

Time: Begin: 1206 End: 1209 **Max Abs. Error** **2.0** **PASS** **Mean Abs. Error** **1.1** **PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	N/A	**N/A**
New	1.0	0.014	0.5	**PASS**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	N/A	**N/A**
New	11.0	0.153	10.0	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Saddle 1210	110.1	112.2	2.1	Pass
Compass - Brass Cap	14.5	15.7	1.2	Pass
Compass	279.0	277.8	-1.2	Pass
Compass	201.5	200.9	-0.6	Pass

Time: Begin: 1445 End: 1500 **Max Abs. Error** **2.1** **PASS** **Mean Abs. Error** **1.3** **GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Direction threshold high but no replacement sensor available.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** Williamsport
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 15, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C1020007 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST							
Date	Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
10/16/08	1120	29.67	29.61	1002.6	1005.11	2.6	Pass
					Max Abs. Error	2.6	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/28/08	
Audit Inst	Offset Amount
24.09	-0.09
26.06	-0.07
28.08	-0.08
30.06	-0.06
Intercept	**-0.18**
Slope	**0.0040**

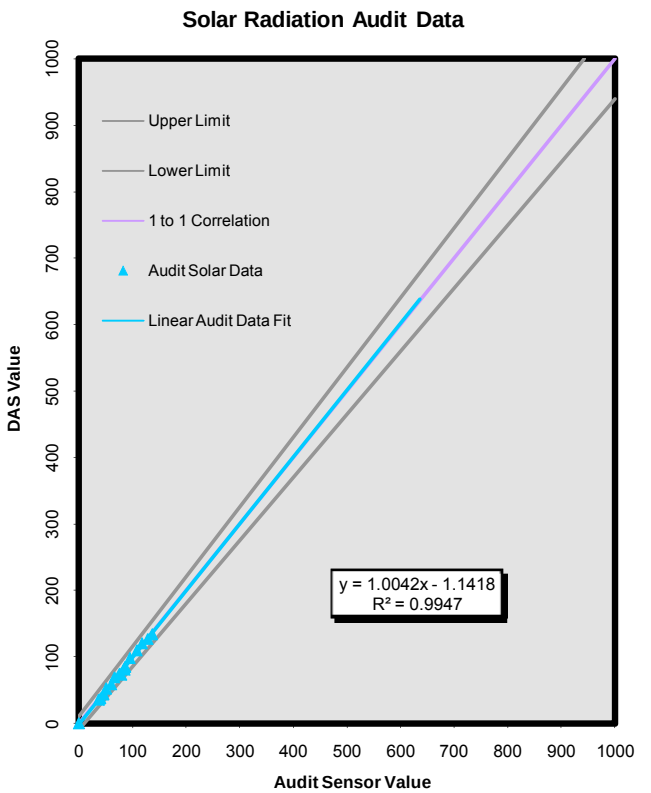
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: New audit instrument broken during September audit, audited with calibrated standard during October trip.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56188 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

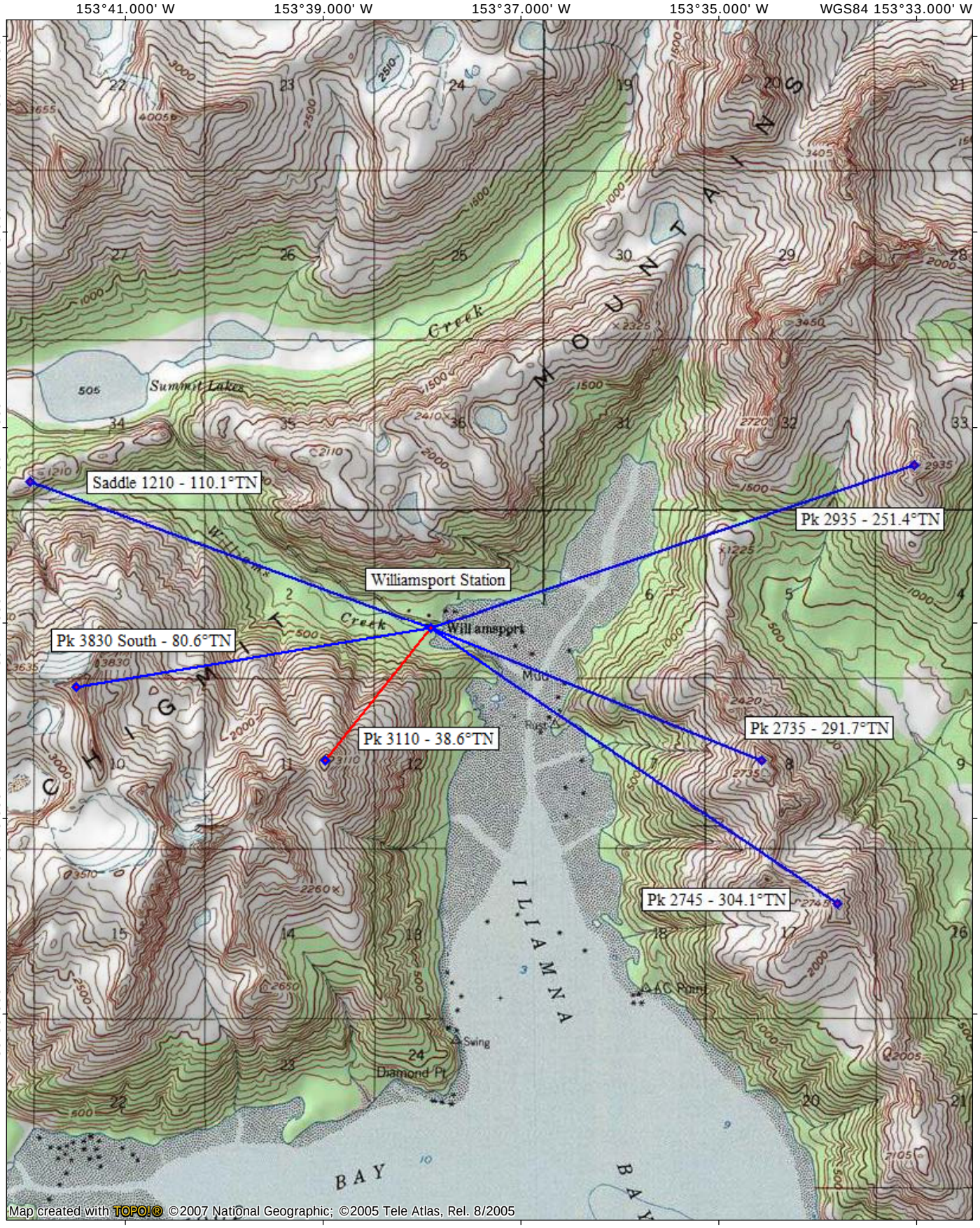
SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1104	37.1	35.4	-1.7	±11.9	n/a	Pass
1107	39.9	37.9	-2.0	±12.0	n/a	Pass
1125	46.0	44.0	-2.0	±12.3	n/a	Pass
1130	75.7	74.8	-0.9	±13.8	-1.2%	Pass
1138	60.3	58.6	-1.7	±13.0	-2.8%	Pass
1152	83.9	81.9	-2.0	±14.2	-2.4%	Pass
1155	84.3	81.7	-2.6	±14.2	-3.1%	Pass
1233	85.3	81.0	-4.3	±14.3	-5.0%	Pass
1349	78.9	73.0	-5.9	±13.9	-7.5%	Pass
1425	136.7	134.5	-2.2	±16.8	-1.6%	Pass
1444	117.7	120.6	2.9	±15.9	2.5%	Pass
1456	128.5	127.0	-1.5	±16.4	-1.2%	Pass
1510	86.3	85.4	-0.9	±14.3	-1.0%	Pass
1515	0.0	0.2	0.2	±10.0	n/a	Pass
1200	51.2	52.6	1.5	±12.6	2.9%	Pass
1300	66.3	69.4	3.1	±13.3	4.7%	Pass
1400	95.1	98.4	3.3	±14.8	3.5%	Pass
1500	108.1	110.1	2.0	±15.4	1.9%	Pass
Corr. Val	**0.9973**	**Max Abs. Percent Error**			**7.5%**	**PASS**
R² Value	**0.9947**	**Intercept**	**-1.1**	**Slope**	**1.0042**	**PASS**



Begin: 09/15/08 (Date) 1100 (Time) **End:** 09/15/08 (Date) 1505 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.

TOPO! map printed on 04/20/08 from "Williamsport_Station.tpo"



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 miles
0.0 0.5 1.0 1.5 2.0 2.5 km

TN MN 18°
04/20/08

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Calibration complies with ISO 9001 ISO/IEC 17025 AND ANSI/NCSL Z540-1

ACCREDITED

Calibration Certificate No. 1750.01

Cert. No.: 4000-1974024

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Justin Mangold, Anchorage, AK 99503 U.S.A. (RMA:944729)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath TC191	A79341		
Thermistor Module	A27129	8/22/09	1000248949
Temperature Probe	3039	10/26/08	A7710039-4
Temperature Probe	149	3/06/09	A82225037-3
Thermistor Module	A17118	10/30/08	A7831032
Temperature Calibration Bath TC218	A73332		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 9/08/08 **Cal Due: 9/08/09**

Test Conditions: 24.5°C 45.0 %RH 1017 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.001	0.087	N	0.001	0.000	Y	-0.049	0.051	0.013	3.8:1
°C	25.001	25.076	N	25.001	25.000	Y	24.951	25.051	0.013	3.8:1
°C	60.001	60.127	N	60.001	59.999	Y	59.951	60.051	0.018	2.8:1
°C	100.001	100.333	N	100.001	100.001	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Date=MM/DD/YY

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2000 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company

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VAISALA

Certificate of Calibration

Report #: 090408-X0740015-RH **RMA #:** 95-70314 **Calibration Date:** Sep-04-2008
Model #: HMI41/HMP45 **Serial #:** X0650080/X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%, RH Recommended Calibration Due Date: Sep-04-2009
Instrument Range: -20 to +60 °C, T

Customer: HOEFLER CONSULTING GROUP, INC.
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0% against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
22.11	22.30	0.19	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.12	11.30	0.18	2.00	0.92
33.04	32.30	-0.74	2.00	1.01
74.33	72.60	-1.73	2.00	1.02
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.97	21.90	-0.07	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.21	11.50	0.29	2.00	0.92
32.80	33.00	0.20	2.00	1.01
74.89	74.90	0.01	2.00	1.02

Problem Noted: None
Action Taken: The Unit Was Calibrated

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number TN 276340-08. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 6B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900343	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7519018	Dec. 19, 2007	Jun. 19, 2009
HMK13B	P3940001	May. 16, 2008	Nov. 16, 2008
HMP233	V4210039	Jul. 17, 2008	Oct. 17, 2008
HMT333	B0920007	Jun. 17, 2008	Sep. 17, 2008
HMI41/HMP45	S0720005	May. 21, 2008	Nov. 21, 2008

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.50 %RH

Approved By

Technical Operator
Roun Roeun

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18811** (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA 02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft 27106D produces 10 pulses per revolution of the anemometer shaft

(2) Indicated on the Control Unit LCD display

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 7/31/08
Inspection Interval One Year

Tested By RP

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA 01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 10/23/08
Inspection Interval One Year

Tested By RP

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esztr Gozon

Esztar Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Job 128274

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP.

P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esther Gozon

Esther Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner: HOEFLER Consulting Group
Name: _____

Address: 341 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER: _____

MODEL NUMBER: 5008

SERIAL NUMBER: 508099319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072808. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/28/08 Lab temperature 72.9 °F
Lab pressure 660.0 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.09	0.09	-0.09
25.99	26.06	0.07	-0.07
28.00	28.08	0.08	-0.08
30.00	30.06	0.06	-0.06

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ NO ☒

Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R L S Date: 7/28/08

Roger L. Sanders, PE

Chinook Engineering
a division of Inter-Mountain Laboratories, Inc.
555 Absaraka Street
Sheridan, Wyoming 82801 USA
(307) 672-7790
chinook@imlinc.com

THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: R. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Appendix D

Validated Continuous Data Summaries

CONTENTS

Pebble Williamsport Station 2008 Hourly Data:

1. Temperature at 2 meters (deg. C)

2. Temperature at 10 meters (deg. C)

3. Temperature Difference 2 meter to 10 meter (deg. C)

4. Relative Humidity (%)

5. Solar (Watts/m^2)

6. Barometric Pressure (mbar)

7. Wind Speed – Climatronic (m/s)

8. Wind Direction – Climatronic (degrees)

9. Wind Sigma – Climatronic (σ_θ)

10. Wind Speed – RM Young (m/s)

11. Wind Direction – RM Young (degrees)

12. Wind Sigma – RM Young (σ_θ)

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.5	2.9	3.8	3.2	3.4	0.7	-0.9	-1.0	-1.7	-2.2	-1.6	-2.2	-2.3	-1.2	-1.9	-2.4	-3.0	-4.0	-4.6	-4.7	-5.1	-5.5	-5.8	-6.2	3.8	-6.2	-1.6
2	-6.2	-6.6	-6.9	-6.9	-7.1	-7.5	-8.0	-8.4	-8.5	-8.8	-9.0	-9.2	-9.4	-9.8	-10.1	-10.3	-10.7	-11.1	-11.2	-11.5	-11.5	-11.6	-11.7	-11.6	-6.2	-11.7	-9.3
3	-11.7	-11.8	-11.8	-11.7	-11.4	-10.9	-10.7	-10.5	-10.4	-10.1	-9.9	-9.8	-10.0	-10.2	-10.2	-10.4	-10.4	-10.6	-10.9	-11.4	-11.9	-12.4	-12.8	-13.0	-9.8	-13.0	-11.0
4	-13.0	-13.3	-13.4	-13.5	-13.6	-13.8	-13.8	-13.8	-14.1	-14.3	-14.3	-14.3	-14.4	-14.5	-14.5	-14.7	-14.7	-14.8	-15.0	-15.0	-15.2	-15.3	-15.3	-15.2	-13.0	-15.3	-14.3
5	-15.3	-15.5	-15.4	-15.5	-15.9	-16.2	-16.4	-16.6	-16.8	-16.9	-17.2	-17.5	-17.5	-17.3	-17.1	-16.9	-16.9	-16.9	-16.8	-16.8	-16.9	-16.9	-17.1	-17.3	-15.3	-17.5	-16.6
6	-17.4	-17.8	-17.8	-17.7	-17.7	-17.9	-18.2	-18.5	-18.6	-18.6	-18.9	-19.3	-19.6	-19.6	-19.8	-19.8	-20.0	-20.0	-19.9	-20.0	-20.0	-20.1	-20.3	-20.4	-17.4	-20.4	-19.1
7	-20.5	-20.5	-20.7	-20.9	-21.1	-21.2	-21.1	-20.9	-20.7	-20.8	-20.8	-20.6	-20.5	-20.3	-20.5	-20.3	-20.3	-20.3	-20.3	-20.0	-19.8	-19.8	-19.6	-19.7	-19.6	-21.2	-20.5
8	-19.7	-19.7	-19.7	-19.8	-19.7	-19.6	-19.7	-20.0	-20.0	-20.0	-20.1	-20.1	-20.0	-20.2	-20.2	-19.9	-19.9	-19.9	-19.8	-20.1	-20.5	-21.0	-21.3	-21.2	-19.6	-21.3	-20.1
9	-21.1	-21.2	-21.5	-21.6	-21.7	-21.7	-22.0	-22.2	-22.4	-22.6	-22.6	-22.3	-22.3	-22.2	-22.1	-21.9	-21.8	-21.7	-21.4	-21.2	-21.1	-21.2	-21.2	-21.2	-21.1	-22.6	-21.7
10	-21.1	-21.0	-20.9	-21.0	-20.8	-20.7	-20.7	-20.6	-20.5	-20.6	-20.5	-20.4	-20.1	-20.1	-19.8	-19.8	-19.7	-19.7	-19.8	-20.2	-20.5	-20.8	-21.4	-21.6	-19.7	-21.6	-20.5
11	-21.8	-22.1	-22.4	-22.3	-21.9	-21.2	-21.2	-21.4	-22.0	-22.3	-22.3	-22.5	-22.7	-22.6	-22.4	-22.5	-22.6	-22.9	-23.1	-23.4	-23.4	-23.2	-23.2	-23.4	-21.2	-23.4	-22.4
12	-23.6	-23.7	-23.7	-23.5	-23.8	-24.5	-24.7	-24.8	-25.2	-25.6	-25.8	-25.7	-25.6	-25.8	-25.7	-26.0	-26.2	-26.2	-26.0	-25.9	-25.6	-25.7	-25.7	-25.7	-23.5	-26.2	-25.2
13	-26.0	-26.0	-25.8	-26.0	-25.8	-25.9	-25.7	-25.7	-25.7	-25.5	-25.3	-25.2	-25.1	-25.1	-25.0	-24.8	-24.2	-24.0	-23.9	-23.8	-24.0	-24.2	-24.3	-24.5	-23.8	-26.0	-25.1
14	-24.6	-23.2	-22.1	-23.0	-22.8	-22.7	-21.8	-20.0	-19.2	-18.5	-18.0	-10.8	-9.5	-8.8	-8.4	-7.9	-7.7	-7.3	-7.4	-6.5	-4.7	-2.6	-1.5	-1.2	-1.2	-24.6	-13.3
15	-1.0	-0.5	0.0	0.7	0.7	0.4	-0.2	-0.9	-2.2	-2.6	-2.6	-2.6	-2.7	-2.5	-2.5	-2.6	-2.5	-2.7	-2.9	-2.7	-2.9	-2.9	-2.8	-3.0	0.7	-3.0	-1.8
16	-3.3	-3.3	-3.0	-3.0	-1.2	0.1	0.4	-0.1	-0.4	-0.1	0.0	0.0	-0.2	-0.3	0.0	0.5	0.4	-0.3	-1.6	-2.5	-1.9	-4.5	-8.0	-8.6	0.5	-8.6	-1.7
17	-10.8	-8.1	-4.3	-4.1	-0.4	0.1	-0.5	2.0	3.4	3.4	3.3	1.5	0.7	0.6	0.7	1.2	1.9	2.9	3.1	3.0	3.0	2.4	1.9	1.7	3.4	-10.8	0.4
18	0.9	0.2	0.2	0.0	-0.1	-0.2	-0.2	-0.6	-0.7	-0.9	-0.6	-0.5	-1.2	-0.7	-0.3	-0.3	-0.7	-0.8	-1.1	-1.2	-1.7	-1.5	-0.7	-0.7	0.9	-1.7	-0.6
19	-1.0	-1.0	-0.9	-1.3	-0.4	-0.2	0.3	2.7	4.5	4.5	3.5	4.3	3.7	3.6	3.8	3.6	4.6	5.0	4.8	3.8	3.4	2.9	2.9	2.8	5.0	-1.3	2.5
20	2.7	2.9	3.0	3.0	3.7	4.5	4.6	4.6	4.4	5.0	4.9	4.8	4.3	4.3	4.2	3.8	3.9	2.8	2.0	0.8	0.7	0.9	0.8	0.8	5.0	0.7	3.2
21	0.8	0.8	0.8	1.6	1.2	1.3	1.4	1.6	2.4	2.1	1.9	2.7	4.1	4.8	4.8	4.6	4.8	4.7	4.4	4.6	4.5	4.3	3.5	3.3	4.8	0.8	3.0
22	3.9	4.0	4.5	4.3	4.1	3.4	3.1	3.0	3.0	2.9	1.2	0.7	0.8	1.1	0.4	-0.5	-1.0	-1.4	-1.5	-1.6	-1.6	-1.8	-1.6	-1.4	4.5	-1.8	1.2
23	-1.6	-1.8	-1.9	-2.1	-2.6	-3.9	-4.7	-6.3	-7.4	-8.3	-9.1	-9.2	-9.2	-9.1	-10.3	-11.4	-11.6	-12.1	-11.9	-13.0	-14.0	-14.9	-15.3	-15.7	-1.6	-15.7	-8.6
24	-15.1	-15.4	-15.2	-15.4	-15.1	-14.1	-13.0	-10.7	-9.2	-6.3	-4.8	-4.5	-4.6	-4.8	-5.2	-5.5	-5.7	-5.7	-5.6	-5.8	-5.9	-6.0	-6.0	-6.1	-4.5	-15.4	-8.6
25	-6.0	-6.0	-6.1	-6.2	-6.1	-5.8	-3.2	-3.8	-4.2	-4.2	-4.1	-4.0	-3.2	-2.6	-2.1	-1.3	-0.7	-0.8	-0.5	-0.6	-1.2	-2.2	-4.0	-5.2	-0.5	-6.2	-3.5
26	-5.7	-6.6	-7.3	-7.6	-8.3	-9.3	-10.0	-10.3	-11.4	-11.9	-12.9	-12.6	-13.1	-13.4	-13.6	-14.2	-13.6	-13.5	-13.8	-13.6	-15.2	-15.8	-15.3	-9.5	-5.7	-15.8	-11.6
27	-8.3	-8.0	-7.7	-6.2	-5.3	-5.0	-3.3	-2.4	-2.2	-1.8	-1.6	-2.1	-2.5	-2.9	-3.3	-3.1	-2.9	-2.9	-2.5	-2.6	-2.5	-1.9	-1.8	-2.0	-1.6	-8.3	-3.5
28	-1.9	-2.1	-2.2	-2.2	-2.2	-2.4	-2.4	-2.7	-2.7	-3.1	-3.2	-3.1	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.3	-3.9	-4.3	-2.1	-1.6	-1.6	-1.6	-4.3	-2.7
29	-1.4	-1.2	-1.2	-1.6	-2.0	-2.0	-2.3	-2.5	-2.9	-3.1	-3.5	-3.9	-3.9	-4.0	-4.2	-4.3	-4.2	-4.2	-4.6	-4.7	-4.2	-5.0	-5.8	-6.3	-1.2	-6.3	-3.4
30	-7.0	-7.7	-9.4	-10.0	-10.4	-10.6	-10.6	-10.7	-10.5	-9.9	-9.6	-9.1	-8.7	-9.3	-9.4	-9.4	-9.9	-10.3	-10.5	-10.3	-10.6	-10.5	-10.8	-11.0	-7.0	-11.0	-9.8
31	-11.0	-11.0	-10.9	-10.9	-11.0	-11.2	-11.3	-12.1	-11.5	-10.3	-9.7	-10.0	-10.9	-10.3	-7.7	-7.0	-7.0	-8.0	-7.6	-7.3	-7.2	-7.3	-8.0	-8.8	-7.0	-12.1	-9.5
Max.	**3.9**	**4.0**	**4.5**	**4.3**	**4.1**	**4.5**	**4.6**	**4.6**	**4.5**	**5.0**	**4.9**	**4.8**	**4.3**	**4.8**	**4.8**	**4.6**	**4.8**	**5.0**	**4.8**	**4.6**	**4.5**	**4.3**	**3.5**	**3.3**	**5.0**		
Min.	**-26.0**	**-26.0**	**-25.8**	**-26.0**	**-25.8**	**-25.9**	**-25.7**	**-25.7**	**-25.7**	**-25.6**	**-25.8**	**-25.7**	**-25.6**	**-25.8**	**-25.7**	**-26.0**	**-26.2**	**-26.2**	**-26.0**	**-25.9**	**-25.6**	**-25.7**	**-25.7**	**-25.7**		**-26.2**	
Avg.	**-9.8**	**-9.8**	**-9.7**	**-9.7**	**-9.5**	**-9.6**	**-9.6**	**-9.5**	**-9.5**	**-9.4**	**-9.5**	**-9.3**	**-9.3**	**-9.2**	**-9.2**	**-9.2**	**-9.2**	**-9.3**	**-9.5**	**-9.6**	**-9.7**	**-9.9**	**-10.1**	**-10.1**			**-9.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-9.0	-10.1	-12.2	-13.7	-14.0	-14.3	-14.7	-14.8	-14.6	-15.3	-14.9	-14.9	-14.2	-12.8	-12.9	-13.3	-13.7	-14.3	-15.8	-16.6	-17.3	-17.2	-16.9	-15.6	-9.0	-17.3	-14.3
2	-16.0	-16.6	-16.2	-15.3	-16.1	-15.6	-14.0	-13.6	-11.3	-12.2	-13.3	-14.3	-13.7	-13.3	-13.9	-14.2	-14.2	-13.8	-13.3	-12.6	-12.6	-12.7	-12.7	-13.1	-11.3	-16.6	-13.9
3	-13.8	-14.5	-15.1	-15.5	-15.9	-16.2	-16.6	-17.3	-17.9	-18.4	-18.4	-19.0	-19.3	-19.3	-19.5	-19.3	-19.4	-19.5	-19.6	-19.9	-20.3	-20.3	-20.4	-20.0	-13.8	-20.4	-18.2
4	-19.5	-19.6	-19.5	-19.7	-19.2	-19.8	-19.6	-20.3	-20.4	-18.7	-18.0	-18.6	-16.7	-15.1	-14.7	-14.2	-14.5	-14.6	-14.2	-14.8	-15.2	-16.5	-18.1	-18.5	-14.2	-20.4	-17.5
5	-19.7	-21.2	-20.5	-20.1	-18.6	-19.5	-20.2	-20.4	-21.6	-21.2	-21.3	-23.0	-22.6	-22.7	-23.0	-23.5	-23.4	-23.3	-23.4	-23.5	-23.2	-22.6	-21.9	-20.9	-18.6	-23.5	-21.7
6	-20.3	-19.2	-19.3	-19.6	-17.6	-16.2	-15.4	-14.6	-14.7	-15.4	-15.5	-15.6	-14.6	-14.5	-16.4	-18.7	-20.3	-20.2	-20.9	-21.1	-21.7	-21.2	-21.1	-21.0	-14.5	-21.7	-18.1
7	-21.9	-21.3	-21.3	-21.6	-21.8	-21.4	-20.7	-21.7	-22.3	-22.1	-22.1	-21.3	-20.7	-19.1	-19.4	-19.7	-19.2	-19.7	-18.7	-17.4	-16.5	-15.9	-13.6	-13.5	-13.5	-22.3	-19.7
8	-14.7	-17.6	-18.5	-19.3	-19.8	-17.0	-16.2	-11.0	-6.3	-5.6	-5.2	-5.8	-5.8	-5.2	-5.0	-5.8	-5.8	-5.7	-5.6	-5.4	-5.7	-5.1	-3.4	-3.1	-3.1	-19.8	-9.1
9	-3.7	-3.6	-3.4	-3.6	-4.0	-4.1	-4.4	-4.6	-4.6	-4.5	-4.7	-4.7	-4.7	-4.8	-4.5	-4.5	-5.0	-5.3	-6.6	-7.7	-8.5	-8.3	-8.3	-8.1	-3.4	-8.5	-5.3
10	-8.3	-9.1	-9.6	-10.2	-11.4	-12.5	-13.7	-15.7	-16.4	-16.0	-15.9	-17.0	-17.0	-15.9	-14.3	-13.8	-14.3	-14.3	-14.2	-14.1	-13.7	-13.2	-13.1	-12.8	-8.3	-17.0	-13.6
11	-12.6	-11.9	-11.6	-11.3	-10.8	-10.2	-10.1	-10.0	-9.8	-11.9	-12.2	-11.9	-12.0	-13.5	-13.1	-13.2	-14.2	-14.0	-14.5	-14.9	-15.2	-15.8	-16.2	-15.9	-9.8	-16.2	-12.8
12	-16.3	-17.2	-18.0	-18.6	-19.3	-20.0	-21.0	-21.7	-21.6	-21.6	-21.9	-21.2	-20.7	-20.4	-20.3	-18.6	-19.0	-19.4	-19.5	-19.5	-18.6	-19.9	-19.9	-16.6	-16.3	-21.9	-19.6
13	-10.6	-4.9	-3.0	-2.0	-1.4	-1.5	-1.9	-1.4	-0.4	0.3	1.0	2.2	2.0	2.0	2.5	2.0	2.3	2.5	2.7	2.7	3.3	3.5	3.3	4.0	4.0	-10.6	0.4
14	3.7	3.6	3.7	3.4	3.2	3.3	3.2	3.4	3.3	3.4	-3.8	-7.2	-8.9	-10.1	-11.0	-12.0	-13.1	-14.1	-14.5	-14.9	-15.4	-15.4	-15.3	-15.1	3.7	-15.4	-5.7
15	-14.9	-15.3	-15.9	-16.6	-17.2	-17.9	-18.9	-19.4	-19.7	-20.0	-20.2	-19.8	-19.5	-19.5	-19.5	-19.1	-18.7	-18.1	-18.0	-18.8	-18.7	-17.8	-10.6	-9.2	-9.2	-20.2	-17.6
16	-9.0	-8.4	-7.4	-6.5	-5.6	-4.6	-4.6	-4.4	-3.7	-3.3	-2.4	-1.5	-0.9	-0.5	0.0	0.8	0.8	1.4	1.0	0.2	-1.3	-2.7	-2.7	-2.6	1.4	-9.0	-2.8
17	-0.8	-1.0	-0.2	-0.4	1.3	2.1	3.4	4.4	4.9	5.1	4.6	4.3	3.3	3.4	3.1	2.9	2.7	2.7	2.3	3.2	3.4	3.4	3.4	3.4	5.1	-1.0	2.7
18	3.6	3.5	2.9	3.1	3.3	3.5	3.6	3.6	3.2	3.2	2.9	3.2	3.1	3.5	3.6	3.4	3.4	3.3	1.8	3.4	3.7	4.2	5.0	4.9	5.0	1.8	3.5
19	5.2	5.1	5.7	4.9	3.6	5.9	4.1	3.4	4.6	4.3	4.1	4.0	4.0	4.3	4.5	5.0	5.3	5.6	4.9	4.4	4.4	4.1	3.9	3.7	5.9	3.4	4.5
20	3.2	2.0	3.0	3.1	3.5	3.6	3.2	3.2	4.0	4.0	3.7	4.7	5.4	5.3	5.2	5.5	5.7	5.4	5.4	5.7	5.8	5.4	4.4	5.2	5.8	2.0	4.4
21	6.0	6.1	5.6	5.8	5.5	6.0	6.0	5.9	5.8	5.2	5.0	4.6	3.7	3.8	4.2	3.8	3.5	3.2	3.2	3.3	3.1	3.3	3.0	3.2	6.1	3.0	4.5
22	3.3	3.2	3.2	3.2	3.0	2.9	2.9	3.0	3.3	3.3	2.9	2.3	1.7	2.1	2.9	2.6	3.2	3.2	2.4	3.2	2.4	3.2	3.2	2.0	3.3	1.7	2.9
23	1.3	0.9	1.0	0.7	0.5	0.7	0.0	-1.1	-1.7	-2.6	-3.0	-3.3	-3.2	-3.0	-3.3	-3.2	-3.3	-3.4	-3.7	-4.1	-4.5	-4.8	-5.1	-5.6	1.3	-5.6	-2.2
24	-5.8	-6.1	-6.2	-6.5	-6.7	-6.9	-7.1	-7.3	-7.1	-7.0	-6.6	-6.5	-6.1	-5.8	-5.9	-6.4	-6.5	-6.5	-6.6	-6.9	-7.4	-7.6	-7.7	-8.0	-5.8	-8.0	-6.7
25	-8.6	-9.5	-10.0	-10.4	-11.0	-11.0	-11.2	-11.4	-11.5	-11.8	-11.9	-11.7	-11.9	-11.6	-9.8	-1.9	-0.4	-0.2	0.0	0.3	0.2	0.1	0.3	1.0	1.0	-11.9	-6.8
26	0.9	0.9	0.4	0.3	-0.3	-0.4	-0.6	-0.4	-0.5	-0.6	-1.1	0.6	1.4	1.7	2.1	2.8	2.6	1.6	0.7	-0.6	-1.0	-1.8	-2.5	-3.2	2.8	-3.2	0.1
27	-3.0	-3.2	-4.2	-5.4	-6.2	-6.3	-6.7	-6.6	-6.5	-6.7	-5.6	-4.4	-3.3	-1.5	-1.1	-0.5	-0.6	-1.0	-0.9	-0.3	3.2	3.9	3.8	4.3	4.3	-6.7	-2.4
28	4.1	4.3	4.4	4.2	4.6	4.7	4.8	4.7	4.5	4.3	4.7	4.8	4.7	4.3	4.7	4.6	3.8	3.2	2.9	2.4	1.9	1.5	1.8	1.7	4.8	1.5	3.8
29	1.2	0.6	0.5	0.6	-0.1	0.1	-0.2	-2.2	-2.9	-3.3	-3.6	-3.8	-3.8	-3.8	-3.9	-3.4	-3.5	-4.8	-6.5	-7.4	-7.7	-7.8	-7.7	-8.1	1.2	-8.1	-3.4
Max.	**6.0**	**6.1**	**5.7**	**5.8**	**5.5**	**6.0**	**6.0**	**5.9**	**5.8**	**5.2**	**5.0**	**4.8**	**5.4**	**5.3**	**5.2**	**5.5**	**5.7**	**5.6**	**5.4**	**5.7**	**5.8**	**5.4**	**5.0**	**5.2**	**6.1**		
Min.	**-21.9**	**-21.3**	**-21.3**	**-21.6**	**-21.8**	**-21.4**	**-21.0**	**-21.7**	**-22.3**	**-22.1**	**-22.1**	**-23.0**	**-22.6**	**-22.7**	**-23.0**	**-23.5**	**-23.4**	**-23.3**	**-23.4**	**-23.5**	**-23.2**	**-22.6**	**-21.9**	**-21.0**		**-23.5**	
Avg.	**-6.8**	**-6.9**	**-7.0**	**-7.1**	**-7.2**	**-7.0**	**-7.1**	**-7.2**	**-7.0**	**-7.1**	**-7.3**	**-7.4**	**-7.2**	**-7.0**	**-6.9**	**-6.6**	**-6.7**	**-6.9**	**-7.2**	**-7.3**	**-7.3**	**-7.4**	**-7.1**	**-6.8**			**-7.1**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-8.1	-8.5	-8.9	-9.5	-9.7	-10.1	-10.5	-11.2	-11.5	-11.4	-9.1	-4.4	-4.0	-3.3	-2.7	-2.2	-1.6	-2.1	-0.7	0.2	1.3	1.3	1.3	1.7	1.7	-11.5	-5.2
2	1.9	1.7	2.1	1.5	1.9	2.0	2.1	1.4	0.8	1.2	1.0	1.2	1.4	1.6	2.5	2.7	2.3	1.3	0.6	0.4	0.5	0.6	1.0	1.6	2.7	0.4	1.5
3	1.2	0.6	0.5	0.6	1.0	1.8	2.6	2.3	2.3	3.0	2.9	2.6	2.3	2.4	3.0	3.0	2.6	3.0	2.9	3.1	3.8	4.1	4.0	4.1	4.1	0.5	2.5
4	4.4	4.2	4.3	3.0	3.1	3.6	4.3	4.3	4.2	3.9	3.8	3.9	3.9	3.8	4.1	4.4	4.4	4.3	4.5	4.2	4.5	3.8	4.1	3.5	4.5	3.0	4.0
5	4.0	4.4	4.3	3.9	3.5	3.6	3.5	3.2	3.2	3.2	3.1	3.1	3.2	3.4	3.8	3.8	4.3	4.6	4.3	3.8	3.8	3.7	3.5	3.5	4.6	3.1	3.7
6	3.6	3.4	3.4	3.4	3.6	3.5	3.5	3.6	3.7	3.6	2.4	1.1	1.2	3.2	4.2	4.2	4.4	4.4	4.7	4.8	5.3	4.3	4.9	2.9	5.3	1.1	3.6
7	2.0	1.6	1.7	1.9	1.7	2.5	2.0	1.9	1.7	2.1	2.2	2.6	2.7	2.6	2.8	2.6	2.0	1.7	1.6	1.4	1.5	1.7	1.6	1.2	2.8	1.2	2.0
8	0.8	0.6	0.2	0.0	0.0	0.0	-0.2	-0.4	0.6	1.9	2.3	1.9	3.3	3.7	4.1	4.4	4.0	3.5	3.5	4.0	4.2	4.9	5.6	4.9	5.6	-0.4	2.4
9	4.7	4.3	4.1	4.2	3.8	3.5	3.1	3.9	5.0	4.5	3.7	3.9	4.8	5.1	5.0	5.1	4.6	3.9	3.8	3.7	3.3	3.0	2.8	2.0	5.1	2.0	4.0
10	1.9	1.5	1.6	1.3	1.2	0.9	-0.1	-0.4	-0.5	-0.9	-1.1	-1.2	-1.2	-0.9	-0.7	-0.9	-1.0	-0.8	-1.1	-1.5	-1.4	-1.3	-1.2	-1.5	1.9	-1.5	-0.4
11	-1.9	-2.4	-2.7	-2.8	-3.3	-3.8	-4.0	-4.2	-4.2	-4.2	-3.8	-3.2	-2.9	-2.7	-2.6	-3.3	-3.2	-3.4	-3.7	-3.7	-3.8	-4.2	-4.2	-4.2	-1.9	-4.2	-3.4
12	-4.3	-5.0	-5.3	-5.6	-5.8	-6.1	-6.6	-7.0	-7.2	-7.3	-7.0	-6.4	-6.0	-5.7	-5.7	-6.2	-6.2	-6.1	-6.3	-6.5	-6.7	-6.8	-6.8	-6.8	-4.3	-7.3	-6.2
13	-6.7	-6.4	-6.3	-6.3	-6.3	-6.2	-6.1	-6.1	-6.1	-6.2	-6.2	-6.0	-6.0	-5.8	-5.8	-5.8	-5.8	-5.9	-6.3	-6.7	-7.0	-7.3	-7.6	-7.8	-5.8	-7.8	-6.4
14	-8.1	-8.3	-8.4	-8.5	-8.6	-8.9	-9.2	-9.4	-9.8	-10.0	-9.6	-8.6	-6.3	-4.9	-2.7	-1.5	-1.2	-1.1	-1.1	-0.9	-0.8	-0.6	0.0	0.1	0.1	-10.0	-5.3
15	0.0	-0.8	-1.2	-1.0	0.1	0.6	0.4	0.5	0.9	1.1	1.3	1.1	1.5	1.7	1.8	1.7	1.8	1.8	1.2	0.8	0.8	1.2	1.4	1.7	1.8	-1.2	0.8
16	2.1	1.9	1.6	0.6	0.8	2.0	2.0	1.3	1.3	1.3	1.3	0.7	1.2	1.4	2.0	1.8	1.3	0.4	-0.9	-2.2	-2.9	-4.0	-4.5	-3.5	2.1	-4.5	0.3
17	-1.5	-1.3	-1.9	-2.7	-3.7	-4.0	-3.7	-2.9	-3.0	-2.6	-1.6	-0.9	0.1	0.8	0.8	1.0	0.9	0.8	-0.2	-2.6	-4.4	-5.1	-5.6	-6.1	1.0	-6.1	-2.1
18	-6.6	-6.6	-6.7	-6.9	-6.9	-7.3	-7.6	-7.6	-7.5	-7.6	-7.9	-7.9	-8.0	-8.2	-8.3	-8.4	-8.5	-8.6	-8.7	-8.8	-9.1	-9.5	-9.9	-10.4	-6.6	-10.4	-8.1
19	-11.0	-11.5	-12.0	-12.2	-12.5	-12.6	-12.8	-13.4	-13.8	-13.8	-13.6	-13.4	-12.9	-12.5	-12.2	-11.9	-11.6	-11.7	-11.9	-12.0	-12.3	-12.6	-13.0	-13.3	-11.0	-13.8	-12.5
20	-13.5	-13.6	-13.7	-13.9	-14.2	-14.7	-15.3	-16.1	-16.7	-16.9	-16.5	-16.2	-16.0	-15.5	-15.2	-15.0	-14.8	-14.5	-14.7	-14.9	-15.1	-15.2	-15.4	-15.3	-13.5	-16.9	-15.1
21	-15.1	-15.0	-14.8	-14.3	-14.4	-14.5	-14.4	-14.0	-13.7	-12.7	-11.4	-9.5	-10.3	-10.2	-9.1	-6.9	-7.1	-6.7	-5.9	-5.8	-6.2	-5.4	-5.3	-2.4	-2.4	-15.1	-10.2
22	-0.6	-0.7	-1.2	-2.3	-3.6	-6.4	-5.8	-8.2	-8.1	-8.1	-8.1	-7.8	-6.9	-5.9	-5.7	-5.9	-6.0	-5.8	-6.3	-6.9	-7.0	-6.7	-6.4	-7.1	-0.6	-8.2	-5.7
23	-7.7	-7.7	-7.1	-7.9	-8.1	-8.9	-9.6	-9.8	-10.4	-10.5	-10.3	-10.3	-10.0	-9.8	-9.7	-9.4	-9.5	-9.5	-9.3	-9.3	-9.5	-9.5	-9.2	-8.9	-7.1	-10.5	-9.2
24	-8.7	-8.8	-9.2	-9.0	-9.5	-9.7	-9.6	-9.6	-9.6	-9.5	-9.8	-8.9	-8.5	-7.9	-7.0	-6.9	-6.8	-7.3	-7.4	-7.6	-7.7	-7.6	-7.6	-7.3	-6.8	-9.8	-8.4
25	-7.2	-6.9	-5.9	-5.3	-4.5	-6.5	-6.5	-6.5	-6.3	-5.8	-6.5	-6.3	-5.5	-4.1	-3.6	-3.1	-3.9	-4.2	-4.6	-4.8	-5.2	-5.6	-5.6	-5.5	-3.1	-7.2	-5.4
26										-6.7				-5.8	-5.9	-5.5	-4.9	-5.2	-5.2	-5.5	-6.3	-6.4	-6.5	-6.3	-4.9	-6.7	-5.8
27	-6.4	-6.6	-7.2	-7.6	-8.1	-8.3	-7.9	-7.6	-7.6	-7.5	-8.1	-7.8	-6.8	-6.4	-5.8	-5.3	-5.1	-5.5	-5.6	-5.7	-5.8	-6.1	-6.5	-6.9	-5.1	-8.3	-6.8
28	-7.4	-8.0	-8.6	-9.0	-9.5	-10.5	-10.0	-10.3	-10.2	-10.1	-9.5	-8.8	-8.2	-7.4	-6.9	-6.3	-6.0	-6.1	-6.0	-5.9	-6.0	-6.3	-7.8	-8.0	-5.9	-10.5	-8.0
29	-8.8	-9.6	-4.7	-2.7	-2.0	-1.2	-0.8	-0.8	-0.9	-0.9	-0.5	-0.5	-0.4	-0.5	-0.6	-0.3	0.0	-0.1	0.2	0.8	1.0	1.4	1.8	2.1	2.1	-9.6	-1.2
30	1.4	1.1	1.6	2.2	1.6	1.6	1.7	1.7	1.6	1.7	2.2	2.2	2.1	2.5	2.4	2.5	2.9	3.1	3.2	3.2	3.3	3.1	3.2	3.2	3.3	1.1	2.3
31	3.6	3.6	3.7	3.7	3.6	3.4	2.6	2.3	3.2	2.9	3.1	2.9	3.5	4.7	4.6	4.6	4.7	5.0	4.9	4.6	4.4	4.7	4.7	4.7	5.0	2.3	3.9
Max.	**4.7**	**4.4**	**4.3**	**4.2**	**3.8**	**3.6**	**4.3**	**4.3**	**5.0**	**4.5**	**3.8**	**3.9**	**4.8**	**5.1**	**5.0**	**5.1**	**4.7**	**5.0**	**4.9**	**4.8**	**5.3**	**4.9**	**5.6**	**4.9**	**5.6**		
Min.	**-15.1**	**-15.0**	**-14.8**	**-14.3**	**-14.4**	**-14.7**	**-15.3**	**-16.1**	**-16.7**	**-16.9**	**-16.5**	**-16.2**	**-16.0**	**-15.5**	**-15.2**	**-15.0**	**-14.8**	**-14.5**	**-14.7**	**-14.9**	**-15.1**	**-15.2**	**-15.4**	**-15.3**		**-16.9**	
Avg.	**-3.1**	**-3.3**	**-3.2**	**-3.4**	**-3.5**	**-3.7**	**-3.8**	**-4.0**	**-4.0**	**-3.9**	**-3.7**	**-3.4**	**-3.0**	**-2.6**	**-2.2**	**-2.0**	**-2.0**	**-2.2**	**-2.3**	**-2.5**	**-2.6**	**-2.7**	**-2.7**	**-2.7**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.8	4.9	4.7	4.5	4.5	4.5	4.4	4.1	3.9	3.5	3.6	4.0	3.6	3.8	3.9	3.9	4.1	4.2	4.1	3.9	3.7	3.5	3.5	3.2	4.9	3.2	4.0
2	3.2	2.3	1.4	1.1	0.9	0.7	0.6	0.7	0.6	0.7	0.9	1.1	1.4	1.6	2.8	2.9	3.5	3.8	3.1	2.6	2.2	2.1	2.6	2.7	3.8	0.6	1.9
3	2.8	2.9	3.0	3.1	2.8	2.4	2.0	1.7	2.2	2.3	2.5	2.7	2.8	2.7	2.7	3.0	3.1	3.3	3.3	3.5	3.5	3.8	3.5	3.4	3.8	1.7	2.9
4	3.4	3.3	3.3	3.3	3.1	3.0	3.1	3.1	3.2	3.1	3.1	3.6	3.5	3.2	3.4	3.8	3.9	3.5	3.0	2.8	2.6	1.6	0.6	-0.2	3.9	-0.2	2.9
5	-1.7	-3.0	-4.1	-5.0	-5.3	-5.6	-5.7	-5.7	-6.5	-6.9	-6.3	-5.7	-5.3	-4.7	-4.3	-4.1	-3.7	-3.4	-3.7	-3.6	-3.6	-3.9	-4.7	-4.9	-1.7	-6.9	-4.6
6	-5.0	-5.1	-5.4	-5.6	-6.5	-6.5	-6.3	-6.9	-7.0	-6.5	-6.4	-6.1	-6.1	-5.5	-4.6	-3.8	-3.6	-3.1	-3.6	-3.9	-4.1	-4.1	-4.3	-4.9	-3.1	-7.0	-5.2
7	-5.6	-6.1	-6.6	-7.2	-7.5	-7.8	-8.1	-8.6	-8.9	-8.7	-8.3	-7.7	-6.9	-5.7	-4.6	-3.7	-3.0	-2.5	-3.0	-2.9	-3.2	-3.7	-4.5	-5.0	-2.5	-8.9	-5.8
8	-5.0	-5.2	-5.2	-5.2	-5.1	-6.1	-6.9	-7.1	-7.3	-7.1	-6.0	-4.7	-3.7	-2.5	-1.4	-1.2	-1.4	-1.7	-1.8	-2.0	-2.4	-2.4	-2.8	-3.7	-1.2	-7.3	-4.1
9	-4.1	-4.7	-5.5	-6.3	-6.4	-7.0	-7.3	-7.5	-8.2	-8.7	-8.5	-7.9	-6.7	-5.7	-4.9	-4.2	-3.1	-3.0	-3.0	-2.9	-3.3	-3.6	-3.9	-4.9	-2.9	-8.7	-5.5
10	-5.8	-6.3	-6.4	-6.5	-6.9	-7.1	-7.5	-8.3	-8.9	-9.0	-8.4	-7.5	-6.8	-5.9	-2.6	-7.2	0.0	-1.8	-4.0	-3.9	-4.4	-4.8	-5.9	-6.3	0.0	-9.0	-5.9
11	-6.6	-7.0	-7.4	-8.0	-8.8	-9.7	-10.2	-10.8	-11.1	-11.6	-11.4	-10.5	-9.3	-8.6	-7.8	-6.6	-5.5	-4.8	-4.7	-4.9	-5.5	-5.9	-6.6	-7.1	-4.7	-11.6	-7.9
12	-7.9	-8.5	-9.0	-9.5	-9.7	-9.9	-10.5	-10.5	-10.8	-10.5	-9.9	-8.7	-7.6	-6.4	-5.1	-3.8	-2.9	-2.2	-1.9	-2.0	-2.6	-3.0	-3.5	-3.8	-1.9	-10.8	-6.7
13	-3.9	-4.4	-4.8	-3.9	-2.8	-2.3	-2.2	-2.0	-2.0	-1.9	-0.8	-0.8	-0.7	-0.4	0.3	2.3	2.9	3.3	3.6	3.3	3.2	3.4	3.5	3.3	3.6	-4.8	-0.2
14	2.8	2.1	1.9	1.6	1.4	1.1	1.0	0.9	0.8	0.8	1.0	1.2	1.5	1.8	2.5	2.6	2.8	2.8	2.9	3.0	2.8	3.0	2.7	2.4	3.0	0.8	2.0
15	2.4	2.4	2.1	2.0	1.8	1.7	1.8	2.2	2.0	2.1	1.4	0.7	1.0	2.1	2.7	3.9	4.0	3.9	3.4	2.4	1.5	0.4	-1.3	-3.1	4.0	-3.1	1.8
16	-4.1	-4.8	-5.7	-6.2	-6.7	-6.9	-7.7	-8.2	-9.1	-8.2	-8.3	-8.0	-7.3	-6.1	-5.2	-4.3	-3.3	-3.5	-3.4	-3.7	-3.9	-3.9	-3.1	-2.7	-2.7	-9.1	-5.6
17	-2.6	-2.1	-1.0	-0.2	0.0	0.2	0.2	0.3	0.1	0.2	0.7	1.3	2.0	1.9	1.9	2.4	2.4	2.2	2.3	2.0	1.4	1.5	1.5	1.5	2.4	-2.6	0.8
18	1.7	2.1	2.3	2.6	2.2	1.7	1.3	0.3	-1.0	-0.1	1.4	2.5	2.9	3.3	3.6	3.5	3.6	3.3	3.1	2.8	2.5	2.1	1.6	1.1	3.6	-1.0	2.1
19	0.9	0.5	1.6	2.0	2.0	1.7	1.9	1.6	0.7	1.4	2.4	2.8	2.7	2.6	2.7	2.9	3.0	3.0	3.1	3.2	3.0	2.8	2.2	1.9	3.2	0.5	2.2
20	2.0	2.4	2.5	2.4	2.3	2.2	2.3	2.2	2.6	3.0	3.1	3.3	3.4	3.3	3.0	3.2	3.2	3.3	2.9	2.8	2.7	2.6	2.7	2.8	3.4	2.0	2.8
21	2.8	2.8	2.8	2.9	2.9	2.8	2.8	2.7	2.8	2.9	3.0	3.1	3.4	3.7	4.0	4.0	3.9	3.7	4.1	3.8	3.6	3.2	2.9	2.6	4.1	2.6	3.2
22	2.4	2.2	2.0	2.1	1.6	1.3	1.3	1.1	1.3	1.6	2.4	3.4	4.8	6.1	6.9	7.4	7.4	8.2	8.8	8.6	7.6	5.5	2.9	1.5	8.8	1.1	4.1
23	0.6	0.7	3.1	5.2	5.9	4.5	3.3	3.3	3.0	3.4	4.3	5.6	6.6	7.8	8.5	9.1	9.5	9.9	9.9	9.7	8.9	8.6	8.2	8.0	9.9	0.6	6.1
24	7.8	6.9	5.4	3.8	2.9	2.1	2.2	1.3	0.5	0.6	1.0	1.3	2.0	2.2	2.5	2.6	3.2	3.7	3.5	3.8	4.0	3.8	3.5	2.9	7.8	0.5	3.1
25	3.9	3.2	1.6	0.3	-0.1	-0.3	-0.6	-0.7	-0.9	-1.2	-0.9	-0.4	0.5	1.0	0.9	0.9	0.8	0.8	0.8	0.6	-0.1	-0.6	-1.1	-1.6	3.9	-1.6	0.3
26	-1.7	-1.9	-2.5	-2.8	-3.2	-3.5	-3.6	-3.7	-4.0	-4.3	-4.6	-4.6	-4.1	-3.6	-3.2	-2.4	-2.1	-1.4	-1.2	-0.9	-0.6	-0.3	-0.4	-0.4	-0.3	-4.6	-2.5
27	-0.5	-0.4	-0.5	-0.5	-0.6	-0.7	-1.0	-1.1	-1.2	-1.2	-0.9	-0.7	-0.8	-0.8	-0.5	0.1	0.5	0.4	0.6	0.5	0.3	0.2	-0.2	-0.9	0.6	-1.2	-0.4
28	-1.0	-1.0	-0.9	-1.1	-1.6	-1.9	-2.4	-2.5	-2.7	-2.4	-2.2	-2.2	-1.7	-1.4	-1.1	-0.8	0.3	0.8	0.8	0.8	0.6	0.5	0.3	0.1	0.8	-2.7	-0.9
29	0.1	0.0	-0.3	-0.5	-0.8	-1.0	-1.1	-1.4	-1.0	-0.7	-0.9	-0.3	0.5	1.5	2.1	2.6	3.0	3.5	3.7	3.8	3.9	2.8	2.2	1.5	3.9	-1.4	1.0
30	1.2	0.6	0.5	0.5	0.2	0.0	0.0	-0.2	-0.1	0.5	1.2	2.0	2.6	3.3	4.6	5.2	5.0	4.8	5.7	5.9	5.5	4.9	4.0	3.0	5.9	-0.2	2.5
Max.	**7.8**	**6.9**	**5.4**	**5.2**	**5.9**	**4.5**	**4.4**	**4.1**	**3.9**	**3.5**	**4.3**	**5.6**	**6.6**	**7.8**	**8.5**	**9.1**	**9.5**	**9.9**	**9.9**	**9.7**	**8.9**	**8.6**	**8.2**	**8.0**	**9.9**		
Min.	**-7.9**	**-8.5**	**-9.0**	**-9.5**	**-9.7**	**-9.9**	**-10.5**	**-10.8**	**-11.1**	**-11.6**	**-11.4**	**-10.5**	**-9.3**	**-8.6**	**-7.8**	**-7.2**	**-5.5**	**-4.8**	**-4.7**	**-4.9**	**-5.5**	**-5.9**	**-6.6**	**-7.1**		**-11.6**	
Avg.	**-0.4**	**-0.7**	**-0.9**	**-1.0**	**-1.3**	**-1.6**	**-1.8**	**-2.0**	**-2.2**	**-2.1**	**-1.7**	**-1.2**	**-0.7**	**-0.2**	**0.5**	**0.8**	**1.4**	**1.5**	**1.4**	**1.3**	**1.0**	**0.7**	**0.2**	**-0.2**			**-0.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.8	2.0	1.6	2.1	2.2	1.8	1.2	1.3	1.6	1.8	2.2	2.5	3.1	3.1	3.1	3.7	4.3	4.6	4.8	5.0	5.0	4.9	4.8	4.2	5.0	1.2	3.1
2	4.1	4.1	2.7	2.3	2.0	1.6	1.3	1.6	1.4	1.5	1.6	1.2	1.7	3.1	3.9	4.0	3.5	4.8	5.0	4.5	4.7	3.8	3.4	2.7	5.0	1.2	2.9
3	2.4	2.2	2.6	2.5	2.5	2.6	1.9	1.6	2.3	3.6	5.7	6.8	6.9	7.2	7.2	7.3	7.4	7.1	7.1	7.1	6.7	4.9	4.7	4.7	7.4	1.6	4.8
4	4.7	4.5	4.9	4.5	4.5	4.6	4.5	4.8	5.4	5.7	5.9	6.0	6.3	6.3	6.6	6.9	7.3	8.1	8.2	8.5	8.5	7.7	6.9	6.4	8.5	4.5	6.2
5	6.0	5.3	5.1	5.1	5.1	5.0	5.2	5.4	5.5	5.5	5.7	5.8	6.4	6.7	7.0	7.4	7.9	8.0	8.3	8.3	8.0	7.5	6.1	4.5	8.3	4.5	6.3
6	3.7	4.9	5.2	3.9	3.1	2.9	4.7	5.1	4.9	4.7	4.8	5.0	5.2	5.1	4.9	5.2	5.6	5.9	5.8	5.7	5.1	5.0	4.8	5.0	5.9	2.9	4.8
7	5.2	5.5	5.7	5.8	6.0	6.2	5.7	5.1	5.2	5.8	5.8	5.2	5.5	5.8	6.2	6.2	6.6	6.8	7.0	7.4	7.4	7.6	6.3	5.8	7.6	5.1	6.1
8	5.6	5.4	5.5	5.4	5.6	5.8	6.0	5.8	5.8	5.9	6.0	6.1	6.1	6.4	6.5	6.3	6.7	6.8	6.7	6.6	6.5	6.4	6.7	6.5	6.8	5.4	6.1
9	6.1	5.9	5.8	5.7	5.8	5.7	5.6	5.6	5.9	6.1	6.4	6.4	6.2	6.8	7.7	7.8	7.8	7.7	8.1	8.3	7.2	6.4	6.1	5.7	8.3	5.6	6.5
10	4.5	4.5	4.7	4.8	4.6	4.3	4.0	4.2	4.5	5.3	5.5	6.0	6.9	7.7	8.0	8.2	8.8	8.8	9.1	9.1	9.2	8.6	8.2	7.9	9.2	4.0	6.6
11	7.2	6.7	6.7	6.3	7.7	7.1	7.4	8.0	8.2	8.5	6.6	6.7	8.1	8.1	8.5	9.2	9.0	8.6	8.9	8.1	7.9	7.6	7.1	6.6	9.2	6.3	7.7
12	6.4	6.0	5.8	5.8	5.9	5.6	5.4	5.5	5.3	5.0	5.0	5.4	5.7	6.0	6.3	5.6	5.6	5.4	5.1	5.1	5.1	5.1	5.3	5.2	6.4	5.0	5.5
13	5.2	5.2	5.0	4.4	4.1	4.0	3.4	3.4	3.9	5.0	5.2	5.2	5.3	5.6	6.0	5.8	5.5	5.5	5.2	4.9	5.4	4.0	4.7	4.9	6.0	3.4	4.9
14	5.0	5.9	6.0	5.9	6.1	5.9	6.0	6.2	6.4	6.6	6.2	6.1	5.7	6.6	8.0	8.5	8.9	9.0	9.1	8.7	8.7	8.3	7.5	6.7	9.1	5.0	7.0
15	5.0	4.4	4.5	5.0	5.0	5.2	5.3	6.0	6.6	7.2	6.9	6.8	6.9	7.0	7.1	7.0	7.3	7.0	6.7	6.3	6.0	6.1	5.7	5.4	7.3	4.4	6.1
16	4.7	5.5	5.2	5.5	5.1	5.4	5.2	5.2	5.0	4.9	5.1	5.3	5.4	5.4	5.5	5.9	6.0	6.1	6.1	6.0	5.7	5.2	2.7	0.6	6.1	0.6	5.1
17	-0.5	2.8	4.5	4.6	4.3	3.9	4.2	4.6	5.4	6.4	7.6	8.3	9.3	9.9	9.7	9.1	9.2	9.0	8.3	7.8	7.6	6.8	6.2	5.7	9.9	-0.5	6.4
18	5.0	4.9	5.3	5.3	5.2	5.4	5.4	5.3	5.2	5.2	5.4	5.2	5.3	5.3	5.3	5.6	6.0	6.2	6.0	5.9	5.9	5.8	5.6	5.3	6.2	4.9	5.5
19	5.1	4.9	4.9	4.5	2.5	1.6	2.2	3.7	5.3	6.3	7.5	8.4	9.2	9.9	10.6	10.8	11.0	10.9	10.7	10.1	9.3	8.3	7.3	6.8	11.0	1.6	7.2
20	6.8	6.4	6.5	6.4	6.6	5.5	5.3	6.1	7.4	8.6	10.3	11.3	12.3	13.4	14.4	15.1	15.0	13.9	13.7	13.7	12.6	10.8	7.9	5.2	15.1	5.2	9.8
21	3.7	2.9	2.5	1.7	3.9	6.0	5.9	6.4	7.7	9.1	10.5	10.6	9.5	8.5	9.2	9.2	8.9	9.5	9.0	9.3	9.5	9.2	8.6	7.5	10.6	1.7	7.5
22	7.3	7.5	7.9	7.3	6.9	6.4	5.9	6.2	6.5	7.5	8.2	9.4	10.8	10.5	9.2	9.0	8.8	7.8	7.4	6.7	6.9	6.8	6.3	6.2	10.8	5.9	7.6
23	5.9	5.6	5.7	5.4	5.3	5.1	5.1	5.2	5.3	5.7	6.0	6.6	7.2	7.3	7.6	7.5	7.2	6.9	6.7	6.7	6.7	6.8	6.7	7.0	7.6	5.1	6.3
24	7.2	6.9	7.1	6.9	6.8	6.7	6.3	6.2	6.2	6.4	6.5	6.2	6.4	6.3	6.2	5.8	6.0	6.3	6.4	6.3	6.1	5.9	4.0	1.9	7.2	1.9	6.1
25	0.8	0.5	0.0	-0.1	-0.4	-0.4	0.8	2.5	5.1	6.3	7.4	8.3	8.5	8.8	8.9	8.9	8.9	8.6	8.5	8.4	8.2	8.1	7.7	7.1	8.9	-0.4	5.5
26	6.7	6.7	6.4	5.8	5.4	5.5	5.4	5.5	6.3	6.9	8.0	9.2	10.3	10.4	10.5	10.8	10.5	9.5	9.1	8.6	8.4	7.6	7.6	7.0	10.8	5.4	7.8
27	6.7	6.6	6.2	5.5	5.3	5.3	5.3	5.6	6.1	6.5	7.2	8.3	9.6	10.5	11.2	12.2	12.8	12.9	13.0	12.7	12.3	11.5	10.7	10.1	13.0	5.3	8.9
28	10.3	10.0	9.4	9.2	8.2	7.9	7.3	6.8	7.0	8.2	9.3	10.7	11.9	13.1	13.9	14.1	14.3	15.0	14.8	14.7	14.1	12.9	12.2	10.9	15.0	6.8	11.1
29	10.4	10.3	10.7	10.4	9.9	9.5	9.4	9.5	9.8	10.7	11.3	12.4	13.4	14.4	13.5	12.9	13.4	14.0	13.7	13.6	12.4	11.5	10.5	8.6	14.4	8.6	11.5
30	7.2	6.6	5.8	5.8	4.9	4.6	5.2	7.7	9.4	10.0	10.1	10.5	10.5	10.6	10.5	9.9	8.8	8.4	9.4	9.3	8.6	8.3	8.0	7.7	10.6	4.6	8.2
31	7.8	7.8	7.5	7.3	7.2	7.0	7.0	6.9	6.9	7.0	7.1	8.0	7.8	7.6	7.3	7.1	7.2	7.1	6.9	6.4	6.4	6.5	6.4	6.4	8.0	6.4	7.1
Max.	**10.4**	**10.3**	**10.7**	**10.4**	**9.9**	**9.5**	**9.4**	**9.5**	**9.8**	**10.7**	**11.3**	**12.4**	**13.4**	**14.4**	**14.4**	**15.1**	**15.0**	**15.0**	**14.8**	**14.7**	**14.1**	**12.9**	**12.2**	**10.9**	**15.1**		
Min.	**-0.5**	**0.5**	**0.0**	**-0.1**	**-0.4**	**-0.4**	**0.8**	**1.3**	**1.4**	**1.5**	**1.6**	**1.2**	**1.7**	**3.1**	**3.1**	**3.7**	**3.5**	**4.6**	**4.8**	**4.5**	**4.7**	**3.8**	**2.7**	**0.6**		**-0.5**	
Avg.	**5.4**	**5.4**	**5.4**	**5.2**	**5.1**	**5.0**	**5.0**	**5.3**	**5.7**	**6.3**	**6.7**	**7.1**	**7.5**	**7.8**	**8.1**	**8.2**	**8.3**	**8.3**	**8.2**	**8.0**	**7.8**	**7.3**	**6.7**	**6.0**			**6.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.9	7.6	8.1	8.0	8.2	8.1	8.4	8.3	8.7	8.9	9.1	9.0	8.8	8.9	8.7	9.1	9.5	9.1	9.0	9.2	8.9	8.8	8.5	8.6	9.5	6.9	8.6
2	8.7	8.5	8.6	8.5	8.4	8.3	8.7	8.7	8.9	9.0	9.7	10.5	10.4	10.6	10.9	10.8	10.8	9.9	9.6	9.9	10.0	9.1	8.6	9.0	10.9	8.3	9.4
3	8.4	8.5	8.4	8.5	8.8	10.1	9.9	9.9	10.6	11.1	11.4	11.6	10.2	8.8	8.5	9.3	9.1	8.2	7.7	7.4	7.1	7.1	7.1	6.7	11.6	6.7	8.9
4	6.1	6.1	4.9	5.5	5.9	5.8	6.0	6.4	6.8	7.4	8.1	8.0	7.9	8.3	8.2	8.5	9.0	9.6	9.4	9.2	9.3	8.8	8.0	7.6	9.6	4.9	7.5
5	7.2	7.0	7.0	6.7	6.5	6.8	6.9	6.8	6.9	7.0	6.7	6.8	6.7	6.7	7.0	6.8	7.0	7.5	7.9	7.7	7.7	7.5	7.0	6.3	7.9	6.3	7.0
6	5.9	6.7	6.1	5.8	5.7	5.7	5.8	6.2	6.8	8.0	9.2	9.8	10.9	11.7	12.4	13.6	14.7	15.2	15.5	14.2	12.8	12.2	11.4	10.3	15.5	5.7	9.9
7	9.8	9.3	9.0	8.4	7.8	7.0	6.3	6.2	6.6	7.0	7.7	7.7	8.4	9.4	10.3	11.7	12.7	9.5	8.5	8.1	7.8	7.7	7.3	7.0	12.7	6.2	8.4
8	6.9	6.9	7.0	7.0	6.6	6.8	7.7	7.6	7.9	7.8	8.4	9.4	10.6	11.7	12.1	13.9	14.1	14.5	13.8	12.7	11.8	10.4	9.9	9.3	14.5	6.6	9.8
9	7.9	7.0	6.3	6.0	5.7	5.3	4.9	4.3	4.6	5.3	6.5	6.9	8.3	9.3	9.9	10.1	10.1	10.1	10.2	9.9	9.0	7.9	7.0	6.4	10.2	4.3	7.5
10	6.1	5.9	5.9	5.7	5.3	5.2	5.0	5.0	5.4	5.6	6.0	6.8	8.1	8.5	9.4	8.5	8.7	8.2	8.0	7.9	7.7	7.5	7.4	7.3	9.4	5.0	6.9
11	7.3	7.2	7.4	6.9	6.3	6.1	6.0	5.8	5.6	5.8	6.8	7.6	7.5	7.2	7.3	7.4	7.3	7.2	7.3	7.1	7.3	7.3	7.1	6.5	7.6	5.6	6.9
12	6.6	6.4	6.0	5.9	5.5	5.2	4.9	4.7	4.9	5.2	6.3	7.8	9.1	9.3	9.9	10.4	10.0	10.1	9.2	7.9	7.1	6.5	5.8	5.4	10.4	4.7	7.1
13	5.3	5.1	4.9	5.0	4.7	4.5	4.5	4.8	5.7	6.2	7.3	7.7	8.6	9.9	9.8	10.8	11.2	12.6	12.8	13.5	13.5	11.2	9.4	10.4	13.5	4.5	8.3
14	10.1	9.1	9.8	9.2	8.9	8.2	8.1	8.0	7.9	8.1	8.3	8.7	9.1	10.2	10.7	11.3	12.1	12.6	10.9	10.9	10.7	10.8	9.7	9.9	12.6	7.9	9.7
15	11.4	11.5	11.2	10.7	9.3	8.0	7.3	7.0	7.3	7.0	7.9	8.9	10.2	11.4	11.8	12.8	13.7	14.3	13.7	12.9	12.9	12.4	11.7	10.4	14.3	7.0	10.7
16	10.4	10.3	10.0	9.6	9.1	8.7	8.2	8.4	8.7	9.8	10.9	11.9	11.6	12.8	14.6	15.7	15.0	14.4	14.0	14.0	13.5	12.2	10.2	7.9	15.7	7.9	11.3
17	6.5	7.3	7.1	6.0	4.9	9.3	11.1	11.6	12.2	12.9	13.3	11.6	10.6	10.8	10.5	10.3	10.5	10.1	11.1	10.7	9.6	9.4	8.9	8.6	13.3	4.9	9.8
18	8.2	7.6	7.2	6.5	5.8	6.0	7.5	10.7	11.0	11.0	10.6	11.8	13.9	15.4	13.9	13.1	12.3	12.4	12.6	12.9	12.4	11.4	9.7	7.5	15.4	5.8	10.5
19	6.0	5.3	4.8	4.3	4.2	6.7	10.3	10.6	10.8	10.8	12.3	13.3	11.5	11.3	10.8	11.1	11.1	11.1	11.1	10.8	10.1	9.5	9.2	8.9	13.3	4.2	9.4
20	8.9	8.5	8.2	8.1	7.9	7.6	7.9	8.0	8.1	8.5	9.1	9.8	10.4	10.5	10.0	10.0	10.1	10.2	10.2	10.5	10.0	9.5	9.6	9.6	10.5	7.6	9.2
21	9.7	9.6	9.4	9.2	9.2	8.3	9.2	9.4	9.6	10.1	10.3	10.7	11.3	11.5	12.1	12.1	12.9	12.8	12.7	12.5	12.7	12.6	11.7	9.3	12.9	8.3	10.8
22	6.9	6.9	6.1	6.4	7.0	7.0	7.5	9.4	10.1	10.1	10.5	10.8	10.2	10.1	10.0	9.9	10.3	10.8	11.1	11.0	10.8	10.4	10.2	10.0	11.1	6.1	9.3
23	9.6	9.5	9.3	9.0	9.1	9.0	9.0	9.0	9.4	9.9	10.3	10.7	11.2	11.0	11.2	10.9	10.8	10.7	10.7	10.8	10.5	10.2	9.7	8.9	11.2	8.9	10.0
24	8.0	8.4	9.4	9.3	9.0	8.9	8.8	8.9	9.2	9.5	9.8	9.3	8.9	8.7	8.6	8.7	9.0	9.9	10.0	9.9	10.0	10.2	10.6	10.9	10.9	8.0	9.3
25	11.2	11.2	10.7	9.5	9.5	10.5	10.8	10.4	10.3	10.9	11.7	11.9	12.0	12.6	12.4	12.6	12.7	12.8	12.8	12.5	12.3	12.6	11.6	10.5	12.8	9.5	11.5
26	10.4	10.4	10.3	10.3	10.4	10.4	9.6	10.7	11.1	11.2	11.7	11.8	12.2	12.9	13.4	13.4	13.7	13.7	13.6	13.4	13.2	12.9	12.9	13.1	13.7	9.6	11.9
27	13.0	12.7	11.1	9.8	9.5	9.4	9.4	9.3	8.5	8.1	7.8	8.2	8.3	8.9	9.6	10.2	11.4	10.9	10.3	10.0	9.7	9.6	9.1	7.2	13.0	7.2	9.7
28	5.5	5.8	5.1	4.8	3.9	4.7	6.9	9.4	9.8	9.8	11.0	11.5	12.0	12.8	13.6	13.5	12.4	12.1	12.0	11.0	9.6	9.8	9.8	9.3	13.6	3.9	9.4
29	8.8	9.0	9.3	9.4	9.4	9.4	9.4	9.7	9.4	9.1	9.1	9.0	9.3	9.4	9.8	10.2	10.2	10.0	10.4	10.5	10.4	10.0	9.8	9.7	10.5	8.8	9.6
30	9.5	9.1	8.4	6.3	5.0	3.7	3.4	5.1	7.5	9.4	10.2	10.7	11.0	11.1	11.5	11.8	11.7	11.8	11.7	12.0	12.2	11.5	9.2	6.7	12.2	3.4	9.2
Max.	**13.0**	**12.7**	**11.2**	**10.7**	**10.4**	**10.5**	**11.1**	**11.6**	**12.2**	**12.9**	**13.3**	**13.3**	**13.9**	**15.4**	**14.6**	**15.7**	**15.0**	**15.2**	**15.5**	**14.2**	**13.5**	**12.9**	**12.9**	**13.1**	**15.7**		
Min.	**5.3**	**5.1**	**4.8**	**4.3**	**3.9**	**3.7**	**3.4**	**4.3**	**4.6**	**5.2**	**6.0**	**6.8**	**6.7**	**6.7**	**7.0**	**6.8**	**7.0**	**7.2**	**7.3**	**7.1**	**7.1**	**6.5**	**5.8**	**5.4**		**3.4**	
Avg.	**8.2**	**8.1**	**7.9**	**7.5**	**7.3**	**7.4**	**7.7**	**8.0**	**8.3**	**8.7**	**9.3**	**9.7**	**10.0**	**10.4**	**10.6**	**10.9**	**11.1**	**11.1**	**10.9**	**10.7**	**10.3**	**9.9**	**9.3**	**8.6**			**9.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.8	5.1	4.5	4.0	3.6	3.3	3.4	6.1	9.2	10.7	11.3	12.0	12.1	11.3	12.1	12.8	12.3	12.1	12.1	12.2	11.6	10.0	10.2	10.7	12.8	3.3	9.1
2	10.4	10.1	10.0	9.8	9.7	9.6	9.7	10.0	10.3	10.0	10.7	11.5	11.5	11.7	12.4	12.0	11.7	11.8	12.4	12.2	11.5	11.3	11.2	11.1	12.4	9.6	11.0
3	10.2	9.3	9.8	12.7	13.9	13.8	13.3	12.7	10.9	10.6	11.1	11.5	11.9	12.3	12.1	12.1	11.2	11.6	11.2	11.0	10.6	10.2	10.1	9.9	13.9	9.3	11.4
4	9.6	9.9	10.0	10.3	10.6	9.8	10.0	10.6	10.5	10.6	10.7	11.4	11.6	11.7	12.6	12.0	11.6	11.1	10.8	11.3	11.3	11.2	11.3	11.1	12.6	9.6	10.9
5	10.8	10.7	10.4	10.3	10.6	10.3	9.9	10.5	11.2	12.2	13.5	14.6	15.2	15.5	15.1	16.0	15.7	15.8	15.7	15.9	14.9	14.5	13.8	11.1	16.0	9.9	13.1
6	10.1	10.6	9.8	9.5	9.1	9.3	10.0	11.3	12.6	12.6	13.3	14.1	14.4	14.6	13.1	13.8	13.0	12.6	12.6	12.7	12.2	11.9	11.6	11.1	14.6	9.1	11.9
7	11.4	11.8	11.7	11.4	11.1	10.2	9.2	9.2	9.2	9.3	9.2	9.7	10.1	10.6	11.1	11.4	11.5	11.6	11.5	11.3	10.9	10.8	10.0	9.0	11.8	9.0	10.5
8	8.4	8.1	8.4	8.3	9.3	10.4	10.4	10.4	10.7	10.9	11.3	11.3	11.7	11.4	12.4	13.0	13.3	13.6	13.6	13.2	12.5	12.2	11.8	11.3	13.6	8.1	11.2
9	10.7	10.0	9.9	9.9	9.6	9.5	9.6	9.7	10.8	12.3	12.8	13.5	13.3	12.9	12.6	12.0	11.8	12.3	12.5	12.9	13.2	12.8	12.8	12.7	13.5	9.5	11.7
10	12.5	12.6	12.6	12.3	12.0	11.9	11.8	11.6	11.5	11.3	10.9	11.1	10.7	10.7	11.0	11.0	11.5	11.3	10.9	10.6	10.3	10.1	10.0	10.0	12.6	10.0	11.3
11	10.0	10.1	10.0	10.1	10.0	9.9	9.7	9.6	10.2	10.3	10.5	10.8	10.9	11.3	12.0	12.6	12.9	13.0	12.5	12.2	11.8	11.5	10.4	6.8	13.0	6.8	10.8
12	5.2	4.0	4.5	4.7	3.5	3.9	6.4	9.2	10.2	10.9	11.2	11.4	11.7	11.8	11.9	12.0	12.1	11.8	12.0	11.4	11.4	11.2	11.1	11.0	12.1	3.5	9.4
13	10.5	10.5	10.4	10.3	10.1	10.1	10.1	9.6	9.8	10.3	10.7	10.8	10.7	10.4	10.3	10.3	10.3	10.3	10.2	10.2	10.1	10.1	10.0	9.8	10.8	9.6	10.2
14	9.6	9.8	9.5	9.7	9.8	9.8	9.7	10.0	10.1	10.4	11.4	11.3	11.7	12.0	11.9	12.2	12.5	12.5	12.4	12.2	12.3	11.9	11.5	11.2	12.5	9.5	11.1
15	11.1	11.0	10.6	10.9	10.9	11.0	10.8	10.7	10.9																11.1	10.6	10.9
16	12.9	12.4	11.7	11.6	11.8	11.7	11.7	11.2	10.8	10.8	10.7	10.6	11.1	11.0	11.2	11.3	11.2	11.3	11.4	11.4	11.4	11.4	11.4	11.3	12.9	10.6	11.4
17	11.4	11.1	10.7	10.3	9.0	7.7	7.4	7.2	7.2	7.7	8.5	9.8	9.4	9.9	10.0	10.4	9.3	9.5	10.5	10.2	9.7	9.5	9.2	9.1	11.4	7.2	9.4
18	8.8	8.5	8.5	8.1	8.2	7.9	7.8	7.7	7.9	8.4	9.1	10.0	11.5	12.1	12.4	12.4	12.7	12.6	12.6	12.0	10.8	10.2	9.8	9.3	12.7	7.7	10.0
19	8.9	9.1	8.9	8.7	8.7	8.6	8.8	9.5	10.2	10.7	12.0	13.3	14.2	15.2	16.3	16.9	17.2	17.4	16.4	15.6	15.5	14.4	13.4	12.1	17.4	8.6	12.6
20	11.9	11.1	11.5	11.5	11.3	11.2	11.4	11.5	11.7	12.6	12.6	11.1	10.2	9.9	10.2	10.8	10.6	10.5	10.4	10.4	10.1	9.4	9.4	9.4	12.6	9.4	10.9
21	9.6	9.5	8.9	8.3	8.4	8.1	7.9	7.8	8.3	9.0	9.8	10.4	10.8	11.0	10.7	11.5	11.6	12.4	13.0	12.4	12.2	11.5	11.0	10.6	13.0	7.8	10.2
22	10.4	9.9	9.5	9.4	9.1	8.9	8.8	9.2	9.6	10.4	10.9	11.0	10.6	10.3	10.1	10.1	9.7	9.9	10.1	9.8	9.8	9.6	8.9	8.3	11.0	8.3	9.8
23	7.9	7.7	8.1	7.9	8.1	8.1	8.1	8.4	8.8	10.5	11.5	11.0	11.6	12.1	12.5	12.4	12.2	11.7	11.5	11.2	10.4	9.9	9.4	9.3	12.5	7.7	10.0
24	8.1	7.4	7.5	7.0	7.3	7.3	7.5	7.9	8.1	8.5	8.9	9.5	10.4	11.3	12.6	13.5	13.7	13.1	13.1	12.8	12.8	11.9	10.3	9.1	13.7	7.0	10.0
25	8.7	9.4	10.6	11.5	11.8	12.4	12.9	12.6	13.0	12.6	15.3	15.1	16.3	17.1	18.3	19.4	20.3	20.0	16.5	15.4	14.4	14.3	13.8	12.2	20.3	8.7	14.3
26	11.5	10.8	10.0	11.0	12.4	12.1	11.1	10.4	10.1	10.4	10.9	11.9	11.7	11.3	10.9	11.2	11.7	12.3	12.5	12.3	11.8	11.3	11.0	10.5	12.5	10.0	11.3
27	10.2	9.7	9.8	9.9	9.6	9.6	9.4	9.2	9.2	9.3	9.3	10.0	10.2	10.4	10.8	10.7	10.9	11.0	11.3	11.6	11.1	10.4	8.4	8.4	11.6	8.4	10.0
28	8.1	8.2	9.8	10.1	9.9	9.8	10.0	10.3	11.1	11.8	12.9	13.5	14.5	16.3	17.3	17.4	17.5	18.3	18.1	17.7	17.8	16.9	16.3	15.7	18.3	8.1	13.7
29	15.4	14.6	14.1	14.2	13.7	13.4	13.2	13.3	14.5	15.4	16.4	17.8	19.3	20.0	21.2	21.9	22.2	22.1	21.5	21.2	20.2	19.0	18.0	18.0	22.2	13.2	17.5
30	17.5	16.8	16.1	15.5	14.9	14.5	14.4	14.6	15.0	15.5	16.1	16.5	17.3	17.8	18.9	20.3	21.0	21.2	20.7	20.1	19.4	18.4	17.3	16.7	21.2	14.4	17.4
31	16.3	16.2	15.6	15.4	14.4	13.6	13.4	13.3	13.2	13.4	13.8	15.0	16.0	16.9	17.2	18.0	18.3	18.3	19.3	19.9	18.9	17.9	16.6	16.5	19.9	13.2	16.1
Max.	**17.5**	**16.8**	**16.1**	**15.5**	**14.9**	**14.5**	**14.4**	**14.6**	**15.0**	**15.5**	**16.4**	**17.8**	**19.3**	**20.0**	**21.2**	**21.9**	**22.2**	**22.1**	**21.5**	**21.2**	**20.2**	**19.0**	**18.0**	**18.0**	**22.2**		
Min.	**5.2**	**4.0**	**4.5**	**4.0**	**3.5**	**3.3**	**3.4**	**6.1**	**7.2**	**7.7**	**8.5**	**9.5**	**9.4**	**9.9**	**10.0**	**10.1**	**9.3**	**9.5**	**10.1**	**9.8**	**9.7**	**9.4**	**8.4**	**6.8**		**3.3**	
Avg.	**10.5**	**10.2**	**10.1**	**10.1**	**10.1**	**9.9**	**9.9**	**10.2**	**10.5**	**11.0**	**11.6**	**12.0**	**12.4**	**12.7**	**13.0**	**13.4**	**13.4**	**13.4**	**13.3**	**13.1**	**12.7**	**12.2**	**11.7**	**11.1**			**11.6**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	15.7	15.2	14.4	13.4	12.5	11.7	11.2	10.9	11.0	12.7	13.8	13.7	12.9	11.8	11.6	12.0	11.7	11.6	11.7	12.4	12.6	12.5	12.5	12.3	15.7	10.9	12.6
2	12.4	12.1	11.8	11.5	11.6	11.2	11.2	11.5	11.7	11.8	12.1	12.3	12.4	12.4	13.0	12.1	12.2	12.2	12.0	11.9	11.8	11.5	11.3	11.3	13.0	11.2	11.9
3	10.9	10.8	10.5	10.6	11.0	11.1	11.1	11.3	11.2	11.4	11.8	11.8	12.0	12.1	12.5	13.0	12.8	13.1	12.4	12.2	11.9	11.8	11.7	11.8	13.1	10.5	11.7
4	11.6	11.4	11.5	11.5	11.1	10.4	9.8	10.8	11.1	11.4	11.6	11.6	11.7	12.1	11.9	11.9	11.7	11.8	11.4	10.9	10.4	10.5	10.3	10.3	12.1	9.8	11.2
5	10.2	10.3	10.2	10.3	9.9	9.8	9.5	9.5	10.0	11.5	12.5	13.4	13.9	14.8	14.4	14.2	13.4	13.3	13.5	13.7	13.6	13.2	13.1	12.5	14.8	9.5	12.1
6	12.3	11.9	11.8	10.4	10.0	9.9	9.2	8.3	10.4	11.6	13.8	15.0	16.3	17.2	17.7	18.2	19.0	19.6	19.1	18.2	17.6	17.2	15.0	13.1	19.6	8.3	14.3
7	12.0	12.1	12.7	12.4	12.5	11.6	12.0	12.0	12.8	13.8	14.5	15.7	16.9	18.1	18.9	19.5	19.7	19.9	19.4	18.9	17.9	16.0	14.9	13.7	19.9	11.6	15.3
8	11.9	9.5	7.8	7.3	7.2	6.7	7.3	9.0	11.7	13.8	14.7	16.1	15.1	15.1	15.4	15.6	15.9	15.7	15.3	14.9	13.9	10.6	8.1	7.2	16.1	6.7	11.9
9	6.4	6.1	5.7	5.4	4.7	4.3	7.8	9.2	12.5	13.3	14.5	15.1	16.0	17.5	18.3	16.6	14.7	14.5	13.8	12.7	12.1	12.0	11.4	11.2	18.3	4.3	11.5
10	11.0	11.0	11.1	11.1	11.1	11.1	11.2	11.3	11.3	11.6	11.9	12.1	12.3	12.7	13.2	13.5	13.6	13.4	13.0	12.8	12.5	12.4	12.2	12.1	13.6	11.0	12.1
11	11.9	12.0	11.8	11.8	11.7	11.6	11.4	11.5	11.7	12.1	12.2	12.4	12.5	12.5	13.2	13.5	13.7	13.7	14.0	13.4	12.5	9.6	8.1	7.2	14.0	7.2	11.9
12	6.6	8.9	10.9	11.1	11.2	11.2	11.1	11.8	12.0	12.7	13.8	14.7	14.8	15.1	15.0	15.3	15.1	14.6	14.5	14.3	13.5	13.0	11.4	10.6	15.3	6.6	12.6
13	11.4	12.2	12.2	11.8	11.7	11.5	11.4	11.7	12.1	13.1	14.0	13.8	14.5	14.9	14.1	13.6	13.2	13.1	13.0	12.7	12.5	12.5	11.8	11.1	14.9	11.1	12.7
14	10.6	10.9	10.9	11.6	11.7	11.3	11.5	12.5	11.8	12.1	12.3	12.5	12.7	13.3	13.2	13.5	13.6	14.1	14.5	14.3	13.7	12.8	12.2	12.3	14.5	10.6	12.5
15	12.4	11.8	11.3	10.8	10.6	10.5	10.2	10.0	10.1	10.1	10.3	10.6	10.9	11.0	11.5	11.6	11.5	11.4	11.6	11.5	11.5	11.6	11.9	11.8	12.4	10.0	11.1
16	11.4	10.9	10.5	10.4	10.6	10.7	10.8	11.1	11.3	11.6	11.6	11.3	11.1	11.5	11.8	12.0	12.1	12.3	12.5	12.4	12.1	11.6	11.6	11.1	12.5	10.4	11.4
17	10.9	10.1	10.0	10.8	10.0	9.4	9.6	9.5	9.7	10.8	11.1	10.7	11.1	10.6	11.1	11.6	11.8	12.4	12.5	12.3	11.8	11.9	11.7	10.9	12.5	9.4	10.9
18	11.0	11.3	10.5	9.3	8.1	7.3	6.3	7.4	9.6	11.2	12.3	13.0	13.7	14.2	14.7	15.0	15.0	14.9	14.9	14.0	13.0	12.1	11.6	11.3	15.0	6.3	11.7
19	11.2	10.6	10.4	10.2	9.8	9.1	9.0	9.7	11.0	11.9	12.1	13.4	13.9	14.4	14.9	15.4	15.5	15.3	15.1	14.7	14.2	13.3	13.3	13.8	15.5	9.0	12.6
20	13.2	12.7	12.5	12.7	12.5	12.4	12.5	12.5	12.4	12.3	12.6	13.4	13.4	13.7	14.3	15.1	15.3	15.7	15.4	14.8	14.2	13.4	12.8	12.5	15.7	12.3	13.4
21	12.5	12.5	12.4	13.0	12.8	13.0	12.7	12.4	12.3	12.5	13.0	13.2	12.8	13.0	13.8	14.2	13.8	13.7	13.8	12.6	11.9	11.8	11.4	11.1	14.2	11.1	12.8
22	11.2	10.9	10.7	11.1	11.1	10.6	10.1	10.0	10.5	11.5	11.9	12.9	13.7	13.3	13.9	14.6	14.2	13.9	12.8	12.5	13.6	12.5	12.3	12.6	14.6	10.0	12.2
23	12.8	12.7	12.7	12.8	12.8	12.5	12.4	12.2	12.0	12.3	12.8	13.2	13.9	14.3	14.6	13.2	12.9	12.5	12.4	12.4	12.3	11.8	11.6	11.6	14.6	11.6	12.7
24	11.2	10.7	10.8	10.8	11.5	11.8	11.8	12.0	12.1	12.5	12.7	13.9	15.1	15.3	15.5	15.6	16.3	15.9	15.5	14.3	14.0	13.8	12.7	12.1	16.3	10.7	13.2
25	11.9	10.5	10.0	10.9	11.8	11.9	11.6	11.1	11.2	11.3	11.7	12.2	12.8	12.5	12.0	12.0	12.4	12.3	12.2	12.0	11.7	11.9	11.7	11.6	12.8	10.0	11.7
26	11.7	11.6	11.4	10.7	10.8	11.2	10.9	11.1	11.5	12.1	12.9	13.1	13.4	13.3	13.3	13.0	12.8	13.0	12.7	12.5	12.1	11.8	11.7	11.3	13.4	10.7	12.1
27	10.4	9.3	9.0	9.1	8.2	7.8	7.5	9.8	10.7	11.0	11.1	11.6	11.7	12.5	13.3	13.5	13.2	13.2	13.0	12.5	11.6	11.3	11.2	11.7	13.5	7.5	11.0
28	11.9	11.9	11.6	11.7	11.1	11.2	11.3	11.5	11.6	11.6	12.7	12.7	13.4	13.4	13.8	14.2	13.8	13.4	12.9	12.7	12.3	11.3	11.2	11.1	14.2	11.1	12.3
29	11.4	11.6	11.7	10.9	10.5	10.4	10.2	10.1	10.6	11.8	13.0	14.5	15.7	16.6	16.9	17.0	16.6	16.0	14.9	13.5	12.5	11.5	10.9	10.3	17.0	10.1	12.9
30	10.3	9.7	9.5	9.6	9.8	9.9	10.1	10.1	10.4	11.1	11.9	13.2	13.9	13.5	12.7	12.9	12.9	11.9	11.7	11.9	11.9	12.5	12.3	12.3	13.9	9.5	11.5
31	12.3	12.5	12.2	11.6	11.0	10.5	10.7	11.1	11.4	11.6	11.6	11.8	11.9	12.1	12.2	12.1	12.3	12.5	13.0	13.4	13.0	13.0	13.1	13.1	13.4	10.5	12.1
Max.	**15.7**	**15.2**	**14.4**	**13.4**	**12.8**	**13.0**	**12.7**	**12.5**	**12.8**	**13.8**	**14.7**	**16.1**	**16.9**	**18.1**	**18.9**	**19.5**	**19.7**	**19.9**	**19.4**	**18.9**	**17.9**	**17.2**	**15.0**	**13.8**	**19.9**		
Min.	**6.4**	**6.1**	**5.7**	**5.4**	**4.7**	**4.3**	**6.3**	**7.4**	**9.6**	**10.1**	**10.3**	**10.6**	**10.9**	**10.6**	**11.1**	**11.6**	**11.5**	**11.4**	**11.4**	**10.9**	**10.4**	**9.6**	**8.1**	**7.2**		**4.3**	
Avg.	**11.4**	**11.1**	**11.0**	**10.9**	**10.7**	**10.4**	**10.4**	**10.7**	**11.3**	**11.9**	**12.6**	**13.1**	**13.4**	**13.7**	**14.0**	**14.0**	**13.9**	**13.9**	**13.7**	**13.3**	**12.9**	**12.3**	**11.8**	**11.5**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.1	12.9	12.5	12.1	12.7	12.7	12.1	12.1	12.4	12.1	11.9	11.9	12.1	12.5	12.8	12.3	12.0	12.0	12.0	12.0	11.9	12.0	11.8	11.7	13.1	11.7	12.2
2	11.7	11.4	11.4	11.5	11.8	12.0	11.5	11.6	11.4	11.1	10.7	10.6	11.3	11.4	11.7	11.8	11.9	12.0	12.0	11.7	11.3	11.3	11.4	11.1	12.0	10.6	11.5
3	11.2	11.3	11.7	11.9	11.8	11.6	11.4	11.3	11.0	10.2	9.8	10.1	10.4	10.5	10.7	10.5	10.8	11.5	12.0	11.6	10.0	8.1	8.6	8.8	12.0	8.1	10.7
4	9.1	9.6	9.1	9.4	9.3	9.4	9.8	9.9	10.3	10.5	11.5	12.5	12.9	12.1	12.0	11.7	11.5	11.4	11.4	10.8	9.2	7.5	7.4	7.3	12.9	7.3	10.2
5	6.9	7.2	7.5	7.4	6.5	5.3	5.2	6.1	7.7	9.1	10.3	11.7	12.6	13.1	12.8	11.9	10.4	9.9	9.3	9.0	8.5	8.2	8.1	8.0	13.1	5.2	8.9
6	8.1	8.4	9.2	9.9	10.5	10.7	11.5	12.1	12.1	12.6	12.8	12.7	12.0	11.5	11.3	11.5	11.6	11.8	11.7	11.7	11.6	11.6	11.7	11.7	12.8	8.1	11.3
7	12.2	12.9	13.3	13.3	13.3	13.9	13.4	12.4	12.4	12.6	11.9	10.4	11.8	10.7	11.4	11.5	11.6	12.1	11.6	10.8	10.3	10.0	9.5	9.2	13.9	9.2	11.8
8	9.6	9.9	9.4	9.2	9.5	9.0	8.9	9.0	9.2	9.5	10.2	11.1	11.0	11.6	11.6	10.9	10.7	10.5	11.0	11.0	10.7	10.8	10.9	10.8	11.6	8.9	10.3
9	10.9	10.8	11.0	11.4	11.8	12.0	12.0	11.9	11.9	11.9	12.1	12.3	12.3	12.5	11.3	11.4	10.9	10.8	10.9	10.8	10.7	10.8	10.6	10.4	12.5	10.4	11.4
10	9.9	9.6	9.5	9.3	9.1	8.9	8.7	8.6	8.7	9.3	11.0	11.6	12.0	12.1	12.7	12.9	12.9	12.6	12.3	11.7	11.5	11.6	11.4	11.5	12.9	8.6	10.8
11	11.2	10.9	10.5	10.2	10.0	9.9	9.6	9.6	9.7	11.0	11.9	12.6	13.4	14.8	13.0	12.9	12.0	11.2	11.4	11.6	11.8	11.1	10.7	10.6	14.8	9.6	11.3
12	11.1	11.1	11.0	10.5	10.1	10.2	10.3	10.4	10.2	10.2	10.3	10.4	10.6	10.8	11.0	11.1	11.2	11.5	11.7	11.7	11.9	11.9	11.9	11.8	11.9	10.1	10.9
13	11.9	11.9	11.5	11.4	11.3	11.4	11.2	10.9	10.7	10.7	10.7	10.5	10.3	10.0	9.8	10.1	10.4	10.2	10.3	10.4	10.5	10.6	10.6	10.5	11.9	9.8	10.7
14	10.5	10.9	11.2	10.5	10.9	10.4	9.3	9.5	9.7	9.7	10.0	10.4	10.1	9.9	9.8	9.8	9.5	9.8	10.1	9.5	9.3	8.9	8.7	8.6	11.2	8.6	9.9
15	8.5	8.8	8.8	9.6	10.6	10.7	10.7	10.7	10.6	10.2	10.6	10.9	11.1	12.1	-13.9	3.0	10.6	10.7	10.3	9.5	8.8	8.6	8.2	7.8	12.1	-13.9	8.7
16	7.8	8.0	9.1	9.1	9.7	9.1	8.9	9.0	9.0	9.2	9.3	9.7	10.4	11.4	12.1	12.7	12.5	12.2	11.4	11.1	10.8	10.1	10.5	10.4	12.7	7.8	10.1
17	10.3	9.8	9.3	9.5	9.0	8.7	8.5	8.3	8.3	8.4	9.1	9.7	10.2	10.3	10.4	9.9	9.1	8.4	8.1	8.2	8.2	8.5	8.7	8.6	10.4	8.1	9.1
18	8.5	8.4	8.6	8.7	8.8	8.7	9.0	9.2	9.9	10.4	10.9	10.8	11.5	10.8	10.0	9.2	8.6	8.0	7.7	7.6	8.4	9.1	9.4	9.4	11.5	7.6	9.2
19	9.5	8.9	9.2	9.0	8.5	7.6	7.0	7.3	7.5	7.4	7.9	8.1	8.4	8.9	9.4	9.2	9.5	8.9	8.1	8.0	7.8	7.8	7.9	7.5	9.5	7.0	8.3
20	7.6	7.3	7.4	7.4	7.1	7.1	7.2	7.2	6.8	7.2	7.8	7.1	7.2	7.2	7.6	7.8	8.3	8.2	7.6	7.0	5.6	3.9	3.3	3.0	8.3	3.0	6.8
21	2.7	2.9	3.4	4.3	4.7	5.2	5.1	5.6	5.7	6.0	7.7	9.0	10.1	10.5	10.4	9.7	9.5	9.2	8.6	8.2	7.2	6.6	5.0	2.8	10.5	2.7	6.7
22	2.9	3.4	3.4	3.3	3.2	3.3	4.9	5.1	4.7	5.3	6.7	7.9	8.9	9.3	9.2	9.2	9.4	9.4	8.8	7.7	6.6	5.9	5.5	5.6	9.4	2.9	6.2
23	6.0	6.0	5.7	5.6	5.8	5.6	5.4	5.6	5.3	5.7	6.1	6.3	6.9	7.1	7.1	7.2	7.6	8.3	8.1	7.5	6.9	6.4	6.0	5.8	8.3	5.3	6.4
24	5.4	5.3	4.8	5.3	5.8	5.8	5.9	6.4	6.2	6.5	7.4	7.7	7.5	8.2	8.6	8.7	8.8	8.7	8.4	8.3	8.3	8.3	8.6	8.4	8.8	4.8	7.2
25	8.6	8.6	8.3	7.7	7.1	7.7	7.8	8.3	8.0	8.0	8.4	8.1	7.5	8.1	8.0	8.6	8.7	8.8	8.2	7.6	7.2	7.1	8.2	8.3	8.8	7.1	8.0
26	8.4	7.3	6.9	6.9	6.7	6.7	6.6	6.7	6.9	7.3	8.0	9.1	9.5	9.9	10.7	10.2	10.0	9.6	9.5	7.3	5.3	6.0	5.1	6.4	10.7	5.1	7.8
27	6.5	6.5	6.8	7.2	7.3	7.4	6.9	5.8	5.4	5.7	7.1	8.0	9.5	9.9	9.5	8.9	9.0	9.1	8.5	7.6	8.1	8.5	7.9	8.0	9.9	5.4	7.7
28	7.6	6.1	5.1	4.9	4.0	4.8	4.5	5.5	5.4	5.5	7.4	8.5	9.3	10.0	9.7	9.2	8.9	8.9	9.0	8.6	6.6	5.0	4.2	3.7	10.0	3.7	6.8
29	7.6	8.2	8.3	8.5	8.3	8.3	8.2	7.9	7.7	7.8	8.2	8.5	8.6	8.8	9.1	9.2	9.2	8.9	8.5	8.2	5.9	4.8	4.1	3.3	9.2	3.3	7.8
30	3.2	3.3	3.8	4.0	3.9	4.4	4.8	5.0	4.6	5.2	6.4	7.5	8.8	9.3	8.8	8.5	8.3	7.9	6.7	5.5	3.8	4.1	3.8	3.8	9.3	3.2	5.6
Max.	**13.1**	**12.9**	**13.3**	**13.3**	**13.3**	**13.9**	**13.4**	**12.4**	**12.4**	**12.6**	**12.8**	**12.7**	**13.4**	**14.8**	**13.0**	**12.9**	**12.9**	**12.6**	**12.3**	**12.0**	**11.9**	**12.0**	**11.9**	**11.8**	**14.8**		
Min.	**2.7**	**2.9**	**3.4**	**3.3**	**3.2**	**3.3**	**4.5**	**5.0**	**4.6**	**5.2**	**6.1**	**6.3**	**6.9**	**7.1**	**-13.9**	**3.0**	**7.6**	**7.9**	**6.7**	**5.5**	**3.8**	**3.9**	**3.3**	**2.8**		**-13.9**	
Avg.	**8.6**	**8.6**	**8.6**	**8.6**	**8.6**	**8.6**	**8.5**	**8.6**	**8.7**	**8.9**	**9.5**	**9.9**	**10.3**	**10.5**	**9.6**	**10.1**	**10.2**	**10.1**	**9.8**	**9.4**	**8.8**	**8.5**	**8.3**	**8.2**			**9.1**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.0	3.6	2.8	2.8	2.8	2.2	2.2	1.0	0.6	1.7	4.3	6.5	7.1	8.4	9.2	8.6	7.9	7.3	7.7	7.9	7.2	7.1	7.1	5.4	9.2	0.6	5.2
2	4.9	4.8	3.8	3.4	3.1	1.5	1.1	1.6	1.4	4.2	6.4	7.8	8.7	9.1	8.5	8.1	8.0	7.6	7.4	6.7	6.6	6.3	4.7	3.2	9.1	1.1	5.4
3	3.3	3.6	2.8	2.3	2.6	2.4	2.0	1.9	1.9	2.1	2.6	3.3	3.9	3.8	3.3	3.4	3.7	3.5	3.5	3.2	2.7	1.6	1.3	1.0	3.9	1.0	2.7
4	0.7	0.9	1.5	0.6	0.9	0.8	0.9	0.8	0.8	0.9	2.5	4.2	4.8	5.0	4.3	4.2	4.1	3.6	3.0	2.6	1.9	2.9	2.2	1.8	5.0	0.6	2.3
5	1.8	1.3	1.3	1.5	1.7	1.8	1.3	0.9	0.6	0.7	1.6	2.6	2.3	2.2	2.2	2.1	2.3	2.5	2.3	0.5	-0.4	-0.7	-1.2	-1.2	2.6	-1.2	1.2
6	-1.6	-1.4	-1.3	-1.5	-1.6	-1.5	-1.1	-0.3	-0.4	-0.3	0.8	1.9	2.5	2.7	2.8	2.5	2.2	1.9	1.7	1.2	0.9	1.0	0.8	0.6	2.8	-1.6	0.5
7	0.8	0.6	0.7	0.9	0.5	0.6	0.5	0.3	0.1	-0.1	0.3	1.0	1.4	1.8	1.5	1.4	1.7	1.4	1.1	0.8	0.5	0.3	0.2	0.1	1.8	-0.1	0.8
8	0.0	-0.1	-0.1	-0.2	-0.4	-0.4	-0.5	-0.8	-1.0	-0.9	-0.1	0.7	1.2	1.5	1.4	1.7	1.5	1.2	0.5	-0.3	-1.6	-2.2	-3.0	1.6	1.7	-3.0	0.0
9	3.0	3.0	3.0	2.9	2.6	2.1	1.7	1.4	1.7	2.3	2.6	2.4	2.9	3.8	4.3	5.0	5.8	5.8	5.9	6.5	6.8	7.5	7.5	7.7	7.7	1.4	4.1
10	7.8	7.7	7.2	6.9	6.4	6.3	6.2	5.6	5.5	5.9	5.9	6.7	8.1	8.6	8.8	8.6	8.1	7.7	6.7	4.7	3.4	2.6	2.3	3.5	8.8	2.3	6.3
11	6.9	8.6	8.6	8.4	8.6	8.8	8.8	8.8	8.8	8.8	8.7	8.5	7.9	7.1	6.5	6.7	5.4	2.8	1.8	1.4	1.1	0.6	0.1	-0.1	8.8	-0.1	6.0
12	-0.1	-0.2	-0.3	-0.6	-0.8	-0.7	-0.8	-0.8	-0.8	-1.0	-1.0	-0.8	-0.6	0.3	0.5	0.6	0.3	0.3	0.0	-1.0	-1.6	-2.1	-2.4	-2.5	0.6	-2.5	-0.7
13	-2.8	-3.0	-3.0	-2.7	-2.8	-3.0	-3.3	-3.6	-3.7	-3.7	-3.2	-2.3	-0.6	1.5	2.4	2.4	1.8	1.8	2.0	2.4	2.5	2.7	2.3	2.0	2.7	-3.7	-0.6
14	1.1	0.8	1.3	1.6	1.3	1.1	1.0	0.8	0.6	0.6	0.6	0.7	1.1	1.4	1.7	1.9	2.1	2.2	2.1	1.8	1.8	1.1	1.4	1.5	2.2	0.6	1.3
15	1.5	1.3	1.3	0.8	1.0	0.9	1.1	1.3	1.6	1.7	2.4	3.1	3.5	4.0	4.1	3.8	3.4	3.3	2.6	2.2	2.0	2.1	1.8	2.1	4.1	0.8	2.2
16	2.1	1.9	1.9	1.8	1.8	1.7	1.4	1.3	1.4	1.5	1.7	2.0	2.5	2.6	2.4	2.5	2.3	1.9	1.3	0.8	0.6	0.4	0.1	-0.2	2.6	-0.2	1.6
17	-0.3	-0.5	-0.9	-1.2	-1.2	-1.3	-1.5	-1.6	-1.7	-1.9	-1.9	-1.4	-0.3	1.1	2.9	4.9	5.3	5.0	5.0	4.9	5.0	4.6	3.7	4.4	5.3	-1.9	1.3
18	4.6	4.5	4.5	4.7	4.8	4.9	5.4	5.8	5.6	5.6	5.7	5.8	6.3	6.9	6.9	7.1	7.0	5.8	4.8	4.5	3.7	4.7	4.4	4.6	7.1	3.7	5.4
19	3.7	3.1	2.8	2.1	2.2	2.1	2.6	2.7	3.1	3.2	3.5	3.6	4.3	4.8	4.5	4.4	4.2	3.5	2.7	1.9	1.7	1.4	1.3	1.3	4.8	1.3	2.9
20	1.4	1.4	1.3	1.4	1.4	1.3	1.2	1.0	0.7	0.6	0.3	0.2	0.1	-0.2	-0.5	-0.6	-0.7	-1.0	-1.3	-1.3	-1.3	-1.6	-1.7	-1.8	1.4	-1.8	0.0
21	-1.8	-1.7	-1.5	-1.5	-1.6	-1.6	-1.8	-1.8	-1.8	-1.7	-1.7	-1.5	-1.1	-1.0	-1.0	-0.8	-0.7	-0.8	-1.0	-1.2	-1.5	-1.9	-2.4	-2.7	-0.7	-2.7	-1.5
22	-3.0	-3.2	-3.3	-3.8	-4.3	-4.5	-4.6	-4.7	-5.3	-5.6	-5.1	-4.6	-4.1	-3.2	-3.6	-3.2	-3.7	-4.1	-4.5	-4.8	-5.1	-5.7	-5.4	-4.5	-3.0	-5.7	-4.3
23	-2.9	-1.9	-2.4	-2.9	-3.8	-4.3	-4.1	-4.1	-3.9	-3.8	-3.8	-3.9	-3.3	-2.9	-2.3	-2.2	-3.1	-3.8	-4.4	-5.1	-5.4	-5.1	-5.1	-4.9	-1.9	-5.4	-3.7
24	-5.0	-5.0	-4.9	-5.1	-4.9	-4.8	-5.3	-5.7	-6.6	-7.1	-6.9	-6.3	-5.5	-5.1	-4.8	-4.4	-4.0	-4.0	-4.3	-5.1	-5.7	-7.0	-7.1	-7.0	-4.0	-7.1	-5.5
25	-6.1	-5.6	-5.2	-4.8	-4.5	-4.4	-4.0	-4.1	-3.9	-3.9	-3.2	-2.4	-1.7	-0.7	-0.6	-0.8	-0.5	-0.2	0.6	0.9	-0.7	-2.7	-3.1	-3.5	0.9	-6.1	-2.7
26	-1.7	-0.8	0.5	1.2	1.2	0.4	-1.2	-1.6	-3.2	-5.3	-5.2	-4.2	-3.4	-1.7	-0.8	-0.6	-0.6	-0.7	-1.9	-3.2	-3.5	-4.3	-4.7	-4.9	1.2	-5.3	-2.1
27	-5.5	-5.9	-6.2	-6.3	-6.6	-7.1	-7.2	-7.5	-7.6	-7.8	-8.0	-7.9	-7.7	-7.3	-6.9	-7.0	-6.7	-6.5	-6.5	-6.6	-6.6	-7.0	-7.4	-7.3	-5.5	-8.0	-7.0
28	-7.5	-7.8	-8.1	-8.2	-9.6	-11.4	-11.7	-12.0	-12.3	-12.3	-11.9	-9.6	-7.6	-6.9	-5.7	-4.9	-4.9	-4.5	-6.5	-6.3	-5.1	-5.0	-4.1	-4.2	-4.1	-12.3	-7.8
29	-6.1	-7.9	-8.8	-8.7	-8.6	-9.2	-9.5	-9.1	-8.8	-8.7	-7.5	-4.5	-3.2	-2.1	-0.9	0.3	0.6	0.7	0.3	0.7	-0.7	-1.1	-1.2	-1.1	0.7	-9.5	-4.4
30	-1.0	-1.0	-0.9	-0.7	-0.6	-0.4	-0.9	-1.7	-1.6	-0.3	-0.2	0.1	0.3	0.7	1.1	1.3	1.1	0.8	0.0	-0.9	-2.4	-3.6	-4.5	-5.0	1.3	-5.0	-0.8
31	-5.1	-5.2	-5.2	-5.3	-5.7	-5.8	-6.0	-6.0	-6.5	-7.0	-6.0	-5.3	-4.3	-3.6	-3.2	-3.1	-2.9	-1.6	-0.3	-0.5	-1.5	-2.1	-2.4	-2.9	-0.3	-7.0	-4.1
Max.	**7.8**	**8.6**	**8.6**	**8.4**	**8.6**	**8.8**	**8.8**	**8.8**	**8.8**	**8.8**	**8.7**	**8.5**	**8.7**	**9.1**	**9.2**	**8.6**	**8.1**	**7.7**	**7.7**	**7.9**	**7.2**	**7.5**	**7.5**	**7.7**	**9.2**		
Min.	**-7.5**	**-7.9**	**-8.8**	**-8.7**	**-9.6**	**-11.4**	**-11.7**	**-12.0**	**-12.3**	**-12.3**	**-11.9**	**-9.6**	**-7.7**	**-7.3**	**-6.9**	**-7.0**	**-6.7**	**-6.5**	**-6.5**	**-6.6**	**-6.6**	**-7.0**	**-7.4**	**-7.3**		**-12.3**	
Avg.	**-0.1**	**-0.1**	**-0.2**	**-0.3**	**-0.5**	**-0.7**	**-0.8**	**-1.0**	**-1.1**	**-1.0**	**-0.5**	**0.2**	**0.8**	**1.4**	**1.6**	**1.7**	**1.6**	**1.4**	**1.0**	**0.6**	**0.2**	**-0.2**	**-0.5**	**-0.4**			**0.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-4.3	-2.9	-4.8	-5.3	-4.8	-4.8	-4.1	-4.7	-4.8	-3.4	-0.9	-0.3	-0.2	0.4	0.9	1.0	1.5	1.6	1.8	1.6	1.4	1.2	0.8	0.7	1.8	-5.3	-1.4
2	0.7	0.5	0.1	0.1	0.2	0.2	-0.4	-1.1	-1.7	-2.4	-3.3	-3.8	-4.4	-4.8	-5.1	-5.4	-5.8	-6.0	-6.3	-6.5	-7.0	-7.3	-7.6	-8.0	0.7	-8.0	-3.5
3	-8.2	-8.3	-8.6	-8.8	-8.7	-8.9	-8.8	-8.5	-8.7	-8.7	-8.6	-8.0	-7.4	-7.3	-7.0	-6.7	-6.4	-6.7	-7.1	-7.3	-7.5	-7.6	-7.6	-7.6	-6.4	-8.9	-7.9
4	-7.7	-7.8	-7.6	-7.5	-7.5	-7.5	-7.2	-7.2	-7.1	-7.0	-6.8	-6.5	-6.3	-5.9	-5.8	-5.5	-5.7	-5.8	-5.8	-5.7	-5.8	-5.8	-5.8	-5.9	-5.5	-7.8	-6.5
5	-6.1	-6.1	-5.8	-5.6	-5.5	-5.3	-5.2	-5.1	-5.0	-4.8	-4.9	-4.5	-3.9	-3.0	-1.9	-0.8	-0.4	-0.5	0.8	2.5	2.3	2.2	1.9	2.2	2.5	-6.1	-2.6
6	2.4	2.0	1.8	2.6	2.2	2.5	2.1	2.3	2.3	3.1	1.3	1.2	3.3	3.9	4.3	4.1	3.1	1.9	1.7	1.6	1.1	0.4	0.5	0.3	4.3	0.3	2.2
7	-0.3	-1.2	-1.9	-2.6	-3.3	-4.1	-4.8	-5.3	-5.7	-5.9	-6.3	-6.1	-6.0	-5.9	-5.8	-5.7	-5.3	-5.1	-4.8	-4.3	-3.8	-3.3	-3.1	-2.8	-0.3	-6.3	-4.3
8	-2.4	-2.5	-2.5	-2.8	-3.0	-3.2	-3.2	-2.9	-3.0	-3.1	-2.9	-1.9	-0.1	1.3	1.5	1.3	0.9	1.0	1.2	1.2	1.3	1.7	1.6	1.4	1.7	-3.2	-0.8
9	1.5	1.5	1.4	1.7	1.9	2.5	2.7	2.7	2.3	2.1	1.8	2.0	2.0	2.3	2.5	2.5	2.5	2.4	2.2	2.5	2.9	2.9	3.2	3.5	3.5	1.4	2.3
10	4.2	4.4	4.5	4.4	4.6	4.8	6.3	6.6	6.1	3.7	2.2	1.2	2.2	2.2	2.9	4.0	3.7	4.3	4.5	3.3	1.7	1.9	3.1	3.0	6.6	1.2	3.7
11	2.7	3.0	3.6	3.8	3.4	3.2	3.1	2.6	0.9	0.9	0.9	0.8	0.4	0.4	1.1	0.9	1.7	1.4	1.0	1.1	0.9	0.4	0.2	0.2	3.8	0.2	1.6
12	0.0	0.0	-0.2	-0.2	-0.6	-0.6	-1.2	-1.3	-1.6	-1.2	-1.3	-1.0	-1.0	-1.1	-1.3	-1.3	-1.3	-1.2	-1.4	-1.3	-1.4	-1.7	-2.4	-4.4	0.0	-4.4	-1.2
13	-3.4	-3.0	-4.8	-5.7	-6.4	-6.2	-5.6	-5.0	-4.0	-3.8	-2.4	0.4	0.9	1.1	0.9	1.5	1.7	0.9	0.5	0.4	0.1	-0.2	-0.4	-0.9	1.7	-6.4	-1.8
14	-1.2	-1.7	-1.6	-1.6	-3.0	-3.4	-2.9	-4.0	-5.1	-5.6	-6.5	-4.3	-1.8	0.3	0.7	0.7	0.3	0.1	0.0	0.2	0.0	-0.2	-0.7	-0.7	0.7	-6.5	-1.7
15	-0.8	-1.3	-2.2	-2.8	-1.5	-0.9	-1.1	-1.5	-1.5	-2.5	-4.5	-5.3	-4.9	-3.2	-0.8	-0.1	0.3	1.0	0.6	0.4	1.7	2.3	1.8	1.5	2.3	-5.3	-1.1
16	1.8	2.1	1.7	2.4	3.0	2.8	0.8	0.3	0.2	0.5	0.2	0.6	1.1	0.9	1.6	1.0	0.0	-1.1	-2.1	-3.0	-2.9	-2.8	-2.4	-2.8	3.0	-3.0	0.2
17	-4.2	-5.5	-6.3	-6.7	-7.4	-7.2	-7.9	-7.9	-8.4	-8.3	-8.6	-8.2	-4.4	-4.0	-4.0	-3.4	-3.1	-3.3	-3.0	-3.6	-4.2	-5.1	-6.0	-7.4	-3.0	-8.6	-5.8
18	-8.2	-7.3	-7.0	-6.1	-5.2	-4.9	-4.8	-5.0	-5.4	-5.9	-5.3	-5.0	-5.2	-5.1	-5.3	-5.6	-5.9	-6.4	-6.7	-7.2	-7.8	-8.1	-8.4	-8.6	-4.8	-8.6	-6.3
19	-9.1	-8.0	-8.8	-9.1	-9.5	-9.1	-8.5	-8.7	-8.7	-8.7	-8.3	-8.3	-8.6	-8.6	-8.3	-8.3	-8.2	-8.1	-7.9	-7.7	-7.5	-7.8	-7.8	-7.8	-7.5	-9.5	-8.4
20	-7.5	-7.2	-7.7	-8.0	-8.6	-8.7	-8.8	-9.4	-9.2	-9.7	-9.9	-10.6	-10.8	-11.3	-11.9	-12.0	-12.3	-12.4	-12.8	-13.3	-13.6	-13.8	-13.9	-14.0	-7.2	-14.0	-10.7
21	-13.8	-13.9	-14.1	-14.4	-14.7	-15.3	-15.5	-15.5	-15.6	-15.8	-15.8	-15.8	-15.7	-15.6	-15.4	-15.7	-15.6	-15.7	-15.9	-16.1	-16.1	-16.1	-15.4	-14.6	-13.8	-16.1	-15.3
22	-13.0	-12.6	-12.9	-12.2	-11.8	-11.4	-11.3	-11.6	-11.7	-11.4	-10.9	-10.8	-10.9	-10.6	-10.7	-10.4	-9.8	-9.7	-9.9	-9.3	-8.5	-7.3	-6.8	-6.7	-6.7	-13.0	-10.5
23	-6.7	-6.5	-6.1	-6.2	-5.4	-5.4	-5.6	-5.6	-5.4	-5.3	-5.0	-4.7	-4.5	-4.0	-2.9	-1.8	0.0	0.3	0.5	1.0	1.0	1.5	1.8	2.0	2.0	-6.7	-3.0
24	2.5	2.9	2.8	2.9	2.9	2.9	2.9	3.0	3.2	3.2	2.7	3.0	2.6	1.9	2.1	2.0	2.0	1.1	2.0	2.0	1.3	0.7	0.5	0.5	3.2	0.5	2.2
25	-0.6	-1.6	-2.6	-3.5	-4.3	-4.9	-5.2	-5.4	-5.4	-5.4	-5.3	-5.6	-6.3	-6.9	-7.4	-8.1	-8.5	-8.9	-9.5	-9.6	-10.1	-10.1	-10.7	-10.6	-0.6	-10.7	-6.5
26	-10.7	-10.9	-10.6	-10.6	-10.7	-10.8	-11.1	-11.0	-10.8	-10.7	-10.8	-10.6	-10.1	-9.8	-9.8	-9.7	-9.9	-10.0	-9.9	-10.3	-11.1	-11.1	-11.0	-11.1	-9.7	-11.1	-10.5
27	-11.1	-11.2	-11.1	-11.2	-10.8	-10.7	-10.4	-9.5	-9.8	-9.3	-8.3	-7.6	-6.8	-6.3	-6.0	-5.8	-5.9	-6.6	-6.4	-6.2	-5.7	-4.9	-3.9	-2.1	-2.1	-11.2	-7.8
28	0.2	-1.9	-2.6	-2.2	-0.9	-1.9	-2.5	-2.3	-2.0	-1.6	-1.0	-1.2	-1.5	-1.3	-1.2	-1.2	-0.9	-0.6	-0.6	-1.3	-1.6	-1.8	-2.5	-3.2	0.2	-3.2	-1.6
29	-4.1	-4.6	-5.5	-6.0	-6.3	-6.7	-7.2	-7.5	-7.8	-8.4	-8.9	-9.0	-9.1	-9.2	-9.2	-9.5	-9.7	-10.1	-10.1	-10.3	-10.5	-10.7	-11.0	-10.7	-4.1	-11.0	-8.4
30	-11.2	-11.3	-11.9	-12.3	-12.5	-12.5	-12.6	-12.9	-13.1	-12.9	-12.8	-12.5	-12.6	-12.0	-11.3	-11.3	-11.7	-11.7	-11.8	-11.1	-10.8	-10.5	-10.5	-10.4	-10.4	-13.1	-11.8
Max.	**4.2**	**4.4**	**4.5**	**4.4**	**4.6**	**4.8**	**6.3**	**6.6**	**6.1**	**3.7**	**2.7**	**3.0**	**3.3**	**3.9**	**4.3**	**4.1**	**3.7**	**4.3**	**4.5**	**3.3**	**2.9**	**2.9**	**3.2**	**3.5**	**6.6**		
Min.	**-13.8**	**-13.9**	**-14.1**	**-14.4**	**-14.7**	**-15.3**	**-15.5**	**-15.5**	**-15.6**	**-15.8**	**-15.8**	**-15.8**	**-15.7**	**-15.6**	**-15.4**	**-15.7**	**-15.6**	**-15.7**	**-15.9**	**-16.1**	**-16.1**	**-16.1**	**-15.4**	**-14.6**		**-16.1**	
Avg.	**-4.0**	**-4.0**	**-4.4**	**-4.4**	**-4.5**	**-4.5**	**-4.6**	**-4.7**	**-4.9**	**-4.9**	**-5.0**	**-4.8**	**-4.3**	**-4.0**	**-3.8**	**-3.6**	**-3.6**	**-3.8**	**-3.8**	**-3.9**	**-4.0**	**-4.0**	**-4.1**	**-4.2**			**-4.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 2 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-10.2	-10.0	-9.9	-9.8	-10.0	-9.9	-9.7	-9.8	-9.6	-9.4	-9.4	-9.6	-9.0	-9.4	-8.6	-7.5	-6.9	-5.7	-5.1	-4.6	-5.2	-5.4	-5.1	-4.8	-4.6	-10.2	-8.1
2	-4.7	-4.8	-4.6	-4.6	-4.6	-3.9	-3.8	-3.3	-1.9	-2.0	-0.4	-0.3	0.5	1.4	1.5	1.6	1.6	2.0	2.2	2.1	2.5	2.8	3.1	3.5	3.5	-4.8	-0.6
3	3.7	3.9	3.8	3.8	3.9	4.0	3.8	3.6	3.2	3.3	3.6	4.0	3.5	2.6	2.5	2.8	2.7	3.2	3.5	3.9	3.8	3.9	4.0	4.3	4.3	2.5	3.5
4	4.2	4.6	4.8	5.3	5.3	5.2	4.4	4.3	3.3	4.3	4.2	4.5	4.5	4.5	4.5	4.3	4.1	4.0	3.4	3.1	3.1	3.3	3.4	3.1	5.3	3.1	4.2
5	2.9	2.8	2.4	2.4	2.9	3.7	3.3	3.2	3.7	4.3	3.9	5.5	5.6	5.8	6.4	6.6	6.8	6.3	5.9	6.8	6.4	6.6	6.5	5.8	6.8	2.4	4.9
6	5.4	5.4	5.6	5.9	4.7	3.7	2.7	2.3	2.0	2.1	2.0	2.5	2.2	2.4	2.2	1.9	2.2	1.9	1.8	1.5	1.6	1.4	1.3	0.9	5.9	0.9	2.7
7	0.8	1.2	2.6	2.5	3.2	3.2	3.0	2.9	2.5	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.1	1.0	1.0	0.7	0.4	1.2	1.4	1.7	3.2	0.4	1.8
8	3.2	4.3	4.4	4.4	4.5	4.7	4.5	4.3	4.1	4.1	2.6	2.1	2.9	3.3	3.3	3.5	2.8	2.4	2.4	2.9	3.2	3.1	2.9	3.7	4.7	2.1	3.5
9	4.2	4.1	4.4	4.3	3.2	1.9	0.4	0.4	0.3	0.0	-0.5	0.0	0.5	0.4	0.3	0.3	-0.1	-0.5	-1.0	-1.7	-2.4	-2.5	-1.9	-1.2	4.4	-2.5	0.5
10	-0.6	-0.4	0.0	0.5	-0.1	-0.6	-0.8	-1.5	-2.0	-2.3	-2.8	-3.2	-3.6	-4.2	-4.6	-4.7	-4.6	-4.7	-4.7	-4.4	-4.1	-4.0	-4.3	-4.5	0.5	-4.7	-2.8
11	-4.5	-4.4	-4.2	-4.5	-4.3	-4.2	-3.8	-3.8	-4.2	-4.7	-4.9	-4.7	-4.2	-3.9	-4.5	-4.2	-3.7	-3.5	-4.0	-4.7	-5.1	-4.3	-5.3	-5.7	-3.5	-5.7	-4.4
12	-5.9	-6.2	-6.5	-6.4	-6.3	-6.4	-6.4	-6.6	-7.0	-6.8	-6.5	-6.0	-5.4	-5.3	-5.4	-5.1	-4.9	-4.8	-4.3	-4.0	-3.5	-2.6	-1.9	-2.4	-1.9	-7.0	-5.3
13	-2.4	-2.5	-2.5	-2.6	-2.4	-2.5	-2.9	-5.5	-7.3	-8.1	-9.8	-8.6	-8.3	-8.4	-7.0	-5.3	-6.0	-5.2	-6.5	-8.3	-5.7	-4.9	-5.5	-5.9	-2.4	-9.8	-5.6
14	-5.7	-5.9	-5.7	-4.8	-4.2	-4.5	-4.5	-3.6	-3.7	-4.0	-4.4	-4.3	-3.7	-3.7	-2.9	-2.3	-2.2	-2.9	-2.4	-1.5	0.5	2.5	2.7	2.6	2.7	-5.9	-2.9
15	3.2	3.1	2.8	2.5	2.4	2.3	2.0	2.1	1.8	1.5	1.1	0.5	0.2	0.3	0.2	0.0	-0.2	-0.1	0.0	0.0	-0.3	-1.0	-1.4	-1.3	3.2	-1.4	0.9
16	-2.2	-1.7	-1.8	-1.8	-1.6	-1.5	-1.6	-1.9	-2.1	-2.6	-3.2	-3.2	-3.0	-3.1	-2.9	-2.6	-2.4	-2.1	-1.6	-1.2	-0.7	-0.4	0.0	0.9	0.9	-3.2	-1.8
17	1.4	1.8	0.9	0.6	1.7	2.1	2.2	1.3	1.4	1.9	1.8	1.7	1.7	1.5	1.9	1.9	2.1	2.5	1.1	0.7	0.5	1.3	1.3	0.6	2.5	0.5	1.5
18	0.5	0.5	0.8	1.2	2.4	2.5	3.5	3.6	3.2	3.4	3.3	3.3	3.4	3.5	3.4	3.5	3.4	3.5	3.7	4.2	3.9	4.0	4.0	3.5	4.2	0.5	3.0
19	3.0	2.8	3.5	3.3	2.6	3.1	3.5	3.0	2.8	3.0	2.7	2.4	2.6	2.4	2.6	2.7	2.9	3.0	3.4	3.4	3.3	3.3	3.2	2.9	3.5	2.4	3.0
20	2.6	2.7	2.9	3.4	3.4	3.3	3.3	3.7	3.7	3.1	2.3	3.3	3.5	3.6	3.9	2.9	2.7	1.8	1.8	0.5	-1.0	-1.0	1.0	0.5	3.9	-1.0	2.4
21	-0.9	-2.1	-3.1	-2.2	-2.6	-3.0	-3.6	-4.2	-4.0	-3.8	-4.6	-4.8	-2.0	-1.2	-1.3	-1.5	-1.7	-1.5	-1.9	-2.5	-4.5	-5.8	-6.0	-7.2	-0.9	-7.2	-3.2
22	-7.4	-3.0	-2.5	-2.1	-2.2	-2.1	-2.3	-2.5	-2.4	-2.6	-2.7	-2.6	-2.6	-2.5	-2.3	-2.3	-2.2	-2.1	-2.2	-2.2	-2.1	-2.2	-2.3	-2.7	-2.1	-7.4	-2.6
23	-2.9	-2.7	-2.7	-2.5	-1.8	-1.3	-1.4	-1.5	-1.4	-1.3	-1.3	0.1	-0.5	-0.8	-1.2	-1.4	-1.6	-1.8	-2.2	-2.6	-3.0	-3.0	-2.6	-2.4	0.1	-3.0	-1.8
24	-1.9	-1.5	-1.7	-1.5	-1.3	-1.6	-2.0	-2.2	-2.3	-2.4	-2.5	-2.7	-2.5	-2.3	-2.1	-2.5	-3.2	-4.0	-6.1	-5.1	-4.1	-3.9	-4.2	-4.3	-1.3	-6.1	-2.8
25	-3.2	-2.1	-0.8	-1.5	-2.4	-2.7	-2.1	-1.9	-1.5	-1.5	-1.0	-1.1	-1.5	-1.6	-2.8	-2.9	-2.8	-2.8	-2.8	-2.8	-3.3	-3.9	-4.5	-4.7	-0.8	-4.7	-2.4
26	-5.2	-5.9	-6.5	-7.5	-8.3	-9.3	-9.9	-10.7	-11.7	-11.7	-11.6	-11.1	-10.7	-10.6	-10.6	-10.5	-10.4	-10.4	-10.4	-10.6	-10.8	-10.7	-11.3	-11.6	-5.2	-11.7	-9.9
27	-11.6	-11.9	-12.2	-12.7	-12.8	-13.0	-12.7	-13.0	-13.2	-13.4	-13.4	-13.4	-13.1	-12.9	-12.8	-13.0	-13.0	-13.1	-13.2	-13.0	-12.9	-12.9	-13.0	-13.1	-11.6	-13.4	-12.9
28	-13.4	-13.3	-13.2	-13.4	-14.0	-14.2	-14.4	-14.7	-14.7	-15.0	-15.0	-15.0	-15.1	-15.1	-15.3	-15.3	-15.6	-15.4	-15.3	-15.2	-15.4	-15.4	-15.4	-15.5	-13.2	-15.6	-14.8
29	-15.6	-15.6	-15.6	-15.7	-15.6	-15.4	-15.4	-15.3	-15.3	-15.4	-15.7	-16.0	-16.1	-16.0	-15.9	-15.8	-16.1	-16.4	-16.5	-16.5	-16.6	-16.6	-16.8	-16.8	-15.3	-16.8	-15.9
30	-16.9	-17.1	-16.9	-17.0	-17.0	-16.8	-16.7	-16.6	-16.8	-16.8	-16.9	-17.0	-17.1	-17.3	-17.7	-18.0	-18.3	-18.7	-19.0	-19.1	-19.4	-19.8	-20.1	-20.4	-16.6	-20.4	-17.8
31	-20.5	-20.8	-21.1	-21.6	-22.0	-22.1	-22.1	-22.2	-22.4	-22.5	-22.5	-22.3	-22.4	-22.2	-21.8	-21.7	-21.6	-21.6	-21.4	-21.3	-20.7	-20.3	-20.3	-20.3	-20.3	-22.5	-21.6
Max.	**5.4**	**5.4**	**5.6**	**5.9**	**5.3**	**5.2**	**4.5**	**4.3**	**4.1**	**4.3**	**4.2**	**5.5**	**5.6**	**5.8**	**6.4**	**6.6**	**6.8**	**6.3**	**5.9**	**6.8**	**6.4**	**6.6**	**6.5**	**5.8**	**6.8**		
Min.	**-20.5**	**-20.8**	**-21.1**	**-21.6**	**-22.0**	**-22.1**	**-22.1**	**-22.2**	**-22.4**	**-22.5**	**-22.5**	**-22.3**	**-22.4**	**-22.2**	**-21.8**	**-21.7**	**-21.6**	**-21.6**	**-21.4**	**-21.3**	**-20.7**	**-20.3**	**-20.3**	**-20.4**		**-22.5**	
Avg.	**-3.2**	**-3.1**	**-3.0**	**-3.0**	**-3.0**	**-3.1**	**-3.2**	**-3.4**	**-3.6**	**-3.7**	**-3.9**	**-3.7**	**-3.5**	**-3.5**	**-3.4**	**-3.3**	**-3.4**	**-3.4**	**-3.6**	**-3.6**	**-3.6**	**-3.5**	**-3.5**	**-3.6**			**-3.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.0	3.7	4.3	4.1	3.8	0.9	-0.8	-0.9	-1.6	-2.1	-1.5	-2.1	-2.3	-1.2	-1.8	-2.5	-3.0	-4.0	-4.5	-4.7	-5.1	-5.5	-5.8	-6.2	4.3	-6.2	-1.5
2	-6.2	-6.6	-6.9	-7.0	-7.2	-7.5	-8.0	-8.4	-8.5	-8.9	-9.1	-9.2	-9.4	-9.8	-10.1	-10.3	-10.7	-11.1	-11.2	-11.5	-11.5	-11.6	-11.7	-11.5	-6.2	-11.7	-9.3
3	-11.6	-11.8	-11.8	-11.7	-11.5	-11.0	-10.8	-10.6	-10.5	-10.2	-10.0	-9.9	-10.0	-10.3	-10.3	-10.5	-10.5	-10.7	-11.0	-11.4	-11.9	-12.4	-12.8	-13.0	-9.9	-13.0	-11.1
4	-13.1	-13.3	-13.4	-13.6	-13.7	-13.8	-13.9	-13.9	-14.2	-14.4	-14.3	-14.4	-14.4	-14.6	-14.6	-14.7	-14.8	-14.9	-15.0	-15.1	-15.2	-15.3	-15.3	-15.3	-13.1	-15.3	-14.4
5	-15.3	-15.5	-15.5	-15.5	-16.0	-16.2	-16.4	-16.6	-16.8	-16.9	-17.2	-17.5	-17.5	-17.4	-17.1	-17.0	-16.9	-16.9	-16.9	-16.9	-16.9	-16.9	-17.1	-17.3	-15.3	-17.5	-16.7
6	-17.5	-17.8	-17.9	-17.8	-17.8	-18.0	-18.2	-18.5	-18.6	-18.6	-18.9	-19.3	-19.6	-19.7	-19.9	-19.9	-20.1	-20.1	-20.0	-20.1	-20.1	-20.1	-20.4	-20.4	-17.5	-20.4	-19.1
7	-20.6	-20.6	-20.8	-21.0	-21.2	-21.3	-21.2	-21.0	-20.8	-20.9	-20.9	-20.7	-20.6	-20.4	-20.5	-20.4	-20.4	-20.4	-20.4	-20.1	-19.9	-19.8	-19.7	-19.8	-19.7	-21.3	-20.5
8	-19.8	-19.7	-19.8	-19.9	-19.8	-19.7	-19.8	-20.1	-20.0	-20.1	-20.2	-20.1	-20.1	-20.2	-20.3	-20.0	-20.0	-19.9	-19.9	-20.2	-20.6	-21.0	-21.3	-21.2	-19.7	-21.3	-20.2
9	-21.1	-21.2	-21.5	-21.7	-21.7	-21.7	-22.0	-22.3	-22.4	-22.6	-22.6	-22.3	-22.3	-22.3	-22.1	-22.0	-21.9	-21.7	-21.4	-21.2	-21.1	-21.2	-21.2	-21.2	-21.1	-22.6	-21.8
10	-21.1	-21.0	-20.9	-21.0	-20.8	-20.7	-20.7	-20.6	-20.5	-20.6	-20.5	-20.4	-20.2	-20.1	-19.8	-19.8	-19.7	-19.7	-19.8	-20.1	-20.5	-20.8	-21.4	-21.6	-19.7	-21.6	-20.5
11	-21.8	-22.1	-22.4	-22.4	-22.0	-21.3	-21.2	-21.4	-22.0	-22.3	-22.3	-22.5	-22.7	-22.6	-22.4	-22.5	-22.6	-22.9	-23.1	-23.5	-23.4	-23.3	-23.3	-23.4	-21.2	-23.5	-22.5
12	-23.7	-23.8	-23.8	-23.6	-23.8	-24.5	-24.7	-24.8	-25.2	-25.6	-25.8	-25.7	-25.6	-25.8	-25.7	-26.0	-26.2	-26.3	-26.0	-25.9	-25.7	-25.7	-25.7	-25.8	-23.6	-26.3	-25.2
13	-26.0	-26.0	-25.9	-26.0	-25.8	-25.9	-25.7	-25.7	-25.7	-25.5	-25.3	-25.2	-25.1	-25.2	-25.0	-24.8	-24.2	-24.0	-23.9	-23.8	-24.0	-24.2	-24.3	-24.5	-23.8	-26.0	-25.1
14	-24.6	-23.2	-22.0	-23.0	-22.8	-22.7	-21.2	-19.5	-18.7	-17.1	-15.8	-10.2	-9.4	-8.6	-8.2	-7.8	-7.6	-7.3	-7.3	-6.4	-4.6	-2.5	-1.3	-0.9	-0.9	-24.6	-13.0
15	-0.8	-0.3	0.1	0.8	0.8	0.4	-0.2	-0.9	-2.2	-2.6	-2.6	-2.6	-2.7	-2.5	-2.6	-2.6	-2.6	-2.7	-2.8	-2.7	-2.8	-2.9	-2.7	-2.8	0.8	-2.9	-1.8
16	-3.1	-3.2	-3.0	-3.0	-1.0	0.2	0.5	0.0	-0.3	0.0	0.0	0.0	-0.2	-0.2	0.1	0.7	0.7	0.3	-0.2	-0.5	-0.9	-2.6	-5.8	-6.1	0.7	-6.1	-1.2
17	-8.0	-6.3	-2.2	-2.3	0.3	0.2	-0.3	2.3	3.7	3.7	3.5	1.7	0.8	0.9	0.8	1.3	2.1	3.1	3.3	3.1	3.2	2.6	2.0	1.8	3.7	-8.0	0.9
18	0.9	0.3	0.2	0.0	-0.1	-0.1	-0.1	-0.5	-0.6	-0.8	-0.6	-0.5	-0.9	-0.5	-0.2	-0.3	-0.8	-0.8	-1.0	-1.1	-1.6	-1.4	-0.7	-0.6	0.9	-1.6	-0.5
19	-0.9	-0.8	-0.7	-1.0	-0.3	-0.1	0.4	2.9	4.9	4.7	3.6	4.4	3.7	3.6	3.9	3.9	4.8	5.2	4.9	3.9	3.5	3.1	3.0	2.9	5.2	-1.0	2.7
20	2.8	3.0	3.1	3.2	3.9	4.6	4.7	4.7	4.5	5.1	5.1	5.0	4.6	4.7	4.6	4.3	4.3	3.2	2.2	1.0	0.8	1.0	1.1	1.0	5.1	0.8	3.4
21	1.0	0.9	1.0	1.8	1.4	1.5	1.6	1.8	2.7	2.2	1.9	2.9	4.4	5.1	5.2	5.0	5.0	5.0	4.5	4.8	4.8	4.4	3.7	3.6	5.2	0.9	3.2
22	4.2	4.2	4.8	4.6	4.3	3.6	3.3	3.3	3.2	3.1	1.4	0.8	0.9	1.1	0.4	-0.5	-1.0	-1.4	-1.5	-1.6	-1.6	-1.8	-1.6	-1.4	4.8	-1.8	1.3
23	-1.6	-1.7	-1.8	-2.0	-2.5	-3.8	-4.6	-6.3	-7.3	-8.3	-9.1	-9.1	-9.2	-9.0	-10.2	-11.4	-11.6	-12.0	-11.8	-12.9	-14.0	-14.9	-15.3	-15.7	-1.6	-15.7	-8.6
24	-15.1	-15.5	-15.3	-15.5	-15.2	-14.2	-13.1	-10.8	-9.0	-6.1	-4.7	-4.5	-4.6	-4.8	-5.3	-5.5	-5.8	-5.8	-5.6	-5.9	-6.0	-6.1	-6.1	-6.1	-4.5	-15.5	-8.6
25	-6.1	-6.1	-6.1	-6.2	-6.2	-5.8	-3.2	-3.8	-4.2	-4.3	-4.0	-4.0	-3.2	-2.6	-2.1	-1.3	-0.7	-0.8	-0.4	-0.6	-1.1	-2.1	-3.9	-5.1	-0.4	-6.2	-3.5
26	-5.6	-6.6	-7.2	-7.5	-8.2	-9.2	-9.9	-10.1	-11.2	-11.8	-12.7	-12.5	-13.0	-13.4	-13.5	-14.1	-13.5	-12.8	-12.7	-12.6	-13.5	-13.1	-13.1	-8.3	-5.6	-14.1	-11.1
27	-7.6	-7.4	-7.0	-6.1	-5.2	-4.9	-3.0	-1.9	-1.7	-1.5	-1.4	-1.9	-2.3	-2.8	-3.3	-3.0	-2.8	-2.9	-2.4	-2.5	-2.4	-1.8	-1.8	-1.9	-1.4	-7.6	-3.3
28	-1.8	-2.0	-2.2	-2.2	-2.2	-2.4	-2.4	-2.7	-2.8	-3.2	-3.2	-3.1	-3.0	-3.1	-3.1	-3.0	-3.1	-3.1	-3.3	-3.7	-4.0	-1.9	-1.6	-1.6	-1.6	-4.0	-2.7
29	-1.3	-1.2	-1.1	-1.6	-2.0	-2.0	-2.4	-2.5	-2.9	-3.1	-3.5	-3.9	-4.0	-4.1	-4.3	-4.3	-4.2	-4.2	-4.5	-4.6	-4.1	-4.8	-5.7	-6.4	-1.1	-6.4	-3.5
30	-7.1	-7.8	-9.3	-9.9	-10.2	-10.4	-10.4	-10.5	-10.3	-9.8	-9.4	-9.1	-8.6	-9.3	-9.5	-9.5	-10.0	-10.3	-10.5	-10.3	-10.6	-10.5	-10.8	-11.0	-7.1	-11.0	-9.8
31	-11.0	-11.0	-10.9	-10.9	-11.0	-11.2	-11.2	-12.0	-11.4	-10.2	-9.6	-10.0	-10.9	-10.2	-7.6	-6.9	-6.9	-7.9	-7.6	-7.2	-7.1	-7.2	-7.8	-8.6	-6.9	-12.0	-9.4
Max.	**4.2**	**4.2**	**4.8**	**4.6**	**4.3**	**4.6**	**4.7**	**4.7**	**4.9**	**5.1**	**5.1**	**5.0**	**4.6**	**5.1**	**5.2**	**5.0**	**5.0**	**5.2**	**4.9**	**4.8**	**4.8**	**4.4**	**3.7**	**3.6**	**5.2**		
Min.	**-26.0**	**-26.0**	**-25.9**	**-26.0**	**-25.8**	**-25.9**	**-25.7**	**-25.7**	**-25.7**	**-25.6**	**-25.8**	**-25.7**	**-25.6**	**-25.8**	**-25.7**	**-26.0**	**-26.2**	**-26.3**	**-26.0**	**-25.9**	**-25.7**	**-25.7**	**-25.7**	**-25.8**		**-26.3**	
Avg.	**-9.7**	**-9.7**	**-9.5**	**-9.6**	**-9.5**	**-9.6**	**-9.5**	**-9.4**	**-9.4**	**-9.3**	**-9.3**	**-9.2**	**-9.3**	**-9.2**	**-9.2**	**-9.2**	**-9.2**	**-9.3**	**-9.4**	**-9.5**	**-9.6**	**-9.7**	**-9.9**	**-10.0**			**-9.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-8.7	-9.2	-10.4	-11.5	-12.3	-12.4	-12.8	-12.9	-12.7	-12.9	-13.3	-13.5	-12.3	-11.2	-11.1	-10.8	-11.0	-10.5	-11.9	-11.9	-12.7	-12.9	-13.8	-13.2	-8.7	-13.8	-11.9
2	-13.4	-13.0	-13.4	-12.6	-12.2	-12.1	-11.3	-11.2	-10.9	-12.0	-13.1	-14.2	-13.6	-13.3	-13.9	-14.2	-14.1	-13.8	-13.2	-12.5	-12.5	-12.6	-12.6	-13.1	-10.9	-14.2	-12.9
3	-13.8	-14.4	-15.1	-15.5	-15.8	-16.2	-16.5	-17.3	-17.9	-18.4	-18.3	-19.0	-19.3	-19.3	-19.5	-19.3	-19.4	-19.5	-19.6	-19.9	-20.3	-20.2	-20.3	-20.0	-13.8	-20.3	-18.1
4	-19.4	-19.5	-19.5	-19.6	-19.0	-19.7	-19.5	-19.0	-17.8	-17.2	-16.9	-16.9	-15.7	-14.9	-14.5	-13.9	-13.8	-14.0	-13.9	-14.6	-14.9	-16.3	-17.9	-18.3	-13.8	-19.7	-16.9
5	-19.6	-21.1	-20.4	-20.0	-18.6	-19.5	-20.1	-20.3	-21.4	-21.1	-21.2	-22.9	-22.5	-22.6	-23.0	-23.5	-23.4	-23.3	-23.4	-23.5	-23.2	-22.6	-21.8	-20.8	-18.6	-23.5	-21.7
6	-20.0	-18.9	-19.2	-18.7	-16.7	-15.4	-14.6	-14.1	-14.4	-15.1	-15.3	-15.4	-14.4	-14.4	-16.3	-18.7	-20.3	-20.2	-20.9	-21.1	-21.7	-21.1	-21.1	-21.0	-14.1	-21.7	-17.9
7	-21.9	-21.3	-21.2	-21.6	-21.7	-21.4	-20.6	-21.6	-22.3	-22.1	-22.0	-21.3	-20.7	-19.1	-19.3	-19.7	-19.1	-19.7	-18.6	-17.3	-16.4	-15.3	-13.0	-12.9	-12.9	-22.3	-19.6
8	-12.8	-14.6	-15.6	-16.8	-16.3	-13.9	-11.1	-7.5	-5.6	-5.1	-4.8	-5.3	-5.4	-5.0	-4.8	-5.5	-5.6	-5.5	-5.3	-5.2	-5.4	-4.9	-3.2	-2.9	-2.9	-16.8	-7.8
9	-3.5	-3.4	-3.2	-3.3	-3.7	-3.9	-4.2	-4.3	-4.4	-4.3	-4.5	-4.6	-4.6	-4.7	-4.5	-4.5	-4.7	-5.3	-6.5	-7.5	-8.1	-8.0	-8.0	-7.8	-3.2	-8.1	-5.1
10	-8.0	-8.8	-9.1	-9.9	-11.1	-12.2	-13.6	-15.6	-16.3	-15.9	-15.8	-17.0	-17.0	-15.9	-14.1	-13.6	-13.8	-13.5	-13.4	-13.6	-13.4	-12.9	-12.8	-12.7	-8.0	-17.0	-13.3
11	-12.6	-12.0	-11.5	-11.1	-10.6	-10.1	-10.1	-10.1	-9.8	-12.0	-12.3	-12.1	-12.2	-13.7	-13.3	-13.4	-14.3	-14.2	-14.6	-15.0	-15.3	-15.9	-16.3	-16.0	-9.8	-16.3	-12.8
12	-16.4	-17.3	-18.1	-18.7	-19.3	-20.0	-21.1	-21.7	-21.6	-21.7	-22.0	-21.2	-20.8	-20.4	-20.3	-18.6	-19.0	-19.3	-19.5	-19.4	-18.3	-18.4	-17.3	-15.6	-15.6	-22.0	-19.4
13	-9.6	-4.8	-2.9	-1.9	-1.0	-1.1	-1.7	-1.1	-0.1	0.5	1.2	2.3	2.2	2.1	2.6	2.1	2.5	2.7	2.9	2.9	3.6	3.7	3.6	4.2	4.2	-9.6	0.6
14	3.9	3.9	3.9	3.6	3.5	3.5	3.5	3.7	3.6	3.6	-3.7	-7.3	-9.0	-10.2	-11.1	-12.1	-13.2	-14.1	-14.6	-15.0	-15.4	-15.5	-15.4	-15.1	3.9	-15.5	-5.6
15	-15.0	-15.3	-16.0	-16.7	-17.2	-18.0	-19.0	-19.5	-19.8	-20.1	-20.3	-19.8	-19.6	-19.7	-19.6	-19.2	-18.7	-18.1	-17.9	-18.7	-18.4	-16.2	-10.1	-9.0	-9.0	-20.3	-17.6
16	-8.9	-8.3	-7.3	-6.3	-5.4	-4.5	-4.4	-4.2	-3.6	-3.2	-2.2	-1.4	-0.8	-0.4	0.2	0.8	0.9	1.5	1.2	0.4	-0.5	-1.5	-1.8	-1.2	1.5	-8.9	-2.5
17	-0.5	-0.7	-0.1	0.0	1.5	2.3	3.8	4.8	5.3	5.4	4.9	4.5	3.3	3.4	3.1	2.8	2.6	2.7	2.4	3.5	3.8	3.8	3.8	3.8	5.4	-0.7	2.9
18	3.8	3.7	2.8	3.0	3.2	3.4	3.6	3.5	3.2	3.3	3.0	3.3	3.2	3.8	3.8	3.6	3.6	3.5	2.0	3.5	3.9	4.6	5.4	5.6	5.6	2.0	3.6
19	5.8	6.0	6.5	5.8	4.2	6.3	4.5	3.9	4.9	4.5	4.3	4.2	4.1	4.4	4.7	5.3	5.6	6.0	5.1	4.6	4.6	4.3	4.1	3.8	6.5	3.8	4.9
20	3.3	2.0	3.1	3.2	3.8	3.7	3.3	3.3	4.1	4.2	4.1	5.1	5.7	5.6	5.6	5.9	6.3	5.9	5.9	6.2	6.3	5.9	4.8	5.8	6.3	2.0	4.7
21	6.5	6.5	6.0	6.0	5.8	6.2	6.4	6.1	6.1	5.6	5.5	5.0	3.8	4.0	4.4	4.0	3.8	3.5	3.5	3.6	3.5	3.6	3.4	3.5	6.5	3.4	4.9
22	3.6	3.5	3.4	3.3	3.2	3.1	3.0	3.2	3.5	3.6	3.1	2.5	1.8	2.1	2.9	2.7	3.3	3.4	2.5	3.3	2.7	3.3	3.3	2.1	3.6	1.8	3.0
23	1.3	1.1	1.3	0.9	0.8	0.7	-0.1	-1.1	-1.8	-2.7	-3.1	-3.4	-3.4	-3.4	-3.4	-3.4	-3.4	-3.5	-3.8	-4.1	-4.5	-4.9	-5.2	-5.6	1.3	-5.6	-2.3
24	-5.9	-6.1	-6.2	-6.5	-6.8	-6.9	-7.1	-7.3	-7.1	-7.0	-6.7	-6.6	-6.3	-6.1	-6.2	-6.6	-6.7	-6.6	-6.6	-6.9	-7.4	-7.6	-7.7	-8.0	-5.9	-8.0	-6.8
25	-8.6	-9.5	-10.1	-10.5	-11.0	-11.1	-11.4	-11.5	-11.6	-11.9	-11.9	-11.9	-12.1	-11.8	-10.0	-1.7	-0.3	0.0	0.3	0.4	0.4	0.5	0.6	1.1	1.1	-12.1	-6.8
26	1.1	1.1	0.8	0.6	0.3	0.1	0.0	0.1	0.1	0.4	-0.3	0.8	1.8	1.9	2.3	2.7	2.5	1.6	0.7	-0.6	-1.0	-1.9	-2.5	-3.2	2.7	-3.2	0.4
27	-2.9	-3.2	-4.2	-5.4	-6.2	-6.2	-6.7	-6.5	-6.5	-6.7	-5.7	-4.5	-3.4	-1.5	-1.4	-0.7	-0.8	-1.1	-1.0	-0.1	3.5	4.3	4.2	4.4	4.4	-6.7	-2.4
28	4.5	4.6	4.9	4.8	5.1	5.2	5.3	5.3	5.1	5.0	5.0	5.3	5.0	4.8	5.1	5.0	3.7	3.1	2.9	2.5	2.0	1.6	1.9	1.8	5.3	1.6	4.1
29	1.2	0.7	0.5	0.6	-0.1	0.2	-0.1	-2.2	-2.9	-3.4	-3.8	-4.0	-4.1	-4.0	-4.1	-3.7	-3.7	-4.9	-6.6	-7.5	-7.8	-7.8	-7.8	-8.1	1.2	-8.1	-3.5
Max.	**6.5**	**6.5**	**6.5**	**6.0**	**5.8**	**6.3**	**6.4**	**6.1**	**6.1**	**5.6**	**5.5**	**5.3**	**5.7**	**5.6**	**5.6**	**5.9**	**6.3**	**6.0**	**5.9**	**6.2**	**6.3**	**5.9**	**5.4**	**5.8**	**6.5**		
Min.	**-21.9**	**-21.3**	**-21.2**	**-21.6**	**-21.7**	**-21.4**	**-21.1**	**-21.7**	**-22.3**	**-22.1**	**-22.0**	**-22.9**	**-22.5**	**-22.6**	**-23.0**	**-23.5**	**-23.4**	**-23.3**	**-23.4**	**-23.5**	**-23.2**	**-22.6**	**-21.8**	**-21.0**		**-23.5**	
Avg.	**-6.4**	**-6.5**	**-6.6**	**-6.7**	**-6.7**	**-6.5**	**-6.6**	**-6.7**	**-6.6**	**-6.8**	**-7.1**	**-7.2**	**-7.1**	**-6.9**	**-6.7**	**-6.5**	**-6.6**	**-6.7**	**-7.0**	**-7.0**	**-7.0**	**-6.9**	**-6.7**	**-6.5**			**-6.8**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-8.2	-8.6	-9.0	-9.6	-9.8	-10.1	-10.6	-11.3	-11.5	-11.5	-8.9	-4.3	-4.1	-3.4	-2.8	-2.2	-1.5	-2.0	-0.7	0.3	1.4	1.5	1.4	1.9	1.9	-11.5	-5.2
2	2.0	1.9	2.3	1.6	2.0	2.2	2.2	1.4	0.9	1.3	1.0	1.3	1.5	1.6	2.6	3.0	2.4	1.4	0.6	0.5	0.6	1.0	1.6	1.8	3.0	0.5	1.6
3	1.2	0.7	0.6	0.8	1.0	1.8	2.8	2.5	2.4	3.1	2.9	2.6	2.3	2.5	3.1	3.1	2.7	3.1	3.1	3.3	4.2	4.6	4.6	4.5	4.6	0.6	2.6
4	4.6	4.4	4.5	3.3	3.3	3.7	4.3	4.3	4.2	3.9	3.8	3.9	4.0	3.9	4.2	4.5	4.6	4.5	4.6	4.3	4.6	3.9	4.2	3.7	4.6	3.3	4.1
5	4.2	4.6	4.5	4.0	3.5	3.6	3.4	3.1	3.1	3.1	3.0	3.1	3.2	3.4	3.9	3.9	4.4	4.7	4.3	3.8	3.8	3.8	3.7	3.7	4.7	3.0	3.7
6	3.8	3.7	3.6	3.5	3.6	3.7	3.6	3.7	3.8	3.7	2.4	1.1	1.2	3.3	4.2	4.3	4.6	4.8	5.2	5.6	5.6	4.7	5.2	3.4	5.6	1.1	3.8
7	2.7	2.2	1.9	2.4	2.2	2.7	2.2	2.1	1.9	2.2	2.3	2.5	2.6	2.4	2.6	2.3	1.9	1.6	1.6	1.4	1.5	1.8	1.6	1.3	2.7	1.3	2.1
8	0.8	0.6	0.2	0.0	0.0	0.0	-0.2	-0.4	0.7	2.2	2.5	2.0	3.4	3.8	4.2	4.5	4.1	3.7	3.7	4.2	4.5	5.1	5.8	5.1	5.8	-0.4	2.5
9	4.9	4.6	4.4	4.5	4.0	3.7	3.3	4.2	5.3	4.6	3.8	3.8	4.7	4.9	4.6	4.9	4.5	3.9	3.8	3.8	3.4	3.1	3.0	2.5	5.3	2.5	4.1
10	2.0	1.7	1.7	1.4	1.3	1.0	-0.1	-0.4	-0.5	-1.0	-1.2	-1.2	-1.3	-1.0	-0.8	-0.9	-1.1	-0.8	-1.2	-1.5	-1.4	-1.3	-1.2	-1.5	2.0	-1.5	-0.4
11	-1.9	-2.4	-2.8	-2.8	-3.4	-3.9	-4.1	-4.2	-4.2	-4.2	-3.9	-3.4	-3.3	-3.1	-3.0	-3.4	-3.3	-3.5	-3.8	-3.6	-3.7	-4.1	-4.2	-4.2	-1.9	-4.2	-3.5
12	-4.3	-5.0	-5.4	-5.6	-5.9	-6.2	-6.7	-7.0	-7.2	-7.3	-7.0	-6.6	-6.3	-6.0	-6.0	-6.3	-6.2	-6.1	-6.3	-6.4	-6.6	-6.8	-6.8	-6.8	-4.3	-7.3	-6.3
13	-6.7	-6.5	-6.4	-6.4	-6.3	-6.2	-6.2	-6.2	-6.2	-6.3	-6.3	-6.2	-6.2	-6.1	-6.0	-6.0	-5.9	-6.0	-6.3	-6.7	-7.1	-7.4	-7.6	-7.8	-5.9	-7.8	-6.5
14	-8.1	-8.3	-8.4	-8.5	-8.6	-8.9	-9.2	-9.4	-9.8	-10.0	-9.7	-9.0	-6.6	-5.1	-2.7	-1.6	-1.2	-1.2	-1.1	-0.9	-0.7	-0.4	0.1	0.2	0.2	-10.0	-5.4
15	0.2	-0.6	-1.1	-0.9	0.2	0.7	0.5	0.7	1.1	1.3	1.4	1.2	1.6	1.8	2.0	1.9	2.0	1.9	1.3	0.8	0.9	1.4	1.5	1.8	2.0	-1.1	1.0
16	2.3	2.1	1.7	0.8	1.3	2.5	2.4	1.9	1.8	1.8	1.5	1.0	1.5	1.5	1.9	1.9	1.5	0.9	-0.1	-1.1	-1.8	-2.3	-2.4	-1.1	2.5	-2.4	0.9
17	-0.7	-0.7	-1.2	-1.5	-2.1	-2.4	-2.5	-2.5	-2.8	-2.5	-1.7	-1.1	-0.2	0.4	0.5	0.7	0.6	0.6	-0.3	-2.7	-4.5	-5.2	-5.7	-6.2	0.7	-6.2	-1.8
18	-6.6	-6.7	-6.8	-6.9	-7.0	-7.4	-7.6	-7.6	-7.6	-7.7	-8.0	-8.1	-8.2	-8.4	-8.5	-8.6	-8.6	-8.8	-8.8	-8.9	-9.2	-9.5	-9.9	-10.4	-6.6	-10.4	-8.2
19	-11.0	-11.5	-12.0	-12.2	-12.5	-12.6	-12.9	-13.4	-13.8	-13.8	-13.7	-13.6	-13.1	-12.8	-12.5	-12.1	-11.8	-11.9	-12.0	-12.1	-12.4	-12.6	-13.1	-13.3	-11.0	-13.8	-12.6
20	-13.6	-13.7	-13.8	-14.0	-14.3	-14.7	-15.4	-16.2	-16.8	-16.9	-16.7	-16.5	-16.3	-15.8	-15.5	-15.3	-15.0	-14.7	-14.8	-15.0	-15.2	-15.3	-15.4	-15.4	-13.6	-16.9	-15.3
21	-15.2	-15.1	-14.8	-14.3	-14.4	-14.5	-14.4	-14.1	-13.8	-12.8	-11.5	-9.6	-10.4	-10.4	-9.3	-7.2	-7.1	-6.7	-5.8	-5.7	-6.1	-5.2	-5.1	-2.1	-2.1	-15.2	-10.2
22	-0.2	-0.4	-1.0	-2.2	-3.4	-6.4	-5.7	-8.2	-8.1	-8.1	-8.2	-7.9	-7.1	-6.2	-5.9	-6.0	-6.1	-5.8	-6.2	-6.8	-7.0	-6.8	-6.4	-7.0	-0.2	-8.2	-5.7
23	-7.6	-7.7	-7.1	-7.9	-8.1	-8.9	-9.7	-9.9	-10.4	-10.5	-10.5	-10.5	-10.3	-10.1	-9.9	-9.7	-9.7	-9.6	-9.4	-9.3	-9.5	-9.5	-9.2	-8.9	-7.1	-10.5	-9.3
24	-8.7	-8.9	-9.2	-9.1	-9.5	-9.7	-9.6	-9.6	-9.7	-9.6	-9.9	-9.2	-8.8	-8.2	-7.3	-7.1	-7.0	-7.4	-7.5	-7.6	-7.7	-7.7	-7.6	-7.4	-7.0	-9.9	-8.5
25	-7.3	-6.9	-5.9	-5.1	-4.3	-6.5	-6.4	-6.5	-6.2	-5.8	-6.6	-6.5	-5.8	-4.4	-3.9	-3.4	-3.9	-4.2	-4.6	-4.8	-5.2	-5.5	-5.6	-5.5	-3.4	-7.3	-5.5
26										-6.7				-6.1	-6.3	-5.9	-5.2	-5.3	-5.2	-5.5	-6.3	-6.3	-6.4	-6.2	-5.2	-6.7	-5.9
27	-6.3	-6.6	-7.2	-7.6	-8.1	-8.4	-7.9	-7.7	-7.6	-7.5	-8.2	-7.9	-7.1	-6.7	-6.1	-5.6	-5.3	-5.7	-5.8	-5.8	-5.9	-6.2	-6.5	-6.9	-5.3	-8.4	-6.9
28	-7.4	-8.0	-8.6	-8.9	-9.5	-10.5	-10.0	-10.3	-10.1	-10.0	-9.5	-9.0	-8.5	-7.8	-7.3	-6.7	-6.4	-6.3	-6.1	-5.9	-6.0	-6.1	-6.5	-6.5	-5.9	-10.5	-8.0
29	-7.1	-7.3	-3.7	-2.2	-1.6	-1.0	-0.7	-0.7	-0.7	-0.8	-0.5	-0.5	-0.4	-0.5	-0.6	-0.2	0.0	-0.1	0.2	0.8	1.0	1.3	1.7	2.0	2.0	-7.3	-0.9
30	1.4	1.2	1.7	2.2	1.6	1.5	1.7	1.5	1.5	1.6	2.2	2.2	2.1	2.5	2.4	2.5	2.9	3.2	3.3	3.2	3.3	3.3	3.4	3.5	3.5	1.2	2.3
31	3.8	3.8	4.0	4.0	4.1	3.9	2.9	2.8	3.6	3.4	3.6	3.3	3.9	4.8	4.7	4.7	4.8	5.1	5.0	4.8	4.6	4.9	4.7	4.8	5.1	2.8	4.2
Max.	**4.9**	**4.6**	**4.5**	**4.5**	**4.1**	**3.9**	**4.3**	**4.3**	**5.3**	**4.6**	**3.8**	**3.9**	**4.7**	**4.9**	**4.7**	**4.9**	**4.8**	**5.1**	**5.2**	**5.6**	**5.6**	**5.1**	**5.8**	**5.1**	**5.8**		
Min.	**-15.2**	**-15.1**	**-14.8**	**-14.3**	**-14.4**	**-14.7**	**-15.4**	**-16.2**	**-16.8**	**-16.9**	**-16.7**	**-16.5**	**-16.3**	**-15.8**	**-15.5**	**-15.3**	**-15.0**	**-14.7**	**-14.8**	**-15.0**	**-15.2**	**-15.3**	**-15.4**	**-15.4**		**-16.9**	
Avg.	**-2.9**	**-3.1**	**-3.1**	**-3.2**	**-3.4**	**-3.6**	**-3.7**	**-3.9**	**-3.9**	**-3.9**	**-3.7**	**-3.4**	**-3.1**	**-2.7**	**-2.4**	**-2.1**	**-2.1**	**-2.2**	**-2.2**	**-2.4**	**-2.5**	**-2.5**	**-2.5**	**-2.5**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.9	5.0	4.8	4.7	4.7	4.6	4.5	4.2	4.1	3.8	3.8	4.1	3.8	3.8	4.0	4.0	4.2	4.3	4.4	4.2	4.0	3.8	3.8	3.9	5.0	3.8	4.2
2	3.6	2.5	1.5	1.2	0.9	0.7	0.6	0.7	0.7	0.7	0.8	1.0	1.1	1.2	2.3	2.5	3.1	3.6	2.9	2.5	2.2	2.1	2.6	2.8	3.6	0.6	1.8
3	2.9	3.0	3.1	3.2	2.9	2.4	2.0	1.8	2.4	2.6	2.7	2.8	2.7	2.6	2.6	2.9	3.0	3.2	3.2	3.6	3.6	3.8	3.6	3.4	3.8	1.8	2.9
4	3.4	3.3	3.3	3.3	3.1	3.0	3.1	3.1	3.2	3.2	3.1	3.6	3.5	3.2	3.3	3.7	3.9	3.5	2.9	2.8	2.6	1.6	0.7	-0.2	3.9	-0.2	2.9
5	-1.7	-3.0	-4.2	-5.0	-5.3	-5.7	-5.8	-5.7	-6.5	-6.9	-6.4	-5.9	-5.5	-4.9	-4.6	-4.4	-4.0	-3.6	-3.8	-3.6	-3.6	-3.9	-4.6	-4.8	-1.7	-6.9	-4.7
6	-5.0	-5.1	-5.3	-5.6	-6.5	-6.5	-6.2	-6.9	-7.0	-6.6	-6.5	-6.4	-6.5	-5.9	-5.1	-4.2	-4.0	-3.5	-3.8	-4.0	-4.1	-4.1	-4.3	-4.8	-3.5	-7.0	-5.3
7	-5.6	-6.1	-6.6	-7.1	-7.5	-7.8	-8.1	-8.6	-9.0	-8.8	-8.6	-8.2	-7.4	-6.3	-5.2	-4.3	-3.6	-3.0	-3.1	-3.1	-3.3	-3.7	-4.4	-4.9	-3.0	-9.0	-6.0
8	-5.0	-5.2	-5.1	-5.1	-5.1	-6.0	-6.8	-7.1	-7.2	-7.2	-6.4	-5.3	-4.2	-3.0	-2.0	-1.8	-2.0	-2.0	-2.0	-2.2	-2.6	-2.5	-2.9	-3.8	-1.8	-7.2	-4.3
9	-4.2	-4.7	-5.5	-6.3	-6.5	-7.1	-7.3	-7.5	-8.3	-8.8	-8.7	-8.2	-7.1	-6.2	-5.4	-4.7	-3.6	-3.4	-3.3	-3.1	-3.4	-3.7	-4.0	-4.9	-3.1	-8.8	-5.7
10	-5.8	-6.3	-6.4	-6.5	-6.9	-7.1	-7.5	-8.3	-8.9	-9.2	-8.8	-8.1	-7.5	-3.1	2.1	-7.4	1.3	-1.7	-4.4	-4.3	-4.6	-4.9	-5.9	-6.2	2.1	-9.2	-5.7
11	-6.5	-6.9	-7.3	-8.0	-8.9	-9.8	-10.2	-10.9	-11.2	-11.8	-11.8	-11.0	-10.0	-9.4	-8.6	-7.3	-6.3	-5.5	-5.2	-5.2	-5.6	-6.0	-6.6	-7.1	-5.2	-11.8	-8.2
12	-7.9	-8.5	-9.0	-9.6	-9.7	-9.9	-10.5	-10.6	-10.8	-10.7	-10.3	-9.2	-8.1	-7.0	-5.8	-4.5	-3.4	-2.7	-2.3	-2.3	-2.6	-3.0	-3.5	-3.8	-2.3	-10.8	-6.9
13	-3.9	-4.4	-4.8	-3.9	-2.8	-2.3	-2.2	-2.0	-2.0	-2.0	-1.0	-1.0	-0.9	-0.7	0.1	2.1	2.8	3.1	3.4	3.2	3.2	3.4	3.5	3.4	3.5	-4.8	-0.2
14	2.8	2.1	1.9	1.5	1.3	1.1	1.0	0.9	0.8	0.7	1.0	1.2	1.3	1.5	2.0	2.2	2.5	2.6	2.7	2.9	2.8	3.1	2.8	2.5	3.1	0.7	1.9
15	2.5	2.6	2.2	2.2	1.9	1.8	1.9	2.3	2.1	2.1	1.3	0.5	0.9	1.8	2.2	3.4	3.6	3.7	3.1	2.3	1.4	0.4	-1.4	-3.2	3.7	-3.2	1.7
16	-4.2	-4.9	-5.8	-6.3	-6.8	-7.0	-7.8	-8.3	-9.2	-8.4	-8.6	-8.5	-7.9	-6.6	-5.7	-4.9	-3.8	-4.0	-3.7	-4.0	-4.0	-4.0	-3.1	-2.8	-2.8	-9.2	-5.8
17	-2.6	-2.0	-1.0	-0.1	0.0	0.2	0.2	0.4	0.2	0.2	0.5	1.0	1.5	1.6	1.4	1.8	1.8	1.7	1.9	1.7	1.4	1.6	1.6	1.6	1.9	-2.6	0.7
18	1.9	2.2	2.5	2.8	2.4	1.9	1.6	0.9	0.1	0.5	1.1	1.9	2.5	2.7	3.0	3.0	3.0	2.8	2.7	2.6	2.3	2.1	1.9	1.7	3.0	0.1	2.1
19	1.4	1.2	2.0	2.4	2.3	2.1	2.1	2.0	1.3	1.5	2.3	2.5	2.5	2.3	2.3	2.4	2.6	2.7	2.8	3.0	2.9	2.8	2.4	2.1	3.0	1.2	2.2
20	2.2	2.5	2.6	2.5	2.4	2.2	2.4	2.3	2.6	3.0	3.0	3.1	3.0	2.9	2.6	2.8	2.8	2.9	2.7	2.6	2.6	2.5	2.6	2.7	3.1	2.2	2.6
21	2.8	2.8	2.8	2.8	2.9	2.8	2.8	2.7	2.7	2.9	2.9	3.0	3.2	3.4	3.6	3.6	3.5	3.4	3.6	3.4	3.5	3.3	3.0	2.7	3.6	2.7	3.1
22	2.7	2.6	2.7	2.6	2.0	1.5	1.7	1.5	1.7	1.5	1.9	2.8	4.0	5.1	6.0	6.6	6.7	7.2	8.0	8.0	7.4	5.8	3.8	2.6	8.0	1.5	4.0
23	2.3	3.0	4.9	6.0	6.2	4.8	3.5	3.5	3.1	3.3	3.9	5.1	5.9	7.0	7.6	8.2	8.6	9.1	9.3	9.4	9.0	8.7	8.4	8.2	9.4	2.3	6.2
24	8.0	7.1	5.6	3.9	3.0	2.2	2.2	1.3	0.5	0.4	0.7	0.9	1.5	1.7	2.0	2.1	2.8	3.3	3.2	3.4	3.8	3.7	3.5	2.9	8.0	0.4	2.9
25	4.0	3.2	1.6	0.3	-0.1	-0.3	-0.6	-0.7	-0.9	-1.2	-1.1	-0.8	0.0	0.3	0.1	0.1	0.0	0.1	0.2	0.1	-0.3	-0.7	-1.1	-1.6	4.0	-1.6	0.0
26	-1.7	-1.9	-2.5	-2.7	-3.2	-3.6	-3.7	-3.9	-4.1	-4.5	-4.8	-4.7	-4.3	-3.9	-3.4	-2.6	-2.3	-1.7	-1.3	-1.0	-0.7	-0.4	-0.4	-0.4	-0.4	-4.8	-2.6
27	-0.5	-0.4	-0.5	-0.5	-0.6	-0.7	-1.0	-1.1	-1.2	-1.3	-1.0	-0.8	-0.9	-0.9	-0.6	-0.1	0.3	0.3	0.5	0.4	0.2	0.2	-0.2	-0.8	0.5	-1.3	-0.5
28	-0.9	-1.0	-0.9	-1.2	-1.7	-1.9	-2.4	-2.5	-2.7	-2.5	-2.4	-2.5	-2.0	-1.8	-1.5	-1.2	-0.1	0.4	0.5	0.6	0.5	0.5	0.3	0.2	0.6	-2.7	-1.1
29	0.2	0.1	-0.2	-0.4	-0.7	-0.9	-1.0	-1.4	-1.0	-0.8	-1.1	-0.6	0.0	0.8	1.3	1.8	2.2	2.7	3.0	3.3	3.4	2.8	2.2	1.6	3.4	-1.4	0.7
30	1.4	0.8	0.7	0.6	0.4	0.2	0.2	-0.1	-0.1	0.3	0.7	1.3	1.8	2.5	3.7	4.4	4.5	4.5	5.2	5.3	5.1	4.7	4.0	3.1	5.3	-0.1	2.3
Max.	**8.0**	**7.1**	**5.6**	**6.0**	**6.2**	**4.8**	**4.5**	**4.2**	**4.1**	**3.8**	**3.9**	**5.1**	**5.9**	**7.0**	**7.6**	**8.2**	**8.6**	**9.1**	**9.3**	**9.4**	**9.0**	**8.7**	**8.4**	**8.2**	**9.4**		
Min.	**-7.9**	**-8.5**	**-9.0**	**-9.6**	**-9.7**	**-9.9**	**-10.5**	**-10.9**	**-11.2**	**-11.8**	**-11.8**	**-11.0**	**-10.0**	**-9.4**	**-8.6**	**-7.4**	**-6.3**	**-5.5**	**-5.2**	**-5.2**	**-5.6**	**-6.0**	**-6.6**	**-7.1**		**-11.8**	
Avg.	**-0.3**	**-0.5**	**-0.8**	**-0.9**	**-1.2**	**-1.5**	**-1.7**	**-1.9**	**-2.2**	**-2.1**	**-1.9**	**-1.5**	**-1.1**	**-0.5**	**0.1**	**0.3**	**1.0**	**1.1**	**1.1**	**1.1**	**0.9**	**0.7**	**0.3**	**-0.1**			**-0.5**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.8	2.0	1.6	2.3	2.4	2.0	1.4	1.5	1.7	1.8	2.0	2.1	2.4	2.4	2.4	3.1	3.7	4.1	4.4	4.6	4.8	4.7	4.8	4.3	4.8	1.4	2.9
2	4.2	4.1	2.8	2.3	2.1	1.7	1.4	1.7	1.5	1.5	1.6	1.2	1.7	2.7	3.5	3.6	3.2	4.4	4.6	4.4	4.5	3.8	3.4	2.8	4.6	1.2	2.9
3	2.5	2.3	2.8	2.6	2.7	2.8	2.4	2.0	2.5	3.5	5.7	6.7	6.7	6.9	7.0	7.2	7.3	7.0	6.9	7.1	6.8	5.0	4.7	4.8	7.3	2.0	4.8
4	4.7	4.5	5.0	4.5	4.5	4.8	4.7	5.1	5.6	5.9	5.9	5.9	6.0	6.0	6.3	6.4	6.9	7.7	7.8	8.1	8.2	7.5	6.9	6.6	8.2	4.5	6.1
5	6.2	5.5	5.3	5.2	5.2	5.1	5.3	5.6	5.5	5.4	5.5	5.5	6.0	6.2	6.5	6.9	7.3	7.5	7.8	7.8	7.6	7.3	6.2	4.9	7.8	4.9	6.1
6	4.1	5.0	5.3	4.1	3.5	3.4	5.1	5.2	4.9	4.6	4.6	4.7	5.0	4.8	4.6	4.9	5.3	5.5	5.4	5.4	4.9	4.9	4.7	4.9	5.5	3.4	4.8
7	5.1	5.5	5.7	5.9	6.1	6.2	5.7	5.1	5.3	5.9	5.8	5.1	5.4	5.7	6.0	5.9	6.2	6.6	6.8	7.3	7.4	7.6	6.4	5.8	7.6	5.1	6.0
8	5.7	5.5	5.6	5.5	5.6	6.0	6.2	6.0	6.0	6.0	6.0	6.0	6.0	6.2	6.3	6.2	6.5	6.6	6.6	6.5	6.4	6.5	6.9	6.7	6.9	5.5	6.1
9	6.2	6.0	5.9	5.9	5.9	5.8	5.6	5.7	6.0	6.3	6.5	6.5	6.2	6.7	7.5	7.6	7.7	7.6	8.1	8.3	7.2	6.3	6.1	5.9	8.3	5.6	6.6
10	4.9	4.6	4.8	4.8	4.6	4.4	4.1	4.2	4.4	5.2	5.2	5.6	6.2	7.0	7.3	7.5	8.1	8.1	8.5	8.6	8.7	8.4	8.2	8.0	8.7	4.1	6.3
11	7.3	6.8	6.8	6.6	8.1	7.3	7.5	8.2	8.4	8.7	6.6	6.7	8.2	8.1	8.6	9.2	9.0	8.6	9.0	8.2	7.9	7.6	7.1	6.5	9.2	6.5	7.8
12	6.3	5.9	5.6	5.6	5.7	5.4	5.3	5.3	5.2	5.1	5.0	5.3	5.6	5.9	6.1	5.5	5.5	5.3	5.0	5.0	5.0	5.1	5.3	5.2	6.3	5.0	5.4
13	5.2	5.2	5.0	4.4	4.2	4.0	3.4	3.4	3.9	5.0	5.1	5.2	5.2	5.4	5.8	5.7	5.4	5.4	5.2	4.9	5.3	4.0	4.7	5.0	5.8	3.4	4.8
14	5.1	6.2	6.4	6.3	6.4	6.2	6.3	6.3	6.4	6.5	6.2	6.0	5.5	6.2	7.5	8.1	8.5	8.6	8.8	8.6	8.6	8.3	7.6	6.9	8.8	5.1	7.0
15	5.2	4.8	5.0	5.4	5.5	5.6	5.8	6.1	6.5	6.9	6.6	6.4	6.4	6.5	6.9	6.8	7.1	6.9	6.5	6.2	5.9	6.0	5.8	5.5	7.1	4.8	6.1
16	4.8	5.7	5.3	5.6	5.2	5.5	5.4	5.3	5.0	4.9	5.0	5.2	5.1	5.2	5.3	5.6	5.6	5.6	5.7	5.6	5.5	5.3	3.1	1.9	5.7	1.9	5.1
17	2.2	4.4	4.8	4.9	4.6	4.3	4.5	4.5	5.1	5.8	6.9	7.5	8.4	9.1	8.7	8.6	8.8	8.6	7.9	7.5	7.4	6.7	6.1	5.9	9.1	2.2	6.4
18	5.4	5.5	5.4	5.4	5.3	5.5	5.5	5.2	5.1	5.1	5.1	5.0	5.1	5.1	5.2	5.4	5.8	5.9	5.7	5.6	5.7	5.7	5.6	5.3	5.9	5.0	5.4
19	5.1	5.0	4.9	4.7	3.6	3.0	3.1	3.7	4.9	5.8	6.8	7.6	8.4	9.0	9.6	9.9	10.1	10.2	10.0	9.7	9.1	8.3	7.5	7.1	10.2	3.0	7.0
20	7.2	6.8	6.9	6.7	6.9	5.8	5.5	6.0	7.1	8.0	9.6	10.4	11.4	12.5	13.5	14.3	14.3	13.3	13.2	13.2	12.4	10.8	8.4	5.9	14.3	5.5	9.6
21	4.9	4.2	4.1	3.3	5.3	6.3	6.0	6.3	7.2	8.5	9.7	10.0	8.9	8.0	8.5	8.5	8.2	8.7	8.5	8.8	9.3	9.1	8.7	7.8	10.0	3.3	7.5
22	7.7	7.8	8.1	7.5	7.1	6.5	6.0	6.1	6.3	6.9	7.5	8.5	9.9	9.9	8.8	8.6	8.4	7.5	7.1	6.5	6.7	6.7	6.2	6.1	9.9	6.0	7.4
23	5.9	5.6	5.6	5.3	5.1	5.0	4.9	5.1	5.3	5.6	6.0	6.6	7.2	7.3	7.6	7.5	7.1	6.8	6.6	6.6	6.8	6.8	6.7	7.1	7.6	4.9	6.2
24	7.2	7.0	7.2	7.0	6.9	6.8	6.3	6.2	6.2	6.4	6.4	6.1	6.1	6.0	6.0	5.6	5.8	6.1	6.2	6.1	5.9	5.9	4.5	3.0	7.2	3.0	6.1
25	2.2	1.5	1.5	1.1	0.7	0.7	1.6	2.6	4.8	5.8	6.7	7.5	7.8	8.2	8.3	8.4	8.4	8.2	8.3	8.1	8.0	8.0	7.7	7.3	8.4	0.7	5.6
26	6.9	6.8	6.5	6.0	5.6	5.6	5.4	5.5	6.0	6.5	7.4	8.4	9.4	9.4	9.6	10.0	9.7	8.9	8.7	8.4	8.4	7.6	7.7	7.0	10.0	5.4	7.6
27	6.8	6.7	6.2	5.6	5.5	5.4	5.4	5.5	5.8	5.9	6.5	7.5	8.8	9.7	10.3	11.4	12.1	12.3	12.5	12.4	12.1	11.5	10.9	10.3	12.5	5.4	8.6
28	10.5	10.2	9.6	9.4	8.3	8.1	7.4	6.7	6.7	7.7	8.6	9.9	11.1	12.2	13.0	13.6	13.9	14.4	14.3	14.4	13.9	12.8	12.4	11.2	14.4	6.7	10.8
29	10.9	10.8	11.0	10.5	10.1	9.6	9.5	9.4	9.6	10.3	10.9	11.9	12.7	13.7	12.6	12.2	12.6	13.1	13.1	13.0	12.0	11.3	10.6	9.2	13.7	9.2	11.3
30	7.9	7.4	7.0	6.7	6.3	5.8	6.1	7.7	9.2	9.7	9.7	10.0	10.0	10.4	10.2	9.5	8.5	7.9	9.0	9.0	8.4	8.1	7.9	7.7	10.4	5.8	8.3
31	7.8	7.7	7.5	7.3	7.2	7.0	7.0	6.8	6.9	6.9	6.9	7.9	7.7	7.4	7.1	7.0	7.0	6.9	6.8	6.3	6.3	6.5	6.4	6.4	7.9	6.3	7.0
Max.	**10.9**	**10.8**	**11.0**	**10.5**	**10.1**	**9.6**	**9.5**	**9.4**	**9.6**	**10.3**	**10.9**	**11.9**	**12.7**	**13.7**	**13.5**	**14.3**	**14.3**	**14.4**	**14.3**	**14.4**	**13.9**	**12.8**	**12.4**	**11.2**	**14.4**		
Min.	**2.2**	**1.5**	**1.5**	**1.1**	**0.7**	**0.7**	**1.4**	**1.5**	**1.5**	**1.5**	**1.6**	**1.2**	**1.7**	**2.4**	**2.4**	**3.1**	**3.2**	**4.1**	**4.4**	**4.4**	**4.5**	**3.8**	**3.1**	**1.9**		**0.7**	
Avg.	**5.8**	**5.7**	**5.6**	**5.4**	**5.4**	**5.2**	**5.1**	**5.3**	**5.6**	**6.1**	**6.4**	**6.7**	**7.1**	**7.4**	**7.6**	**7.8**	**7.9**	**7.9**	**7.9**	**7.8**	**7.7**	**7.2**	**6.7**	**6.2**			**6.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.9	7.6	8.1	8.2	8.4	8.3	8.6	8.4	8.9	9.0	9.2	9.0	8.8	9.0	8.7	9.3	9.6	9.1	9.1	9.2	9.0	9.0	8.7	8.9	9.6	6.9	8.7
2	9.1	8.9	8.9	8.9	8.8	8.6	9.0	9.0	9.0	9.0	9.6	10.2	10.0	10.0	10.3	10.4	10.5	9.6	9.3	9.8	10.2	9.5	9.1	9.7	10.5	8.6	9.5
3	9.5	9.0	8.9	9.0	9.6	10.4	10.2	10.1	10.6	11.0	11.3	11.5	10.2	8.7	8.4	8.6	8.7	8.0	7.6	7.2	6.9	7.0	7.1	6.8	11.5	6.8	9.0
4	6.3	6.3	5.4	5.8	6.0	5.9	6.0	6.4	6.8	7.4	8.0	7.9	7.7	7.8	7.9	8.0	8.5	9.0	9.1	8.9	9.1	8.7	7.9	7.5	9.1	5.4	7.4
5	7.2	7.0	6.9	6.7	6.5	6.7	7.0	6.8	6.9	7.0	6.6	6.7	6.7	6.6	6.9	6.7	6.9	7.5	8.0	7.8	7.9	7.8	7.4	6.7	8.0	6.5	7.0
6	6.2	6.8	6.2	5.9	5.8	5.7	5.9	6.1	6.7	7.6	8.5	9.0	10.1	10.7	11.6	12.8	13.9	14.6	14.9	13.8	12.7	12.2	11.5	10.5	14.9	5.7	9.6
7	9.9	9.3	9.0	8.4	7.8	6.9	6.2	6.1	6.3	6.5	6.9	7.0	7.5	8.4	9.3	10.8	11.9	9.0	8.3	7.9	7.6	7.5	7.2	6.9	11.9	6.1	8.0
8	6.7	6.8	6.9	6.9	6.6	6.8	7.7	7.5	7.5	7.1	7.7	8.7	9.9	11.0	11.4	13.3	13.5	13.9	13.3	12.4	11.7	10.3	10.0	9.5	13.9	6.6	9.5
9	8.0	7.1	6.3	6.0	5.6	5.2	4.9	4.2	4.4	5.0	5.8	6.4	7.5	8.4	9.0	9.3	9.3	9.5	9.7	9.6	8.9	7.9	7.1	6.5	9.7	4.2	7.1
10	6.2	6.0	6.0	5.7	5.3	5.1	4.9	4.9	5.1	5.2	5.5	6.1	7.4	7.9	8.8	8.1	8.3	7.8	7.6	7.6	7.5	7.3	7.3	7.2	8.8	4.9	6.6
11	7.3	7.2	7.3	7.0	6.6	6.3	6.0	5.9	5.6	5.7	6.6	7.2	7.1	6.9	6.9	7.1	7.0	6.9	7.1	7.0	7.1	7.1	7.1	6.7	7.3	5.6	6.8
12	6.7	6.4	6.1	5.9	5.5	5.2	4.9	4.6	4.8	5.0	5.8	7.0	8.3	8.4	9.1	9.7	9.5	9.7	8.9	7.7	7.0	6.4	5.8	5.4	9.7	4.6	6.8
13	5.2	5.1	4.9	4.9	4.6	4.6	4.6	4.9	5.6	6.0	6.9	7.4	8.2	9.3	9.3	10.0	10.5	11.9	12.4	13.2	13.3	11.2	10.0	11.0	13.3	4.6	8.1
14	10.8	9.4	10.0	9.2	8.9	8.3	8.1	7.9	7.8	7.9	8.0	8.3	8.7	9.5	10.1	10.6	11.5	12.0	10.5	10.6	10.5	10.8	10.0	10.3	12.0	7.8	9.6
15	11.5	11.6	11.3	10.8	9.3	8.0	7.3	6.9	7.1	6.7	7.6	8.3	9.5	10.6	11.1	12.2	13.1	13.8	13.3	12.7	12.8	12.3	11.6	10.4	13.8	6.7	10.4
16	10.4	10.3	10.0	9.6	9.1	8.7	8.2	8.3	8.5	9.4	10.4	11.2	11.1	12.2	13.9	14.9	14.2	13.9	13.5	13.6	13.0	12.0	11.0	9.4	14.9	8.2	11.1
17	9.0	10.2	9.6	8.1	7.4	10.5	11.4	11.5	11.8	12.3	12.6	10.8	9.6	9.7	9.4	9.0	9.1	9.0	9.9	9.8	9.1	9.2	8.9	8.7	12.6	7.4	9.9
18	8.2	7.5	7.1	6.4	5.8	6.4	7.9	11.0	11.0	10.7	10.4	11.2	13.1	14.6	12.8	12.0	11.3	11.5	11.9	12.2	11.9	11.1	10.1	8.3	14.6	5.8	10.2
19	8.0	7.3	7.4	7.0	6.7	9.0	10.8	10.5	10.4	10.4	11.7	12.7	10.9	10.7	10.2	10.5	10.6	10.6	10.6	10.3	9.8	9.4	9.2	8.9	12.7	6.7	9.7
20	8.7	8.5	8.2	8.1	7.9	7.6	7.8	7.8	7.9	8.2	8.6	9.2	10.0	10.0	9.7	9.6	9.6	9.7	9.7	10.0	9.6	9.3	9.4	9.5	10.0	7.6	8.9
21	9.6	9.6	9.5	9.3	9.3	8.7	9.2	9.3	9.4	9.8	10.0	10.3	10.8	11.0	11.5	11.6	12.2	12.2	12.1	12.1	12.3	12.3	11.9	10.2	12.3	8.7	10.6
22	8.0	7.5	7.0	7.0	7.8	7.7	8.5	9.5	10.0	10.0	10.2	10.5	10.0	9.9	9.8	9.7	9.8	10.4	10.7	10.7	10.6	10.3	10.2	10.0	10.7	7.0	9.4
23	9.6	9.5	9.3	9.1	9.1	9.0	8.9	9.0	9.3	9.6	10.0	10.2	10.5	10.5	10.7	10.3	10.3	10.2	10.2	10.5	10.2	10.0	9.7	9.1	10.7	8.9	9.8
24	8.4	8.8	9.4	9.3	9.0	8.9	8.9	8.9	9.2	9.5	9.6	9.2	8.9	8.6	8.4	8.5	8.9	10.0	10.1	10.0	10.0	10.3	10.8	11.0	11.0	8.4	9.4
25	11.4	11.5	10.8	9.5	9.5	10.6	10.9	10.6	10.5	11.0	11.8	12.1	12.2	12.8	12.6	12.6	12.7	13.0	13.0	12.7	12.5	12.9	11.9	10.9	13.0	9.5	11.7
26	10.8	10.8	10.7	10.7	10.8	10.8	10.3	11.2	11.5	11.6	11.9	12.0	12.3	12.9	13.3	13.4	13.6	13.8	13.8	13.6	13.5	13.5	13.5	13.6	13.8	10.3	12.2
27	13.5	13.2	11.4	9.8	9.5	9.5	9.4	9.2	8.4	8.0	7.7	7.9	8.1	8.5	9.1	9.7	10.7	10.6	10.1	9.9	9.6	9.5	9.2	7.8	13.5	7.7	9.6
28	6.5	6.5	6.1	5.4	4.6	5.3	7.5	9.5	9.8	9.7	10.6	11.1	11.6	12.4	13.1	13.2	12.2	11.8	11.7	10.9	9.5	9.7	9.7	9.5	13.2	4.6	9.5
29	9.1	9.3	9.6	9.7	9.6	9.6	9.5	9.7	9.3	9.1	9.0	8.9	9.1	9.1	9.5	9.9	9.8	9.7	9.9	10.1	10.1	9.9	9.7	9.7	10.1	8.9	9.5
30	9.5	9.3	8.6	6.9	5.6	4.7	4.3	5.2	7.2	8.8	9.5	9.8	10.2	10.5	10.9	11.0	11.1	11.2	11.2	11.5	11.7	11.3	9.5	7.1	11.7	4.3	9.0
Max.	**13.5**	**13.2**	**11.4**	**10.8**	**10.8**	**10.8**	**11.4**	**11.5**	**11.8**	**12.3**	**12.6**	**12.7**	**13.1**	**14.6**	**13.9**	**14.9**	**14.2**	**14.6**	**14.9**	**13.8**	**13.5**	**13.5**	**13.5**	**13.6**	**14.9**		
Min.	**5.2**	**5.1**	**4.9**	**4.9**	**4.6**	**4.6**	**4.3**	**4.2**	**4.4**	**5.0**	**5.5**	**6.1**	**6.7**	**6.6**	**6.9**	**6.7**	**6.9**	**6.9**	**7.1**	**7.0**	**6.9**	**6.4**	**5.8**	**5.4**		**4.2**	
Avg.	**8.6**	**8.5**	**8.2**	**7.8**	**7.6**	**7.6**	**7.8**	**8.0**	**8.2**	**8.5**	**8.9**	**9.3**	**9.5**	**9.9**	**10.1**	**10.4**	**10.6**	**10.7**	**10.6**	**10.4**	**10.2**	**9.9**	**9.4**	**8.9**			**9.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.3	5.9	5.7	5.3	4.8	5.4	5.4	6.5	8.9	10.0	10.5	11.2	11.4	10.8	11.5	12.3	11.8	11.7	11.8	12.0	11.5	9.9	10.2	10.7	12.3	4.8	9.2
2	10.5	10.2	10.0	9.8	9.7	9.7	9.7	9.9	10.1	9.7	10.1	11.0	11.1	11.3	12.0	11.8	11.5	11.5	11.9	12.0	11.5	11.3	11.2	11.2	12.0	9.7	10.8
3	10.3	9.7	10.4	13.4	14.2	14.2	13.7	12.9	11.1	10.9	11.4	11.6	11.9	12.4	12.3	12.1	11.1	11.5	11.2	11.1	10.6	10.2	10.1	10.0	14.2	9.7	11.6
4	9.7	10.0	10.2	10.4	10.8	10.2	10.3	10.8	10.8	10.5	10.7	11.2	11.4	11.5	12.1	11.8	11.5	11.0	10.9	11.4	11.5	11.5	11.5	11.2	12.1	9.7	11.0
5	10.9	10.9	11.1	10.9	11.2	10.5	10.0	10.6	11.1	12.0	13.1	13.9	14.7	15.0	14.7	15.2	15.1	15.0	15.4	15.7	14.7	14.4	14.1	11.7	15.7	10.0	13.0
6	10.7	11.2	10.5	10.3	10.3	10.5	10.5	11.4	12.4	12.4	12.9	13.6	13.9	14.0	12.7	13.1	12.5	12.3	12.4	12.5	12.1	11.8	11.6	11.3	14.0	10.3	12.0
7	11.5	11.8	11.8	11.5	11.2	10.2	9.1	9.2	9.1	9.2	9.2	9.6	9.8	10.4	10.8	10.9	11.0	11.2	11.1	10.9	10.7	10.7	10.2	9.4	11.8	9.1	10.4
8	8.6	8.3	8.9	8.9	9.9	10.6	10.5	10.4	10.6	10.8	11.0	11.1	11.4	11.2	12.0	12.6	13.0	13.3	13.5	13.1	12.7	12.3	11.8	11.5	13.5	8.3	11.2
9	10.8	10.2	10.0	9.9	9.6	9.5	9.5	9.6	10.6	12.1	12.5	13.1	12.9	12.6	12.3	11.8	11.7	12.2	12.4	12.9	13.2	12.9	12.9	12.8	13.2	9.5	11.6
10	12.6	12.7	12.7	12.5	12.2	12.0	11.9	11.7	11.6	11.3	10.8	11.0	10.6	10.6	10.7	10.8	11.3	11.1	10.8	10.5	10.2	10.0	10.0	10.0	12.7	10.0	11.2
11	10.1	10.1	9.9	10.1	10.0	9.9	9.8	9.6	9.8	10.0	10.1	10.3	10.6	11.0	11.6	12.0	12.5	12.5	12.1	11.8	11.5	11.4	10.7	7.7	12.5	7.7	10.6
12	6.1	6.1	6.4	6.6	5.9	5.5	7.1	9.5	10.2	10.8	11.1	11.3	11.4	11.5	11.5	11.7	12.0	11.7	11.9	11.4	11.4	11.3	11.3	11.2	12.0	5.5	9.8
13	10.5	10.5	10.5	10.5	10.2	10.2	10.3	9.7	9.8	10.4	10.7	10.7	10.7	10.3	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.0	9.9	10.7	9.7	10.2
14	9.7	9.9	9.6	9.8	9.8	9.9	9.8	10.0	10.0	10.2	10.8	10.8	11.2	11.4	11.5	11.6	11.9	12.0	12.0	12.0	12.0	11.8	11.5	11.4	12.0	9.6	10.9
15	11.1	11.0	10.7	11.0	11.0	11.0	10.8	10.6	10.6																11.1	10.6	10.8
16	13.1	12.5	11.9	11.6	11.8	11.7	11.7	11.2	10.8	10.8	10.7	10.6	11.1	11.0	11.1	11.2	11.2	11.3	11.3	11.4	11.4	11.4	11.4	11.2	13.1	10.6	11.4
17	11.4	11.2	10.8	10.6	9.2	7.7	7.4	7.2	7.2	7.6	8.2	9.3	8.9	9.3	9.5	10.1	9.1	9.4	10.3	10.1	9.6	9.5	9.3	9.1	11.4	7.2	9.3
18	8.9	8.6	8.5	8.2	8.2	8.0	7.8	7.7	7.8	8.3	9.0	9.7	10.7	11.2	11.5	11.6	12.0	12.1	12.2	11.8	10.9	10.3	10.0	9.5	12.2	7.7	9.8
19	9.3	9.5	9.2	9.0	8.9	8.8	9.0	9.5	10.2	10.7	11.6	12.6	13.5	14.5	15.5	16.3	16.7	16.9	16.1	15.6	15.6	14.7	14.0	12.8	16.9	8.8	12.5
20	12.8	11.8	11.9	11.9	11.5	11.4	11.5	11.6	11.7	12.4	12.5	11.0	10.2	9.8	10.0	10.5	10.3	10.3	10.2	10.2	10.1	9.3	9.4	9.4	12.8	9.3	10.9
21	9.7	9.6	9.0	8.5	8.5	8.2	8.0	8.0	8.5	9.0	9.7	10.1	10.4	10.5	10.2	11.0	11.2	12.0	12.6	12.3	12.3	11.7	11.1	10.7	12.6	8.0	10.1
22	10.5	9.9	9.5	9.5	9.1	9.0	8.9	9.2	9.5	10.1	10.6	10.7	10.4	10.2	10.1	10.0	9.6	9.9	10.1	9.8	9.8	9.6	9.1	8.5	10.7	8.5	9.7
23	8.2	8.1	8.2	8.1	8.3	8.2	8.2	8.4	8.8	10.0	10.9	10.5	11.0	11.4	12.0	12.2	11.9	11.5	11.3	11.0	10.4	9.9	9.4	9.4	12.2	8.1	9.9
24	8.4	7.8	8.0	7.6	7.7	7.6	7.8	8.2	8.3	8.7	8.9	9.5	10.3	11.1	12.2	13.2	13.2	12.5	12.8	12.7	12.7	12.3	10.9	9.6	13.2	7.6	10.1
25	9.8	10.7	11.6	12.2	12.3	12.7	13.3	12.9	13.3	12.8	14.9	14.7	15.9	16.6	17.8	18.8	19.8	19.6	16.2	15.5	15.1	14.7	14.2	12.8	19.8	9.8	14.5
26	11.8	11.4	10.6	11.5	12.7	12.1	11.1	10.3	10.1	10.3	10.7	11.3	11.2	10.8	10.6	10.9	11.4	12.1	12.5	12.3	11.7	11.2	10.9	10.5	12.7	10.1	11.2
27	10.2	9.8	10.0	10.1	9.7	9.8	9.6	9.2	9.2	9.4	9.3	10.0	10.2	10.4	10.7	10.6	10.7	10.8	11.1	11.5	11.0	10.5	8.8	8.7	11.5	8.7	10.1
28	9.0	9.3	10.2	10.3	10.1	10.0	10.1	10.4	11.0	11.6	12.2	12.9	13.8	15.5	16.7	16.9	17.2	18.1	18.1	17.8	17.9	17.2	16.6	16.1	18.1	9.0	13.7
29	15.7	15.0	14.4	14.5	14.0	13.7	13.5	13.5	14.5	15.2	16.0	17.4	18.8	19.5	20.7	21.5	21.9	22.0	21.6	21.4	20.4	19.4	18.5	18.3	22.0	13.5	17.5
30	17.8	17.0	16.3	15.7	15.0	14.7	14.5	14.7	15.0	15.5	16.0	16.5	17.3	17.8	19.0	20.2	20.9	21.1	20.6	20.1	19.5	18.5	17.6	16.9	21.1	14.5	17.4
31	16.5	16.3	15.8	15.5	14.5	13.7	13.5	13.3	13.1	13.3	13.6	14.5	15.5	16.3	16.7	17.5	18.1	18.2	19.1	19.8	19.0	18.0	16.9	16.6	19.8	13.1	16.1
Max.	**17.8**	**17.0**	**16.3**	**15.7**	**15.0**	**14.7**	**14.5**	**14.7**	**15.0**	**15.5**	**16.0**	**17.4**	**18.8**	**19.5**	**20.7**	**21.5**	**21.9**	**22.0**	**21.6**	**21.4**	**20.4**	**19.4**	**18.5**	**18.3**	**22.0**		
Min.	**6.1**	**5.9**	**5.7**	**5.3**	**4.8**	**5.4**	**5.4**	**6.5**	**7.2**	**7.6**	**8.2**	**9.3**	**8.9**	**9.3**	**9.5**	**10.0**	**9.1**	**9.4**	**10.1**	**9.8**	**9.6**	**9.3**	**8.8**	**7.7**		**4.8**	
Avg.	**10.7**	**10.5**	**10.5**	**10.5**	**10.4**	**10.2**	**10.1**	**10.2**	**10.5**	**10.9**	**11.3**	**11.7**	**12.1**	**12.3**	**12.7**	**13.0**	**13.1**	**13.2**	**13.1**	**13.0**	**12.7**	**12.3**	**11.8**	**11.3**			**11.6**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	15.9	15.3	14.5	13.4	12.6	11.8	11.3	10.9	10.8	12.2	13.2	13.3	12.4	11.5	11.3	11.5	11.3	11.3	11.5	12.2	12.5	12.4	12.4	12.3	15.9	10.8	12.4
2	12.3	12.2	11.8	11.4	11.6	11.2	11.3	11.5	11.7	11.8	12.0	12.1	12.2	12.2	12.7	11.9	11.9	12.0	11.9	11.8	11.7	11.5	11.3	11.3	12.7	11.2	11.8
3	11.0	11.0	10.7	10.8	11.2	11.2	11.3	11.4	11.2	11.3	11.5	11.6	11.8	11.8	12.2	12.7	12.4	12.8	12.1	11.9	11.8	11.8	11.7	11.8	12.8	10.7	11.6
4	11.6	11.5	11.6	11.5	11.3	10.5	10.3	11.1	11.3	11.5	11.7	11.5	11.6	12.0	11.6	11.7	11.5	11.6	11.3	10.8	10.3	10.5	10.2	10.2	12.0	10.2	11.2
5	10.3	10.3	10.3	10.4	10.1	10.0	9.6	9.6	10.0	11.2	11.9	12.7	13.2	13.8	13.7	13.5	12.8	12.7	13.0	13.3	13.3	13.0	13.0	12.5	13.8	9.6	11.8
6	12.4	12.2	11.9	10.9	10.2	10.0	9.5	8.7	10.1	11.1	13.3	14.1	15.5	16.6	17.1	17.6	18.5	19.3	19.0	18.4	17.9	17.5	16.0	14.1	19.3	8.7	14.2
7	12.8	13.5	13.6	13.3	13.1	12.0	12.6	12.3	12.7	13.5	14.1	15.2	16.3	17.4	18.3	18.9	19.3	19.6	19.3	19.0	18.1	16.5	15.6	14.4	19.6	12.0	15.5
8	13.2	11.8	9.4	8.3	8.7	8.8	8.6	9.8	11.6	13.4	14.2	15.4	14.1	14.5	14.8	15.0	15.3	15.3	14.9	14.5	13.9	11.8	9.1	8.0	15.4	8.0	12.3
9	7.3	7.2	6.8	6.6	6.7	6.4	9.5	10.4	12.5	13.0	14.1	14.6	15.4	16.8	17.7	16.0	14.2	14.2	13.5	12.6	12.0	11.9	11.3	11.0	17.7	6.4	11.7
10	10.9	10.9	11.0	11.0	11.2	11.2	11.2	11.2	11.2	11.4	11.7	11.9	12.1	12.3	12.7	13.0	13.0	13.0	12.7	12.6	12.4	12.3	12.1	12.0	13.0	10.9	11.9
11	11.9	11.9	11.8	11.9	11.7	11.6	11.5	11.6	11.7	12.0	12.1	12.1	12.2	12.3	12.5	12.9	13.3	13.2	13.6	13.5	13.0	10.8	8.8	8.1	13.6	8.1	11.9
12	7.9	9.8	11.3	11.5	11.5	11.4	11.4	12.0	12.2	12.9	13.8	14.6	14.6	14.7	14.7	14.9	14.8	14.4	14.4	14.3	13.7	13.2	11.8	11.2	14.9	7.9	12.8
13	12.1	12.5	12.5	12.1	11.9	11.8	11.7	12.0	12.3	13.1	13.8	13.8	14.3	14.7	14.3	13.8	13.2	13.3	13.6	13.3	13.4	14.1	12.9	12.0	14.7	11.7	13.0
14	11.4	11.6	11.9	11.9	12.1	12.0	12.3	12.7	12.1	12.1	12.2	12.3	12.6	13.1	13.2	13.4	13.4	13.8	14.2	14.2	13.8	13.1	12.5	12.5	14.2	11.4	12.7
15	12.5	11.8	11.5	11.0	10.8	10.7	10.4	10.2	10.3	10.3	10.4	10.7	11.0	11.0	11.4	11.4	11.4	11.3	11.6	11.5	11.4	11.6	12.0	11.8	12.5	10.2	11.2
16	11.5	10.8	10.4	10.4	10.6	10.8	10.9	11.1	11.4	11.6	11.6	11.2	11.1	11.5	11.7	11.8	12.0	12.2	12.4	12.4	12.1	11.6	11.6	11.3	12.4	10.4	11.4
17	11.1	10.6	10.7	11.0	10.5	10.0	10.3	9.9	10.0	10.9	11.2	10.8	11.1	10.5	11.1	11.6	11.8	12.4	12.5	12.3	11.9	12.0	11.8	11.2	12.5	9.9	11.1
18	11.2	11.4	10.9	9.9	8.7	8.0	7.2	8.3	10.6	12.0	12.9	13.3	13.8	14.1	14.5	14.8	15.0	15.2	15.2	14.5	13.6	12.7	12.4	12.3	15.2	7.2	12.2
19	12.2	11.4	11.0	10.7	10.4	9.7	9.5	10.0	11.3	12.0	12.1	13.1	13.8	14.2	14.6	15.1	15.4	15.2	15.1	14.8	14.4	13.6	13.7	14.0	15.4	9.5	12.8
20	13.5	12.8	12.6	12.8	12.6	12.6	12.6	12.6	12.5	12.4	12.5	13.1	13.1	13.4	14.0	14.7	15.0	15.4	15.3	14.9	14.4	13.7	13.4	13.1	15.4	12.4	13.5
21	13.0	13.0	12.8	13.2	13.0	13.1	12.8	12.5	12.4	12.5	12.9	13.1	12.9	12.9	13.5	13.9	13.6	13.6	13.6	12.6	11.9	11.9	11.4	11.1	13.9	11.1	12.8
22	11.3	11.0	10.8	11.1	11.2	10.8	10.3	10.2	10.5	11.3	11.6	12.5	13.3	13.0	13.5	13.9	13.9	13.6	12.5	12.5	13.9	13.0	12.7	12.9	13.9	10.2	12.1
23	13.0	12.9	12.9	13.0	13.0	12.7	12.5	12.3	12.1	12.3	12.7	13.0	13.5	14.0	14.3	13.0	12.8	12.4	12.3	12.3	12.4	12.4	12.2	12.1	14.3	12.1	12.7
24	11.8	11.3	11.1	11.2	11.9	12.0	12.0	12.2	12.2	12.5	12.6	13.6	14.6	14.8	15.0	15.2	15.8	15.6	15.3	14.5	14.2	14.2	13.4	12.7	15.8	11.1	13.3
25	12.7	12.5	11.6	11.7	12.0	12.2	11.8	11.3	11.4	11.5	11.8	12.0	12.5	12.3	11.9	12.0	12.4	12.3	12.2	12.1	11.8	12.0	11.9	11.9	12.7	11.3	12.0
26	11.9	11.9	11.8	11.0	11.3	11.6	11.2	11.4	11.9	12.1	12.7	12.9	13.2	13.1	13.1	12.8	12.6	12.8	12.6	12.4	12.1	11.8	11.7	11.5	13.2	11.0	12.1
27	10.8	9.5	9.3	9.4	8.9	8.8	8.9	10.4	10.8	10.9	11.0	11.3	11.5	12.2	12.9	13.2	13.0	13.2	13.1	12.7	11.9	11.7	11.5	12.0	13.2	8.8	11.2
28	12.1	12.0	11.8	11.9	11.4	11.6	11.6	11.7	11.6	11.6	12.5	12.4	12.9	13.1	13.5	13.8	13.5	13.3	13.0	12.8	12.5	11.6	11.6	11.6	13.8	11.4	12.3
29	11.8	12.1	12.0	11.2	10.8	10.7	10.5	10.3	10.7	11.6	12.7	14.2	15.3	16.1	16.5	16.6	16.4	15.9	14.9	13.7	12.8	11.8	11.2	10.8	16.6	10.3	12.9
30	10.7	10.1	9.8	9.9	10.1	10.2	10.4	10.3	10.5	10.9	11.6	12.7	13.4	13.1	12.4	12.7	12.6	11.7	11.6	11.9	12.1	12.6	12.3	12.5	13.4	9.8	11.5
31	12.4	12.6	12.2	11.6	11.1	10.6	10.9	11.3	11.5	11.5	11.7	11.8	12.0	12.3	12.2	12.0	12.4	12.7	13.4	13.9	13.5	13.5	13.7	13.7	13.9	10.6	12.3
Max.	**15.9**	**15.3**	**14.5**	**13.4**	**13.1**	**13.1**	**12.8**	**12.7**	**12.7**	**13.5**	**14.2**	**15.4**	**16.3**	**17.4**	**18.3**	**18.9**	**19.3**	**19.6**	**19.3**	**19.0**	**18.1**	**17.5**	**16.0**	**14.4**	**19.6**		
Min.	**7.3**	**7.2**	**6.8**	**6.6**	**6.7**	**6.4**	**7.2**	**8.3**	**10.0**	**10.3**	**10.4**	**10.7**	**11.0**	**10.5**	**11.1**	**11.4**	**11.3**	**11.3**	**11.3**	**10.8**	**10.3**	**10.5**	**8.8**	**8.0**		**6.4**	
Avg.	**11.8**	**11.6**	**11.4**	**11.2**	**11.0**	**10.8**	**10.8**	**11.0**	**11.4**	**11.9**	**12.4**	**12.8**	**13.1**	**13.4**	**13.6**	**13.7**	**13.7**	**13.7**	**13.6**	**13.4**	**13.1**	**12.6**	**12.2**	**11.9**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.7	13.5	13.1	12.8	13.4	13.2	12.7	12.6	12.9	12.5	12.3	12.2	12.4	12.7	13.0	12.6	12.3	12.4	12.4	12.2	12.2	12.3	12.1	12.0	13.7	12.0	12.6
2	12.0	11.7	11.6	11.8	12.0	12.1	11.6	11.7	11.5	11.2	10.7	10.6	11.3	11.6	11.9	12.3	12.4	12.5	12.5	12.0	11.6	11.7	11.8	11.5	12.5	10.6	11.7
3	11.5	11.8	12.1	12.4	12.2	12.1	11.9	12.0	11.6	10.6	10.0	10.2	10.5	10.5	10.7	10.6	10.9	11.5	12.1	11.8	10.6	8.7	8.9	9.1	12.4	8.7	11.0
4	9.2	9.7	9.7	10.2	10.1	10.1	10.3	10.2	10.6	10.8	11.5	12.1	12.3	11.7	11.5	11.3	11.2	11.3	11.4	11.0	9.8	8.8	8.1	8.1	12.3	8.1	10.5
5	7.9	8.1	8.4	8.4	8.1	7.3	7.1	7.7	8.3	9.1	9.9	11.3	11.9	12.3	12.0	11.0	10.1	9.8	9.2	8.9	8.4	8.1	8.0	7.9	12.3	7.1	9.1
6	8.0	8.4	9.3	10.0	10.6	10.8	11.8	12.4	12.4	12.9	13.1	13.1	12.2	11.5	11.3	11.4	11.7	12.0	11.7	11.8	11.5	11.4	11.4	11.5	13.1	8.0	11.3
7	12.5	13.4	13.7	13.8	13.7	14.3	13.7	12.7	12.7	12.8	12.1	10.4	11.9	10.7	11.6	11.9	12.0	12.5	12.1	10.8	10.4	10.2	9.7	9.6	14.3	9.6	12.0
8	9.8	9.9	9.6	9.6	9.8	9.3	9.3	9.2	9.6	9.6	10.2	11.3	11.2	11.7	11.6	11.0	10.7	10.5	11.1	11.0	10.6	10.8	11.1	11.0	11.7	9.2	10.4
9	11.2	11.1	11.3	11.9	12.2	12.4	12.4	12.3	12.3	12.2	12.4	12.6	12.5	12.6	11.3	11.4	10.9	10.9	10.9	10.8	10.7	10.9	10.6	10.4	12.6	10.4	11.6
10	10.1	9.9	9.7	9.5	9.4	9.2	9.1	8.9	9.0	9.3	11.1	11.5	11.8	12.0	12.5	12.8	12.8	12.6	12.3	11.8	11.7	11.8	11.5	11.6	12.8	8.9	10.9
11	11.4	11.0	10.6	10.3	10.1	10.0	9.7	9.7	9.8	11.0	11.8	12.5	13.1	14.2	12.6	12.4	11.8	11.1	11.3	11.6	11.9	11.2	10.8	10.7	14.2	9.7	11.3
12	11.2	11.3	11.1	10.4	10.1	10.2	10.2	10.4	10.4	10.4	10.6	10.7	10.9	11.1	11.4	11.5	11.7	11.9	12.0	12.1	12.1	12.1	12.2	12.2	12.2	10.1	11.2
13	12.1	11.9	11.3	11.2	11.2	11.3	11.0	10.8	10.6	10.5	10.4	10.3	10.2	9.8	9.7	10.1	10.5	10.1	10.4	10.6	10.6	10.7	10.7	10.8	12.1	9.7	10.7
14	10.9	11.4	11.6	11.2	11.4	10.8	9.9	10.1	10.2	10.2	10.4	10.8	10.4	10.2	10.1	9.9	9.5	9.9	10.3	9.8	9.9	9.2	8.8	8.8	11.6	8.8	10.2
15	8.9	9.2	9.1	9.9	10.8	10.8	10.9	10.9	10.9	10.5	10.7	11.0	11.2	12.1	-15.4	2.9	10.8	10.7	10.4	9.6	9.0	8.9	8.6	8.3	12.1	-15.4	8.8
16	8.3	8.6	9.5	9.4	10.0	9.4	9.2	9.3	9.2	9.5	9.5	9.7	10.3	11.3	12.0	12.6	12.6	12.3	11.6	11.3	11.0	10.4	10.8	10.6	12.6	8.3	10.3
17	10.5	10.0	9.5	9.6	9.1	8.8	8.6	8.4	8.4	8.5	9.0	9.6	10.0	10.2	10.4	10.0	9.2	8.5	8.3	8.3	8.2	8.6	8.9	8.9	10.5	8.2	9.1
18	8.7	8.5	8.8	9.0	9.1	9.0	9.4	9.6	10.3	10.8	11.2	11.2	11.8	11.1	10.3	9.2	8.7	8.1	8.0	7.9	8.5	9.1	9.4	9.5	11.8	7.9	9.5
19	9.6	9.1	9.5	9.3	9.0	8.1	7.3	7.5	7.6	7.4	7.9	8.1	8.4	8.7	9.2	9.0	9.3	8.8	8.1	8.1	7.9	8.0	8.0	7.7	9.6	7.3	8.4
20	7.8	7.5	7.6	7.5	7.3	7.3	7.4	7.4	7.0	7.3	7.8	7.1	7.1	7.1	7.4	7.7	8.3	8.2	7.8	7.3	6.6	5.9	5.3	4.9	8.3	4.9	7.2
21	4.7	4.7	4.6	5.1	5.4	5.7	5.5	5.9	6.0	6.1	7.5	8.7	9.7	10.1	10.0	9.7	9.6	9.4	8.8	8.5	7.6	7.3	6.6	5.4	10.1	4.6	7.2
22	4.7	4.7	4.4	4.3	4.0	4.4	5.4	5.5	5.0	5.5	6.5	7.5	8.5	8.9	8.9	9.1	9.3	9.4	9.0	8.1	7.0	6.4	5.9	6.0	9.4	4.0	6.6
23	6.4	6.0	5.9	5.7	5.8	5.7	5.5	5.6	5.4	5.6	6.0	6.2	6.7	6.9	6.9	7.0	7.5	8.2	8.1	7.7	7.2	6.7	6.4	6.2	8.2	5.4	6.5
24	6.0	5.8	5.5	5.9	6.1	6.2	6.2	6.6	6.4	6.8	7.7	8.0	7.7	8.3	8.7	8.8	8.9	8.8	8.7	8.6	8.6	8.7	9.0	8.9	9.0	5.5	7.5
25	9.1	9.0	8.8	8.2	7.7	8.3	8.4	8.7	8.4	8.3	8.7	8.4	7.8	8.2	8.2	8.6	8.9	9.0	8.5	8.1	7.9	7.7	9.0	9.0	9.1	7.7	8.4
26	9.0	8.2	7.5	7.4	7.2	7.1	6.9	7.0	7.3	7.5	8.1	9.1	9.3	9.5	10.3	10.2	10.0	9.6	9.7	8.0	7.0	7.3	7.0	7.3	10.3	6.9	8.2
27	7.4	7.1	7.4	7.8	7.8	7.7	7.3	6.2	5.7	6.0	6.9	7.6	9.0	9.2	9.2	9.4	9.3	9.5	9.1	8.6	9.1	9.0	8.5	8.5	9.5	5.7	8.1
28	8.2	7.0	6.1	5.7	5.9	6.0	5.8	6.1	5.9	6.1	7.3	8.1	8.8	9.4	9.6	9.2	9.0	9.0	9.1	8.8	7.5	6.9	6.8	5.9	9.6	5.7	7.4
29	8.5	8.8	8.9	9.1	8.8	8.7	8.7	8.5	8.3	8.3	8.4	8.5	8.6	8.7	9.0	9.1	9.2	8.9	8.5	8.3	6.5	5.3	4.8	4.6	9.2	4.6	8.1
30	4.7	5.1	4.8	4.7	4.8	5.2	5.3	5.4	5.0	5.5	6.3	7.3	8.4	8.9	8.6	8.6	8.5	8.2	7.5	6.8	5.3	5.0	4.7	4.8	8.9	4.7	6.2
Max.	**13.7**	**13.5**	**13.7**	**13.8**	**13.7**	**14.3**	**13.7**	**12.7**	**12.9**	**12.9**	**13.1**	**13.1**	**13.1**	**14.2**	**13.0**	**12.8**	**12.8**	**12.6**	**12.5**	**12.2**	**12.2**	**12.3**	**12.2**	**12.2**	**14.3**		
Min.	**4.7**	**4.7**	**4.4**	**4.3**	**4.0**	**4.4**	**5.3**	**5.4**	**5.0**	**5.5**	**6.0**	**6.2**	**6.7**	**6.9**	**-15.4**	**2.9**	**7.5**	**8.1**	**7.5**	**6.8**	**5.3**	**5.0**	**4.7**	**4.6**		**-15.4**	
Avg.	**9.1**	**9.1**	**9.0**	**9.1**	**9.1**	**9.0**	**8.9**	**9.0**	**9.0**	**9.1**	**9.5**	**9.9**	**10.2**	**10.4**	**9.5**	**10.1**	**10.2**	**10.2**	**10.0**	**9.7**	**9.2**	**9.0**	**8.9**	**8.7**			**9.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.9	4.6	3.7	3.9	3.9	3.4	3.5	2.2	1.6	2.2	4.3	6.2	6.8	8.2	9.1	8.6	8.0	7.5	8.1	8.3	7.5	7.4	7.4	6.1	9.1	1.6	5.7
2	5.3	5.3	4.5	4.0	3.8	2.4	2.1	2.6	3.0	4.9	6.4	7.5	8.3	8.7	8.3	8.3	8.1	7.8	7.5	6.8	6.8	6.4	4.9	3.4	8.7	2.1	5.7
3	3.5	3.8	2.9	2.4	2.8	2.5	2.1	2.0	2.0	2.1	2.6	3.2	3.7	3.6	3.1	3.3	3.5	3.5	3.5	3.3	2.9	2.1	1.8	1.7	3.8	1.7	2.8
4	1.4	1.5	1.9	1.3	1.5	1.4	1.5	1.2	1.1	1.2	2.4	3.9	4.3	4.4	4.1	4.3	4.4	4.0	3.5	3.0	2.6	3.1	2.4	2.0	4.4	1.1	2.6
5	2.0	1.6	1.5	1.6	1.8	1.9	1.4	1.0	0.7	0.7	1.4	2.2	2.1	2.0	2.1	2.0	2.2	2.4	2.4	1.0	0.2	-0.1	-0.5	-0.5	2.4	-0.5	1.4
6	-0.9	-0.8	-0.6	-1.0	-0.9	-0.9	-0.5	0.0	-0.1	-0.1	0.9	1.7	2.1	2.3	2.5	2.4	2.2	1.9	1.8	1.3	1.1	1.3	1.1	0.9	2.5	-1.0	0.7
7	1.1	0.9	0.9	1.1	0.6	0.7	0.7	0.4	0.2	-0.1	0.2	0.8	1.1	1.4	1.3	1.2	1.5	1.3	1.1	0.8	0.6	0.3	0.3	0.2	1.5	-0.1	0.8
8	0.1	0.0	0.0	-0.1	-0.3	-0.3	-0.4	-0.6	-0.9	-0.8	-0.2	0.5	0.9	1.0	1.3	1.7	1.8	1.6	1.1	0.4	-0.8	-1.7	-1.6	2.6	2.6	-1.7	0.2
9	3.4	3.3	3.3	3.2	2.8	2.2	1.8	1.6	1.9	2.5	2.8	2.6	3.1	4.0	4.6	5.2	6.1	6.2	6.3	6.9	7.2	7.8	8.0	8.3	8.3	1.6	4.4
10	8.3	8.2	7.7	7.4	6.8	6.4	6.4	5.9	6.0	6.0	6.0	6.6	7.9	8.4	8.7	8.6	8.2	8.0	7.4	6.2	4.8	4.0	3.6	4.8	8.7	3.6	6.8
11	7.9	9.2	8.9	8.5	8.8	8.9	8.9	8.8	8.8	8.8	8.7	8.4	7.8	7.3	6.8	7.0	5.5	2.9	1.8	1.4	1.1	0.6	0.1	0.0	9.2	0.0	6.1
12	-0.1	-0.2	-0.2	-0.5	-0.7	-0.7	-0.8	-0.7	-0.8	-0.9	-1.0	-0.9	-0.8	0.1	0.4	0.5	0.3	0.4	0.1	-0.9	-1.5	-2.0	-2.3	-2.5	0.5	-2.5	-0.7
13	-2.8	-2.9	-3.0	-2.6	-2.7	-2.9	-3.2	-3.5	-3.6	-3.7	-3.3	-2.5	-0.7	1.4	2.3	2.5	1.9	1.9	2.2	2.6	2.8	2.9	2.5	2.1	2.9	-3.7	-0.5
14	1.2	0.9	1.4	1.7	1.3	1.1	1.0	0.8	0.7	0.7	0.6	0.7	1.0	1.2	1.5	1.7	2.0	2.1	2.1	2.0	1.9	1.2	1.4	1.7	2.1	0.6	1.3
15	1.6	1.4	1.7	1.1	1.4	1.4	1.6	1.7	1.9	2.0	2.4	3.0	3.3	3.7	3.9	3.7	3.3	3.3	2.6	2.2	2.1	2.1	1.9	2.1	3.9	1.1	2.3
16	2.2	2.0	2.0	1.8	1.8	1.7	1.5	1.3	1.4	1.5	1.6	1.9	2.3	2.3	2.2	2.3	2.1	1.8	1.2	0.8	0.6	0.4	0.2	-0.1	2.3	-0.1	1.5
17	-0.3	-0.5	-0.9	-1.1	-1.2	-1.3	-1.5	-1.6	-1.7	-1.9	-1.9	-1.5	-0.7	0.7	2.7	4.8	5.3	5.3	5.3	5.2	5.2	4.8	4.1	4.7	5.3	-1.9	1.3
18	4.9	4.8	4.8	5.0	5.1	5.1	5.6	5.9	5.8	5.9	5.9	5.9	6.4	7.0	7.2	7.5	7.5	6.8	6.2	5.4	4.6	5.3	5.0	5.2	7.5	4.6	5.8
19	4.3	3.7	3.3	2.8	2.9	2.7	3.0	3.0	3.2	3.3	3.6	3.6	4.2	4.6	4.3	4.2	4.0	3.4	2.7	2.0	1.8	1.5	1.3	1.3	4.6	1.3	3.1
20	1.4	1.4	1.4	1.4	1.5	1.4	1.3	1.0	0.7	0.5	0.3	0.1	0.0	-0.3	-0.6	-0.7	-0.9	-1.1	-1.4	-1.4	-1.3	-1.6	-1.7	-1.8	1.5	-1.8	0.0
21	-1.7	-1.7	-1.5	-1.5	-1.5	-1.6	-1.7	-1.7	-1.7	-1.6	-1.7	-1.6	-1.3	-1.2	-1.1	-1.0	-0.8	-0.9	-1.0	-1.2	-1.4	-1.9	-2.3	-2.6	-0.8	-2.6	-1.5
22	-2.9	-3.1	-3.3	-3.7	-4.3	-4.5	-4.6	-4.7	-5.2	-5.6	-5.1	-4.6	-4.3	-3.4	-3.6	-3.3	-3.7	-4.1	-4.4	-4.7	-4.9	-5.6	-5.3	-3.9	-2.9	-5.6	-4.3
23	-1.7	-1.5	-2.2	-2.9	-3.7	-4.3	-4.1	-4.0	-3.8	-3.7	-3.8	-3.9	-3.5	-3.0	-2.3	-2.1	-3.1	-3.8	-4.4	-5.1	-5.4	-5.1	-5.1	-4.9	-1.5	-5.4	-3.6
24	-5.0	-5.0	-4.9	-5.1	-4.9	-4.9	-5.3	-5.8	-6.6	-7.2	-7.0	-6.4	-5.7	-5.2	-4.8	-4.5	-4.1	-4.1	-4.2	-4.8	-5.3	-5.4	-6.3	-6.5	-4.1	-7.2	-5.4
25	-5.7	-5.1	-4.8	-4.6	-4.5	-4.4	-4.0	-4.1	-4.0	-3.9	-3.3	-2.5	-1.9	-0.7	-0.6	-0.9	-0.4	-0.1	1.0	1.7	0.8	-0.9	-0.3	-0.8	1.7	-5.7	-2.2
26	0.4	0.7	1.1	1.6	1.5	0.7	-0.1	-0.4	-1.6	-3.3	-3.6	-2.9	-2.2	-0.8	-0.3	-0.2	-0.3	-0.4	-1.7	-2.9	-3.0	-3.9	-4.5	-4.7	1.6	-4.7	-1.3
27	-5.3	-5.7	-6.0	-6.2	-6.5	-7.0	-7.1	-7.4	-7.5	-7.8	-7.9	-7.9	-7.7	-7.2	-6.8	-6.9	-6.6	-6.4	-6.4	-6.5	-6.4	-6.8	-7.2	-7.2	-5.3	-7.9	-6.9
28	-7.3	-7.7	-7.9	-7.9	-8.6	-8.9	-9.3	-9.2	-8.7	-8.2	-8.2	-7.3	-5.4	-4.8	-3.9	-3.3	-3.4	-3.6	-4.5	-4.4	-3.6	-3.5	-3.4	-3.2	-3.2	-9.3	-6.1
29	-4.3	-6.0	-7.2	-6.7	-6.8	-6.9	-7.0	-7.1	-6.5	-7.2	-6.0	-4.4	-3.2	-2.1	-0.6	0.7	0.9	1.1	1.1	1.1	-0.5	-1.1	-1.2	-1.0	1.1	-7.2	-3.4
30	-1.0	-1.0	-0.9	-0.7	-0.5	-0.3	-0.4	-0.9	-0.8	0.2	0.2	0.3	0.7	0.8	1.3	1.6	1.6	1.5	0.6	-0.4	-1.6	-2.6	-3.3	-3.6	1.6	-3.6	-0.4
31	-4.1	-3.9	-3.9	-3.7	-4.5	-4.2	-4.7	-4.4	-4.7	-5.4	-4.8	-3.8	-3.0	-2.1	-1.5	-0.6	-0.2	0.5	0.3	0.1	-0.7	-1.3	-1.3	-1.1	0.5	-5.4	-2.6
Max.	**8.3**	**9.2**	**8.9**	**8.5**	**8.8**	**8.9**	**8.9**	**8.8**	**8.8**	**8.8**	**8.7**	**8.4**	**8.3**	**8.7**	**9.1**	**8.6**	**8.2**	**8.0**	**8.1**	**8.3**	**7.5**	**7.8**	**8.0**	**8.3**	**9.2**		
Min.	**-7.3**	**-7.7**	**-7.9**	**-7.9**	**-8.6**	**-8.9**	**-9.3**	**-9.2**	**-8.7**	**-8.2**	**-8.2**	**-7.9**	**-7.7**	**-7.2**	**-6.8**	**-6.9**	**-6.6**	**-6.4**	**-6.4**	**-6.5**	**-6.4**	**-6.8**	**-7.2**	**-7.2**		**-9.3**	
Avg.	**0.3**	**0.3**	**0.1**	**0.0**	**-0.1**	**-0.3**	**-0.4**	**-0.5**	**-0.6**	**-0.6**	**-0.2**	**0.3**	**0.8**	**1.4**	**1.7**	**1.9**	**1.8**	**1.6**	**1.4**	**1.0**	**0.6**	**0.3**	**0.0**	**0.1**			**0.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-2.0	-1.8	-2.8	-4.0	-3.9	-3.2	-2.3	-3.1	-2.9	-2.0	-0.5	-0.1	-0.2	0.4	0.8	0.9	1.5	1.7	1.8	1.7	1.6	1.3	0.9	0.9	1.8	-4.0	-0.6
2	0.8	0.6	0.2	0.3	0.4	0.4	-0.2	-0.9	-1.6	-2.3	-3.1	-3.8	-4.4	-4.9	-5.2	-5.4	-5.8	-6.0	-6.3	-6.4	-7.0	-7.3	-7.6	-8.0	0.8	-8.0	-3.5
3	-8.2	-8.3	-8.6	-8.8	-8.7	-8.9	-8.8	-8.4	-8.6	-8.6	-8.6	-8.0	-7.5	-7.3	-7.0	-6.7	-6.4	-6.7	-7.1	-7.2	-7.5	-7.5	-7.5	-7.6	-6.4	-8.9	-7.9
4	-7.6	-7.7	-7.6	-7.4	-7.5	-7.5	-7.2	-7.2	-7.1	-7.0	-6.8	-6.6	-6.4	-6.1	-5.9	-5.6	-5.8	-5.9	-5.8	-5.7	-5.7	-5.7	-5.8	-5.9	-5.6	-7.7	-6.6
5	-6.0	-6.0	-5.8	-5.6	-5.5	-5.3	-5.2	-5.1	-5.1	-4.8	-4.9	-4.6	-4.0	-3.1	-2.0	-0.9	-0.3	0.3	1.9	3.0	2.9	2.7	2.6	2.7	3.0	-6.0	-2.4
6	2.8	2.7	2.6	3.1	2.9	3.2	3.0	3.2	3.1	3.5	2.7	2.6	3.5	4.3	4.3	4.1	3.2	2.1	1.9	1.8	1.3	0.6	0.6	0.4	4.3	0.4	2.7
7	-0.1	-1.1	-1.8	-2.6	-3.3	-4.1	-4.8	-5.4	-5.8	-5.9	-6.3	-6.1	-6.0	-6.0	-5.8	-5.7	-5.2	-5.0	-4.7	-4.2	-3.7	-3.1	-2.9	-2.5	-0.1	-6.3	-4.2
8	-2.2	-2.2	-2.2	-2.4	-2.5	-2.7	-2.9	-2.6	-2.8	-2.7	-2.7	-1.9	0.0	1.5	1.7	1.5	1.2	1.3	1.5	1.5	1.6	2.0	2.0	1.8	2.0	-2.9	-0.5
9	1.8	1.8	1.7	2.0	2.2	2.8	3.0	2.9	2.4	2.2	1.8	2.1	2.0	2.4	2.5	2.5	2.6	2.4	2.2	2.6	3.0	3.0	3.4	3.8	3.8	1.7	2.5
10	4.8	5.0	5.1	4.9	5.2	5.3	6.5	6.9	6.4	4.0	2.4	1.5	2.4	2.5	2.9	4.2	3.9	4.5	4.7	3.4	1.8	2.1	3.4	3.3	6.9	1.5	4.1
11	3.1	3.4	3.9	4.0	3.7	3.6	3.5	3.1	1.1	1.2	1.3	1.3	0.4	0.3	1.2	1.0	1.8	1.6	1.1	1.2	0.9	0.5	0.3	0.2	4.0	0.2	1.8
12	0.0	0.0	-0.2	-0.1	-0.5	-0.4	-1.1	-1.2	-1.5	-1.1	-1.2	-1.0	-1.0	-1.1	-1.3	-1.3	-1.3	-1.2	-1.3	-1.2	-1.2	-1.3	-1.6	-2.7	0.0	-2.7	-1.0
13	-2.9	-2.3	-3.0	-4.5	-5.0	-4.8	-4.4	-3.7	-3.1	-1.9	-0.6	0.5	1.1	1.2	1.2	1.6	1.9	1.3	1.0	0.7	0.4	0.1	0.0	-0.3	1.9	-5.0	-1.1
14	-0.4	-0.9	-0.7	-0.7	-2.0	-1.8	-1.7	-3.0	-3.6	-4.1	-4.7	-3.7	-1.4	0.4	0.8	0.8	0.3	0.3	0.1	0.4	0.2	0.0	-0.4	-0.6	0.8	-4.7	-1.1
15	-0.7	-0.8	-1.3	-1.4	-0.8	-0.6	-0.7	-1.1	-1.1	-2.1	-3.0	-4.2	-4.0	-2.7	-0.7	0.0	0.4	1.0	0.7	0.5	2.0	2.7	2.2	1.8	2.7	-4.2	-0.6
16	2.1	2.5	2.0	2.6	3.3	3.2	1.0	0.4	0.4	0.6	0.2	0.8	1.2	1.0	1.6	1.2	0.5	-0.3	-1.2	-2.3	-2.4	-2.5	-2.0	-2.1	3.3	-2.5	0.5
17	-3.3	-4.5	-5.2	-5.7	-6.0	-5.9	-6.5	-6.6	-5.9	-6.1	-5.3	-5.2	-3.5	-3.2	-3.2	-2.8	-2.5	-2.7	-2.7	-3.0	-3.5	-4.1	-5.0	-6.0	-2.5	-6.6	-4.5
18	-6.5	-5.8	-5.6	-4.9	-4.7	-4.4	-4.5	-4.8	-5.1	-5.5	-5.0	-4.9	-4.9	-5.0	-5.1	-5.4	-5.7	-6.2	-6.5	-7.1	-7.7	-8.0	-8.2	-8.5	-4.4	-8.5	-5.8
19	-8.9	-7.8	-8.7	-9.0	-9.4	-9.1	-8.5	-8.7	-8.6	-8.7	-8.3	-8.3	-8.5	-8.5	-8.2	-8.2	-8.1	-8.0	-7.7	-7.6	-7.3	-7.7	-7.6	-7.7	-7.3	-9.4	-8.3
20	-7.4	-7.1	-7.5	-7.9	-8.4	-8.5	-8.6	-9.2	-9.0	-9.5	-9.8	-10.5	-10.8	-11.3	-11.9	-12.0	-12.3	-12.4	-12.8	-13.2	-13.6	-13.8	-13.9	-14.0	-7.1	-14.0	-10.6
21	-13.8	-14.0	-14.2	-14.4	-14.8	-15.3	-15.5	-15.6	-15.7	-15.8	-15.8	-15.9	-15.8	-15.6	-15.5	-15.7	-15.7	-15.7	-15.9	-16.1	-16.1	-16.1	-15.5	-14.5	-13.8	-16.1	-15.4
22	-12.9	-12.6	-12.9	-12.2	-11.9	-11.5	-11.2	-11.7	-11.7	-11.3	-10.8	-10.8	-10.9	-10.6	-10.6	-10.3	-9.7	-9.6	-9.8	-9.2	-8.4	-7.3	-6.8	-6.7	-6.7	-12.9	-10.5
23	-6.7	-6.5	-6.1	-6.1	-5.4	-5.4	-5.6	-5.7	-5.4	-5.3	-5.0	-4.7	-4.6	-4.1	-2.9	-1.7	0.1	0.5	0.9	1.3	1.1	1.9	2.2	2.2	2.2	-6.7	-3.0
24	2.7	3.0	2.9	3.1	3.2	3.1	3.1	3.3	3.5	3.5	3.1	3.3	2.9	2.2	2.4	2.3	2.3	1.2	2.3	2.3	1.5	0.8	0.6	0.6	3.5	0.6	2.5
25	-0.6	-1.7	-2.6	-3.6	-4.4	-4.9	-5.2	-5.5	-5.5	-5.4	-5.3	-5.6	-6.4	-6.9	-7.5	-8.1	-8.6	-8.9	-9.6	-9.6	-10.1	-10.2	-10.7	-10.6	-0.6	-10.7	-6.6
26	-10.7	-10.8	-10.6	-10.5	-10.6	-10.8	-11.1	-10.9	-10.8	-10.6	-10.7	-10.6	-10.2	-9.8	-9.9	-9.7	-9.8	-9.9	-9.8	-10.2	-11.0	-11.0	-10.9	-11.0	-9.7	-11.1	-10.5
27	-11.0	-11.1	-11.0	-11.2	-10.6	-10.6	-10.2	-9.5	-9.7	-9.2	-8.3	-7.6	-6.8	-6.3	-6.1	-5.8	-5.9	-6.7	-6.4	-6.3	-5.8	-5.0	-3.9	-2.0	-2.0	-11.2	-7.8
28	0.4	-1.9	-2.6	-2.2	-0.9	-2.0	-2.5	-2.3	-2.0	-1.6	-1.1	-1.3	-1.6	-1.4	-1.3	-1.3	-1.0	-0.7	-0.6	-1.4	-1.6	-1.9	-2.5	-3.2	0.4	-3.2	-1.6
29	-4.1	-4.6	-5.5	-6.0	-6.4	-6.8	-7.2	-7.6	-7.9	-8.4	-8.9	-9.1	-9.1	-9.3	-9.2	-9.6	-9.7	-10.1	-10.2	-10.3	-10.6	-10.8	-11.1	-10.8	-4.1	-11.1	-8.5
30	-11.2	-11.3	-11.9	-12.4	-12.6	-12.5	-12.6	-12.8	-13.1	-12.8	-12.7	-12.5	-12.6	-12.0	-11.2	-11.2	-11.7	-11.6	-11.7	-11.1	-10.7	-10.4	-10.4	-10.3	-10.3	-13.1	-11.8
Max.	**4.8**	**5.0**	**5.1**	**4.9**	**5.2**	**5.3**	**6.5**	**6.9**	**6.4**	**4.0**	**3.1**	**3.3**	**3.5**	**4.3**	**4.3**	**4.2**	**3.9**	**4.5**	**4.7**	**3.4**	**3.0**	**3.0**	**3.4**	**3.8**	**6.9**		
Min.	**-13.8**	**-14.0**	**-14.2**	**-14.4**	**-14.8**	**-15.3**	**-15.5**	**-15.6**	**-15.7**	**-15.8**	**-15.8**	**-15.9**	**-15.8**	**-15.6**	**-15.5**	**-15.7**	**-15.7**	**-15.7**	**-15.9**	**-16.1**	**-16.1**	**-16.1**	**-15.5**	**-14.5**		**-16.1**	
Avg.	**-3.6**	**-3.7**	**-4.0**	**-4.1**	**-4.2**	**-4.2**	**-4.3**	**-4.4**	**-4.6**	**-4.6**	**-4.6**	**-4.5**	**-4.2**	**-4.0**	**-3.7**	**-3.6**	**-3.5**	**-3.6**	**-3.7**	**-3.7**	**-3.9**	**-3.9**	**-3.9**	**-3.9**			**-4.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature at 10 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-10.1	-9.9	-9.8	-9.7	-9.9	-9.9	-9.6	-9.7	-9.5	-9.3	-9.2	-9.0	-8.3	-8.5	-8.0	-6.8	-5.9	-5.2	-4.8	-4.5	-4.9	-4.9	-4.7	-4.6	-4.5	-10.1	-7.8
2	-4.5	-4.6	-4.4	-4.4	-4.5	-3.9	-3.8	-3.2	-1.8	-2.0	-0.3	0.1	0.8	1.5	1.8	1.9	2.0	2.3	2.6	2.4	2.7	3.1	3.4	3.8	3.8	-4.6	-0.4
3	4.1	4.2	4.1	4.2	4.4	4.5	4.2	3.9	3.4	3.5	3.9	4.3	3.7	2.6	2.4	2.7	2.6	3.2	3.7	4.2	4.1	4.2	4.4	4.8	4.8	2.4	3.8
4	4.8	5.1	5.5	5.8	5.6	5.5	4.5	4.5	3.7	4.7	4.3	4.8	5.1	5.0	5.0	4.9	4.6	4.4	3.6	3.4	3.7	3.8	3.8	3.6	5.8	3.4	4.6
5	3.1	3.0	2.7	2.8	3.4	4.1	3.8	3.6	4.2	4.8	4.3	5.9	6.4	6.6	7.2	7.5	7.5	7.1	6.5	7.3	7.1	7.2	7.0	6.4	7.5	2.7	5.4
6	5.9	5.9	6.1	6.4	5.9	4.5	3.6	2.8	2.5	2.4	2.5	2.9	2.7	2.9	2.5	2.2	2.8	2.2	2.0	1.8	1.9	1.8	2.0	1.8	6.4	1.8	3.3
7	1.8	2.1	3.0	3.0	3.4	3.3	3.1	3.0	2.5	2.2	1.9	1.8	1.7	1.6	1.5	1.6	1.3	1.2	1.2	0.9	0.7	1.4	1.4	1.8	3.4	0.7	2.0
8	3.7	4.7	4.8	4.9	4.9	5.1	4.9	4.6	4.4	4.5	2.6	2.1	3.1	3.7	3.7	3.9	3.0	2.5	2.6	3.3	3.6	3.4	3.1	3.8	5.1	2.1	3.8
9	4.4	4.4	4.7	4.6	3.7	2.0	0.4	0.5	0.3	0.1	-0.4	0.3	0.7	0.6	0.4	0.4	-0.1	-0.5	-1.0	-1.7	-2.4	-2.5	-1.8	-1.1	4.7	-2.5	0.7
10	-0.5	-0.3	0.0	0.6	-0.1	-0.6	-0.8	-1.5	-1.9	-2.2	-2.7	-3.2	-3.6	-4.2	-4.6	-4.7	-4.5	-4.6	-4.6	-4.4	-4.1	-4.0	-4.2	-4.4	0.6	-4.7	-2.7
11	-4.4	-4.3	-4.0	-4.3	-4.1	-3.9	-3.6	-3.6	-4.1	-4.6	-4.8	-4.6	-4.2	-3.9	-4.6	-4.3	-3.7	-3.5	-3.9	-4.6	-4.9	-4.1	-5.2	-5.6	-3.5	-5.6	-4.3
12	-5.6	-5.8	-6.3	-6.2	-6.1	-6.3	-6.3	-6.4	-6.9	-6.7	-6.4	-5.9	-5.4	-5.3	-5.5	-5.2	-4.9	-4.8	-4.3	-4.0	-3.5	-2.6	-1.9	-2.2	-1.9	-6.9	-5.2
13	-2.2	-2.3	-2.3	-2.4	-2.2	-2.3	-2.6	-4.4	-5.7	-5.9	-7.2	-7.1	-6.7	-6.9	-6.2	-4.7	-4.8	-5.0	-5.6	-6.5	-4.9	-4.6	-5.1	-5.3	-2.2	-7.2	-4.7
14	-5.2	-5.3	-5.2	-4.4	-4.0	-4.3	-4.3	-3.4	-3.3	-3.5	-4.0	-3.8	-3.1	-2.7	-2.4	-2.0	-1.9	-2.5	-1.8	-1.1	1.0	2.8	3.0	3.0	3.0	-5.3	-2.4
15	3.3	3.3	3.0	2.8	2.6	2.5	2.5	2.6	2.1	1.7	1.3	0.6	0.2	0.3	0.3	0.2	-0.1	0.1	0.1	0.0	-0.3	-1.0	-1.4	-1.3	3.3	-1.4	1.1
16	-1.8	-1.6	-1.8	-1.8	-1.6	-1.4	-1.7	-1.9	-2.1	-2.6	-3.1	-3.1	-2.8	-2.9	-2.8	-2.4	-2.2	-1.9	-1.3	-1.0	-0.6	-0.3	0.1	1.2	1.2	-3.1	-1.7
17	2.1	2.1	0.9	0.6	1.8	2.3	2.5	1.4	1.5	2.3	1.9	2.0	2.0	1.8	2.2	2.0	2.3	2.7	1.1	0.8	0.7	1.5	1.5	0.9	2.7	0.6	1.7
18	0.7	0.7	1.1	1.5	2.6	2.7	3.7	3.9	3.6	3.7	3.6	3.7	3.8	3.9	3.8	3.9	3.8	3.9	4.1	4.5	4.4	4.5	4.4	4.0	4.5	0.7	3.4
19	3.4	3.1	3.8	3.6	2.8	3.4	3.8	3.2	3.1	3.3	3.0	2.7	2.9	2.6	2.9	3.0	3.2	3.3	3.8	3.8	3.7	3.7	3.5	3.2	3.8	2.6	3.3
20	2.8	2.9	3.1	3.7	3.7	3.6	3.7	4.2	4.3	3.9	3.5	4.0	4.1	4.2	4.3	3.7	3.6	2.7	2.2	1.5	0.0	-0.2	1.4	0.8	4.3	-0.2	3.0
21	0.1	-0.6	-1.1	-1.1	-1.3	-1.5	-1.7	-2.4	-2.8	-2.6	-2.8	-3.0	-1.5	-1.1	-1.1	-1.4	-1.5	-1.3	-1.7	-2.2	-2.9	-3.7	-4.8	-6.1	0.1	-6.1	-2.1
22	-6.3	-2.8	-2.4	-2.0	-2.2	-2.1	-2.3	-2.6	-2.4	-2.6	-2.7	-2.7	-2.7	-2.5	-2.4	-2.3	-2.3	-2.1	-2.2	-2.2	-2.1	-2.3	-2.3	-2.8	-2.0	-6.3	-2.5
23	-2.9	-2.8	-2.7	-2.5	-1.8	-1.3	-1.4	-1.5	-1.4	-1.3	-1.3	0.1	-0.4	-0.7	-1.1	-1.3	-1.6	-1.7	-2.1	-2.5	-2.9	-3.0	-2.5	-2.4	0.1	-3.0	-1.8
24	-1.8	-1.5	-1.6	-1.4	-1.2	-1.5	-1.9	-2.1	-2.2	-2.3	-2.5	-2.6	-2.4	-2.2	-2.0	-2.4	-3.0	-3.6	-5.0	-4.6	-4.0	-3.9	-4.1	-4.2	-1.2	-5.0	-2.7
25	-3.1	-2.0	-0.8	-1.5	-2.4	-2.7	-2.1	-1.8	-1.4	-1.5	-1.0	-1.1	-1.5	-1.6	-2.9	-2.9	-2.9	-2.9	-2.9	-2.8	-3.3	-3.9	-4.5	-4.6	-0.8	-4.6	-2.4
26	-5.2	-5.9	-6.5	-7.5	-8.3	-9.3	-9.9	-10.6	-11.6	-11.7	-11.6	-11.1	-10.7	-10.6	-10.6	-10.5	-10.4	-10.4	-10.3	-10.6	-10.8	-10.7	-11.2	-11.5	-5.2	-11.7	-9.9
27	-11.6	-11.8	-12.1	-12.6	-12.8	-12.9	-12.6	-12.9	-13.2	-13.3	-13.3	-13.3	-13.0	-12.9	-12.7	-12.9	-12.9	-13.0	-13.1	-13.0	-12.9	-12.9	-13.0	-13.1	-11.6	-13.3	-12.8
28	-13.3	-13.2	-13.2	-13.4	-13.9	-14.1	-14.3	-14.6	-14.7	-14.9	-14.9	-14.9	-15.0	-15.1	-15.2	-15.3	-15.5	-15.4	-15.3	-15.2	-15.3	-15.3	-15.3	-15.4	-13.2	-15.5	-14.7
29	-15.5	-15.6	-15.6	-15.6	-15.5	-15.4	-15.4	-15.4	-15.3	-15.5	-15.7	-16.0	-16.0	-15.9	-15.9	-15.7	-16.0	-16.3	-16.4	-16.4	-16.5	-16.5	-16.7	-16.7	-15.3	-16.7	-15.9
30	-16.8	-17.0	-16.8	-16.9	-16.9	-16.7	-16.6	-16.6	-16.7	-16.7	-16.8	-17.0	-17.0	-17.3	-17.6	-17.9	-18.3	-18.7	-19.0	-19.1	-19.4	-19.8	-20.1	-20.3	-16.6	-20.3	-17.8
31	-20.5	-20.8	-21.1	-21.6	-22.0	-22.1	-22.1	-22.2	-22.4	-22.5	-22.5	-22.3	-22.4	-22.2	-21.8	-21.7	-21.6	-21.6	-21.4	-21.2	-20.7	-20.3	-20.3	-20.3	-20.3	-22.5	-21.6
Max.	**5.9**	**5.9**	**6.1**	**6.4**	**5.9**	**5.5**	**4.9**	**4.6**	**4.4**	**4.8**	**4.3**	**5.9**	**6.4**	**6.6**	**7.2**	**7.5**	**7.5**	**7.1**	**6.5**	**7.3**	**7.1**	**7.2**	**7.0**	**6.4**	**7.5**		
Min.	**-20.5**	**-20.8**	**-21.1**	**-21.6**	**-22.0**	**-22.1**	**-22.1**	**-22.2**	**-22.4**	**-22.5**	**-22.5**	**-22.3**	**-22.4**	**-22.2**	**-21.8**	**-21.7**	**-21.6**	**-21.6**	**-21.4**	**-21.2**	**-20.7**	**-20.3**	**-20.3**	**-20.3**		**-22.5**	
Avg.	**-2.9**	**-2.8**	**-2.7**	**-2.7**	**-2.8**	**-2.9**	**-3.0**	**-3.2**	**-3.4**	**-3.4**	**-3.6**	**-3.4**	**-3.2**	**-3.2**	**-3.2**	**-3.1**	**-3.1**	**-3.2**	**-3.3**	**-3.3**	**-3.3**	**-3.2**	**-3.2**	**-3.3**			**-3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.5	0.82	0.53	0.93	0.39	0.28	0.05	0.04	0.04	0.03	0.06	0.03	0.00	0.06	0.02	-0.02	-0.01	0.02	0.04	0.05	0.05	0.05	0.06	0.04	0.93	-0.02	0.17
2	0.0	0.01	0.00	-0.02	-0.03	-0.01	-0.01	-0.02	-0.01	-0.01	-0.02	0.00	-0.01	-0.01	0.00	-0.01	0.00	0.00	0.02	0.01	0.00	0.02	0.02	0.02	0.02	-0.03	0.00
3	0.0	0.03	0.03	0.01	-0.06	-0.08	-0.09	-0.08	-0.08	-0.08	-0.06	-0.06	-0.06	-0.07	-0.08	-0.08	-0.08	-0.05	-0.05	-0.05	-0.04	-0.03	-0.02	-0.02	0.04	-0.09	-0.05
4	-0.1	-0.06	-0.07	-0.07	-0.05	-0.06	-0.06	-0.07	-0.07	-0.06	-0.06	-0.06	-0.05	-0.08	-0.07	-0.06	-0.06	-0.05	-0.05	-0.04	-0.01	-0.01	-0.05	-0.05	-0.01	-0.08	-0.05
5	-0.1	-0.07	-0.08	-0.03	-0.02	-0.01	-0.02	-0.03	-0.03	-0.03	-0.02	-0.03	-0.05	-0.06	-0.05	-0.05	-0.05	-0.04	-0.05	-0.04	-0.04	-0.03	-0.04	-0.03	-0.01	-0.08	-0.04
6	0.0	-0.03	-0.03	-0.03	-0.04	-0.05	-0.04	-0.02	-0.03	-0.03	-0.02	-0.01	-0.06	-0.10	-0.11	-0.10	-0.08	-0.09	-0.08	-0.07	-0.07	-0.08	-0.08	-0.08	-0.01	-0.11	-0.06
7	-0.1	-0.08	-0.08	-0.08	-0.06	-0.07	-0.06	-0.09	-0.08	-0.06	-0.08	-0.09	-0.09	-0.09	-0.07	-0.09	-0.08	-0.06	-0.06	-0.07	-0.09	-0.08	-0.08	-0.07	-0.06	-0.09	-0.08
8	0.0	-0.04	-0.05	-0.07	-0.08	-0.07	-0.06	-0.08	-0.08	-0.08	-0.06	-0.07	-0.08	-0.08	-0.08	-0.09	-0.09	-0.09	-0.08	-0.07	-0.05	-0.04	-0.02	-0.03	-0.02	-0.09	-0.07
9	0.0	-0.05	-0.03	-0.06	-0.07	-0.07	-0.05	-0.06	-0.03	-0.02	-0.02	-0.02	-0.03	-0.03	-0.02	-0.04	-0.03	-0.02	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	-0.07	-0.03
10	0.0	0.00	0.00	0.01	-0.01	-0.01	0.01	0.01	0.02	0.01	0.00	-0.01	-0.03	-0.01	-0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.02	-0.03	0.01
11	0.0	0.01	0.00	-0.06	-0.10	-0.08	-0.08	-0.06	-0.02	0.00	-0.01	-0.02	-0.02	-0.06	-0.03	-0.01	0.00	0.00	0.00	-0.01	-0.04	-0.07	-0.09	-0.09	0.01	-0.10	-0.04
12	-0.1	-0.09	-0.09	-0.10	-0.06	-0.01	0.02	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.02	-0.03	-0.04	-0.03	-0.03	-0.03	-0.03	-0.04	-0.04	-0.03	-0.03	0.02	-0.10	-0.03
13	0.0	-0.02	-0.02	-0.01	-0.01	-0.02	-0.02	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.01	0.00	0.00	-0.02	0.01	0.04	0.04	-0.02	-0.01
14	0.0	0.04	0.13	0.01	-0.03	0.01	0.56	0.52	0.53	1.44	2.28	0.55	0.15	0.12	0.12	0.12	0.03	0.01	0.10	0.15	0.09	0.15	0.28	0.24	2.28	-0.03	0.32
15	0.2	0.16	0.10	0.07	0.05	0.00	0.01	0.02	-0.06	-0.03	-0.01	-0.03	0.03	0.00	-0.04	-0.05	-0.04	-0.01	0.09	0.03	0.06	0.03	0.07	0.18	0.18	-0.06	0.03
16	0.2	0.10	0.06	0.00	0.18	0.03	0.10	0.04	0.05	0.04	-0.01	0.00	0.03	0.04	0.06	0.14	0.24	0.57	1.40	2.03	1.04	1.89	2.24	2.53	2.53	-0.01	0.54
17	2.9	1.82	2.10	1.82	0.77	0.08	0.12	0.31	0.32	0.31	0.18	0.19	0.17	0.25	0.13	0.14	0.16	0.19	0.21	0.11	0.25	0.16	0.12	0.08	2.86	0.08	0.54
18	0.0	0.13	0.07	0.05	0.03	0.11	0.09	0.11	0.05	0.14	0.02	0.06	0.38	0.20	0.08	-0.07	-0.11	0.03	0.12	0.11	0.11	0.10	0.01	0.03	0.38	-0.11	0.08
19	0.1	0.18	0.15	0.33	0.13	0.06	0.17	0.16	0.33	0.24	0.05	0.08	0.04	0.03	0.17	0.30	0.20	0.24	0.09	0.03	0.10	0.17	0.15	0.14	0.33	0.03	0.15
20	0.1	0.06	0.15	0.18	0.16	0.13	0.10	0.10	0.14	0.19	0.18	0.20	0.26	0.36	0.36	0.43	0.39	0.40	0.13	0.20	0.08	0.09	0.24	0.21	0.43	0.06	0.20
21	0.2	0.12	0.22	0.18	0.18	0.14	0.13	0.19	0.27	0.07	0.00	0.15	0.23	0.33	0.41	0.42	0.16	0.29	0.12	0.18	0.31	0.12	0.21	0.27	0.42	0.00	0.21
22	0.3	0.23	0.35	0.29	0.17	0.20	0.24	0.26	0.21	0.21	0.17	0.08	0.11	0.05	-0.03	-0.03	-0.05	0.00	0.01	0.00	0.04	0.07	0.04	0.03	0.35	-0.05	0.12
23	0.0	0.02	0.06	0.06	0.05	0.03	0.05	0.03	0.04	0.05	0.05	0.06	0.06	0.04	0.03	0.02	0.03	0.04	0.09	0.06	0.03	-0.01	-0.01	-0.03	0.09	-0.03	0.04
24	0.0	-0.08	-0.09	-0.11	-0.10	-0.11	-0.07	-0.08	0.18	0.19	0.05	0.02	0.04	-0.02	-0.06	-0.05	-0.07	-0.07	-0.07	-0.11	-0.11	-0.09	-0.11	-0.08	0.19	-0.11	-0.04
25	-0.1	-0.08	-0.06	-0.06	-0.07	0.02	0.04	0.00	-0.02	-0.02	0.00	-0.02	-0.04	-0.02	-0.01	0.00	0.01	0.02	0.05	0.05	0.04	0.10	0.09	0.09	0.10	-0.08	0.00
26	0.1	0.08	0.09	0.10	0.08	0.09	0.12	0.17	0.15	0.12	0.12	0.10	0.04	0.02	0.02	0.03	0.09	0.67	1.02	1.03	1.75	2.69	2.17	1.16	2.69	0.02	0.50
27	0.7	0.64	0.77	0.12	0.09	0.05	0.31	0.48	0.44	0.34	0.23	0.22	0.19	0.10	0.06	0.08	0.06	0.05	0.15	0.07	0.09	0.08	0.07	0.08	0.77	0.05	0.23
28	0.1	0.06	0.00	-0.02	0.03	0.03	0.01	-0.06	-0.06	-0.07	-0.04	-0.04	-0.05	-0.07	-0.07	-0.07	-0.06	-0.06	0.01	0.17	0.29	0.19	0.03	0.00	0.29	-0.07	0.01
29	0.0	0.01	0.01	0.01	-0.01	-0.02	-0.03	-0.02	-0.02	-0.01	-0.02	-0.06	-0.12	-0.12	-0.12	-0.03	-0.03	0.03	0.04	0.04	0.06	0.19	0.07	-0.05	0.19	-0.12	-0.01
30	-0.1	-0.10	0.03	0.13	0.17	0.13	0.15	0.15	0.15	0.16	0.16	0.09	0.05	0.01	-0.04	-0.01	-0.02	-0.01	0.01	0.00	-0.01	-0.01	0.00	-0.01	0.17	-0.10	0.04
31	0.0	-0.02	-0.02	-0.01	0.00	0.00	0.04	0.05	0.11	0.10	0.13	0.07	0.02	0.04	0.08	0.11	0.10	0.06	0.05	0.03	0.10	0.13	0.19	0.17	0.19	-0.02	0.06
Max.	**2.9**	**1.82**	**2.10**	**1.82**	**0.77**	**0.28**	**0.56**	**0.52**	**0.53**	**1.44**	**2.28**	**0.55**	**0.38**	**0.36**	**0.41**	**0.43**	**0.39**	**0.67**	**1.40**	**2.03**	**1.75**	**2.69**	**2.24**	**2.53**	**2.86**		
Min.	**-0.1**	**-0.10**	**-0.09**	**-0.11**	**-0.10**	**-0.11**	**-0.09**	**-0.09**	**-0.08**	**-0.08**	**-0.08**	**-0.09**	**-0.12**	**-0.12**	**-0.12**	**-0.10**	**-0.11**	**-0.09**	**-0.08**	**-0.11**	**-0.11**	**-0.09**	**-0.11**	**-0.09**		**-0.12**	
Avg.	**0.2**	**0.12**	**0.14**	**0.12**	**0.05**	**0.02**	**0.06**	**0.06**	**0.08**	**0.10**	**0.10**	**0.04**	**0.03**	**0.02**	**0.02**	**0.03**	**0.02**	**0.07**	**0.11**	**0.12**	**0.13**	**0.19**	**0.18**	**0.15**			**0.09**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.3	0.96	1.75	2.23	1.78	1.88	1.95	1.88	1.91	2.41	1.68	1.44	1.89	1.58	1.83	2.49	2.64	3.86	3.93	4.77	4.68	4.32	3.15	2.41	4.77	0.26	2.40
2	2.5	3.59	2.81	2.68	3.92	3.50	2.69	2.38	0.46	0.25	0.17	0.10	0.08	0.07	0.04	0.03	0.04	0.06	0.07	0.09	0.09	0.08	0.08	0.06	3.92	0.03	1.08
3	0.1	0.04	0.05	0.03	0.04	0.03	0.05	0.02	0.03	0.03	0.06	0.03	0.01	0.01	0.01	0.03	0.00	-0.01	0.04	0.02	0.01	0.06	0.05	0.09	0.09	-0.01	0.03
4	0.1	0.08	0.08	0.11	0.14	0.07	0.15	1.36	2.57	1.47	1.12	1.69	1.03	0.27	0.24	0.32	0.62	0.53	0.31	0.27	0.28	0.22	0.15	0.11	2.57	0.07	0.55
5	0.0	0.03	0.07	0.11	0.07	0.04	0.05	0.10	0.12	0.11	0.10	0.07	0.05	0.04	0.03	-0.01	0.00	0.02	0.02	0.03	0.04	0.05	0.07	0.11	0.12	-0.01	0.06
6	0.3	0.23	0.16	0.98	0.83	0.83	0.80	0.47	0.38	0.31	0.24	0.22	0.19	0.15	0.11	0.04	0.02	0.04	0.01	0.03	0.02	0.06	0.06	0.05	0.98	0.01	0.27
7	0.0	0.05	0.07	0.03	0.04	0.05	0.10	0.07	0.03	0.05	0.05	0.04	0.00	0.01	0.02	0.01	0.05	0.04	0.09	0.12	0.17	0.62	0.53	0.66	0.66	0.00	0.12
8	1.9	2.99	2.92	2.53	3.49	3.07	5.10	3.46	0.72	0.55	0.43	0.43	0.34	0.22	0.20	0.32	0.21	0.23	0.29	0.25	0.24	0.16	0.21	0.22	5.10	0.16	1.27
9	0.2	0.26	0.26	0.26	0.22	0.18	0.18	0.21	0.20	0.19	0.23	0.12	0.08	0.12	0.00	0.00	0.23	0.00	0.14	0.20	0.38	0.28	0.32	0.23	0.38	0.00	0.19
10	0.2	0.26	0.43	0.24	0.30	0.26	0.11	0.07	0.12	0.11	0.12	-0.01	-0.02	0.02	0.19	0.21	0.46	0.83	0.76	0.54	0.22	0.25	0.32	0.11	0.83	-0.02	0.26
11	0.1	-0.03	0.04	0.20	0.19	0.15	0.02	-0.03	-0.08	-0.11	-0.11	-0.18	-0.22	-0.22	-0.24	-0.21	-0.17	-0.15	-0.11	-0.08	-0.07	-0.08	-0.07	-0.07	0.20	-0.24	-0.07
12	-0.1	-0.09	-0.11	-0.11	-0.09	-0.07	-0.04	-0.01	-0.01	-0.02	-0.04	-0.04	-0.04	-0.02	-0.04	0.08	0.03	0.05	0.00	0.01	0.34	1.52	2.58	1.02	2.58	-0.11	0.20
13	1.0	0.09	0.14	0.12	0.42	0.33	0.21	0.22	0.26	0.18	0.20	0.16	0.23	0.07	0.12	0.12	0.12	0.19	0.20	0.23	0.26	0.20	0.25	0.30	1.00	0.07	0.23
14	0.2	0.21	0.22	0.22	0.26	0.25	0.23	0.27	0.24	0.19	0.09	-0.07	-0.07	-0.08	-0.09	-0.08	-0.09	-0.07	-0.09	-0.08	-0.07	-0.07	-0.06	-0.09	0.27	-0.09	0.06
15	-0.1	-0.07	-0.08	-0.09	-0.08	-0.10	-0.12	-0.13	-0.11	-0.12	-0.11	-0.09	-0.09	-0.13	-0.08	-0.05	-0.01	-0.02	0.04	0.08	0.36	1.57	0.54	0.19	1.57	-0.13	0.05
16	0.2	0.10	0.12	0.17	0.20	0.14	0.16	0.19	0.09	0.10	0.15	0.16	0.12	0.13	0.13	0.05	0.05	0.09	0.24	0.16	0.73	1.20	0.87	1.41	1.41	0.05	0.29
17	0.3	0.30	0.16	0.40	0.18	0.29	0.37	0.36	0.43	0.37	0.28	0.23	0.02	0.04	-0.05	-0.10	-0.05	-0.02	0.07	0.25	0.33	0.37	0.43	0.35	0.43	-0.10	0.22
18	0.2	0.16	-0.09	-0.13	-0.03	-0.02	-0.02	-0.06	0.01	0.11	0.16	0.17	0.11	0.32	0.24	0.23	0.24	0.14	0.19	0.13	0.11	0.39	0.35	0.72	0.72	-0.13	0.15
19	0.6	0.85	0.72	0.84	0.56	0.44	0.47	0.47	0.29	0.21	0.23	0.14	0.14	0.17	0.18	0.29	0.34	0.41	0.25	0.16	0.15	0.20	0.21	0.17	0.85	0.14	0.35
20	0.1	0.09	0.13	0.08	0.26	0.14	0.04	0.03	0.07	0.17	0.34	0.34	0.31	0.31	0.39	0.45	0.52	0.47	0.53	0.49	0.51	0.50	0.39	0.58	0.58	0.03	0.30
21	0.5	0.44	0.40	0.20	0.34	0.22	0.37	0.18	0.31	0.47	0.49	0.38	0.17	0.20	0.23	0.24	0.23	0.28	0.33	0.34	0.38	0.36	0.36	0.27	0.49	0.17	0.32
22	0.3	0.27	0.23	0.19	0.20	0.21	0.15	0.19	0.29	0.31	0.20	0.18	0.08	0.06	0.08	0.06	0.11	0.14	0.17	0.15	0.27	0.14	0.13	0.09	0.31	0.06	0.17
23	0.1	0.22	0.29	0.20	0.28	0.06	-0.02	-0.05	-0.07	-0.08	-0.09	-0.12	-0.21	-0.34	-0.18	-0.12	-0.10	-0.08	-0.07	-0.04	-0.05	-0.07	-0.06	-0.06	0.29	-0.34	-0.03
24	-0.1	-0.07	-0.08	-0.06	-0.06	-0.05	-0.04	-0.03	-0.05	-0.05	-0.07	-0.13	-0.25	-0.27	-0.25	-0.14	-0.11	-0.07	-0.05	-0.04	-0.04	-0.02	-0.01	-0.01	-0.01	-0.27	-0.08
25	0.0	-0.05	-0.05	-0.05	-0.05	-0.07	-0.12	-0.12	-0.10	-0.10	-0.08	-0.13	-0.20	-0.21	-0.19	0.26	0.12	0.20	0.34	0.13	0.22	0.33	0.27	0.10	0.34	-0.21	0.02
26	0.2	0.24	0.41	0.33	0.58	0.50	0.58	0.58	0.62	0.92	0.82	0.24	0.40	0.24	0.28	-0.12	-0.08	-0.05	-0.01	0.02	0.02	-0.02	-0.03	0.01	0.92	-0.12	0.28
27	0.1	-0.01	0.00	0.03	0.01	0.07	0.02	0.06	0.00	-0.01	-0.09	-0.10	-0.13	-0.09	-0.29	-0.19	-0.15	-0.11	-0.09	0.19	0.31	0.40	0.37	0.16	0.40	-0.29	0.02
28	0.4	0.27	0.43	0.60	0.47	0.51	0.51	0.68	0.67	0.64	0.27	0.47	0.28	0.43	0.40	0.48	-0.09	-0.06	0.00	0.07	0.10	0.13	0.07	0.05	0.68	-0.09	0.32
29	0.1	0.08	0.06	0.02	0.01	0.04	0.04	0.01	-0.06	-0.06	-0.13	-0.18	-0.25	-0.25	-0.23	-0.23	-0.20	-0.17	-0.14	-0.12	-0.10	-0.07	-0.03	-0.06	0.08	-0.25	-0.08
Max.	**2.5**	**3.59**	**2.92**	**2.68**	**3.92**	**3.50**	**5.10**	**3.46**	**2.57**	**2.41**	**1.68**	**1.69**	**1.89**	**1.58**	**1.83**	**2.49**	**2.64**	**3.86**	**3.93**	**4.77**	**4.68**	**4.32**	**3.15**	**2.41**	**5.10**		
Min.	**-0.1**	**-0.09**	**-0.11**	**-0.13**	**-0.09**	**-0.10**	**-0.12**	**-0.13**	**-0.11**	**-0.12**	**-0.13**	**-0.18**	**-0.25**	**-0.34**	**-0.29**	**-0.23**	**-0.20**	**-0.17**	**-0.14**	**-0.12**	**-0.10**	**-0.08**	**-0.07**	**-0.09**		**-0.34**	
Avg.	**0.3**	**0.40**	**0.40**	**0.43**	**0.50**	**0.45**	**0.48**	**0.44**	**0.32**	**0.30**	**0.23**	**0.19**	**0.14**	**0.10**	**0.11**	**0.15**	**0.17**	**0.23**	**0.26**	**0.29**	**0.34**	**0.45**	**0.40**	**0.32**			**0.31**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.1	-0.09	-0.09	-0.10	-0.09	-0.09	-0.10	-0.11	-0.06	-0.10	0.20	0.05	-0.04	-0.05	-0.03	-0.02	0.08	0.03	0.04	0.04	0.11	0.18	0.13	0.17	0.20	-0.11	0.00
2	0.1	0.20	0.21	0.12	0.12	0.18	0.11	0.06	0.04	0.08	0.04	0.07	0.10	0.02	0.10	0.25	0.12	0.03	-0.01	0.06	0.15	0.40	0.55	0.22	0.55	-0.01	0.14
3	0.0	0.07	0.07	0.18	0.01	0.03	0.13	0.21	0.14	0.05	-0.03	-0.03	0.01	0.09	0.10	0.17	0.13	0.09	0.13	0.25	0.42	0.51	0.54	0.46	0.54	-0.03	0.16
4	0.2	0.16	0.21	0.28	0.19	0.12	0.01	0.01	0.00	0.00	0.00	0.01	0.07	0.07	0.07	0.14	0.18	0.17	0.14	0.12	0.13	0.11	0.10	0.19	0.28	0.00	0.11
5	0.2	0.25	0.22	0.10	0.00	0.00	-0.06	-0.08	-0.11	-0.09	-0.09	0.02	0.07	0.00	0.12	0.14	0.11	0.11	0.01	0.01	0.00	0.12	0.16	0.23	0.25	-0.11	0.06
6	0.2	0.24	0.23	0.13	0.06	0.13	0.12	0.05	0.09	0.13	0.01	0.01	-0.01	0.07	0.08	0.04	0.24	0.38	0.48	0.72	0.34	0.35	0.31	0.45	0.72	-0.01	0.20
7	0.7	0.58	0.20	0.46	0.49	0.20	0.19	0.16	0.17	0.12	0.05	-0.07	-0.12	-0.14	-0.22	-0.23	-0.18	-0.11	-0.03	0.02	0.06	0.06	0.05	0.03	0.67	-0.23	0.10
8	0.0	-0.01	-0.01	-0.01	-0.01	0.01	-0.01	0.10	0.16	0.32	0.19	0.14	0.15	0.07	0.01	0.07	0.14	0.20	0.17	0.25	0.32	0.29	0.20	0.25	0.32	-0.01	0.12
9	0.3	0.30	0.29	0.24	0.27	0.27	0.21	0.25	0.30	0.17	0.09	-0.05	-0.08	-0.20	-0.38	-0.21	-0.11	-0.07	0.01	0.06	0.10	0.13	0.22	0.54	0.54	-0.38	0.11
10	0.1	0.13	0.13	0.11	0.15	0.06	-0.01	0.01	-0.01	-0.05	-0.07	-0.06	-0.08	-0.12	-0.12	-0.06	-0.04	-0.06	-0.04	-0.01	0.03	0.03	0.01	-0.01	0.15	-0.12	0.00
11	0.0	-0.01	-0.03	-0.02	-0.04	-0.04	-0.03	-0.01	-0.01	-0.02	-0.08	-0.22	-0.33	-0.33	-0.36	-0.10	-0.15	-0.12	-0.09	0.03	0.09	0.07	0.03	0.02	0.09	-0.36	-0.07
12	0.0	-0.02	-0.03	-0.04	-0.04	-0.05	-0.05	-0.01	0.01	0.02	-0.02	-0.19	-0.32	-0.35	-0.35	-0.08	-0.03	-0.01	0.03	0.04	0.06	0.05	0.03	0.00	0.06	-0.35	-0.06
13	0.0	-0.02	-0.02	-0.04	-0.06	-0.06	-0.06	-0.06	-0.06	-0.09	-0.13	-0.18	-0.20	-0.24	-0.22	-0.15	-0.15	-0.11	-0.07	-0.04	-0.05	-0.05	-0.03	-0.01	-0.01	-0.24	-0.09
14	0.0	0.02	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	-0.02	-0.15	-0.35	-0.29	-0.20	-0.08	-0.09	-0.06	-0.06	-0.05	-0.01	0.06	0.17	0.14	0.16	0.17	-0.35	-0.03
15	0.2	0.14	0.09	0.14	0.14	0.16	0.14	0.16	0.21	0.16	0.13	0.09	0.11	0.10	0.13	0.15	0.16	0.10	0.07	0.03	0.13	0.14	0.17	0.17	0.21	0.03	0.13
16	0.2	0.23	0.13	0.21	0.48	0.48	0.36	0.59	0.52	0.45	0.16	0.35	0.28	0.16	-0.07	0.12	0.21	0.52	0.81	1.03	1.13	1.72	2.15	2.46	2.46	-0.07	0.61
17	0.8	0.53	0.67	1.12	1.55	1.59	1.20	0.40	0.25	0.13	-0.04	-0.20	-0.33	-0.36	-0.33	-0.29	-0.22	-0.18	-0.09	-0.07	-0.08	-0.08	-0.07	-0.07	1.59	-0.36	0.24
18	-0.1	-0.07	-0.06	-0.05	-0.05	-0.06	-0.06	-0.05	-0.04	-0.07	-0.11	-0.16	-0.18	-0.19	-0.22	-0.19	-0.13	-0.13	-0.11	-0.06	-0.05	-0.03	0.00	0.01	0.01	-0.22	-0.09
19	0.0	0.01	-0.01	0.00	0.00	-0.05	-0.08	-0.04	-0.04	-0.07	-0.14	-0.19	-0.26	-0.25	-0.24	-0.25	-0.21	-0.17	-0.13	-0.10	-0.09	-0.08	-0.09	-0.09	0.01	-0.26	-0.11
20	-0.1	-0.09	-0.08	-0.08	-0.07	-0.06	-0.07	-0.07	-0.07	-0.09	-0.15	-0.25	-0.28	-0.28	-0.26	-0.24	-0.20	-0.19	-0.16	-0.09	-0.10	-0.08	-0.07	-0.08	-0.06	-0.28	-0.13
21	-0.1	-0.09	-0.08	-0.08	-0.05	-0.04	-0.07	-0.07	-0.08	-0.09	-0.09	-0.13	-0.12	-0.11	-0.19	-0.31	-0.06	0.04	0.08	0.09	0.09	0.14	0.17	0.25	0.25	-0.31	-0.04
22	0.4	0.28	0.19	0.16	0.14	0.05	0.09	0.04	-0.01	-0.03	-0.11	-0.16	-0.21	-0.31	-0.25	-0.16	-0.02	0.01	0.06	0.06	0.00	-0.03	0.04	0.09	0.40	-0.31	0.01
23	0.1	0.04	0.06	0.03	0.02	0.01	-0.03	-0.04	0.02	-0.02	-0.12	-0.23	-0.31	-0.27	-0.28	-0.26	-0.15	-0.14	-0.10	-0.06	0.00	-0.02	-0.04	-0.05	0.07	-0.31	-0.08
24	0.0	-0.05	-0.06	-0.06	0.00	-0.02	-0.04	-0.04	-0.06	-0.07	-0.16	-0.24	-0.23	-0.28	-0.35	-0.25	-0.21	-0.09	-0.09	-0.05	-0.03	-0.04	-0.02	-0.04	0.00	-0.35	-0.11
25	0.0	-0.04	0.06	0.24	0.20	0.01	0.05	0.03	0.06	-0.01	-0.15	-0.26	-0.31	-0.34	-0.34	-0.30	-0.06	0.00	0.01	0.00	0.03	0.04	0.03	0.05	0.24	-0.34	-0.04
26										0.05				-0.31	-0.33	-0.34	-0.31	-0.08	-0.01	0.02	0.02	0.04	0.06	0.07	0.07	-0.34	-0.09
27	0.1	0.04	0.02	0.05	0.03	-0.01	-0.03	-0.02	-0.03	-0.03	-0.06	-0.15	-0.26	-0.28	-0.31	-0.28	-0.26	-0.20	-0.18	-0.13	-0.09	-0.04	0.00	0.03	0.06	-0.31	-0.09
28	0.1	0.04	0.03	0.03	0.02	0.00	0.02	0.02	0.05	0.05	0.01	-0.20	-0.29	-0.36	-0.40	-0.41	-0.38	-0.20	-0.07	-0.02	0.02	0.22	1.28	1.53	1.53	-0.41	0.04
29	1.7	2.25	0.97	0.46	0.39	0.23	0.07	0.12	0.15	0.18	0.05	-0.01	0.01	0.00	-0.01	0.03	0.03	0.02	0.06	0.01	-0.01	-0.09	-0.08	-0.06	2.25	-0.09	0.27
30	0.0	0.02	0.09	-0.01	-0.05	-0.10	-0.08	-0.12	-0.12	-0.04	-0.02	-0.02	-0.01	-0.03	0.00	0.01	0.02	0.11	0.15	0.05	0.08	0.21	0.23	0.26	0.26	-0.12	0.03
31	0.2	0.25	0.29	0.31	0.50	0.55	0.36	0.55	0.41	0.48	0.48	0.42	0.31	0.07	0.07	0.11	0.17	0.11	0.17	0.18	0.16	0.13	0.07	0.07	0.55	0.07	0.27
Max.	**1.7**	**2.25**	**0.97**	**1.12**	**1.55**	**1.59**	**1.20**	**0.59**	**0.52**	**0.48**	**0.48**	**0.42**	**0.31**	**0.16**	**0.13**	**0.25**	**0.24**	**0.52**	**0.81**	**1.03**	**1.13**	**1.72**	**2.15**	**2.46**	**2.46**		
Min.	**-0.1**	**-0.09**	**-0.09**	**-0.10**	**-0.09**	**-0.10**	**-0.10**	**-0.12**	**-0.12**	**-0.10**	**-0.16**	**-0.35**	**-0.33**	**-0.36**	**-0.40**	**-0.41**	**-0.38**	**-0.20**	**-0.18**	**-0.13**	**-0.10**	**-0.09**	**-0.09**	**-0.09**		**-0.41**	
Avg.	**0.2**	**0.18**	**0.12**	**0.13**	**0.14**	**0.12**	**0.08**	**0.07**	**0.06**	**0.05**	**-0.01**	**-0.07**	**-0.11**	**-0.14**	**-0.15**	**-0.10**	**-0.04**	**0.00**	**0.04**	**0.08**	**0.10**	**0.15**	**0.20**	**0.24**			**0.05**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.08	0.12	0.15	0.15	0.15	0.13	0.09	0.21	0.29	0.19	0.09	0.17	0.08	0.11	0.10	0.13	0.16	0.25	0.26	0.29	0.36	0.38	0.63	0.63	0.08	0.19
2	0.4	0.24	0.10	0.08	0.03	0.02	0.02	0.02	0.01	-0.01	-0.05	-0.11	-0.25	-0.39	-0.49	-0.46	-0.40	-0.25	-0.16	-0.08	0.00	0.02	0.03	0.04	0.43	-0.49	-0.07
3	0.1	0.10	0.08	0.11	0.12	-0.01	-0.01	0.09	0.20	0.29	0.23	0.06	-0.10	-0.10	-0.11	-0.08	-0.09	-0.08	-0.03	0.08	0.10	0.06	0.12	0.04	0.29	-0.11	0.05
4	0.0	-0.02	-0.01	-0.04	-0.03	-0.02	-0.01	0.01	0.04	0.03	0.02	-0.01	-0.02	-0.06	-0.08	-0.04	-0.01	0.00	-0.07	-0.04	-0.02	0.03	0.03	0.02	0.04	-0.08	-0.01
5	0.0	-0.02	-0.03	-0.05	-0.05	-0.05	-0.06	-0.03	-0.03	-0.03	-0.07	-0.14	-0.17	-0.24	-0.26	-0.26	-0.28	-0.24	-0.07	-0.03	0.00	0.02	0.02	0.01	0.02	-0.28	-0.09
6	0.0	0.02	0.02	0.03	-0.01	0.01	0.03	0.02	0.01	-0.03	-0.18	-0.31	-0.41	-0.48	-0.49	-0.48	-0.42	-0.39	-0.16	-0.12	-0.05	0.00	0.03	0.04	0.04	-0.49	-0.14
7	0.0	0.02	0.01	0.05	0.05	0.02	0.01	-0.01	-0.03	-0.11	-0.30	-0.43	-0.53	-0.60	-0.62	-0.61	-0.60	-0.51	-0.18	-0.14	-0.06	-0.03	0.02	0.03	0.05	-0.62	-0.19
8	0.0	0.00	0.04	0.06	0.03	0.09	0.10	0.06	0.06	-0.11	-0.38	-0.52	-0.56	-0.49	-0.57	-0.61	-0.51	-0.30	-0.23	-0.26	-0.19	-0.13	-0.08	-0.14	0.10	-0.61	-0.19
9	-0.1	-0.04	-0.03	-0.04	-0.05	-0.04	-0.03	-0.02	-0.05	-0.11	-0.19	-0.30	-0.39	-0.49	-0.53	-0.48	-0.49	-0.42	-0.25	-0.22	-0.09	-0.05	-0.01	-0.01	-0.01	-0.53	-0.18
10	0.0	-0.03	-0.01	0.02	0.02	0.00	0.00	0.00	-0.01	-0.18	-0.37	-0.61	-0.69	2.82	4.76	-0.20	1.26	0.07	-0.46	-0.42	-0.14	-0.07	-0.01	0.02	4.76	-0.69	0.24
11	0.0	0.04	0.04	0.01	-0.02	-0.04	-0.04	-0.05	-0.06	-0.21	-0.38	-0.53	-0.71	-0.82	-0.76	-0.74	-0.73	-0.65	-0.48	-0.34	-0.13	-0.07	-0.02	-0.01	0.04	-0.82	-0.28
12	0.0	-0.03	-0.01	-0.04	-0.06	-0.04	-0.03	-0.02	-0.04	-0.19	-0.35	-0.50	-0.55	-0.65	-0.67	-0.64	-0.58	-0.47	-0.38	-0.24	-0.07	-0.03	0.02	0.04	0.04	-0.67	-0.23
13	0.0	-0.01	-0.04	-0.01	0.00	0.01	0.01	0.01	-0.01	-0.14	-0.22	-0.21	-0.19	-0.34	-0.21	-0.20	-0.16	-0.18	-0.16	-0.11	-0.04	0.02	0.08	0.09	0.09	-0.34	-0.08
14	0.1	0.03	0.01	-0.04	-0.03	-0.02	-0.02	-0.03	-0.03	-0.04	-0.02	-0.04	-0.17	-0.29	-0.52	-0.42	-0.29	-0.22	-0.14	-0.10	-0.01	0.06	0.10	0.10	0.10	-0.52	-0.09
15	0.1	0.13	0.09	0.12	0.07	0.08	0.10	0.13	0.08	0.02	-0.10	-0.11	-0.15	-0.30	-0.45	-0.50	-0.38	-0.28	-0.26	-0.14	-0.13	-0.05	-0.03	-0.07	0.13	-0.50	-0.08
16	-0.1	-0.08	-0.08	-0.08	-0.08	-0.07	-0.09	-0.08	-0.13	-0.20	-0.33	-0.49	-0.54	-0.55	-0.58	-0.55	-0.50	-0.48	-0.38	-0.26	-0.14	-0.09	-0.03	-0.03	-0.03	-0.58	-0.25
17	0.0	0.02	0.02	0.03	0.04	0.07	0.08	0.10	0.06	-0.03	-0.22	-0.36	-0.48	-0.31	-0.51	-0.64	-0.59	-0.52	-0.37	-0.26	-0.05	0.03	0.07	0.09	0.10	-0.64	-0.16
18	0.1	0.13	0.17	0.21	0.20	0.20	0.30	0.64	1.10	0.54	-0.27	-0.56	-0.46	-0.60	-0.60	-0.51	-0.58	-0.45	-0.35	-0.23	-0.14	0.05	0.33	0.55	1.10	-0.60	-0.01
19	0.6	0.79	0.42	0.34	0.26	0.33	0.23	0.47	0.60	0.09	-0.11	-0.22	-0.28	-0.33	-0.40	-0.49	-0.42	-0.34	-0.32	-0.22	-0.11	-0.03	0.16	0.21	0.79	-0.49	0.05
20	0.2	0.16	0.09	0.11	0.09	0.07	0.07	0.08	0.03	-0.03	-0.13	-0.21	-0.38	-0.43	-0.37	-0.37	-0.39	-0.39	-0.20	-0.14	-0.11	-0.08	-0.06	-0.04	0.20	-0.43	-0.10
21	0.0	-0.03	-0.04	-0.02	-0.02	-0.03	-0.03	-0.04	-0.03	-0.06	-0.11	-0.14	-0.19	-0.28	-0.39	-0.40	-0.40	-0.33	-0.51	-0.44	-0.17	0.08	0.13	0.16	0.16	-0.51	-0.14
22	0.3	0.41	0.62	0.55	0.36	0.25	0.43	0.41	0.36	-0.09	-0.42	-0.58	-0.81	-0.97	-0.90	-0.83	-0.76	-0.97	-0.76	-0.61	-0.21	0.33	0.95	1.12	1.12	-0.97	-0.08
23	1.7	2.37	1.74	0.78	0.31	0.29	0.20	0.17	0.10	-0.14	-0.39	-0.55	-0.65	-0.79	-0.88	-0.92	-0.84	-0.74	-0.55	-0.34	0.01	0.18	0.22	0.25	2.37	-0.92	0.06
24	0.3	0.23	0.15	0.09	0.07	0.05	0.07	0.03	-0.06	-0.20	-0.27	-0.36	-0.51	-0.55	-0.46	-0.42	-0.44	-0.41	-0.34	-0.34	-0.18	-0.08	-0.03	0.02	0.26	-0.55	-0.15
25	0.1	0.03	-0.01	-0.03	-0.02	-0.02	-0.01	-0.03	-0.04	-0.07	-0.23	-0.40	-0.57	-0.73	-0.76	-0.79	-0.78	-0.72	-0.61	-0.46	-0.19	-0.03	0.01	0.05	0.06	-0.79	-0.26
26	0.1	0.07	0.05	0.05	0.01	-0.05	-0.10	-0.12	-0.16	-0.20	-0.21	-0.17	-0.20	-0.23	-0.23	-0.20	-0.18	-0.21	-0.17	-0.12	-0.09	-0.07	-0.03	0.00	0.07	-0.23	-0.11
27	0.0	-0.01	-0.01	-0.01	0.00	-0.02	-0.02	-0.03	-0.05	-0.08	-0.10	-0.09	-0.11	-0.12	-0.10	-0.16	-0.20	-0.15	-0.16	-0.07	-0.02	-0.04	0.01	0.05	0.05	-0.20	-0.06
28	0.1	0.02	-0.01	0.00	-0.01	0.02	0.03	0.05	0.00	-0.10	-0.19	-0.26	-0.32	-0.41	-0.44	-0.41	-0.47	-0.37	-0.29	-0.20	-0.10	-0.02	0.02	0.05	0.05	-0.47	-0.14
29	0.1	0.09	0.06	0.07	0.07	0.07	0.08	0.06	-0.01	-0.17	-0.20	-0.37	-0.51	-0.69	-0.81	-0.82	-0.81	-0.77	-0.68	-0.49	-0.42	-0.09	0.03	0.12	0.12	-0.82	-0.25
30	0.2	0.16	0.16	0.17	0.21	0.19	0.16	0.15	0.04	-0.26	-0.51	-0.71	-0.79	-0.83	-0.91	-0.77	-0.53	-0.36	-0.56	-0.57	-0.41	-0.22	-0.05	0.07	0.21	-0.91	-0.25
Max.	**1.7**	**2.37**	**1.74**	**0.78**	**0.36**	**0.33**	**0.43**	**0.64**	**1.10**	**0.54**	**0.23**	**0.09**	**0.17**	**2.82**	**4.76**	**0.10**	**1.26**	**0.16**	**0.25**	**0.26**	**0.29**	**0.36**	**0.95**	**1.12**	**4.76**		
Min.	**-0.1**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.07**	**-0.10**	**-0.12**	**-0.16**	**-0.26**	**-0.51**	**-0.71**	**-0.81**	**-0.97**	**-0.91**	**-0.92**	**-0.84**	**-0.97**	**-0.76**	**-0.61**	**-0.42**	**-0.22**	**-0.08**	**-0.14**		**-0.97**	
Avg.	**0.1**	**0.16**	**0.12**	**0.09**	**0.06**	**0.05**	**0.05**	**0.07**	**0.07**	**-0.05**	**-0.20**	**-0.31**	**-0.38**	**-0.34**	**-0.31**	**-0.46**	**-0.38**	**-0.37**	**-0.30**	**-0.22**	**-0.10**	**0.00**	**0.08**	**0.12**			**-0.10**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.0	0.01	0.05	0.13	0.19	0.19	0.16	0.13	0.07	-0.05	-0.22	-0.40	-0.66	-0.70	-0.72	-0.62	-0.57	-0.54	-0.46	-0.35	-0.23	-0.11	-0.01	0.08	0.19	-0.72	-0.19
2	0.1	0.08	0.10	0.10	0.08	0.09	0.10	0.10	0.08	0.08	-0.01	0.01	-0.08	-0.37	-0.40	-0.39	-0.29	-0.43	-0.32	-0.16	-0.21	-0.01	0.08	0.12	0.12	-0.43	-0.07
3	0.2	0.16	0.17	0.15	0.17	0.24	0.43	0.38	0.24	-0.12	-0.01	-0.07	-0.20	-0.27	-0.21	-0.13	-0.11	-0.17	-0.20	0.06	0.12	0.06	0.06	0.11	0.43	-0.27	0.04
4	0.1	0.01	0.07	0.01	0.07	0.13	0.19	0.24	0.26	0.18	0.02	-0.15	-0.30	-0.32	-0.38	-0.45	-0.48	-0.46	-0.37	-0.31	-0.30	-0.17	-0.04	0.18	0.26	-0.48	-0.10
5	0.1	0.13	0.16	0.11	0.11	0.12	0.11	0.13	0.05	-0.06	-0.18	-0.28	-0.37	-0.52	-0.51	-0.51	-0.57	-0.55	-0.50	-0.44	-0.39	-0.22	0.06	0.38	0.38	-0.57	-0.15
6	0.4	0.15	0.10	0.27	0.41	0.48	0.43	0.05	0.01	-0.03	-0.20	-0.28	-0.25	-0.28	-0.32	-0.32	-0.33	-0.41	-0.46	-0.27	-0.15	-0.10	-0.08	-0.04	0.48	-0.46	-0.05
7	0.0	-0.01	0.00	0.03	0.04	0.06	0.07	0.05	0.06	0.10	0.01	-0.05	-0.11	-0.14	-0.20	-0.31	-0.36	-0.24	-0.14	-0.05	-0.02	0.07	0.06	0.08	0.10	-0.36	-0.04
8	0.1	0.12	0.13	0.09	0.05	0.17	0.19	0.17	0.17	0.08	0.01	-0.05	-0.09	-0.16	-0.17	-0.17	-0.20	-0.19	-0.14	-0.11	-0.06	0.03	0.18	0.21	0.21	-0.20	0.01
9	0.2	0.16	0.15	0.17	0.17	0.05	0.03	0.11	0.18	0.21	0.11	0.04	-0.07	-0.08	-0.18	-0.16	-0.13	-0.08	0.04	0.04	-0.03	-0.11	-0.01	0.19	0.21	-0.18	0.04
10	0.4	0.18	0.07	0.04	0.02	0.03	0.06	0.04	-0.05	-0.15	-0.29	-0.44	-0.62	-0.68	-0.70	-0.78	-0.77	-0.69	-0.63	-0.53	-0.45	-0.20	0.00	0.14	0.40	-0.78	-0.25
11	0.1	0.10	0.14	0.31	0.36	0.12	0.10	0.12	0.21	0.22	0.00	0.02	0.05	0.02	0.07	0.03	-0.01	0.02	0.07	0.07	0.01	0.01	-0.02	-0.09	0.36	-0.09	0.08
12	-0.1	-0.11	-0.22	-0.22	-0.14	-0.16	-0.10	-0.20	-0.10	0.01	0.01	-0.03	-0.09	-0.18	-0.17	-0.16	-0.10	-0.08	-0.06	-0.04	-0.03	-0.01	-0.01	0.01	0.01	-0.22	-0.10
13	0.0	-0.03	-0.03	0.03	0.10	0.09	0.03	0.04	0.04	-0.01	-0.07	-0.08	-0.17	-0.23	-0.15	-0.07	-0.08	-0.09	-0.07	-0.04	0.00	-0.04	0.01	0.07	0.10	-0.23	-0.03
14	0.1	0.34	0.33	0.34	0.33	0.31	0.26	0.15	0.05	-0.06	-0.07	-0.10	-0.16	-0.45	-0.47	-0.42	-0.44	-0.37	-0.28	-0.19	-0.13	-0.03	0.11	0.19	0.34	-0.47	-0.03
15	0.2	0.32	0.46	0.41	0.50	0.42	0.49	0.09	-0.11	-0.25	-0.27	-0.36	-0.48	-0.45	-0.27	-0.21	-0.15	-0.11	-0.14	-0.12	-0.08	-0.02	0.09	0.06	0.50	-0.48	0.00
16	0.1	0.16	0.06	0.11	0.07	0.10	0.12	0.09	0.00	-0.05	-0.07	-0.10	-0.21	-0.21	-0.27	-0.38	-0.37	-0.49	-0.43	-0.32	-0.19	0.07	0.41	1.29	1.29	-0.49	-0.02
17	2.8	1.56	0.38	0.28	0.29	0.37	0.26	-0.06	-0.35	-0.58	-0.70	-0.83	-0.84	-0.82	-1.02	-0.52	-0.44	-0.47	-0.36	-0.27	-0.21	-0.08	-0.04	0.19	2.75	-1.02	-0.06
18	0.4	0.53	0.07	0.01	0.05	0.05	0.02	-0.04	-0.08	-0.12	-0.25	-0.22	-0.17	-0.15	-0.17	-0.18	-0.22	-0.32	-0.28	-0.23	-0.19	-0.11	-0.07	-0.06	0.53	-0.32	-0.07
19	0.0	0.11	0.02	0.21	1.05	1.36	0.89	-0.05	-0.38	-0.57	-0.65	-0.73	-0.76	-0.90	-0.94	-0.88	-0.87	-0.72	-0.64	-0.42	-0.20	-0.01	0.20	0.37	1.36	-0.94	-0.19
20	0.4	0.36	0.34	0.34	0.36	0.31	0.20	-0.09	-0.33	-0.56	-0.72	-0.87	-0.92	-0.92	-0.91	-0.86	-0.71	-0.68	-0.49	-0.48	-0.29	-0.06	0.47	0.73	0.73	-0.92	-0.22
21	1.2	1.30	1.62	1.59	1.42	0.29	0.18	-0.13	-0.41	-0.58	-0.71	-0.66	-0.60	-0.50	-0.73	-0.76	-0.66	-0.82	-0.50	-0.49	-0.25	-0.13	0.13	0.29	1.62	-0.82	0.01
22	0.4	0.25	0.19	0.17	0.17	0.12	0.09	-0.13	-0.28	-0.58	-0.75	-0.87	-0.89	-0.65	-0.41	-0.37	-0.38	-0.30	-0.27	-0.17	-0.14	-0.07	-0.07	-0.06	0.38	-0.89	-0.21
23	-0.1	-0.05	-0.08	-0.06	-0.11	-0.15	-0.20	-0.14	-0.07	-0.06	-0.04	0.01	0.03	0.01	-0.01	-0.03	-0.06	-0.05	-0.10	-0.06	0.06	0.01	0.03	0.04	0.06	-0.20	-0.05
24	0.1	0.05	0.10	0.10	0.08	0.07	-0.02	-0.01	-0.04	-0.06	-0.07	-0.15	-0.26	-0.24	-0.20	-0.17	-0.18	-0.23	-0.22	-0.23	-0.14	0.03	0.54	1.04	1.04	-0.26	-0.01
25	1.4	1.04	1.48	1.12	1.12	1.12	0.79	0.11	-0.31	-0.49	-0.68	-0.81	-0.64	-0.65	-0.55	-0.49	-0.54	-0.41	-0.27	-0.26	-0.16	-0.04	0.02	0.16	1.48	-0.81	0.08
26	0.2	0.09	0.11	0.17	0.15	0.08	0.03	-0.05	-0.25	-0.34	-0.56	-0.77	-0.89	-0.91	-0.90	-0.84	-0.78	-0.63	-0.34	-0.18	-0.06	-0.02	0.07	0.07	0.17	-0.91	-0.27
27	0.1	0.08	0.08	0.08	0.11	0.10	0.05	-0.11	-0.34	-0.59	-0.72	-0.78	-0.81	-0.87	-0.88	-0.78	-0.75	-0.60	-0.47	-0.30	-0.15	0.00	0.12	0.18	0.18	-0.88	-0.30
28	0.2	0.20	0.20	0.19	0.13	0.13	0.06	-0.11	-0.33	-0.52	-0.65	-0.78	-0.85	-0.87	-0.83	-0.46	-0.37	-0.60	-0.46	-0.33	-0.21	-0.04	0.17	0.32	0.32	-0.87	-0.24
29	0.5	0.50	0.30	0.15	0.14	0.12	0.09	-0.06	-0.19	-0.39	-0.41	-0.57	-0.73	-0.74	-0.85	-0.74	-0.81	-0.88	-0.63	-0.51	-0.42	-0.20	0.11	0.56	0.56	-0.88	-0.23
30	0.7	0.80	1.13	0.92	1.45	1.22	0.87	-0.03	-0.22	-0.39	-0.35	-0.47	-0.46	-0.26	-0.28	-0.36	-0.33	-0.48	-0.45	-0.30	-0.21	-0.14	-0.10	-0.09	1.45	-0.48	0.09
31	-0.1	-0.06	-0.02	-0.04	-0.04	-0.06	-0.06	-0.08	-0.09	-0.10	-0.12	-0.12	-0.15	-0.14	-0.13	-0.14	-0.13	-0.12	-0.12	-0.10	-0.09	-0.07	-0.07	-0.05	-0.02	-0.15	-0.09
Max.	**2.8**	**1.56**	**1.62**	**1.59**	**1.45**	**1.36**	**0.89**	**0.38**	**0.26**	**0.22**	**0.11**	**0.04**	**0.05**	**0.02**	**0.07**	**0.03**	**-0.01**	**0.02**	**0.07**	**0.07**	**0.12**	**0.07**	**0.54**	**1.29**	**2.75**		
Min.	**-0.1**	**-0.11**	**-0.22**	**-0.22**	**-0.14**	**-0.16**	**-0.20**	**-0.20**	**-0.41**	**-0.59**	**-0.75**	**-0.87**	**-0.92**	**-0.92**	**-1.02**	**-0.88**	**-0.87**	**-0.88**	**-0.64**	**-0.53**	**-0.45**	**-0.22**	**-0.10**	**-0.09**		**-1.02**	
Avg.	**0.3**	**0.27**	**0.25**	**0.24**	**0.29**	**0.24**	**0.19**	**0.02**	**-0.08**	**-0.19**	**-0.28**	**-0.35**	**-0.41**	**-0.44**	**-0.45**	**-0.41**	**-0.39**	**-0.39**	**-0.31**	**-0.23**	**-0.16**	**-0.06**	**0.08**	**0.22**			**-0.08**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.0	0.01	0.03	0.12	0.20	0.16	0.12	0.13	0.19	0.11	0.07	0.05	0.06	0.12	0.06	0.20	0.13	0.09	0.11	0.05	0.10	0.17	0.22	0.31	0.31	0.01	0.12
2	0.4	0.36	0.33	0.40	0.37	0.33	0.35	0.28	0.13	0.00	-0.13	-0.26	-0.43	-0.62	-0.61	-0.35	-0.29	-0.25	-0.27	-0.12	0.19	0.37	0.47	0.66	0.66	-0.62	0.06
3	1.0	0.48	0.44	0.49	0.80	0.35	0.33	0.16	-0.01	-0.13	-0.08	-0.08	-0.04	-0.10	-0.15	-0.68	-0.47	-0.22	-0.16	-0.17	-0.15	-0.09	0.01	0.11	1.03	-0.68	0.07
4	0.2	0.18	0.50	0.33	0.03	0.09	-0.01	-0.05	-0.03	-0.02	-0.02	-0.11	-0.21	-0.40	-0.34	-0.46	-0.53	-0.67	-0.33	-0.30	-0.21	-0.13	-0.09	-0.07	0.50	-0.67	-0.11
5	0.0	0.01	-0.03	-0.04	-0.03	-0.03	0.03	-0.02	0.00	0.01	-0.02	-0.04	-0.07	-0.09	-0.07	-0.05	-0.06	-0.03	0.06	0.10	0.21	0.24	0.47	0.38	0.47	-0.09	0.04
6	0.3	0.17	0.11	0.07	0.08	0.09	0.03	-0.04	-0.16	-0.39	-0.68	-0.81	-0.84	-0.91	-0.85	-0.81	-0.74	-0.64	-0.59	-0.36	-0.12	-0.03	0.11	0.11	0.32	-0.91	-0.29
7	0.1	0.01	-0.03	-0.04	-0.06	-0.08	-0.10	-0.11	-0.29	-0.49	-0.76	-0.67	-0.93	-1.03	-0.99	-0.89	-0.79	-0.49	-0.27	-0.21	-0.19	-0.22	-0.16	-0.12	0.09	-1.03	-0.37
8	-0.2	-0.13	-0.13	-0.08	-0.05	0.01	0.00	-0.08	-0.37	-0.65	-0.75	-0.70	-0.65	-0.62	-0.65	-0.66	-0.57	-0.60	-0.48	-0.29	-0.14	-0.06	0.06	0.12	0.12	-0.75	-0.32
9	0.1	0.08	0.02	-0.03	-0.04	-0.06	-0.08	-0.14	-0.25	-0.36	-0.63	-0.58	-0.81	-0.96	-0.97	-0.78	-0.76	-0.63	-0.49	-0.37	-0.14	0.02	0.07	0.10	0.10	-0.97	-0.32
10	0.1	0.11	0.07	0.02	-0.02	-0.04	-0.08	-0.12	-0.29	-0.42	-0.56	-0.67	-0.73	-0.62	-0.52	-0.36	-0.47	-0.40	-0.40	-0.34	-0.25	-0.17	-0.12	-0.07	0.11	-0.73	-0.26
11	-0.1	-0.07	-0.01	0.14	0.29	0.15	0.03	0.04	-0.02	-0.08	-0.15	-0.35	-0.40	-0.31	-0.33	-0.35	-0.23	-0.26	-0.17	-0.16	-0.24	-0.17	-0.04	0.23	0.29	-0.40	-0.10
12	0.1	0.07	0.08	0.07	0.00	-0.02	-0.07	-0.11	-0.15	-0.23	-0.48	-0.76	-0.81	-0.86	-0.84	-0.70	-0.48	-0.41	-0.25	-0.20	-0.15	-0.08	-0.02	-0.02	0.13	-0.86	-0.26
13	0.0	-0.04	-0.03	-0.06	-0.03	0.05	0.07	0.03	-0.10	-0.24	-0.41	-0.37	-0.40	-0.53	-0.50	-0.76	-0.63	-0.67	-0.43	-0.35	-0.20	-0.01	0.64	0.59	0.64	-0.76	-0.18
14	0.7	0.34	0.17	0.01	0.01	0.01	0.01	-0.04	-0.11	-0.17	-0.28	-0.34	-0.47	-0.73	-0.62	-0.64	-0.62	-0.55	-0.39	-0.31	-0.23	-0.04	0.32	0.37	0.66	-0.73	-0.15
15	0.1	0.09	0.09	0.07	0.03	0.00	-0.04	-0.09	-0.17	-0.31	-0.38	-0.57	-0.77	-0.82	-0.74	-0.67	-0.59	-0.49	-0.33	-0.26	-0.12	-0.06	-0.02	-0.02	0.14	-0.82	-0.25
16	0.0	0.00	-0.03	-0.02	0.00	-0.03	-0.06	-0.16	-0.19	-0.35	-0.45	-0.63	-0.48	-0.63	-0.73	-0.82	-0.77	-0.50	-0.44	-0.42	-0.41	-0.14	0.82	1.51	1.51	-0.82	-0.21
17	2.5	2.83	2.47	2.12	2.50	1.24	0.33	-0.17	-0.42	-0.65	-0.72	-0.74	-0.94	-1.17	-1.09	-1.34	-1.34	-1.11	-1.17	-0.87	-0.49	-0.25	0.01	0.07	2.83	-1.34	0.06
18	0.0	-0.11	-0.10	-0.11	-0.04	0.44	0.33	0.27	0.00	-0.23	-0.21	-0.61	-0.80	-0.79	-1.08	-1.13	-0.99	-0.87	-0.70	-0.69	-0.46	-0.27	0.45	0.72	0.72	-1.13	-0.29
19	2.0	1.95	2.66	2.75	2.52	2.31	0.45	-0.13	-0.33	-0.42	-0.63	-0.62	-0.59	-0.64	-0.57	-0.60	-0.51	-0.58	-0.51	-0.43	-0.31	-0.10	-0.04	0.02	2.75	-0.64	0.32
20	-0.1	0.01	0.07	-0.05	-0.04	0.06	-0.13	-0.18	-0.26	-0.37	-0.50	-0.51	-0.39	-0.43	-0.39	-0.40	-0.48	-0.51	-0.56	-0.50	-0.31	-0.26	-0.24	-0.11	0.07	-0.56	-0.27
21	-0.1	0.02	0.09	0.11	0.07	0.33	-0.05	-0.11	-0.24	-0.39	-0.26	-0.38	-0.50	-0.51	-0.56	-0.53	-0.63	-0.51	-0.56	-0.36	-0.45	-0.32	0.24	0.81	0.81	-0.63	-0.20
22	1.1	0.59	0.89	0.57	0.82	0.70	1.03	0.11	-0.16	-0.17	-0.29	-0.32	-0.22	-0.28	-0.19	-0.22	-0.43	-0.44	-0.40	-0.28	-0.18	-0.13	-0.07	-0.02	1.08	-0.44	0.08
23	0.0	0.00	0.02	0.05	-0.03	-0.04	-0.05	-0.08	-0.14	-0.26	-0.27	-0.52	-0.72	-0.51	-0.55	-0.59	-0.53	-0.51	-0.49	-0.35	-0.23	-0.17	0.01	0.21	0.21	-0.72	-0.24
24	0.4	0.38	0.03	-0.04	0.01	-0.02	0.05	0.00	-0.03	-0.06	-0.16	-0.13	-0.08	-0.09	-0.16	-0.19	-0.14	0.10	0.05	0.08	0.04	0.09	0.14	0.13	0.38	-0.19	0.02
25	0.2	0.24	0.08	-0.01	0.00	0.10	0.12	0.21	0.13	0.13	0.15	0.18	0.17	0.16	0.13	0.03	0.08	0.13	0.17	0.23	0.27	0.31	0.30	0.38	0.38	-0.01	0.16
26	0.4	0.39	0.42	0.33	0.46	0.45	0.65	0.51	0.44	0.38	0.23	0.20	0.09	-0.01	-0.10	-0.02	-0.08	0.03	0.17	0.24	0.34	0.55	0.63	0.53	0.65	-0.10	0.30
27	0.5	0.50	0.36	0.02	0.04	0.05	0.01	-0.03	-0.06	-0.06	-0.10	-0.26	-0.25	-0.45	-0.50	-0.47	-0.77	-0.39	-0.25	-0.16	-0.08	-0.13	0.09	0.65	0.65	-0.77	-0.07
28	1.0	0.72	1.03	0.52	0.77	0.57	0.58	0.07	-0.03	-0.15	-0.36	-0.39	-0.42	-0.40	-0.47	-0.26	-0.21	-0.29	-0.35	-0.15	-0.11	-0.06	-0.02	0.23	1.03	-0.47	0.08
29	0.4	0.37	0.29	0.27	0.24	0.22	0.12	0.01	-0.04	-0.08	-0.10	-0.09	-0.15	-0.23	-0.27	-0.35	-0.39	-0.32	-0.48	-0.42	-0.26	-0.12	-0.08	-0.04	0.39	-0.48	-0.06
30	0.0	0.13	0.28	0.69	0.61	1.01	0.82	0.09	-0.32	-0.56	-0.76	-0.86	-0.78	-0.55	-0.56	-0.76	-0.58	-0.58	-0.53	-0.41	-0.50	-0.15	0.25	0.44	1.01	-0.86	-0.15
Max.	**2.5**	**2.83**	**2.66**	**2.75**	**2.52**	**2.31**	**1.03**	**0.51**	**0.44**	**0.38**	**0.23**	**0.20**	**0.17**	**0.16**	**0.13**	**0.20**	**0.13**	**0.13**	**0.17**	**0.24**	**0.34**	**0.55**	**0.82**	**1.51**	**2.83**		
Min.	**-0.2**	**-0.13**	**-0.13**	**-0.11**	**-0.06**	**-0.08**	**-0.13**	**-0.18**	**-0.42**	**-0.65**	**-0.76**	**-0.86**	**-0.94**	**-1.17**	**-1.09**	**-1.34**	**-1.34**	**-1.11**	**-1.17**	**-0.87**	**-0.50**	**-0.32**	**-0.24**	**-0.12**		**-1.34**	
Avg.	**0.4**	**0.32**	**0.34**	**0.29**	**0.32**	**0.28**	**0.16**	**0.01**	**-0.11**	**-0.22**	**-0.32**	**-0.40**	**-0.45**	**-0.50**	**-0.51**	**-0.52**	**-0.50**	**-0.42**	**-0.35**	**-0.26**	**-0.16**	**-0.05**	**0.15**	**0.27**			**-0.09**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.5	0.78	1.18	1.26	1.19	2.06	1.98	0.35	-0.34	-0.69	-0.80	-0.80	-0.70	-0.57	-0.57	-0.51	-0.46	-0.42	-0.30	-0.21	-0.16	-0.13	-0.05	0.01	2.06	-0.80	0.11
2	0.0	0.08	0.05	0.01	0.00	0.02	0.03	-0.08	-0.21	-0.32	-0.64	-0.46	-0.36	-0.46	-0.41	-0.26	-0.19	-0.32	-0.47	-0.13	-0.04	-0.03	0.01	0.08	0.08	-0.64	-0.17
3	0.1	0.39	0.60	0.68	0.32	0.37	0.39	0.22	0.19	0.28	0.27	0.09	-0.01	0.10	0.19	0.00	-0.10	-0.05	-0.05	0.03	0.03	0.02	0.02	0.06	0.68	-0.10	0.17
4	0.1	0.11	0.12	0.07	0.14	0.40	0.33	0.21	0.21	-0.02	-0.04	-0.18	-0.17	-0.14	-0.47	-0.26	-0.17	-0.06	0.13	0.18	0.26	0.26	0.22	0.13	0.40	-0.47	0.06
5	0.1	0.24	0.63	0.63	0.58	0.20	0.14	0.13	-0.05	-0.24	-0.42	-0.64	-0.52	-0.47	-0.33	-0.76	-0.57	-0.84	-0.29	-0.28	-0.20	-0.11	0.24	0.65	0.65	-0.84	-0.09
6	0.6	0.60	0.69	0.80	1.23	1.24	0.50	0.12	-0.17	-0.16	-0.34	-0.49	-0.44	-0.58	-0.38	-0.64	-0.50	-0.37	-0.19	-0.15	-0.07	-0.06	-0.04	0.19	1.24	-0.64	0.06
7	0.1	0.06	0.09	0.12	0.08	-0.01	-0.05	-0.04	-0.05	-0.08	-0.08	-0.10	-0.31	-0.23	-0.29	-0.50	-0.44	-0.38	-0.40	-0.34	-0.14	-0.12	0.22	0.39	0.39	-0.50	-0.10
8	0.2	0.20	0.51	0.56	0.53	0.17	0.09	-0.02	-0.07	-0.13	-0.21	-0.22	-0.30	-0.26	-0.46	-0.40	-0.30	-0.21	-0.12	-0.08	0.15	0.06	0.05	0.20	0.56	-0.46	0.00
9	0.1	0.13	0.05	0.00	0.03	-0.08	-0.08	-0.14	-0.29	-0.21	-0.32	-0.42	-0.35	-0.30	-0.22	-0.17	-0.10	-0.05	-0.04	-0.04	0.00	0.14	0.07	0.06	0.14	-0.42	-0.09
10	0.1	0.10	0.15	0.18	0.18	0.16	0.13	0.12	0.04	0.00	-0.07	-0.05	-0.10	-0.14	-0.30	-0.23	-0.26	-0.19	-0.17	-0.10	-0.04	-0.04	0.01	0.02	0.18	-0.30	-0.02
11	0.1	-0.01	-0.04	0.00	-0.01	-0.01	0.12	-0.05	-0.34	-0.27	-0.33	-0.43	-0.31	-0.33	-0.43	-0.58	-0.45	-0.42	-0.44	-0.38	-0.26	-0.06	0.31	0.85	0.85	-0.58	-0.16
12	1.0	2.11	1.86	1.88	2.44	1.58	0.69	0.24	0.02	-0.06	-0.11	-0.18	-0.28	-0.26	-0.32	-0.27	-0.17	-0.15	-0.12	-0.08	0.01	0.10	0.14	0.22	2.44	-0.32	0.43
13	0.0	0.00	0.07	0.16	0.10	0.10	0.19	0.10	0.08	0.13	-0.01	-0.07	-0.06	-0.08	-0.08	-0.10	-0.11	-0.12	-0.11	-0.07	-0.08	-0.06	0.00	0.08	0.19	-0.12	0.00
14	0.2	0.09	0.14	0.15	0.03	0.07	0.11	0.00	-0.13	-0.19	-0.57	-0.43	-0.60	-0.61	-0.41	-0.56	-0.54	-0.49	-0.38	-0.28	-0.29	-0.14	0.02	0.20	0.20	-0.61	-0.19
15	0.0	0.00	0.10	0.07	0.06	-0.01	-0.04	-0.14	-0.33																0.10	-0.33	-0.03
16	0.1	0.18	0.14	0.03	-0.01	0.02	0.05	0.02	-0.05	-0.04	-0.03	-0.04	0.00	-0.03	-0.05	-0.07	-0.05	-0.01	-0.03	-0.01	-0.01	-0.02	0.02	-0.06	0.18	-0.07	0.00
17	0.0	0.06	0.11	0.25	0.20	0.05	0.07	0.03	-0.02	-0.08	-0.33	-0.59	-0.51	-0.56	-0.50	-0.35	-0.18	-0.10	-0.16	-0.05	-0.02	0.00	0.02	0.04	0.25	-0.59	-0.11
18	0.0	0.04	0.03	0.06	0.03	0.05	0.00	-0.04	-0.05	-0.09	-0.16	-0.32	-0.78	-0.84	-0.82	-0.75	-0.65	-0.53	-0.42	-0.26	0.09	0.16	0.17	0.29	0.29	-0.84	-0.20
19	0.4	0.38	0.30	0.26	0.23	0.20	0.17	0.02	-0.01	-0.05	-0.38	-0.71	-0.77	-0.74	-0.74	-0.69	-0.56	-0.49	-0.30	-0.06	0.13	0.33	0.57	0.71	0.71	-0.77	-0.08
20	0.9	0.76	0.39	0.34	0.20	0.15	0.10	0.04	-0.03	-0.16	-0.16	-0.10	-0.06	-0.11	-0.20	-0.29	-0.26	-0.24	-0.18	-0.13	0.01	-0.08	0.00	0.03	0.85	-0.29	0.04
21	0.1	0.13	0.17	0.20	0.15	0.11	0.14	0.21	0.16	0.03	-0.17	-0.28	-0.35	-0.53	-0.45	-0.51	-0.39	-0.37	-0.40	-0.13	0.07	0.21	0.14	0.08	0.21	-0.53	-0.07
22	0.1	0.04	0.02	0.05	0.03	0.06	0.10	0.03	-0.11	-0.24	-0.30	-0.27	-0.15	-0.06	-0.03	-0.04	-0.09	-0.07	-0.03	-0.02	-0.03	0.00	0.17	0.17	0.17	-0.30	-0.03
23	0.3	0.45	0.15	0.21	0.13	0.11	0.13	0.05	-0.05	-0.54	-0.68	-0.46	-0.56	-0.64	-0.55	-0.26	-0.27	-0.25	-0.23	-0.13	-0.04	-0.03	-0.02	0.18	0.45	-0.68	-0.13
24	0.3	0.31	0.47	0.56	0.39	0.23	0.24	0.24	0.20	0.13	0.04	-0.05	-0.06	-0.19	-0.32	-0.32	-0.50	-0.55	-0.31	-0.14	-0.10	0.34	0.52	0.51	0.56	-0.55	0.08
25	1.2	1.25	1.05	0.73	0.46	0.31	0.37	0.37	0.26	0.22	-0.39	-0.37	-0.46	-0.47	-0.58	-0.58	-0.50	-0.39	-0.27	0.10	0.63	0.45	0.43	0.63	1.25	-0.58	0.18
26	0.4	0.60	0.50	0.42	0.27	0.07	0.00	-0.04	-0.02	-0.11	-0.22	-0.53	-0.57	-0.43	-0.25	-0.32	-0.36	-0.16	-0.06	-0.03	-0.19	-0.06	-0.05	0.00	0.60	-0.57	-0.05
27	0.1	0.10	0.16	0.22	0.11	0.15	0.15	0.02	0.00	0.05	0.01	-0.04	-0.01	0.01	-0.06	-0.12	-0.16	-0.19	-0.24	-0.10	-0.04	0.12	0.35	0.30	0.35	-0.24	0.04
28	0.9	1.06	0.44	0.20	0.17	0.15	0.14	0.12	-0.05	-0.25	-0.65	-0.60	-0.70	-0.74	-0.67	-0.50	-0.33	-0.17	0.01	0.08	0.18	0.25	0.30	0.36	1.06	-0.74	-0.01
29	0.3	0.34	0.31	0.33	0.35	0.33	0.29	0.15	-0.05	-0.19	-0.36	-0.43	-0.48	-0.51	-0.50	-0.43	-0.29	-0.14	0.07	0.14	0.20	0.37	0.44	0.32	0.44	-0.51	0.02
30	0.3	0.22	0.18	0.19	0.16	0.16	0.13	0.12	0.04	-0.01	-0.08	-0.02	-0.02	0.00	0.10	-0.04	-0.15	-0.15	-0.08	-0.05	0.03	0.16	0.20	0.22	0.27	-0.15	0.07
31	0.2	0.15	0.19	0.16	0.14	0.15	0.12	0.04	-0.15	-0.16	-0.19	-0.50	-0.57	-0.57	-0.54	-0.47	-0.21	-0.06	-0.15	-0.10	0.09	0.14	0.29	0.19	0.29	-0.57	-0.08
Max.	**1.2**	**2.11**	**1.86**	**1.88**	**2.44**	**2.06**	**1.98**	**0.37**	**0.26**	**0.28**	**0.27**	**0.09**	**0.00**	**0.10**	**0.19**	**0.00**	**-0.05**	**-0.01**	**0.13**	**0.18**	**0.63**	**0.45**	**0.57**	**0.85**	**2.44**		
Min.	**0.0**	**-0.01**	**-0.04**	**0.00**	**-0.01**	**-0.08**	**-0.08**	**-0.14**	**-0.34**	**-0.69**	**-0.80**	**-0.80**	**-0.78**	**-0.84**	**-0.82**	**-0.76**	**-0.65**	**-0.84**	**-0.47**	**-0.38**	**-0.29**	**-0.14**	**-0.05**	**-0.06**		**-0.84**	
Avg.	**0.3**	**0.35**	**0.35**	**0.35**	**0.32**	**0.28**	**0.22**	**0.08**	**-0.04**	**-0.12**	**-0.26**	**-0.32**	**-0.35**	**-0.36**	**-0.35**	**-0.37**	**-0.31**	**-0.26**	**-0.19**	**-0.10**	**0.01**	**0.07**	**0.16**	**0.24**			**-0.01**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.2	0.10	0.05	0.06	0.09	0.09	0.08	-0.02	-0.17	-0.43	-0.61	-0.47	-0.49	-0.35	-0.33	-0.48	-0.36	-0.29	-0.20	-0.25	-0.12	-0.07	-0.03	0.00	0.16	-0.61	-0.17
2	0.0	0.08	-0.02	-0.01	-0.01	0.00	0.07	0.03	-0.01	-0.02	-0.10	-0.19	-0.23	-0.25	-0.32	-0.21	-0.33	-0.17	-0.12	-0.11	-0.11	-0.01	0.00	0.01	0.08	-0.33	-0.09
3	0.1	0.17	0.26	0.23	0.20	0.12	0.18	0.04	-0.03	-0.15	-0.26	-0.22	-0.22	-0.31	-0.36	-0.34	-0.38	-0.34	-0.25	-0.23	-0.16	-0.05	0.00	0.03	0.26	-0.38	-0.08
4	0.0	0.10	0.13	0.03	0.19	0.09	0.48	0.30	0.14	0.10	0.00	-0.11	-0.10	-0.19	-0.21	-0.23	-0.16	-0.16	-0.15	-0.12	-0.11	-0.02	-0.07	-0.03	0.48	-0.23	0.00
5	0.0	0.06	0.06	0.14	0.20	0.21	0.18	0.05	-0.02	-0.26	-0.52	-0.67	-0.72	-0.97	-0.74	-0.62	-0.59	-0.64	-0.58	-0.40	-0.31	-0.14	-0.08	0.07	0.21	-0.97	-0.26
6	0.1	0.34	0.12	0.41	0.20	0.12	0.33	0.41	-0.31	-0.58	-0.52	-0.88	-0.79	-0.62	-0.65	-0.58	-0.49	-0.31	-0.05	0.13	0.22	0.31	0.99	1.04	1.04	-0.88	-0.05
7	0.7	1.43	0.85	0.90	0.61	0.42	0.63	0.32	-0.10	-0.30	-0.44	-0.50	-0.57	-0.67	-0.63	-0.56	-0.46	-0.37	-0.08	0.09	0.25	0.46	0.72	0.69	1.43	-0.67	0.14
8	1.3	2.31	1.66	1.07	1.50	2.16	1.27	0.80	-0.13	-0.39	-0.45	-0.63	-0.96	-0.68	-0.53	-0.61	-0.58	-0.38	-0.42	-0.37	-0.09	1.21	0.94	0.85	2.31	-0.96	0.37
9	0.8	1.11	1.14	1.19	2.00	2.07	1.69	1.18	-0.01	-0.30	-0.45	-0.56	-0.63	-0.70	-0.66	-0.62	-0.52	-0.34	-0.22	-0.14	-0.12	-0.10	-0.07	-0.11	2.07	-0.70	0.24
10	-0.1	-0.07	-0.06	-0.05	0.03	0.09	-0.02	-0.05	-0.10	-0.16	-0.26	-0.27	-0.27	-0.34	-0.46	-0.52	-0.53	-0.45	-0.30	-0.23	-0.11	-0.12	-0.07	-0.07	0.09	-0.53	-0.19
11	0.0	-0.03	0.04	0.07	0.05	0.00	0.07	0.07	0.01	-0.10	-0.17	-0.27	-0.29	-0.28	-0.75	-0.63	-0.46	-0.47	-0.43	0.02	0.46	1.24	0.67	0.87	1.24	-0.75	-0.01
12	1.3	0.87	0.41	0.37	0.34	0.23	0.27	0.25	0.23	0.17	-0.05	-0.14	-0.23	-0.34	-0.26	-0.42	-0.27	-0.19	-0.12	0.03	0.23	0.15	0.41	0.57	1.32	-0.42	0.16
13	0.7	0.34	0.21	0.23	0.18	0.21	0.32	0.28	0.24	0.05	-0.16	-0.02	-0.14	-0.16	0.20	0.20	0.07	0.21	0.64	0.59	0.89	1.53	1.10	0.88	1.53	-0.16	0.36
14	0.8	0.69	0.98	0.34	0.41	0.77	0.78	0.26	0.23	-0.05	-0.10	-0.15	-0.16	-0.24	-0.09	-0.06	-0.18	-0.24	-0.21	-0.05	0.09	0.27	0.31	0.23	0.98	-0.24	0.19
15	0.1	0.07	0.22	0.22	0.19	0.20	0.20	0.19	0.20	0.18	0.15	0.13	0.10	-0.02	-0.10	-0.13	-0.07	-0.10	-0.07	-0.08	-0.08	-0.01	0.03	-0.02	0.22	-0.13	0.06
16	0.1	-0.06	-0.06	-0.02	0.03	0.07	0.11	0.08	0.08	0.02	-0.02	-0.10	-0.06	-0.01	-0.11	-0.12	-0.11	-0.08	-0.11	0.03	0.01	-0.01	0.01	0.13	0.13	-0.12	-0.01
17	0.2	0.58	0.73	0.19	0.52	0.58	0.68	0.40	0.27	0.15	0.08	0.09	0.04	-0.04	0.01	-0.02	-0.04	-0.03	0.00	0.02	0.13	0.06	0.09	0.23	0.73	-0.04	0.21
18	0.2	0.10	0.39	0.63	0.65	0.69	0.88	0.81	1.03	0.80	0.69	0.33	0.02	-0.10	-0.22	-0.22	0.09	0.27	0.28	0.55	0.58	0.52	0.81	0.99	1.03	-0.22	0.45
19	1.0	0.84	0.63	0.55	0.53	0.61	0.49	0.34	0.22	0.12	0.00	-0.25	-0.17	-0.20	-0.32	-0.29	-0.16	-0.07	-0.03	0.08	0.18	0.30	0.36	0.25	0.99	-0.32	0.21
20	0.2	0.18	0.17	0.13	0.10	0.12	0.12	0.10	0.06	0.03	-0.10	-0.32	-0.27	-0.32	-0.35	-0.34	-0.28	-0.26	-0.14	0.03	0.18	0.31	0.60	0.61	0.61	-0.35	0.02
21	0.6	0.45	0.35	0.22	0.26	0.12	0.10	0.09	0.02	-0.01	-0.10	-0.04	0.09	-0.09	-0.26	-0.31	-0.17	-0.12	-0.23	-0.06	-0.02	0.10	0.04	0.06	0.56	-0.31	0.04
22	0.1	0.07	0.12	0.05	0.13	0.13	0.20	0.19	0.01	-0.19	-0.22	-0.35	-0.38	-0.29	-0.34	-0.69	-0.36	-0.32	-0.33	-0.07	0.30	0.50	0.45	0.31	0.50	-0.69	-0.04
23	0.2	0.19	0.17	0.19	0.18	0.13	0.15	0.12	0.12	0.07	-0.11	-0.19	-0.36	-0.34	-0.38	-0.20	-0.10	-0.11	-0.10	-0.11	0.05	0.56	0.56	0.48	0.56	-0.38	0.05
24	0.6	0.57	0.27	0.38	0.34	0.24	0.25	0.17	0.10	0.02	-0.04	-0.31	-0.52	-0.57	-0.44	-0.41	-0.44	-0.30	-0.20	0.14	0.24	0.46	0.73	0.59	0.73	-0.57	0.08
25	0.8	1.93	1.59	0.87	0.27	0.28	0.14	0.15	0.20	0.17	0.11	-0.14	-0.23	-0.19	-0.16	-0.01	0.00	-0.01	-0.01	0.03	0.13	0.09	0.17	0.26	1.93	-0.23	0.27
26	0.2	0.34	0.42	0.30	0.45	0.31	0.29	0.32	0.32	0.01	-0.18	-0.18	-0.21	-0.16	-0.23	-0.17	-0.21	-0.21	-0.16	-0.07	0.01	0.03	-0.01	0.24	0.45	-0.23	0.06
27	0.4	0.28	0.36	0.33	0.70	0.98	1.41	0.54	0.09	-0.08	-0.18	-0.29	-0.25	-0.36	-0.47	-0.36	-0.16	-0.03	0.03	0.17	0.28	0.30	0.36	0.26	1.41	-0.47	0.18
28	0.2	0.18	0.22	0.19	0.34	0.33	0.31	0.17	0.04	-0.04	-0.29	-0.35	-0.47	-0.27	-0.34	-0.33	-0.22	-0.02	0.06	0.12	0.14	0.29	0.45	0.43	0.45	-0.47	0.05
29	0.4	0.43	0.35	0.30	0.30	0.28	0.27	0.25	0.05	-0.16	-0.27	-0.34	-0.38	-0.42	-0.37	-0.33	-0.20	-0.12	-0.01	0.22	0.30	0.31	0.35	0.50	0.50	-0.42	0.07
30	0.3	0.41	0.30	0.32	0.29	0.21	0.22	0.18	0.09	-0.18	-0.33	-0.52	-0.49	-0.36	-0.27	-0.28	-0.28	-0.19	-0.07	0.00	0.18	0.11	0.06	0.15	0.41	-0.52	0.00
31	0.1	0.03	0.01	0.01	0.04	0.12	0.26	0.19	0.06	-0.10	0.08	0.01	0.10	0.17	-0.07	-0.10	0.16	0.14	0.40	0.50	0.56	0.55	0.51	0.52	0.56	-0.10	0.18
Max.	**1.3**	**2.31**	**1.66**	**1.19**	**2.00**	**2.16**	**1.69**	**1.18**	**1.03**	**0.80**	**0.69**	**0.33**	**0.10**	**0.17**	**0.20**	**0.20**	**0.16**	**0.27**	**0.64**	**0.59**	**0.89**	**1.53**	**1.10**	**1.04**	**2.31**		
Min.	**-0.1**	**-0.07**	**-0.06**	**-0.05**	**-0.01**	**0.00**	**-0.02**	**-0.05**	**-0.31**	**-0.58**	**-0.61**	**-0.88**	**-0.96**	**-0.97**	**-0.75**	**-0.69**	**-0.59**	**-0.64**	**-0.58**	**-0.40**	**-0.31**	**-0.14**	**-0.08**	**-0.11**		**-0.97**	
Avg.	**0.4**	**0.46**	**0.39**	**0.32**	**0.37**	**0.39**	**0.40**	**0.26**	**0.09**	**-0.05**	**-0.16**	**-0.25**	**-0.30**	**-0.31**	**-0.33**	**-0.32**	**-0.25**	**-0.18**	**-0.10**	**0.02**	**0.13**	**0.29**	**0.34**	**0.36**			**0.08**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.6	0.66	0.58	0.62	0.62	0.57	0.56	0.54	0.55	0.44	0.38	0.34	0.26	0.17	0.22	0.33	0.34	0.35	0.32	0.25	0.28	0.32	0.33	0.29	0.66	0.17	0.41
2	0.3	0.31	0.24	0.32	0.22	0.16	0.07	0.10	0.10	0.15	0.01	-0.01	0.07	0.24	0.26	0.51	0.44	0.44	0.50	0.35	0.28	0.44	0.34	0.40	0.51	-0.01	0.26
3	0.3	0.43	0.44	0.44	0.44	0.53	0.53	0.70	0.62	0.38	0.20	0.17	0.13	0.06	0.03	0.03	0.05	0.06	0.10	0.19	0.53	0.59	0.36	0.27	0.70	0.03	0.31
4	0.1	0.19	0.56	0.80	0.74	0.70	0.46	0.31	0.29	0.27	0.02	-0.35	-0.58	-0.41	-0.46	-0.37	-0.27	-0.18	-0.02	0.18	0.64	1.25	0.72	0.76	1.25	-0.58	0.22
5	0.9	0.85	0.91	0.96	1.62	2.03	1.92	1.64	0.62	0.04	-0.37	-0.45	-0.68	-0.81	-0.74	-0.84	-0.37	-0.14	-0.17	-0.14	-0.13	-0.07	-0.12	-0.12	2.03	-0.84	0.26
6	-0.1	-0.02	0.09	0.13	0.17	0.10	0.32	0.27	0.30	0.25	0.25	0.33	0.19	0.01	-0.01	-0.10	0.07	0.22	0.00	0.11	-0.11	-0.20	-0.29	-0.18	0.33	-0.29	0.07
7	0.3	0.53	0.49	0.46	0.36	0.42	0.31	0.28	0.25	0.25	0.13	-0.05	0.10	0.03	0.18	0.40	0.37	0.41	0.51	0.08	0.06	0.19	0.27	0.32	0.53	-0.05	0.28
8	0.2	0.06	0.23	0.38	0.31	0.23	0.32	0.24	0.35	0.06	0.00	0.20	0.18	0.08	0.04	0.05	0.03	-0.02	0.14	0.03	-0.18	-0.03	0.20	0.21	0.38	-0.18	0.14
9	0.3	0.27	0.32	0.46	0.47	0.38	0.40	0.40	0.35	0.32	0.36	0.25	0.21	0.19	-0.03	0.02	0.00	0.02	0.02	0.02	0.03	0.04	0.01	0.04	0.47	-0.03	0.20
10	0.1	0.31	0.25	0.22	0.22	0.28	0.41	0.36	0.34	-0.03	0.05	-0.05	-0.20	-0.16	-0.21	-0.10	-0.04	-0.04	0.01	0.10	0.19	0.20	0.16	0.18	0.41	-0.21	0.11
11	0.2	0.15	0.13	0.09	0.14	0.09	0.07	0.12	0.11	0.01	-0.08	-0.17	-0.31	-0.61	-0.45	-0.54	-0.18	-0.10	-0.05	0.01	0.10	0.05	0.06	0.04	0.18	-0.61	-0.05
12	0.1	0.18	0.08	-0.02	0.01	0.01	-0.05	0.06	0.15	0.20	0.28	0.33	0.34	0.39	0.40	0.37	0.48	0.41	0.35	0.37	0.26	0.26	0.25	0.34	0.48	-0.05	0.23
13	0.2	-0.04	-0.15	-0.21	-0.15	-0.13	-0.26	-0.19	-0.17	-0.21	-0.22	-0.14	-0.13	-0.14	-0.14	-0.02	0.16	-0.04	0.15	0.23	0.06	0.04	0.11	0.25	0.25	-0.26	-0.05
14	0.4	0.47	0.41	0.64	0.45	0.46	0.60	0.56	0.47	0.45	0.38	0.35	0.28	0.33	0.27	0.09	0.05	0.08	0.26	0.31	0.53	0.35	0.18	0.21	0.64	0.05	0.36
15	0.3	0.40	0.31	0.30	0.11	0.16	0.18	0.20	0.29	0.31	0.07	0.13	0.11	-0.03	-1.49	-0.09	0.12	0.02	0.08	0.10	0.27	0.33	0.37	0.45	0.45	-1.49	0.13
16	0.4	0.68	0.37	0.25	0.32	0.30	0.27	0.27	0.23	0.28	0.16	0.06	-0.09	-0.14	-0.13	-0.12	0.04	0.13	0.16	0.24	0.20	0.29	0.24	0.21	0.68	-0.14	0.19
17	0.2	0.18	0.17	0.15	0.12	0.12	0.13	0.14	0.13	0.08	-0.05	-0.12	-0.17	-0.08	-0.01	0.09	0.09	0.12	0.16	0.12	0.02	0.14	0.17	0.24	0.24	-0.17	0.09
18	0.2	0.15	0.17	0.31	0.33	0.27	0.34	0.35	0.46	0.41	0.30	0.40	0.30	0.24	0.33	0.02	0.11	0.10	0.22	0.28	0.06	-0.05	0.04	0.10	0.46	-0.05	0.23
19	0.1	0.17	0.27	0.32	0.43	0.40	0.31	0.21	0.14	0.06	-0.02	-0.03	-0.01	-0.19	-0.24	-0.18	-0.16	-0.07	0.00	0.13	0.17	0.12	0.17	0.22	0.43	-0.24	0.10
20	0.2	0.21	0.23	0.14	0.19	0.23	0.17	0.18	0.17	0.08	-0.01	-0.01	-0.10	-0.07	-0.16	-0.08	-0.03	0.05	0.21	0.32	1.06	2.05	2.01	1.90	2.05	-0.16	0.37
21	1.9	1.76	1.20	0.76	0.63	0.56	0.37	0.30	0.28	0.15	-0.16	-0.32	-0.42	-0.44	-0.37	0.01	0.18	0.17	0.23	0.28	0.41	0.71	1.60	2.62	2.62	-0.44	0.52
22	1.7	1.36	0.99	0.98	0.78	1.07	0.56	0.38	0.34	0.23	-0.19	-0.34	-0.36	-0.39	-0.27	-0.18	-0.14	0.01	0.27	0.42	0.40	0.51	0.39	0.43	1.74	-0.39	0.37
23	0.4	0.05	0.12	0.12	0.07	0.08	0.15	0.05	0.06	-0.05	-0.11	-0.18	-0.18	-0.20	-0.20	-0.17	-0.14	-0.05	0.00	0.18	0.25	0.35	0.33	0.43	0.43	-0.20	0.06
24	0.6	0.49	0.70	0.61	0.30	0.42	0.26	0.24	0.21	0.33	0.32	0.30	0.20	0.12	0.14	0.10	0.13	0.18	0.28	0.37	0.35	0.42	0.40	0.42	0.70	0.10	0.33
25	0.5	0.45	0.46	0.43	0.61	0.56	0.63	0.45	0.42	0.29	0.30	0.30	0.24	0.07	0.12	0.06	0.12	0.20	0.27	0.49	0.69	0.55	0.75	0.67	0.75	0.06	0.40
26	0.6	0.88	0.58	0.50	0.50	0.39	0.30	0.36	0.36	0.21	0.09	-0.05	-0.16	-0.37	-0.41	0.04	0.04	0.07	0.20	0.75	1.67	1.33	1.93	0.86	1.93	-0.41	0.45
27	0.8	0.64	0.54	0.52	0.46	0.37	0.44	0.40	0.29	0.28	-0.21	-0.34	-0.48	-0.62	-0.29	0.43	0.34	0.39	0.60	1.07	1.01	0.48	0.61	0.54	1.07	-0.62	0.35
28	0.5	0.82	0.93	0.86	1.90	1.22	1.26	0.60	0.44	0.56	-0.09	-0.39	-0.52	-0.64	-0.03	0.07	0.06	0.03	0.06	0.19	0.88	1.87	2.57	2.18	2.57	-0.64	0.64
29	1.0	0.56	0.53	0.54	0.51	0.43	0.55	0.55	0.53	0.40	0.16	0.06	-0.01	-0.12	-0.08	-0.09	-0.01	0.00	0.06	0.13	0.52	0.51	0.70	1.26	1.26	-0.12	0.36
30	1.4	1.82	1.01	0.76	0.93	0.79	0.54	0.43	0.44	0.29	-0.09	-0.25	-0.37	-0.41	-0.20	0.18	0.21	0.31	0.77	1.30	1.51	0.88	0.98	0.96	1.82	-0.41	0.59
Max.	**1.9**	**1.82**	**1.20**	**0.98**	**1.90**	**2.03**	**1.92**	**1.64**	**0.62**	**0.56**	**0.38**	**0.40**	**0.34**	**0.39**	**0.40**	**0.51**	**0.48**	**0.44**	**0.77**	**1.30**	**1.67**	**2.05**	**2.57**	**2.62**	**2.62**		
Min.	**-0.1**	**-0.04**	**-0.15**	**-0.21**	**-0.15**	**-0.13**	**-0.26**	**-0.19**	**-0.17**	**-0.21**	**-0.37**	**-0.45**	**-0.68**	**-0.81**	**-1.49**	**-0.84**	**-0.37**	**-0.18**	**-0.17**	**-0.14**	**-0.18**	**-0.20**	**-0.29**	**-0.18**		**-1.49**	
Avg.	**0.5**	**0.50**	**0.44**	**0.43**	**0.46**	**0.44**	**0.40**	**0.35**	**0.30**	**0.22**	**0.06**	**0.00**	**-0.07**	**-0.13**	**-0.13**	**0.00**	**0.07**	**0.10**	**0.19**	**0.28**	**0.40**	**0.46**	**0.53**	**0.55**			**0.26**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.9	1.05	0.84	1.12	1.10	1.22	1.28	1.17	1.02	0.57	-0.04	-0.27	-0.29	-0.19	-0.11	-0.01	0.07	0.19	0.32	0.39	0.32	0.34	0.33	0.68	1.28	-0.29	0.50
2	0.4	0.46	0.68	0.61	0.77	0.85	0.93	1.00	1.58	0.71	0.05	-0.26	-0.40	-0.40	-0.13	0.11	0.12	0.15	0.14	0.18	0.18	0.15	0.15	0.13	1.58	-0.40	0.34
3	0.2	0.13	0.10	0.10	0.24	0.13	0.09	0.08	0.07	0.06	0.05	-0.12	-0.23	-0.24	-0.17	-0.16	-0.14	-0.03	0.00	0.10	0.15	0.44	0.54	0.64	0.64	-0.24	0.09
4	0.7	0.64	0.46	0.72	0.54	0.54	0.61	0.36	0.32	0.29	-0.08	-0.32	-0.56	-0.56	-0.19	0.14	0.24	0.38	0.44	0.46	0.64	0.28	0.14	0.17	0.72	-0.56	0.27
5	0.2	0.28	0.21	0.16	0.13	0.11	0.06	0.04	0.05	0.04	-0.14	-0.37	-0.27	-0.16	-0.11	-0.14	-0.13	-0.06	0.14	0.57	0.68	0.58	0.70	0.72	0.72	-0.37	0.14
6	0.8	0.56	0.64	0.53	0.70	0.64	0.64	0.32	0.26	0.23	0.04	-0.22	-0.40	-0.39	-0.26	-0.18	-0.02	0.05	0.09	0.16	0.25	0.28	0.29	0.36	0.79	-0.40	0.22
7	0.3	0.29	0.25	0.21	0.19	0.11	0.12	0.11	0.09	0.04	-0.10	-0.23	-0.31	-0.35	-0.17	-0.13	-0.14	-0.05	0.00	0.03	0.08	0.06	0.08	0.09	0.29	-0.35	0.02
8	0.1	0.11	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.09	-0.10	-0.24	-0.34	-0.41	-0.09	0.08	0.22	0.36	0.68	0.65	0.85	0.55	1.40	1.05	1.40	-0.41	0.24
9	0.4	0.35	0.26	0.23	0.22	0.13	0.11	0.16	0.20	0.23	0.21	0.16	0.19	0.25	0.26	0.27	0.32	0.36	0.34	0.41	0.39	0.39	0.51	0.57	0.57	0.11	0.29
10	0.5	0.44	0.43	0.53	0.37	0.09	0.23	0.31	0.43	0.11	0.09	-0.04	-0.23	-0.17	-0.06	0.04	0.03	0.27	0.68	1.48	1.46	1.42	1.29	1.32	1.48	-0.23	0.46
11	1.0	0.61	0.31	0.14	0.19	0.17	0.09	0.00	-0.03	-0.04	-0.03	-0.08	-0.05	0.22	0.29	0.27	0.16	0.07	0.05	0.06	0.07	0.03	0.00	0.01	1.01	-0.08	0.15
12	0.0	0.02	0.04	0.05	0.05	0.05	0.04	0.03	0.04	0.01	-0.04	-0.10	-0.15	-0.21	-0.10	-0.06	0.01	0.05	0.09	0.10	0.10	0.08	0.09	0.07	0.10	-0.21	0.01
13	0.1	0.07	0.05	0.07	0.06	0.07	0.04	0.04	0.03	0.01	-0.14	-0.19	-0.13	-0.12	-0.10	0.06	0.06	0.06	0.20	0.27	0.23	0.24	0.26	0.13	0.27	-0.19	0.06
14	0.0	0.03	0.06	0.06	0.01	0.05	0.05	0.03	0.05	0.08	0.01	-0.04	-0.12	-0.17	-0.18	-0.18	-0.11	-0.05	0.00	0.17	0.09	0.06	0.07	0.18	0.18	-0.18	0.01
15	0.1	0.14	0.34	0.35	0.37	0.50	0.51	0.46	0.23	0.22	0.03	-0.15	-0.20	-0.26	-0.20	-0.13	-0.09	-0.07	-0.02	0.01	0.03	0.05	0.09	0.08	0.51	-0.26	0.10
16	0.0	0.05	0.03	0.01	0.01	0.04	0.05	0.01	0.01	0.00	-0.06	-0.13	-0.23	-0.30	-0.24	-0.23	-0.18	-0.11	-0.03	0.02	0.04	0.05	0.06	0.06	0.06	-0.30	-0.04
17	0.0	0.04	0.02	0.01	0.01	0.02	0.02	0.02	0.04	0.02	-0.02	-0.05	-0.40	-0.42	-0.24	-0.07	0.02	0.23	0.32	0.32	0.13	0.22	0.33	0.35	0.35	-0.42	0.04
18	0.3	0.30	0.33	0.30	0.25	0.28	0.21	0.15	0.25	0.31	0.25	0.07	0.02	0.04	0.37	0.39	0.48	0.96	1.46	0.96	0.84	0.65	0.60	0.58	1.46	0.02	0.43
19	0.5	0.56	0.51	0.64	0.77	0.62	0.46	0.31	0.18	0.14	0.05	0.02	-0.07	-0.20	-0.16	-0.19	-0.16	-0.09	0.01	0.02	0.02	0.01	0.00	0.00	0.77	-0.20	0.17
20	0.0	0.03	0.05	0.08	0.07	0.05	0.02	-0.01	0.01	-0.02	-0.03	-0.09	-0.16	-0.18	-0.17	-0.14	-0.15	-0.10	-0.08	-0.07	-0.02	0.01	0.02	0.02	0.08	-0.18	-0.03
21	0.0	0.03	0.02	0.04	0.06	0.08	0.10	0.10	0.10	0.06	0.01	-0.04	-0.17	-0.19	-0.16	-0.15	-0.10	-0.04	0.02	0.07	0.05	0.04	0.08	0.07	0.10	-0.19	0.00
22	0.1	0.07	0.07	0.06	0.04	0.04	0.04	0.05	0.03	0.01	0.00	-0.04	-0.21	-0.20	-0.08	-0.05	-0.02	0.00	0.06	0.09	0.14	0.10	0.06	0.63	0.63	-0.21	0.04
23	1.1	0.48	0.14	0.07	0.05	0.07	0.04	0.04	0.09	0.05	0.04	-0.01	-0.15	-0.09	0.01	0.06	0.04	0.03	0.02	0.02	0.00	0.00	0.00	-0.06	1.12	-0.15	0.09
24	0.0	-0.01	-0.01	0.00	-0.04	-0.05	-0.06	-0.04	-0.05	-0.07	-0.08	-0.08	-0.17	-0.09	-0.06	-0.14	-0.15	-0.08	0.08	0.23	0.45	1.68	0.74	0.47	1.68	-0.17	0.10
25	0.4	0.52	0.41	0.26	0.02	-0.03	-0.05	-0.01	-0.05	-0.04	-0.07	-0.11	-0.16	0.02	-0.05	-0.08	0.06	0.09	0.35	0.82	1.58	1.79	2.87	2.71	2.87	-0.16	0.47
26	2.0	1.47	0.60	0.37	0.32	0.32	1.18	1.18	1.54	2.06	1.57	1.33	1.17	0.87	0.57	0.38	0.35	0.24	0.22	0.33	0.49	0.32	0.22	0.20	2.06	0.20	0.81
27	0.2	0.15	0.15	0.10	0.11	0.09	0.07	0.09	0.07	0.07	0.05	0.02	-0.01	0.02	0.03	0.07	0.08	0.11	0.13	0.14	0.14	0.17	0.15	0.15	0.17	-0.01	0.10
28	0.1	0.16	0.21	0.27	1.04	2.46	2.43	2.88	3.54	4.10	3.69	2.31	2.27	2.13	1.85	1.54	1.51	0.89	2.03	1.90	1.44	1.54	0.69	1.00	4.10	0.15	1.75
29	1.8	1.95	1.67	2.02	1.84	2.30	2.50	2.05	2.34	1.57	1.47	0.16	0.00	-0.06	0.26	0.38	0.27	0.41	0.83	0.42	0.17	0.03	0.06	0.04	2.50	-0.06	1.02
30	0.0	0.00	0.02	0.07	0.05	0.15	0.45	0.79	0.78	0.45	0.40	0.19	0.36	0.16	0.21	0.35	0.53	0.70	0.62	0.58	0.78	0.99	1.13	1.34	1.34	0.00	0.46
31	1.0	1.27	1.34	1.54	1.28	1.66	1.28	1.62	1.83	1.66	1.27	1.47	1.29	1.49	1.77	2.57	2.76	2.06	0.64	0.57	0.81	0.82	1.14	1.80	2.76	0.57	1.46
Max.	**2.0**	**1.95**	**1.67**	**2.02**	**1.84**	**2.46**	**2.50**	**2.88**	**3.54**	**4.10**	**3.69**	**2.31**	**2.27**	**2.13**	**1.85**	**2.57**	**2.76**	**2.06**	**2.03**	**1.90**	**1.58**	**1.79**	**2.87**	**2.71**	**4.10**		
Min.	**0.0**	**-0.01**	**-0.01**	**0.00**	**-0.04**	**-0.05**	**-0.06**	**-0.04**	**-0.05**	**-0.07**	**-0.14**	**-0.37**	**-0.56**	**-0.56**	**-0.26**	**-0.23**	**-0.18**	**-0.11**	**-0.08**	**-0.07**	**-0.02**	**0.00**	**0.00**	**-0.06**		**-0.56**	
Avg.	**0.4**	**0.39**	**0.33**	**0.35**	**0.35**	**0.41**	**0.44**	**0.43**	**0.49**	**0.42**	**0.27**	**0.08**	**0.00**	**0.00**	**0.08**	**0.15**	**0.19**	**0.23**	**0.32**	**0.37**	**0.41**	**0.43**	**0.45**	**0.50**			**0.31**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.2	1.11	1.94	1.26	0.93	1.59	1.86	1.56	1.90	1.35	0.41	0.16	0.07	0.01	-0.05	-0.08	-0.04	0.01	0.04	0.14	0.14	0.14	0.12	0.14	2.22	-0.08	0.71
2	0.2	0.17	0.15	0.20	0.20	0.18	0.15	0.12	0.13	0.14	0.13	0.06	0.00	-0.01	-0.02	0.00	-0.01	0.01	0.02	0.03	0.02	0.01	0.01	0.02	0.20	-0.02	0.08
3	0.0	0.01	0.03	0.02	0.04	0.04	0.03	0.02	0.04	0.04	0.01	-0.04	-0.07	-0.03	-0.01	0.01	0.05	0.03	0.04	0.06	0.06	0.07	0.07	0.06	0.07	-0.07	0.02
4	0.0	0.03	0.03	0.02	0.00	0.03	-0.02	-0.02	-0.04	-0.02	-0.03	-0.10	-0.13	-0.15	-0.13	-0.13	-0.06	-0.04	-0.02	0.02	0.04	0.03	0.01	0.05	0.05	-0.15	-0.02
5	0.1	0.05	0.00	-0.03	-0.02	-0.03	-0.04	-0.03	-0.04	-0.03	-0.04	-0.07	-0.09	-0.12	-0.09	-0.07	0.17	0.82	1.11	0.52	0.53	0.57	0.71	0.58	1.11	-0.12	0.18
6	0.4	0.74	0.85	0.54	0.69	0.72	0.94	0.86	0.84	0.45	1.41	1.35	0.29	0.37	0.02	0.03	0.15	0.21	0.20	0.14	0.14	0.17	0.15	0.10	1.41	0.02	0.49
7	0.1	0.09	0.08	0.05	0.01	0.00	0.01	-0.01	-0.02	-0.02	-0.02	-0.05	-0.07	-0.04	-0.01	0.00	0.06	0.08	0.11	0.09	0.11	0.23	0.26	0.24	0.26	-0.07	0.05
8	0.3	0.25	0.25	0.39	0.48	0.45	0.27	0.23	0.17	0.35	0.22	-0.01	0.09	0.22	0.20	0.18	0.25	0.28	0.26	0.24	0.31	0.31	0.33	0.32	0.48	-0.01	0.26
9	0.3	0.28	0.27	0.25	0.25	0.29	0.23	0.19	0.19	0.17	0.01	0.07	-0.02	0.03	0.07	0.05	0.07	0.00	0.06	0.06	0.08	0.10	0.17	0.36	0.36	-0.02	0.15
10	0.6	0.60	0.59	0.56	0.58	0.45	0.23	0.28	0.23	0.31	0.22	0.26	0.25	0.33	0.03	0.17	0.20	0.16	0.22	0.13	0.04	0.17	0.32	0.33	0.61	0.03	0.30
11	0.4	0.41	0.25	0.24	0.33	0.37	0.34	0.47	0.25	0.27	0.43	0.41	0.03	-0.01	0.03	0.08	0.08	0.13	0.17	0.12	0.08	0.06	0.06	0.04	0.47	-0.01	0.21
12	0.0	0.01	0.02	0.10	0.08	0.14	0.07	0.07	0.08	0.08	0.05	0.01	-0.01	-0.02	-0.03	-0.01	0.00	0.04	0.13	0.13	0.22	0.35	0.74	1.65	1.65	-0.03	0.16
13	0.5	0.69	1.81	1.22	1.36	1.41	1.21	1.27	0.95	1.89	1.78	0.16	0.15	0.10	0.25	0.11	0.19	0.43	0.42	0.29	0.35	0.29	0.41	0.59	1.89	0.10	0.74
14	0.7	0.81	0.88	0.86	1.07	1.56	1.16	1.02	1.48	1.47	1.77	0.60	0.35	0.15	0.05	0.04	0.00	0.11	0.19	0.17	0.17	0.13	0.28	0.11	1.77	0.00	0.63
15	0.2	0.44	0.88	1.34	0.78	0.31	0.33	0.38	0.39	0.40	1.53	1.07	0.91	0.44	0.07	0.09	0.05	0.05	0.07	0.14	0.39	0.40	0.36	0.29	1.53	0.05	0.47
16	0.3	0.34	0.27	0.22	0.32	0.39	0.17	0.08	0.22	0.08	0.05	0.24	0.13	0.11	-0.02	0.20	0.49	0.86	0.88	0.70	0.42	0.34	0.44	0.68	0.88	-0.02	0.33
17	0.9	0.91	1.09	1.04	1.35	1.33	1.39	1.31	2.51	2.21	3.24	3.06	0.84	0.81	0.81	0.63	0.66	0.61	0.34	0.52	0.61	0.97	0.98	1.40	3.24	0.34	1.23
18	1.7	1.52	1.38	1.27	0.48	0.48	0.28	0.26	0.28	0.39	0.29	0.18	0.25	0.16	0.15	0.21	0.19	0.20	0.20	0.14	0.15	0.14	0.17	0.13	1.73	0.13	0.44
19	0.2	0.22	0.12	0.12	0.05	0.06	0.06	0.07	0.06	0.06	0.03	0.02	0.05	0.07	0.09	0.08	0.10	0.12	0.16	0.12	0.19	0.19	0.14	0.12	0.22	0.02	0.10
20	0.1	0.09	0.13	0.16	0.17	0.18	0.18	0.21	0.20	0.15	0.12	0.08	0.04	0.04	0.02	0.03	0.02	0.03	0.03	0.02	0.01	0.01	0.01	-0.04	0.21	-0.04	0.08
21	-0.1	-0.05	-0.06	-0.04	-0.03	-0.03	-0.05	-0.07	-0.03	-0.02	-0.06	-0.05	-0.05	-0.06	-0.05	-0.03	-0.05	-0.01	0.01	0.02	0.00	0.00	-0.04	0.02	0.02	-0.07	-0.03
22	0.2	0.02	-0.06	-0.05	-0.04	-0.03	0.00	-0.01	0.02	0.04	0.04	-0.02	0.01	0.02	0.05	0.09	0.11	0.14	0.12	0.03	0.08	0.02	-0.02	-0.01	0.18	-0.06	0.03
23	0.0	0.02	0.05	0.07	0.05	0.01	-0.02	-0.03	-0.03	-0.03	-0.03	-0.04	-0.07	-0.09	0.00	0.06	0.05	0.26	0.32	0.33	0.10	0.32	0.32	0.20	0.33	-0.09	0.08
24	0.1	0.13	0.17	0.25	0.27	0.18	0.22	0.28	0.37	0.37	0.32	0.28	0.36	0.25	0.27	0.30	0.29	0.12	0.31	0.28	0.22	0.14	0.15	0.19	0.37	0.11	0.24
25	0.0	-0.03	-0.03	-0.05	-0.06	-0.07	-0.06	-0.07	-0.05	-0.04	-0.03	-0.04	-0.06	-0.07	-0.08	-0.06	-0.06	-0.04	-0.05	-0.03	-0.04	-0.05	0.00	0.00	0.01	-0.08	-0.04
26	0.0	0.03	0.03	0.05	0.06	0.05	0.04	0.05	0.05	0.08	0.09	0.06	-0.03	-0.08	-0.05	-0.04	0.06	0.09	0.11	0.14	0.11	0.12	0.10	0.10	0.14	-0.08	0.05
27	0.1	0.11	0.09	0.10	0.16	0.11	0.13	0.08	0.07	0.07	0.04	0.00	-0.06	-0.06	-0.07	-0.07	-0.03	-0.04	-0.03	-0.04	-0.04	-0.04	0.00	0.13	0.16	-0.07	0.03
28	0.2	-0.01	-0.03	-0.02	-0.01	-0.03	-0.04	-0.04	-0.04	-0.03	-0.02	-0.06	-0.06	-0.06	-0.07	-0.07	-0.04	-0.02	0.00	-0.02	-0.01	-0.03	-0.02	-0.02	0.16	-0.07	-0.02
29	0.0	-0.04	-0.03	-0.03	-0.03	-0.04	-0.05	-0.04	-0.02	-0.02	-0.04	-0.05	-0.06	-0.06	-0.06	-0.06	-0.05	-0.05	-0.05	-0.04	-0.05	-0.05	-0.06	-0.05	-0.02	-0.06	-0.04
30	-0.1	-0.04	-0.02	-0.03	-0.01	0.03	0.05	0.05	0.05	0.06	0.06	0.07	0.04	0.04	0.06	0.08	0.07	0.07	0.07	0.09	0.11	0.08	0.09	0.08	0.11	-0.05	0.05
Max.	**2.2**	**1.52**	**1.94**	**1.34**	**1.36**	**1.59**	**1.86**	**1.56**	**2.51**	**2.21**	**3.24**	**3.06**	**0.91**	**0.81**	**0.81**	**0.63**	**0.66**	**0.86**	**1.11**	**0.70**	**0.61**	**0.97**	**0.98**	**1.65**	**3.24**		
Min.	**-0.1**	**-0.05**	**-0.06**	**-0.05**	**-0.06**	**-0.07**	**-0.06**	**-0.07**	**-0.05**	**-0.04**	**-0.06**	**-0.10**	**-0.13**	**-0.15**	**-0.13**	**-0.13**	**-0.06**	**-0.05**	**-0.05**	**-0.04**	**-0.05**	**-0.05**	**-0.06**	**-0.05**		**-0.15**	
Avg.	**0.3**	**0.30**	**0.37**	**0.34**	**0.32**	**0.34**	**0.30**	**0.29**	**0.34**	**0.34**	**0.40**	**0.25**	**0.10**	**0.08**	**0.05**	**0.06**	**0.10**	**0.16**	**0.18**	**0.15**	**0.15**	**0.17**	**0.21**	**0.26**			**0.23**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.12	0.11	0.11	0.08	0.07	0.08	0.12	0.08	0.08	0.23	0.62	0.62	0.94	0.59	0.70	1.03	0.53	0.36	0.14	0.28	0.51	0.34	0.13	1.03	0.07	0.33
2	0.2	0.26	0.15	0.12	0.16	0.06	0.05	0.02	0.06	0.01	0.07	0.43	0.35	0.14	0.27	0.36	0.38	0.33	0.35	0.34	0.23	0.23	0.33	0.33	0.43	0.01	0.22
3	0.3	0.27	0.31	0.40	0.47	0.46	0.41	0.38	0.25	0.25	0.31	0.33	0.23	0.02	-0.06	-0.04	-0.02	0.04	0.16	0.24	0.33	0.35	0.41	0.51	0.51	-0.06	0.26
4	0.6	0.50	0.64	0.57	0.27	0.29	0.12	0.15	0.32	0.40	0.13	0.24	0.55	0.49	0.49	0.64	0.57	0.40	0.23	0.28	0.56	0.51	0.48	0.46	0.64	0.12	0.41
5	0.2	0.24	0.34	0.42	0.51	0.42	0.55	0.38	0.52	0.52	0.33	0.36	0.81	0.81	0.79	0.89	0.67	0.83	0.66	0.55	0.66	0.56	0.50	0.58	0.89	0.21	0.55
6	0.5	0.54	0.49	0.55	1.26	0.79	0.87	0.49	0.41	0.34	0.48	0.46	0.53	0.41	0.26	0.37	0.60	0.26	0.22	0.26	0.31	0.45	0.64	0.82	1.26	0.22	0.51
7	1.0	0.95	0.46	0.47	0.21	0.10	0.08	0.10	0.08	0.08	0.05	0.04	0.02	0.03	0.04	0.18	0.22	0.12	0.26	0.25	0.36	0.13	0.05	0.12	0.98	0.02	0.22
8	0.4	0.37	0.45	0.44	0.41	0.40	0.35	0.37	0.38	0.38	0.08	0.04	0.15	0.35	0.35	0.38	0.23	0.16	0.23	0.35	0.33	0.27	0.23	0.17	0.45	0.04	0.30
9	0.2	0.28	0.34	0.31	0.48	0.10	0.04	0.07	0.03	0.03	0.15	0.26	0.19	0.11	0.08	0.08	0.04	0.07	0.04	0.03	0.01	0.00	0.08	0.11	0.48	0.00	0.13
10	0.1	0.06	0.08	0.09	0.04	0.01	0.01	0.03	0.06	0.04	0.03	0.01	0.02	0.01	0.01	0.02	0.04	0.09	0.08	0.02	0.01	0.01	0.05	0.06	0.09	0.01	0.04
11	0.1	0.08	0.15	0.19	0.20	0.21	0.17	0.17	0.15	0.15	0.13	0.12	0.05	-0.04	-0.06	-0.04	0.01	0.02	0.08	0.15	0.21	0.20	0.15	0.18	0.21	-0.06	0.11
12	0.2	0.32	0.27	0.27	0.21	0.14	0.12	0.14	0.15	0.16	0.10	0.04	-0.03	-0.03	-0.07	-0.06	-0.04	-0.01	-0.02	-0.03	0.01	0.05	0.03	0.19	0.32	-0.07	0.09
13	0.1	0.20	0.19	0.21	0.21	0.22	0.25	1.11	1.57	2.23	2.58	1.43	1.55	1.45	0.86	0.61	1.25	0.21	0.95	1.82	0.80	0.32	0.41	0.59	2.58	0.14	0.88
14	0.5	0.62	0.57	0.41	0.23	0.23	0.15	0.21	0.35	0.50	0.43	0.43	0.62	1.05	0.54	0.33	0.35	0.40	0.58	0.42	0.54	0.30	0.29	0.44	1.05	0.15	0.44
15	0.2	0.23	0.23	0.33	0.24	0.25	0.43	0.44	0.29	0.25	0.23	0.05	0.01	0.08	0.06	0.13	0.06	0.15	0.13	0.09	0.03	-0.08	-0.07	0.01	0.44	-0.08	0.16
16	0.3	0.07	-0.02	-0.02	0.01	0.01	-0.01	-0.02	0.02	0.05	0.12	0.07	0.19	0.24	0.14	0.12	0.17	0.21	0.25	0.18	0.10	0.12	0.08	0.32	0.32	-0.02	0.11
17	0.7	0.32	0.06	0.07	0.08	0.20	0.22	0.11	0.12	0.38	0.18	0.31	0.29	0.32	0.29	0.15	0.22	0.27	0.08	0.06	0.13	0.19	0.12	0.24	0.71	0.06	0.21
18	0.2	0.26	0.28	0.24	0.20	0.17	0.16	0.27	0.47	0.37	0.32	0.40	0.41	0.35	0.46	0.39	0.42	0.37	0.37	0.35	0.47	0.49	0.47	0.50	0.50	0.16	0.35
19	0.4	0.39	0.27	0.30	0.26	0.29	0.30	0.25	0.29	0.31	0.31	0.35	0.33	0.27	0.34	0.30	0.32	0.33	0.41	0.43	0.33	0.34	0.29	0.30	0.44	0.25	0.32
20	0.2	0.20	0.24	0.32	0.28	0.29	0.41	0.49	0.63	0.88	1.19	0.63	0.57	0.57	0.48	0.83	0.86	0.87	0.46	0.95	0.93	0.73	0.42	0.27	1.19	0.20	0.57
21	1.0	1.54	1.95	1.14	1.28	1.53	1.87	1.85	1.22	1.14	1.83	1.83	0.45	0.14	0.16	0.08	0.11	0.13	0.17	0.22	1.57	2.05	1.21	1.15	2.05	0.08	1.07
22	1.1	0.20	0.12	0.13	0.07	0.05	-0.03	-0.06	-0.01	-0.04	-0.02	-0.07	-0.05	-0.03	-0.02	-0.07	-0.05	-0.04	0.00	-0.02	-0.02	-0.04	-0.04	-0.07	1.06	-0.07	0.04
23	0.0	-0.03	-0.04	-0.04	0.01	0.01	0.02	0.01	-0.02	0.00	-0.01	0.05	0.07	0.09	0.12	0.09	0.07	0.09	0.11	0.09	0.07	0.03	0.03	0.03	0.12	-0.04	0.03
24	0.0	0.04	0.04	0.05	0.07	0.06	0.06	0.06	0.07	0.06	0.05	0.10	0.09	0.11	0.12	0.15	0.18	0.37	1.12	0.48	0.07	0.03	0.06	0.17	1.12	0.03	0.15
25	0.1	0.14	0.08	0.06	0.04	-0.02	0.02	0.05	0.06	0.02	0.02	0.04	0.03	0.00	-0.06	-0.07	-0.07	-0.05	-0.05	-0.03	0.03	0.04	0.04	0.09	0.14	-0.07	0.02
26	0.0	0.02	0.02	0.02	0.03	0.01	0.01	0.03	0.01	0.00	0.00	0.00	0.03	-0.03	-0.04	-0.01	-0.01	0.01	0.02	0.01	0.02	0.03	0.03	0.04	0.04	-0.04	0.01
27	0.0	0.07	0.07	0.07	0.06	0.06	0.05	0.08	0.07	0.07	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.09	0.07	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.06
28	0.1	0.06	0.02	0.05	0.07	0.07	0.09	0.08	0.05	0.05	0.06	0.06	0.04	0.02	0.02	0.04	0.03	0.04	0.05	0.08	0.09	0.08	0.06	0.09	0.09	0.02	0.06
29	0.1	0.07	0.06	0.05	0.02	-0.03	-0.02	-0.04	-0.05	-0.03	0.02	0.06	0.05	0.05	0.05	0.06	0.08	0.08	0.08	0.07	0.08	0.07	0.08	0.08	0.08	-0.05	0.04
30	0.1	0.07	0.07	0.09	0.08	0.07	0.05	0.07	0.06	0.06	0.06	0.05	0.04	0.03	0.03	0.02	0.03	0.04	0.04	0.06	0.04	0.03	0.02	0.02	0.09	0.02	0.05
31	0.0	0.03	0.02	0.00	0.00	-0.01	0.00	-0.01	0.00	-0.01	0.00	0.00	-0.02	-0.02	-0.01	0.00	-0.01	0.01	0.01	0.01	0.05	0.05	0.04	0.02	0.05	-0.02	0.01
Max.	**1.1**	**1.54**	**1.95**	**1.14**	**1.28**	**1.53**	**1.87**	**1.85**	**1.57**	**2.23**	**2.58**	**1.83**	**1.55**	**1.45**	**0.86**	**0.89**	**1.25**	**0.87**	**1.12**	**1.82**	**1.57**	**2.05**	**1.21**	**1.15**	**2.58**		
Min.	**0.0**	**-0.03**	**-0.04**	**-0.04**	**0.00**	**-0.03**	**-0.03**	**-0.06**	**-0.05**	**-0.04**	**-0.02**	**-0.07**	**-0.05**	**-0.04**	**-0.07**	**-0.07**	**-0.07**	**-0.05**	**-0.05**	**-0.03**	**-0.02**	**-0.08**	**-0.07**	**-0.07**		**-0.08**	
Avg.	**0.3**	**0.27**	**0.26**	**0.24**	**0.24**	**0.21**	**0.22**	**0.24**	**0.25**	**0.28**	**0.31**	**0.29**	**0.27**	**0.26**	**0.20**	**0.21**	**0.25**	**0.21**	**0.24**	**0.25**	**0.28**	**0.26**	**0.22**	**0.26**			**0.25**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	53.7	58.6	48.7	50.1	44.7	62.6	74.3	74.0	77.0	80.4	76.7	79.9	80.9	74.0	79.3	82.3	83.7	84.4	85.7	85.9	84.9	85.4	85.8	87.8	87.8	44.7	74.2
2	89.3	89.4	89.5	89.8	89.9	89.4	89.1	89.4	87.8	87.5	86.7	84.0	83.8	82.0	80.2	80.5	81.1	81.2	81.4	83.2	84.8	85.1	86.1	86.4	89.9	80.2	85.7
3	86.6	87.2	87.5	87.9	87.1	85.8	85.7	86.1	84.7	79.8	78.4	77.7	78.1	78.5	77.5	78.8	78.9	78.9	79.4	78.8	77.8	78.9	78.5	80.0	87.9	77.5	81.6
4	79.7	77.8	76.8	76.8	76.8	77.1	78.7	77.6	75.7	74.9	74.3	75.1	76.8	74.6	73.7	73.6	75.3	75.2	76.6	76.1	75.5	73.6	73.3	73.4	79.7	73.3	75.8
5	72.1	73.0	73.8	73.8	73.6	74.2	73.7	73.3	73.2	73.7	71.8	71.9	71.5	71.6	72.4	74.8	73.5	73.2	72.7	72.1	70.4	69.0	69.9	69.2	74.8	69.0	72.4
6	68.6	69.0	69.6	69.2	72.4	71.6	69.0	69.0	71.2	72.1	69.2	66.9	66.5	64.7	63.4	62.5	63.8	65.0	64.7	67.3	67.0	67.0	67.0	68.9	72.4	62.5	67.7
7	71.3	71.6	74.3	72.1	69.4	67.1	66.4	68.8	68.6	68.8	67.8	68.5	69.0	69.6	73.3	72.4	71.4	76.0	77.7	77.9	70.7	70.9	68.9	67.4	77.9	66.4	70.8
8	67.7	69.2	68.2	69.6	71.4	72.0	71.7	72.2	72.8	71.6	71.5	71.6	71.2	70.2	70.2	70.6	70.7	70.6	71.5	72.7	71.9	70.5	69.9	68.9	72.8	67.7	70.8
9	68.6	69.9	70.6	70.0	69.8	68.3	69.0	70.2	69.6	67.9	66.2	64.4	64.7	65.7	65.8	65.9	67.0	66.9	66.4	66.2	65.4	65.4	64.7	63.9	70.6	63.9	67.2
10	64.1	65.0	64.7	64.3	63.6	63.2	62.6	62.8	62.2	62.4	62.5	61.8	61.8	61.3	59.9	58.7	58.1	58.5	57.9	59.7	61.0	59.9	63.4	62.9	65.0	57.9	61.8
11	61.6	61.6	60.6	61.3	62.7	65.2	66.2	64.4	64.6	63.6	62.1	62.3	62.9	63.4	62.0	60.3	60.9	62.3	63.6	64.9	64.2	63.7	63.9	63.7	66.2	60.3	63.0
12	65.3	65.2	65.0	64.2	64.8	67.1	66.7	66.1	65.3	66.8	66.8	65.3	62.9	62.9	60.3	62.5	61.2	62.4	61.5	64.0	63.0	63.2	62.0	60.4	67.1	60.3	63.9
13	60.8	59.6	58.3	58.4	57.6	58.9	59.2	58.8	58.8	57.5	56.3	56.1	55.9	56.2	57.4	58.5	57.8	58.9	59.0	58.7	60.7	62.4	60.5	61.5	62.4	55.9	58.7
14	62.1	56.5	51.6	54.3	53.3	54.5	61.7	66.8	70.5	74.5	78.2	68.9	66.3	64.0	65.2	65.8	69.8	75.4	81.9	81.1	78.3	71.0	71.5	70.1	81.9	51.6	67.2
15	75.7	76.1	74.5	70.4	71.6	76.1	82.2	83.6	90.0	93.8	92.7	92.0	92.2	92.4	89.0	91.0	88.9	90.9	93.4	92.0	93.7	94.5	93.5	94.6	94.6	70.4	86.9
16	95.7	96.8	96.1	97.3	93.9	88.4	85.7	88.1	85.5	84.8	88.5	86.8	86.3	85.2	81.9	76.6	70.5	71.2	74.7	76.3	72.8	78.9	87.6	88.5	97.3	70.5	84.9
17	92.9	87.8	76.4	76.2	63.5	59.7	61.5	38.5	25.9	26.3	30.3	55.8	73.3	77.5	77.5	75.2	69.6	64.0	68.1	72.9	72.9	76.4	79.3	80.2	92.9	25.9	65.9
18	89.8	97.0	97.5	98.4	98.6	99.1	99.1	99.3	99.6	99.7	99.8	99.3	99.4	99.4	97.7	95.6	95.1	94.2	94.2	94.1	95.6	95.4	89.1	85.7	99.8	85.7	96.4
19	87.7	86.3	85.2	86.2	80.6	78.3	75.0	60.4	49.8	49.4	54.6	50.0	54.0	57.1	59.4	61.3	56.2	53.3	56.7	68.0	72.1	77.4	78.6	81.6	87.7	49.4	67.5
20	82.9	80.8	81.2	81.0	77.4	74.6	74.4	74.7	76.2	73.0	74.2	76.0	79.3	78.0	78.5	80.9	81.1	88.1	92.3	97.2	98.0	97.6	97.9	97.3	98.0	73.0	83.0
21	97.9	98.3	98.9	95.2	95.7	95.0	94.4	93.5	88.1	87.3	89.7	85.5	79.3	75.2	74.4	73.5	73.6	74.0	76.9	75.5	77.3	81.0	89.1	91.8	98.9	73.5	85.9
22	84.2	75.5	62.2	59.2	54.2	59.9	61.4	62.4	64.4	65.5	87.0	94.4	95.3	89.4	85.6	79.1	72.6	72.8	73.2	77.6	76.4	74.3	72.0	69.6	95.3	54.2	73.7
23	70.0	66.5	62.2	60.1	65.0	69.9	66.0	62.8	53.1	44.7	39.1	38.1	37.8	33.5	37.8	41.4	39.6	40.0	36.5	41.2	46.6	51.6	52.7	55.6	70.0	33.5	50.5
24	52.6	58.3	58.8	61.8	60.2	59.3	60.2	64.3	69.5	53.8	30.0	28.5	39.5	49.6	59.2	68.1	77.7	76.1	74.7	81.1	88.1	90.6	89.5	88.2	90.6	28.5	64.1
25	88.9	89.6	91.3	92.8	93.4	93.2	82.9	82.8	84.0	83.6	81.2	80.8	76.8	75.2	71.3	71.1	70.3	70.6	61.8	61.8	58.3	53.6	53.2	55.3	93.4	53.2	76.0
26	55.4	56.4	53.5	50.0	49.6	49.8	50.3	48.3	52.4	54.2	57.0	55.0	56.4	58.5	60.4	63.7	62.3	65.4	67.2	67.2	76.6	79.8	85.6	75.4	85.6	48.3	60.4
27	70.4	65.5	67.3	55.0	47.4	47.8	30.9	28.0	32.3	35.0	39.8	47.9	58.7	67.6	73.7	74.1	75.5	76.9	79.1	79.6	75.2	69.5	71.2	73.7	79.6	28.0	60.1
28	73.6	78.3	82.1	83.2	86.1	90.9	92.1	94.1	93.9	92.6	94.2	92.8	92.0	92.4	92.5	90.2	89.9	89.8	92.5	96.2	96.5	89.3	85.3	86.6	96.5	73.6	89.5
29	86.3	84.9	83.0	84.6	85.7	85.4	86.0	84.7	85.8	86.1	87.8	87.0	88.3	91.2	93.8	92.5	90.2	85.9	86.7	86.4	83.8	85.6	87.2	89.5	93.8	83.0	87.0
30	92.2	94.4	92.6	90.9	89.7	88.9	88.5	88.9	87.9	85.1	83.3	84.8	81.1	81.6	82.9	79.9	84.5	84.7	78.6	76.1	76.9	76.0	76.5	76.2	94.4	76.0	84.3
31	74.9	74.9	74.8	74.5	74.5	74.7	73.6	74.9	72.6	70.1	68.1	69.7	72.1	72.9	70.7	68.2	68.4	73.3	78.6	85.8	82.1	80.5	81.2	83.1	85.8	68.1	74.7
Max.	**97.9**	**98.3**	**98.9**	**98.4**	**98.6**	**99.1**	**99.1**	**99.3**	**99.6**	**99.7**	**99.8**	**99.3**	**99.4**	**99.4**	**97.7**	**95.6**	**95.1**	**94.2**	**94.2**	**97.2**	**98.0**	**97.6**	**97.9**	**97.3**	**99.8**		
Min.	**52.6**	**56.4**	**48.7**	**50.0**	**44.7**	**47.8**	**30.9**	**28.0**	**25.9**	**26.3**	**30.0**	**28.5**	**37.8**	**33.5**	**37.8**	**41.4**	**39.6**	40.0	36.5	**41.2**	**46.6**	**51.6**	**52.7**	**55.3**		**25.9**	
Avg.	**75.6**	**75.5**	**74.1**	**73.5**	**72.4**	**73.2**	**72.8**	**71.9**	**71.4**	**70.5**	**70.5**	**70.9**	**72.1**	**72.1**	**72.5**	**72.6**	**72.2**	**72.9**	**73.7**	**75.4**	**75.4**	**75.4**	**76.0**	**76.0**			**73.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	81.5	83.4	87.4	88.3	86.8	87.1	87.7	88.2	87.8	87.7	87.1	88.3	88.9	88.7	87.3	87.9	87.6	88.5	88.4	88.6	88.2	87.8	87.7	88.4	88.9	81.5	87.5
2	87.7	86.9	86.0	85.7	85.8	83.7	78.6	77.6	70.1	71.0	71.8	74.7	71.5	69.3	69.7	69.2	68.3	67.5	67.1	64.6	62.6	61.7	60.6	60.8	87.7	60.6	73.0
3	62.0	63.1	63.6	63.2	63.3	63.8	63.6	64.8	65.4	65.9	64.3	65.7	65.5	63.7	63.5	62.8	63.4	64.5	65.0	65.8	68.0	67.8	67.9	67.5	68.0	62.0	64.8
4	66.3	65.9	65.8	66.5	64.4	66.0	65.4	71.0	72.3	69.2	66.5	71.3	69.2	60.5	56.8	55.0	55.5	55.7	53.6	55.8	57.1	59.8	62.6	63.0	72.3	53.6	63.1
5	65.0	67.7	61.3	59.1	50.9	51.6	52.1	52.5	54.9	53.1	52.3	57.4	54.6	53.9	53.1	56.4	57.8	57.4	56.6	56.7	56.0	54.0	52.0	48.0	67.7	48.0	55.6
6	47.4	44.0	43.8	47.8	43.7	40.0	37.2	34.3	34.2	35.2	35.1	35.9	33.5	33.6	37.9	44.8	49.9	50.1	52.0	52.1	54.5	51.4	50.5	50.0	54.5	33.5	43.3
7	53.2	51.0	50.3	52.0	51.5	50.3	47.2	50.3	52.9	51.6	51.8	49.0	47.3	42.8	43.3	45.5	44.4	47.1	43.9	39.2	37.6	37.9	32.8	32.8	53.2	32.8	46.1
8	41.1	52.9	57.3	62.0	64.9	57.9	53.8	38.2	28.2	27.2	26.1	28.6	29.6	29.3	30.0	32.5	31.8	31.4	32.1	29.5	30.9	28.4	29.6	34.3	64.9	26.1	37.8
9	38.9	41.9	45.6	47.7	48.0	45.8	42.9	40.5	34.0	28.1	31.7	32.3	32.1	35.6	34.7	33.9	43.5	40.0	47.9	51.0	52.4	54.4	53.5	52.4	54.4	28.1	42.0
10	53.9	56.1	57.5	59.0	62.6	65.4	67.0	69.5	69.3	67.5	66.9	68.0	68.4	67.4	65.5	66.1	69.6	72.3	75.5	73.5	72.1	72.6	77.0	74.0	77.0	53.9	67.4
11	74.3	73.6	73.2	77.1	79.1	84.2	86.5	88.7	91.9	82.6	79.8	78.9	78.2	74.5	73.8	74.1	75.5	77.1	77.6	77.9	77.8	75.6	74.8	71.5	91.9	71.5	78.3
12	73.5	74.1	73.5	72.3	70.6	68.1	65.7	62.9	63.6	65.4	67.2	65.7	64.8	64.3	65.0	60.7	60.9	62.2	63.2	63.1	60.2	65.3	67.0	70.9	74.1	60.2	66.2
13	68.2	54.3	40.2	41.6	39.4	53.6	71.4	74.3	72.0	74.5	74.6	68.3	75.1	79.2	76.4	83.9	81.4	81.2	80.4	80.1	75.0	74.6	76.5	72.2	83.9	39.4	69.5
14	73.8	74.7	74.9	78.0	78.8	78.2	78.2	76.5	77.7	77.9	85.6	87.1	84.5	84.7	84.7	81.8	83.0	84.3	84.5	84.5	85.9	85.7	86.0	84.6	87.1	73.8	81.5
15	80.6	80.6	80.6	80.3	80.1	78.2	76.9	76.1	74.7	73.8	70.3	65.6	63.3	65.9	65.4	63.9	60.7	58.1	56.8	59.8	65.6	67.4	65.6	59.7	80.6	56.8	69.6
16	63.1	63.6	63.1	61.0	65.3	66.3	68.5	72.5	74.4	75.1	73.7	68.9	67.4	66.9	63.4	60.4	62.4	61.5	64.3	65.3	73.7	76.9	79.1	79.4	79.4	60.4	68.2
17	74.7	75.9	73.1	76.6	70.3	67.7	61.8	56.7	53.9	52.6	65.0	73.6	77.2	76.7	78.6	80.9	83.7	83.6	84.5	85.2	84.6	85.5	84.3	82.4	85.5	52.6	74.5
18	79.4	81.0	84.8	82.6	81.0	80.6	80.8	82.5	88.7	89.4	87.7	85.0	84.6	79.4	80.7	85.9	88.3	83.2	91.3	83.7	79.7	72.2	64.8	63.8	91.3	63.8	81.7
19	60.9	60.1	56.1	59.4	68.5	56.8	77.0	84.9	74.7	76.3	76.7	77.3	76.5	75.1	74.5	70.2	69.0	67.6	73.3	76.8	75.9	77.3	77.5	78.3	84.9	56.1	71.7
20	80.1	88.3	86.1	84.9	80.6	81.9	80.7	76.7	65.6	66.3	71.2	64.2	57.9	60.3	60.0	56.5	55.3	58.0	56.8	53.6	52.7	57.8	67.2	59.2	88.3	52.7	67.6
21	50.9	49.7	54.9	55.5	58.2	54.3	53.5	54.8	54.9	58.6	60.5	64.9	75.1	74.6	71.2	74.7	76.7	79.9	80.7	80.0	80.6	79.2	81.0	79.7	81.0	49.7	66.8
22	77.9	77.8	76.8	75.7	76.7	76.1	75.1	72.8	71.5	73.5	77.5	83.1	88.8	85.3	77.8	78.4	71.3	69.0	78.4	66.5	75.6	67.4	67.4	81.2	88.8	66.5	75.9
23	89.0	91.8	90.8	92.2	92.6	88.3	88.3	90.3	92.0	92.3	90.8	91.2	90.9	89.6	89.9	89.6	89.6	91.1	91.6	92.8	94.0	95.3	94.9	94.6	95.3	88.3	91.4
24	95.1	95.0	94.7	94.5	93.9	92.7	91.4	90.7	91.6	92.2	92.0	92.0	90.7	90.3	87.1	84.8	84.2	82.7	80.4	80.0	79.4	78.7	77.1	75.2	95.1	75.2	87.8
25	75.6	77.5	77.1	76.4	75.4	74.4	75.1	75.2	74.3	75.7	76.9	73.5	73.4	73.4	70.5	58.8	56.0	55.6	52.9	50.1	53.7	54.9	51.8	48.3	77.5	48.3	66.9
26	49.9	49.8	51.9	49.5	54.4	53.3	52.9	52.1	55.5	56.6	61.4	52.4	52.8	54.1	52.1	42.3	44.0	49.5	51.1	56.3	59.5	64.4	67.1	69.9	69.9	42.3	54.3
27	68.6	67.9	70.1	73.2	74.2	74.5	74.8	74.8	72.8	73.3	69.1	66.1	67.5	58.8	53.1	53.3	65.3	80.8	83.9	87.1	71.2	65.9	66.1	61.9	87.1	53.1	69.8
28	61.8	59.0	57.0	57.4	54.9	54.1	53.2	54.6	56.4	57.3	55.6	55.9	57.1	61.3	60.4	62.4	61.2	63.3	65.8	68.4	69.6	71.2	70.7	77.1	77.1	53.2	61.1
29	79.6	81.3	82.4	81.7	82.3	82.2	82.1	82.1	80.7	79.6	77.7	77.9	75.3	75.6	79.7	78.6	80.3	81.3	80.9	79.7	79.4	76.5	74.8	74.6	82.4	74.6	79.4
Max.	**95.1**	**95.0**	**94.7**	**94.5**	**93.9**	**92.7**	**91.4**	**90.7**	**92.0**	**92.3**	**92.0**	**92.0**	**90.9**	**90.3**	**89.9**	**89.6**	**89.6**	**91.1**	**91.6**	**92.8**	**94.0**	**95.3**	**94.9**	**94.6**	**95.3**		
Min.	**38.9**	**41.9**	**40.2**	**41.6**	**39.4**	**40.0**	**37.2**	**34.3**	**28.2**	**27.2**	**26.1**	**28.6**	**29.6**	**29.3**	**30.0**	**32.5**	**31.8**	31.4	32.1	**29.5**	**30.9**	**28.4**	**29.6**	**32.8**		**26.1**	
Avg.	**68.1**	**68.6**	**68.3**	**69.0**	**68.9**	**68.2**	**68.6**	**68.5**	**67.4**	**67.2**	**67.8**	**67.7**	**67.6**	**66.7**	**65.7**	**65.4**	**66.2**	**67.0**	**68.3**	**67.8**	**68.0**	**67.8**	**67.9**	**67.4**			**67.7**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	74.1	75.6	76.3	78.7	77.4	76.6	76.7	79.9	79.0	78.3	73.1	58.8	62.0	60.4	61.4	62.1	63.9	76.0	72.3	66.5	62.4	64.8	65.2	66.0	79.9	58.8	70.3
2	65.4	70.0	68.8	75.6	72.2	72.0	73.0	80.2	84.7	78.7	78.7	77.5	76.2	76.9	74.3	72.1	77.2	89.0	97.0	97.9	98.0	97.1	94.5	85.9	98.0	65.4	80.5
3	85.0	87.2	87.8	87.7	83.2	76.0	69.4	74.6	79.7	77.3	78.4	79.2	81.9	80.3	76.4	77.8	82.9	83.0	83.5	84.3	83.2	82.1	83.9	85.7	87.8	69.4	81.3
4	87.3	90.0	84.6	85.6	84.6	81.0	79.0	78.3	76.7	75.5	79.1	74.6	75.2	77.3	76.4	73.6	73.4	74.3	73.2	75.2	72.9	77.7	75.4	79.5	90.0	72.9	78.3
5	75.1	72.3	73.6	77.9	79.8	78.8	79.0	81.4	79.5	79.7	81.3	80.6	80.0	78.9	75.8	77.7	75.2	75.8	77.4	81.6	81.5	84.9	83.3	81.4	84.9	72.3	78.9
6	81.9	82.7	82.6	82.2	78.7	73.8	74.3	74.4	71.0	72.1	85.3	94.0	95.2	81.7	73.8	72.3	68.1	65.0	60.7	58.8	55.8	66.8	61.6	80.9	95.2	55.8	74.7
7	90.2	94.8	94.3	93.1	93.1	85.3	88.2	86.7	87.2	84.0	84.2	82.2	81.9	83.5	82.5	82.9	86.9	87.8	87.8	88.4	87.6	87.2	88.2	86.1	94.8	81.9	87.3
8	85.0	82.3	80.9	79.5	80.2	77.6	81.9	86.1	77.6	69.3	70.1	78.3	66.5	63.3	61.7	59.0	63.3	68.2	71.0	66.3	64.0	57.0	50.0	55.3	86.1	50.0	70.6
9	57.1	60.0	62.0	60.8	65.6	69.8	74.5	64.8	55.2	62.7	72.6	72.6	66.2	66.7	71.1	67.6	71.6	76.1	74.6	74.8	77.9	80.6	83.0	91.3	91.3	55.2	70.0
10	89.1	92.3	91.9	93.5	94.1	91.8	89.5	82.4	81.3	82.6	82.6	82.9	85.9	83.9	83.5	85.2	87.3	84.2	88.2	89.4	86.6	85.0	82.3	85.4	94.1	81.3	86.7
11	88.4	87.7	87.4	85.5	86.2	82.2	81.1	81.9	82.0	82.2	79.1	76.1	73.6	68.9	68.3	69.2	71.0	69.8	73.0	69.5	65.4	69.8	72.8	68.4	88.4	65.4	76.6
12	67.0	70.2	72.4	72.3	72.7	73.8	75.2	76.8	77.6	78.0	76.9	73.7	72.0	70.9	70.0	72.8	73.9	74.9	76.4	78.7	81.2	82.4	82.9	83.8	83.8	67.0	75.3
13	83.6	82.4	83.4	83.6	84.2	83.6	83.6	83.8	83.3	82.6	82.2	82.0	81.9	79.9	79.3	78.4	77.9	77.4	77.9	78.4	78.7	79.0	79.8	80.4	84.2	77.4	81.1
14	80.3	81.0	82.2	83.5	84.7	85.7	87.2	88.0	89.9	90.1	87.6	81.2	69.0	71.3	64.8	65.0	62.9	67.8	76.1	69.0	62.6	56.7	47.6	50.2	90.1	47.6	74.3
15	54.0	63.1	72.2	73.0	66.0	65.0	66.7	67.4	65.7	64.7	65.2	69.7	67.4	68.6	70.1	73.3	73.2	71.9	78.6	84.2	83.6	77.8	75.5	72.0	84.2	54.0	70.4
16	66.9	69.7	74.1	85.9	80.0	66.7	62.6	65.0	63.5	61.6	63.2	67.3	64.4	63.8	58.4	58.5	60.6	66.5	69.4	73.3	76.7	82.4	87.9	88.9	88.9	58.4	69.9
17	81.3	79.1	79.2	79.8	82.4	83.5	82.9	78.9	79.7	78.4	75.2	72.4	69.5	68.1	70.2	71.0	73.8	75.9	81.8	79.7	80.1	81.4	81.9	82.1	83.5	68.1	77.8
18	82.0	80.7	80.8	80.0	79.7	79.6	80.5	79.6	78.5	77.8	77.4	73.6	71.6	71.3	68.6	69.1	72.0	70.2	71.7	72.3	72.8	70.9	68.8	66.5	82.0	66.5	74.8
19	65.6	65.3	67.2	66.9	67.8	67.6	68.6	68.6	67.5	67.0	66.4	65.4	65.2	65.9	63.3	60.0	62.3	66.6	70.2	68.6	71.7	72.7	72.7	73.7	73.7	60.0	67.4
20	75.3	75.3	77.7	78.2	78.7	78.7	78.0	77.4	78.0	75.6	71.4	68.5	67.2	67.7	65.9	67.2	68.7	66.0	67.2	69.4	74.5	75.6	76.0	73.7	78.7	65.9	73.0
21	71.5	73.1	75.1	73.7	79.0	82.2	82.6	77.0	75.9	75.4	73.5	69.8	70.0	69.5	66.5	61.5	64.2	65.1	63.8	64.0	64.9	61.4	60.2	52.8	82.6	52.8	69.7
22	48.3	49.1	50.4	53.0	55.4	63.8	61.5	68.6	67.8	65.8	65.7	64.0	60.7	58.1	57.2	58.0	58.3	58.1	59.5	61.0	60.2	59.1	56.5	57.8	68.6	48.3	59.1
23	62.3	62.1	57.9	61.9	61.9	64.0	69.4	69.4	67.0	66.4	66.4	67.0	64.7	64.4	65.8	66.7	68.7	66.5	65.7	65.7	66.7	68.1	68.0	69.3	69.4	57.9	65.7
24	68.3	71.0	72.3	70.8	78.9	79.3	77.4	74.1	73.2	74.0	76.1	73.1	71.5	69.5	66.2	66.4	65.4	68.1	69.6	71.5	72.2	73.8	77.9	79.7	79.7	65.4	72.5
25	80.9	82.1	83.6	85.8	82.7	80.3	80.9	81.1	80.8	79.1	79.6	79.3	76.2	70.5	68.5	66.4	69.5	70.6	71.4	71.7	71.4	71.0	70.8	70.2	85.8	66.4	76.0
26										75.1				71.4	70.5	68.2	65.0	65.0	65.3	66.2	68.1	69.2	69.2	70.4	75.1	65.0	68.6
27	70.9	70.9	73.9	75.5	79.1	81.2	81.0	81.3	84.7	82.7	78.9	78.2	75.4	76.8	76.6	74.7	72.2	75.5	76.9	78.1	77.9	77.5	78.2	77.1	84.7	70.9	77.3
28	75.8	75.0	75.4	74.2	74.0	75.5	72.4	72.5	71.0	70.0	68.0	65.3	63.1	61.2	60.4	58.8	58.3	58.8	59.6	59.8	60.3	63.1	72.7	76.8	76.8	58.3	67.6
29	78.5	84.9	79.7	75.1	74.7	73.2	72.9	73.9	75.1	76.4	73.1	75.8	75.4	80.2	83.5	81.4	73.6	78.5	82.7	83.6	86.1	86.1	83.6	82.2	86.1	72.9	78.8
30	87.9	88.5	86.8	83.5	87.2	85.1	84.0	83.9	84.8	83.8	78.7	80.4	82.0	80.2	82.4	82.0	78.1	76.7	76.1	76.6	75.6	76.7	77.0	76.4	88.5	75.6	81.4
31	74.2	74.1	74.0	75.3	76.0	78.9	86.1	90.7	84.6	87.1	86.7	87.6	83.2	75.6	77.1	77.1	75.2	73.0	74.3	75.9	77.0	75.1	76.8	77.3	90.7	73.0	78.9
Max.	**90.2**	**94.8**	**94.3**	**93.5**	**94.1**	**91.8**	**89.5**	**90.7**	**89.9**	**90.1**	**87.6**	**94.0**	**95.2**	**83.9**	**83.5**	**85.2**	**87.3**	**89.0**	**97.0**	**97.9**	**98.0**	**97.1**	**94.5**	**91.3**	**98.0**		
Min.	**48.3**	**49.1**	**50.4**	**53.0**	**55.4**	**63.8**	**61.5**	**64.8**	**55.2**	**61.6**	**63.2**	**58.8**	**60.7**	**58.1**	**57.2**	**58.0**	**58.3**	58.1	59.5	**58.8**	**55.8**	**56.7**	**47.6**	**50.2**		**47.6**	
Avg.	**75.1**	**76.4**	**77.0**	**77.7**	**78.0**	**77.1**	**77.3**	**77.6**	**76.7**	**75.9**	**75.9**	**75.0**	**73.2**	**71.8**	**70.7**	**70.2**	**70.8**	**72.3**	**74.0**	**74.2**	**74.1**	**74.6**	**74.3**	**75.1**			**74.8**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	77.1	75.4	75.3	75.8	75.4	75.3	74.9	76.3	77.1	79.3	79.2	77.1	80.2	79.1	77.8	78.3	77.7	77.2	77.3	79.6	80.6	82.8	82.7	85.0	85.0	74.9	78.2
2	85.6	91.0	88.9	89.2	88.6	89.2	88.3	87.6	87.7	87.1	85.1	82.7	82.7	82.4	74.0	72.9	70.9	71.9	79.4	89.5	93.4	95.1	88.3	87.4	95.1	70.9	85.0
3	88.2	88.8	88.1	86.9	87.1	90.9	88.9	89.1	81.8	79.9	80.3	81.6	82.1	82.7	84.5	81.8	82.3	80.5	82.0	79.0	80.2	79.7	82.6	82.3	90.9	79.0	83.8
4	83.6	83.4	82.9	80.6	81.7	81.9	80.3	80.4	78.8	78.2	79.4	75.1	76.4	80.4	79.8	76.7	75.3	79.0	84.4	86.0	88.5	92.5	96.7	89.6	96.7	75.1	82.2
5	88.9	86.7	83.6	83.8	82.5	81.9	81.2	77.3	75.5	73.3	66.0	58.6	53.7	51.1	51.0	51.0	50.4	46.8	47.8	45.6	43.1	42.9	49.3	49.7	88.9	42.9	63.4
6	49.3	49.8	51.2	52.4	57.9	55.8	53.0	56.1	55.2	51.8	51.8	51.9	53.6	53.5	51.1	50.0	49.9	49.1	51.2	52.3	52.7	52.0	50.1	51.0	57.9	49.1	52.2
7	53.5	54.9	56.1	58.9	60.4	61.6	63.3	66.2	67.9	66.9	65.7	63.9	61.6	57.7	55.5	50.6	48.7	47.3	47.7	50.5	50.1	52.5	56.4	59.8	67.9	47.3	57.4
8	57.7	58.9	57.4	55.9	55.6	59.8	63.5	63.5	62.0	61.6	56.2	51.5	47.9	47.2	56.2	62.0	67.4	68.5	67.9	72.3	80.7	80.1	80.6	80.6	80.7	47.2	63.1
9	79.1	75.7	75.0	80.9	81.1	80.0	77.2	77.0	78.1	78.2	76.3	73.3	68.9	65.6	63.6	60.2	55.5	51.8	49.1	47.0	48.0	49.4	49.8	56.1	81.1	47.0	66.5
10	60.3	61.0	59.6	58.5	58.1	57.7	58.5	60.7	62.8	63.4	60.5	58.2	56.3	54.7	46.8	34.8	34.8	40.5	50.8	49.1	49.4	51.0	55.9	56.8	63.4	34.8	54.2
11	56.0	56.9	56.7	59.3	61.7	64.9	65.6	68.6	68.3	70.5	69.1	65.9	62.2	61.2	59.1	57.1	54.4	51.4	50.7	50.8	53.0	53.7	54.4	55.3	70.5	50.7	59.5
12	57.2	59.3	60.3	62.9	63.1	63.8	66.7	65.7	66.1	64.6	61.9	57.5	53.6	50.8	47.5	44.7	42.9	41.8	41.9	42.6	43.8	45.9	47.8	48.9	66.7	41.8	54.2
13	50.7	57.0	61.0	57.3	59.3	65.4	68.9	72.7	77.3	80.7	79.6	87.5	93.6	96.6	97.0	87.5	85.0	85.3	81.6	83.3	83.9	82.8	83.9	85.7	97.0	50.7	77.7
14	90.0	91.2	89.9	90.3	90.3	91.0	91.5	90.9	90.9	90.6	86.2	82.8	81.4	80.5	78.5	77.3	76.1	74.7	73.9	73.4	76.4	71.6	77.4	80.7	91.5	71.6	83.2
15	79.5	80.0	82.9	82.2	85.1	85.1	82.2	77.6	79.4	80.1	90.8	96.7	95.3	88.6	84.8	68.5	62.1	58.8	56.9	53.8	52.4	47.8	44.1	46.0	96.7	44.1	73.4
16	48.0	47.4	49.3	48.6	48.6	47.4	50.1	50.5	53.2	48.9	49.5	50.5	50.4	47.1	43.3	38.6	34.5	40.7	43.2	48.4	56.0	59.3	56.4	56.6	59.3	34.5	48.6
17	62.3	62.4	58.9	57.2	57.6	58.9	60.5	60.9	62.0	62.1	61.5	61.5	61.9	65.4	68.7	66.3	67.9	68.6	67.5	68.7	70.8	70.6	70.4	69.1	70.8	57.2	64.2
18	67.3	65.4	63.6	60.2	60.6	59.5	59.3	64.0	75.2	77.5	73.2	69.6	66.1	65.3	64.2	64.7	64.0	65.0	66.0	64.8	64.3	65.8	73.6	75.9	77.5	59.3	66.5
19	75.3	79.8	70.8	63.4	61.3	63.6	62.6	62.3	68.0	69.5	62.1	65.0	70.2	70.7	71.6	69.6	68.5	67.4	64.0	58.9	66.4	73.7	79.8	82.0	82.0	58.9	68.6
20	80.6	72.4	67.6	66.9	71.1	77.6	77.3	78.7	78.9	75.1	79.4	80.1	81.6	82.7	83.3	81.7	81.3	81.5	82.5	83.9	85.4	86.0	84.8	84.1	86.0	66.9	79.4
21	82.8	82.3	82.2	82.0	82.2	82.5	82.6	82.0	80.9	79.9	79.5	78.8	76.8	75.8	73.1	73.2	76.3	76.5	73.9	74.3	74.0	75.9	79.1	81.7	82.8	73.1	78.7
22	82.1	83.3	83.5	83.1	87.1	90.0	88.4	90.3	89.1	89.7	86.4	82.5	76.4	67.6	63.5	61.4	59.9	58.3	56.0	56.8	60.1	67.4	78.7	83.8	90.3	56.0	76.1
23	86.7	84.9	71.0	60.9	56.5	60.8	68.0	68.7	71.0	69.7	66.6	61.9	58.4	54.9	53.3	51.2	50.2	49.3	48.6	47.3	47.9	48.5	50.4	52.0	86.7	47.3	59.9
24	55.0	60.2	67.2	75.1	78.1	80.6	78.3	84.5	88.2	87.2	85.3	85.4	81.3	81.4	80.2	80.7	78.0	74.7	76.1	75.1	72.3	73.4	74.5	82.1	88.2	55.0	77.3
25	70.4	74.4	78.6	79.9	75.9	72.2	74.6	76.3	76.1	71.8	65.4	61.4	51.1	47.8	42.9	38.9	39.9	41.1	40.6	43.6	48.2	51.1	53.6	55.7	79.9	38.9	59.6
26	54.3	53.8	56.0	56.5	59.2	62.5	63.7	65.2	67.1	71.6	77.1	82.7	79.4	80.2	77.6	76.6	79.5	76.2	78.9	80.4	79.3	79.1	80.6	82.2	82.7	53.8	71.6
27	82.4	80.2	80.3	79.0	80.0	81.1	83.2	82.9	83.1	84.5	79.0	78.0	81.5	81.7	82.6	77.8	78.5	80.5	78.9	81.8	82.7	81.4	83.1	84.8	84.8	77.8	81.2
28	85.1	84.4	82.9	83.3	83.4	81.7	79.2	78.2	78.1	75.9	73.5	72.6	71.1	70.7	69.6	68.3	66.3	67.0	67.3	65.3	64.1	63.1	62.3	62.3	85.1	62.3	73.2
29	63.2	63.4	65.9	68.3	68.9	68.5	69.2	70.6	68.6	67.5	67.8	66.7	65.1	63.1	62.8	62.1	61.5	60.2	59.5	58.9	59.8	63.7	65.8	68.2	70.6	58.9	65.0
30	68.0	69.5	68.7	67.8	68.8	69.1	69.2	70.2	69.9	66.9	65.0	63.0	62.3	61.6	59.1	57.7	59.0	63.6	59.9	59.6	60.6	61.4	67.5	70.4	70.4	57.7	64.9
Max.	**90.0**	**91.2**	**89.9**	**90.3**	**90.3**	**91.0**	**91.5**	**90.9**	**90.9**	**90.6**	**90.8**	**96.7**	**95.3**	**96.6**	**97.0**	**87.5**	**85.0**	**85.3**	**84.4**	**89.5**	**93.4**	**95.1**	**96.7**	**89.6**	**97.0**		
Min.	**48.0**	**47.4**	**49.3**	**48.6**	**48.6**	**47.4**	**50.1**	**50.5**	**53.2**	**48.9**	**49.5**	**50.5**	**47.9**	**47.1**	**42.9**	**34.8**	**34.5**	40.5	40.6	**42.6**	**43.1**	**42.9**	**44.1**	**46.0**		**34.5**	
Avg.	**70.7**	**71.1**	**70.5**	**70.2**	**70.9**	**72.0**	**72.3**	**73.2**	**73.9**	**73.5**	**72.0**	**70.8**	**69.4**	**68.3**	**66.8**	**64.1**	**63.3**	**63.2**	**63.5**	**64.1**	**65.6**	**66.7**	**68.7**	**70.2**			**69.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	71.0	78.9	84.1	78.9	73.6	75.4	78.6	81.0	78.8	76.9	74.1	72.6	70.7	69.8	68.5	65.6	63.6	62.3	60.4	59.2	57.2	57.6	57.6	61.3	84.1	57.2	69.9
2	63.2	66.0	80.7	85.6	85.3	85.8	88.5	85.6	85.8	86.4	87.2	91.2	91.1	86.1	81.1	82.9	88.3	85.5	83.0	84.1	81.0	85.2	87.9	92.2	92.2	63.2	84.2
3	92.4	93.2	91.1	90.4	90.5	92.2	96.2	96.9	96.4	91.5	70.2	53.9	54.1	53.4	52.0	51.2	53.4	57.4	56.4	55.2	56.0	74.5	76.2	75.3	96.9	51.2	73.7
4	74.4	74.9	70.6	74.3	73.3	71.6	71.3	67.1	61.6	59.9	60.9	61.8	60.8	60.7	59.0	58.8	57.3	52.3	51.3	49.5	50.5	54.5	58.0	60.3	74.9	49.5	62.3
5	62.3	67.6	70.0	71.3	71.2	71.3	69.7	68.1	68.4	69.0	68.9	68.7	66.0	66.7	64.7	63.5	62.2	60.7	59.5	59.2	60.0	61.8	68.2	75.6	75.6	59.2	66.4
6	80.1	79.5	79.9	85.6	87.6	88.6	79.5	77.1	80.3	84.8	85.2	85.6	83.4	87.3	87.1	79.7	75.6	69.1	71.1	68.1	78.9	79.5	82.6	78.3	88.6	68.1	80.6
7	75.4	70.2	66.3	62.9	58.8	56.3	61.4	66.9	66.2	60.2	60.7	68.2	66.8	67.7	66.6	67.8	66.7	64.7	61.9	57.7	56.5	56.1	67.2	72.1	75.4	56.1	64.4
8	73.8	75.1	74.6	74.6	73.5	70.2	68.4	71.2	70.6	69.9	71.6	72.1	72.4	72.0	71.6	73.2	72.3	72.4	71.3	71.2	71.1	70.5	66.0	66.9	75.1	66.0	71.5
9	70.4	71.8	71.4	71.7	71.2	71.5	72.3	71.8	70.1	68.6	68.2	69.0	71.5	70.4	66.1	66.0	67.5	69.3	65.5	63.1	71.4	79.1	81.0	81.5	81.5	63.1	70.8
10	85.1	85.7	86.5	85.9	88.0	89.5	90.8	88.1	85.8	81.1	81.0	79.1	76.1	73.0	72.2	72.1	69.2	68.6	66.7	66.1	63.4	69.0	71.2	70.3	90.8	63.4	77.7
11	70.5	74.5	72.5	78.7	68.8	68.3	67.2	65.4	63.8	62.0	75.6	76.3	66.2	67.1	62.7	54.1	54.4	57.1	53.7	60.3	61.9	63.4	67.8	72.4	78.7	53.7	66.0
12	73.3	75.6	76.2	74.8	74.1	76.2	76.6	76.1	77.0	77.8	77.5	75.2	73.9	72.8	71.8	77.0	76.2	75.3	75.5	75.7	76.2	77.0	75.5	76.3	77.8	71.8	75.6
13	76.4	77.2	79.6	83.0	83.5	84.8	87.2	86.0	85.9	83.0	80.4	80.2	82.3	81.2	77.6	77.5	76.5	71.0	72.0	71.8	63.5	79.6	74.8	72.0	87.2	63.5	78.6
14	71.7	63.5	60.8	59.7	55.4	56.2	55.6	53.0	53.9	53.5	58.5	60.6	67.2	65.1	52.1	47.9	45.9	46.0	45.7	49.6	50.5	53.4	57.4	65.9	71.7	45.7	56.2
15	86.1	90.6	90.6	83.8	81.4	76.8	76.3	73.2	72.1	69.9	76.0	81.2	82.6	80.3	75.2	76.7	74.3	75.4	78.5	81.3	83.5	82.6	86.2	89.0	90.6	69.9	80.2
16	94.6	82.4	79.1	74.3	80.5	75.1	77.8	80.1	82.5	81.5	79.3	75.4	73.3	69.7	68.0	63.7	65.3	68.9	67.7	67.2	65.9	67.5	77.9	86.5	94.6	63.7	75.2
17	91.7	72.9	63.6	65.7	67.9	69.1	68.3	68.6	66.3	63.7	59.7	57.7	53.1	50.0	52.6	52.3	46.3	48.5	57.6	63.5	59.7	66.6	70.1	68.8	91.7	46.3	62.7
18	74.6	69.7	76.6	78.1	78.7	76.4	78.3	82.9	82.2	82.6	84.1	88.0	87.7	87.7	87.3	85.9	80.9	79.6	80.2	79.0	74.0	71.1	73.6	80.2	88.0	69.7	80.0
19	82.1	83.1	83.2	85.7	91.1	93.9	93.8	89.3	78.9	69.1	63.1	58.5	55.4	52.4	50.1	48.3	47.8	47.4	48.8	49.3	51.5	55.4	58.5	59.3	93.9	47.4	66.5
20	59.5	60.5	59.5	59.6	58.2	62.7	63.7	61.5	57.2	54.2	47.8	46.2	43.9	41.0	37.2	34.5	34.6	39.7	39.7	38.2	47.8	56.1	59.6	69.9	69.9	34.5	51.4
21	76.4	79.1	80.6	84.5	75.3	64.3	65.3	64.0	61.0	56.8	52.0	52.8	60.8	66.2	61.9	62.3	69.4	64.0	59.8	56.5	59.3	64.9	64.5	68.8	84.5	52.0	65.4
22	71.2	71.3	68.7	70.8	70.4	69.1	68.3	67.6	68.7	66.7	64.5	60.6	56.1	59.7	62.9	61.6	59.5	55.8	59.5	66.5	63.1	61.5	68.8	68.9	71.3	55.8	65.1
23	75.2	79.1	77.6	77.2	75.8	77.4	77.6	76.0	76.0	74.0	71.6	69.4	66.7	67.8	68.8	70.4	74.2	78.5	80.1	81.2	81.0	80.2	80.2	76.3	81.2	66.7	75.5
24	74.5	77.3	76.0	77.5	78.5	78.9	82.1	83.1	83.8	80.4	79.3	85.8	86.8	86.6	85.0	89.6	87.5	84.9	84.1	84.7	84.9	85.6	90.7	94.2	94.2	74.5	83.4
25	96.3	97.0	97.9	98.0	97.9	98.5	97.7	94.6	83.1	76.2	66.7	58.4	59.0	58.2	57.5	57.4	57.1	57.4	59.1	62.7	64.9	65.6	65.4	65.5	98.5	57.1	74.7
26	66.9	67.7	72.1	80.4	81.9	80.8	82.1	80.2	74.8	70.5	66.1	59.3	54.2	55.3	54.1	52.3	53.0	57.5	59.6	61.4	63.2	70.1	65.8	70.5	82.1	52.3	66.7
27	70.6	74.4	77.3	79.6	77.9	75.9	74.4	73.3	72.5	71.9	68.6	62.4	57.7	56.7	53.0	49.3	45.8	43.2	41.8	41.5	42.2	44.4	47.0	49.3	79.6	41.5	60.4
28	49.2	50.6	53.3	54.2	59.5	58.9	61.9	66.6	68.3	64.4	59.7	53.5	47.7	44.3	43.1	43.0	42.3	39.6	40.0	38.8	40.7	44.2	46.4	51.3	68.3	38.8	50.9
29	55.2	57.1	56.1	57.3	58.7	60.4	60.2	60.3	59.3	56.7	54.4	51.5	49.9	47.4	53.6	57.0	56.7	55.5	51.9	52.6	62.4	71.3	77.6	76.8	77.6	47.4	58.3
30	77.6	80.0	83.6	84.5	87.8	89.5	89.5	84.0	70.9	67.8	65.2	64.2	61.2	57.2	62.0	71.7	83.4	85.6	74.2	71.4	77.2	79.7	81.4	84.4	89.5	57.2	76.4
31	84.0	83.6	85.5	87.6	88.2	89.7	90.3	92.6	91.4	91.7	91.7	82.7	85.9	89.3	91.3	91.7	90.5	90.4	91.9	93.8	94.1	92.2	92.7	91.8	94.1	82.7	89.8
Max.	**96.3**	**97.0**	**97.9**	**98.0**	**97.9**	**98.5**	**97.7**	**96.9**	**96.4**	**91.7**	**91.7**	**91.2**	**91.1**	**89.3**	**91.3**	**91.7**	**90.5**	**90.4**	**91.9**	**93.8**	**94.1**	**92.2**	**92.7**	**94.2**	**98.5**		
Min.	**49.2**	**50.6**	**53.3**	**54.2**	**55.4**	**56.2**	**55.6**	**53.0**	**53.9**	**53.5**	**47.8**	**46.2**	**43.9**	**41.0**	**37.2**	**34.5**	**34.6**	39.6	39.7	**38.2**	**40.7**	**44.2**	**46.4**	**49.3**		**34.5**	
Avg.	**75.0**	**75.2**	**75.7**	**76.6**	**76.3**	**76.0**	**76.5**	**75.9**	**74.0**	**71.7**	**70.0**	**68.5**	**67.2**	**66.5**	**65.0**	**64.7**	**64.4**	**64.0**	**63.5**	**63.9**	**64.9**	**68.4**	**70.9**	**73.3**			**70.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	89.1	82.8	76.6	76.6	74.2	72.6	69.1	70.2	66.5	64.4	63.5	65.8	66.7	64.9	67.3	64.2	62.1	67.5	68.5	68.1	69.5	68.5	70.3	68.0	89.1	62.1	69.9
2	64.9	65.5	65.1	66.1	66.7	68.1	65.4	65.5	65.4	66.1	62.6	57.7	60.2	60.3	57.7	57.1	57.7	67.8	71.2	68.9	68.2	75.0	78.8	73.1	78.8	57.1	65.6
3	77.2	74.4	75.1	72.4	71.0	62.9	65.6	65.1	60.8	58.4	57.7	57.3	66.5	76.6	78.7	78.3	76.1	78.7	80.4	84.5	88.3	88.7	88.2	91.0	91.0	57.3	73.9
4	94.5	92.4	96.5	94.9	92.5	94.8	95.5	92.8	92.3	86.4	81.5	81.1	81.9	80.8	80.9	77.6	74.5	72.1	66.1	68.8	63.7	68.2	77.7	81.1	96.5	63.7	82.9
5	82.8	82.7	81.5	84.4	85.0	81.9	80.6	82.0	79.8	76.9	80.3	79.8	79.6	80.4	77.0	79.5	76.7	74.3	71.7	72.4	74.2	77.9	83.3	86.8	86.8	71.7	79.6
6	87.9	79.1	83.6	85.5	85.8	85.9	85.5	83.9	81.0	76.7	72.8	71.0	67.0	64.9	62.4	57.2	53.2	48.9	46.0	51.7	57.3	62.3	65.0	72.4	87.9	46.0	70.3
7	78.7	83.0	84.8	87.1	88.4	90.8	91.9	91.7	90.2	88.0	85.2	85.6	84.3	81.3	78.3	72.7	69.0	79.9	83.7	84.8	86.7	88.1	88.5	88.6	91.9	69.0	84.6
8	89.9	90.3	91.2	91.6	92.9	92.0	87.0	87.7	86.9	83.0	77.5	69.3	55.5	35.6	29.8	28.2	29.6	34.8	37.5	38.6	40.9	49.7	51.6	53.7	92.9	28.2	63.5
9	56.8	65.4	73.3	74.6	76.1	79.9	80.7	85.6	84.1	79.1	74.0	70.7	61.8	57.9	56.5	55.3	55.6	57.4	57.8	58.1	59.9	63.4	66.4	68.0	85.6	55.3	67.4
10	68.2	70.0	74.1	76.6	77.9	76.8	76.2	75.8	76.0	77.5	78.3	74.8	69.1	68.0	65.9	72.2	70.3	75.4	77.3	77.5	76.3	78.8	79.7	78.7	79.7	65.9	74.6
11	78.1	78.5	77.8	84.4	89.8	91.9	89.3	89.5	92.8	93.9	86.3	79.9	84.5	89.6	88.5	87.7	85.2	85.2	84.7	86.8	86.2	88.1	88.1	87.2	93.9	77.8	86.4
12	83.6	83.9	81.2	79.5	84.8	85.8	88.9	91.7	89.9	87.2	82.1	75.9	68.5	66.8	64.3	62.8	64.9	64.9	69.0	75.5	76.5	82.0	86.5	87.1	91.7	62.8	78.5
13	86.8	87.7	89.7	89.2	91.1	90.2	88.3	87.7	88.2	88.9	84.5	82.8	79.2	75.0	77.4	74.7	72.6	67.8	66.4	64.9	66.0	76.1	84.6	79.3	91.1	64.9	80.8
14	80.0	86.9	86.8	90.6	90.8	91.9	91.0	90.5	90.5	87.7	84.3	82.4	81.0	77.2	76.3	75.5	73.4	71.8	79.7	78.4	79.2	79.3	84.3	85.1	91.9	71.8	83.1
15	78.5	77.9	78.5	79.8	83.4	84.8	86.9	87.1	85.2	86.2	81.7	78.1	72.5	69.0	68.4	65.3	62.8	61.9	63.9	69.0	70.4	72.4	77.7	87.8	87.8	61.9	76.2
16	86.1	84.1	86.0	86.6	85.5	85.9	88.5	87.9	87.0	82.4	77.6	73.5	74.9	70.5	63.9	60.4	64.1	65.2	65.3	64.8	71.6	80.2	87.9	92.6	92.6	60.4	78.0
17	94.6	93.0	93.2	95.4	96.7	89.1	82.8	81.9	80.7	78.0	78.0	84.0	87.4	86.0	86.2	87.2	86.2	87.6	83.8	83.8	88.0	90.3	91.1	92.2	96.7	78.0	87.4
18	94.5	97.2	98.0	98.3	98.5	98.7	98.3	86.2	82.4	79.9	79.4	75.8	68.4	63.5	72.2	73.9	77.4	76.8	73.4	71.8	75.1	84.4	90.1	93.0	98.7	63.5	83.6
19	94.8	95.6	96.3	96.8	97.4	93.1	79.0	78.1	77.6	76.1	70.7	68.6	82.0	83.4	84.8	81.7	77.7	74.9	73.8	73.2	76.0	80.3	82.7	85.1	97.4	68.6	82.5
20	86.5	88.7	90.1	90.2	91.0	93.0	90.9	89.9	89.5	88.3	87.0	86.4	76.6	73.6	73.9	72.4	73.2	73.6	72.6	70.9	73.7	78.7	78.1	75.8	93.0	70.9	81.9
21	76.5	77.7	79.3	80.9	81.7	87.8	83.2	82.8	82.7	78.7	76.7	76.1	73.9	75.4	69.9	67.3	65.0	63.1	63.7	64.2	64.9	68.5	75.0	85.3	87.8	63.1	75.0
22	92.9	93.1	94.8	94.8	95.0	95.3	94.2	89.4	86.9	83.5	76.1	75.4	81.8	84.2	82.9	87.0	86.9	82.2	78.2	76.8	77.6	80.0	81.0	80.3	95.3	75.4	85.4
23	83.2	81.7	82.6	83.4	82.1	82.5	82.6	83.5	79.9	71.8	64.6	63.5	63.6	60.0	60.9	67.3	63.3	65.4	64.9	58.3	61.7	67.5	73.1	74.5	83.5	58.3	71.7
24	80.0	78.7	75.4	74.3	77.1	75.9	76.0	73.8	71.5	71.9	74.4	79.4	82.3	84.3	89.6	90.7	90.2	81.4	79.2	79.8	79.8	77.1	73.5	70.4	90.7	70.4	78.6
25	67.4	66.8	70.4	82.7	81.1	71.5	68.0	70.2	70.7	67.5	60.9	59.1	60.3	55.7	54.6	52.2	52.3	51.7	52.7	55.4	57.4	55.0	63.2	70.9	82.7	51.7	63.2
26	69.2	67.3	67.6	66.6	66.7	66.6	74.1	66.4	64.9	65.4	64.1	64.3	62.6	58.6	55.7	55.4	53.6	52.6	52.0	51.9	52.6	53.2	52.9	52.0	74.1	51.9	60.7
27	52.8	55.0	68.8	79.8	82.5	84.2	85.6	86.1	91.1	91.9	91.8	91.2	90.0	86.6	83.1	80.6	76.6	70.2	68.5	68.3	68.9	69.4	71.7	83.2	91.9	52.8	78.2
28	92.9	93.7	95.0	95.1	95.2	94.8	88.6	77.5	77.2	81.0	75.9	72.5	70.6	67.2	64.5	64.2	73.3	75.8	76.1	78.8	85.2	79.4	77.6	82.0	95.2	64.2	80.6
29	84.6	82.3	79.5	79.0	79.9	79.1	79.5	77.6	81.2	82.6	82.8	84.9	83.1	85.0	82.8	81.7	83.2	83.5	80.5	77.0	72.5	72.5	74.2	73.8	85.0	72.5	80.1
30	72.9	75.4	80.4	91.7	93.4	94.9	95.0	92.2	85.4	76.7	74.9	72.3	69.9	67.4	65.9	71.2	73.5	74.5	74.2	71.6	70.4	75.7	85.2	93.1	95.0	65.9	79.1
Max.	**94.8**	**97.2**	**98.0**	**98.3**	**98.5**	**98.7**	**98.3**	**92.8**	**92.8**	**93.9**	**91.8**	**91.2**	**90.0**	**89.6**	**89.6**	**90.7**	**90.2**	**87.6**	**84.7**	**86.8**	**88.3**	**90.3**	**91.1**	**93.1**	**98.7**		
Min.	**52.8**	**55.0**	**65.1**	**66.1**	**66.7**	**62.9**	**65.4**	**65.1**	**60.8**	**58.4**	**57.7**	**57.3**	**55.5**	**35.6**	**29.8**	**28.2**	**29.6**	34.8	37.5	**38.6**	**40.9**	**49.7**	**51.6**	**52.0**		**28.2**	
Avg.	**80.9**	**81.0**	**82.4**	**84.3**	**85.1**	**84.8**	**83.6**	**82.3**	**81.3**	**79.2**	**76.2**	**74.6**	**73.5**	**71.7**	**70.7**	**70.0**	**69.3**	**69.6**	**69.4**	**69.8**	**71.3**	**74.4**	**77.6**	**79.7**			**76.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	93.9	94.6	94.9	95.1	95.5	95.6	96.1	93.2	84.8	76.9	75.1	69.2	67.8	75.2	66.0	55.4	60.1	59.6	59.1	57.6	60.5	79.0	76.3	70.7	96.1	55.4	77.2
2	70.0	69.2	71.5	72.6	72.8	71.8	69.2	66.1	64.5	72.2	71.4	60.3	56.8	54.9	50.7	54.4	57.7	57.3	56.5	59.2	62.8	62.9	62.0	62.1	72.8	50.7	63.7
3	70.4	79.2	77.4	54.4	44.0	44.4	48.0	52.5	67.4	71.2	69.0	67.9	67.2	65.0	67.3	69.2	77.2	74.2	77.6	79.9	83.2	86.5	86.7	90.1	90.1	44.0	69.6
4	93.9	93.5	93.4	93.4	91.8	95.3	95.9	92.2	92.9	94.5	94.6	91.9	91.7	91.3	89.1	88.1	88.8	92.1	93.9	93.8	94.2	94.3	93.9	94.8	95.9	88.1	92.9
5	96.0	96.5	96.2	96.7	95.6	96.5	97.5	97.8	95.7	92.5	87.5	84.2	80.4	77.9	77.6	74.7	74.0	73.8	72.1	70.3	76.4	78.4	83.2	91.6	97.8	70.3	86.0
6	94.5	94.2	95.4	95.6	96.3	96.4	95.9	93.5	86.8	85.0	83.7	81.1	79.7	79.7	86.1	84.5	85.4	84.7	83.9	83.1	86.8	92.4	95.4	96.9	96.9	79.7	89.0
7	96.9	94.2	92.3	92.4	90.7	92.5	90.4	86.4	84.4	83.2	83.9	78.9	81.8	75.3	69.4	69.4	68.4	66.5	67.8	68.7	71.1	72.8	82.9	89.0	96.9	66.5	81.2
8	89.7	89.9	88.6	88.9	81.3	71.7	72.5	74.8	79.9	81.1	79.7	80.0	78.6	82.7	80.0	77.4	75.5	74.0	73.6	77.2	81.1	85.0	87.9	91.2	91.2	71.7	80.9
9	92.0	93.6	92.8	93.1	94.7	95.4	94.9	94.6	88.7	76.8	73.8	70.3	70.9	73.1	74.2	77.5	76.9	72.2	70.1	66.4	65.5	68.7	68.7	69.4	95.4	65.5	79.8
10	70.6	70.1	69.9	71.9	73.5	73.3	72.8	72.7	73.2	76.4	80.0	77.8	83.0	82.2	81.2	82.4	75.3	76.0	80.5	83.3	85.3	86.7	86.1	86.7	86.7	69.9	78.0
11	88.6	88.6	88.0	83.8	82.3	83.3	84.3	85.9	83.6	83.7	83.3	81.7	77.8	73.3	65.3	64.1	55.8	53.3	59.3	61.4	65.2	66.8	71.0	88.0	88.6	53.3	75.8
12	92.7	94.9	95.8	95.8	96.4	96.8	95.9	85.4	79.5	79.4	78.8	77.5	77.2	78.2	78.4	77.4	75.7	78.6	77.8	81.7	81.6	82.7	83.2	84.2	96.8	75.7	84.4
13	87.4	86.7	84.5	83.5	85.5	86.1	86.0	91.3	91.8	86.2	83.3	83.8	85.3	87.7	88.6	89.8	91.2	92.7	92.9	93.3	93.8	93.7	94.6	95.3	95.3	83.3	89.0
14	95.9	95.2	96.3	96.5	96.4	96.6	97.2	96.3	96.2	94.0	90.2	91.4	90.5	88.9	87.3	86.7	85.3	87.1	87.4	86.3	87.8	89.6	91.5	92.1	97.2	85.3	91.8
15	93.0	93.5	95.7	95.4	95.1	94.2	94.7	95.0	94.7																95.7	93.0	94.6
16	81.6	86.4	88.6	88.5	85.7	85.6	84.0	86.2	88.7	88.3	88.9	89.0	85.4	86.3	85.3	85.2	85.3	83.4	82.9	82.5	82.5	82.4	82.4	83.0	89.0	81.6	85.3
17	82.4	85.3	88.4	90.3	94.6	91.5	89.6	90.4	88.8	85.1	85.0	75.7	81.1	78.4	78.9	76.1	88.2	88.9	82.9	83.0	86.4	85.6	85.6	84.4	94.6	75.7	85.3
18	87.1	88.4	87.7	87.1	86.1	83.8	85.3	87.6	85.6	82.0	77.4	74.1	68.7	66.7	66.3	64.7	62.7	62.6	63.8	65.3	69.1	71.7	72.4	75.7	88.4	62.6	75.9
19	79.1	78.6	80.4	82.3	84.8	86.2	84.6	82.3	79.6	76.9	73.5	69.3	66.4	62.5	57.9	55.6	55.3	55.1	58.4	60.6	61.7	60.9	62.8	67.4	86.2	55.1	70.1
20	67.7	71.2	71.2	72.6	75.5	77.7	78.3	78.9	80.3	79.6	80.0	86.1	86.1	86.9	82.9	76.7	76.6	75.5	75.2	74.3	75.5	82.2	81.1	82.0	86.9	67.7	78.1
21	80.2	80.7	86.6	93.0	92.1	91.4	90.7	88.2	86.2	84.0	79.9	78.2	77.9	81.6	85.9	81.8	80.6	74.7	71.4	76.0	75.8	78.9	84.2	90.3	93.0	71.4	82.9
22	89.9	89.9	89.5	86.7	86.5	85.7	86.2	83.3	82.7	80.0	78.1	80.4	84.1	85.8	86.1	83.4	87.4	86.7	81.8	85.6	85.8	87.4	92.1	95.4	95.4	78.1	85.9
23	96.0	96.1	94.7	95.8	94.8	93.7	93.4	92.4	90.5	83.1	78.1	79.9	77.9	74.9	72.6	71.8	72.8	76.6	75.1	77.4	82.1	87.1	89.2	84.3	96.1	71.8	84.6
24	90.1	95.0	90.8	94.0	91.2	90.8	89.5	87.0	88.8	89.3	88.4	87.3	82.8	78.2	70.4	66.4	68.9	72.6	67.8	71.8	73.4	82.5	89.5	91.3	95.0	66.4	83.2
25	93.7	91.4	83.5	78.5	76.9	73.6	69.2	69.5	68.4	69.3	62.3	63.7	60.7	57.6	53.4	50.0	47.8	47.9	54.7	63.0	70.2	70.9	72.1	81.2	93.7	47.8	67.9
26	83.8	86.5	89.5	85.1	78.5	79.0	83.9	88.7	88.9	85.4	83.5	79.2	79.7	81.2	82.6	83.1	81.6	78.3	74.6	76.1	84.5	86.8	86.2	88.0	89.5	74.6	83.1
27	85.7	86.2	84.6	83.3	87.1	85.0	86.9	91.0	92.8	93.7	95.6	90.8	88.8	86.9	84.3	86.9	86.9	86.2	86.7	83.0	85.5	88.2	94.4	94.7	95.6	83.0	88.1
28	96.0	95.3	87.5	87.0	87.0	86.6	85.3	83.9	82.5	81.3	79.3	78.1	75.5	71.2	66.8	64.7	61.7	51.1	50.7	52.7	50.6	54.5	56.5	58.7	96.0	50.6	72.7
29	59.2	61.4	62.9	61.7	63.3	63.2	62.2	62.0	58.8	56.3	55.3	51.6	45.9	44.8	41.9	41.1	41.0	40.8	42.1	42.2	46.3	51.3	54.0	52.7	63.3	40.8	52.6
30	53.8	57.4	57.0	57.9	60.8	63.9	65.0	64.3	63.3	61.5	59.8	59.6	58.0	56.4	52.9	49.6	47.7	46.6	48.7	50.0	52.6	57.1	61.4	63.8	65.0	46.6	57.0
31	64.9	65.1	67.9	68.7	71.8	74.6	75.4	75.7	76.6	76.3	75.2	70.8	68.2	66.2	65.8	61.8	57.2	58.0	56.7	55.7	59.4	64.4	70.2	70.9	76.6	55.7	67.4
Max.	**96.9**	**96.5**	**96.3**	**96.7**	**96.4**	**96.8**	**97.5**	**97.8**	**96.2**	**94.5**	**95.6**	**91.9**	**91.7**	**91.3**	**89.1**	**89.8**	**91.2**	**92.7**	**93.9**	**93.8**	**94.2**	**94.3**	**95.4**	**96.9**	**97.8**		
Min.	**53.8**	**57.4**	**57.0**	**54.4**	**44.0**	**44.4**	**48.0**	**52.5**	**58.8**	**56.3**	**55.3**	**51.6**	**45.9**	**44.8**	**41.9**	**41.1**	**41.0**	40.8	42.1	**42.2**	**46.3**	**51.3**	**54.0**	**52.7**		**40.8**	
Avg.	**84.4**	**85.4**	**85.3**	**84.6**	**84.1**	**83.9**	**83.9**	**83.5**	**82.8**	**80.8**	**79.2**	**77.0**	**75.9**	**75.0**	**73.2**	**71.7**	**71.6**	**70.9**	**70.9**	**72.0**	**74.5**	**77.7**	**79.9**	**82.2**			**78.8**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	75.5	78.8	79.9	79.9	81.8	84.4	85.7	86.4	85.0	76.3	72.0	75.0	84.4	88.5	88.9	87.1	88.4	89.4	89.4	85.4	82.1	82.7	82.0	82.3	89.4	72.0	83.0
2	81.3	83.3	87.5	90.6	87.7	91.3	92.7	91.3	90.0	89.3	86.3	85.4	84.5	84.5	78.5	85.1	85.1	84.6	84.6	85.6	87.7	90.2	92.6	93.3	93.3	78.5	87.2
3	94.8	94.6	95.6	95.6	93.5	93.1	92.8	93.2	94.6	95.0	94.3	93.2	90.5	90.4	88.6	82.8	82.3	78.4	83.4	85.8	88.3	89.0	89.8	87.9	95.6	78.4	90.3
4	89.1	91.1	89.4	86.3	88.0	93.7	96.6	91.4	90.4	87.9	85.1	86.0	82.9	78.3	81.2	80.6	80.5	79.1	82.0	87.6	91.6	91.6	95.1	95.9	96.6	78.3	87.6
5	95.9	95.3	95.7	95.1	96.8	97.3	97.3	97.2	96.3	90.6	86.8	80.5	80.1	78.6	77.5	75.6	82.1	85.2	83.2	80.4	80.9	82.7	83.1	87.1	97.3	75.6	87.6
6	87.0	89.3	90.7	94.2	94.4	93.5	94.1	95.5	90.5	85.6	73.2	68.4	60.5	55.4	51.2	49.0	41.9	36.5	35.9	39.0	39.6	42.3	54.3	60.4	95.5	35.9	67.6
7	62.8	61.7	57.4	60.0	60.7	65.9	63.6	61.3	60.5	59.2	57.6	54.9	50.8	46.5	43.3	39.7	37.0	35.5	37.9	39.0	44.3	52.2	55.2	58.8	65.9	35.5	52.7
8	66.2	78.8	86.0	87.6	87.3	87.9	85.0	78.7	69.1	61.9	58.4	55.2	64.8	57.2	53.5	51.6	48.8	48.2	48.9	55.5	59.7	78.9	89.3	92.0	92.0	48.2	68.8
9	93.7	94.1	95.0	95.0	95.6	95.8	86.4	78.4	65.9	63.6	58.7	59.0	52.6	48.1	45.7	60.4	66.4	66.9	73.9	83.8	86.5	85.4	86.7	87.3	95.8	45.7	76.0
10	86.9	85.3	84.6	85.7	85.8	86.5	85.8	84.8	86.9	84.9	81.9	81.1	79.2	76.4	73.8	74.4	70.5	70.9	74.9	75.7	79.2	80.3	83.2	82.4	86.9	70.5	80.9
11	83.1	84.5	87.3	87.8	89.1	88.4	90.2	87.4	85.6	82.9	83.1	82.4	82.5	80.6	76.3	73.3	69.3	67.6	63.2	64.9	73.4	89.2	91.0	92.2	92.2	63.2	81.5
12	93.6	85.6	74.4	73.3	73.0	73.3	73.0	70.1	71.5	69.6	66.1	64.9	69.2	67.1	68.2	69.2	69.0	68.3	69.9	72.9	81.8	81.6	92.4	94.4	94.4	64.9	74.7
13	89.9	83.9	84.7	88.3	89.7	90.5	90.6	87.9	88.1	85.1	81.1	81.8	78.4	73.7	81.1	85.3	89.0	86.3	82.2	88.0	89.1	87.7	91.0	93.6	93.6	73.7	86.1
14	95.3	94.4	94.3	91.6	91.2	93.7	92.6	86.9	93.9	93.7	93.4	93.0	92.7	90.9	90.4	89.0	89.0	86.4	84.3	86.6	94.0	95.4	95.7	96.1	96.1	84.3	91.9
15	96.0	96.3	91.6	90.7	92.0	90.7	90.3	91.0	90.5	90.0	89.7	89.0	88.8	90.2	90.9	92.2	93.0	94.4	94.3	96.0	96.7	97.0	95.8	94.4	97.0	88.8	92.6
16	95.0	96.7	97.4	95.0	92.2	92.5	91.8	90.8	88.9	86.6	85.8	89.5	92.2	85.4	84.6	81.2	80.0	71.4	69.8	70.0	76.0	81.4	81.1	86.3	97.4	69.8	85.9
17	87.7	89.7	90.5	85.8	88.3	93.6	92.8	94.4	95.2	87.1	82.9	87.0	84.2	86.5	80.2	75.7	75.3	70.9	70.8	73.5	78.7	74.7	74.9	82.7	95.2	70.8	83.5
18	81.8	78.3	84.3	92.0	94.9	94.8	95.6	94.7	87.2	79.3	72.2	65.2	60.9	56.4	55.2	57.0	56.7	55.5	59.1	70.2	71.9	74.0	75.3	78.0	95.6	55.2	74.6
19	77.8	82.6	84.4	84.8	87.4	91.8	92.0	87.3	82.4	79.9	83.2	76.7	72.8	71.4	67.2	65.5	64.1	64.8	68.4	70.1	70.8	73.0	70.1	68.4	92.0	64.1	76.5
20	71.4	76.8	81.3	80.9	82.3	83.3	82.7	84.1	85.6	88.0	88.5	82.8	81.5	80.1	77.1	74.8	73.9	70.8	72.1	74.1	78.0	82.0	81.4	80.1	88.5	70.8	79.7
21	80.8	83.0	85.1	84.7	86.4	86.6	89.7	92.7	93.2	91.9	88.6	86.7	89.2	90.6	85.7	82.5	83.5	82.7	83.3	90.1	93.1	91.7	94.1	95.7	95.7	80.8	88.0
22	93.7	96.3	97.0	93.5	90.6	91.2	95.1	96.3	95.8	89.4	86.4	83.8	80.0	83.9	82.3	77.6	76.0	78.3	87.4	89.0	79.7	81.5	80.1	79.4	97.0	76.0	86.8
23	80.2	82.7	83.6	82.3	81.6	82.9	83.0	84.0	87.1	87.1	84.6	83.6	82.8	82.0	80.7	85.0	88.0	92.1	93.2	94.4	95.5	95.9	94.5	93.8	95.9	80.2	86.7
24	93.7	92.1	91.5	91.2	88.1	86.5	86.2	85.9	85.9	85.3	87.1	83.5	78.5	76.2	74.2	74.5	70.5	71.4	72.9	78.3	79.0	75.9	79.3	81.5	93.7	70.5	82.0
25	82.1	89.9	93.5	92.4	90.1	89.2	91.8	92.7	90.8	89.6	88.4	87.6	85.5	87.1	92.1	91.0	85.3	84.9	86.1	87.9	91.6	89.3	89.7	90.8	93.5	82.1	89.1
26	89.5	89.7	91.5	95.5	95.1	92.0	94.9	92.3	90.1	88.4	84.5	82.4	79.5	77.0	78.1	80.2	83.7	80.0	82.9	80.6	79.7	81.9	83.6	87.0	95.5	77.0	85.8
27	91.2	94.1	94.9	94.4	95.1	96.0	96.6	89.3	88.9	89.6	90.6	84.5	83.0	79.1	75.2	74.2	75.9	75.3	76.8	78.9	83.2	84.7	86.0	84.6	96.6	74.2	85.9
28	84.2	85.6	88.7	88.1	90.1	89.0	87.9	88.8	89.0	89.7	83.2	86.3	82.6	80.5	78.1	77.1	78.7	79.4	81.9	83.3	83.8	86.2	86.4	87.8	90.1	77.1	84.8
29	87.3	85.5	83.2	85.6	83.1	81.0	81.5	81.5	78.8	74.2	69.7	62.8	54.9	48.8	46.3	46.6	49.5	53.4	57.3	54.8	57.8	62.4	66.3	66.2	87.3	46.3	67.4
30	69.3	73.8	79.3	82.7	82.7	81.7	80.3	79.8	77.7	76.5	74.1	70.2	67.3	67.0	68.0	64.3	65.8	76.8	73.8	69.3	75.0	71.1	70.2	69.4	82.7	64.3	73.6
31	70.1	69.0	69.7	73.0	77.0	77.1	76.2	75.9	75.5	72.9	71.2	70.2	69.3	67.2	67.6	69.1	70.0	68.1	64.3	60.0	62.6	61.4	59.1	59.4	77.1	59.1	69.0
Max.	**96.0**	**96.7**	**97.4**	**95.6**	**96.8**	**97.3**	**97.3**	**97.2**	**96.3**	**95.0**	**94.3**	**93.2**	**92.7**	**90.9**	**92.1**	**92.2**	**93.0**	**94.4**	**94.3**	**96.0**	**96.7**	**97.0**	**95.8**	**96.1**	**97.4**		
Min.	**62.8**	**61.7**	**57.4**	**60.0**	**60.7**	**65.9**	**63.6**	**61.3**	**60.5**	**59.2**	**57.6**	**54.9**	**50.8**	**46.5**	**43.3**	**39.7**	**37.0**	35.5	35.9	**39.0**	**39.6**	**42.3**	**54.3**	**58.8**		**35.5**	
Avg.	**84.7**	**85.9**	**86.8**	**87.2**	**87.5**	**88.2**	**88.2**	**86.8**	**85.5**	**82.9**	**80.3**	**78.5**	**77.0**	**75.0**	**73.6**	**73.3**	**73.2**	**72.7**	**73.8**	**75.8**	**78.4**	**80.4**	**82.2**	**83.5**			**80.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	59.2	61.2	64.3	66.8	62.5	63.8	67.5	68.0	66.7	68.7	71.0	72.4	71.2	69.3	67.2	71.7	75.2	75.2	76.0	77.0	77.0	75.2	76.1	77.5	77.5	59.2	70.0
2	75.4	77.7	78.5	78.4	76.7	74.2	78.2	75.9	77.3	80.6	82.9	82.3	77.1	77.1	74.1	72.8	71.0	69.9	69.2	70.9	71.3	72.2	71.7	73.4	82.9	69.2	75.4
3	73.7	74.6	73.6	74.1	73.7	72.9	73.3	72.8	77.6	87.4	92.4	90.2	89.7	89.6	88.7	87.8	84.7	80.2	77.4	83.2	89.8	95.9	96.3	97.0	97.0	72.8	83.2
4	97.3	95.8	96.6	95.2	94.4	94.2	93.6	93.3	89.4	85.0	79.9	77.5	79.0	84.2	86.0	85.7	85.4	84.3	82.8	87.1	94.7	96.1	96.3	95.8	97.3	77.5	89.6
5	96.7	96.3	97.0	96.9	97.2	97.3	97.8	97.7	97.3	94.6	89.3	83.2	81.7	78.1	78.5	84.5	92.1	93.8	96.4	97.4	98.0	98.3	98.4	98.5	98.5	78.1	93.2
6	98.6	98.6	97.3	94.9	92.4	91.1	81.5	71.7	72.7	68.7	65.9	65.8	70.1	72.9	74.3	73.0	70.7	70.5	72.4	71.9	70.9	72.6	74.4	75.8	98.6	65.8	77.9
7	72.4	68.9	68.2	68.3	69.2	66.5	69.1	75.6	76.9	75.4	79.5	87.5	76.9	87.1	79.3	77.4	79.3	75.0	77.6	87.1	92.0	94.1	97.0	97.4	97.4	66.5	79.1
8	97.1	95.7	97.2	97.6	96.1	97.5	97.8	98.0	96.9	96.2	93.3	85.8	80.0	76.3	77.8	82.5	82.9	83.4	73.4	73.5	75.5	73.6	73.6	75.5	98.0	73.4	86.5
9	76.4	77.0	76.4	73.8	72.5	74.0	76.0	76.6	78.4	78.6	78.4	77.8	78.5	76.4	84.6	82.4	86.2	86.9	86.8	88.2	89.4	89.6	92.0	93.1	93.1	72.5	81.2
10	95.1	96.8	97.0	97.6	98.0	98.2	98.2	98.2	98.1	97.8	90.6	87.5	85.9	84.1	80.0	76.4	76.0	76.3	80.0	84.5	85.7	85.6	90.7	90.8	98.2	76.0	89.5
11	91.4	91.8	91.3	91.1	89.9	89.4	90.5	89.5	88.9	82.0	78.3	77.0	74.9	68.3	73.7	74.4	78.7	82.6	82.7	80.8	79.0	84.9	88.1	89.8	91.8	68.3	83.7
12	85.6	84.9	83.6	85.1	84.7	80.3	78.3	79.4	79.7	81.7	81.0	80.4	78.8	78.9	77.9	78.7	79.1	78.6	78.3	78.7	77.8	78.5	78.5	79.1	85.6	77.8	80.3
13	79.9	81.6	83.9	83.5	83.1	81.0	82.8	86.4	87.7	87.3	86.0	87.8	85.8	81.4	82.0	76.4	74.3	76.3	75.1	72.6	73.5	73.3	74.2	75.2	87.8	72.6	80.5
14	75.3	70.6	66.7	71.2	67.0	70.6	79.1	77.1	75.8	77.5	77.9	76.8	79.5	83.6	85.8	90.4	91.3	91.7	86.1	91.1	91.2	94.6	96.4	97.2	97.2	66.7	81.9
15	97.5	96.5	95.9	92.9	85.9	85.9	84.3	83.4	83.5	87.3	84.9	81.4	79.7	80.0	79.3	80.6	78.7	78.9	83.0	90.4	95.4	95.9	95.7	96.1	97.5	78.7	87.2
16	95.7	94.8	86.6	85.2	81.6	86.9	90.5	89.3	89.7	87.3	85.9	84.6	82.9	76.9	71.8	67.2	66.5	66.4	70.1	70.0	75.1	80.8	75.8	75.7	95.7	66.4	80.7
17	79.4	87.1	88.9	88.4	90.3	91.1	90.8	89.3	89.6	89.1	84.4	79.4	77.6	76.1	73.0	73.4	77.9	79.5	79.1	78.8	82.2	79.5	77.0	76.8	91.1	73.0	82.4
18	75.7	75.2	73.5	73.3	73.5	73.7	72.8	70.9	66.8	65.9	63.9	66.7	63.2	70.5	74.8	78.7	77.3	79.0	81.5	84.7	86.9	82.1	80.0	79.4	86.9	63.2	74.6
19	79.5	78.8	75.9	77.2	80.0	89.2	95.3	94.8	93.8	95.8	94.8	92.1	89.7	89.2	85.1	84.9	81.4	83.5	89.3	87.4	86.5	87.2	84.5	83.9	95.8	75.9	86.7
20	83.5	84.5	83.6	84.8	81.7	77.1	79.9	78.4	80.3	81.1	80.6	81.8	81.9	79.0	76.3	72.4	64.1	60.9	63.4	67.3	75.4	84.0	84.2	83.1	84.8	60.9	77.9
21	84.5	84.2	82.9	78.6	74.5	71.5	69.6	66.6	66.3	68.2	62.0	56.4	49.9	48.0	47.5	49.7	49.3	55.6	59.1	62.8	67.8	69.9	75.2	87.0	87.0	47.5	66.1
22	86.6	85.7	85.7	87.1	89.4	88.9	80.8	78.9	80.2	79.9	73.9	66.3	55.0	53.6	54.6	53.2	55.4	57.2	68.0	77.2	83.7	90.5	93.3	93.3	93.3	53.2	75.8
23	89.8	92.7	92.8	93.6	93.5	95.3	96.5	96.0	96.9	97.2	96.0	95.1	94.2	94.0	94.0	94.6	95.3	91.5	89.1	94.2	96.5	96.8	97.0	97.2	97.2	89.1	94.6
24	97.4	97.6	97.7	97.9	97.7	97.4	97.6	96.8	97.4	97.5	88.5	79.7	86.1	81.6	78.2	77.2	75.4	74.9	75.3	75.5	74.4	74.0	72.4	72.9	97.9	72.4	85.9
25	72.0	72.5	74.3	78.9	85.3	79.3	77.4	72.5	74.7	76.4	73.3	75.5	86.1	83.9	88.5	85.4	83.7	81.1	88.2	91.3	91.0	90.9	81.4	79.3	91.3	72.0	81.0
26	79.7	89.2	92.6	91.9	92.9	93.3	94.1	93.6	92.4	90.4	87.6	82.2	81.6	79.9	68.6	69.8	73.0	82.7	81.7	91.1	94.4	90.5	93.5	88.5	94.4	68.6	86.5
27	88.4	88.4	88.0	86.9	85.0	82.9	80.8	83.6	83.1	82.0	77.7	75.1	68.4	65.5	67.3	67.7	69.3	61.0	60.9	62.8	56.4	52.5	54.2	53.2	88.4	52.5	72.5
28	54.5	61.2	66.5	66.6	71.7	67.3	70.3	63.5	63.8	65.1	59.1	54.8	52.5	52.3	55.0	72.5	73.5	71.2	67.1	68.1	82.6	90.0	91.7	89.8	91.7	52.3	67.9
29	62.8	58.9	57.0	55.5	56.2	56.6	59.4	60.1	60.2	59.1	57.8	58.3	57.5	57.6	53.4	49.7	49.2	54.6	60.6	61.8	80.7	88.0	87.8	92.7	92.7	49.2	62.3
30	94.0	90.5	84.7	81.3	80.5	78.2	78.1	77.7	79.1	77.6	74.2	68.7	59.9	53.8	56.2	58.4	60.4	61.9	69.0	74.5	82.8	80.4	82.0	81.8	94.0	53.8	74.4
Max.	**98.6**	**98.6**	**97.7**	**97.9**	**98.0**	**98.2**	**98.2**	**98.2**	**98.1**	**97.8**	**96.0**	**95.1**	**94.2**	**94.0**	**94.0**	**94.6**	**95.3**	**93.8**	**96.4**	**97.4**	**98.0**	**98.3**	**98.4**	**98.5**	**98.6**		
Min.	**54.5**	**58.9**	**57.0**	**55.5**	**56.2**	**56.6**	**59.4**	**60.1**	**60.2**	**59.1**	**57.8**	**54.8**	**49.9**	**48.0**	**47.5**	**49.7**	**49.2**	54.6	59.1	**61.8**	**56.4**	**52.5**	**54.2**	**53.2**		**47.5**	
Avg.	**83.2**	**83.6**	**83.3**	**83.2**	**82.6**	**82.2**	**82.7**	**81.9**	**82.0**	**82.0**	**79.7**	**77.7**	**75.8**	**75.0**	**74.4**	**75.0**	**75.2**	**75.5**	**76.6**	**79.4**	**82.6**	**83.9**	**84.3**	**84.9**			**80.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	79.4	79.9	84.2	85.0	85.0	90.5	92.1	95.0	95.5	95.4	91.4	78.2	76.6	71.4	64.1	71.7	79.6	86.2	81.5	77.0	81.2	79.8	76.1	89.0	95.5	64.1	82.7
2	93.0	93.4	95.3	95.5	94.8	95.1	95.6	95.6	96.0	90.6	80.8	72.8	67.3	62.3	62.2	65.0	66.6	69.0	69.9	73.7	74.1	78.4	86.4	84.9	96.0	62.2	81.6
3	76.8	77.3	85.3	90.3	85.4	84.3	89.3	91.4	91.2	91.1	85.3	82.8	80.3	78.6	85.5	82.7	81.0	78.9	76.2	76.4	80.5	85.0	87.2	87.7	91.4	76.2	83.8
4	88.4	87.5	84.1	87.2	86.1	86.6	85.7	84.8	84.2	83.0	76.9	68.6	64.5	62.8	65.2	62.0	62.9	67.6	73.3	77.9	82.5	79.9	90.0	88.9	90.0	62.0	78.4
5	82.7	82.0	80.4	79.0	75.6	73.2	79.6	86.9	90.5	90.2	86.3	81.9	81.2	79.3	79.6	80.3	79.1	74.1	72.2	81.1	85.3	87.0	87.7	86.6	90.5	72.2	81.7
6	88.3	83.6	82.5	83.8	82.1	81.3	78.1	73.5	79.9	80.9	77.4	71.5	68.9	69.3	65.8	67.2	67.6	68.8	71.7	74.5	76.2	74.8	76.0	77.6	88.3	65.8	75.9
7	77.7	78.1	73.1	66.4	66.6	66.9	66.3	66.2	66.8	66.9	63.3	58.7	57.7	57.1	59.2	59.8	57.4	58.1	60.9	61.9	61.8	63.3	63.6	63.9	78.1	57.1	64.2
8	63.4	61.3	60.9	61.2	62.6	60.2	61.3	60.6	62.1	60.9	57.0	53.1	51.8	48.8	47.4	43.4	43.1	47.1	53.7	56.5	64.6	69.2	77.7	67.2	77.7	43.1	58.1
9	58.0	61.0	61.4	61.1	62.5	68.3	72.0	74.1	70.9	69.9	72.0	78.1	78.1	75.1	74.9	73.7	71.9	73.9	75.5	74.8	75.3	74.6	75.9	76.9	78.1	58.0	71.2
10	78.2	81.6	85.9	90.5	94.2	95.4	93.7	89.0	92.9	92.8	93.2	88.0	78.3	74.5	69.1	69.3	80.8	81.8	85.3	91.8	94.0	94.8	95.5	95.3	95.5	69.1	86.9
11	85.0	77.1	79.8	86.3	83.2	81.8	83.2	84.5	84.3	87.2	86.5	88.1	87.1	84.4	84.9	80.3	89.4	89.5	91.5	89.2	86.7	87.3	84.7	82.1	91.5	77.1	85.2
12	78.9	78.3	75.6	72.7	70.7	68.8	67.6	66.3	66.2	66.9	66.4	64.7	63.0	57.7	55.8	54.2	52.8	50.0	50.1	54.9	57.8	59.1	59.9	62.3	78.9	50.0	63.4
13	65.4	66.2	65.3	59.1	59.9	63.7	67.4	71.8	74.9	74.9	73.2	68.2	59.8	57.2	57.7	64.2	74.5	76.8	74.7	71.5	71.4	69.6	73.3	78.8	78.8	57.2	68.3
14	89.6	94.1	89.9	85.5	89.4	92.1	93.5	95.1	96.3	96.8	97.1	97.5	97.0	96.2	95.4	95.2	94.5	93.9	93.9	96.2	95.9	97.1	97.4	97.6	97.6	85.5	94.5
15	97.5	98.0	97.7	98.1	97.7	98.2	98.1	97.6	96.4	95.1	92.6	88.6	85.3	81.0	78.9	79.8	81.9	83.0	85.6	85.0	85.5	83.7	86.5	83.9	98.2	78.9	89.8
16	83.7	86.6	85.3	85.8	86.3	86.7	87.5	85.7	83.7	84.0	84.3	83.7	80.6	79.1	78.3	77.4	77.1	79.1	79.9	80.9	82.8	79.7	78.3	77.4	87.5	77.1	82.2
17	78.4	79.2	79.7	80.8	82.5	83.6	82.9	83.0	82.1	82.9	83.1	80.5	76.3	73.5	72.8	67.4	65.5	69.0	69.7	71.5	70.6	73.2	79.6	72.7	83.6	65.5	76.7
18	69.2	70.0	71.3	70.1	69.5	67.6	61.9	57.7	58.3	57.8	55.8	55.5	54.5	52.4	51.8	50.0	49.6	52.6	55.9	55.6	58.6	52.6	53.9	53.3	71.3	49.6	58.6
19	56.6	59.0	60.4	63.5	63.0	63.1	60.0	59.3	59.2	59.8	59.9	61.0	58.9	60.2	64.6	68.4	68.8	70.7	75.2	80.1	81.1	83.1	84.8	84.6	84.8	56.6	66.9
20	82.8	83.5	81.9	80.7	81.2	80.2	81.2	82.8	85.2	85.7	85.0	81.0	78.8	77.3	75.7	74.2	79.9	81.0	81.1	80.8	78.1	77.0	77.2	77.7	85.7	74.2	80.4
21	77.8	77.9	78.0	77.8	75.2	73.1	74.1	73.1	71.6	72.4	72.7	72.7	70.9	70.7	71.4	71.1	69.8	69.8	68.8	68.2	69.4	70.6	71.3	69.1	78.0	68.2	72.4
22	67.8	64.6	60.5	60.3	61.6	61.2	59.6	58.2	60.3	60.2	56.9	54.2	52.3	46.9	50.4	47.5	53.3	56.2	56.3	59.2	62.2	65.3	64.3	63.8	67.8	46.9	58.5
23	63.3	58.1	55.9	56.6	59.2	66.2	68.4	70.6	70.8	72.2	62.3	64.5	54.3	44.6	38.2	30.6	34.4	38.2	41.0	46.8	51.1	49.1	54.6	61.7	72.2	30.6	54.7
24	61.6	60.5	59.7	61.3	58.4	55.9	64.5	62.4	58.9	52.8	51.9	49.9	47.8	46.3	46.0	52.0	53.1	52.8	53.8	55.7	56.6	64.0	64.5	67.5	67.5	46.0	56.6
25	66.0	67.1	68.1	72.6	88.6	92.6	92.1	94.0	94.0	94.6	93.7	92.5	91.4	87.2	89.8	96.5	96.1	95.9	88.9	77.9	84.8	89.3	88.0	86.9	96.5	66.0	87.0
26	77.1	73.4	65.1	60.2	59.1	61.0	68.0	70.9	77.4	86.3	85.1	83.2	80.2	73.7	68.4	65.0	67.2	67.0	67.3	68.2	65.2	67.4	68.9	67.4	86.3	59.1	70.5
27	70.3	70.5	70.2	73.0	71.4	74.4	74.6	71.2	74.6	73.5	70.7	72.0	70.2	69.9	69.3	65.4	65.8	66.0	66.1	68.9	69.7	71.0	72.2	71.9	74.6	65.4	70.5
28	73.2	74.5	75.7	75.8	79.5	85.5	86.9	87.9	87.7	88.1	87.2	88.3	79.5	73.6	69.5	67.4	65.0	60.7	69.5	66.8	61.0	61.6	58.5	58.4	88.3	58.4	74.2
29	65.8	73.2	74.8	74.6	71.9	73.7	74.2	74.0	73.6	75.4	73.5	70.1	62.6	59.3	58.7	52.8	61.4	64.8	69.1	65.2	85.7	93.5	95.7	96.2	96.2	52.8	72.5
30	96.7	97.4	97.5	97.5	97.5	97.0	97.3	97.8	98.0	96.3	95.1	94.7	94.0	92.9	88.3	82.7	83.0	85.6	88.8	90.0	91.8	94.0	95.3	95.9	98.0	82.7	93.5
31	95.9	95.8	95.4	94.9	95.0	94.4	94.0	93.5	93.8	93.7	92.4	93.4	92.9	90.1	88.5	89.3	90.6	86.1	79.8	78.6	82.1	83.4	84.8	86.9	95.9	78.6	90.2
Max.	**97.5**	**98.0**	**97.7**	**98.1**	**97.7**	**98.2**	**98.1**	**97.8**	**98.0**	**96.8**	**97.1**	**97.5**	**97.0**	**96.2**	**95.4**	**96.5**	**96.1**	**95.9**	**93.9**	**96.2**	**95.9**	**97.1**	**97.4**	**97.6**	**98.2**		
Min.	**56.6**	**58.1**	**55.9**	**56.6**	**58.4**	**55.9**	**59.6**	**57.7**	**58.3**	**52.8**	**51.9**	**49.9**	**47.8**	**44.6**	**38.2**	**30.6**	**34.4**	38.2	41.0	**46.8**	**51.1**	**49.1**	**53.9**	**53.3**		**30.6**	
Avg.	**77.1**	**77.1**	**76.8**	**77.0**	**77.3**	**78.1**	**79.1**	**79.2**	**79.9**	**79.9**	**77.7**	**75.4**	**72.3**	**69.5**	**68.6**	**67.9**	**69.8**	**70.8**	**71.8**	**72.8**	**75.0**	**76.1**	**77.7**	**77.9**			**75.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	90.1	85.9	91.5	92.8	91.7	92.6	90.7	92.3	92.0	88.8	83.3	82.1	81.8	81.9	83.8	84.2	81.2	80.2	80.0	76.7	76.5	76.0	78.2	75.9	92.8	75.9	84.6
2	73.3	72.0	72.5	69.1	66.9	65.4	68.2	70.0	69.1	64.7	58.1	57.9	60.6	61.6	62.7	65.8	69.0	71.6	71.1	70.3	72.7	71.8	70.8	70.7	73.3	57.9	67.7
3	72.4	72.4	70.8	72.0	70.3	71.0	71.3	70.1	70.7	70.1	69.1	63.7	62.2	63.1	62.2	62.0	59.7	61.7	62.0	60.8	61.9	62.2	64.8	66.6	72.4	59.7	66.4
4	69.5	70.8	70.7	70.1	70.8	72.1	71.3	71.1	73.1	73.2	73.8	72.4	71.7	71.9	72.8	71.0	74.5	75.0	73.7	74.9	77.4	78.5	79.8	80.3	80.3	69.5	73.3
5	81.0	81.9	81.9	81.2	80.9	80.1	81.4	82.4	83.5	80.1	81.1	80.1	79.1	77.1	74.2	71.7	71.5	71.7	69.4	64.8	65.8	65.6	67.5	67.7	83.5	64.8	75.9
6	66.4	65.7	65.4	61.4	61.5	58.3	58.4	57.2	57.3	54.8	62.0	64.3	54.1	49.9	48.1	51.9	59.4	64.8	67.5	68.5	71.1	74.9	71.3	66.4	74.9	48.1	61.7
7	63.8	64.5	69.7	70.7	74.4	73.8	74.5	74.6	75.7	74.2	73.1	74.5	73.9	70.3	69.7	72.0	69.4	68.8	70.3	75.9	78.3	77.8	77.6	76.5	78.3	63.8	72.7
8	76.0	75.4	75.0	77.5	78.6	78.1	78.1	77.4	78.2	80.7	82.1	80.2	71.5	62.9	62.1	63.3	63.6	61.1	58.5	57.4	56.9	55.7	55.6	56.5	82.1	55.6	69.3
9	57.9	62.4	66.0	65.1	68.1	66.1	66.2	68.9	74.6	76.3	79.5	78.9	78.2	77.3	78.6	79.5	81.1	82.5	84.8	81.9	79.4	79.9	77.6	75.0	84.8	57.9	74.4
10	66.9	63.0	61.9	62.8	60.1	59.2	49.8	47.4	51.1	75.1	90.1	94.4	88.2	86.8	88.4	84.3	85.6	80.6	74.0	80.4	89.6	88.8	81.5	80.6	94.4	47.4	74.6
11	79.2	75.7	67.4	71.2	71.1	70.6	71.2	75.1	90.9	93.4	91.4	94.5	96.4	97.6	95.7	94.0	89.2	88.3	92.6	90.3	89.0	88.8	90.0	90.2	97.6	67.4	85.6
12	90.3	90.0	92.6	81.5	83.0	74.7	80.5	79.8	82.2	75.4	79.1	80.5	79.0	75.8	76.4	75.6	76.5	76.1	77.6	79.4	78.6	79.3	81.1	88.9	92.6	74.7	80.6
13	86.6	84.0	88.6	89.3	89.5	88.6	89.1	90.6	90.2	90.1	88.0	91.2	90.1	85.8	86.8	83.0	79.4	88.6	92.8	93.2	96.1	96.3	96.8	96.8	96.8	79.4	89.6
14	96.4	95.3	95.2	94.2	92.4	93.9	94.3	94.2	93.9	93.2	93.7	91.9	87.1	77.7	78.7	81.4	89.1	88.8	84.4	80.0	79.2	83.6	84.1	87.2	96.4	77.7	88.7
15	89.6	87.7	93.8	94.9	91.6	88.7	87.2	87.0	86.5	87.8	91.3	89.7	88.3	86.4	81.0	81.7	86.0	85.8	92.2	95.4	85.0	77.5	81.2	83.6	95.4	77.5	87.5
16	79.9	76.7	81.8	77.7	72.0	72.9	92.7	96.5	97.5	96.9	97.7	96.6	90.4	89.5	84.6	81.1	83.0	88.5	90.1	90.5	88.7	90.5	89.8	89.5	97.7	72.0	87.3
17	91.3	91.6	92.2	92.1	92.2	91.9	92.1	91.7	92.5	91.3	91.1	91.0	78.1	77.5	77.4	74.8	75.2	76.0	75.0	75.6	77.8	80.3	82.0	84.4	92.5	74.8	84.8
18	85.7	84.5	84.0	80.7	75.6	74.1	72.3	71.9	72.3	74.4	73.6	73.8	72.9	71.5	73.4	71.2	70.4	75.8	79.4	85.2	86.6	82.0	82.1	83.4	86.6	70.4	77.4
19	83.6	73.9	79.1	81.9	89.8	92.5	93.2	92.0	92.1	91.8	92.5	91.2	87.4	85.1	81.7	80.5	77.6	73.3	70.2	71.4	69.9	68.4	69.8	70.6	93.2	68.4	81.6
20	67.5	67.3	68.1	68.4	67.7	67.4	66.0	65.4	61.0	62.5	67.3	69.9	70.9	68.4	71.2	71.3	73.0	72.9	72.4	70.6	70.2	70.5	69.7	69.5	73.0	61.0	68.7
21	70.2	69.0	69.6	71.7	72.9	71.9	73.3	73.0	70.6	68.5	69.5	72.0	70.3	69.5	71.2	71.0	73.3	75.7	77.4	77.8	78.4	79.6	78.5	75.8	79.6	68.5	72.9
22	74.8	72.5	74.7	75.3	79.5	80.3	79.6	83.2	88.1	90.3	91.2	90.8	89.4	84.6	81.6	77.3	73.4	72.0	76.0	77.3	76.6	76.1	79.7	80.8	91.2	72.0	80.2
23	80.8	80.3	82.3	86.8	87.8	90.5	84.3	83.8	85.3	87.6	86.7	84.8	84.2	83.0	84.0	81.7	70.5	73.0	73.5	73.9	79.0	76.5	75.4	76.9	90.5	70.5	81.4
24	75.6	75.2	76.3	78.1	78.2	78.7	79.1	79.0	77.7	76.6	80.6	78.5	82.6	88.9	87.4	88.5	87.9	93.1	88.6	87.3	91.2	95.9	96.7	96.6	96.7	75.2	84.1
25	92.6	87.8	84.9	82.6	81.4	83.0	83.9	83.7	79.7	77.4	77.1	78.3	81.5	79.8	75.9	76.3	78.1	78.3	77.5	77.2	78.9	76.9	74.1	72.3	92.6	72.3	80.0
26	74.0	69.6	66.7	64.8	63.0	63.2	64.6	63.8	61.1	59.6	59.6	60.5	58.0	58.8	61.1	63.1	62.3	63.2	63.1	65.7	67.7	67.5	67.4	68.9	74.0	58.0	64.0
27	70.6	71.5	73.1	73.0	68.5	67.9	66.7	62.2	63.2	60.1	56.2	55.7	53.9	52.5	52.7	52.1	52.9	71.4	82.0	86.5	86.1	84.6	85.6	90.9	90.9	52.1	68.3
28	86.8	85.7	85.9	85.0	85.6	87.8	86.2	85.8	86.8	86.4	84.5	87.4	87.6	84.7	84.3	85.3	83.8	82.3	80.2	81.8	83.0	81.5	82.4	82.1	87.8	80.2	84.7
29	83.8	83.2	83.8	82.6	82.1	81.3	80.9	78.6	74.1	74.4	73.9	74.8	73.9	73.8	75.2	76.1	75.4	76.0	75.0	75.3	75.1	74.6	74.5	70.9	83.8	70.9	77.0
30	68.1	65.5	66.1	66.6	65.1	62.7	61.3	63.6	64.9	61.4	58.4	56.9	58.8	54.4	54.2	55.3	58.9	61.5	63.8	57.2	55.2	62.0	64.6	63.3	68.1	54.2	61.2
Max.	**96.4**	**95.3**	**95.2**	**94.9**	**92.4**	**93.9**	**94.3**	**96.5**	**97.5**	**96.9**	**97.7**	**96.6**	**96.4**	**97.6**	**95.7**	**94.0**	**89.2**	**93.1**	**92.8**	**95.4**	**96.1**	**96.3**	**96.8**	**96.8**	**97.7**		
Min.	**57.9**	**62.4**	**61.9**	**61.4**	**60.1**	**58.3**	**49.8**	**47.4**	**51.1**	**54.8**	**56.2**	**55.7**	**53.9**	**49.9**	**48.1**	**51.9**	**52.9**	61.1	58.5	**57.2**	**55.2**	**55.7**	**55.6**	**56.5**		**47.4**	
Avg.	**78.2**	**76.7**	**77.7**	**77.4**	**77.1**	**76.7**	**77.0**	**77.1**	**77.9**	**77.9**	**78.5**	**78.6**	**76.7**	**74.9**	**74.6**	**74.2**	**74.4**	**75.9**	**76.5**	**76.8**	**77.4**	**77.5**	**77.7**	**78.0**			**76.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Relative Humidity (%)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	61.4	63.1	62.8	65.3	68.8	69.0	66.5	65.3	63.3	61.3	57.6	63.3	60.9	63.8	64.4	65.8	71.7	74.8	72.7	68.7	73.2	70.8	71.5	70.0	74.8	57.6	66.5
2	69.1	69.8	65.4	66.3	68.4	61.1	60.2	55.4	45.6	45.1	33.9	35.0	32.6	29.3	32.3	39.4	41.7	45.0	48.5	51.0	54.9	58.1	60.0	58.9	69.8	29.3	51.1
3	60.5	61.1	62.5	63.6	63.3	62.8	64.8	70.0	74.3	75.0	73.6	70.4	74.2	82.2	84.3	83.3	82.8	79.2	77.1	75.3	75.5	74.9	74.4	74.4	84.3	60.5	72.5
4	76.6	75.4	73.4	69.4	68.6	67.5	71.6	73.3	81.6	77.2	76.3	74.6	76.1	77.2	78.6	79.8	83.2	83.0	85.6	85.8	86.8	90.7	92.3	93.2	93.2	67.5	79.1
5	94.0	93.1	94.5	93.4	91.4	87.1	88.3	89.5	88.8	85.2	85.3	79.0	77.4	75.6	72.1	71.3	71.3	72.8	76.3	72.0	73.1	74.1	74.8	76.9	94.5	71.3	81.6
6	77.6	78.2	78.4	77.2	80.8	88.4	94.5	96.3	97.3	97.6	97.9	97.6	97.8	97.9	98.1	98.3	98.3	98.4	98.6	98.8	98.8	98.8	98.9	98.9	98.9	77.2	93.5
7	99.0	99.0	98.3	98.1	96.6	95.2	94.2	92.9	93.0	93.6	92.8	91.6	91.9	90.0	90.1	88.1	88.5	88.4	89.6	92.0	92.8	90.4	91.4	89.0	99.0	88.1	92.8
8	79.8	71.2	69.2	66.7	65.5	63.7	63.2	61.6	60.1	59.2	74.3	80.7	73.9	68.8	67.1	64.9	69.6	74.8	73.3	67.5	63.9	65.2	68.6	60.9	80.7	59.2	68.1
9	56.3	56.8	55.0	55.7	64.0	79.7	95.1	96.7	96.9	97.4	98.0	96.3	86.4	84.0	85.9	84.7	87.7	85.9	84.1	84.6	83.6	83.8	78.4	77.9	98.0	55.0	81.4
10	77.0	79.6	80.4	74.4	80.9	86.0	84.1	76.3	66.6	67.7	69.2	69.6	65.6	64.9	60.4	61.8	61.6	62.5	64.9	64.7	68.1	74.8	75.0	73.0	86.0	60.4	71.2
11	71.4	67.3	58.9	59.5	56.4	52.8	47.0	46.7	59.2	68.4	70.3	67.8	69.7	72.3	81.7	82.4	81.2	72.5	70.3	71.2	69.7	58.0	59.9	59.8	82.4	46.7	65.6
12	56.9	58.6	60.2	57.5	57.0	63.7	68.7	66.8	68.6	68.7	67.3	60.8	58.1	62.8	76.0	76.6	77.9	80.4	82.1	83.9	83.5	82.2	80.3	79.3	83.9	56.9	69.9
13	77.0	76.9	74.5	72.9	71.7	70.5	71.2	84.3	88.1	92.2	93.3	93.4	92.3	91.3	87.5	79.2	82.0	80.4	84.4	88.8	86.1	85.3	86.6	88.3	93.4	70.5	83.3
14	88.0	87.7	88.3	84.5	83.5	86.6	86.2	80.1	78.8	81.4	83.7	81.6	75.1	74.8	74.9	74.9	73.1	74.6	68.9	64.2	62.9	61.1	61.1	64.2	88.3	61.1	76.7
15	61.7	62.5	65.1	67.0	68.7	69.6	71.2	71.6	77.5	82.5	86.8	95.3	96.7	97.6	97.5	97.8	98.1	98.4	98.5	98.2	97.7	97.5	98.0	97.8	98.5	61.7	85.5
16	97.5	96.0	96.6	95.1	93.7	91.6	90.5	89.6	90.1	90.9	92.0	92.5	91.2	90.9	89.2	83.6	83.8	79.8	76.0	72.5	64.3	60.0	54.7	44.2	97.5	44.2	83.6
17	42.9	41.3	46.8	48.1	50.2	58.9	62.0	75.2	74.0	68.9	65.6	63.0	60.0	61.9	58.6	57.6	57.0	57.5	60.8	61.5	63.4	58.8	57.2	63.4	75.2	41.3	58.9
18	65.8	66.4	63.0	58.8	60.5	60.5	58.7	58.3	58.6	59.0	59.7	59.2	58.8	59.0	63.7	64.3	66.3	65.6	63.5	62.2	63.9	63.8	62.3	63.7	66.4	58.3	61.9
19	67.6	70.5	66.4	68.7	76.2	71.3	66.7	74.0	73.8	71.7	74.6	76.7	74.4	76.3	73.6	72.4	70.9	68.7	62.6	62.1	62.9	63.1	63.9	67.3	76.7	62.1	69.8
20	71.4	72.1	70.3	64.0	60.6	60.8	60.6	56.4	55.8	60.1	64.1	56.9	55.9	55.2	55.0	62.0	62.1	64.3	65.5	71.7	79.4	79.2	68.8	76.1	79.4	55.0	64.5
21	81.5	86.9	89.9	89.5	90.4	91.9	93.4	94.7	94.7	94.5	95.4	96.2	88.5	81.3	80.7	82.5	85.2	83.4	83.3	84.1	89.6	93.1	92.9	93.5	96.2	80.7	89.0
22	94.0	89.5	87.4	87.4	87.6	87.4	90.8	94.2	92.8	91.2	94.3	95.6	95.8	96.0	94.6	94.9	95.1	94.1	93.0	92.1	90.0	89.4	86.0	91.8	96.0	86.0	91.9
23	94.2	92.3	93.1	94.0	94.0	93.2	95.1	96.6	96.5	96.6	97.1	79.6	83.3	72.3	65.1	60.7	60.6	58.5	59.7	62.7	66.8	70.9	66.7	65.5	97.1	58.5	79.8
24	63.5	62.7	64.8	61.3	58.3	62.1	67.0	67.8	68.1	67.1	71.6	69.2	62.2	55.1	50.5	53.8	61.2	67.2	75.5	72.8	70.7	73.2	76.2	76.2	76.2	50.5	65.8
25	69.3	64.0	51.8	59.9	75.6	81.0	80.0	79.5	74.3	74.8	70.6	72.6	78.8	80.2	89.7	91.1	91.0	91.2	92.2	91.8	81.6	73.4	74.7	69.0	92.2	51.8	77.4
26	68.5	67.6	65.8	66.7	63.5	63.5	63.7	63.7	67.6	65.3	64.0	60.5	58.1	57.8	58.8	57.7	57.1	56.8	56.3	59.0	59.8	58.8	60.7	60.3	68.5	56.3	61.7
27	56.4	56.5	56.6	59.1	57.6	55.0	53.8	53.6	55.4	55.3	57.2	59.1	60.3	60.5	59.1	61.0	62.3	61.2	63.3	65.8	64.9	63.8	63.4	65.3	65.8	53.6	59.4
28	67.6	67.0	63.9	65.6	68.2	65.6	65.5	65.2	64.8	66.6	67.5	67.5	66.0	66.4	67.0	66.0	68.5	68.8	68.3	67.6	69.3	70.6	71.6	70.4	71.6	63.9	67.3
29	70.9	71.3	71.5	72.3	71.9	72.4	73.2	73.5	73.9	75.9	76.3	76.0	74.7	73.7	73.5	73.5	74.2	75.0	76.0	76.8	77.8	78.2	78.3	79.5	79.5	70.9	74.6
30	79.7	80.8	81.2	80.3	80.3	79.7	79.1	78.6	78.8	77.1	76.5	75.7	73.4	73.1	73.4	73.5	72.3	72.1	71.6	70.5	70.7	71.7	70.2	70.1	81.2	70.1	75.4
31	70.6	69.6	69.5	68.9	67.8	69.1	68.3	67.6	67.9	67.0	66.4	66.4	66.6	65.4	63.9	62.8	64.7	65.6	66.0	65.1	60.6	56.9	57.8	58.5	70.6	56.9	65.5
Max.	**99.0**	**99.0**	**98.3**	**98.1**	**96.6**	**95.2**	**95.1**	**96.7**	**97.3**	**97.6**	**98.0**	**97.6**	**97.8**	**97.9**	**98.1**	**98.3**	**98.3**	**98.4**	**98.6**	**98.8**	**98.8**	**98.8**	**98.9**	**98.9**	**99.0**		
Min.	**42.9**	**41.3**	**46.8**	**48.1**	**50.2**	**52.8**	**47.0**	**46.7**	**45.6**	**45.1**	**33.9**	**35.0**	**32.6**	**29.3**	**32.3**	**39.4**	**41.7**	45.0	48.5	**51.0**	**54.9**	**56.9**	**54.7**	**44.2**		**29.3**	
Avg.	**73.2**	**72.7**	**71.8**	**71.3**	**72.3**	**73.2**	**74.0**	**74.7**	**75.1**	**75.3**	**75.9**	**74.9**	**73.4**	**72.8**	**73.1**	**73.1**	**74.2**	**74.2**	**74.5**	**74.4**	**74.4**	**73.9**	**73.4**	**73.5**			**73.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	0	6	22	55	57	35	19	3	0	0	0	0	0	0	57	0	8
2	0	0	0	0	0	0	0	0	0	0	0	9	38	38	31	21	11	3	0	0	0	0	0	0	38	0	6
3	0	0	0	0	0	0	0	0	0	0	0	4	7	12	42	44	16	2	0	0	0	0	0	0	44	0	5
4	0	0	0	0	0	0	0	0	0	0	0	7	31	62	62	44	19	4	0	0	0	0	0	0	62	0	10
5	0	0	0	0	0	0	0	0	0	0	0	8	36	62	55	35	15	3	0	0	0	0	0	0	62	0	9
6	0	0	0	0	0	0	0	0	0	0	1	11	40	49	62	46	30	4	0	0	0	0	0	0	62	0	10
7	0	0	0	0	0	0	0	0	0	0	0	8	26	38	33	33	13	2	0	0	0	0	0	0	38	0	6
8	0	0	0	0	0	0	0	0	0	0	1	10	51	70	61	56	28	5	0	0	0	0	0	0	70	0	12
9	0	0	0	0	0	0	0	0	0	0	1	12	37	48	43	26	13	4	0	0	0	0	0	0	48	0	8
10	0	0	0	0	0	0	0	0	0	0	1	14	32	40	39	25	14	5	0	0	0	0	0	0	40	0	7
11	0	0	0	0	0	0	0	0	0	0	1	11	34	73	41	24	14	6	0	0	0	0	0	0	73	0	8
12	0	0	0	0	0	0	0	0	0	0	1	11	29	36	36	25	14	5	0	0	0	0	0	0	36	0	6
13	0	0	0	0	0	0	0	0	0	0	1	8	24	34	37	25	15	6	0	0	0	0	0	0	37	0	6
14	0	0	0	0	0	0	0	0	0	0	0	6	19	42	46	41	22	5	0	0	0	0	0	0	46	0	7
15	0	0	0	0	0	0	0	0	0	0	0	9	33	46	49	43	30	6	0	0	0	0	0	0	49	0	9
16	0	0	0	0	0	0	0	0	0	0	1	20	59	75	65	36	17	7	0	0	0	0	0	0	75	0	12
17	0	0	0	0	0	0	0	0	0	0	0	9	27	54	53	54	29	8	0	0	0	0	0	0	54	0	10
18	0	0	0	0	0	0	0	0	0	0	1	10	28	42	41	31	21	4	0	0	0	0	0	0	42	0	7
19	0	0	0	0	0	0	0	0	0	0	1	7	17	36	60	109	58	7	0	0	0	0	0	0	109	0	12
20	0	0	0	0	0	0	0	0	0	0	0	3	8	15	14	14	7	2	0	0	0	0	0	0	15	0	3
21	0	0	0	0	0	0	0	0	0	0	1	18	35	59	59	41	29	27	0	0	0	0	0	0	59	0	11
22	0	0	0	0	0	0	0	0	0	0	0	8	24	69	72	57	39	10	1	0	0	0	0	0	72	0	12
23	0	0	0	0	0	0	0	0	0	0	2	17	34	40	38	29	18	8	1	0	0	0	0	0	40	0	8
24	0	0	0	0	0	0	0	0	0	0	1	12	22	34	43	40	30	10	0	0	0	0	0	0	43	0	8
25	0	0	0	0	0	0	0	0	0	0	6	53	65	72	78	64	36	19	1	0	0	0	0	0	78	0	16
26	0	0	0	0	0	0	0	0	0	0	3	18	34	39	36	24	31	19	1	0	0	0	0	0	39	0	9
27	0	0	0	0	0	0	0	0	0	0	2	19	27	35	34	64	20	6	1	0	0	0	0	0	64	0	9
28	0	0	0	0	0	0	0	0	0	0	2	19	43	59	78	72	53	18	2	0	0	0	0	0	78	0	14
29	0	0	0	0	0	0	0	0	0	0	6	60	134	107	99	53	33	13	2	0	0	0	0	0	134	0	21
30	0	0	0	0	0	0	0	0	0	0	7	34	53	77	88	62	57	25	3	0	0	0	0	0	88	0	17
31	0	0	0	0	0	0	0	0	0	0	4	20	38	49	44	32	21	14	3	0	0	0	0	0	49	0	9
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**60**	**134**	**107**	**99**	**109**	**58**	**27**	**3**	**0**	**0**	**0**	**0**	**0**	**134**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**7**	**12**	**14**	**14**	**7**	**2**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**36**	**51**	**51**	**42**	**25**	**8**	**1**	**0**	**0**	**0**	**0**	**0**			**10**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	5	24	58	50	42	32	22	14	4	0	0	0	0	0	58	0	10
2	0	0	0	0	0	0	0	0	0	0	5	22	38	43	41	33	22	14	4	0	0	0	0	0	43	0	9
3	0	0	0	0	0	0	0	0	0	0	6	22	37	44	44	35	35	25	5	0	0	0	0	0	44	0	10
4	0	0	0	0	0	0	0	0	0	0	6	24	39	43	42	34	23	15	5	0	0	0	0	0	43	0	10
5	0	0	0	0	0	0	0	0	0	0	7	24	39	44	42	34	23	16	6	0	0	0	0	0	44	0	10
6	0	0	0	0	0	0	0	0	0	0	7	26	41	46	44	35	24	16	6	0	0	0	0	0	46	0	10
7	0	0	0	0	0	0	0	0	0	0	8	26	40	45	43	35	24	16	6	0	0	0	0	0	45	0	10
8	0	0	0	0	0	0	0	0	0	0	14	43	74	105	84	68	74	51	11	0	0	0	0	0	105	0	22
9	0	0	0	0	0	0	0	0	0	0	26	64	110	146	153	130	109	50	10	0	0	0	0	0	153	0	33
10	0	0	0	0	0	0	0	0	0	0	10	29	41	46	44	36	26	23	7	0	0	0	0	0	46	0	11
11	0	0	0	0	0	0	0	0	0	0	8	40	78	117	138	140	59	48	8	0	0	0	0	0	140	0	27
12	0	0	0	0	0	0	0	0	0	1	12	36	49	78	55	41	27	18	10	0	0	0	0	0	78	0	14
13	0	0	0	0	0	0	0	0	0	0	15	42	70	92	54	29	23	28	10	0	0	0	0	0	92	0	15
14	0	0	0	0	0	0	0	0	0	0	5	17	32	50	65	74	57	30	9	0	0	0	0	0	74	0	14
15	0	0	0	0	0	0	0	0	0	1	26	66	72	183	77	51	34	25	12	1	0	0	0	0	183	0	23
16	0	0	0	0	0	0	0	0	0	0	10	33	54	74	69	71	70	58	28	1	0	0	0	0	74	0	19
17	0	0	0	0	0	0	0	0	0	1	11	27	51	44	51	33	30	20	4	0	0	0	0	0	51	0	11
18	0	0	0	0	0	0	0	0	0	0	3	16	32	49	63	74	37	20	7	0	0	0	0	0	74	0	12
19	0	0	0	0	0	0	0	0	0	0	6	23	39	46	44	80	89	64	12	0	0	0	0	0	89	0	17
20	0	0	0	0	0	0	0	0	0	1	14	70	108	183	183	157	120	62	20	1	0	0	0	0	183	0	38
21	0	0	0	0	0	0	0	0	0	4	22	48	54	74	103	79	69	23	8	1	0	0	0	0	103	0	20
22	0	0	0	0	0	0	0	0	0	3	10	16	24	72	75	124	101	76	29	4	0	0	0	0	124	0	22
23	0	0	0	0	0	0	0	0	0	5	24	46	235	330	167	47	36	26	16	4	0	0	0	0	330	0	39
24	0	0	0	0	0	0	0	0	0	4	24	91	254	194	170	69	42	25	14	3	0	0	0	0	254	0	37
25	0	0	0	0	0	0	0	0	0	2	23	74	151	164	188	166	142	83	44	5	0	0	0	0	188	0	43
26	0	0	0	0	0	0	0	0	0	6	58	138	206	243	207	187	157	95	51	8	0	0	0	0	243	0	56
27	0	0	0	0	0	0	0	0	0	8	52	123	176	141	196	146	135	56	27	6	0	0	0	0	196	0	44
28	0	0	0	0	0	0	0	0	0	11	68	87	156	215	205	189	132	103	49	10	0	0	0	0	215	0	51
29	0	0	0	0	0	0	0	0	0	11	59	90	121	105	132	137	121	92	43	7	0	0	0	0	137	0	38
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**68**	**138**	**254**	**330**	**207**	**189**	**157**	**103**	**51**	**10**	**0**	**0**	**0**	**0**	**330**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**16**	**24**	**43**	**41**	**29**	**22**	**14**	**4**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**19**	**48**	**85**	**106**	**97**	**82**	**64**	**41**	**16**	**2**	**0**	**0**	**0**	**0**			**23**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	14	55	111	182	167	142	106	73	41	26	5	0	0	0	0	182	0	38
2	0	0	0	0	0	0	0	0	0	9	49	119	147	130	147	131	96	56	29	8	0	0	0	0	147	0	38
3	0	0	0	0	0	0	0	0	0	7	14	15	24	37	70	83	51	31	27	3	0	0	0	0	83	0	15
4	0	0	0	0	0	0	0	0	0	3	14	29	39	49	67	76	57	37	18	3	0	0	0	0	76	0	16
5	0	0	0	0	0	0	0	0	0	4	14	27	41	80	114	100	73	53	20	5	0	0	0	0	114	0	22
6	0	0	0	0	0	0	0	0	0	13	35	65	95	132	127	119	111	60	36	11	0	0	0	0	132	0	34
7	0	0	0	0	0	0	0	0	1	19	46	117	159	185	231	221	186	127	47	11	0	0	0	0	231	0	56
8	0	0	0	0	0	0	0	0	1	22	26	75	179	187	216	228	158	82	34	10	0	0	0	0	228	0	51
9	0	0	0	0	0	0	0	0	2	27	68	127	151	239	324	217	155	129	75	19	1	0	0	0	324	0	64
10	0	0	0	0	0	0	0	0	1	29	55	52	107	148	150	103	99	101	34	8	0	0	0	0	150	0	37
11	0	0	0	0	0	0	0	0	4	37	131	381	517	545	570	126	202	148	81	22	1	0	0	0	570	0	115
12	0	0	0	0	0	0	0	0	3	25	63	300	419	466	485	77	63	51	29	13	1	0	0	0	485	0	83
13	0	0	0	0	0	0	0	0	4	36	100	183	297	400	348	206	170	118	57	16	2	0	0	0	400	0	81
14	0	0	0	0	0	0	0	0	5	32	174	328	409	451	411	192	190	152	89	36	1	0	0	0	451	0	103
15	0	0	0	0	0	0	0	0	5	27	55	103	134	154	134	157	138	80	44	13	1	0	0	0	157	0	43
16	0	0	0	0	0	0	0	0	6	54	176	203	341	345	468	156	74	57	35	23	4	0	0	0	468	0	81
17	0	0	0	0	0	0	0	0	14	70	153	269	354	403	337	293	223	203	84	27	2	0	0	0	403	0	101
18	0	0	0	0	0	0	0	0	9	59	121	223	282	311	345	255	144	154	86	31	4	0	0	0	345	0	84
19	0	0	0	0	0	0	0	0	14	58	122	222	369	387	403	370	254	167	95	42	5	0	0	0	403	0	104
20	0	0	0	0	0	0	0	0	6	43	134	342	272	304	304	261	193	176	131	44	10	0	0	0	342	0	92
21	0	0	0	0	0	0	0	0	6	53	115	223	219	160	382	485	112	51	37	23	5	0	0	0	485	0	78
22	0	0	0	0	0	0	0	0	15	69	143	226	362	521	494	499	96	85	60	21	6	0	0	0	521	0	108
23	0	0	0	0	0	0	0	0	9	61	263	387	493	498	535	494	224	196	131	56	7	0	0	0	535	0	140
24	0	0	0	0	0	0	0	0	11	82	194	333	351	375	513	266	247	114	123	38	5	0	0	0	513	0	110
25	0	0	0	0	0	0	0	0	27	103	250	338	391	504	550	550	116	54	50	70	21	0	0	0	550	0	126
26										71				515	583	598	568	144	53	40	29	11	0	0	598	0	218
27	0	0	0	0	0	0	0	0	1	22	63	235	393	450	511	458	389	280	211	132	76	20	0	0	511	0	135
28	0	0	0	0	0	0	0	0	1	21	96	316	437	525	572	566	528	241	97	76	54	13	0	0	572	0	148
29	0	0	0	0	0	0	0	0	1	17	61	86	134	152	221	192	166	125	102	63	32	5	0	0	221	0	57
30	0	0	0	0	0	0	0	0	0	13	43	71	134	195	172	162	166	140	118	79	35	10	0	0	195	0	56
31	0	0	0	0	0	0	0	0	1	16	44	64	111	117	130	149	138	104	78	41	21	5	0	0	149	0	42
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	**103**	**263**	**387**	**517**	**545**	**583**	**598**	**568**	**280**	**211**	**132**	**76**	**20**	**0**	**0**	**598**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**14**	**15**	**24**	**37**	**67**	**76**	**51**	**31**	**18**	**3**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**36**	**96**	**186**	**251**	**295**	**324**	**255**	**176**	**115**	**69**	**32**	**11**	**2**	**0**	**0**			**78**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	9	30	57	74	98	131	137	142	134	126	76	31	7	0	0	142	0	44
2	0	0	0	0	0	0	0	0	3	34	110	198	331	440	509	417	389	248	145	55	25	8	0	0	509	0	121
3	0	0	0	0	0	0	0	0	2	23	67	125	173	141	159	152	186	163	116	78	45	8	0	0	186	0	60
4	0	0	0	0	0	0	0	0	1	18	51	86	113	157	175	184	150	127	104	71	46	9	0	0	184	0	54
5	0	0	0	0	0	0	0	0	4	38	200	392	516	612	661	654	597	471	78	59	36	17	2	0	661	0	181
6	0	0	0	0	0	0	0	0	6	80	248	384	509	602	657	667	628	544	86	63	33	17	2	0	667	0	189
7	0	0	0	0	0	0	0	0	8	87	248	390	514	606	660	671	630	547	141	133	41	22	2	0	671	0	196
8	0	0	0	0	0	0	0	0	9	95	254	353	439	591	706	660	602	307	183	140	84	29	2	0	706	0	185
9	0	0	0	0	0	0	0	0	8	59	216	387	530	625	691	673	596	507	252	256	43	23	3	0	691	0	203
10	0	0	0	0	0	0	0	0	12	120	265	410	532	624	676	686	652	578	359	300	36	20	3	0	686	0	220
11	0	0	0	0	0	0	0	0	13	128	271	413	537	631	680	688	651	569	457	302	43	23	3	0	688	0	225
12	0	0	0	0	0	0	0	0	15	123	257	395	528	625	666	674	639	558	455	297	51	26	4	0	674	0	221
13	0	0	0	0	0	0	0	0	12	89	132	186	212	218	238	300	263	255	202	130	60	24	2	0	300	0	97
14	0	0	0	0	0	0	0	0	13	50	120	236	379	423	664	456	315	283	181	131	66	31	4	0	664	0	140
15	0	0	0	0	0	0	0	0	15	44	80	101	157	311	461	566	401	334	262	168	144	66	6	0	566	0	130
16	0	0	0	0	0	0	0	1	29	126	249	396	522	620	680	683	642	559	424	247	67	37	6	0	683	0	220
17	0	0	0	0	0	0	0	1	23	102	268	418	498	302	525	675	615	420	404	282	75	37	7	0	675	0	194
18	0	0	0	0	0	0	0	1	23	98	240	353	463	543	646	649	602	519	379	269	104	40	8	0	649	0	206
19	0	0	0	0	0	0	0	2	30	147	286	424	553	621	664	660	614	544	438	316	85	33	7	0	664	0	226
20	0	0	0	0	0	0	0	2	36	156	304	453	593	649	571	571	548	480	125	65	38	13	3	0	649	0	192
21	0	0	0	0	0	0	0	2	18	67	129	147	250	513	739	517	508	327	515	325	99	29	5	0	739	0	175
22	0	0	0	0	0	0	0	3	39	174	315	453	568	656	704	713	679	607	504	373	98	26	10	0	713	0	247
23	0	0	0	0	0	0	0	4	43	192	328	466	583	670	719	726	691	618	513	384	102	25	9	0	726	0	253
24	0	0	0	0	0	0	0	6	60	158	205	264	439	421	324	278	328	319	210	227	108	40	16	0	439	0	142
25	0	0	0	0	0	0	0	2	18	100	309	468	587	694	736	745	706	634	528	391	148	33	13	0	745	0	255
26	0	0	0	0	0	0	0	3	30	69	77	150	206	252	266	250	261	289	187	142	114	87	18	0	289	0	100
27	0	0	0	0	0	0	0	4	43	103	153	154	202	230	268	337	362	273	231	144	106	71	15	1	362	0	112
28	0	0	0	0	0	0	0	10	66	169	350	492	571	711	712	564	687	527	393	262	134	65	23	1	712	0	239
29	0	0	0	0	0	0	0	10	69	188	193	412	510	683	726	740	692	630	530	419	326	78	21	1	740	0	260
30	0	0	0	0	0	0	0	9	69	215	366	499	526	523	633	468	368	348	361	337	178	73	19	1	633	0	208
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**69**	**215**	**366**	**499**	**593**	**711**	**739**	**745**	**706**	**634**	**530**	**419**	**326**	**87**	**23**	**1**	**745**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**30**	**57**	**74**	**98**	**131**	**137**	**142**	**127**	**78**	**55**	**25**	**7**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**24**	**102**	**211**	**322**	**420**	**493**	**555**	**539**	**505**	**424**	**296**	**215**	**85**	**34**	**7**	**0**			**176**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	6	39	98	170	261	463	491	491	414	381	340	316	205	134	65	25	1	491	0	162
2	0	0	0	0	0	0	0	6	15	43	77	106	171	413	319	275	223	476	223	193	221	57	17	0	476	0	118
3	0	0	0	0	0	0	0	8	42	115	150	231	304	313	246	189	182	260	163	73	52	20	9	1	313	0	98
4	0	0	0	0	0	0	0	8	46	101	159	219	266	258	319	317	401	419	287	221	144	81	28	3	419	0	137
5	0	0	0	0	0	0	0	9	34	94	125	170	247	309	305	309	334	308	272	259	213	86	15	2	334	0	129
6	0	0	0	0	0	0	1	13	23	40	122	140	133	119	208	473	354	272	264	139	60	81	18	2	473	0	103
7	0	0	0	0	0	0	0	7	31	93	123	126	169	176	184	249	271	217	132	96	55	29	11	1	271	0	82
8	0	0	0	0	0	0	0	10	40	90	116	149	192	225	243	207	284	219	180	127	91	72	22	2	284	0	95
9	0	0	0	0	0	0	0	4	20	50	108	111	139	203	296	228	216	176	141	123	105	73	24	3	296	0	84
10	0	0	0	0	0	0	1	13	51	115	186	281	433	453	458	502	518	415	371	312	228	73	24	1	518	0	185
11	0	0	0	0	0	0	1	9	24	32	57	77	82	135	139	172	171	135	100	108	79	32	11	1	172	0	57
12	0	0	0	0	0	0	0	3	9	20	39	67	121	173	165	123	101	72	58	48	34	20	6	1	173	0	44
13	0	0	0	0	0	0	3	12	26	86	137	147	196	222	178	118	128	158	111	67	70	18	3	0	222	0	70
14	0	0	0	0	0	1	14	44	101	142	143	182	227	474	409	487	467	287	168	144	103	33	5	0	487	0	143
15	0	0	0	0	0	2	22	70	117	209	255	264	376	319	255	164	101	103	104	47	41	32	5	0	376	0	104
16	0	0	0	0	0	1	5	34	52	66	94	127	201	252	353	408	521	445	470	331	199	76	8	0	521	0	152
17	0	0	0	0	0	4	20	161	296	441	562	675	759	806	811	774	634	571	369	259	153	69	12	0	811	0	307
18	0	0	0	0	0	2	19	42	84	113	154	149	162	135	196	193	272	327	291	217	215	62	7	0	327	0	110
19	0	0	0	0	0	6	28	111	282	426	564	685	760	838	839	784	707	597	473	343	211	84	9	1	839	0	323
20	0	0	0	0	0	4	20	170	305	440	576	688	764	809	816	761	677	589	470	348	213	86	9	1	816	0	323
21	0	0	0	0	0	7	28	173	301	441	573	675	746	759	752	763	677	563	443	344	210	87	10	1	763	0	315
22	0	0	0	0	0	6	26	171	235	434	562	674	758	806	552	517	540	372	264	114	31	12	4	0	806	0	253
23	0	0	0	0	0	1	3	9	28	71	66	62	64	69	101	78	85	40	65	43	38	10	2	0	101	0	35
24	0	0	0	0	0	2	10	31	46	49	76	153	324	300	227	155	125	196	228	267	123	85	12	1	324	0	100
25	0	0	0	0	0	12	42	205	269	419	546	693	768	810	811	773	703	368	249	201	77	30	8	1	811	0	291
26	0	0	0	0	0	7	32	82	239	276	511	712	832	841	837	802	701	538	203	105	64	35	13	1	841	0	285
27	0	0	0	0	0	12	45	135	308	469	597	685	760	802	810	781	704	588	453	300	208	100	18	2	810	0	324
28	0	0	0	0	0	8	44	155	290	447	576	693	730	815	750	372	343	564	423	351	265	87	21	2	815	0	289
29	0	0	0	0	1	14	40	125	183	309	323	447	599	694	588	431	522	606	487	343	239	117	33	3	694	0	254
30	0	0	0	0	0	12	41	131	242	382	469	642	586	317	366	534	571	460	513	227	141	37	15	0	642	0	237
31	0	0	0	0	0	1	14	20	55	93	135	238	192	177	130	134	105	99	67	31	18	10	4	1	238	0	63
Max.	**0**	**0**	**0**	**0**	**1**	**14**	**45**	**205**	**308**	**469**	**597**	**712**	**832**	**841**	**839**	**802**	**707**	**606**	**513**	**351**	**265**	**117**	**33**	**3**	**841**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**9**	**20**	**39**	**62**	**64**	**69**	**101**	**78**	**85**	**40**	**58**	**31**	**18**	**10**	**2**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**3**	**15**	**64**	**124**	**200**	**269**	**340**	**404**	**436**	**424**	**403**	**388**	**348**	**270**	**193**	**130**	**57**	**13**	**1**			**170**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	3	15	35	50	114	100	126	124	101	112	86	113	79	56	43	37	21	9	1	126	0	51
2	0	0	0	0	0	7	40	63	134	201	284	369	389	514	503	262	250	243	167	73	52	23	10	1	514	0	149
3	0	0	0	0	0	3	17	67	130	203	191	175	134	177	217	737	660	133	70	69	46	22	7	1	737	0	127
4	0	0	0	0	0	5	30	39	52	61	94	130	157	304	289	343	363	393	220	346	215	52	10	1	393	0	129
5	0	0	0	0	0	6	11	24	31	44	74	93	111	143	140	114	135	101	70	48	32	33	14	2	143	0	51
6	0	0	0	0	1	8	27	62	151	308	676	639	799	837	834	796	730	638	527	379	120	83	16	3	837	0	318
7	0	0	0	0	0	6	31	61	226	367	583	476	807	903	861	805	672	354	127	49	24	11	3	1	903	0	265
8	0	0	0	0	0	15	41	75	280	482	586	576	577	583	616	682	636	692	495	323	209	79	27	4	692	0	291
9	0	0	0	0	0	3	27	51	141	298	517	462	767	873	925	761	701	628	516	404	194	44	15	3	925	0	305
10	0	0	0	0	1	6	31	65	181	252	367	406	461	325	392	383	615	463	504	236	105	130	27	3	615	0	206
11	0	0	0	0	0	3	11	22	33	50	154	341	244	246	234	266	211	169	91	117	109	55	26	3	341	0	99
12	0	0	0	0	1	7	18	30	75	157	440	718	788	764	728	529	305	268	157	121	71	41	11	2	788	0	218
13	0	0	0	0	0	2	18	67	148	201	317	247	269	423	372	647	477	648	319	360	247	95	18	4	648	0	203
14	0	0	0	0	0	6	16	33	76	113	190	115	165	414	440	397	449	338	235	105	74	53	14	2	449	0	135
15	0	0	0	0	1	12	29	55	107	167	296	439	723	788	740	691	653	533	378	293	108	49	21	4	788	0	254
16	0	0	0	0	1	11	33	112	138	261	352	508	326	584	672	808	478	369	456	352	255	125	19	4	808	0	244
17	0	0	0	0	2	10	32	211	323	459	581	686	688	803	800	775	715	627	505	384	214	49	14	4	803	0	328
18	0	0	0	0	1	13	51	93	148	221	169	589	794	817	867	725	591	644	510	370	249	138	20	4	867	0	292
19	0	0	0	0	1	9	31	206	296	341	526	518	558	786	690	521	529	511	523	369	232	89	21	4	786	0	282
20	0	0	0	0	1	7	18	61	89	189	254	379	541	648	453	436	640	521	559	436	317	169	41	4	648	0	240
21	0	0	0	0	1	3	16	36	92	167	160	239	381	512	573	622	782	751	558	343	272	119	30	4	782	0	236
22	0	0	0	0	1	7	25	64	87	134	219	234	224	352	151	193	332	281	245	137	88	16	14	2	352	0	117
23	0	0	0	0	1	11	25	56	124	258	321	575	758	732	822	797	734	644	548	405	276	149	14	4	822	0	302
24	0	0	0	0	0	5	11	21	42	66	141	110	95	106	110	109	82	59	81	71	37	15	5	1	141	0	49
25	0	0	0	0	0	2	9	20	34	77	71	66	74	109	98	166	106	112	87	50	32	22	7	1	166	0	48
26	0	0	0	0	0	3	16	46	71	137	199	222	289	339	374	298	304	218	172	120	107	38	15	2	374	0	124
27	0	0	0	0	1	3	14	35	36	46	102	188	139	329	262	301	628	504	261	142	113	182	27	3	628	0	138
28	0	0	0	0	1	5	18	51	97	184	387	416	420	412	476	243	223	251	170	72	30	12	7	2	476	0	145
29	0	0	0	0	0	5	14	42	50	76	83	69	133	187	408	446	489	394	668	415	256	80	13	1	668	0	159
30	0	0	0	0	1	8	24	204	228	430	596	702	771	812	822	794	730	637	513	273	269	138	15	4	822	0	332
Max.	**0**	**0**	**0**	**0**	**2**	**15**	**51**	**211**	**323**	**482**	**676**	**718**	**807**	**903**	**925**	**808**	**782**	**751**	**668**	**436**	**317**	**182**	**41**	**4**	**925**		
Min.	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**20**	**31**	**44**	**71**	**66**	**74**	**101**	**98**	**86**	**82**	**59**	**56**	**43**	**24**	**11**	**3**	**1**		**0**	
Avg.	**0**	**0**	**0**	**0**	**1**	**6**	**23**	**67**	**122**	**202**	**301**	**360**	**423**	**498**	**499**	**491**	**478**	**407**	**326**	**230**	**146**	**71**	**16**	**3**			**195**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	1	7	20	205	318	451	580	677	755	809	813	799	738	623	358	219	181	105	24	3	813	0	320
2	0	0	0	0	1	2	36	205	351	349	458	632	447	607	519	354	244	422	391	135	44	19	8	3	632	0	218
3	0	0	0	0	0	2	15	24	35	51	87	179	240	148	149	233	189	156	68	26	22	14	5	1	240	0	69
4	0	0	0	0	0	3	13	17	17	50	70	136	159	107	458	248	139	43	28	10	14	9	5	0	458	0	64
5	0	0	0	0	0	8	39	50	137	221	311	498	436	369	281	646	425	650	339	285	214	101	17	2	650	0	210
6	0	0	0	0	1	7	25	186	267	138	221	386	347	551	311	577	387	174	90	70	41	28	5	1	577	0	159
7	0	0	0	0	0	0	4	25	71	90	91	157	213	209	361	761	504	407	423	273	149	129	24	5	761	0	162
8	0	0	0	0	0	2	18	95	89	127	186	176	250	230	378	287	225	165	108	64	29	16	5	1	378	0	102
9	0	0	0	0	0	3	26	130	278	376	433	561	372	204	134	87	73	85	83	88	33	15	4	1	561	0	124
10	0	0	0	0	0	1	7	17	35	72	89	88	79	115	166	168	219	140	105	73	37	16	5	1	219	0	60
11	0	0	0	0	0	3	20	68	231	210	320	372	285	425	732	843	579	481	475	386	254	130	13	2	843	0	243
12	0	0	0	0	0	6	27	45	68	89	158	275	408	297	260	171	120	101	85	45	34	14	2	0	408	0	92
13	0	0	0	0	0	1	4	16	32	38	92	124	94	107	104	105	93	96	63	52	25	11	4	0	124	0	44
14	0	0	0	0	0	1	7	20	58	118	345	320	359	464	341	401	347	323	237	138	80	41	11	1	464	0	150
15	0	0	0	0	0	3	16	68	133																133	0	24
16	0	0	0	0	0	1	4	14	40	42	44	36	61	65	123	108	94	51	32	22	15	6	2	0	123	0	32
17	0	0	0	0	0	1	16	43	84	142	403	710	519	602	463	359	167	126	191	69	54	29	8	1	710	0	166
18	0	0	0	0	0	4	13	27	59	114	210	338	800	862	885	817	740	615	515	375	47	21	9	1	885	0	269
19	0	0	0	0	0	3	18	91	106	147	428	704	800	802	822	737	655	610	407	238	128	31	7	1	822	0	281
20	0	0	0	0	0	16	29	44	92	194	183	104	80	122	225	344	261	252	185	143	72	59	9	1	344	0	101
21	0	0	0	0	0	0	12	22	45	109	212	269	284	442	356	413	335	364	450	194	70	17	7	1	450	0	150
22	0	0	0	0	0	3	25	72	138	204	202	164	94	62	66	108	122	156	92	72	43	27	8	0	204	0	69
23	0	0	0	0	0	1	16	52	124	446	592	330	510	486	453	202	279	211	169	75	15	9	1	0	592	0	166
24	0	0	0	0	0	0	6	26	49	80	137	225	219	308	398	369	506	536	267	242	217	36	8	1	536	0	151
25	0	0	0	0	0	1	10	31	70	139	519	470	598	630	760	796	662	583	184	93	44	39	15	1	796	0	235
26	0	0	0	0	0	1	5	14	24	87	202	569	514	332	185	270	270	120	79	81	145	28	4	0	569	0	122
27	0	0	0	0	0	0	2	10	35	39	38	57	67	80	155	138	144	132	166	142	154	48	8	0	166	0	59
28	0	0	0	0	0	1	10	36	150	271	608	620	742	787	792	610	532	400	248	149	81	33	6	0	792	0	253
29	0	0	0	0	0	2	13	104	245	385	514	624	710	756	760	729	590	432	230	173	81	31	6	0	760	0	266
30	0	0	0	0	0	0	3	31	113	187	274	209	215	219	191	406	540	558	436	358	231	86	13	0	558	0	170
31	0	0	0	0	0	1	8	73	200	204	281	593	674	729	752	765	410	276	415	360	180	104	15	1	765	0	252
Max.	**0**	**0**	**0**	**0**	**1**	**16**	**39**	**205**	**351**	**451**	**608**	**710**	**800**	**862**	**885**	**843**	**740**	**650**	**515**	**386**	**254**	**130**	**24**	**5**	**885**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**10**	**17**	**38**	**38**	**36**	**61**	**62**	**66**	**87**	**73**	**43**	**28**	**10**	**14**	**6**	**1**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**3**	**15**	**60**	**119**	**172**	**276**	**353**	**378**	**397**	**413**	**428**	**353**	**310**	**231**	**155**	**91**	**42**	**9**	**1**			**157**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	1	10	75	156	353	498	300	377	217	203	347	287	153	95	58	32	14	2	0	498	0	132
2	0	0	0	0	0	0	3	21	61	81	130	193	202	268	330	140	166	108	69	52	30	10	2	0	330	0	78
3	0	0	0	0	0	1	3	13	37	106	218	158	225	279	240	256	352	294	201	146	64	17	1	0	352	0	109
4	0	0	0	0	0	0	6	29	46	40	80	133	128	193	236	219	161	135	109	58	31	24	2	0	236	0	68
5	0	0	0	0	0	0	7	25	88	242	470	568	710	728	736	565	495	594	437	179	91	46	2	0	736	0	249
6	0	0	0	0	0	0	8	62	225	352	484	596	677	732	735	730	648	532	313	131	37	18	8	0	735	0	262
7	0	0	0	0	0	0	8	57	214	341	471	581	664	721	738	708	644	550	350	166	174	44	3	0	738	0	268
8	0	0	0	0	0	0	6	53	217	345	475	585	664	717	732	701	628	483	443	302	165	48	3	0	732	0	274
9	0	0	0	0	0	0	5	50	215	343	475	584	665	716	715	630	528	329	207	99	66	51	1	0	716	0	237
10	0	0	0	0	0	0	3	20	48	103	175	232	292	369	531	660	617	486	239	225	55	13	1	0	660	0	169
11	0	0	0	0	0	0	1	8	46	128	210	316	290	264	477	584	536	422	314	146	61	20	1	0	584	0	159
12	0	0	0	0	0	0	5	38	77	115	213	232	254	301	248	324	219	168	130	101	41	10	1	0	324	0	103
13	0	0	0	0	0	0	2	18	82	138	231	158	248	239	122	136	92	70	40	34	14	4	0	0	248	0	68
14	0	0	0	0	0	0	3	14	43	66	93	114	136	205	175	173	200	175	157	71	32	8	0	0	205	0	69
15	0	0	0	0	0	0	1	6	35	40	66	102	123	155	154	144	80	80	57	28	20	4	0	0	155	0	46
16	0	0	0	0	0	0	1	15	40	59	60	103	90	87	183	199	199	188	205	75	51	7	0	0	205	0	65
17	0	0	0	0	0	0	1	7	19	30	51	53	109	120	115	175	168	165	88	66	21	6	0	0	175	0	50
18	0	0	0	0	0	0	3	20	58	79	101	109	205	265	337	329	226	201	137	73	39	9	0	0	337	0	91
19	0	0	0	0	0	0	1	18	50	62	134	348	250	310	402	376	255	199	163	90	33	7	0	0	402	0	112
20	0	0	0	0	0	0	1	13	39	82	212	352	264	325	364	384	344	355	252	115	45	6	0	0	384	0	131
21	0	0	0	0	0	0	1	16	44	99	147	93	104	211	313	317	202	151	196	88	31	2	0	0	317	0	84
22	0	0	0	0	0	0	0	7	51	146	179	290	297	279	277	618	252	247	196	75	54	16	0	0	618	0	124
23	0	0	0	0	0	0	1	14	42	118	205	234	313	271	269	166	120	114	106	66	17	1	0	0	313	0	86
24	0	0	0	0	0	0	0	10	42	84	94	318	559	608	518	504	520	460	342	51	43	6	0	0	608	0	173
25	0	0	0	0	0	0	0	5	26	51	61	125	184	153	111	55	84	56	34	17	6	1	0	0	184	0	40
26	0	0	0	0	0	0	0	15	52	87	184	185	205	226	250	198	220	236	135	49	18	4	0	0	250	0	86
27	0	0	0	0	0	0	0	9	39	114	180	250	209	280	387	340	183	154	144	51	14	2	0	0	387	0	98
28	0	0	0	0	0	0	0	11	29	84	242	328	348	211	292	277	213	129	69	41	23	4	0	0	348	0	96
29	0	0	0	0	0	0	0	12	116	243	370	473	560	611	608	578	475	382	250	42	25	3	0	0	611	0	198
30	0	0	0	0	0	0	1	20	88	222	293	451	380	347	287	261	389	240	92	57	24	1	0	0	451	0	131
31	0	0	0	0	0	0	0	1	7	16	38	64	99	114	110	100	147	163	108	45	19	1	0	0	163	0	43
Max.	**0**	**0**	**0**	**0**	**0**	**1**	**10**	**75**	**225**	**353**	**498**	**596**	**710**	**732**	**738**	**730**	**648**	**594**	**443**	**302**	**174**	**51**	**8**	**0**	**738**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**16**	**38**	**53**	**90**	**87**	**110**	**55**	**80**	**56**	**34**	**17**	**6**	**1**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**22**	**75**	**141**	**221**	**278**	**317**	**339**	**361**	**361**	**311**	**259**	**183**	**90**	**44**	**13**	**1**	**0**			**126**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	4	20	44	82	124	156	212	205	81	43	41	49	13	3	0	0	0	212	0	45
2	0	0	0	0	0	0	0	1	9	15	17	34	30	52	104	105	85	59	29	19	5	0	0	0	105	0	23
3	0	0	0	0	0	0	0	4	23	31	20	59	108	134	137	125	180	151	117	73	22	1	0	0	180	0	49
4	0	0	0	0	0	0	0	5	29	75	182	378	477	403	422	309	242	161	102	65	20	1	0	0	477	0	120
5	0	0	0	0	0	0	0	6	80	159	324	405	533	670	597	507	134	78	58	27	11	0	0	0	670	0	150
6	0	0	0	0	0	0	0	1	7	15	32	35	53	61	89	91	74	52	30	19	5	0	0	0	91	0	24
7	0	0	0	0	0	0	0	1	4	9	20	40	36	60	61	60	93	77	29	19	7	0	0	0	93	0	22
8	0	0	0	0	0	0	0	2	20	85	77	47	90	180	85	45	30	20	23	14	2	0	0	0	180	0	30
9	0	0	0	0	0	0	0	1	6	14	24	42	78	79	125	108	83	55	54	17	4	0	0	0	125	0	29
10	0	0	0	0	0	0	0	2	25	83	109	164	250	201	267	199	175	162	114	47	7	0	0	0	267	0	75
11	0	0	0	0	0	0	0	2	39	143	193	233	328	535	539	509	169	68	25	7	1	0	0	0	539	0	116
12	0	0	0	0	0	0	0	1	12	25	34	59	64	70	68	41	30	20	14	6	1	0	0	0	70	0	19
13	0	0	0	0	0	0	0	0	4	8	15	32	47	46	43	56	48	36	37	13	1	0	0	0	56	0	16
14	0	0	0	0	0	0	0	0	6	23	47	60	63	78	70	81	82	72	46	21	4	0	0	0	82	0	27
15	0	0	0	0	0	0	0	1	11	20	36	56	53	69	98	110	68	58	34	20	2	0	0	0	110	0	27
16	0	0	0	0	0	0	0	0	10	28	59	113	193	256	256	301	149	97	53	20	3	0	0	0	301	0	64
17	0	0	0	0	0	0	0	1	14	66	183	199	175	118	100	73	54	26	12	4	0	0	0	0	199	0	43
18	0	0	0	0	0	0	0	1	12	63	73	73	135	148	48	41	35	21	14	4	0	0	0	0	148	0	28
19	0	0	0	0	0	0	0	0	5	37	67	71	122	245	259	185	164	102	52	28	2	0	0	0	259	0	56
20	0	0	0	0	0	0	0	1	14	51	120	166	212	173	206	152	173	127	56	28	3	0	0	0	212	0	62
21	0	0	0	0	0	0	0	1	26	91	272	381	442	502	504	208	78	58	31	17	1	0	0	0	504	0	109
22	0	0	0	0	0	0	0	1	14	44	253	354	392	366	288	234	178	124	64	19	1	0	0	0	392	0	97
23	0	0	0	0	0	0	0	0	12	30	54	100	121	81	75	72	91	85	26	9	1	0	0	0	121	0	32
24	0	0	0	0	0	0	0	0	3	20	40	52	89	111	110	98	79	51	31	10	0	0	0	0	111	0	29
25	0	0	0	0	0	0	0	0	6	31	62	61	79	104	105	107	94	68	40	11	0	0	0	0	107	0	32
26	0	0	0	0	0	0	0	0	7	37	74	141	182	386	413	56	61	92	60	15	1	0	0	0	413	0	63
27	0	0	0	0	0	0	0	0	9	29	222	323	401	437	261	57	46	37	25	13	1	0	0	0	437	0	78
28	0	0	0	0	0	0	0	0	9	26	220	323	398	442	334	45	47	85	52	13	0	0	0	0	442	0	83
29	0	0	0	0	0	0	0	0	6	41	85	116	149	189	166	159	141	101	51	12	0	0	0	0	189	0	51
30	0	0	0	0	0	0	0	0	9	34	187	306	388	427	292	49	42	32	21	8	0	0	0	0	427	0	75
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**80**	**159**	**324**	**405**	**533**	**670**	**597**	**509**	**242**	**162**	**117**	**73**	**22**	**1**	**0**	**0**	**670**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**15**	**32**	**30**	**46**	**43**	**41**	**30**	**20**	**12**	**4**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**46**	**106**	**152**	**195**	**228**	**211**	**142**	**99**	**74**	**45**	**20**	**4**	**0**	**0**	**0**			**56**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	11	58	105	258	171	171	145	78	62	56	19	4	0	0	0	0	258	0	47
2	0	0	0	0	0	0	0	0	10	48	163	281	368	417	203	52	48	36	28	6	0	0	0	0	417	0	69
3	0	0	0	0	0	0	0	0	3	18	86	152	218	203	148	139	118	76	56	11	0	0	0	0	218	0	51
4	0	0	0	0	0	0	0	0	5	24	168	284	359	404	194	48	39	31	28	6	0	0	0	0	404	0	66
5	0	0	0	0	0	0	0	0	3	39	146	293	181	123	97	105	95	68	39	5	0	0	0	0	293	0	50
6	0	0	0	0	0	0	0	0	4	25	100	265	358	329	211	152	66	42	27	5	0	0	0	0	358	0	66
7	0	0	0	0	0	0	0	0	4	29	146	273	335	394	209	129	143	76	34	4	0	0	0	0	394	0	74
8	0	0	0	0	0	0	0	0	3	20	145	266	329	382	162	42	35	26	16	4	0	0	0	0	382	0	60
9	0	0	0	0	0	0	0	0	0	7	16	18	20	27	24	15	15	9	4	0	0	0	0	0	27	0	6
10	0	0	0	0	0	0	0	0	2	24	65	145	210	166	137	74	87	34	24	2	0	0	0	0	210	0	40
11	0	0	0	0	0	0	0	0	0	2	4	11	13	29	53	35	26	16	8	1	0	0	0	0	53	0	8
12	0	0	0	0	0	0	0	0	1	22	64	119	176	309	173	114	48	31	18	2	0	0	0	0	309	0	45
13	0	0	0	0	0	0	0	0	2	23	51	68	108	133	123	52	49	42	13	1	0	0	0	0	133	0	28
14	0	0	0	0	0	0	0	0	0	9	31	70	130	119	122	103	69	45	11	0	0	0	0	0	130	0	30
15	0	0	0	0	0	0	0	0	1	10	45	135	166	221	167	121	95	70	19	1	0	0	0	0	221	0	44
16	0	0	0	0	0	0	0	0	1	15	51	87	157	184	136	144	116	64	21	1	0	0	0	0	184	0	41
17	0	0	0	0	0	0	0	0	1	13	30	106	275	279	171	115	68	33	10	0	0	0	0	0	279	0	46
18	0	0	0	0	0	0	0	0	0	9	43	102	222	230	46	35	27	23	11	0	0	0	0	0	230	0	31
19	0	0	0	0	0	0	0	0	0	16	53	84	130	194	145	113	82	51	17	0	0	0	0	0	194	0	37
20	0	0	0	0	0	0	0	0	0	8	30	91	174	179	148	124	95	58	9	0	0	0	0	0	179	0	38
21	0	0	0	0	0	0	0	0	0	9	30	64	160	172	132	123	91	52	14	0	0	0	0	0	172	0	35
22	0	0	0	0	0	0	0	0	0	9	24	33	167	170	69	66	36	22	7	0	0	0	0	0	170	0	25
23	0	0	0	0	0	0	0	0	0	11	29	36	119	108	50	31	25	18	7	0	0	0	0	0	119	0	18
24	0	0	0	0	0	0	0	0	0	14	42	55	139	86	51	90	60	25	5	0	0	0	0	0	139	0	24
25	0	0	0	0	0	0	0	0	0	1	17	39	75	74	38	16	13	6	1	0	0	0	0	0	75	0	12
26	0	0	0	0	0	0	0	0	0	6	24	40	134	65	41	30	24	18	5	0	0	0	0	0	134	0	16
27	0	0	0	0	0	0	0	0	0	6	24	37	110	47	38	26	20	14	4	0	0	0	0	0	110	0	14
28	0	0	0	0	0	0	0	0	0	6	19	30	78	33	36	42	29	17	3	0	0	0	0	0	78	0	12
29	0	0	0	0	0	0	0	0	0	6	46	76	96	112	130	90	60	39	9	0	0	0	0	0	130	0	27
30	0	0	0	0	0	0	0	0	0	1	9	27	49	112	136	66	53	26	3	0	0	0	0	0	136	0	20
31	0	0	0	0	0	0	0	0	0	4	17	29	33	33	33	33	25	13	2	0	0	0	0	0	33	0	9
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**58**	**168**	**293**	**368**	**417**	**211**	**152**	**143**	**76**	**56**	**11**	**0**	**0**	**0**	**0**	**417**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**11**	**13**	**27**	**24**	**15**	**13**	**6**	**1**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**16**	**59**	**115**	**170**	**178**	**115**	**77**	**59**	**37**	**15**	**2**	**0**	**0**	**0**	**0**			**35**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	4	24	46	73	93	81	88	57	13	1	0	0	0	0	0	93	0	20
2	0	0	0	0	0	0	0	0	0	3	17	47	72	68	69	46	46	24	3	0	0	0	0	0	72	0	16
3	0	0	0	0	0	0	0	0	0	2	25	69	98	60	57	47	26	24	2	0	0	0	0	0	98	0	17
4	0	0	0	0	0	0	0	0	0	2	18	49	77	90	91	76	38	22	1	0	0	0	0	0	91	0	19
5	0	0	0	0	0	0	0	0	0	1	20	48	52	97	67	70	44	19	1	0	0	0	0	0	97	0	17
6	0	0	0	0	0	0	0	0	0	1	22	57	104	124	128	95	45	16	1	0	0	0	0	0	128	0	25
7	0	0	0	0	0	0	0	0	0	1	25	61	79	69	59	45	21	12	1	0	0	0	0	0	79	0	16
8	0	0	0	0	0	0	0	0	0	1	13	31	51	57	50	36	34	8	0	0	0	0	0	0	57	0	12
9	0	0	0	0	0	0	0	0	0	0	5	17	25	28	24	15	10	3	0	0	0	0	0	0	28	0	5
10	0	0	0	0	0	0	0	0	0	0	2	5	8	4	6	13	9	3	0	0	0	0	0	0	13	0	2
11	0	0	0	0	0	0	0	0	0	0	7	22	42	51	85	101	61	9	0	0	0	0	0	0	101	0	16
12	0	0	0	0	0	0	0	0	0	1	19	44	54	66	60	44	23	6	0	0	0	0	0	0	66	0	13
13	0	0	0	0	0	0	0	0	0	0	4	3	3	14	28	36	18	5	0	0	0	0	0	0	36	0	5
14	0	0	0	0	0	0	0	0	0	0	8	34	50	81	69	60	29	7	0	0	0	0	0	0	81	0	14
15	0	0	0	0	0	0	0	0	0	0	5	21	37	89	65	56	21	5	0	0	0	0	0	0	89	0	12
16	0	0	0	0	0	0	0	0	0	0	4	29	71	72	103	38	17	5	0	0	0	0	0	0	103	0	14
17	0	0	0	0	0	0	0	0	0	0	6	21	31	33	30	23	16	5	0	0	0	0	0	0	33	0	7
18	0	0	0	0	0	0	0	0	0	0	6	22	33	36	32	24	17	6	0	0	0	0	0	0	36	0	7
19	0	0	0	0	0	0	0	0	0	0	4	19	26	31	30	29	19	7	0	0	0	0	0	0	31	0	7
20	0	0	0	0	0	0	0	0	0	0	4	18	39	36	34	24	14	5	0	0	0	0	0	0	39	0	7
21	0	0	0	0	0	0	0	0	0	0	7	30	51	54	45	25	13	4	0	0	0	0	0	0	54	0	10
22	0	0	0	0	0	0	0	0	0	0	4	28	35	38	28	21	13	4	0	0	0	0	0	0	38	0	7
23	0	0	0	0	0	0	0	0	0	0	1	6	39	36	33	29	15	1	0	0	0	0	0	0	39	0	7
24	0	0	0	0	0	0	0	0	0	0	1	4	5	9	13	20	8	1	0	0	0	0	0	0	20	0	2
25	0	0	0	0	0	0	0	0	0	0	2	14	28	55	65	57	36	8	0	0	0	0	0	0	65	0	11
26	0	0	0	0	0	0	0	0	0	0	2	15	52	70	60	46	13	3	0	0	0	0	0	0	70	0	11
27	0	0	0	0	0	0	0	0	0	0	2	15	29	38	40	36	11	1	0	0	0	0	0	0	40	0	7
28	0	0	0	0	0	0	0	0	0	0	1	4	16	36	41	36	13	2	0	0	0	0	0	0	41	0	6
29	0	0	0	0	0	0	0	0	0	0	1	16	42	74	55	41	16	2	0	0	0	0	0	0	74	0	10
30	0	0	0	0	0	0	0	0	0	0	2	16	30	32	28	19	11	2	0	0	0	0	0	0	32	0	6
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**25**	**69**	**104**	**124**	**128**	**101**	**61**	**24**	**3**	**0**	**0**	**0**	**0**	**0**	**128**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**3**	**4**	**6**	**13**	**8**	**1**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**27**	**45**	**55**	**52**	**43**	**24**	**8**	**0**	**0**	**0**	**0**	**0**	**0**			**11**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Solar (Watts/m^2)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	1	21	37	44	59	37	17	1	0	0	0	0	0	0	59	0	9
2	0	0	0	0	0	0	0	0	0	0	1	7	11	16	23	38	20	1	0	0	0	0	0	0	38	0	5
3	0	0	0	0	0	0	0	0	0	0	0	2	7	16	8	12	7	1	0	0	0	0	0	0	16	0	2
4	0	0	0	0	0	0	0	0	0	0	1	3	7	20	12	13	7	2	0	0	0	0	0	0	20	0	3
5	0	0	0	0	0	0	0	0	0	0	0	6	18	26	30	15	4	1	0	0	0	0	0	0	30	0	4
6	0	0	0	0	0	0	0	0	0	0	0	6	9	18	22	21	11	1	0	0	0	0	0	0	22	0	4
7	0	0	0	0	0	0	0	0	0	0	1	15	34	39	29	15	10	2	0	0	0	0	0	0	39	0	6
8	0	0	0	0	0	0	0	0	0	0	0	2	11	19	24	26	7	1	0	0	0	0	0	0	26	0	4
9	0	0	0	0	0	0	0	0	0	0	0	4	15	39	36	25	9	1	0	0	0	0	0	0	39	0	5
10	0	0	0	0	0	0	0	0	0	0	1	12	24	33	49	40	13	1	0	0	0	0	0	0	49	0	7
11	0	0	0	0	0	0	0	0	0	0	1	10	37	53	46	25	9	2	0	0	0	0	0	0	53	0	8
12	0	0	0	0	0	0	0	0	0	0	1	7	19	21	60	38	18	2	0	0	0	0	0	0	60	0	7
13	0	0	0	0	0	0	0	0	0	0	1	10	22	26	22	16	9	1	0	0	0	0	0	0	26	0	4
14	0	0	0	0	0	0	0	0	0	0	1	10	22	25	23	15	9	1	0	0	0	0	0	0	25	0	4
15	0	0	0	0	0	0	0	0	0	0	0	0	1	3	7	12	6	0	0	0	0	0	0	0	12	0	1
16	0	0	0	0	0	0	0	0	0	0	0	3	9	14	11	14	6	1	0	0	0	0	0	0	14	0	2
17	0	0	0	0	0	0	0	0	0	0	0	9	18	17	30	36	12	1	0	0	0	0	0	0	36	0	5
18	0	0	0	0	0	0	0	0	0	0	0	5	19	28	27	18	6	1	0	0	0	0	0	0	28	0	4
19	0	0	0	0	0	0	0	0	0	0	0	3	9	15	14	19	8	1	0	0	0	0	0	0	19	0	3
20	0	0	0	0	0	0	0	0	0	0	0	12	32	32	24	17	11	1	0	0	0	0	0	0	32	0	5
21	0	0	0	0	0	0	0	0	0	0	0	9	44	44	33	19	10	2	0	0	0	0	0	0	44	0	7
22	0	0	0	0	0	0	0	0	0	0	0	2	10	14	21	10	4	1	0	0	0	0	0	0	21	0	2
23	0	0	0	0	0	0	0	0	0	0	0	2	12	26	44	33	12	3	0	0	0	0	0	0	44	0	5
24	0	0	0	0	0	0	0	0	0	0	1	10	23	25	26	17	11	1	0	0	0	0	0	0	26	0	5
25	0	0	0	0	0	0	0	0	0	0	0	5	17	23	28	22	9	1	0	0	0	0	0	0	28	0	4
26	0	0	0	0	0	0	0	0	0	0	0	9	32	25	34	39	21	4	0	0	0	0	0	0	39	0	7
27	0	0	0	0	0	0	0	0	0	0	0	7	22	28	24	19	12	2	0	0	0	0	0	0	28	0	5
28	0	0	0	0	0	0	0	0	0	0	0	7	23	38	30	18	10	2	0	0	0	0	0	0	38	0	5
29	0	0	0	0	0	0	0	0	0	0	0	6	17	26	22	16	10	2	0	0	0	0	0	0	26	0	4
30	0	0	0	0	0	0	0	0	0	0	0	8	22	27	24	17	10	3	0	0	0	0	0	0	27	0	5
31	0	0	0	0	0	0	0	0	0	0	0	8	22	27	25	17	10	3	0	0	0	0	0	0	27	0	5
Max.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**21**	**44**	**53**	**60**	**40**	**21**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**60**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**7**	**10**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**20**	**26**	**28**	**22**	**10**	**2**	**0**	**0**	**0**	**0**	**0**	**0**			**5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	999	998	996	995	994	993	993	992	991	990	990	989	988	987	987	987	987	987	986	986	987	987	986	987	999	986	990.2
2	986	986	986	986	986	986	986	986	985	985	986	986	985	984	984	983	984	983	982	982	981	981	981	981	986	981	984.3
3	980	980	980	980	980	979	979	979	979	979	979	979	979	979	979	979	980	980	981	981	981	982	982	982	982	979	979.9
4	983	983	983	984	984	984	984	984	984	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	983	984.6
5	985	985	985	985	985	985	985	986	986	986	986	987	987	986	987	987	987	987	987	988	988	988	989	989	989	985	986.5
6	990	991	991	992	992	993	993	993	994	993	994	994	994	994	994	994	994	993	993	993	993	992	992	992	994	990	992.9
7	993	993	993	992	993	992	992	991	991	991	991	992	992	992	992	993	994	994	995	995	996	997	997	998	998	991	993.2
8	999	999	999	1000	1000	1000	1000	1000	1000	1000	1001	1000	1000	999	1000	1000	999	999	998	998	998	997	997	996	1001	996	999.1
9	996	996	996	995	995	994	994	994	994	994	995	995	995	995	995	994	995	995	995	995	995	995	995	996	996	994	994.8
10	996	997	997	997	996	996	997	997	997	998	998	998	999	999	999	999	999	998	999	1000	999	999	1000	1000	1000	996	998.1
11	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1003	1003	1003	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1005	1000	002.8
12	1006	1005	1005	1005	1005	1005	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1005	1006	1003	003.8
13	1005	1006	1007	1008	1008	1009	1009	1010	1011	1012	1012	1013	1013	1014	1014	1014	1014	1013	1013	1014	1014	1015	1014	1014	1015	1005	011.4
14	1014	1015	1015	1014	1014	1013	1013	1013	1012	1012	1011	1010	1011	1011	1010	1010	1009	1009	1008	1007	1006	1005	1004	1004	1015	1004	010.4
15	1004	1004	1004	1003	1002	1003	1001	1003	1003	1004	1004	1005	1005	1006	1006	1006	1006	1006	1005	1005	1005	1004	1004	1003	1006	1001	004.2
16	1003	1003	1003	1004	1005	1006	1007	1008	1010	1012	1014	1015	1017	1018	1019	1019	1020	1021	1021	1022	1022	1022	1023	1022	1023	1003	014.0
17	1023	1023	1022	1021	1020	1020	1019	1017	1016	1015	1015	1015	1013	1011	1011	1010	1009	1009	1010	1010	1010	1011	1011	1012	1023	1009	014.6
18	1013	1014	1013	1014	1015	1015	1016	1016	1017	1018	1019	1020	1021	1022	1023	1023	1023	1024	1025	1026	1025	1026	1027	1027	1027	1013	020.1
19	1028	1028	1028	1028	1028	1027	1026	1025	1026	1026	1025	1026	1026	1026	1027	1026	1025	1024	1025	1025	1025	1024	1024	1024	1028	1024	025.8
20	1024	1023	1023	1022	1021	1021	1020	1020	1019	1019	1018	1019	1018	1017	1017	1016	1017	1017	1017	1018	1019	1019	1020	1020	1024	1016	019.3
21	1021	1022	1022	1023	1023	1022	1022	1022	1021	1021	1021	1020	1019	1018	1016	1015	1014	1013	1011	1010	1011	1011	1010	1010	1023	1010	017.4
22	1011	1012	1011	1013	1013	1012	1013	1013	1013	1015	1015	1016	1017	1019	1020	1021	1021	1020	1020	1019	1019	1019	1018	1017	1021	1011	016.1
23	1018	1018	1018	1019	1019	1020	1021	1022	1024	1025	1026	1026	1028	1028	1029	1030	1031	1033	1033	1032	1031	1033	1034	1034	1034	1018	026.2
24	1033	1033	1032	1031	1029	1028	1026	1025	1024	1021	1020	1020	1018	1017	1016	1015	1013	1012	1011	1010	1009	1008	1007	1006	1033	1006	019.4
25	1005	1004	1004	1004	1003	1002	1002	1003	1004	1005	1006	1006	1006	1006	1006	1005	1006	1006	1006	1006	1007	1008	1010	1011	1011	1002	005.4
26	1012	1014	1014	1015	1017	1018	1018	1019	1020	1021	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1021	1021	1023	1012	020.0
27	1020	1020	1018	1018	1017	1016	1016	1014	1013	1012	1011	1010	1009	1008	1007	1005	1004	1003	1002	1001	1000	999	998	998	1020	998	009.0
28	997	996	995	995	994	994	994	994	994	995	995	996	997	997	998	998	999	999	1000	1001	1001	1002	1003	1003	1003	994	997.3
29	1004	1004	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1003	1003	1002	1001	1001	1001	1000	1000	999	1000	1005	999	003.2
30	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1002	1003	1003	1003	1004	1004	1004	1005	1006	1006	1006	1006	1006	1007	1007	1000	003.0
31	1007	1007	1007	1007	1007	1008	1008	1008	1008	1007	1007	1008	1008	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1008	1005	006.7
Max.	**1033**	**1033**	**1032**	**1031**	**1029**	**1028**	**1026**	**1025**	**1026**	**1026**	**1026**	**1026**	**1028**	**1028**	**1029**	**1030**	**1031**	**1033**	**1033**	**1032**	**1031**	**1033**	**1034**	**1034**	**1034**		
Min.	**980**	**980**	**980**	**980**	**980**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**980**	**980**	**981**	**981**	**981**	**981**	**981**	**981**		**979**	
Avg.	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**	**1005**			**005.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1005	1005	1006	1006	1005	1005	1005	1005	1005	1005	1005	1004	1005	1004	1004	1003	1003	1002	1002	1002	1002	1002	1002	1002	1006	1002	004.0
2	1003	1003	1003	1003	1003	1004	1004	1004	1004	1005	1006	1006	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1011	1011	1011	1003	006.4
3	1012	1012	1012	1013	1012	1012	1011	1011	1012	1012	1011	1012	1011	1011	1011	1010	1010	1009	1009	1009	1008	1008	1008	1008	1013	1008	010.6
4	1008	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1006	1006	1006	1007	1007	1008	1005	006.4
5	1007	1007	1007	1007	1008	1007	1007	1006	1006	1006	1007	1007	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1001	1001	1008	1001	005.1
6	1000	1000	1000	1000	999	999	999	999	999	999	1000	1000	1001	1001	1001	1002	1002	1002	1002	1003	1004	1004	1004	1005	1005	999	001.0
7	1005	1007	1008	1008	1009	1009	1010	1011	1012	1013	1013	1014	1014	1015	1015	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1005	012.9
8	1017	1018	1018	1018	1018	1018	1017	1017	1016	1017	1016	1017	1016	1015	1014	1014	1013	1012	1012	1011	1010	1008	1007	1006	1018	1006	014.2
9	1006	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	990	989	989	989	990	990	990	990	1006	989	994.9
10	990	990	990	990	990	990	990	991	990	991	991	991	991	990	990	990	990	990	989	989	989	989	990	990	991	989	990.2
11	990	990	990	990	990	990	991	990	991	991	991	991	991	991	991	991	991	991	991	991	992	993	994	994	994	990	991.2
12	996	997	998	999	1000	1001	1002	1002	1003	1003	1003	1004	1005	1006	1005	1004	1004	1004	1004	1003	1003	1002	1002	1000	1006	996	002.0
13	999	998	998	996	994	993	990	989	988	987	986	986	986	985	984	984	983	982	982	982	981	981	980	980	999	980	987.2
14	980	979	979	979	979	979	978	978	978	979	982	983	984	984	985	986	986	986	987	987	988	989	990	992	992	978	983.3
15	993	995	997	998	1000	1001	1003	1004	1006	1007	1008	1009	1010	1010	1010	1011	1012	1012	1012	1011	1013	1012	1012	1012	1013	993	006.6
16	1012	1011	1009	1008	1006	1005	1003	1002	999	997	996	994	993	992	991	991	991	992	993	995	996	998	998	998	1012	991	998.7
17	999	999	999	998	998	996	994	992	990	987	984	982	981	980	980	980	981	982	983	985	987	988	989	991	999	980	988.5
18	992	991	991	991	990	990	991	992	992	993	994	996	997	997	997	997	996	997	996	996	996	996	995	995	997	990	994.2
19	994	993	991	988	987	985	983	981	980	979	977	976	975	974	973	972	969	968	969	970	971	972	973	975	994	968	978.1
20	978	981	984	986	988	988	990	990	989	989	990	990	989	988	987	985	985	984	983	982	982	982	982	981	990	978	985.6
21	981	981	980	980	979	979	979	979	979	980	980	982	983	983	984	984	985	986	987	988	989	989	990	991	991	979	983.3
22	992	993	994	995	995	996	996	997	998	999	1000	1002	1003	1004	1005	1007	1007	1008	1009	1009	1010	1010	1011	1012	1012	992	002.1
23	1012	1013	1013	1013	1014	1014	1014	1015	1015	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1012	015.7
24	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1017	1016	1016	1016	1016	1016	1016	1015	1015	1014	1014	1017	1014	016.1
25	1014	1013	1013	1012	1011	1010	1010	1010	1010	1010	1011	1011	1010	1010	1009	1010	1010	1010	1010	1010	1011	1011	1011	1012	1014	1009	010.7
26	1011	1011	1011	1011	1011	1010	1010	1009	1009	1008	1008	1007	1006	1006	1005	1004	1003	1003	1002	1002	1002	1002	1002	1002	1011	1002	006.4
27	1001	1001	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1003	1003	1003	1002	1002	1002	1002	1002	1002	1004	1001	002.6
28	1002	1002	1002	1001	1001	1001	1001	1001	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1000	001.0
29	1001	1001	1001	1000	1000	999	999	998	998	998	997	997	997	996	996	995	994	994	993	993	993	992	992	992	1001	992	996.5
Max.	**1017**	**1018**	**1018**	**1018**	**1018**	**1018**	**1017**	**1017**	**1016**	**1017**	**1016**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1018**		
Min.	**978**	**979**	**979**	**979**	**979**	**979**	**978**	**978**	**978**	**979**	**977**	**976**	**975**	**974**	**973**	**972**	**969**	**968**	**969**	**970**	**971**	**972**	**973**	**975**		**968**	
Avg.	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1000**			**999.8**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	992	991	991	991	991	991	992	992	992	993	993	994	994	995	994	994	994	994	993	993	993	993	992	992	995	991	992.6
2	992	993	993	993	993	994	994	996	997	998	999	999	1000	1000	1000	1000	1000	1001	1001	1002	1002	1003	1004	1005	1005	992	998.2
3	1006	1006	1007	1007	1007	1007	1007	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1008	1009	1009	1009	1009	1010	1010	1010	1006	007.5
4	1010	1010	1010	1010	1009	1008	1008	1008	1008	1008	1008	1008	1008	1009	1008	1008	1008	1008	1007	1007	1007	1006	1005	1004	1010	1004	007.9
5	1001	999	998	996	995	993	991	990	988	988	988	988	987	988	988	989	989	989	991	992	993	994	994	995	1001	987	991.8
6	996	996	996	996	997	997	996	996	996	996	996	996	995	995	994	994	993	991	990	988	987	985	985	983	997	983	993.1
7	982	981	980	980	978	978	978	978	977	977	978	978	978	979	979	979	980	981	982	983	984	986	987	988	988	977	980.6
8	990	991	992	993	994	995	996	996	997	997	997	996	996	995	993	992	992	991	990	989	988	987	985	985	997	985	992.4
9	984	984	984	983	983	983	982	982	982	983	983	984	985	986	986	987	987	988	988	989	990	991	992	993	993	982	985.8
10	995	996	997	998	999	1000	1001	1002	1002	1003	1003	1004	1004	1004	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	995	002.5
11	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1013	1013	1007	009.5
12	1013	1014	1014	1014	1015	1015	1016	1016	1016	1017	1017	1018	1018	1018	1018	1018	1018	1017	1017	1018	1018	1018	1019	1019	1019	1013	016.6
13	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1023	1023	1022	1023	1019	020.6
14	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1019	1018	1018	1017	1016	1016	1015	1014	1014	1022	1014	019.4
15	1013	1012	1012	1011	1009	1008	1008	1007	1007	1007	1007	1007	1006	1006	1005	1004	1003	1003	1002	1001	1001	1000	999	998	1013	998	005.6
16	997	997	996	996	995	994	993	993	992	992	992	992	992	992	991	990	990	990	989	989	989	989	989	989	997	989	992.1
17	990	990	991	991	991	991	992	992	992	993	993	994	994	994	994	994	994	994	995	996	997	998	998	998	998	990	993.5
18	998	998	998	998	998	998	998	998	998	999	999	999	999	1000	1000	1000	1000	999	999	999	999	999	999	999	1000	998	998.8
19	999	999	999	999	999	999	1000	1000	1000	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1003	1003	1004	1004	1005	1005	999	001.3
20	1005	1005	1005	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1008	1008	1008	1007	1007	1006	1006	1006	1005	1005	1004	1008	1004	006.4
21	1004	1004	1003	1002	1002	1002	1002	1002	1002	1002	1001	1001	1002	1002	1002	1002	1001	1000	1000	1000	1000	1000	1001	1001	1004	1000	001.6
22	1001	1000	999	999	999	998	998	999	998	998	998	999	999	999	998	998	998	998	998	999	999	999	999	1000	1001	998	998.8
23	1000	1000	999	999	999	999	999	999	998	997	997	997	997	997	997	997	997	996	996	996	996	997	996	996	1000	996	997.5
24	996	997	997	997	998	998	998	998	998	999	999	1000	1000	1000	1000	1001	1001	1001	1001	1001	1002	1003	1003	1004	1004	996	999.6
25	1006	1007	1007	1007	1008	1008	1008	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1012	1012	1012	1012	1006	009.5
26										1015				1016	1016	1016	1016	1016	1016	1016	1017	1017	1018	1018	1018	1015	016.2
27	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1021	1021	1021	1018	019.5
28	1021	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1021	1021	1021	1020	1020	1021	1023	1020	022.0
29	1020	1020	1021	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1016	1016	1016	1016	1016	1021	1016	018.4
30	1015	1015	1015	1015	1015	1014	1014	1015	1014	1014	1014	1015	1014	1014	1015	1015	1015	1015	1016	1016	1016	1016	1016	1017	1017	1014	015.0
31	1018	1017	1017	1017	1017	1017	1017	1016	1016	1017	1017	1017	1016	1017	1017	1016	1015	1014	1014	1013	1012	1011	1011	1011	1018	1011	015.3
Max.	**1022**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1022**	**1022**	**1022**	**1021**	**1022**	**1022**	**1023**	**1023**	**1022**	**1023**		
Min.	**982**	**981**	**980**	**980**	**978**	**978**	**978**	**978**	**977**	**977**	**978**	**978**	**978**	**979**	**979**	**979**	**980**	**981**	**982**	**983**	**984**	**985**	**985**	**983**		**977**	
Avg.	**1004**	**1004**	**1004**	**1004**	**1004**	**1003**	**1003**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**			**004.0**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1011	1010	1010	1009	1009	1008	1008	1008	1008	1007	1007	1006	1007	1007	1006	1006	1006	1006	1005	1005	1006	1006	1007	1007	1011	1005	007.2
2	1008	1009	1010	1011	1011	1012	1013	1014	1014	1015	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1014	1016	1008	013.6
3	1014	1013	1013	1012	1012	1012	1012	1011	1011	1011	1011	1011	1012	1012	1012	1011	1011	1010	1010	1010	1009	1009	1009	1008	1014	1008	011.0
4	1008	1007	1007	1006	1006	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1006	1007	1008	1004	004.9
5	1008	1009	1010	1010	1009	1009	1009	1010	1010	1011	1011	1011	1010	1010	1010	1010	1010	1009	1009	1008	1009	1009	1009	1009	1011	1008	009.5
6	1008	1008	1009	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1010	1010	1010	1008	009.6
7	1010	1011	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1014	1014	1013	1013	1013	1013	1013	1013	1012	1012	1013	1012	1014	1010	012.4
8	1012	1011	1011	1011	1010	1010	1010	1009	1009	1009	1008	1008	1007	1007	1006	1006	1005	1005	1005	1005	1004	1004	1004	1004	1012	1004	007.5
9	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1006	1006	1005	005.4
10	1006	1006	1007	1008	1008	1008	1009	1010	1010	1011	1011	1012	1013	1014	1014	1014	1014	1014	1015	1015	1015	1015	1016	1016	1016	1006	011.6
11	1016	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1018	1017	1017	1016	1016	1015	1015	1015	1015	1019	1015	017.3
12	1014	1014	1013	1012	1012	1012	1011	1011	1011	1010	1010	1009	1009	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1006	1014	1006	009.2
13	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1005	1006	1004	004.7
14	1005	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1008	1008	1008	1007	1007	1007	1007	1007	1006	1006	1006	1008	1005	006.4
15	1006	1005	1005	1004	1003	1003	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1002	1003	1004	1005	1007	1007	1000	002.0
16	1008	1008	1010	1011	1012	1013	1014	1016	1018	1019	1021	1022	1023	1025	1025	1025	1026	1026	1027	1028	1029	1029	1029	1029	1029	1008	020.6
17	1030	1029	1030	1030	1031	1032	1033	1034	1034	1035	1036	1037	1037	1038	1039	1039	1040	1040	1039	1039	1039	1039	1039	1039	1040	1029	035.7
18	1039	1039	1039	1039	1039	1039	1039	1039	1039	1040	1040	1040	1040	1040	1040	1040	1039	1039	1038	1038	1038	1038	1037	1037	1040	1037	039.0
19	1037	1037	1036	1036	1036	1035	1035	1035	1035	1034	1034	1034	1034	1033	1033	1033	1032	1032	1031	1030	1030	1030	1029	1029	1037	1029	033.3
20	1029	1028	1028	1028	1028	1027	1027	1027	1026	1026	1027	1027	1027	1028	1027	1027	1027	1027	1027	1028	1028	1027	1027	1027	1029	1026	027.3
21	1026	1027	1027	1027	1027	1027	1027	1027	1028	1027	1027	1028	1027	1027	1027	1027	1028	1028	1027	1028	1027	1027	1027	1027	1028	1026	027.1
22	1027	1027	1027	1026	1025	1025	1026	1026	1026	1026	1025	1025	1025	1025	1024	1024	1024	1023	1022	1022	1022	1021	1022	1021	1027	1021	024.4
23	1021	1021	1021	1021	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1021	1016	018.6
24	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1014	1017	1014	016.0
25	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1014	1010	011.8
26	1009	1009	1009	1009	1008	1007	1007	1006	1005	1005	1003	1003	1002	1001	1001	1000	999	999	998	998	997	997	997	996	1009	996	002.7
27	996	996	995	995	995	995	995	995	995	995	996	996	997	998	998	999	1001	1001	1002	1003	1004	1005	1006	1007	1007	995	998.6
28	1008	1008	1009	1010	1010	1010	1011	1012	1012	1013	1013	1013	1013	1013	1014	1013	1013	1013	1013	1012	1012	1012	1012	1012	1014	1008	011.8
29	1013	1013	1013	1013	1012	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1011	1011	1011	1011	1011	1013	1011	012.2
30	1010	1010	1010	1009	1009	1009	1009	1008	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1009	1009	1010	1008	008.8
Max.	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**	**1039**	**1039**	**1039**	**1039**	**1039**	**1039**	**1040**		
Min.	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**996**	**996**	**997**	**998**	**998**	**999**	**999**	**999**	**998**	**998**	**997**	**997**	**997**	**996**		**995**	
Avg.	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**			**014.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1009	1009	1009	1009	1009	1009	1008	1009	1009	1009	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1005	1005	1005	1005	1009	1005	007.7
2	1004	1004	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1006	1007	1007	1008	1009	1009	1003	004.8
3	1009	1009	1009	1009	1010	1010	1010	1010	1011	1010	1010	1010	1010	1010	1009	1009	1009	1009	1008	1007	1008	1008	1008	1007	1011	1007	009.1
4	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1007	1005	005.5
5	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1007	1007	1008	1008	1009	1009	1010	1010	1011	1011	1012	1013	1013	1014	1014	1005	008.1
6	1015	1016	1016	1017	1018	1018	1019	1019	1020	1020	1020	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1022	1015	019.9
7	1021	1021	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1018	1017	1017	1016	1016	1015	1016	1016	1021	1015	018.7
8	1016	1015	1015	1014	1014	1014	1013	1013	1013	1013	1013	1012	1012	1012	1012	1011	1011	1011	1010	1010	1009	1009	1008	1008	1016	1008	012.0
9	1008	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1008	1006	006.5
10	1007	1007	1007	1006	1007	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1007	1005	006.2
11	1005	1005	1004	1004	1003	1002	1001	1000	1000	999	998	997	997	996	994	994	993	991	991	989	989	987	988	986	1005	986	996.4
12	986	985	985	984	984	984	983	983	983	983	983	983	983	982	982	983	984	984	985	985	986	986	987	987	987	982	984.0
13	988	990	991	991	992	993	994	995	996	997	997	998	999	1000	1000	1001	1002	1002	1002	1002	1002	1002	1001	1000	1002	988	997.4
14	999	998	997	995	994	993	991	989	988	987	986	985	984	983	983	983	982	982	983	983	984	985	986	988	999	982	987.8
15	989	990	991	993	994	995	997	999	1000	1002	1004	1005	1007	1008	1009	1010	1011	1011	1012	1013	1014	1015	1016	1017	1017	989	004.3
16	1018	1019	1019	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1021	1021	1020	1019	1019	1018	1018	1018	1017	1017	1022	1017	019.9
17	1017	1017	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1017	1015	015.5
18	1016	1016	1017	1017	1017	1017	1017	1018	1018	1019	1019	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1016	019.2
19	1021	1021	1021	1020	1020	1020	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1015	1015	1014	1014	1014	1013	1013	1013	1021	1013	017.0
20	1013	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1013	1010	010.8
21	1012	1012	1012	1013	1013	1013	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1019	1019	1019	1020	1020	1021	1021	1022	1022	1012	016.5
22	1023	1023	1023	1024	1024	1025	1025	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1025	1025	1024	1025	1024	1023	1026	1023	024.9
23	1022	1022	1021	1019	1019	1017	1018	1018	1017	1017	1016	1017	1018	1018	1020	1021	1022	1022	1023	1023	1022	1023	1023	1023	1023	1016	020.0
24	1024	1023	1023	1022	1022	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1020	1021	1020	1020	1021	1021	1021	1022	1022	1024	1020	021.2
25	1023	1023	1023	1023	1024	1024	1025	1025	1026	1026	1026	1026	1026	1026	1026	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1023	025.6
26	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1027	1028	1027	027.3
27	1027	1027	1027	1027	1027	1027	1027	1027	1027	1028	1027	1027	1027	1027	1026	1026	1026	1025	1025	1025	1025	1025	1025	1024	1028	1024	026.1
28	1024	1024	1024	1024	1024	1024	1024	1024	1024	1024	1025	1024	1024	1023	1023	1022	1022	1022	1021	1021	1021	1020	1020	1020	1025	1020	022.9
29	1020	1020	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1020	1015	017.3
30	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1015	1016	1017	1017	1017	1017	1017	1017	1018	1018	1015	015.8
31	1018	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1013	1012	1012	1012	1011	1018	1011	015.2
Max.	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1028**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1027**	**1028**		
Min.	**986**	**985**	**985**	**984**	**984**	**984**	**983**	**983**	**983**	**983**	**983**	**983**	**983**	**982**	**982**	**983**	**982**	**982**	**983**	**983**	**984**	**985**	**986**	**986**		**982**	
Avg.	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**			**012.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1010	1011	1010	1009	1009	1008	1008	1007	1008	1007	1007	1007	1007	1006	1006	1005	1005	1004	1004	1004	1003	1003	1003	1002	1011	1002	006.4
2	1003	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	999	999	999	998	998	997	997	997	997	996	996	1003	996	999.4
3	996	996	996	996	996	996	996	996	997	997	997	997	998	999	999	999	1000	1001	1001	1001	1001	1001	1001	1001	1001	996	998.2
4	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1000	1000	1000	1001	1000	1001	1001	1001	1000	000.6
5	1001	1001	1001	1001	1001	1001	1000	1001	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1000	000.9
6	1002	1003	1004	1004	1005	1005	1006	1006	1006	1007	1007	1008	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1011	1002	007.1
7	1012	1012	1012	1013	1013	1013	1013	1013	1014	1014	1015	1015	1016	1016	1016	1016	1017	1017	1018	1018	1018	1018	1019	1019	1019	1012	015.2
8	1019	1019	1019	1019	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1018	018.4
9	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1020	1020	1019	019.6
10	1020	1020	1020	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1020	020.9
11	1022	1022	1023	1023	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1023	1022	022.6
12	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1020	1020	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1022	1018	020.3
13	1018	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1020	1020	1020	1019	1019	1020	1020	1020	1020	1020	1020	1017	018.6
14	1020	1021	1021	1022	1022	1022	1023	1023	1023	1024	1024	1024	1025	1025	1025	1025	1024	1025	1025	1025	1025	1025	1025	1024	1025	1020	023.5
15	1024	1024	1024	1024	1024	1025	1025	1025	1026	1026	1026	1025	1025	1025	1024	1024	1023	1023	1023	1022	1022	1022	1021	1021	1026	1021	023.9
16	1021	1020	1020	1020	1020	1020	1020	1019	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1018	1021	1018	019.1
17	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1020	1020	1018	018.8
18	1020	1020	1020	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1020	1019	019.6
19	1020	1020	1020	1020	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1020	1020	1021	1020	020.3
20	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1019	1016	017.3
21	1015	1015	1015	1014	1013	1013	1013	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1015	1011	012.1
22	1012	1012	1013	1013	1013	1013	1014	1014	1014	1015	1016	1016	1017	1017	1017	1018	1018	1018	1018	1019	1018	1018	1019	1019	1019	1012	015.8
23	1019	1019	1018	1018	1018	1017	1017	1017	1017	1016	1016	1015	1014	1014	1014	1014	1013	1013	1012	1012	1012	1012	1011	1011	1019	1011	014.9
24	1011	1011	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1012	1011	1011	1011	1010	1010	1010	1010	1009	1009	1009	1012	1009	010.8
25	1009	1008	1008	1008	1008	1007	1007	1007	1007	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1009	1005	006.3
26	1006	1006	1006	1005	1005	1005	1005	1005	1004	1004	1004	1004	1005	1005	1005	1004	1004	1004	1004	1005	1005	1005	1005	1005	1006	1004	004.8
27	1006	1006	1007	1007	1007	1007	1007	1007	1008	1008	1009	1008	1009	1009	1008	1008	1008	1008	1008	1008	1008	1007	1008	1008	1009	1006	007.6
28	1008	1008	1008	1008	1007	1007	1008	1008	1009	1009	1009	1010	1011	1011	1011	1012	1013	1013	1014	1015	1015	1016	1017	1017	1017	1007	011.0
29	1018	1018	1018	1019	1019	1020	1020	1021	1021	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1024	1024	1024	1018	021.7
30	1024	1024	1023	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1021	1021	1021	1020	1020	1020	1020	1020	1019	1024	1019	021.8
Max.	**1024**	**1024**	**1024**	**1024**	**1024**	**1025**	**1025**	**1025**	**1026**	**1026**	**1026**	**1025**	**1025**	**1025**	**1025**	**1025**	**1024**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1024**	**1026**		
Min.	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**997**	**997**	**997**	**997**	**998**	**999**	**999**	**999**	**998**	**998**	**997**	**997**	**997**	**997**	**996**	**996**		**996**	
Avg.	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**	**1014**			**013.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1019	1019	1019	1018	1018	1017	1017	1017	1018	1018	1017	1017	1017	1017	1017	1018	1018	1018	1018	1017	1017	1017	1017	1018	1019	1017	017.6
2	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1015	1014	1014	1013	1012	1011	1011	1010	1009	1009	1008	1009	1007	1008	1018	1007	013.2
3	1008	1007	1005	1004	1004	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1001	1002	1001	1002	1002	1002	1003	1003	1003	1008	1001	003.0
4	1004	1004	1004	1003	1004	1003	1003	1003	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1004	1002	003.0
5	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1001	001.4
6	1002	1002	1002	1002	1002	1002	1002	1002	1003	1003	1004	1004	1005	1005	1006	1006	1006	1006	1007	1007	1007	1007	1008	1008	1008	1002	004.4
7	1009	1009	1010	1010	1011	1012	1013	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1015	1015	1009	013.6
8	1014	1014	1014	1014	1014	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	013.8
9	1014	1014	1014	1014	1014	1015	1014	1015	1015	1015	1016	1016	1016	1017	1018	1018	1018	1018	1018	1018	1019	1018	1019	1019	1019	1014	016.3
10	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1021	1019	020.1
11	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1022	1023	1023	1023	1021	022.2
12	1023	1023	1023	1022	1022	1022	1021	1021	1021	1021	1021	1021	1021	1021	1021	1020	1020	1020	1019	1019	1019	1018	1019	1019	1023	1018	020.6
13	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1021	1021	1021	1021	1022	1022	1021	1022	1021	1021	1021	1022	1021	1022	1019	020.5
14	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1021	1021	1022	1021	021.6
15	1021	1021	1020	1020	1020	1020	1019	1019	1019																1021	1019	020.0
16	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1016	1016	1015	1014	1014	1013	1013	1012	1012	1019	1012	016.3
17	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1013	1012	1012	1012	1012	1012	1011	1011	1010	1010	1010	1010	1010	1013	1010	011.3
18	1009	1009	1009	1008	1008	1007	1007	1007	1007	1007	1007	1006	1007	1007	1006	1006	1006	1006	1005	1005	1005	1004	1004	1004	1009	1004	006.5
19	1004	1003	1003	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1001	1001	1001	1001	1002	1003	1004	1000	001.4
20	1003	1003	1004	1004	1004	1004	1005	1005	1005	1005	1006	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1005	1005	1007	1003	005.5
21	1005	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1008	1009	1009	1009	1010	1010	1004	006.6
22	1010	1011	1010	1011	1011	1011	1010	1011	1011	1010	1010	1010	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1009	1009	1011	1009	010.1
23	1009	1009	1009	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1008	008.3
24	1007	1007	1007	1007	1006	1006	1006	1007	1007	1007	1007	1007	1007	1008	1007	1007	1007	1007	1007	1006	1007	1007	1007	1007	1008	1006	006.9
25	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1006	1006	1006	1006	1006	1005	1005	1006	1006	1006	1007	1007	1007	1007	1005	006.2
26	1007	1007	1007	1007	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1007	008.4
27	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1010	1011	1011	1011	1011	1008	009.0
28	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1009	1008	1008	1008	1008	1008	1008	1008	1011	1008	009.9
29	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1007	1007	1007	1008	1008	1008	1008	1006	007.0
30	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1008	008.4
31	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1009	1009	1009	1009	1008	1008	1008	1007	1007	1008	1008	1008	1010	1007	008.8
Max.	**1023**	**1023**	**1023**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1022**	**1023**	**1023**	**1023**		
Min.	**1002**	**1002**	**1002**	**1002**	**1002**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1001**	**1001**	**1001**	**1001**	**1001**	**1002**		**1000**	
Avg.	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1011**	**1010**	**1010**	**1010**	**1010**	**1011**	**1011**			**010.8**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1008	1009	1009	1009	1010	1010	1010	1011	1011	1011	1012	1012	1012	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1016	1016	1008	012.0
2	1016	1017	1017	1017	1017	1017	1017	1018	1018	1018	1019	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1016	018.3
3	1020	1020	1020	1020	1020	1020	1021	1021	1022	1022	1022	1022	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1020	021.7
4	1023	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1023	1021	022.1
5	1021	1021	1021	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1019	1019	1018	1019	1018	1018	1019	1019	1019	1019	1021	1018	019.2
6	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1019	1015	017.4
7	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1013	1014	1013	1013	1013	1012	1012	1012	1011	1011	1011	1011	1011	1012	1015	1011	013.0
8	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1012	1010	010.8
9	1010	1009	1009	1009	1009	1008	1008	1009	1009	1008	1008	1009	1009	1008	1009	1009	1009	1009	1010	1011	1011	1012	1012	1012	1012	1008	009.4
10	1013	1013	1013	1013	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1013	014.5
11	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1012	1011	1011	1010	1009	1009	1008	1008	1007	1015	1007	012.2
12	1006	1006	1005	1005	1004	1004	1003	1003	1002	1002	1001	1001	1001	1000	1000	999	999	999	999	998	999	998	998	997	1006	997	001.1
13	996	996	996	996	996	996	996	996	996	996	995	996	996	996	997	997	998	998	998	998	999	999	999	1000	1000	995	996.8
14	1000	1001	1001	1001	1002	1002	1003	1004	1004	1005	1005	1006	1006	1007	1007	1008	1008	1009	1009	1010	1010	1011	1011	1012	1012	1000	005.9
15	1012	1013	1013	1014	1014	1014	1015	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1016	1016	1017	1017	1017	1017	1012	015.6
16	1017	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1013	1013	1013	1012	1012	1012	1017	1012	015.0
17	1012	1011	1011	1010	1010	1009	1009	1009	1009	1008	1008	1008	1008	1007	1007	1006	1006	1005	1005	1004	1004	1004	1004	1004	1012	1004	007.4
18	1003	1003	1003	1002	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	999	999	999	999	1000	1000	1001	1001	1003	999	000.6
19	1001	1002	1002	1002	1003	1003	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1005	1001	003.8
20	1004	1004	1004	1004	1003	1004	1004	1004	1004	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1004	1001	002.7
21	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1001	002.4
22	1005	1004	1005	1004	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1002	1002	1002	1002	1001	1001	1005	1001	003.4
23	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	999	999	1001	999	000.4
24	998	998	997	996	996	995	995	994	994	993	993	993	993	992	992	993	993	992	992	992	993	993	994	994	998	992	993.9
25	994	994	994	995	995	996	996	996	997	997	997	997	997	998	998	998	997	997	997	997	997	997	997	997	998	994	996.5
26	997	997	997	997	997	998	998	998	999	999	999	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	997	999.4
27	1001	1002	1002	1001	1002	1001	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1001	002.8
28	1005	1005	1005	1005	1005	1006	1006	1007	1007	1007	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1011	1011	1012	1012	1005	008.0
29	1012	1012	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1012	014.8
30	1017	1017	1017	1017	1017	1017	1017	1016	1017	1017	1017	1017	1017	1016	1016	1016	1016	1015	1015	1014	1014	1014	1013	1013	1017	1013	015.8
31	1012	1012	1012	1011	1010	1009	1007	1006	1005	1004	1003	1003	1002	1001	1000	1000	1000	999	998	998	998	998	998	998	1012	998	003.5
Max.	**1023**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**		
Min.	**994**	**994**	**994**	**995**	**995**	**995**	**995**	**994**	**994**	**993**	**993**	**993**	**993**	**992**	**992**	**993**	**993**	**992**	**992**	**992**	**993**	**993**	**994**	**994**		**992**	
Avg.	**1009**	**1009**	**1009**	**1008**	**1008**	**1008**	**1008**	**1008**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**			**008.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	998	998	998	998	998	998	998	998	999	999	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1003	1004	1005	1005	1005	998	000.7
2	1005	1006	1006	1006	1006	1006	1007	1007	1007	1007	1008	1007	1007	1006	1006	1005	1004	1003	1002	1002	1001	1001	1001	1001	1008	1001	004.8
3	1000	1001	1001	1001	1001	1002	1002	1002	1003	1004	1006	1007	1008	1009	1010	1011	1011	1011	1011	1012	1013	1014	1015	1015	1015	1000	007.1
4	1016	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1019	1018	1018	1019	1019	1019	1019	1019	1016	017.9
5	1019	1019	1019	1019	1019	1019	1019	1020	1020	1021	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1023	1023	1023	1024	1024	1019	021.0
6	1023	1023	1023	1022	1022	1021	1021	1021	1020	1019	1018	1018	1017	1016	1015	1014	1012	1011	1011	1009	1008	1007	1007	1006	1023	1006	016.0
7	1005	1005	1004	1003	1002	1001	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1005	1005	1006	1007	1008	1009	1010	1010	1001	004.3
8	1011	1011	1012	1012	1012	1013	1013	1013	1013	1013	1012	1013	1013	1012	1012	1010	1009	1008	1007	1006	1004	1005	1004	1003	1013	1003	010.0
9	1002	1002	1002	1001	1000	1000	999	999	999	999	999	999	999	999	1000	999	999	999	998	998	997	997	997	997	1002	997	999.1
10	996	996	996	995	995	995	995	995	995	995	995	995	995	996	996	996	996	996	997	997	998	998	999	1000	1000	995	996.1
11	1000	1001	1002	1002	1003	1003	1004	1004	1005	1005	1005	1006	1006	1007	1007	1007	1008	1008	1007	1007	1008	1008	1008	1008	1008	1000	005.4
12	1007	1007	1007	1008	1008	1008	1008	1008	1007	1008	1008	1008	1008	1008	1008	1007	1007	1006	1006	1006	1005	1006	1006	1006	1008	1005	007.1
13	1006	1007	1006	1006	1006	1006	1005	1006	1007	1007	1007	1008	1006	1007	1007	1005	1004	1003	1002	1002	1001	1001	1001	1001	1008	1001	004.8
14	1000	999	1000	999	999	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1004	1004	1004	1005	1006	1007	1007	1008	1009	1009	999	002.8
15	1009	1010	1011	1011	1011	1011	1012	1012	1012	1012	1013	1013	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1011	1014	1009	012.1
16	1011	1010	1010	1009	1009	1008	1008	1007	1007	1006	1005	1005	1005	1004	1003	1003	1002	1002	1002	1002	1003	1003	1003	1003	1011	1002	005.3
17	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1001	1000	999	998	997	995	994	1003	994	001.3
18	994	993	992	991	991	990	989	989	989	989	989	989	990	990	991	992	993	994	994	995	996	996	997	997	997	989	992.1
19	998	998	998	998	998	998	998	999	999	999	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	1003	1003	1003	1003	998	000.0
20	1004	1004	1004	1005	1005	1005	1006	1006	1007	1007	1008	1009	1009	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1012	1012	1004	008.1
21	1012	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1016	1016	1016	1017	1017	1018	1018	1019	1019	1012	014.8
22	1019	1019	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1019	1019	1020	1020	1020	1020	1019	019.5
23	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1020	1017	018.3
24	1016	1016	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1010	1010	1010	1010	1010	1016	1010	012.4
25	1010	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1009	009.9
26	1010	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1011	1009	009.9
27	1009	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1010	1011	1011	1011	1012	1012	1012	1012	1008	010.0
28	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1013	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1012	1012	1013	1011	012.0
29	1011	1011	1011	1011	1011	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1011	1010	1010	1010	1010	1009	1009	1008	1008	1012	1008	010.8
30	1007	1006	1006	1005	1004	1004	1004	1004	1004	1004	1004	1003	1003	1004	1003	1004	1004	1004	1004	1005	1005	1005	1005	1005	1007	1003	004.4
Max.	**1023**	**1023**	**1023**	**1022**	**1022**	**1021**	**1021**	**1021**	**1020**	**1021**	**1021**	**1021**	**1021**	**1021**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1024**	**1024**		
Min.	**994**	**993**	**992**	**991**	**991**	**990**	**989**	**989**	**989**	**989**	**989**	**989**	**990**	**990**	**991**	**992**	**993**	**994**	**994**	**995**	**996**	**996**	**995**	**994**		**989**	
Avg.	**1008**	**1008**	**1008**	**1008**	**1007**	**1007**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**			**007.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1005	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1008	1007	1007	1007	1007	1006	1005	1005	1005	1004	1004	1004	1008	1004	006.3
2	1003	1003	1002	1002	1001	1001	1000	999	999	998	998	997	996	995	994	993	993	992	992	991	991	991	991	991	1003	991	996.4
3	991	990	990	990	990	990	990	990	990	991	992	992	993	993	994	995	995	996	996	997	997	997	998	998	998	990	993.0
4	998	998	998	998	998	998	998	998	998	998	998	998	998	998	997	997	997	997	997	997	997	997	997	997	998	997	997.7
5	997	998	998	998	998	997	998	998	998	998	998	998	999	999	999	999	999	1000	1000	1000	1001	1001	1001	1001	1001	997	998.9
6	1001	1001	1002	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1003	1001	002.3
7	1002	1002	1002	1002	1002	1002	1003	1003	1004	1004	1005	1005	1006	1007	1007	1008	1009	1009	1010	1011	1012	1012	1013	1014	1014	1002	006.3
8	1014	1015	1016	1016	1017	1018	1018	1019	1019	1020	1020	1021	1021	1021	1020	1020	1020	1020	1020	1020	1020	1019	1019	1019	1021	1014	018.8
9	1018	1017	1017	1016	1015	1014	1014	1013	1011	1010	1009	1007	1006	1004	1002	999	998	997	995	993	992	991	989	988	1018	988	004.8
10	987	987	986	986	985	987	988	989	990	991	992	993	993	994	994	994	994	994	994	994	995	995	995	995	995	985	991.3
11	995	995	995	994	994	994	993	994	994	994	994	993	994	994	994	994	995	996	997	998	999	1000	1000	1001	1001	993	995.3
12	1002	1002	1002	1002	1003	1004	1005	1006	1007	1007	1008	1009	1009	1010	1011	1011	1011	1012	1012	1014	1014	1014	1014	1015	1015	1002	008.5
13	1014	1014	1014	1013	1013	1012	1012	1011	1011	1010	1010	1009	1008	1007	1006	1006	1005	1004	1004	1004	1003	1003	1004	1004	1014	1003	008.3
14	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1002	1002	1001	1000	1000	1000	999	999	999	1004	999	002.3
15	999	999	999	999	999	999	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1003	1003	1003	999	000.8
16	1003	1003	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1003	004.9
17	1007	1006	1006	1006	1006	1006	1006	1006	1006	1007	1006	1006	1006	1006	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1007	1004	005.5
18	1004	1003	1003	1003	1002	1002	1002	1001	1001	1001	1001	1000	1000	999	998	997	997	996	995	995	994	994	993	993	1004	993	998.8
19	992	992	992	991	991	991	991	991	991	991	991	992	992	992	993	993	994	994	995	996	997	997	998	998	998	991	993.0
20	998	999	999	999	999	1000	1000	1001	1002	1002	1002	1003	1003	1004	1004	1004	1004	1005	1005	1005	1005	1006	1006	1006	1006	998	002.6
21	1006	1006	1007	1006	1006	1006	1007	1007	1006	1006	1006	1006	1006	1006	1005	1005	1004	1003	1002	1001	1000	999	998	997	1007	997	004.2
22	996	996	995	995	994	993	993	993	993	992	993	993	993	994	993	993	992	992	991	991	990	990	990	989	996	989	992.6
23	988	988	988	988	988	987	987	987	987	988	988	989	989	989	989	989	991	992	992	993	994	994	995	995	995	987	989.8
24	995	996	997	998	998	1000	1001	1002	1004	1006	1008	1010	1012	1013	1014	1015	1016	1017	1018	1019	1020	1020	1021	1021	1021	995	009.3
25	1021	1022	1022	1021	1021	1021	1021	1021	1021	1022	1022	1022	1022	1021	1021	1020	1019	1018	1017	1017	1016	1016	1015	1014	1022	1014	019.7
26	1013	1012	1011	1011	1010	1009	1009	1009	1010	1010	1010	1010	1010	1010	1009	1008	1008	1008	1009	1010	1010	1011	1012	1012	1013	1008	010.0
27	1012	1013	1013	1014	1014	1015	1015	1017	1017	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1020	1019	1019	1020	1012	017.3
28	1018	1017	1016	1015	1014	1013	1012	1011	1010	1010	1008	1007	1006	1005	1004	1003	1002	1002	1002	1002	1001	1001	1001	1001	1018	1001	007.6
29	1001	1001	1001	1001	1002	1002	1003	1003	1004	1005	1005	1006	1007	1007	1007	1007	1008	1008	1009	1010	1010	1011	1011	1011	1011	1001	005.8
30	1011	1011	1012	1012	1012	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1011	013.9
31	1014	1013	1013	1013	1012	1011	1011	1010	1010	1010	1009	1009	1009	1008	1008	1007	1007	1006	1006	1006	1006	1006	1006	1006	1014	1006	009.0
Max.	**1021**	**1022**	**1022**	**1021**	**1021**	**1021**	**1021**	**1021**	**1021**	**1022**	**1022**	**1022**	**1022**	**1021**	**1021**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1022**		
Min.	**987**	**987**	**986**	**986**	**985**	**987**	**987**	**987**	**987**	**988**	**988**	**989**	**989**	**989**	**989**	**989**	**991**	**992**	**991**	**991**	**990**	**990**	**989**	**988**		**985**	
Avg.	**1004**	**1004**	**1003**	**1003**	**1003**	**1003**	**1003**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**			**003.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1006	1005	1005	1005	1004	1003	1003	1002	1002	1001	1001	1000	1000	1006	1000	004.2
2	999	998	998	997	997	996	996	996	995	995	995	995	995	995	995	995	995	995	995	995	995	995	996	996	999	995	995.8
3	996	996	996	996	997	998	998	998	999	1000	1000	1001	1002	1002	1002	1002	1003	1003	1004	1004	1004	1005	1005	1005	1005	996	000.7
4	1005	1005	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1007	1007	1007	1008	1007	1007	1007	1007	1007	1006	1006	1008	1005	006.7
5	1006	1006	1006	1006	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1003	1003	1002	1002	1002	1003	1003	1002	1002	1002	1006	1002	003.8
6	1002	1002	1002	1001	1001	1001	1001	1000	1000	1000	1000	999	999	999	998	998	998	997	997	996	996	996	996	996	1002	996	999.0
7	996	997	997	998	999	999	1000	1001	1002	1003	1004	1005	1007	1007	1008	1008	1009	1009	1010	1010	1011	1011	1012	1012	1012	996	004.8
8	1013	1013	1013	1013	1012	1013	1012	1012	1012	1012	1012	1011	1011	1009	1009	1008	1007	1006	1005	1005	1004	1002	1001	1000	1013	1000	008.9
9	998	998	997	996	995	994	993	992	992	991	991	990	990	989	989	988	988	988	989	989	989	989	988	987	998	987	991.1
10	986	985	984	982	981	980	979	977	976	976	977	977	978	979	979	980	980	980	981	981	982	982	982	983	986	976	980.4
11	982	982	982	981	981	980	980	979	979	979	979	979	979	979	979	978	979	979	979	980	981	981	982	983	983	978	980.1
12	983	984	985	986	986	987	988	989	989	990	991	992	994	995	995	996	997	998	998	999	1000	1001	1001	1002	1002	983	992.7
13	1003	1003	1004	1004	1005	1005	1005	1006	1006	1006	1006	1007	1007	1007	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1010	1003	006.6
14	1010	1010	1010	1010	1010	1010	1010	1010	1009	1010	1010	1009	1009	1009	1009	1009	1009	1010	1010	1011	1011	1011	1012	1013	1013	1009	010.0
15	1013	1013	1014	1015	1015	1015	1016	1017	1017	1017	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1019	1013	017.1
16	1017	1017	1017	1016	1016	1016	1018	1018	1018	1019	1019	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	1016	018.9
17	1020	1020	1020	1019	1020	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1017	1017	1018	1018	1019	1019	1020	1017	018.6
18	1019	1020	1020	1020	1021	1021	1021	1022	1022	1023	1023	1023	1024	1024	1024	1024	1024	1024	1025	1025	1025	1025	1025	1025	1025	1019	022.9
19	1024	1024	1024	1024	1023	1023	1022	1021	1021	1021	1020	1019	1019	1018	1017	1017	1016	1016	1015	1015	1014	1014	1013	1013	1024	1013	018.9
20	1012	1011	1011	1010	1010	1009	1009	1008	1008	1008	1008	1007	1007	1006	1006	1005	1005	1004	1004	1004	1003	1003	1002	1002	1012	1002	006.7
21	1001	1001	1001	1001	1001	1000	999	999	998	998	997	997	996	995	994	994	993	992	991	991	990	990	989	989	1001	989	995.7
22	988	988	989	989	989	989	990	990	991	992	992	993	993	994	994	994	995	995	996	996	997	997	997	998	998	988	992.7
23	998	997	997	997	997	997	996	996	995	995	994	993	992	991	989	988	987	987	986	984	983	982	981	980	998	980	990.9
24	979	979	978	977	976	975	975	976	976	976	976	977	977	978	978	979	979	980	980	980	981	982	982	983	983	975	978.2
25	985	986	987	987	988	988	988	988	988	989	989	989	990	991	991	990	991	992	993	994	994	995	995	996	996	985	990.1
26	997	997	998	998	999	999	1000	1001	1001	1003	1003	1004	1005	1005	1005	1005	1004	1004	1003	1002	1002	1001	1001	1000	1005	997	001.5
27	999	999	998	996	996	994	993	992	991	991	990	989	988	987	985	984	983	983	983	983	982	981	981	980	999	980	988.6
28	980	980	980	979	979	979	980	980	981	981	982	983	983	983	984	984	984	985	985	986	987	988	989	990	990	979	983.0
29	991	992	993	994	994	995	996	996	997	998	1000	1000	1001	1001	1002	1002	1003	1004	1005	1006	1007	1008	1008	1009	1009	991	000.0
30	1010	1011	1011	1012	1012	1012	1013	1013	1014	1014	1014	1015	1016	1016	1017	1018	1018	1020	1020	1021	1022	1023	1023	1024	1024	1010	016.1
Max.	**1024**	**1024**	**1024**	**1024**	**1023**	**1023**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1024**	**1024**	**1024**	**1024**	**1024**	**1024**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**	**1025**		
Min.	**979**	**979**	**978**	**977**	**976**	**975**	**975**	**976**	**976**	**976**	**976**	**977**	**977**	**978**	**978**	**978**	**979**	**979**	**979**	**980**	**981**	**981**	**981**	**980**		**975**	
Avg.	**1001**	**1001**	**1001**	**1001**	**1000**	**1000**	**1000**	**1000**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**	**1001**			**000.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Barometric Pressure (mbar)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1024	1025	1025	1026	1026	1026	1026	1026	1027	1027	1027	1029	1029	1029	1029	1029	1028	1028	1028	1028	1029	1028	1029	1029	1029	1024	027.3
2	1028	1028	1028	1028	1026	1026	1025	1024	1024	1024	1024	1024	1024	1023	1022	1022	1022	1022	1022	1021	1022	1021	1021	1021	1028	1021	023.9
3	1021	1021	1020	1020	1019	1018	1017	1017	1015	1014	1013	1011	1011	1008	1006	1006	1005	1004	1003	1002	1001	1000	1000	1000	1021	1000	010.5
4	1000	1000	1000	999	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1003	1003	999	000.7
5	1003	1003	1003	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1000	999	999	999	999	999	998	999	999	999	1000	1003	998	000.5
6	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	1003	1003	1003	1003	1004	1004	1004	1005	1005	1005	1006	1006	1006	1000	002.5
7	1007	1007	1007	1007	1007	1008	1008	1008	1009	1009	1010	1010	1010	1011	1011	1011	1010	1010	1010	1010	1009	1009	1009	1007	1011	1007	009.0
8	1006	1005	1003	1001	999	997	996	994	992	990	988	986	985	983	981	978	977	975	974	973	972	971	970	969	1006	969	986.1
9	969	968	968	968	968	969	969	970	970	971	972	973	973	974	975	976	977	979	980	982	984	985	987	988	988	968	974.7
10	989	991	993	994	996	997	999	1001	1002	1004	1006	1008	1009	1011	1012	1012	1013	1014	1015	1016	1017	1018	1019	1020	1020	989	006.5
11	1021	1022	1023	1024	1024	1024	1025	1026	1026	1027	1028	1029	1030	1031	1031	1031	1032	1032	1033	1034	1034	1034	1036	1037	1037	1021	028.9
12	1038	1038	1038	1039	1039	1039	1039	1039	1039	1040	1040	1040	1039	1039	1038	1038	1038	1037	1038	1038	1038	1038	1038	1039	1040	1037	038.6
13	1039	1040	1040	1040	1040	1040	1041	1041	1041	1042	1043	1042	1042	1042	1042	1042	1042	1042	1042	1041	1041	1041	1041	1041	1043	1039	041.2
14	1041	1040	1040	1040	1040	1039	1039	1039	1039	1039	1039	1039	1039	1039	1038	1038	1038	1038	1038	1038	1037	1037	1038	1038	1041	1037	038.7
15	1038	1038	1038	1037	1037	1037	1036	1036	1036	1036	1037	1037	1036	1037	1036	1036	1036	1036	1036	1036	1036	1036	1035	1035	1038	1035	036.4
16	1035	1035	1034	1035	1035	1034	1034	1033	1033	1033	1032	1032	1032	1031	1030	1030	1029	1029	1029	1029	1028	1029	1029	1029	1035	1028	031.6
17	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1028	1027	1027	1027	1027	1026	1027	1027	1026	1026	1026	1026	1028	1026	027.2
18	1025	1025	1025	1024	1024	1023	1023	1023	1023	1022	1022	1022	1021	1021	1020	1019	1019	1018	1018	1018	1018	1017	1017	1017	1025	1017	021.0
19	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1013	1013	1013	1014	1014	1014	1014	1017	1013	014.7
20	1014	1014	1014	1014	1015	1015	1015	1015	1015	1016	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1019	1019	1019	1014	016.5
21	1019	1019	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1019	1016	017.4
22	1015	1015	1015	1014	1013	1013	1012	1011	1011	1010	1010	1011	1010	1009	1009	1009	1009	1008	1007	1006	1005	1005	1004	1002	1015	1002	009.7
23	1000	998	996	994	992	991	991	991	992	993	994	995	995	996	996	997	998	999	1000	1001	1002	1002	1003	1003	1003	991	996.6
24	1004	1005	1006	1007	1009	1010	1011	1011	1011	1012	1013	1013	1013	1013	1013	1014	1014	1015	1013	1012	1012	1011	1010	1009	1015	1004	010.8
25	1009	1007	1006	1004	1003	1001	999	997	996	996	994	993	992	992	992	991	991	991	991	991	991	991	991	991	1009	991	995.8
26	992	991	992	993	993	993	992	993	994	993	994	994	994	995	994	994	993	993	992	992	992	991	991	991	995	991	992.7
27	991	991	992	991	992	992	992	992	993	993	994	995	995	996	996	997	997	998	999	1000	1001	1001	1002	1002	1002	991	995.5
28	1003	1003	1004	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1006	1007	1006	1007	1006	1007	1007	1007	1007	1008	1008	1003	005.7
29	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1010	1010	1010	1010	1010	1010	1011	1011	1011	1012	1013	1013	1014	1014	1008	009.9
30	1014	1014	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1017	1016	1016	1016	1016	1017	1016	1016	1016	1016	1016	1016	1017	1014	015.7
31	1016	1016	1016	1016	1016	1016	1015	1016	1015	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1017	1017	1018	1018	1015	016.5
Max.	**1041**	**1040**	**1040**	**1040**	**1040**	**1040**	**1041**	**1041**	**1041**	**1042**	**1043**	**1042**	**1042**	**1042**	**1042**	**1042**	**1042**	**1042**	**1042**	**1041**	**1041**	**1041**	**1041**	**1041**	**1043**		
Min.	**969**	**968**	**968**	**968**	**968**	**969**	**969**	**970**	**970**	**971**	**972**	**973**	**973**	**974**	**975**	**976**	**977**	**975**	**974**	**973**	**972**	**971**	**970**	**969**		**968**	
Avg.	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**	**1013**			**013.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.9	1.8	2.1	2.1	5.1	7.7	8.7	8.3	8.5	8.8	7.3	7.5	7.6	7.6	7.8	8.4	8.1	8.4	7.6	8.5	8.7	8.2	7.9	8.3	8.8	1.8	7.0
2	8.6	8.9	8.9	9.0	9.4	9.4	10.4	9.5	10.1	11.1	10.8	11.0	10.8	9.4	10.7	9.0	9.2	10.3	9.7	9.2	8.8	9.1	8.2	7.3	11.1	7.3	9.5
3	6.8	6.9	6.6	6.3	6.7	8.1	7.6	8.1	8.2	7.9	7.1	7.0	7.2	7.8	7.8	8.5	8.8	7.6	7.8	8.7	9.0	9.2	8.5	8.7	9.2	6.3	7.8
4	9.3	9.7	9.8	9.9	10.2	9.7	9.2	10.2	10.4	9.8	10.7	10.8	10.2	10.6	10.4	10.8	10.3	10.5	10.4	10.2	10.4	10.7	10.9	10.1	10.9	9.2	10.2
5	11.0	10.8	10.7	11.2	11.1	11.2	11.4	11.9	11.9	12.5	12.0	12.0	11.9	11.1	11.4	11.2	11.1	12.0	12.0	12.5	12.5	12.0	11.8	11.9	12.5	10.7	11.6
6	11.0	9.5	9.2	9.8	9.7	9.3	9.3	9.3	8.9	8.1	8.4	9.1	9.2	10.1	10.1	9.8	10.6	10.1	10.4	11.4	10.8	10.9	10.8	11.2	11.4	8.1	9.9
7	10.8	10.8	10.9	11.5	11.9	11.4	11.7	11.9	11.4	11.9	11.5	11.2	12.4	12.9	12.9	12.2	12.3	12.5	12.5	12.7	12.8	13.1	12.8	11.3	13.1	10.8	12.0
8	11.1	11.7	11.8	11.8	12.2	12.3	12.2	12.7	12.5	12.7	12.7	12.8	13.3	12.5	13.6	13.4	13.9	15.7	14.0	12.9	13.2	13.7	14.6	15.3	15.7	11.1	13.0
9	14.5	13.2	13.5	13.1	12.7	14.7	13.8	12.2	12.1	12.1	12.8	12.7	12.8	13.6	14.0	13.3	11.7	11.8	11.7	10.8	11.2	12.1	11.3	11.0	14.7	10.8	12.6
10	10.8	10.4	9.8	10.3	10.8	11.1	10.6	10.6	11.1	10.0	10.7	12.3	11.4	11.1	9.2	7.8	8.2	10.6	11.3	8.8	9.0	11.0	11.7	11.3	12.3	7.8	10.4
11	10.6	11.0	10.7	11.0	10.8	10.2	10.4	11.5	11.1	10.9	11.9	11.2	10.9	10.7	10.4	11.4	10.9	12.0	11.3	11.9	11.7	12.1	13.0	12.6	13.0	10.2	11.3
12	11.1	10.5	10.4	10.8	10.7	10.4	10.1	10.6	10.4	11.2	11.4	10.8	11.3	10.4	12.9	13.8	11.7	12.0	13.4	12.7	10.8	11.3	11.6	12.4	13.8	10.1	11.3
13	11.5	11.7	12.2	12.1	11.6	12.2	11.8	11.4	11.7	12.1	11.9	11.5	10.5	10.8	11.1	11.3	12.1	12.9	13.2	13.3	12.2	12.4	11.2	12.0	13.3	10.5	11.9
14	11.6	12.3	9.5	7.7	6.3	4.6	1.3	1.2	1.1	1.2	1.0	3.7	6.0	4.8	5.0	4.2	3.2	3.2	2.3	2.8	4.4	6.7	11.0	10.7	12.3	1.0	5.2
15	9.3	8.7	7.1	7.3	6.0	5.2	4.4	4.5	5.5	4.0	3.8	2.5	2.3	3.3	2.5	3.1	2.9	2.0	1.9	3.1	1.8	2.4	2.4	1.7	9.3	1.7	4.1
16	1.3	1.0	0.9	1.0	2.6	4.5	4.1	5.9	5.4	6.3	4.9	5.1	5.4	6.9	5.7	4.3	3.7	1.5	1.0	1.2	2.8	1.4	1.4	1.9	6.9	0.9	3.3
17	0.7	1.7	2.8	2.2	4.6	5.4	5.7	6.1	7.1	7.2	7.5	9.5	10.2	13.8	10.3	11.1	8.5	7.4	6.1	4.0	3.6	2.8	2.8	2.7	13.8	0.7	6.0
18	2.2	1.8	1.7	2.1	1.4	1.4	1.1	0.7	0.6	0.6	0.9	0.7	0.7	0.5	0.5	1.2	1.4	1.8	2.6	2.1	2.3	3.4	3.6	4.1	4.1	0.5	1.6
19	3.9	4.3	5.0	4.7	6.2	5.3	5.1	5.2	7.2	6.0	5.4	6.6	6.5	7.3	8.4	7.7	7.4	7.2	6.1	4.8	5.4	8.0	8.0	6.8	8.4	3.9	6.2
20	6.5	5.8	6.3	6.0	6.2	5.8	4.9	5.9	5.7	6.6	6.0	5.0	5.1	5.5	5.5	5.9	4.3	3.3	2.6	2.2	1.4	1.2	1.5	2.0	6.6	1.2	4.6
21	1.8	2.4	2.4	2.9	2.8	2.7	3.2	3.2	3.9	4.6	5.2	4.3	5.2	6.3	6.8	7.7	7.7	7.5	7.0	9.5	12.0	13.7	14.3	13.9	14.3	1.8	6.3
22	10.9	6.3	8.3	6.5	7.1	6.7	4.2	3.8	2.5	2.2	2.5	1.2	2.2	4.7	7.1	7.9	6.1	5.4	2.5	3.8	4.6	4.6	4.7	4.3	10.9	1.2	5.0
23	4.6	6.3	7.2	9.2	7.0	6.9	7.5	7.5	9.0	9.3	9.6	9.4	9.4	10.3	9.7	10.1	8.2	4.9	4.2	9.3	14.4	11.8	10.4	9.2	14.4	4.2	8.6
24	7.7	8.5	7.4	7.8	5.3	1.9	1.1	2.2	1.3	3.5	3.8	4.0	3.9	3.9	3.6	3.6	3.6	2.5	2.0	2.3	3.2	3.4	3.3	3.6	8.5	1.1	3.9
25	3.1	1.9	1.5	1.1	1.4	1.8	6.1	6.8	6.2	5.3	5.3	5.2	4.8	6.3	6.6	7.7	8.3	9.2	8.1	11.5	8.9	9.8	8.8	8.5	11.5	1.1	6.0
26	7.8	7.7	7.5	6.9	5.9	6.6	7.4	4.8	5.4	5.5	5.2	5.9	6.7	6.8	6.8	6.9	3.7	1.3	2.3	2.4	1.2	1.2	1.7	3.5	7.8	1.2	5.0
27	4.1	3.6	3.6	4.8	6.0	5.9	5.4	9.2	8.6	8.7	8.6	8.6	9.3	9.5	9.7	10.0	9.6	8.8	9.8	8.9	7.9	7.6	7.2	6.6	10.0	3.6	7.6
28	5.5	4.7	3.5	2.7	1.8	1.3	2.5	2.6	3.1	3.1	1.8	2.3	2.6	1.8	1.9	1.6	1.5	1.3	0.7	0.6	0.8	3.6	4.7	4.4	5.5	0.6	2.5
29	5.1	4.9	4.9	6.1	5.2	5.4	6.4	5.5	4.9	5.2	6.0	5.7	6.9	7.9	6.4	5.9	3.8	3.2	1.9	1.5	2.2	1.9	2.6	2.9	7.9	1.5	4.7
30	3.3	3.9	4.4	3.6	3.6	4.5	4.2	4.8	3.5	4.0	3.8	5.7	7.9	7.3	6.8	7.3	9.6	9.0	7.6	7.3	10.2	9.5	10.8	9.4	10.8	3.3	6.3
31	9.4	8.9	9.6	9.9	9.0	9.4	9.7	10.6	8.7	9.2	9.7	11.3	10.9	10.2	8.2	7.7	8.8	7.8	6.9	6.4	5.9	6.0	4.8	4.1	11.3	4.1	8.5
Max.	**14.5**	**13.2**	**13.5**	**13.1**	**12.7**	**14.7**	**13.8**	**12.7**	**12.5**	**12.7**	**12.8**	**12.8**	**13.3**	**13.8**	**14.0**	**13.8**	**13.9**	**15.7**	**14.0**	**13.3**	**14.4**	**13.7**	**14.6**	**15.3**	**15.7**		
Min.	**0.7**	**1.0**	**0.9**	**1.0**	**1.4**	**1.3**	**1.1**	**0.7**	**0.6**	**0.6**	**0.9**	**0.7**	**0.7**	**0.5**	**0.5**	**1.2**	**1.4**	**1.3**	**0.7**	**0.6**	**0.8**	**1.2**	**1.4**	**1.7**		**0.5**	
Avg.	**7.4**	**7.1**	**7.1**	**7.1**	**7.1**	**7.2**	**7.2**	**7.4**	**7.4**	**7.5**	**7.4**	**7.6**	**7.9**	**8.2**	**8.2**	**8.2**	**7.8**	**7.5**	**7.1**	**7.3**	**7.6**	**7.9**	**8.0**	**7.9**			**7.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.8	2.5	1.7	2.3	2.6	2.7	2.1	2.1	2.5	2.1	2.6	1.7	1.1	1.3	2.0	2.1	1.6	1.4	0.6	0.7	0.7	1.2	1.9	2.6	2.8	0.6	1.9
2	1.7	2.3	1.8	0.7	0.8	1.0	1.4	1.6	3.6	4.6	5.8	7.1	7.8	7.3	7.6	8.5	8.0	7.9	6.4	9.2	8.2	8.0	6.2	8.8	9.2	0.7	5.3
3	11.7	9.4	9.9	9.2	10.2	10.1	10.0	10.6	10.1	10.2	9.5	9.5	10.0	8.9	7.9	7.8	7.9	7.3	8.2	8.1	7.0	6.0	5.9	5.3	11.7	5.3	8.8
4	5.9	5.9	5.9	5.1	5.4	6.9	4.7	1.3	2.4	2.7	3.0	2.2	1.3	4.0	3.7	3.4	2.8	3.7	3.1	3.0	3.6	4.4	5.2	6.5	6.9	1.3	4.0
5	9.1	10.1	8.7	7.6	10.3	11.0	11.6	9.6	9.3	9.6	9.4	9.6	9.5	9.1	10.5	10.9	11.1	10.2	9.1	8.8	7.0	7.2	6.7	6.6	11.6	6.6	9.3
6	4.8	4.2	5.0	3.1	2.8	3.2	3.1	3.6	4.5	5.0	5.3	4.7	4.5	4.9	6.3	7.2	7.9	8.7	10.0	9.9	9.5	8.5	9.9	10.3	10.3	2.8	6.1
7	10.5	10.9	10.5	9.3	9.6	9.4	8.4	9.6	8.7	8.8	8.0	8.7	8.5	6.8	8.8	7.5	7.5	7.4	6.1	6.5	5.5	3.5	4.0	3.3	10.9	3.3	7.8
8	2.3	1.1	2.2	1.1	1.3	1.7	1.6	2.6	6.7	5.6	5.3	6.9	7.7	6.0	4.6	8.7	6.9	7.7	9.5	7.6	7.2	3.3	5.6	5.4	9.5	1.1	4.9
9	7.0	5.8	7.6	10.8	11.3	10.8	9.5	9.2	7.6	4.2	2.5	1.6	2.5	2.1	2.4	1.9	0.9	2.9	4.3	4.0	2.7	3.8	3.2	4.4	11.3	0.9	5.1
10	3.6	2.7	2.7	3.9	2.9	3.8	5.2	5.2	5.0	4.6	4.1	5.6	4.8	4.1	2.3	3.0	2.4	2.5	3.0	2.9	2.5	1.9	0.6	3.4	5.6	0.6	3.4
11	2.4	2.9	2.3	0.8	1.2	1.0	1.2	0.9	1.5	4.2	3.4	2.7	4.4	6.2	5.6	6.4	6.9	6.1	7.2	8.5	9.7	9.8	10.4	11.4	11.4	0.8	4.9
12	12.6	12.5	13.3	12.8	13.3	13.9	13.5	12.3	12.3	11.6	11.9	13.5	13.7	12.2	11.6	11.1	11.1	10.6	9.7	8.8	3.3	1.3	1.0	1.6	13.9	1.0	10.4
13	4.1	5.2	6.9	7.5	8.8	9.0	10.1	10.9	12.7	9.9	9.3	5.8	9.7	9.1	7.9	6.7	6.9	7.0	6.0	5.7	5.7	6.5	7.6	7.7	12.7	4.1	7.8
14	7.5	7.4	6.4	5.4	6.5	6.6	6.2	6.0	5.8	4.6	12.7	12.4	12.8	12.0	12.4	13.6	13.0	13.0	11.5	12.0	12.7	12.7	14.0	12.3	14.0	4.6	10.0
15	10.2	11.9	11.4	10.5	11.3	10.6	9.4	9.5	9.1	8.3	10.0	8.2	7.6	7.9	8.8	8.5	7.3	9.7	8.0	4.9	2.3	2.3	5.4	7.2	11.9	2.3	8.3
16	7.7	8.3	7.5	8.1	9.4	9.7	10.6	11.1	9.3	9.2	10.4	9.4	7.3	6.3	5.0	2.3	2.7	1.9	1.2	3.8	1.8	1.4	1.8	2.0	11.1	1.2	6.2
17	3.7	4.6	5.4	4.4	4.5	4.6	6.9	7.1	6.3	5.4	7.2	8.5	12.4	11.4	12.4	12.6	10.7	9.0	7.0	8.7	8.3	8.8	7.8	9.0	12.6	3.7	7.8
18	11.2	12.0	12.5	11.1	9.9	11.2	12.2	13.7	13.6	12.6	9.8	8.7	7.1	7.8	7.2	6.0	6.4	6.1	4.6	6.1	3.9	4.2	3.9	4.1	13.7	3.9	8.6
19	3.6	3.3	3.6	2.2	2.2	2.4	2.3	3.1	7.0	8.2	8.2	9.8	9.8	10.4	9.9	8.8	11.0	12.5	12.6	10.8	10.8	9.3	9.1	9.3	12.6	2.2	7.5
20	9.1	8.4	10.9	11.3	13.4	12.3	11.0	10.3	8.1	4.7	4.7	5.9	6.3	7.6	7.6	7.9	11.0	9.9	9.5	6.9	7.5	8.7	6.2	2.5	13.4	2.5	8.4
21	2.7	3.0	2.7	2.9	2.9	2.9	3.0	3.3	3.9	7.6	9.6	9.3	7.7	7.5	6.8	6.9	6.0	4.8	5.6	5.8	4.9	6.0	5.1	5.0	9.6	2.7	5.2
22	7.1	7.0	7.3	6.7	6.2	6.9	3.8	4.0	3.6	6.0	7.4	5.5	4.7	7.3	7.9	7.8	8.0	7.5	5.8	5.3	4.1	4.4	4.3	3.9	8.0	3.6	5.9
23	2.7	1.7	1.7	1.7	1.2	3.6	4.4	4.6	4.8	6.5	5.8	6.0	7.0	6.8	6.6	6.0	5.7	6.4	6.2	6.4	6.2	6.8	7.0	7.2	7.2	1.2	5.1
24	6.8	6.8	7.0	6.7	7.8	7.1	7.2	7.8	7.8	7.1	7.6	7.7	8.1	8.2	7.9	9.2	9.6	8.4	8.4	8.7	8.1	8.4	8.3	8.6	9.6	6.7	7.9
25	10.3	9.7	9.8	10.1	10.9	10.5	9.3	8.3	8.2	7.6	6.9	6.8	7.3	9.0	7.7	5.4	7.0	7.5	6.2	3.1	3.1	5.7	4.2	4.4	10.9	3.1	7.5
26	3.2	4.2	5.1	2.7	4.6	5.0	3.1	3.9	2.0	1.5	2.1	2.4	1.4	0.8	1.3	3.0	2.6	3.4	4.6	5.2	4.4	4.4	3.6	3.4	5.2	0.8	3.2
27	2.7	4.3	4.4	4.6	4.4	3.9	4.8	3.6	4.6	4.0	4.1	2.4	1.1	0.7	2.9	1.3	2.3	1.9	1.8	1.6	4.4	5.5	3.7	3.0	5.5	0.7	3.3
28	3.0	2.6	2.2	2.2	2.4	3.3	3.4	3.5	4.9	4.2	1.5	1.3	1.7	1.1	1.5	1.2	4.2	4.0	3.4	4.6	4.1	3.9	5.6	5.8	5.8	1.1	3.2
29	5.1	5.4	6.4	5.6	4.6	5.0	4.1	5.0	5.0	4.8	5.9	6.0	6.3	5.2	4.4	3.6	4.7	6.1	7.5	7.1	7.4	7.0	6.5	7.2	7.5	3.6	5.7
Max.	**12.6**	**12.5**	**13.3**	**12.8**	**13.4**	**13.9**	**13.5**	**13.7**	**13.6**	**12.6**	**12.7**	**13.5**	**13.7**	**12.2**	**12.4**	**13.6**	**13.0**	**13.0**	**12.6**	**12.0**	**12.7**	**12.7**	**14.0**	**12.3**	**14.0**		
Min.	**1.7**	**1.1**	**1.7**	**0.7**	**0.8**	**1.0**	**1.2**	**0.9**	**1.5**	**1.5**	**1.5**	**1.3**	**1.1**	**0.7**	**1.3**	**1.2**	**0.9**	**1.4**	**0.6**	**0.7**	**0.7**	**1.2**	**0.6**	**1.6**		**0.6**	
Avg.	**6.0**	**6.1**	**6.3**	**5.9**	**6.3**	**6.5**	**6.3**	**6.4**	**6.6**	**6.4**	**6.7**	**6.5**	**6.7**	**6.6**	**6.6**	**6.5**	**6.7**	**6.7**	**6.4**	**6.4**	**5.7**	**5.7**	**5.7**	**5.9**			**6.3**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.7	6.6	6.1	6.0	6.4	6.5	6.0	5.2	5.8	4.0	3.1	4.7	6.4	6.1	4.9	5.2	7.8	5.6	6.9	6.8	7.0	7.7	5.9	5.9	7.8	3.1	6.0
2	3.8	6.9	8.5	9.9	6.5	8.1	6.1	5.1	4.9	3.9	3.0	2.6	2.8	3.4	4.1	5.0	4.1	1.4	1.0	0.8	1.5	0.9	1.2	2.2	9.9	0.8	4.1
3	3.4	2.1	2.5	3.0	4.8	5.4	8.2	8.4	7.5	7.7	8.9	8.8	8.9	9.0	7.6	6.0	5.6	3.9	4.1	4.9	8.4	8.8	8.3	8.5	9.0	2.1	6.4
4	7.7	8.0	8.0	6.2	6.6	8.1	10.5	10.5	9.8	9.4	8.6	8.3	5.6	5.2	4.8	5.7	6.1	5.8	5.8	5.4	6.6	8.3	6.2	7.3	10.5	4.8	7.3
5	9.1	11.2	11.7	12.4	13.0	11.6	12.8	13.4	13.2	12.7	11.2	9.3	9.1	11.8	9.6	8.7	7.0	7.2	8.7	9.8	10.9	11.6	10.5	9.2	13.4	7.0	10.7
6	8.6	9.1	7.7	8.5	6.7	5.7	4.8	4.6	4.6	4.6	4.5	4.0	4.0	4.0	4.5	4.3	4.7	4.5	3.3	1.8	2.5	2.2	2.6	1.9	9.1	1.8	4.7
7	1.0	1.5	3.1	1.9	1.3	3.5	2.2	3.1	2.6	2.1	1.8	2.2	3.5	5.1	5.2	6.0	6.0	5.0	4.7	5.0	4.6	4.2	4.7	5.1	6.0	1.0	3.6
8	6.5	5.7	6.1	5.0	4.8	3.2	2.2	1.0	3.4	4.6	4.4	4.0	5.3	4.2	3.7	6.3	9.4	7.9	5.1	5.0	5.2	3.0	3.3	4.2	9.4	1.0	4.7
9	2.5	3.1	2.4	3.1	2.4	3.5	4.6	3.6	3.2	3.3	4.6	4.3	2.9	3.3	3.9	4.6	6.0	6.7	5.7	5.7	5.3	3.6	1.3	1.0	6.7	1.0	3.8
10	3.0	2.2	2.6	1.7	2.0	4.9	6.1	5.9	6.4	6.6	6.5	7.1	6.0	5.6	5.6	5.9	5.3	4.9	4.9	5.2	5.3	6.2	7.3	7.4	7.4	1.7	5.2
11	7.3	8.0	6.8	6.7	7.8	7.3	7.0	6.8	6.8	7.4	7.7	8.1	7.7	7.3	6.4	6.8	6.1	7.0	6.5	5.0	5.3	5.4	5.8	5.6	8.1	5.0	6.8
12	7.1	7.7	7.7	7.6	7.2	7.6	8.7	7.3	7.0	6.7	7.7	7.8	7.1	6.5	6.5	6.4	6.5	6.6	6.6	6.3	6.4	6.8	6.4	5.9	8.7	5.9	7.0
13	5.8	5.7	5.6	5.6	5.9	6.4	6.2	6.1	6.2	6.2	6.8	7.3	7.8	8.6	9.1	8.7	8.6	8.8	9.2	8.2	8.3	9.0	8.4	8.5	9.2	5.6	7.4
14	8.4	8.2	8.6	8.7	9.3	8.7	9.2	8.7	8.2	7.8	7.1	5.6	2.0	1.4	1.4	2.1	3.2	3.2	3.1	3.4	3.8	3.5	4.8	4.9	9.3	1.4	5.6
15	6.6	7.6	6.4	6.1	7.2	7.5	7.9	6.8	9.3	7.9	7.6	6.4	5.8	5.1	5.9	6.2	5.7	5.2	4.5	3.9	4.8	5.6	5.9	5.6	9.3	3.9	6.3
16	5.5	5.2	3.1	1.7	1.7	1.7	3.2	1.6	1.3	1.5	2.2	1.5	1.6	1.7	1.1	0.6	0.8	0.7	1.0	1.5	1.9	1.5	0.6	1.2	5.5	0.6	1.8
17	2.1	2.2	1.9	1.8	2.3	1.9	1.8	2.4	2.7	2.6	4.2	3.6	4.0	3.9	4.0	4.0	4.3	4.2	5.6	8.5	7.7	7.5	8.2	8.4	8.5	1.8	4.2
18	9.0	9.1	9.3	8.3	8.5	7.6	8.6	7.3	8.0	7.9	8.2	8.4	9.7	10.5	10.1	9.4	8.2	9.1	7.9	7.4	8.6	9.2	8.5	9.4	10.5	7.3	8.7
19	9.2	9.6	9.1	9.6	9.4	9.8	9.6	9.9	10.0	9.1	10.0	11.1	11.0	11.3	11.3	10.3	11.0	11.3	11.3	11.0	10.5	10.0	9.3	9.4	11.3	9.1	10.2
20	9.2	9.7	9.8	9.7	9.4	10.4	10.5	10.1	10.8	10.7	9.9	11.0	9.5	9.5	10.1	10.1	10.0	10.4	10.1	9.7	9.6	10.0	10.4	10.6	11.0	9.2	10.0
21	9.9	9.9	10.3	10.1	10.2	10.7	9.3	9.9	10.8	11.2	10.9	9.9	11.1	11.1	9.1	7.7	9.8	10.1	9.9	9.9	9.1	9.1	9.1	7.2	11.2	7.2	9.8
22	6.6	6.7	7.5	8.5	9.2	10.1	8.8	8.9	8.2	7.4	8.0	8.4	9.5	8.8	9.5	9.4	9.1	8.5	8.5	8.8	8.3	8.5	9.3	9.5	10.1	6.6	8.6
23	9.0	9.3	9.1	11.1	9.5	9.7	11.5	10.1	9.9	10.3	11.5	10.5	10.9	12.1	12.1	11.4	11.4	11.1	10.2	10.1	9.7	9.1	9.4	9.0	12.1	9.0	10.3
24	9.1	9.4	8.9	9.3	10.4	9.8	8.3	8.7	9.5	9.4	10.0	10.0	10.1	9.5	9.4	8.8	9.1	9.2	9.2	9.2	9.3	8.9	8.6	8.4	10.4	8.3	9.3
25	6.5	3.5	1.1	1.4	4.0	5.5	5.5	5.7	5.5	6.5	8.6	7.5	6.8	6.8	7.4	7.2	7.9	8.2	7.7	8.0	8.1	7.9	7.5	8.3	8.6	1.1	6.4
26										8.6				8.8	9.6	9.9	9.1	7.9	8.4	8.2	8.6	8.1	7.5	8.0	9.9	7.5	8.6
27	7.5	7.7	8.6	7.8	8.1	9.7	8.7	7.1	7.0	7.4	7.7	8.6	8.6	9.3	9.1	9.0	7.6	8.5	8.0	7.2	7.6	7.1	7.2	6.4	9.7	6.4	8.0
28	5.9	6.8	7.5	8.1	9.7	10.2	9.9	10.2	9.7	9.5	8.9	9.4	8.0	8.2	8.4	7.0	6.7	6.2	5.1	4.9	4.4	2.5	2.1	2.2	10.2	2.1	7.2
29	1.9	0.9	3.1	3.1	3.5	3.9	4.4	4.1	3.9	3.9	3.9	4.4	4.8	5.2	6.2	6.6	5.7	5.3	5.4	6.3	7.5	8.2	8.9	9.0	9.0	0.9	5.0
30	7.8	7.9	8.7	10.8	10.8	10.2	10.3	10.8	9.2	8.3	8.9	8.8	7.7	8.2	7.5	6.8	6.4	7.6	7.6	5.7	6.5	6.1	6.2	6.4	10.8	5.7	8.1
31	5.2	5.1	5.2	4.8	4.3	3.9	4.0	3.8	4.2	4.0	4.3	3.8	4.6	4.5	3.9	4.5	5.1	5.5	5.5	4.2	5.2	5.5	6.5	7.0	7.0	3.8	4.8
Max.	**9.9**	**11.2**	**11.7**	**12.4**	**13.0**	**11.6**	**12.8**	**13.4**	**13.2**	**12.7**	**11.5**	**11.1**	**11.1**	**12.1**	**12.1**	**11.4**	**11.4**	**11.3**	**11.3**	**11.0**	**10.9**	**11.6**	**10.5**	**10.6**	**13.4**		
Min.	**1.0**	**0.9**	**1.1**	**1.4**	**1.3**	**1.7**	**1.8**	**1.0**	**1.3**	**1.5**	**1.8**	**1.5**	**1.6**	**1.4**	**1.1**	**0.6**	**0.8**	**0.7**	**1.0**	**0.8**	**1.5**	**0.9**	**0.6**	**1.0**		**0.6**	
Avg.	**6.4**	**6.6**	**6.6**	**6.6**	**6.8**	**7.1**	**7.2**	**6.9**	**7.0**	**6.9**	**7.0**	**6.9**	**6.8**	**7.0**	**6.8**	**6.8**	**6.9**	**6.7**	**6.5**	**6.4**	**6.7**	**6.6**	**6.5**	**6.6**			**6.8**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.0	7.2	7.6	6.5	5.4	6.6	4.8	3.8	4.9	5.8	4.9	4.5	5.5	4.6	5.2	5.0	4.4	5.3	6.0	4.2	3.5	2.5	2.6	1.9	7.6	1.9	5.0
2	1.5	3.6	6.0	6.3	6.7	6.6	6.4	6.6	6.2	6.2	6.0	5.8	5.9	5.9	4.4	3.5	2.0	1.5	2.7	2.3	3.4	3.5	3.8	4.5	6.7	1.5	4.6
3	5.2	5.3	5.1	5.6	5.6	6.3	5.1	4.0	3.3	2.8	4.0	5.1	4.6	3.9	4.6	4.8	4.8	5.2	5.3	7.3	7.8	8.5	8.9	9.6	9.6	2.8	5.5
4	10.1	11.3	11.3	11.2	11.0	11.1	9.4	9.0	8.2	5.6	5.2	5.7	5.4	4.7	4.7	5.5	4.8	4.6	3.0	2.4	2.1	2.2	1.9	6.5	11.3	1.9	6.5
5	7.3	7.6	8.8	9.1	10.4	10.4	10.4	9.4	9.8	9.9	10.0	9.4	10.6	10.0	9.8	10.1	8.7	8.8	8.9	8.8	9.3	9.1	7.7	8.9	10.6	7.3	9.3
6	8.5	10.5	9.0	8.4	8.9	6.9	6.6	8.7	9.1	8.7	8.7	8.3	8.5	8.7	8.9	7.7	7.7	7.1	6.7	5.4	5.3	5.7	5.2	5.9	10.5	5.2	7.7
7	6.1	6.4	6.5	4.7	5.3	6.0	5.5	4.4	6.0	6.6	7.3	7.7	7.6	7.5	7.0	7.2	7.0	6.2	7.0	4.2	3.9	3.8	4.4	4.4	7.7	3.8	5.9
8	5.9	5.8	5.0	5.1	5.3	4.5	4.3	4.5	3.6	5.5	4.6	3.9	3.4	1.7	2.4	3.4	2.9	2.8	2.7	2.4	1.6	1.3	1.2	4.3	5.9	1.2	3.7
9	4.2	4.2	5.5	5.1	4.8	6.6	6.3	7.2	7.4	7.5	6.9	7.6	7.0	7.8	9.3	10.7	7.1	6.7	7.1	7.1	6.5	7.0	6.1	5.4	10.7	4.2	6.7
10	5.3	6.9	5.6	4.5	5.6	7.7	7.3	7.0	7.7	7.9	8.2	7.9	8.0	1.3	0.5	0.2	2.8	6.2	5.4	5.8	5.6	3.9	4.2	3.9	8.2	0.2	5.4
11	4.2	4.0	3.8	5.8	7.0	8.0	8.0	8.8	8.3	9.0	9.0	8.3	7.0	7.3	7.7	7.2	7.5	8.2	8.3	9.0	8.0	7.7	7.7	8.1	9.0	3.8	7.4
12	7.8	7.1	7.5	10.1	10.5	9.4	8.1	7.9	8.0	8.5	9.5	9.1	10.4	9.0	9.3	9.2	9.4	9.6	8.7	8.3	8.4	7.0	5.5	7.0	10.5	5.5	8.5
13	8.4	8.5	8.2	8.1	6.7	6.6	6.8	6.2	4.1	3.8	2.3	1.3	1.1	1.3	1.7	4.2	5.2	5.5	6.0	6.5	6.0	6.1	6.8	7.2	8.5	1.1	5.4
14	8.1	8.0	8.5	9.7	9.8	9.0	8.3	9.8	9.7	9.4	10.0	9.3	8.9	7.6	7.9	7.5	6.8	8.1	7.8	6.5	6.4	4.8	5.6	5.2	10.0	4.8	8.0
15	4.1	4.7	5.3	3.7	3.9	3.2	3.8	3.4	2.7	1.5	1.1	0.5	2.0	4.3	5.8	6.3	6.4	5.9	5.5	6.5	5.2	5.4	7.0	7.7	7.7	0.5	4.4
16	10.5	11.9	10.0	10.3	10.1	11.1	12.3	12.3	10.5	8.5	9.0	8.6	8.6	9.0	11.2	11.3	11.8	10.6	8.7	9.4	9.1	8.1	8.0	9.8	12.3	8.0	10.0
17	10.1	8.3	7.9	10.9	7.4	6.4	6.2	6.0	6.8	6.9	6.7	7.4	6.3	6.0	7.9	7.7	7.2	6.6	7.4	6.2	6.1	6.8	7.7	6.7	10.9	6.0	7.2
18	6.2	6.9	5.4	6.0	5.3	4.7	2.8	1.9	1.1	2.2	2.6	3.0	3.0	2.9	3.2	3.6	3.9	3.8	3.5	3.3	3.7	3.1	2.8	2.8	6.9	1.1	3.6
19	2.6	2.4	2.9	4.3	4.6	4.6	5.0	3.5	2.9	3.1	4.1	5.5	5.4	5.3	4.5	4.0	3.9	3.5	3.2	3.3	4.0	4.4	3.2	3.2	5.5	2.4	3.9
20	4.0	5.7	4.8	4.3	4.2	4.1	4.4	5.0	6.1	4.8	5.6	6.5	7.6	7.0	7.0	5.0	4.4	5.2	5.0	4.9	4.5	5.1	4.7	4.8	7.6	4.0	5.2
21	5.3	5.3	5.5	5.3	4.5	4.9	5.0	5.3	4.8	4.3	4.5	4.3	5.2	5.4	4.8	5.3	4.7	4.8	4.2	4.0	3.4	3.0	3.7	3.3	5.5	3.0	4.6
22	4.2	3.7	3.7	3.1	2.9	3.0	3.3	3.0	2.6	2.9	2.7	2.9	3.0	3.3	2.9	2.8	2.9	2.5	1.8	2.0	1.7	1.1	1.9	2.0	4.2	1.1	2.7
23	1.7	1.6	1.5	3.3	6.9	5.8	6.3	6.3	6.8	7.2	6.4	6.9	7.5	6.9	6.7	6.7	6.7	6.3	6.8	6.3	5.7	5.5	5.5	6.1	7.5	1.5	5.7
24	6.0	6.1	9.0	9.5	9.9	10.7	9.8	10.5	11.2	9.7	10.1	8.8	9.4	9.7	9.5	9.6	8.5	8.1	6.6	5.4	5.1	3.0	4.0	3.3	11.2	3.0	8.1
25	4.2	4.4	7.2	7.6	7.2	6.0	4.4	4.2	6.9	8.2	7.4	8.0	7.7	8.1	9.1	9.2	9.3	8.4	7.4	6.5	4.6	5.8	6.1	4.8	9.3	4.2	6.8
26	4.7	4.8	4.8	5.6	6.4	7.3	7.4	8.1	7.8	7.7	8.0	7.8	8.0	8.7	8.8	8.3	9.5	9.1	8.1	7.8	7.5	8.4	7.7	6.2	9.5	4.7	7.4
27	6.1	5.8	7.1	6.5	7.0	7.5	7.9	7.9	8.0	7.8	8.4	8.1	8.1	8.4	8.9	9.1	7.7	7.7	7.4	7.8	8.3	7.9	7.6	8.0	9.1	5.8	7.7
28	8.5	8.2	7.7	6.9	8.7	9.0	9.3	8.0	8.3	8.7	9.5	10.0	9.6	10.1	9.7	8.3	8.5	8.1	8.7	7.8	7.2	6.7	6.7	6.7	10.1	6.7	8.4
29	6.0	6.8	6.6	6.3	6.9	6.5	5.5	5.3	5.8	6.4	7.4	6.7	6.8	5.9	6.1	5.7	5.5	5.2	5.1	5.0	4.9	5.3	5.3	5.4	7.4	4.9	5.9
30	4.6	4.5	4.5	4.0	2.9	3.1	3.9	3.1	3.6	5.0	4.8	4.9	5.3	4.8	3.7	2.9	2.1	1.3	2.3	2.7	2.8	3.1	3.5	3.5	5.3	1.3	3.6
Max.	**10.5**	**11.9**	**11.3**	**11.2**	**11.0**	**11.1**	**12.3**	**12.3**	**11.2**	**9.9**	**10.1**	**10.0**	**10.6**	**10.1**	**11.2**	**11.3**	**11.8**	**10.6**	**8.9**	**9.4**	**9.3**	**9.1**	**8.9**	**9.8**	**12.3**		
Min.	**1.5**	**1.6**	**1.5**	**3.1**	**2.9**	**3.0**	**2.8**	**1.9**	**1.1**	**1.5**	**1.1**	**0.5**	**1.1**	**1.3**	**0.5**	**0.2**	**2.0**	**1.3**	**1.8**	**2.0**	**1.6**	**1.1**	**1.2**	**1.9**		**0.2**	
Avg.	**6.0**	**6.2**	**6.4**	**6.6**	**6.7**	**6.8**	**6.5**	**6.4**	**6.4**	**6.4**	**6.5**	**6.5**	**6.6**	**6.2**	**6.4**	**6.4**	**6.1**	**6.1**	**5.9**	**5.6**	**5.4**	**5.2**	**5.2**	**5.6**			**6.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.7	4.2	4.0	4.8	5.5	5.0	4.7	4.9	4.4	4.7	5.6	5.4	6.0	6.8	7.8	6.6	6.8	6.4	6.7	5.4	4.9	4.8	3.7	2.3	7.8	2.3	5.2
2	2.8	2.6	4.0	5.8	6.8	6.5	5.6	6.5	6.2	5.5	5.3	4.8	4.3	6.3	6.3	6.4	5.7	5.6	5.3	5.9	6.4	6.5	3.5	2.2	6.8	2.2	5.3
3	2.5	2.8	2.8	2.9	2.3	1.9	1.4	1.3	1.0	1.0	2.4	4.3	3.7	5.8	5.9	6.6	6.1	6.8	5.7	7.2	8.6	7.7	7.8	8.2	8.6	1.0	4.4
4	9.1	9.2	9.1	8.0	7.7	8.3	6.8	6.3	7.5	7.0	7.1	6.8	5.3	3.5	2.9	2.1	2.0	2.4	1.7	1.6	2.0	2.5	1.5	3.6	9.2	1.5	5.2
5	5.7	5.2	5.0	4.6	4.7	5.0	4.9	4.8	4.8	4.2	3.4	4.7	5.5	5.1	4.9	4.1	3.5	3.2	2.7	2.8	2.8	2.2	2.0	2.1	5.7	2.0	4.1
6	1.7	2.5	1.9	1.5	1.6	1.1	2.0	2.7	3.2	2.5	2.5	2.5	3.9	4.6	5.7	5.0	4.9	5.9	5.8	7.0	6.2	5.9	5.8	4.8	7.0	1.1	3.8
7	5.5	5.4	6.1	5.8	5.5	5.4	5.9	5.4	5.0	7.2	7.9	6.7	7.7	6.6	6.7	7.1	7.8	7.6	7.1	7.0	5.7	6.4	6.3	6.3	7.9	5.0	6.4
8	6.6	6.9	7.7	9.3	10.8	8.4	8.3	7.9	8.1	8.7	8.2	8.6	8.2	8.5	8.0	8.2	8.5	8.7	9.2	8.8	9.6	9.8	10.0	9.0	10.8	6.6	8.6
9	9.0	9.0	9.3	9.4	9.8	10.3	9.3	8.8	9.4	6.9	9.0	9.5	8.6	7.6	8.1	7.7	6.2	6.2	5.1	3.5	3.2	2.1	2.1	2.3	10.3	2.1	7.2
10	1.4	2.7	3.7	4.1	4.4	4.1	3.4	3.4	3.6	3.6	4.4	4.4	4.6	4.5	5.0	5.2	4.1	3.6	3.5	3.1	2.3	1.5	1.2	3.2	5.2	1.2	3.5
11	3.8	3.5	3.5	2.3	2.6	5.5	6.2	6.7	7.9	7.6	7.7	7.7	8.4	9.3	11.3	11.6	11.4	11.6	13.9	13.5	12.9	14.0	13.4	13.6	14.0	2.3	8.7
12	12.4	13.6	13.1	12.2	11.2	10.7	9.4	10.9	9.4	8.2	7.7	9.1	9.5	9.8	9.6	8.9	8.0	7.9	6.7	5.7	6.2	6.6	7.0	6.2	13.6	5.7	9.2
13	7.0	7.8	7.6	6.6	5.8	4.5	3.7	3.4	4.7	6.5	6.4	5.4	6.9	6.4	6.6	6.9	8.9	8.1	8.5	8.2	7.4	5.9	4.1	5.3	8.9	3.4	6.4
14	5.0	7.0	7.8	7.8	7.5	7.9	4.6	3.0	3.6	3.3	3.2	3.1	2.8	3.5	3.7	2.7	3.3	3.0	3.2	2.0	2.9	2.4	2.6	2.7	7.9	2.0	4.1
15	2.1	1.2	0.9	2.9	1.5	1.3	1.0	1.4	2.0	1.7	1.7	2.0	2.0	2.2	3.1	3.2	3.6	3.8	4.5	6.2	4.1	2.3	2.2	1.7	6.2	0.9	2.4
16	1.3	3.6	5.6	5.1	6.7	6.8	7.4	5.8	5.2	6.3	6.8	6.2	6.0	4.7	3.4	3.1	3.2	2.5	2.6	2.1	1.5	1.2	2.1	1.4	7.4	1.2	4.2
17	0.6	2.9	4.7	5.3	5.2	4.7	5.2	4.8	5.0	5.0	4.3	4.2	3.4	2.8	2.4	2.5	2.4	2.7	2.8	2.3	2.2	3.0	2.7	2.3	5.3	0.6	3.5
18	2.6	2.3	3.1	3.6	2.6	2.8	2.9	2.9	3.4	3.4	3.2	3.1	3.7	5.0	4.9	3.0	2.5	3.3	3.4	4.8	3.3	2.2	2.0	2.8	5.0	2.0	3.2
19	1.7	2.0	1.5	1.2	1.0	0.7	1.2	1.6	2.2	4.6	3.9	3.9	3.1	3.7	4.0	3.8	4.5	4.6	5.0	5.0	4.7	4.7	3.8	3.2	5.0	0.7	3.1
20	4.0	4.0	5.0	5.2	5.2	4.9	4.9	6.5	6.4	5.9	5.1	5.7	5.2	4.7	4.0	3.5	2.7	2.5	2.0	1.8	2.0	1.5	2.0	2.4	6.5	1.5	4.0
21	2.2	2.3	2.1	1.8	2.6	4.4	5.4	5.0	4.5	4.6	4.3	2.8	3.4	3.5	3.0	3.7	3.3	2.5	2.5	2.3	1.1	2.0	2.9	2.6	5.4	1.1	3.1
22	2.4	3.1	4.1	3.8	3.9	5.4	6.3	6.9	6.6	6.0	5.8	5.2	3.5	2.9	3.8	4.1	3.8	4.4	3.4	4.2	7.3	7.4	8.9	8.3	8.9	2.4	5.1
23	9.3	9.2	9.5	9.0	9.0	9.6	10.5	8.0	8.3	9.1	8.4	8.9	9.2	9.1	10.9	8.8	9.4	10.1	8.9	9.8	9.5	8.8	9.1	8.2	10.9	8.0	9.2
24	9.8	9.6	10.0	9.9	9.1	8.2	5.6	6.3	6.5	4.5	4.3	3.5	4.8	5.5	4.3	5.0	4.8	2.8	2.5	2.4	1.9	1.2	1.6	1.4	10.0	1.2	5.2
25	1.9	1.7	1.7	2.0	1.1	1.2	1.6	1.0	1.8	2.3	2.6	3.0	3.4	2.9	2.9	2.7	3.2	3.1	2.2	2.0	1.6	0.9	1.9	2.3	3.4	0.9	2.1
26	2.9	4.5	4.9	4.8	4.3	5.8	5.6	5.4	5.8	6.5	6.5	6.5	5.9	6.5	6.8	6.8	6.6	7.1	5.6	5.6	5.8	4.3	3.9	5.2	7.1	2.9	5.6
27	5.3	6.2	6.2	5.7	5.4	6.1	6.6	5.6	6.7	6.9	7.5	7.9	7.3	6.4	5.6	5.4	5.8	6.2	5.2	4.2	4.1	3.5	3.1	4.2	7.9	3.1	5.7
28	4.1	3.6	4.2	4.5	4.0	4.6	5.3	6.6	6.7	7.0	7.8	6.0	6.6	6.4	5.5	4.9	4.9	5.4	5.5	5.1	4.5	4.1	3.1	2.6	7.8	2.6	5.1
29	1.9	2.6	4.0	5.5	6.4	7.0	7.0	6.7	6.6	6.0	5.1	4.7	3.6	3.4	2.9	2.2	2.3	2.3	2.4	2.3	1.9	1.1	0.8	1.6	7.0	0.8	3.8
30	1.9	1.8	1.5	1.6	1.0	1.3	0.8	2.0	2.8	2.8	4.3	3.7	4.1	4.3	5.2	4.8	3.9	5.7	4.6	4.2	4.4	5.3	5.6	6.6	6.6	0.8	3.5
31	7.4	7.4	8.0	6.9	6.8	6.8	6.6	6.8	6.4	5.3	4.8	4.7	5.2	5.8	5.4	6.7	6.6	7.1	8.1	8.7	8.7	7.6	8.3	8.8	8.8	4.7	6.9
Max.	**12.4**	**13.6**	**13.1**	**12.2**	**11.2**	**10.7**	**10.5**	**10.9**	**9.4**	**9.1**	**9.0**	**9.5**	**9.5**	**9.8**	**11.3**	**11.6**	**11.4**	**11.6**	**13.9**	**13.5**	**12.9**	**14.0**	**13.4**	**13.6**	**14.0**		
Min.	**0.6**	**1.2**	**0.9**	**1.2**	**1.0**	**0.7**	**0.8**	**1.0**	**1.0**	**1.0**	**1.7**	**2.0**	**2.0**	**2.2**	**2.4**	**2.1**	**2.0**	**2.3**	**1.7**	**1.6**	**1.1**	**0.9**	**0.8**	**1.4**		**0.6**	
Avg.	**4.4**	**4.8**	**5.2**	**5.3**	**5.2**	**5.4**	**5.2**	**5.1**	**5.3**	**5.3**	**5.4**	**5.3**	**5.4**	**5.4**	**5.5**	**5.3**	**5.2**	**5.3**	**5.0**	**5.0**	**4.8**	**4.5**	**4.4**	**4.4**			**5.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.4	7.4	6.6	6.4	7.5	7.5	6.5	7.2	8.2	7.7	7.4	7.3	6.9	7.6	8.8	8.3	7.9	8.3	7.1	9.0	9.6	8.9	9.9	9.9	9.9	6.4	7.9
2	9.0	8.2	8.0	8.1	8.2	7.9	8.9	8.3	7.8	7.6	6.7	7.5	6.4	6.1	6.7	4.9	2.6	1.4	1.4	1.3	1.5	3.3	4.0	2.7	9.0	1.3	5.8
3	2.0	2.9	3.6	2.4	1.9	3.9	4.8	2.7	1.4	2.7	4.9	4.3	4.8	4.5	3.4	3.0	5.0	4.3	5.2	4.6	3.3	2.5	2.2	1.3	5.2	1.3	3.4
4	1.4	1.6	0.8	2.6	2.4	1.4	1.0	1.9	1.3	1.4	1.6	2.7	2.7	2.3	2.8	2.2	1.9	2.1	2.3	3.3	3.2	3.1	3.5	3.4	3.5	0.8	2.2
5	3.2	3.6	3.2	3.5	3.9	4.5	5.0	5.0	4.2	4.6	4.0	4.5	5.6	4.6	4.5	3.9	4.3	4.4	5.6	4.4	3.5	1.4	1.9	1.4	5.6	1.4	3.9
6	2.6	5.7	4.3	4.5	4.3	3.5	3.1	3.7	4.0	4.6	4.9	5.4	5.2	5.6	5.5	5.1	3.9	3.4	3.6	5.1	3.9	4.9	3.8	4.0	5.7	2.6	4.4
7	4.4	5.0	5.5	6.5	7.1	9.2	9.2	8.7	8.8	8.8	8.1	7.9	8.3	8.4	8.1	7.1	5.1	3.7	2.8	2.5	2.6	3.5	3.4	2.3	9.2	2.3	6.1
8	3.0	3.3	2.4	1.7	1.0	2.7	4.1	4.8	6.6	7.3	7.3	6.8	6.2	6.8	6.6	4.7	4.9	5.9	4.4	5.3	6.0	5.2	4.3	4.2	7.3	1.0	4.8
9	6.5	6.5	7.2	6.1	5.9	6.0	6.2	7.5	7.1	8.5	7.7	7.4	7.1	6.3	6.0	5.8	6.9	6.8	6.7	6.8	7.1	6.7	6.1	5.6	8.5	5.6	6.7
10	5.9	5.9	6.5	6.6	6.4	6.1	5.9	6.1	6.4	6.1	5.6	5.3	5.0	4.2	2.2	3.4	3.8	4.6	3.2	2.5	2.3	2.3	2.3	2.4	6.6	2.2	4.6
11	2.0	2.3	1.9	1.5	1.2	1.6	2.4	3.4	2.4	2.1	1.5	1.2	1.6	2.1	2.3	2.8	2.0	2.7	2.2	1.6	1.1	0.7	1.8	1.3	3.4	0.7	1.9
12	2.8	3.8	5.6	6.2	7.0	5.8	6.2	6.7	6.2	6.4	7.4	6.3	6.2	6.5	5.6	5.3	5.1	5.1	5.5	6.5	6.3	5.9	6.1	6.4	7.4	2.8	5.9
13	6.6	7.1	7.4	7.2	6.1	5.7	6.5	6.6	5.3	5.0	5.3	4.9	3.8	3.8	4.4	4.8	4.5	4.0	3.4	3.1	2.6	1.8	1.0	2.1	7.4	1.0	4.7
14	2.0	1.7	4.2	5.5	5.2	5.3	5.8	5.0	5.2	4.8	5.2	5.1	6.0	6.2	5.3	4.9	4.2	3.1	2.6	1.7	1.7	2.5	1.4	2.1	6.2	1.4	4.0
15	5.2	6.7	6.9	7.2	7.8	7.0	7.8	7.2	6.7	5.6	6.2	5.8	6.1	5.9	6.1	6.6	6.2	5.5	6.2	6.0	4.8	4.4	5.3	6.2	7.8	4.4	6.2
16	6.2	6.0	6.8	6.4	5.7	6.2	6.5	6.4	6.6	5.9	5.8	5.3	5.4	4.6	3.9	2.4	2.5	2.6	2.5	2.1	1.9	1.0	1.1	1.4	6.8	1.0	4.4
17	0.8	1.3	1.0	0.6	0.6	3.2	4.4	4.7	4.7	4.2	2.9	3.0	3.0	3.5	4.3	4.4	3.8	3.8	3.0	3.7	3.5	2.5	2.8	2.4	4.7	0.6	3.0
18	2.6	1.8	1.1	0.8	0.6	1.5	2.2	5.0	4.9	5.5	5.9	6.2	5.3	4.2	3.5	3.4	3.9	3.7	3.1	2.5	2.1	1.3	1.3	2.1	6.2	0.6	3.1
19	1.3	1.1	0.8	0.8	0.7	2.2	4.9	6.4	6.3	5.7	4.6	3.5	3.2	3.6	3.7	3.0	2.9	3.7	2.9	3.5	3.4	3.1	2.5	2.4	6.4	0.7	3.2
20	2.6	2.1	1.8	2.1	1.6	1.4	1.7	1.6	1.5	1.6	2.2	3.4	4.8	5.3	5.0	3.6	3.3	3.6	3.9	3.3	4.4	3.4	3.1	3.2	5.3	1.4	2.9
21	2.8	2.4	1.8	1.8	1.4	1.2	2.3	1.7	2.0	1.9	1.2	1.3	1.5	2.6	2.6	3.0	3.0	3.0	2.9	2.7	2.6	1.8	1.7	1.2	3.0	1.2	2.1
22	1.8	2.0	1.7	1.9	1.1	1.1	1.7	1.4	1.3	2.6	2.3	2.1	2.0	2.4	1.9	2.2	2.3	2.7	3.2	3.1	3.1	3.0	3.0	4.3	4.3	1.1	2.2
23	4.2	4.6	3.7	3.3	3.8	3.7	2.9	3.2	3.6	3.1	4.1	4.7	5.2	4.5	4.0	4.4	3.6	3.1	2.8	2.8	3.2	3.4	3.3	2.6	5.2	2.6	3.7
24	2.5	2.9	3.3	3.5	4.2	3.3	3.9	3.7	4.3	4.8	6.3	3.8	3.7	3.9	4.5	4.3	3.3	2.8	4.3	5.1	4.2	4.3	4.8	5.8	6.3	2.5	4.1
25	6.1	6.9	6.7	7.7	7.7	8.4	7.7	8.2	7.2	6.0	6.5	8.1	8.0	8.1	7.3	6.4	7.3	6.6	6.1	6.3	6.3	6.5	6.5	5.6	8.4	5.6	7.0
26	8.0	7.3	7.0	7.0	5.7	5.3	2.8	5.1	5.5	6.0	7.7	9.3	8.3	9.3	9.7	9.9	8.3	7.4	6.5	5.7	5.6	5.8	6.0	5.7	9.9	2.8	6.9
27	6.1	6.3	5.5	5.4	3.9	4.5	4.3	3.4	4.0	4.3	3.3	2.4	2.1	2.1	2.4	2.1	2.2	3.1	3.1	2.7	2.3	2.2	2.7	1.6	6.3	1.6	3.4
28	0.9	1.0	1.5	2.3	2.3	1.3	1.8	3.6	4.5	4.8	5.6	5.8	4.8	4.4	3.6	3.2	3.5	3.2	2.3	3.1	2.9	2.3	1.8	1.7	5.8	0.9	3.0
29	1.9	1.8	2.1	2.6	3.6	3.2	1.9	2.1	3.0	2.6	2.6	1.9	2.9	3.6	3.3	4.4	5.1	5.4	4.0	3.9	3.1	2.8	4.0	3.5	5.4	1.8	3.1
30	2.7	1.8	1.6	1.5	2.1	2.2	2.3	1.2	1.3	2.1	2.2	2.9	2.9	3.0	3.0	2.7	2.7	2.7	2.7	2.1	1.8	1.6	1.7	2.4	3.0	1.2	2.2
Max.	**9.0**	**8.2**	**8.0**	**8.1**	**8.2**	**9.2**	**9.2**	**8.7**	**8.8**	**8.8**	**8.1**	**9.3**	**8.3**	**9.3**	**9.7**	**9.9**	**8.3**	**8.3**	**7.1**	**9.0**	**9.6**	**8.9**	**9.9**	**9.9**	**9.9**		
Min.	**0.8**	**1.0**	**0.8**	**0.6**	**0.6**	**1.1**	**1.0**	**1.2**	**1.3**	**1.4**	**1.2**	**1.2**	**1.5**	**2.1**	**1.9**	**2.1**	**1.9**	**1.4**	**1.4**	**1.3**	**1.1**	**0.7**	**1.0**	**1.2**		**0.6**	
Avg.	**3.8**	**4.0**	**4.0**	**4.1**	**4.0**	**4.2**	**4.5**	**4.8**	**4.7**	**4.8**	**4.9**	**4.9**	**4.8**	**4.9**	**4.7**	**4.4**	**4.2**	**4.1**	**3.9**	**3.9**	**3.7**	**3.4**	**3.4**	**3.4**			**4.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.5	2.7	2.2	1.9	2.2	1.4	1.1	0.9	1.7	2.7	3.9	4.7	5.6	7.6	5.9	5.3	5.1	4.4	3.8	3.4	4.0	3.6	3.4	4.5	7.6	0.9	3.5
2	5.2	5.1	5.1	5.5	5.0	4.1	3.6	4.1	3.8	4.8	4.0	5.5	5.5	4.8	6.4	7.3	6.1	5.4	5.6	6.2	7.6	6.3	4.9	4.4	7.6	3.6	5.3
3	5.1	3.2	2.8	4.4	5.2	6.9	6.7	6.2	5.3	5.5	7.0	7.5	6.1	6.5	4.3	4.0	4.3	4.8	4.0	2.3	3.8	4.2	4.6	4.0	7.5	2.3	4.9
4	3.4	3.8	3.7	3.6	3.0	1.3	1.4	1.6	1.9	1.5	1.9	1.8	2.4	2.5	2.8	3.6	3.2	3.0	2.3	2.7	2.5	2.2	2.4	2.1	3.8	1.3	2.5
5	2.6	2.5	2.5	2.8	2.3	2.1	1.0	1.7	2.4	2.3	2.1	2.8	2.6	2.4	3.2	2.3	2.9	2.9	2.7	2.1	2.6	2.1	2.0	1.7	3.2	1.0	2.4
6	1.4	1.8	2.0	1.0	1.5	1.2	0.8	1.1	2.6	3.4	2.7	2.5	2.6	3.1	3.5	3.0	3.6	3.3	3.0	2.6	2.1	1.5	1.1	0.9	3.6	0.8	2.2
7	1.6	2.0	3.1	2.5	3.9	6.2	5.4	5.9	4.8	4.5	3.8	3.7	3.3	3.5	3.7	4.3	3.5	2.4	2.3	2.4	2.3	1.5	0.7	1.4	6.2	0.7	3.3
8	1.9	2.1	1.0	0.8	1.9	3.9	3.6	4.8	4.0	4.3	4.4	4.1	4.6	4.3	3.7	3.7	3.9	3.4	3.3	2.4	1.0	0.9	1.9	0.8	4.8	0.8	2.9
9	1.7	1.0	1.5	1.4	1.2	2.0	2.4	3.1	3.7	4.2	3.4	3.7	3.6	5.1	6.0	7.0	5.5	4.4	3.6	3.6	6.1	6.3	4.9	4.1	7.0	1.0	3.7
10	4.1	3.9	4.1	4.4	4.6	4.8	4.4	4.0	3.0	3.3	3.8	3.8	3.2	2.1	2.4	2.6	1.8	1.9	2.2	2.7	2.6	2.4	2.3	2.1	4.8	1.8	3.2
11	2.2	2.3	3.3	3.1	3.1	3.1	2.3	2.6	2.1	2.2	2.3	2.6	3.1	2.6	3.1	3.5	3.2	3.4	3.2	2.6	2.5	2.1	1.9	2.0	3.5	1.9	2.7
12	2.0	1.0	0.9	1.0	1.1	0.9	1.5	2.8	3.8	4.3	4.7	4.9	5.9	5.7	6.4	5.9	6.8	7.2	7.2	6.7	6.6	7.9	7.9	7.5	7.9	0.9	4.6
13	6.2	5.3	4.9	4.1	3.4	3.4	3.0	1.9	1.7	2.1	1.8	2.5	2.0	2.8	2.7	2.8	2.5	2.6	2.7	2.3	2.3	2.1	2.1	2.2	6.2	1.7	2.9
14	1.9	1.9	1.3	1.5	1.8	2.0	1.9	1.6	1.8	1.9	2.2	2.5	2.4	2.8	2.7	2.9	2.7	2.6	2.5	2.6	1.9	2.1	2.1	1.9	2.9	1.3	2.1
15	2.4	1.9	0.7	1.9	2.0	2.3	1.9	1.7	2.5																2.5	0.7	1.9
16	7.9	7.6	8.1	7.5	6.9	6.6	6.9	7.6	7.5	6.2	6.3	5.3	6.2	6.5	6.3	7.7	7.3	7.4	7.1	7.3	7.3	7.8	7.1	8.1	8.1	5.3	7.1
17	7.4	4.9	4.2	3.1	4.3	6.9	5.9	6.3	6.6	7.6	8.7	9.3	7.3	7.8	7.5	7.0	5.9	5.6	6.1	5.3	5.2	4.9	4.9	6.3	9.3	3.1	6.2
18	6.4	6.1	7.4	5.8	5.7	6.7	5.8	5.3	6.3	5.9	5.5	6.1	6.0	6.0	6.4	7.1	6.4	5.9	5.1	5.0	4.9	4.5	4.4	3.8	7.4	3.8	5.8
19	3.5	4.2	4.4	4.6	4.4	4.9	4.7	4.8	5.4	5.7	5.6	5.7	5.9	5.6	5.3	4.9	4.2	4.6	5.4	4.6	2.9	3.2	3.3	3.5	5.9	2.9	4.6
20	3.2	3.5	5.3	5.2	5.0	3.8	4.3	4.0	4.0	4.4	5.9	5.6	5.1	5.9	6.5	6.9	6.8	6.8	5.9	4.8	5.1	4.8	4.1	4.4	6.9	3.2	5.1
21	4.8	3.7	2.1	1.9	3.6	4.6	3.3	3.0	3.0	2.8	3.3	3.5	3.8	4.1	4.5	4.5	4.8	3.8	4.2	3.1	3.2	2.9	3.3	3.6	4.8	1.9	3.6
22	4.2	4.6	4.4	4.8	5.3	4.9	4.9	4.0	4.1	3.1	1.7	1.6	2.4	3.1	4.3	4.2	4.5	3.3	3.0	2.5	3.1	2.0	0.9	1.4	5.3	0.9	3.4
23	1.3	1.5	1.5	1.5	2.7	3.0	2.9	2.9	3.1	3.1	3.8	3.9	4.5	4.7	4.3	3.3	2.8	2.6	2.1	2.7	3.7	4.4	4.6	2.9	4.7	1.3	3.1
24	1.6	1.9	2.2	1.6	2.9	2.4	2.8	4.9	3.4	3.2	4.9	5.6	4.8	4.4	3.7	3.0	2.5	2.5	1.8	1.2	1.0	1.2	2.0	2.5	5.6	1.0	2.8
25	1.6	2.0	2.0	2.1	2.3	3.6	4.7	5.3	5.5	3.9	5.7	6.4	5.8	5.6	5.2	4.9	4.4	3.8	3.8	1.2	1.8	2.0	2.3	1.5	6.4	1.2	3.6
26	1.9	2.3	1.7	1.9	4.4	6.4	6.1	5.5	5.6	5.6	6.0	6.7	7.1	6.8	5.6	5.1	4.6	3.4	3.2	2.2	2.6	2.6	1.9	2.1	7.1	1.7	4.2
27	2.8	2.7	2.4	2.8	3.2	3.1	1.9	2.1	2.7	2.5	3.5	5.3	4.8	3.6	3.2	2.5	2.3	1.3	1.4	1.5	2.2	1.3	2.3	2.1	5.3	1.3	2.7
28	0.6	1.0	2.5	3.3	4.2	4.8	5.4	6.8	6.6	6.8	6.8	7.2	6.8	5.4	5.8	6.1	5.9	6.8	6.0	5.4	5.4	6.1	4.8	3.9	7.2	0.6	5.2
29	5.5	5.1	6.0	6.3	6.5	7.0	6.4	5.7	6.9	8.8	7.5	6.8	5.6	6.6	6.6	6.5	5.8	5.8	5.0	5.0	4.1	3.2	3.4	5.3	8.8	3.2	5.9
30	5.0	5.4	7.2	7.5	7.9	7.4	6.6	7.1	6.8	7.7	8.2	7.5	7.4	7.1	7.8	8.0	8.0	9.6	9.0	7.7	7.7	5.7	4.0	5.5	9.6	4.0	7.2
31	6.8	8.8	6.0	7.6	6.9	6.8	7.3	8.7	8.5	9.9	9.6	9.4	8.7	8.4	8.8	9.4	8.5	6.6	5.8	4.8	5.3	4.0	3.7	7.3	9.9	3.7	7.4
Max.	**7.9**	**8.8**	**8.1**	**7.6**	**7.9**	**7.4**	**7.3**	**8.7**	**8.5**	**9.9**	**9.6**	**9.4**	**8.7**	**8.4**	**8.8**	**9.4**	**8.5**	**9.6**	**9.0**	**7.7**	**7.7**	**7.9**	**7.9**	**8.1**	**9.9**		
Min.	**0.6**	**1.0**	**0.7**	**0.8**	**1.1**	**0.9**	**0.8**	**0.9**	**1.7**	**1.5**	**1.7**	**1.6**	**2.0**	**2.1**	**2.4**	**2.3**	**1.8**	**1.3**	**1.4**	**1.2**	**1.0**	**0.9**	**0.7**	**0.8**		**0.6**	
Avg.	**3.5**	**3.4**	**3.4**	**3.5**	**3.8**	**4.1**	**3.9**	**4.1**	**4.2**	**4.5**	**4.7**	**4.9**	**4.8**	**4.9**	**5.0**	**5.0**	**4.7**	**4.4**	**4.1**	**3.6**	**3.8**	**3.5**	**3.3**	**3.5**			**4.1**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.2	7.9	7.7	6.2	6.3	6.5	7.5	7.2	6.4	4.3	3.4	2.7	3.5	4.3	2.6	2.5	2.5	2.4	2.5	2.5	3.4	3.9	3.6	4.0	7.9	2.4	4.6
2	4.5	3.5	3.7	4.0	3.5	2.9	2.9	2.9	3.1	3.0	2.7	3.2	4.4	4.2	3.9	2.8	2.3	2.8	2.1	2.1	2.0	1.8	1.7	1.1	4.5	1.1	3.0
3	1.1	1.3	0.9	0.8	1.3	1.9	1.6	1.6	1.8	1.6	2.1	2.2	2.9	2.8	2.5	2.6	2.7	2.3	2.8	3.0	3.2	2.9	3.5	3.7	3.7	0.8	2.2
4	3.3	3.9	3.4	2.7	2.5	1.9	1.8	2.0	2.1	1.9	2.2	2.7	2.9	2.6	3.1	3.2	3.0	2.5	3.1	3.4	2.7	2.6	1.9	1.9	3.9	1.8	2.6
5	2.5	2.4	2.3	1.8	0.9	1.2	1.3	1.8	1.5	0.9	2.1	2.6	2.4	3.0	3.5	3.1	3.5	2.8	2.6	1.9	1.8	1.7	1.8	2.0	3.5	0.9	2.1
6	1.7	1.7	0.9	1.4	1.8	1.6	1.7	1.9	0.7	1.5	1.8	2.5	2.7	2.9	3.6	3.0	3.5	3.5	3.9	3.9	3.6	3.2	1.4	2.4	3.9	0.7	2.4
7	3.8	2.8	3.1	2.8	3.5	3.8	3.5	3.8	5.6	5.4	5.6	5.8	5.2	4.5	4.2	4.5	4.6	4.3	4.0	3.9	3.4	3.4	3.2	3.6	5.8	2.8	4.1
8	2.5	1.5	2.9	2.7	2.6	1.9	2.7	1.5	2.4	3.5	3.2	3.1	3.0	2.7	3.0	3.4	3.3	2.4	2.5	2.4	2.2	1.0	2.5	2.6	3.5	1.0	2.6
9	2.4	2.5	2.4	2.1	2.0	1.3	1.5	3.0	4.4	5.3	5.1	5.1	5.6	4.7	4.1	3.6	3.3	3.1	3.9	3.6	3.6	2.3	3.1	3.0	5.6	1.3	3.4
10	3.1	3.0	2.6	2.1	2.1	1.8	2.8	2.2	1.9	2.0	2.0	2.3	3.0	2.6	2.7	2.6	3.3	3.9	3.2	2.2	2.6	3.4	2.5	3.0	3.9	1.8	2.6
11	2.7	2.3	1.8	1.7	1.8	2.9	2.6	2.8	2.2	2.9	3.0	4.1	4.3	3.9	3.3	2.8	2.7	2.5	2.0	2.0	1.1	1.8	2.8	2.7	4.3	1.1	2.6
12	2.0	3.1	3.2	3.7	3.9	4.1	3.2	3.2	2.7	2.7	3.0	2.7	1.6	1.9	1.7	1.7	1.7	2.8	1.5	1.3	1.8	1.9	1.7	1.0	4.1	1.0	2.4
13	1.5	3.0	3.5	3.6	3.2	3.3	2.4	3.3	3.2	3.2	3.1	3.7	3.4	4.6	2.5	2.1	0.9	1.7	2.4	1.5	1.0	1.3	2.1	1.5	4.6	0.9	2.6
14	1.3	1.7	2.0	2.3	1.8	1.7	1.2	1.9	1.1	1.1	1.3	0.7	0.9	1.2	1.7	1.4	1.3	1.5	1.1	0.8	0.9	1.1	1.7	0.7	2.3	0.7	1.3
15	1.2	2.6	5.4	5.7	4.7	5.7	5.9	5.5	5.2	5.1	4.3	4.1	4.1	3.8	2.6	2.5	2.6	2.3	1.6	0.9	0.8	1.7	2.1	2.6	5.9	0.8	3.5
16	2.8	2.5	2.6	2.9	2.6	2.8	3.1	3.0	2.7	3.3	2.8	2.8	4.3	2.6	2.6	3.1	3.2	3.2	3.2	2.7	2.7	3.1	3.0	2.5	4.3	2.5	2.9
17	1.6	1.2	1.6	1.9	1.6	1.1	1.4	1.2	1.1	3.1	2.8	3.1	3.3	3.8	3.0	3.2	3.5	4.1	4.6	4.3	3.2	3.9	3.6	2.6	4.6	1.1	2.7
18	2.6	3.0	2.0	1.3	2.0	2.0	2.3	2.3	1.3	1.5	1.4	1.8	2.6	2.8	2.5	2.2	1.3	1.7	1.6	1.9	2.5	2.2	2.8	2.7	3.0	1.3	2.1
19	3.1	2.0	2.8	2.8	2.2	1.8	1.7	2.3	2.1	5.3	5.2	5.9	4.8	5.1	5.8	5.5	4.7	4.9	4.1	5.2	5.2	4.5	4.8	6.0	6.0	1.7	4.1
20	5.2	5.0	5.3	5.9	5.7	6.3	6.7	6.0	5.8	6.5	6.9	6.9	7.1	6.7	5.7	5.7	5.6	5.4	5.2	4.1	3.2	3.5	3.4	3.1	7.1	3.1	5.5
21	3.5	3.5	3.7	4.6	4.6	5.2	4.9	4.7	4.7	5.1	4.7	3.9	3.8	3.9	4.1	4.3	4.5	3.8	2.5	2.5	3.0	1.9	1.6	2.2	5.2	1.6	3.8
22	1.8	0.9	1.2	2.1	2.4	2.0	1.2	0.8	1.4	1.1	0.9	1.3	1.5	1.8	1.5	2.3	2.0	2.0	1.8	0.5	2.3	2.7	3.4	4.7	4.7	0.5	1.8
23	5.3	5.5	6.2	6.0	5.4	6.0	6.4	6.2	5.6	6.7	6.8	6.3	4.9	3.7	2.1	2.9	2.2	1.9	1.0	0.9	1.1	1.2	2.0	2.1	6.8	0.9	4.1
24	1.9	2.2	3.1	3.9	4.2	4.0	4.1	5.1	5.7	5.2	4.7	4.6	5.7	5.9	5.9	5.9	5.6	5.9	5.2	4.6	3.8	4.5	3.6	3.7	5.9	1.9	4.5
25	2.7	1.4	1.1	1.7	1.8	1.5	3.3	3.7	4.7	4.1	2.1	1.2	1.7	2.0	2.9	3.6	2.7	3.4	3.5	3.1	3.0	3.3	2.2	3.0	4.7	1.1	2.7
26	2.8	2.0	1.8	1.1	1.2	2.0	2.4	2.0	1.8	1.4	1.8	1.6	1.8	2.7	2.7	3.3	4.2	3.6	3.4	2.9	1.9	2.1	2.1	2.0	4.2	1.1	2.3
27	1.3	1.6	1.6	2.3	2.1	1.4	0.9	3.1	4.5	4.5	4.2	5.4	5.1	4.0	4.2	3.9	5.0	4.4	4.8	4.2	3.9	3.5	3.1	3.8	5.4	0.9	3.5
28	3.2	3.7	3.5	3.7	2.6	3.5	2.9	3.8	3.2	2.5	3.8	4.6	4.4	4.3	4.5	4.3	4.9	4.9	4.9	4.4	4.0	3.0	3.6	3.2	4.9	2.5	3.8
29	3.7	3.9	4.5	3.9	4.4	5.1	5.0	5.1	5.3	5.0	6.1	5.7	6.2	5.8	5.6	5.8	6.5	5.8	5.2	4.1	4.5	4.7	4.1	2.9	6.5	2.9	5.0
30	3.7	3.2	3.7	3.7	4.0	4.8	5.4	5.4	5.9	5.6	4.9	4.3	3.3	2.6	2.7	2.5	2.8	3.2	3.4	4.3	3.9	4.5	4.3	4.2	5.9	2.5	4.0
31	4.6	6.1	8.2	7.4	7.7	6.4	5.4	6.7	9.0	10.1	9.0	9.8	10.3	10.3	11.4	10.3	9.2	10.9	9.9	8.6	7.5	5.5	4.5	6.1	11.4	4.5	8.1
Max.	**7.2**	**7.9**	**8.2**	**7.4**	**7.7**	**6.5**	**7.5**	**7.2**	**9.0**	**10.1**	**9.0**	**9.8**	**10.3**	**10.3**	**11.4**	**10.3**	**9.2**	**10.9**	**9.9**	**8.6**	**7.5**	**5.5**	**4.8**	**6.1**	**11.4**		
Min.	**1.1**	**0.9**	**0.9**	**0.8**	**0.9**	**1.1**	**0.9**	**0.8**	**0.7**	**0.9**	**0.9**	**0.7**	**0.9**	**1.2**	**1.5**	**1.4**	**0.9**	**1.5**	**1.0**	**0.5**	**0.8**	**1.0**	**1.4**	**0.7**		**0.5**	
Avg.	**2.9**	**2.9**	**3.2**	**3.2**	**3.1**	**3.2**	**3.2**	**3.4**	**3.5**	**3.7**	**3.6**	**3.8**	**3.9**	**3.8**	**3.6**	**3.6**	**3.5**	**3.5**	**3.3**	**3.0**	**2.9**	**2.8**	**2.8**	**2.9**			**3.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.6	7.6	8.1	5.0	8.5	9.9	7.8	8.9	8.4	8.9	7.7	6.3	6.6	6.3	6.8	7.2	6.6	6.4	6.6	5.7	5.0	6.1	5.1	5.4	9.9	5.0	7.0
2	6.7	6.0	5.6	5.9	6.2	7.2	7.9	7.8	8.6	6.1	7.3	7.8	7.1	5.5	5.9	5.4	7.2	6.8	6.8	6.8	6.4	6.6	8.0	7.0	8.6	5.4	6.8
3	7.1	6.2	6.6	6.6	7.6	6.8	5.9	4.0	2.4	2.2	3.7	4.8	4.2	3.1	2.6	1.9	2.7	3.7	2.4	1.1	1.1	1.5	1.2	1.6	7.6	1.1	3.8
4	1.7	1.5	0.9	2.1	1.7	1.4	2.2	2.9	3.8	4.0	3.1	3.7	2.1	2.5	2.6	2.7	2.5	2.7	1.9	0.9	1.0	1.4	2.4	2.1	4.0	0.9	2.2
5	1.9	1.4	1.7	0.8	0.7	0.9	0.7	1.1	0.7	1.2	1.3	1.6	2.0	2.4	2.8	3.2	2.1	1.6	1.1	0.9	1.6	1.6	1.1	2.0	3.2	0.7	1.5
6	2.1	2.7	3.6	2.8	4.1	4.7	4.4	5.4	6.5	7.3	8.0	9.0	8.6	8.4	10.0	10.8	11.6	10.9	10.5	10.1	11.5	11.0	11.6	9.4	11.6	2.1	7.7
7	5.5	9.9	9.5	8.6	8.3	7.8	10.2	8.5	7.5	7.9	7.9	8.2	7.1	6.9	5.2	3.9	3.0	4.4	3.3	2.7	1.8	1.5	1.1	1.2	10.2	1.1	5.9
8	1.9	1.5	0.7	1.4	1.5	1.0	0.9	2.0	2.3	1.9	2.5	5.0	6.9	7.3	7.8	6.8	7.2	8.2	7.8	9.5	11.8	9.2	9.4	9.5	11.8	0.7	5.2
9	7.9	8.1	8.3	7.4	7.9	5.9	7.4	8.0	7.8	7.9	5.6	5.1	4.4	4.5	7.9	6.2	5.8	5.0	5.6	5.8	5.5	5.3	5.2	4.4	8.3	4.4	6.4
10	2.5	1.7	1.2	0.7	0.7	1.0	0.7	1.3	1.1	0.9	2.0	2.6	4.3	4.4	4.2	4.2	5.1	4.9	3.8	3.2	3.0	3.2	3.1	3.1	5.1	0.7	2.6
11	3.8	4.6	4.6	4.7	4.6	4.9	4.2	3.3	3.8	4.4	4.4	4.0	3.7	3.1	3.7	2.6	4.0	3.1	3.0	3.5	4.7	5.7	5.4	5.7	5.7	2.6	4.1
12	6.2	6.0	8.7	10.2	8.4	9.3	8.5	7.3	6.2	5.4	5.0	5.7	5.3	5.8	6.2	6.4	6.0	6.3	7.2	7.9	7.6	7.8	6.4	6.6	10.2	5.0	6.9
13	7.6	9.5	11.0	10.1	10.1	9.8	10.7	12.0	13.7	13.5	13.4	13.6	12.5	11.5	10.3	7.5	6.1	8.0	8.3	8.4	9.0	9.1	8.4	8.0	13.7	6.1	10.1
14	6.7	4.9	3.3	3.6	2.9	5.3	2.8	2.6	5.2	4.8	4.9	5.2	4.7	4.0	2.4	1.4	1.5	1.6	1.4	1.3	1.0	1.0	1.4	0.8	6.7	0.8	3.1
15	1.2	1.1	1.6	3.6	4.3	4.2	4.2	4.6	4.0	3.5	6.5	5.6	5.7	1.6	1.1	2.5	5.7	4.4	3.0	2.1	1.1	1.7	1.6	1.8	6.5	1.1	3.2
16	1.1	1.8	2.9	3.5	5.2	3.9	3.5	3.8	3.4	3.4	4.6	4.1	4.6	4.5	5.0	5.7	5.7	6.3	5.7	4.5	3.8	2.8	4.5	6.0	6.3	1.1	4.2
17	6.1	6.3	5.1	5.6	4.8	5.1	4.3	3.8	3.6	4.3	4.6	4.0	1.8	3.0	4.2	5.1	5.9	4.8	5.1	6.2	6.8	5.8	7.9	7.4	7.9	1.8	5.1
18	8.6	9.4	9.7	7.4	8.9	9.0	8.9	6.9	5.7	4.3	3.7	3.8	5.7	6.6	7.6	6.5	5.7	5.5	4.4	3.6	6.8	8.9	8.8	8.7	9.7	3.6	6.9
19	8.4	5.0	4.5	3.7	2.4	1.9	2.0	2.1	1.2	1.2	1.1	1.3	2.7	2.1	3.2	3.8	3.7	4.1	4.3	3.7	2.7	3.2	3.5	2.5	8.4	1.1	3.1
20	2.8	2.7	2.6	5.1	5.0	4.6	5.6	4.9	4.5	5.9	6.7	5.5	4.7	5.0	4.5	4.6	4.8	4.7	3.7	2.5	1.2	0.9	1.5	1.2	6.7	0.9	4.0
21	1.5	1.8	2.0	2.6	3.3	3.6	4.0	5.2	5.2	4.5	5.2	5.0	4.9	5.3	5.6	5.2	4.7	5.4	4.3	3.6	2.8	2.0	1.2	1.1	5.6	1.1	3.8
22	2.3	2.6	3.1	3.0	3.3	2.9	4.4	4.8	4.6	5.0	5.3	4.8	4.2	3.9	4.0	3.7	2.5	1.6	1.4	1.4	1.6	1.4	2.1	1.1	5.3	1.1	3.1
23	2.3	1.6	1.9	1.1	1.2	1.0	0.9	1.2	0.7	0.7	1.0	1.6	1.0	1.9	1.2	1.0	1.4	1.7	1.7	0.8	1.4	1.0	1.6	0.7	2.3	0.7	1.3
24	1.1	1.0	0.8	1.5	2.0	0.8	1.4	1.1	1.4	1.3	1.7	3.5	1.4	2.7	3.6	4.1	4.9	4.6	4.0	3.7	4.7	4.7	5.4	4.6	5.4	0.8	2.8
25	4.6	4.5	4.5	2.4	1.4	2.0	2.2	3.7	2.8	2.0	4.1	4.5	1.6	1.3	1.8	1.0	1.0	1.5	1.3	1.4	1.5	2.3	2.4	2.4	4.6	1.0	2.4
26	2.1	1.7	2.2	2.7	2.7	2.5	2.1	2.5	2.5	2.4	2.3	2.3	1.2	1.2	2.1	1.7	2.1	1.3	1.8	1.9	1.6	1.5	1.5	2.3	2.7	1.2	2.0
27	3.2	3.6	3.7	4.4	4.3	4.5	4.2	3.3	4.0	4.0	4.3	4.5	3.5	3.8	3.1	2.9	3.4	2.7	3.8	3.3	4.0	5.1	4.3	4.9	5.1	2.7	3.9
28	5.5	3.1	2.8	2.7	1.6	2.6	2.7	3.9	3.6	3.3	4.3	4.4	4.1	3.8	3.6	3.1	2.3	2.6	2.4	2.1	1.5	1.0	1.1	1.8	5.5	1.0	2.9
29	5.2	5.7	4.4	5.3	3.0	3.4	4.6	4.7	4.4	2.9	2.1	2.7	3.3	2.9	2.5	1.4	1.1	1.8	2.0	2.5	1.5	2.5	1.9	0.8	5.7	0.8	3.0
30	0.6	1.0	1.8	2.1	2.6	3.3	3.8	4.3	3.3	3.5	4.7	5.4	5.2	5.4	4.2	4.5	4.5	3.1	2.4	2.1	3.1	3.5	3.1	3.3	5.4	0.6	3.4
Max.	**8.6**	**9.9**	**11.0**	**10.2**	**10.1**	**9.9**	**10.7**	**12.0**	**13.7**	**13.5**	**13.4**	**13.6**	**12.5**	**11.5**	**10.3**	**10.8**	**11.6**	**10.9**	**10.5**	**10.1**	**11.8**	**11.0**	**11.6**	**9.5**	**13.7**		
Min.	**0.6**	**1.0**	**0.7**	**0.7**	**0.7**	**0.8**	**0.7**	**1.1**	**0.7**	**0.7**	**1.0**	**1.3**	**1.0**	**1.2**	**1.1**	**1.0**	**1.0**	**1.3**	**1.1**	**0.8**	**1.0**	**0.9**	**1.1**	**0.7**		**0.6**	
Avg.	**4.2**	**4.1**	**4.3**	**4.2**	**4.3**	**4.4**	**4.4**	**4.5**	**4.4**	**4.3**	**4.6**	**4.9**	**4.5**	**4.4**	**4.5**	**4.2**	**4.4**	**4.3**	**4.0**	**3.8**	**3.9**	**4.0**	**4.1**	**3.9**			**4.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.7	2.3	2.1	2.4	2.5	1.7	1.1	2.1	2.4	1.7	0.8	1.6	2.1	1.8	2.4	2.7	2.3	2.5	2.8	3.8	3.3	3.1	2.2	1.4	3.8	0.8	2.2
2	2.2	1.7	1.3	2.4	2.4	2.5	2.7	2.1	1.1	2.0	3.2	3.7	4.2	5.0	4.7	5.7	6.1	4.8	5.8	4.7	5.5	5.9	7.7	6.0	7.7	1.1	3.9
3	6.0	5.3	5.3	4.2	2.8	4.6	3.7	3.6	3.6	4.1	3.6	3.8	4.2	5.4	5.1	4.6	4.0	3.9	3.7	3.8	3.4	3.0	3.2	3.3	6.0	2.8	4.1
4	3.4	3.2	3.2	2.7	3.3	3.0	3.0	3.7	3.1	2.5	2.6	4.1	3.8	4.2	3.8	4.2	3.7	2.7	2.9	3.5	2.8	3.9	3.9	3.3	4.2	2.5	3.4
5	3.2	2.9	2.7	2.7	3.2	3.8	3.8	3.5	3.5	3.0	3.7	4.2	4.7	4.2	4.2	4.2	4.7	4.4	4.5	3.0	2.5	2.9	2.2	2.8	4.7	2.2	3.5
6	2.3	2.7	2.9	2.5	2.7	2.7	2.3	4.7	4.0	3.6	4.4	5.2	4.9	5.4	5.0	5.1	4.7	4.8	4.6	4.2	3.3	3.3	2.9	2.6	5.4	2.3	3.8
7	3.0	3.0	3.7	4.2	4.7	6.0	6.1	6.1	6.1	6.7	7.8	7.3	7.5	8.3	8.0	7.3	6.9	7.7	7.6	7.2	7.2	6.6	7.6	7.0	8.3	3.0	6.4
8	7.2	6.6	7.1	6.8	7.0	6.7	5.8	6.0	5.6	5.5	6.6	7.1	6.3	5.8	4.6	4.8	3.3	3.5	3.1	3.2	2.7	2.8	1.6	3.3	7.2	1.6	5.1
9	4.4	5.9	6.7	7.1	7.0	7.2	7.6	8.7	9.2	7.5	8.5	8.2	8.9	8.1	10.9	11.6	10.4	10.0	9.7	10.3	10.2	8.2	7.5	7.1	11.6	4.4	8.4
10	6.3	4.8	2.1	1.4	1.1	1.6	2.8	1.9	2.3	3.6	3.3	2.8	2.5	1.5	2.6	2.6	0.8	1.7	1.1	1.8	1.9	2.6	2.3	1.6	6.3	0.8	2.4
11	3.2	5.7	5.7	7.4	9.8	10.0	10.8	11.1	10.3	11.0	9.9	11.0	8.1	3.4	2.0	3.5	3.2	6.4	4.8	4.8	4.2	5.3	6.3	7.7	11.1	2.0	6.9
12	8.8	8.6	8.9	10.3	10.4	10.7	10.0	9.1	9.5	9.8	9.5	9.3	9.6	8.3	8.9	7.6	7.7	8.3	8.5	7.5	6.7	8.3	6.8	7.0	10.7	6.7	8.7
13	7.4	6.5	5.9	6.5	6.3	6.7	7.0	5.4	5.1	3.5	1.9	1.1	2.2	2.7	3.8	4.4	5.3	5.3	5.5	5.9	4.9	5.5	4.3	2.7	7.4	1.1	4.8
14	4.1	2.9	3.4	3.5	3.5	2.8	2.4	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.0	2.0	1.9	2.2	1.5	0.9	1.6	1.3	0.9	0.9	4.1	0.9	2.2
15	0.8	0.7	0.9	0.8	0.7	0.4	1.0	1.0	1.6	1.7	2.0	2.1	3.8	4.1	4.1	4.4	4.7	4.8	5.7	5.7	5.4	5.0	5.1	5.3	5.7	0.4	3.0
16	5.1	5.5	5.3	5.2	5.8	5.8	6.0	5.6	5.7	5.3	5.9	6.2	6.1	5.9	5.9	5.7	6.3	6.9	6.8	6.3	6.2	6.6	6.8	6.3	6.9	5.1	6.0
17	6.5	6.3	7.0	6.7	6.8	7.5	7.1	6.2	6.3	6.4	6.2	5.0	4.4	2.6	0.7	1.7	1.7	3.2	4.3	4.5	4.3	4.6	5.9	5.8	7.5	0.7	5.1
18	6.0	6.1	6.8	6.8	7.1	7.4	6.0	4.9	6.5	5.8	5.5	4.6	5.4	6.0	6.0	4.8	4.0	1.8	2.3	3.8	3.8	3.5	4.1	4.0	7.4	1.8	5.1
19	3.3	2.3	3.1	2.8	2.8	2.0	2.3	3.0	3.8	2.7	4.2	4.5	4.9	5.0	5.7	4.6	4.4	6.2	6.7	6.5	6.1	6.0	6.1	6.3	6.7	2.0	4.4
20	6.2	6.3	5.5	4.9	5.5	6.0	6.4	6.4	6.2	5.3	6.2	7.2	7.4	8.2	7.2	7.4	7.9	7.7	7.5	6.2	6.5	6.1	6.0	6.3	8.2	4.9	6.5
21	6.3	6.2	6.7	6.8	6.9	6.9	5.7	5.4	4.8	5.6	6.8	6.1	6.4	6.5	6.3	6.1	5.4	5.6	4.8	4.9	5.4	6.0	4.8	5.5	6.9	4.8	5.9
22	6.9	5.3	5.9	6.1	8.3	8.1	7.0	7.0	8.3	7.9	8.4	8.6	6.7	4.2	4.7	5.2	6.0	7.4	6.9	6.2	5.0	4.2	4.7	3.6	8.6	3.6	6.4
23	2.2	2.5	4.1	4.4	4.6	5.2	4.5	4.6	5.2	5.8	5.7	6.0	5.8	5.3	4.0	7.5	7.7	8.2	9.1	9.6	11.2	11.3	9.5	9.9	11.3	2.2	6.4
24	9.0	8.5	8.8	6.9	7.0	8.1	7.7	7.6	7.9	10.4	10.1	9.8	8.2	7.5	6.9	6.6	6.3	5.1	3.8	2.2	2.0	1.2	2.2	2.3	10.4	1.2	6.5
25	1.5	1.4	1.1	1.5	1.4	1.4	1.3	0.6	1.1	0.9	1.7	1.7	2.1	1.9	2.3	0.6	0.9	0.5	1.7	2.1	1.9	2.3	2.7	2.0	2.7	0.5	1.5
26	2.3	2.3	3.9	4.0	3.5	2.6	1.8	2.5	1.8	1.8	2.3	1.0	1.5	2.3	2.0	2.3	4.0	4.6	5.3	2.6	3.6	4.5	4.6	6.0	6.0	1.0	3.0
27	6.3	6.1	6.2	6.9	6.8	8.0	8.6	7.8	7.1	7.1	7.2	7.1	7.4	6.7	6.9	6.0	6.6	5.9	6.4	6.9	7.4	5.3	5.1	5.8	8.6	5.1	6.7
28	5.6	5.0	4.0	3.5	2.4	1.5	2.0	1.7	1.0	1.0	0.8	0.8	1.0	2.0	2.6	2.5	2.7	3.1	2.5	2.9	1.7	1.7	1.7	2.7	5.6	0.8	2.4
29	1.8	2.5	2.5	2.3	2.5	2.2	2.3	2.7	2.2	2.3	1.6	0.8	0.4	0.5	1.9	1.7	1.9	1.8	2.2	3.1	2.5	1.5	2.3	1.8	3.1	0.4	2.0
30	1.6	0.9	0.6	0.7	1.6	1.6	0.9	0.9	1.3	2.0	1.9	2.0	1.8	1.5	1.6	2.0	2.0	1.5	1.4	2.3	2.3	2.0	2.2	2.2	2.3	0.6	1.6
31	2.3	2.2	2.4	2.1	2.5	2.4	2.6	2.5	2.2	2.2	2.4	1.3	0.9	2.0	1.8	2.0	1.5	1.8	2.6	2.6	2.8	2.7	2.5	2.4	2.8	0.9	2.2
Max.	**9.0**	**8.6**	**8.9**	**10.3**	**10.4**	**10.7**	**10.8**	**11.1**	**10.3**	**11.0**	**10.1**	**11.0**	**9.6**	**8.3**	**10.9**	**11.6**	**10.4**	**10.0**	**9.7**	**10.3**	**11.2**	**11.3**	**9.5**	**9.9**	**11.6**		
Min.	**0.8**	**0.7**	**0.6**	**0.7**	**0.7**	**0.4**	**0.9**	**0.6**	**1.0**	**0.9**	**0.8**	**0.8**	**0.4**	**0.5**	**0.7**	**0.6**	**0.8**	**0.5**	**1.1**	**0.9**	**1.6**	**1.2**	**0.9**	**0.9**		**0.4**	
Avg.	**4.5**	**4.3**	**4.4**	**4.4**	**4.6**	**4.7**	**4.6**	**4.5**	**4.5**	**4.5**	**4.7**	**4.7**	**4.7**	**4.5**	**4.5**	**4.6**	**4.5**	**4.7**	**4.7**	**4.6**	**4.5**	**4.4**	**4.4**	**4.4**			**4.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.1	2.6	1.7	2.4	2.2	1.9	1.8	2.0	2.1	2.8	3.8	5.3	4.6	5.3	5.1	4.1	4.1	4.7	5.2	5.7	5.1	4.8	4.6	4.4	5.7	1.7	3.7
2	5.0	5.2	4.9	5.2	6.5	6.7	7.7	7.1	6.4	6.6	6.3	6.5	7.5	8.2	7.6	7.1	8.2	9.0	8.8	9.5	9.1	9.2	9.6	9.4	9.6	4.9	7.4
3	8.8	8.9	9.0	8.1	8.7	8.5	7.9	8.1	8.1	7.4	7.9	8.0	7.6	7.2	7.1	7.5	7.9	7.7	7.1	7.3	7.8	7.6	7.6	7.7	9.0	7.1	7.9
4	7.4	7.3	7.1	7.2	6.7	6.3	6.5	7.0	6.6	6.7	6.8	7.3	7.2	7.1	7.2	7.1	7.3	6.2	6.4	7.1	6.8	6.5	6.9	6.6	7.4	6.2	6.9
5	6.7	6.7	6.9	6.6	7.0	6.6	6.1	6.8	6.1	5.6	6.7	6.2	6.0	6.3	5.4	4.4	3.5	2.5	2.4	5.2	5.2	3.1	3.2	3.9	7.0	2.4	5.4
6	4.5	2.8	2.2	3.9	2.9	3.1	1.9	1.8	2.3	3.6	1.4	1.0	1.6	1.9	1.3	2.9	5.1	4.4	4.9	5.4	6.1	4.6	3.8	5.8	6.1	1.0	3.3
7	6.4	6.8	7.5	8.7	9.4	9.2	8.5	9.5	10.0	10.1	10.6	9.6	8.5	7.4	6.4	6.4	7.1	6.1	5.6	7.0	5.8	3.8	3.4	2.4	10.6	2.4	7.3
8	2.8	3.2	3.1	2.7	2.9	2.8	2.1	1.3	1.2	1.0	1.5	1.5	3.4	5.1	5.9	6.7	7.7	7.8	7.7	8.7	8.7	9.5	10.3	11.8	11.8	1.0	5.0
9	13.0	13.5	13.9	11.5	10.2	10.2	7.8	6.9	9.1	9.9	11.8	11.2	12.6	12.2	11.7	11.2	11.1	12.0	10.0	10.9	11.1	10.7	10.2	8.4	13.9	6.9	10.9
10	9.5	9.0	8.6	7.3	6.3	3.8	3.4	4.3	3.1	2.0	2.7	2.9	4.4	6.2	9.2	9.1	7.7	8.9	9.4	6.8	6.2	5.9	7.8	8.8	9.5	2.0	6.4
11	8.6	6.5	6.1	6.7	5.8	5.0	5.5	5.6	2.5	1.7	1.6	1.6	0.6	0.8	2.0	0.7	2.0	2.7	1.7	2.7	4.7	4.8	4.6	4.9	8.6	0.6	3.7
12	5.2	5.3	4.0	4.1	4.9	6.8	4.8	3.8	4.1	4.6	5.7	5.3	5.5	5.1	5.2	5.2	5.1	5.1	3.5	3.4	3.0	2.4	1.6	1.9	6.8	1.6	4.4
13	2.3	1.6	1.6	2.5	2.4	2.6	2.2	1.1	1.4	1.7	1.9	2.4	2.4	4.2	4.0	3.1	3.1	1.4	1.1	0.6	1.1	0.8	1.2	1.1	4.2	0.6	2.0
14	1.4	1.5	1.3	2.3	1.6	1.4	1.3	2.2	2.2	2.3	2.5	1.4	1.7	2.8	2.7	2.4	2.7	2.8	2.1	2.4	2.3	2.6	1.9	3.5	3.5	1.3	2.1
15	2.3	1.0	0.8	1.1	2.0	2.4	2.7	2.7	3.4	2.8	2.0	2.6	2.2	1.0	1.6	1.4	2.8	2.9	3.0	2.5	5.8	6.9	6.5	5.9	6.9	0.8	2.9
16	6.6	6.5	4.7	3.7	3.8	2.7	2.4	0.6	0.8	1.2	0.9	1.5	2.8	1.8	2.1	2.0	1.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	6.6	0.2	2.0
17	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
18	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	3.2	3.2	4.0	4.4	3.8	4.8	4.7	4.1	4.3	4.3	4.9	5.1	4.2	5.2	5.2	5.2	5.2	0.2	3.0
19	4.8	4.5	4.8	5.3	6.7	7.0	6.6	6.3	5.7	6.0	6.2	6.9	6.7	6.4	6.6	6.7	6.7	6.9	6.2	6.3	6.4	6.7	6.4	7.0	7.0	4.5	6.2
20	8.0	7.5	7.7	8.1	5.4	5.0	5.8	5.1	7.2	6.6	7.3	8.1	7.6	8.3	8.1	8.2	7.9	7.8	8.1	8.5	8.6	8.1	8.3	8.8	8.8	5.0	7.5
21	7.8	6.8	6.9	7.9	8.9	8.6	8.6	8.3	7.9	9.1	9.2	9.7	9.5	8.6	8.5	7.9	8.0	7.2	6.0	6.0	6.6	6.1	5.8	4.5	9.7	4.5	7.7
22	3.4	6.4	6.3	6.1	6.4	5.0	6.2	6.3	5.9	6.0	5.0	4.9	5.2	5.0	5.3	5.5	4.8	4.6	3.8	5.2	5.6	5.0	5.4	4.7	6.4	3.4	5.3
23	3.3	2.6	1.5	1.2	1.5	1.9	4.3	3.6	3.6	3.7	3.0	3.8	4.2	2.0	1.9	3.0	4.3	4.5	5.7	5.6	3.9	8.7	9.7	8.6	9.7	1.2	4.0
24	8.0	6.6	6.3	7.4	9.1	9.7	9.8	7.9	7.2	6.6	6.0	5.4	5.6	4.7	5.0	4.3	4.1	2.4	2.8	3.9	2.3	1.2	1.2	3.6	9.8	1.2	5.5
25	6.4	7.5	7.8	7.5	8.7	7.8	7.9	8.0	7.9	7.2	6.5	7.7	7.3	8.1	7.9	8.7	9.0	10.7	9.2	9.6	9.6	8.8	8.5	8.3	10.7	6.4	8.2
26	9.1	8.7	8.7	8.2	9.0	9.2	9.4	8.6	8.6	7.6	7.4	6.8	7.0	7.1	6.6	7.4	7.0	6.8	6.8	6.0	6.1	6.3	6.6	6.9	9.4	6.0	7.6
27	6.2	5.3	6.1	5.2	4.4	5.7	4.6	4.6	5.4	4.3	4.7	3.5	3.4	4.8	5.2	5.0	6.5	6.5	6.3	6.0	5.8	5.0	3.4	2.7	6.5	2.7	5.0
28	3.8	7.1	6.8	7.3	6.0	6.6	6.8	6.8	6.0	5.5	5.4	5.6	6.4	6.8	5.8	5.3	6.1	6.7	7.6	8.1	8.6	7.7	8.4	8.8	8.8	3.8	6.7
29	9.5	9.3	9.9	9.5	9.3	9.3	9.8	10.4	10.5	9.2	9.8	9.1	10.2	10.7	10.6	10.6	11.1	10.5	11.3	12.4	11.7	11.6	8.9	9.6	12.4	8.9	10.2
30	10.1	9.2	9.6	9.3	10.0	9.7	8.8	9.1	9.2	8.6	8.7	7.6	8.1	9.8	7.2	7.3	7.9	8.3	7.4	6.8	7.1	7.9	6.4	6.8	10.1	6.4	8.4
Max.	**13.0**	**13.5**	**13.9**	**11.5**	**10.2**	**10.2**	**9.8**	**10.4**	**10.5**	**10.1**	**11.8**	**11.2**	**12.6**	**12.2**	**11.7**	**11.2**	**11.1**	**12.0**	**11.3**	**12.4**	**11.7**	**11.6**	**10.3**	**11.8**	**13.9**		
Min.	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**		**0.2**	
Avg.	**5.8**	**5.7**	**5.5**	**5.6**	**5.6**	**5.5**	**5.4**	**5.2**	**5.3**	**5.1**	**5.2**	**5.3**	**5.5**	**5.7**	**5.6**	**5.5**	**5.8**	**5.7**	**5.5**	**5.8**	**5.9**	**5.7**	**5.6**	**5.8**			**5.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (Climatronics) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.3	4.8	6.7	6.6	7.5	8.2	7.6	6.0	6.4	4.9	3.2	0.7	1.6	2.1	1.4	1.6	0.9	2.1	2.8	3.5	3.1	2.9	3.4	3.7	8.2	0.7	4.0
2	3.6	3.7	4.2	3.7	3.1	4.6	5.0	4.7	4.4	4.4	5.0	5.9	6.2	6.9	8.2	8.9	9.3	8.4	8.2	8.1	7.6	8.2	7.2	8.4	9.3	3.1	6.2
3	7.4	7.4	7.5	7.8	8.5	8.5	8.1	7.7	8.5	7.9	8.9	9.8	9.2	10.6	11.5	11.2	11.1	10.9	11.5	10.7	11.1	10.4	9.0	8.0	11.5	7.4	9.3
4	5.9	5.3	5.7	6.4	5.5	5.9	4.5	3.8	3.3	4.6	4.3	4.9	6.3	6.2	5.1	4.9	4.4	5.2	4.5	3.8	3.8	3.7	3.8	4.2	6.4	3.3	4.8
5	3.6	3.3	3.2	3.0	3.5	3.5	3.2	1.7	2.9	3.2	3.1	4.1	5.6	5.9	7.0	5.1	5.2	6.0	5.3	5.4	6.1	5.3	5.3	5.0	7.0	1.7	4.4
6	5.7	5.7	5.3	5.1	4.0	1.9	1.7	1.0	0.9	1.1	0.9	0.9	1.1	0.9	0.7	1.0	1.7	0.7	1.2	0.8	1.2	0.8	1.0	0.8	5.7	0.7	1.9
7	0.8	0.8	1.3	1.0	2.9	4.3	4.8	5.2	4.7	5.9	6.2	5.5	5.9	5.0	4.7	3.1	3.1	2.4	1.1	1.1	1.7	2.8	3.1	4.6	6.2	0.8	3.4
8	4.4	6.5	8.0	9.6	10.1	11.2	12.4	12.3	10.5	10.9	11.7	9.5	11.4	11.0	10.7	11.6	12.0	8.7	8.0	7.5	5.4	3.9	4.9	4.3	12.4	3.9	9.0
9	5.4	3.3	3.7	2.0	1.7	2.3	0.9	1.0	1.3	1.1	0.6	1.8	4.1	4.7	4.1	4.0	4.1	5.3	4.9	6.0	7.1	6.0	4.2	4.6	7.1	0.6	3.5
10	4.5	3.6	3.2	4.3	5.2	4.5	5.6	6.8	6.7	6.3	6.4	6.5	5.7	5.4	5.4	5.3	6.2	5.3	5.0	5.0	5.6	5.7	5.3	5.8	6.8	3.2	5.4
11	5.2	5.8	4.5	3.1	3.9	4.0	4.9	5.3	5.2	5.4	5.8	5.9	5.8	5.8	5.9	5.5	5.3	4.2	3.7	3.0	3.7	5.1	5.2	3.4	5.9	3.0	4.8
12	2.9	3.0	3.7	3.7	4.5	5.5	5.1	5.9	4.4	4.2	4.8	3.8	4.2	7.2	7.3	6.5	5.3	5.1	3.2	4.5	4.5	4.0	3.9	3.4	7.3	2.9	4.6
13	4.7	4.2	3.7	3.1	4.6	3.5	2.4	1.1	1.5	0.8	0.8	2.5	1.4	1.6	2.5	2.6	2.0	3.5	2.4	0.9	2.6	2.6	2.4	2.9	4.7	0.8	2.5
14	2.7	2.9	2.9	3.5	3.4	3.6	3.6	4.6	3.9	3.5	3.8	3.8	4.0	3.5	3.0	3.8	3.7	2.9	2.9	3.0	5.0	4.6	4.5	5.1	5.1	2.7	3.7
15	5.5	5.9	6.4	7.3	8.2	6.8	7.9	7.6	5.5	4.1	3.5	3.0	1.9	1.4	0.9	1.1	0.8	0.4	0.6	0.2	0.2	0.2	0.2	0.2	8.2	0.2	3.3
16	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	3.5	4.1	6.3	5.8	4.6	5.2	6.3	0.2	1.4
17	6.8	4.5	4.1	4.9	4.1	4.9	5.8	5.1	5.4	6.4	4.8	5.1	6.3	6.2	6.1	5.6	6.0	5.4	5.2	5.3	4.1	4.4	4.4	3.3	6.8	3.3	5.2
18	3.5	3.6	4.4	5.0	4.5	4.0	5.1	6.9	8.3	7.0	6.8	7.2	7.4	6.2	6.4	6.7	6.4	7.2	7.6	7.5	7.6	7.2	6.4	6.0	8.3	3.5	6.2
19	6.2	6.2	5.5	6.0	4.9	5.9	6.1	6.1	6.2	6.3	6.1	6.7	7.2	7.3	7.7	7.5	7.3	8.1	7.7	8.4	8.8	8.9	9.5	9.6	9.6	4.9	7.1
20	9.0	7.7	7.1	5.7	3.5	2.9	1.9	1.8	2.0	2.3	0.9	1.3	2.8	2.4	2.5	1.4	1.5	2.3	2.2	1.5	1.8	1.7	2.8	3.1	9.0	0.9	3.0
21	1.4	1.1	0.8	1.0	1.0	0.8	0.7	0.8	1.0	0.6	0.5	0.9	2.6	3.6	3.1	4.9	4.1	5.5	3.1	2.6	1.0	1.1	1.7	1.8	5.5	0.5	1.9
22	0.9	2.9	2.6	3.1	2.4	2.8	2.7	2.5	3.2	2.9	2.5	1.9	1.2	0.8	1.5	1.6	1.6	2.3	2.2	2.5	2.7	3.2	3.5	2.5	3.5	0.8	2.3
23	2.5	2.9	2.5	2.2	2.3	1.5	1.1	1.1	1.3	1.2	1.7	8.0	8.1	8.7	9.5	9.0	7.4	8.0	7.9	9.0	7.5	6.4	6.0	6.7	9.5	1.1	5.1
24	8.8	8.3	8.8	8.4	6.8	6.2	7.4	7.3	7.8	7.7	8.0	8.4	9.6	9.3	7.0	4.9	3.1	2.8	2.5	4.6	7.8	6.5	3.2	1.7	9.6	1.7	6.5
25	2.4	2.8	3.8	5.0	4.8	3.4	5.2	6.6	5.7	5.4	3.7	3.6	2.9	3.2	4.2	3.5	2.8	2.2	2.2	2.6	4.0	5.3	5.6	5.9	6.6	2.2	4.0
26	7.8	9.1	9.6	9.2	9.0	9.2	11.5	13.6	13.1	13.6	12.8	12.9	14.4	8.6	8.8	10.1	10.5	9.3	11.0	10.9	10.5	11.7	10.4	11.8	14.4	7.8	10.8
27	10.7	9.1	8.6	8.3	8.3	8.3	7.9	8.0	7.8	8.2	7.9	7.4	6.7	6.7	6.8	7.1	7.1	6.9	7.0	7.4	7.3	7.2	6.8	6.9	10.7	6.7	7.7
28	6.9	6.9	7.4	7.4	7.2	6.2	6.1	6.4	6.9	7.4	7.8	7.8	7.9	8.4	7.5	7.2	7.7	7.3	6.4	6.1	5.9	6.2	6.1	6.2	8.4	5.9	7.0
29	6.8	6.8	7.0	6.9	6.8	7.0	6.7	6.9	7.4	7.0	6.7	6.0	7.4	7.1	6.9	6.9	6.2	6.0	6.4	7.0	6.9	6.9	6.6	6.6	7.4	6.0	6.8
30	6.1	6.9	6.6	6.3	6.7	7.4	8.2	7.7	8.0	8.1	8.5	7.9	7.9	8.6	8.6	8.5	8.3	8.0	8.6	9.2	9.7	9.4	9.2	9.5	9.7	6.1	8.1
31	9.4	9.9	10.0	10.1	10.9	11.2	10.7	11.4	10.3	10.6	10.3	11.3	10.4	10.5	10.8	10.1	10.0	10.2	10.7	9.9	9.6	10.1	9.9	10.0	11.4	9.4	10.3
Max.	**10.7**	**9.9**	**10.0**	**10.1**	**10.9**	**11.2**	**12.4**	**13.6**	**13.1**	**13.6**	**12.8**	**12.9**	**14.4**	**11.0**	**11.5**	**11.6**	**12.0**	**10.9**	**11.5**	**10.9**	**11.1**	**11.7**	**10.4**	**11.8**	**14.4**		
Min.	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.4**	**0.6**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**		**0.2**	
Avg.	**5.1**	**5.0**	**5.1**	**5.2**	**5.2**	**5.2**	**5.3**	**5.4**	**5.3**	**5.3**	**5.1**	**5.3**	**5.7**	**5.7**	**5.7**	**5.5**	**5.3**	**5.3**	**5.1**	**5.2**	**5.5**	**5.4**	**5.2**	**5.2**			**5.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	183.5	271.3	169.0	277.0	270.9	265.9	261.7	262.6	260.8	260.6	265.3	264.2	264.0	267.5	263.9	263.9	273.2	270.7	265.1	272.8	273.4	265.6	266.6	267.7
2	268.6	269.0	268.4	269.6	275.9	285.6	289.6	282.6	284.0	285.4	291.0	291.9	288.0	286.1	286.2	282.9	283.3	287.3	281.5	265.8	262.7	269.4	270.0	271.8
3	270.1	268.0	276.2	268.4	273.5	278.3	273.9	273.6	272.5	272.9	272.1	278.4	283.4	288.3	289.6	293.0	292.5	290.8	293.1	295.4	292.6	293.3	292.0	288.1
4	289.6	288.5	294.1	294.0	290.3	288.0	286.1	286.7	291.9	291.8	291.3	290.2	290.2	289.6	291.7	291.4	290.5	290.0	289.5	287.5	286.6	286.9	288.3	288.6
5	289.2	285.8	286.5	285.0	284.8	286.7	284.6	285.0	285.1	285.8	285.0	282.7	278.6	279.7	278.5	281.3	281.2	286.0	287.9	288.8	289.2	288.8	288.9	287.5
6	289.4	285.4	285.9	286.8	284.0	286.2	289.0	285.2	282.2	276.8	276.1	278.5	275.9	275.1	286.2	285.2	287.4	284.6	292.7	295.2	297.1	296.7	296.1	296.6
7	291.8	291.6	290.7	291.0	293.0	295.3	293.0	292.4	288.4	287.6	287.6	287.1	288.0	287.0	287.2	288.0	286.9	287.5	290.2	290.3	290.7	291.5	290.6	288.1
8	285.6	285.6	288.6	286.3	285.5	285.6	288.0	288.1	287.4	289.2	287.4	285.6	293.0	285.9	287.2	287.1	291.4	296.5	293.7	291.7	287.3	291.8	291.1	294.3
9	289.0	286.8	285.0	288.4	286.6	295.2	293.8	287.3	289.6	288.8	284.8	287.8	285.8	284.5	284.7	287.9	287.4	280.9	281.0	277.7	277.0	278.1	276.7	278.8
10	279.1	276.9	279.6	283.1	282.7	284.3	284.3	282.2	281.0	271.8	271.7	277.1	278.1	275.9	273.7	272.4	275.9	269.9	270.9	269.6	268.3	274.1	275.5	276.3
11	278.5	278.0	275.5	278.4	278.1	275.0	280.5	284.1	280.2	280.4	281.6	284.9	282.4	284.2	284.2	287.6	285.3	289.5	291.9	293.2	291.9	291.5	295.5	293.1
12	290.0	285.9	284.4	285.7	283.4	276.9	277.8	278.7	277.4	277.0	277.0	280.0	280.5	280.8	288.2	292.5	286.0	287.2	290.1	285.7	277.3	275.6	275.4	276.1
13	274.2	276.1	278.3	281.2	276.1	278.4	277.1	278.1	282.5	276.7	276.1	283.1	281.5	275.2	277.0	279.7	278.1	285.6	282.5	281.7	286.5	291.0	295.0	284.7
14	281.8	286.6	279.5	260.4	269.5	278.0	328.4	295.6	300.5	74.5	75.6	86.2	77.6	82.1	73.8	88.2	48.2	57.8	93.1	61.3	113.1	122.5	105.7	108.3
15	112.2	107.4	107.4	115.5	119.9	112.4	127.3	107.9	68.2	89.6	93.2	91.2	92.8	104.3	122.2	105.3	122.4	102.5	78.4	54.7	83.0	73.2	87.2	94.1
16	73.6	267.3	24.7	92.7	346.4	293.9	294.7	297.6	288.2	283.1	280.0	284.8	291.9	301.0	289.2	299.8	288.9	235.1	194.4	200.5	273.7	296.8	293.1	282.0
17	90.8	89.8	81.9	98.4	61.6	61.8	70.5	107.7	103.9	123.0	116.5	87.9	90.0	87.4	97.9	94.5	104.2	118.3	112.6	127.2	124.7	88.4	103.0	132.4
18	106.7	88.4	74.4	94.4	105.6	103.0	107.6	67.5	359.9	25.8	269.8	356.0	84.7	100.2	90.4	286.5	286.2	84.9	95.3	116.4	105.4	70.5	69.9	94.1
19	64.2	61.5	46.7	57.2	32.4	69.6	86.4	93.1	110.3	81.8	123.7	136.3	124.4	91.4	99.5	91.9	101.5	98.6	117.7	91.7	93.2	101.8	101.1	108.5
20	110.4	113.8	117.7	106.8	104.9	99.2	108.4	96.9	100.1	90.1	86.7	84.7	78.4	78.9	88.4	70.2	70.2	80.9	109.8	88.6	64.1	277.3	293.8	72.3
21	95.6	105.9	95.8	114.1	97.2	108.5	116.2	111.0	130.4	104.8	80.3	104.9	128.5	126.3	114.5	101.8	124.5	113.8	97.3	94.8	95.8	97.5	84.9	72.3
22	75.1	64.7	67.3	62.0	64.8	50.8	48.8	51.3	51.2	71.0	81.9	195.4	265.2	267.6	287.0	287.6	275.9	276.9	322.5	286.0	277.4	288.3	288.2	296.9
23	303.4	286.5	291.1	278.7	285.9	306.5	306.4	295.9	290.7	295.6	290.0	302.6	295.0	289.2	303.4	303.8	293.6	310.6	312.5	291.6	283.2	274.9	274.0	283.2
24	294.2	273.6	273.9	263.8	269.8	290.9	302.1	78.7	84.0	120.2	103.8	101.3	124.9	91.0	33.7	72.8	88.0	111.9	116.3	60.1	66.2	71.6	80.6	53.4
25	56.2	56.9	76.1	84.6	220.1	75.1	295.4	293.7	287.2	284.5	286.8	295.8	284.7	287.7	289.3	288.9	276.2	277.9	279.0	272.2	278.1	292.1	289.3	286.1
26	290.0	292.0	287.9	294.0	307.6	305.2	294.2	288.0	255.8	270.4	261.1	262.5	257.5	261.3	269.3	266.1	289.8	291.0	284.6	284.1	280.5	274.1	72.8	67.6
27	57.1	82.1	52.9	49.8	56.1	67.8	108.7	93.0	93.2	114.5	112.2	99.3	107.8	110.7	113.9	121.6	120.7	122.6	108.1	112.9	114.9	121.6	120.1	110.4
28	122.5	114.2	143.7	157.8	276.0	311.5	118.2	94.0	66.5	47.7	91.3	47.8	50.1	67.4	65.4	68.5	69.8	62.0	91.1	281.7	76.1	285.2	287.5	292.7
29	287.1	295.4	289.2	287.1	281.0	282.0	286.9	289.4	290.3	291.7	293.2	290.6	284.2	276.5	274.0	291.3	273.9	266.6	271.2	317.5	35.9	314.4	265.3	268.2
30	266.9	266.5	269.5	277.5	272.4	272.4	272.3	266.8	283.3	269.6	269.2	273.0	286.9	267.9	276.6	281.7	290.3	292.6	281.3	290.0	294.0	293.4	298.3	295.9
31	295.0	298.3	304.5	297.8	301.0	307.9	306.1	297.0	290.2	315.3	295.3	302.6	308.4	309.2	316.0	304.6	296.0	293.9	300.1	305.3	305.9	288.5	266.2	254.2

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	262.9	290.0	286.2	282.6	287.7	282.9	284.3	281.5	285.9	281.3	286.6	280.3	272.4	276.3	278.8	282.2	282.5	284.6	287.9	299.9	313.8	274.5	284.8	279.5
2	287.5	279.7	285.5	99.6	294.5	319.5	323.3	266.3	263.8	253.7	255.5	260.4	281.8	285.3	285.6	294.8	306.4	306.7	311.4	289.8	286.1	289.5	309.7	297.6
3	283.1	293.7	289.4	281.8	289.0	295.4	283.9	299.5	294.3	292.0	275.6	275.4	273.8	271.9	254.6	258.5	259.8	264.4	263.9	265.8	268.5	271.6	271.1	271.9
4	271.0	270.6	271.0	271.8	269.5	269.3	276.9	317.8	282.3	286.6	287.2	281.1	290.0	272.1	282.8	281.3	284.6	271.6	265.4	269.7	262.6	271.6	276.7	265.6
5	249.6	247.9	254.0	265.2	297.5	298.0	294.1	275.2	261.6	272.0	278.7	258.9	270.5	268.6	260.3	259.5	260.3	261.5	266.4	265.9	274.9	271.7	273.8	272.6
6	280.7	280.7	276.3	292.7	293.8	289.7	279.2	286.7	288.1	280.8	280.0	272.5	275.0	271.1	278.1	271.0	266.7	256.1	246.0	252.0	257.2	258.4	259.7	252.0
7	253.8	252.6	254.0	256.6	260.9	263.0	264.4	261.1	264.8	264.8	269.0	265.1	268.1	269.8	266.7	272.2	271.2	271.7	272.8	271.3	272.7	293.1	277.5	285.1
8	296.3	279.8	281.4	270.5	284.2	272.5	284.6	312.6	109.5	130.4	148.6	105.5	108.0	137.3	129.5	89.4	104.6	98.4	91.4	109.8	103.6	155.5	151.6	131.6
9	108.7	101.2	99.5	99.5	109.0	102.9	99.8	107.3	104.9	92.7	71.5	20.3	93.0	71.9	53.8	60.3	121.2	266.5	264.7	244.4	264.0	287.1	286.5	297.1
10	271.1	255.5	266.5	249.9	268.3	273.6	269.2	274.0	278.4	265.9	271.4	269.6	271.1	279.5	283.1	276.5	284.8	281.9	279.9	285.0	282.2	287.4	267.6	271.7
11	286.2	281.3	291.8	305.2	278.6	297.4	289.1	351.2	75.8	270.4	277.3	275.0	269.4	270.9	272.4	275.4	275.2	275.2	270.1	259.8	251.0	259.5	274.6	281.7
12	287.5	294.2	299.1	294.8	293.4	294.3	289.1	280.6	282.4	278.5	282.3	286.8	288.9	286.7	302.3	279.1	275.5	256.1	260.2	270.1	289.0	281.2	280.6	82.0
13	59.1	90.0	107.4	107.8	99.3	93.3	102.3	100.4	88.2	105.6	104.4	107.6	103.5	106.4	107.1	105.7	101.3	98.2	108.5	105.0	105.7	106.4	103.9	100.3
14	118.5	118.9	111.5	125.8	107.0	102.9	117.2	117.6	118.6	131.7	295.0	290.1	285.7	287.4	288.4	289.1	290.0	285.5	286.2	285.2	283.6	289.6	291.8	296.2
15	296.1	288.1	287.6	287.0	288.4	292.9	301.2	300.5	289.3	302.8	293.9	288.1	279.0	273.5	278.5	293.9	272.8	295.1	279.5	272.2	105.4	285.8	95.4	98.8
16	96.7	117.8	108.1	92.1	92.7	101.6	103.8	102.1	123.0	112.4	102.7	97.7	101.2	100.3	103.5	199.4	184.7	195.2	41.4	66.6	95.5	113.5	137.9	350.5
17	59.1	59.1	61.5	73.5	97.2	114.3	109.6	120.6	107.2	107.1	96.6	105.2	98.7	93.5	104.3	116.2	100.6	104.1	90.3	79.3	81.2	81.0	88.0	100.2
18	102.9	105.0	99.2	96.6	83.5	82.4	89.5	96.4	95.1	98.9	102.4	97.2	86.5	88.4	100.4	109.3	106.1	96.4	93.4	67.6	98.0	106.8	129.3	107.8
19	119.8	105.4	114.2	271.1	35.9	201.1	279.2	249.8	93.4	95.0	97.9	98.9	102.4	99.9	101.6	107.1	102.9	105.6	105.3	102.8	93.0	98.1	91.4	95.6
20	94.5	92.8	95.1	86.9	89.8	102.5	101.5	87.1	82.8	80.0	100.2	90.9	91.4	100.2	91.2	99.7	101.7	98.6	96.4	91.9	97.5	98.1	103.0	167.8
21	71.7	88.7	75.3	50.2	123.5	15.1	85.2	71.8	102.2	96.4	101.2	101.4	95.1	88.6	91.7	95.5	88.4	94.1	97.7	93.4	103.2	92.9	99.9	102.4
22	87.9	89.1	84.7	92.9	104.7	100.1	134.8	115.2	116.5	112.8	89.4	112.2	98.6	87.2	99.6	92.4	105.3	102.6	92.7	96.8	92.9	97.3	91.9	73.5
23	69.3	97.1	96.5	273.1	284.8	265.7	262.2	266.2	273.7	265.7	267.7	267.4	265.9	268.0	267.6	269.8	269.3	266.3	266.9	265.1	267.1	265.3	261.5	262.4
24	266.6	266.3	264.8	269.1	264.2	263.4	266.0	262.7	270.2	269.2	272.0	263.3	265.0	273.3	271.5	271.2	277.8	281.5	282.1	282.3	284.8	289.7	289.0	287.7
25	292.0	297.4	292.5	297.7	295.9	295.1	291.1	291.2	288.2	278.7	279.1	276.6	274.9	269.8	269.2	105.3	114.9	112.1	104.0	89.9	99.6	91.6	86.7	50.3
26	78.8	82.4	101.3	73.3	97.7	94.4	116.3	101.5	150.1	225.5	284.6	261.8	112.7	73.5	109.8	267.2	264.4	256.7	255.2	256.6	262.0	251.9	272.7	280.9
27	280.5	270.8	272.3	274.0	272.8	270.5	268.1	273.2	267.0	270.1	274.1	291.9	103.3	72.8	267.6	333.2	94.8	93.8	298.4	250.1	126.4	117.7	122.2	139.4
28	113.7	145.4	148.3	110.5	130.9	96.4	101.7	95.9	97.5	102.3	249.3	104.6	109.7	83.6	87.9	83.0	266.1	266.6	275.1	299.8	284.6	274.8	293.8	298.6
29	281.6	266.0	285.6	286.5	256.7	286.1	289.3	269.1	268.6	270.3	256.7	256.6	255.1	262.0	270.1	268.3	261.9	258.9	261.8	265.4	269.8	281.9	278.8	285.5

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	283.3	283.4	277.1	267.7	275.6	273.1	270.3	266.1	267.6	270.4	294.4	112.1	89.1	84.5	85.4	90.8	85.7	101.4	144.9	152.0	132.2	114.0	130.4	117.9
2	124.7	109.7	97.1	102.4	122.9	105.4	124.0	127.4	127.8	125.1	111.4	87.5	100.6	128.0	119.1	102.2	135.0	178.8	316.1	31.0	281.8	237.8	291.1	92.5
3	96.5	92.8	75.5	72.6	55.2	120.2	125.1	116.3	94.7	97.0	91.4	97.6	100.2	111.5	111.6	113.1	120.6	125.3	131.1	122.6	98.1	90.2	100.3	99.9
4	110.3	109.4	112.4	78.3	57.5	80.7	103.3	104.6	87.0	91.0	77.0	78.8	99.2	96.2	152.7	94.2	101.0	113.6	108.1	91.5	87.4	73.0	112.6	95.4
5	83.5	92.4	100.4	100.9	98.2	97.0	95.1	88.9	92.0	93.4	90.6	92.3	89.0	83.0	87.9	98.5	116.7	86.8	78.5	82.8	100.2	103.5	96.8	91.5
6	99.8	93.6	95.0	90.6	89.4	100.4	85.9	78.4	100.1	103.3	75.8	95.7	102.1	108.4	89.8	90.8	105.7	98.1	106.2	188.5	71.5	285.6	316.7	122.5
7	239.4	277.8	268.3	274.4	257.1	295.1	278.1	278.8	281.4	298.5	265.3	308.2	299.8	294.0	282.0	288.2	290.6	286.0	288.0	283.5	285.2	282.0	279.0	281.8
8	275.8	273.7	290.3	293.6	296.1	272.7	266.7	259.4	124.6	100.3	112.6	131.5	102.8	131.4	134.6	101.1	96.5	99.6	95.4	96.7	95.3	155.0	352.8	95.2
9	77.7	128.2	147.2	141.2	287.6	271.3	271.0	282.4	293.7	279.1	276.1	268.9	262.2	272.9	276.3	273.4	287.8	293.5	287.4	299.4	296.2	283.4	286.5	327.9
10	280.2	282.6	256.7	281.9	282.4	282.7	289.7	299.2	295.7	295.3	292.3	288.8	285.1	283.3	284.0	288.2	288.2	288.9	284.3	283.3	292.0	295.4	295.7	292.8
11	295.3	294.2	288.6	287.3	291.7	289.2	286.0	282.9	284.4	288.0	288.3	289.4	285.1	283.0	279.9	277.3	276.9	282.6	288.3	280.1	273.8	277.6	282.2	282.6
12	288.0	287.7	288.4	288.4	285.4	289.4	292.2	289.3	287.2	287.4	288.0	286.6	286.6	285.5	277.9	279.9	278.6	279.3	270.9	270.3	269.6	265.4	268.6	271.1
13	276.2	279.9	275.8	280.1	281.3	282.9	285.0	278.6	277.6	279.7	282.1	278.4	274.6	274.8	276.6	279.2	282.1	283.4	287.9	284.6	278.6	281.8	283.1	286.7
14	287.9	289.2	287.1	288.6	290.2	280.2	264.6	267.0	264.9	259.0	263.1	273.6	283.2	91.9	115.7	96.9	94.8	97.0	90.6	90.9	91.9	123.7	96.5	119.8
15	94.7	101.1	94.5	105.6	93.4	94.4	94.7	97.5	99.8	112.1	117.1	113.3	95.6	107.0	95.9	93.9	102.1	116.9	118.7	134.6	108.4	98.6	105.8	115.4
16	119.1	109.5	118.0	277.2	274.9	176.2	105.8	340.1	332.3	5.9	83.6	105.9	108.4	94.5	95.9	183.7	273.0	239.3	277.2	279.3	282.0	283.2	291.7	245.6
17	275.9	269.2	275.5	295.9	290.5	291.7	295.5	268.4	269.8	273.7	252.3	254.1	265.7	282.2	271.3	274.8	285.3	291.0	288.3	285.3	284.5	285.8	284.8	287.7
18	286.9	286.5	286.6	281.9	282.9	283.2	279.4	276.9	283.6	284.5	286.7	287.0	289.8	290.7	287.8	284.0	280.4	287.9	287.1	284.9	289.1	285.9	273.1	268.4
19	270.6	274.7	280.2	275.2	280.6	280.9	282.4	276.6	275.0	276.0	279.7	291.1	287.0	288.1	286.6	284.0	291.7	292.6	292.2	292.9	291.6	289.9	286.2	286.8
20	290.5	287.7	289.9	290.4	287.2	287.5	290.5	290.7	295.3	292.9	288.9	286.7	283.1	278.0	277.6	277.8	281.3	276.7	275.6	273.5	275.4	271.0	270.3	269.7
21	270.3	271.1	270.3	271.6	278.2	274.8	274.3	274.6	270.0	266.7	266.8	268.8	266.8	267.8	267.0	270.3	269.8	263.4	266.9	265.5	264.3	269.8	268.8	270.8
22	273.8	274.9	273.0	271.0	269.1	271.3	274.0	267.0	270.1	273.1	263.3	261.9	261.5	261.5	258.6	257.7	261.9	266.8	260.2	270.0	268.5	274.6	272.8	274.4
23	277.8	280.7	285.8	287.1	285.1	287.3	291.4	295.6	290.7	289.9	285.2	287.4	286.6	285.5	287.3	284.7	287.7	287.4	286.3	285.4	280.3	282.5	287.2	287.6
24	285.1	282.3	286.9	293.2	290.4	286.4	278.1	277.7	279.8	281.0	278.3	273.1	273.3	268.3	266.7	270.2	277.4	277.3	275.2	275.2	278.5	277.0	281.3	277.8
25	268.1	273.1	294.9	276.6	273.0	268.2	268.7	270.5	269.0	265.3	262.7	274.0	275.1	263.7	262.9	261.3	273.7	280.6	279.4	280.0	284.4	286.0	278.3	280.4
26										289.6				282.3	287.3	284.6	283.8	278.8	277.1	284.5	291.1	296.7	295.2	285.1
27	282.1	283.0	283.2	289.9	283.3	271.9	276.2	275.2	276.6	278.6	291.6	283.1	279.3	286.2	285.1	286.1	281.5	285.6	285.5	285.6	289.3	278.9	277.2	285.5
28	291.0	296.3	302.8	297.1	298.7	296.6	296.8	298.3	295.7	294.6	284.7	281.8	277.4	270.4	273.5	268.0	267.0	267.0	262.3	266.8	269.6	279.5	283.5	287.2
29	284.6	290.7	70.3	87.1	71.2	66.7	101.8	87.6	96.2	85.4	80.6	90.3	110.6	104.1	101.9	110.0	106.5	105.0	104.8	104.4	95.8	92.1	94.3	97.4
30	83.0	77.0	82.4	105.6	104.0	103.3	98.8	102.7	96.5	96.1	107.3	103.1	108.9	97.8	104.6	95.5	102.5	97.2	99.0	97.6	90.9	92.4	95.1	95.4
31	96.2	94.4	106.5	109.6	116.0	115.6	105.6	75.8	71.7	85.4	70.0	96.9	86.6	61.7	92.2	72.4	82.6	76.5	95.6	98.7	97.1	92.6	104.5	97.6

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	94.5	92.2	98.2	95.7	97.5	99.6	89.1	92.9	94.1	100.8	116.5	119.3	121.2	114.8	116.4	128.0	116.5	104.7	95.8	114.3	128.5	130.7	135.4	205.1
2	238.0	273.6	290.4	289.3	294.1	293.8	296.1	294.8	297.2	300.6	299.1	298.0	292.8	292.5	277.1	270.8	269.0	26.8	76.6	106.1	89.9	82.5	92.6	62.1
3	88.0	94.9	93.0	97.1	72.4	77.9	24.9	60.1	62.6	92.1	101.5	87.6	94.1	60.6	53.5	55.0	71.1	83.5	88.7	111.9	109.6	100.1	111.4	110.4
4	105.6	98.7	96.9	101.6	92.7	95.2	91.9	82.8	91.5	91.5	99.5	89.7	76.7	92.0	106.8	105.6	120.5	96.2	108.6	127.8	103.9	94.7	5.0	288.8
5	292.1	288.6	293.0	296.6	290.2	294.8	293.4	286.1	287.5	296.5	294.7	286.0	282.5	275.1	273.3	270.9	270.6	268.0	263.9	263.1	268.8	272.1	271.7	276.1
6	282.5	280.7	295.7	303.0	288.3	294.1	308.9	297.1	297.6	298.0	296.2	294.6	291.9	289.9	288.0	286.0	288.8	291.7	287.5	277.8	280.8	278.9	279.4	278.6
7	274.2	280.3	277.2	288.1	287.9	287.0	289.7	289.7	287.5	283.2	288.7	283.7	278.7	275.9	282.6	273.5	267.6	269.3	268.4	272.3	275.3	287.5	286.7	299.3
8	297.1	296.4	291.8	303.5	300.2	267.3	258.2	252.7	253.6	253.4	269.2	270.7	268.0	253.4	64.4	63.9	65.2	47.0	38.9	63.9	98.1	118.9	243.5	279.5
9	290.7	287.1	291.0	290.4	296.2	296.6	295.8	294.9	283.8	295.3	300.9	287.7	288.7	286.1	290.3	293.7	274.9	266.8	267.1	268.0	269.3	270.3	277.3	299.4
10	290.4	297.2	305.3	298.2	288.8	292.7	301.8	290.3	291.9	294.3	286.2	285.5	296.1	16.1	11.1	16.6	193.2	270.1	272.0	270.8	271.7	283.0	299.7	298.8
11	294.6	303.5	307.8	307.5	304.2	299.4	301.2	296.3	298.7	299.8	297.5	300.6	289.5	283.0	269.1	280.4	273.6	273.8	275.4	283.6	284.9	286.4	285.6	284.2
12	281.2	278.2	281.0	278.8	282.0	283.7	296.6	293.0	290.5	289.6	292.5	285.1	291.7	301.6	300.8	304.7	302.3	299.8	298.0	301.6	303.8	308.4	309.9	300.2
13	282.8	283.5	301.2	295.7	302.4	297.1	283.6	284.6	269.3	243.3	244.7	60.2	25.9	94.9	47.9	271.7	265.5	274.0	273.6	277.8	281.4	280.7	291.4	285.6
14	277.1	277.2	271.1	274.9	273.6	273.3	279.0	281.4	282.5	285.8	286.8	289.7	283.8	283.3	290.1	283.8	286.9	290.0	291.3	291.2	292.9	296.1	299.0	296.5
15	294.1	303.4	296.2	285.5	289.8	290.1	273.4	270.6	265.4	167.3	119.2	65.4	27.6	299.9	284.0	292.9	299.6	292.8	288.1	277.6	287.3	273.8	270.9	290.7
16	278.5	277.3	287.0	287.9	282.7	288.6	290.9	294.8	290.9	297.8	298.4	303.1	318.8	312.3	288.3	275.8	272.3	279.6	284.0	283.8	285.8	302.8	296.1	285.2
17	291.6	291.7	287.6	276.2	284.9	293.4	307.3	297.6	299.4	294.9	292.6	293.2	284.9	282.0	290.4	294.9	292.4	293.3	294.0	278.9	277.7	282.8	297.0	300.6
18	313.8	304.3	297.7	288.6	253.7	247.4	274.7	295.1	346.1	84.5	114.0	131.8	116.0	102.8	90.3	85.2	81.7	72.6	68.8	90.7	62.2	120.4	102.3	83.2
19	103.5	104.1	66.7	40.0	32.9	36.6	45.4	54.5	101.3	75.0	66.9	64.9	51.8	48.8	58.7	97.2	86.8	90.1	70.4	76.7	64.6	71.0	89.6	46.3
20	68.3	77.6	73.8	57.6	50.1	59.4	40.3	47.8	60.2	45.9	86.2	72.4	56.7	55.3	40.9	23.5	25.3	22.2	8.0	56.3	74.1	31.6	35.4	44.6
21	52.4	54.1	35.5	38.3	37.7	46.3	34.6	42.3	37.9	40.2	44.2	22.3	36.9	38.4	43.6	36.8	52.1	41.9	67.7	81.4	123.7	130.7	91.1	83.9
22	65.7	64.7	47.4	52.4	93.9	76.9	80.4	105.3	124.4	122.6	89.6	86.4	97.8	109.1	119.0	128.8	136.2	128.9	120.8	96.2	97.4	19.5	284.9	284.3
23	282.1	302.7	326.7	308.1	301.1	274.2	250.5	241.3	250.2	258.1	262.4	259.4	259.2	265.0	267.9	270.0	269.0	281.7	288.8	291.5	296.8	301.3	302.7	298.6
24	302.8	298.5	283.3	282.4	287.9	286.0	288.2	290.4	287.8	278.9	279.6	282.3	282.3	280.2	278.7	275.0	278.3	279.3	275.9	284.1	298.2	309.2	288.4	277.3
25	290.2	311.3	278.8	272.7	285.7	309.3	323.6	301.2	292.2	297.4	299.0	294.7	282.3	267.2	270.2	269.8	273.1	273.4	275.0	278.4	285.0	305.0	297.0	295.3
26	304.4	300.6	297.7	303.8	303.0	298.6	299.7	295.1	295.1	299.0	292.0	286.6	286.4	288.0	287.8	287.6	292.8	295.8	294.3	293.3	290.0	292.1	293.0	289.4
27	286.8	289.6	295.4	296.4	288.6	292.8	292.3	285.4	286.1	283.6	286.9	291.3	287.4	288.7	293.8	303.0	293.2	296.3	295.5	299.6	296.1	295.8	293.5	290.3
28	288.3	284.6	285.5	280.8	294.8	299.2	296.4	300.8	286.0	290.7	290.5	299.4	290.4	290.2	291.5	279.2	289.3	290.7	291.6	289.4	287.8	287.5	287.7	287.6
29	298.0	289.8	293.2	297.5	297.2	299.0	304.0	305.6	295.6	297.5	295.4	297.0	285.0	273.9	269.4	265.4	262.6	276.3	280.7	285.1	282.0	287.4	288.2	288.1
30	282.4	253.4	253.4	255.6	272.8	269.4	259.4	271.9	270.4	259.3	260.7	266.1	277.1	274.6	277.6	277.2	255.5	233.2	269.9	279.2	276.4	290.7	275.9	265.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	272.3	263.3	262.6	288.6	299.1	290.8	273.6	273.8	273.3	275.3	283.3	285.8	283.1	284.5	274.8	278.7	275.5	273.1	275.2	275.0	276.5	287.1	295.2	299.2
2	295.5	293.5	295.4	302.5	296.2	288.8	285.5	289.3	286.4	281.2	275.0	269.0	275.0	277.2	275.4	266.2	269.7	292.5	292.0	290.5	289.9	294.2	254.7	278.0
3	296.6	270.8	264.7	265.2	279.0	290.5	281.9	281.4	288.8	289.3	110.4	84.0	75.6	109.3	95.5	94.9	95.3	83.1	95.7	103.2	104.2	101.1	90.6	98.3
4	95.5	98.7	103.7	96.7	98.8	97.9	97.4	94.3	94.3	95.7	96.2	98.4	91.3	91.6	90.0	99.7	206.7	208.6	171.4	204.3	274.8	264.7	277.3	295.9
5	301.0	295.3	297.5	301.5	295.8	299.6	303.1	296.5	289.3	276.9	269.6	267.9	289.6	276.4	279.9	278.9	281.9	283.6	283.2	262.4	247.1	272.9	280.5	291.6
6	285.4	36.0	101.8	273.2	283.4	279.5	95.6	69.6	66.0	61.9	84.3	94.9	94.6	92.3	81.2	59.2	58.6	98.8	107.5	102.9	83.0	45.7	51.5	44.8
7	61.2	66.4	78.5	88.9	84.7	99.6	91.4	78.4	89.6	88.3	94.4	109.0	98.7	96.0	94.9	93.8	92.2	87.3	86.2	82.2	76.6	76.9	77.3	79.3
8	86.7	107.9	103.0	83.6	84.2	96.1	94.6	92.3	88.3	85.6	95.7	91.6	100.8	96.5	102.7	105.1	102.3	97.3	94.2	92.9	92.0	91.4	92.9	102.1
9	93.4	95.6	97.5	97.1	92.6	92.7	95.5	100.7	96.5	115.1	95.9	95.5	95.0	95.8	90.7	93.7	105.8	101.2	113.3	109.7	93.9	70.2	82.4	101.0
10	289.4	264.4	279.7	291.8	289.9	278.5	267.4	266.3	258.3	275.5	267.0	271.2	270.1	275.0	276.3	278.0	275.5	278.1	283.9	278.3	268.3	116.9	87.4	105.8
11	100.9	70.3	80.3	86.9	71.3	75.8	77.4	93.6	91.3	74.1	39.9	46.4	65.3	75.8	73.7	76.1	77.5	83.4	86.6	90.8	97.3	91.8	90.7	98.7
12	102.5	110.2	102.0	106.4	102.3	103.6	107.8	97.9	103.9	105.6	104.3	97.0	100.0	99.2	91.9	70.6	68.7	79.1	81.7	79.1	80.0	83.5	81.8	83.5
13	90.7	87.2	78.9	66.6	57.0	72.4	46.2	53.7	55.5	99.5	104.8	95.4	112.2	111.1	109.1	91.5	98.9	102.3	103.1	96.2	86.2	57.5	57.6	74.4
14	96.7	95.4	99.7	103.4	103.5	102.8	98.4	187.6	109.2	255.2	282.9	285.8	280.0	267.3	225.3	266.0	216.4	260.1	255.1	90.6	242.1	279.3	263.4	265.9
15	283.8	273.4	98.3	291.6	262.9	258.6	237.4	279.4	260.7	167.3	121.8	121.2	101.6	93.4	35.8	38.9	89.2	120.7	106.5	90.6	80.6	81.4	135.9	84.8
16	272.8	71.2	72.6	88.8	104.6	101.0	86.9	88.6	109.7	99.4	98.3	99.2	93.8	96.0	63.4	48.1	38.2	80.4	161.1	139.6	116.5	79.3	284.1	296.3
17	305.8	283.9	293.3	297.5	295.0	292.9	293.8	282.4	286.1	294.9	277.5	279.0	283.7	283.3	115.0	106.9	63.0	122.6	130.8	126.9	139.3	120.3	113.1	112.5
18	112.4	111.7	71.2	74.7	40.2	89.5	100.7	91.3	81.7	74.1	69.0	86.7	65.9	93.9	78.2	22.7	54.1	129.7	18.0	15.0	48.5	47.5	52.4	64.1
19	43.0	41.4	76.3	68.8	236.0	286.7	283.8	276.7	333.9	293.7	270.3	258.7	281.1	252.3	261.3	251.7	253.5	263.4	263.5	268.1	280.0	284.0	276.4	270.5
20	283.2	278.2	288.4	288.4	284.7	259.8	263.5	256.3	270.7	273.3	280.7	279.8	279.1	280.6	280.0	270.2	224.7	124.9	127.6	127.8	88.2	32.6	290.6	285.2
21	284.4	286.2	286.9	285.1	268.9	258.7	252.8	263.8	273.6	283.6	282.5	184.0	127.1	88.1	88.3	126.2	118.9	132.6	119.2	139.3	111.8	29.9	294.3	299.3
22	302.0	308.4	319.3	302.4	291.1	284.1	280.0	275.0	273.9	275.4	284.0	285.6	282.0	127.1	63.8	68.5	68.7	17.8	69.8	73.6	101.8	89.5	95.6	89.6
23	74.8	77.6	79.1	71.2	77.0	90.2	97.3	85.4	76.6	96.7	111.9	84.7	85.7	83.5	95.0	88.5	86.9	99.4	100.6	102.4	107.4	88.6	101.6	101.8
24	102.4	98.6	103.0	99.0	99.5	98.0	73.1	83.9	97.1	55.4	59.3	79.0	60.3	45.0	22.1	28.6	58.3	61.9	180.2	97.4	124.9	98.5	294.3	280.8
25	282.0	288.7	282.1	283.7	290.8	286.4	282.8	324.2	59.9	99.6	105.5	91.4	72.8	70.3	51.8	46.1	28.0	55.7	68.2	97.8	123.9	166.1	280.0	276.9
26	315.5	307.1	300.0	298.7	302.1	299.6	296.8	289.0	294.8	294.4	296.5	276.0	271.9	275.2	275.7	270.9	269.9	280.2	268.5	281.7	279.2	286.2	292.0	296.1
27	297.8	296.9	299.1	294.1	286.5	281.4	277.6	290.8	286.0	292.0	289.8	294.3	290.0	280.2	294.8	282.8	265.2	266.0	271.7	285.4	287.6	309.5	335.8	314.0
28	305.5	304.4	306.0	299.8	320.6	323.5	310.5	309.9	306.6	300.9	292.4	279.8	276.0	275.2	277.0	285.0	266.3	256.8	259.8	258.7	274.1	305.2	301.0	261.0
29	261.3	274.5	297.4	304.0	302.4	296.9	297.1	299.9	292.6	297.1	280.4	281.9	282.5	267.1	121.0	103.8	105.1	123.0	139.3	138.5	68.0	46.4	74.9	285.1
30	284.6	285.6	284.2	283.7	282.0	285.8	277.0	81.1	76.1	79.2	94.7	91.3	108.8	67.8	58.9	45.8	37.9	25.4	54.8	12.8	6.1	28.3	56.5	91.7
31	97.6	101.6	99.6	100.6	98.9	99.2	92.6	87.6	74.6	56.9	38.4	71.9	52.4	48.9	33.6	48.9	59.1	52.6	51.8	53.7	49.5	54.2	54.2	76.3

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	78.9	75.5	80.7	101.8	101.7	94.1	76.4	78.2	89.9	79.5	82.5	78.4	102.0	93.4	104.0	100.4	96.8	97.7	99.6	99.2	103.7	107.5	107.9	104.1
2	108.4	110.9	104.8	106.1	102.0	105.8	102.9	103.2	91.1	101.4	102.4	106.8	103.3	103.6	112.8	103.0	95.1	203.8	83.6	42.9	227.4	292.2	278.5	278.6
3	275.3	274.9	289.6	287.9	245.4	84.8	90.7	110.2	241.7	101.0	100.4	108.4	140.3	60.9	89.2	101.4	57.6	26.4	83.8	76.0	81.9	77.6	81.3	101.0
4	84.7	62.6	341.8	83.4	66.2	105.7	198.1	84.8	310.3	64.2	139.0	98.0	95.0	85.8	81.3	101.6	75.7	84.0	64.6	47.5	51.9	22.5	70.8	67.0
5	54.2	95.3	79.1	78.6	65.7	55.9	64.5	65.4	90.8	95.4	90.4	82.5	96.5	85.5	92.9	90.2	98.5	80.0	107.8	95.6	106.8	209.2	264.8	285.5
6	287.5	302.5	295.6	283.7	290.2	283.1	273.6	261.7	273.8	273.7	273.5	280.7	279.4	278.0	279.3	276.2	265.4	257.2	260.2	274.4	300.9	308.1	312.4	314.5
7	308.1	310.5	301.1	288.0	287.7	284.0	283.0	283.1	283.2	285.9	284.7	283.0	298.9	291.6	292.5	292.8	282.7	120.0	115.2	105.7	106.7	55.4	53.5	41.6
8	44.1	39.4	57.2	73.8	209.7	329.8	285.2	286.6	282.9	290.3	292.4	282.5	286.8	291.3	293.1	280.9	272.0	289.3	271.7	271.3	285.3	290.0	286.0	313.7
9	295.0	294.0	292.0	269.1	277.3	278.1	282.1	285.3	285.5	293.5	295.0	296.3	295.8	294.5	291.1	289.8	290.4	282.7	281.8	285.3	293.8	290.9	289.3	277.0
10	276.6	278.4	282.8	284.9	285.4	285.9	287.7	289.1	292.9	285.5	286.1	282.4	282.8	283.1	290.6	154.5	158.8	168.5	152.8	113.6	123.3	132.2	87.2	102.0
11	62.3	80.8	75.8	98.6	121.5	275.4	261.6	255.1	260.8	266.2	61.1	78.1	116.6	110.3	104.1	101.7	58.5	61.7	58.0	109.8	105.5	101.0	293.7	280.9
12	293.3	291.0	290.0	284.9	284.6	286.5	288.7	288.5	280.4	282.1	288.2	284.4	286.1	297.1	286.6	278.9	281.8	283.6	284.9	292.8	296.3	283.4	281.6	281.3
13	285.7	287.0	289.3	287.4	285.9	290.0	293.0	291.2	282.2	281.8	285.5	285.1	281.0	281.8	280.5	276.5	281.9	272.3	262.3	254.3	269.1	40.8	61.8	288.4
14	247.0	40.4	266.4	271.9	274.9	282.6	299.8	289.4	290.9	305.3	300.0	298.3	294.2	290.6	285.2	285.5	285.1	269.4	121.6	121.7	136.4	133.8	26.5	294.0
15	285.4	296.4	304.8	289.9	278.4	282.1	298.0	301.0	299.4	296.3	292.7	296.8	288.7	273.8	273.2	272.6	276.6	285.7	283.1	287.0	286.0	282.9	283.5	284.0
16	296.4	291.7	287.4	287.4	276.0	279.6	283.8	296.5	293.1	290.1	286.7	282.2	284.3	282.6	280.2	124.8	122.9	125.5	123.3	109.4	59.2	34.9	335.3	284.2
17	308.5	308.3	303.0	83.1	237.4	280.3	291.4	273.3	272.3	279.1	296.0	126.9	132.0	131.0	135.8	136.8	134.9	138.1	129.8	139.5	130.3	128.2	135.8	128.4
18	124.3	134.7	229.4	251.2	234.0	135.4	14.0	280.3	276.0	282.4	283.3	291.9	292.1	274.6	120.8	120.5	134.3	133.8	116.8	118.4	39.6	42.3	325.9	284.8
19	287.9	293.6	275.8	286.3	326.0	286.4	299.8	303.2	278.5	279.8	283.6	278.2	113.9	121.4	130.2	115.3	119.8	146.5	105.4	135.2	128.1	138.0	117.1	139.5
20	56.6	69.2	52.5	60.7	65.7	104.3	111.8	84.6	88.0	105.4	91.0	79.8	58.9	47.3	34.0	269.5	334.4	55.1	91.4	112.5	55.4	63.9	105.8	84.3
21	49.9	85.3	114.2	109.7	101.6	96.4	74.4	104.8	106.3	118.0	108.6	119.1	94.7	107.7	107.9	70.1	76.0	66.1	88.2	93.9	114.9	83.8	89.9	42.2
22	289.7	289.2	284.6	285.4	66.5	299.6	100.0	102.1	96.5	85.9	115.6	126.7	111.4	96.4	113.3	118.9	79.9	99.4	99.6	90.4	91.9	97.6	81.5	89.7
23	87.5	88.1	87.6	73.8	60.8	60.2	73.9	65.1	37.4	64.3	43.3	51.9	48.0	36.5	48.8	34.2	46.6	96.5	159.5	145.0	75.5	92.5	79.9	69.9
24	108.5	96.2	49.1	49.9	107.1	87.7	80.3	92.6	93.6	99.3	93.5	65.1	59.0	65.5	90.9	104.1	101.5	106.4	101.2	97.6	91.3	111.2	123.4	93.3
25	72.3	77.2	76.5	55.2	48.4	61.4	79.5	88.2	81.3	74.1	82.5	70.3	85.2	70.9	69.3	66.2	58.9	71.2	84.8	82.6	76.7	94.9	96.4	106.0
26	114.9	109.4	113.4	102.3	100.5	93.3	118.4	101.3	99.2	101.2	103.9	111.8	115.4	107.1	112.8	110.9	112.1	106.4	100.5	108.6	106.3	105.8	106.4	106.8
27	101.2	99.2	103.7	83.0	107.4	70.2	90.0	74.2	35.8	25.3	66.4	105.5	78.6	90.4	103.3	124.1	105.0	50.2	119.3	134.6	124.9	111.8	115.2	80.4
28	299.0	282.3	291.3	285.1	283.7	296.2	284.6	298.5	287.0	285.7	293.1	294.5	293.1	283.5	280.9	275.7	141.5	55.7	91.8	110.2	87.0	115.6	78.4	89.6
29	76.9	92.6	64.8	119.6	90.0	113.4	127.8	109.3	75.3	23.6	326.8	127.8	96.0	87.3	33.2	23.7	22.3	30.5	19.9	8.0	19.5	4.5	52.6	57.8
30	69.3	71.7	305.9	286.5	287.1	285.2	285.6	305.4	99.5	120.9	105.5	98.1	99.9	95.7	106.0	109.6	106.7	118.9	135.2	136.4	127.4	86.9	296.3	285.2

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	289.4	285.9	284.3	285.4	289.4	287.2	282.0	288.0	75.3	107.9	92.3	84.7	79.6	53.0	23.4	12.2	9.3	350.1	16.5	35.0	64.7	38.0	15.9	86.6
2	108.6	94.4	99.7	96.5	106.6	76.4	86.8	89.8	32.6	57.9	69.7	68.3	69.6	74.4	83.5	88.5	102.6	101.0	99.2	71.1	56.1	39.7	51.8	79.3
3	80.0	85.3	57.3	85.3	75.3	85.9	80.8	80.4	90.4	113.0	114.3	113.1	114.1	107.8	124.5	113.5	92.5	125.7	64.2	71.5	87.6	75.2	88.9	90.8
4	72.0	59.9	54.6	56.2	56.0	116.2	86.3	81.9	88.6	95.1	102.3	102.8	113.8	80.4	96.9	125.9	102.0	123.5	96.0	63.1	107.8	137.1	131.0	106.7
5	107.2	94.5	96.7	110.4	94.3	72.4	95.7	96.6	68.2	73.9	102.4	126.0	118.7	135.2	145.3	111.0	134.0	120.0	111.3	115.6	111.8	92.8	89.2	286.7
6	289.0	275.4	286.2	291.9	280.8	338.0	306.6	136.3	93.7	134.3	114.8	109.9	122.3	115.1	98.6	111.6	86.6	93.2	98.0	97.6	119.0	107.1	103.4	283.8
7	83.2	83.7	65.0	40.9	72.9	65.5	33.4	92.1	78.2	64.5	51.2	53.9	96.5	55.8	12.3	30.8	37.9	30.2	152.5	161.6	146.9	127.9	276.2	283.8
8	283.9	287.3	282.5	356.4	288.4	296.8	300.0	283.1	283.1	283.2	288.4	290.3	287.1	280.3	287.2	295.6	288.5	286.6	269.4	282.8	165.6	265.4	281.8	310.7
9	113.3	152.7	121.0	116.1	154.6	77.6	72.6	69.8	49.8	89.4	96.6	118.0	135.5	100.0	100.1	85.9	88.3	87.3	90.3	110.3	68.9	109.3	99.9	101.3
10	113.3	95.8	85.3	89.5	78.8	86.9	87.0	98.5	113.7	125.9	101.7	74.5	98.3	123.5	104.5	76.7	104.2	113.7	131.6	143.8	142.9	136.2	131.6	111.8
11	115.5	89.1	83.1	86.3	71.4	71.0	87.9	71.9	112.0	127.3	118.9	102.4	78.4	72.3	36.3	48.4	58.5	91.5	85.5	96.1	57.5	113.8	105.4	288.7
12	285.6	304.9	295.1	305.3	294.5	310.2	69.2	114.8	70.6	58.8	42.3	26.9	48.8	79.2	88.0	106.0	112.9	112.5	111.1	112.5	111.1	109.6	111.1	101.9
13	90.5	83.6	107.8	109.3	119.8	77.1	107.4	87.5	118.3	131.9	115.0	156.4	135.2	133.4	95.1	95.4	101.4	132.3	118.4	121.0	78.4	73.7	86.8	85.2
14	72.9	50.1	108.2	76.9	42.5	67.9	77.0	59.2	90.7	124.6	122.5	114.9	127.2	117.8	127.7	122.5	120.2	128.9	136.4	137.1	126.0	131.6	140.4	136.5
15	139.5	128.7	75.9	63.8	81.7	108.0	141.8	137.9	102.2															
16	100.1	98.1	119.1	111.7	96.7	97.6	103.6	105.6	97.8	73.1	103.2	86.0	83.1	86.6	88.9	77.6	76.1	90.5	80.5	71.5	75.0	72.8	62.6	66.7
17	69.5	54.2	55.0	52.2	277.0	281.5	282.2	283.1	291.3	295.3	292.2	294.3	284.4	289.7	288.8	288.2	277.8	279.4	288.6	281.9	282.1	286.3	290.9	296.0
18	293.4	297.8	298.2	307.1	300.3	299.0	293.6	290.4	293.6	296.6	292.9	296.9	295.1	284.3	283.7	289.8	287.1	281.6	282.8	283.2	282.4	288.4	283.4	288.9
19	293.5	294.4	295.3	293.3	288.8	286.8	282.2	280.3	284.5	287.4	291.8	288.4	284.2	282.3	277.6	282.9	281.8	283.5	292.7	291.1	300.4	306.2	304.8	289.9
20	299.1	291.2	301.4	298.3	303.9	312.9	305.8	303.6	301.9	294.8	290.0	282.2	286.9	289.9	282.7	281.9	283.0	282.5	276.8	275.0	289.0	293.4	306.9	303.5
21	306.4	269.6	281.0	282.1	281.5	277.8	282.1	269.2	271.4	256.3	282.9	278.9	285.5	276.2	276.4	273.8	275.6	279.6	294.5	279.3	284.6	302.1	300.6	286.6
22	274.9	279.3	291.8	281.5	285.4	288.9	297.3	288.5	279.9	274.9	310.2	111.1	107.5	33.4	38.9	85.7	37.3	16.6	84.6	87.5	61.1	103.2	346.4	278.2
23	285.8	274.4	279.6	297.2	273.2	267.3	266.9	277.1	278.5	293.6	285.3	279.0	280.3	282.6	287.1	246.0	131.4	171.0	94.4	94.7	44.6	36.6	38.5	123.7
24	265.8	286.9	289.2	274.9	279.6	285.8	291.9	305.2	299.4	298.2	313.8	308.0	291.6	300.4	299.6	286.4	201.7	127.1	103.7	90.1	97.4	272.3	283.9	284.9
25	282.0	286.8	287.7	303.3	292.6	275.4	291.1	290.4	293.3	291.4	287.3	280.3	277.9	285.2	280.7	288.5	279.0	257.7	117.3	94.2	98.6	75.9	99.4	274.2
26	285.4	286.6	289.0	304.4	278.6	283.3	280.9	279.1	275.2	272.4	272.0	277.8	287.3	286.0	285.1	285.8	287.7	286.9	287.8	262.0	120.8	145.9	148.8	28.8
27	26.0	51.5	61.1	55.6	56.2	63.0	75.1	80.3	108.6	121.8	88.0	44.8	32.1	26.4	55.4	57.8	52.0	98.2	131.0	149.3	141.9	346.2	282.8	283.4
28	269.0	258.3	282.1	279.8	279.9	279.4	270.7	280.2	287.3	289.3	288.1	285.1	283.5	278.4	287.9	293.4	284.3	265.2	273.2	279.2	275.6	291.9	307.6	334.5
29	329.6	315.2	308.5	306.3	302.1	302.1	307.4	308.4	290.9	293.1	294.0	291.7	292.0	295.7	281.9	287.6	279.2	274.7	291.9	295.3	307.3	301.8	300.9	302.2
30	307.8	291.7	287.8	293.1	288.8	288.7	285.0	287.3	290.4	297.2	295.6	298.0	304.3	301.4	289.1	284.3	283.7	290.2	287.6	297.0	303.5	301.8	309.4	305.8
31	299.2	287.9	309.1	299.1	314.6	307.5	303.7	297.9	292.2	297.4	293.6	296.2	294.2	285.3	280.7	285.3	287.9	284.5	291.1	281.4	281.7	295.6	295.6	296.6

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	274.3	272.0	278.9	276.1	279.8	276.3	284.7	289.8	284.2	276.3	288.0	303.0	143.8	155.6	100.4	108.7	120.3	115.9	132.4	58.2	66.5	51.7	56.2	58.0
2	54.8	78.6	86.7	63.6	54.0	65.3	49.3	84.0	67.0	63.6	80.4	34.1	33.8	26.7	49.0	49.9	92.7	104.7	59.6	85.7	70.3	147.9	145.2	98.0
3	317.1	313.9	75.6	30.5	65.1	70.4	84.7	80.4	120.6	115.0	134.3	98.4	87.1	89.4	64.9	83.6	110.3	103.6	94.9	135.0	128.0	123.2	119.2	100.7
4	98.3	78.2	65.1	54.0	71.3	65.5	78.6	85.7	96.1	80.5	68.3	74.4	38.1	71.7	49.8	66.1	66.6	318.6	25.7	330.3	30.3	84.7	92.2	81.0
5	69.1	69.7	90.4	75.5	141.9	281.8	285.1	275.9	292.0	7.7	109.8	99.1	96.1	121.4	110.6	116.1	145.5	133.8	122.2	122.7	117.7	67.8	105.1	145.4
6	142.1	150.1	99.5	285.2	286.3	286.3	290.1	296.5	34.2	93.5	88.8	112.9	154.2	278.9	279.0	275.0	267.5	273.5	282.6	282.7	286.8	296.0	268.5	280.2
7	279.4	295.2	302.3	314.0	305.0	294.7	311.8	307.6	301.4	292.5	292.3	282.8	285.7	279.4	276.9	281.6	277.4	271.2	283.5	267.9	271.7	290.1	298.6	282.5
8	271.8	291.1	284.2	287.4	288.9	287.1	293.4	326.3	291.6	274.1	297.5	290.0	131.2	97.5	84.9	79.6	68.1	123.7	120.3	129.7	117.4	16.5	282.7	287.0
9	285.8	287.9	285.8	288.0	282.8	283.6	311.8	281.5	304.8	297.4	277.4	280.6	292.9	277.3	289.6	161.7	138.2	130.4	143.5	136.4	134.8	134.4	136.3	84.2
10	48.6	32.6	47.2	55.3	78.6	63.8	84.9	77.3	72.2	51.9	77.9	62.4	59.1	38.7	53.2	100.5	40.7	26.3	50.3	108.7	100.5	52.0	21.9	45.2
11	82.0	103.5	60.4	58.8	62.5	56.1	41.2	34.3	39.8	56.4	323.9	349.2	20.3	7.5	80.0	61.7	80.0	93.1	103.5	140.9	101.0	281.7	287.6	285.8
12	285.2	286.6	274.9	262.6	258.4	258.1	273.2	268.4	291.4	292.2	286.6	283.3	45.8	109.8	129.3	104.4	110.5	105.3	119.9	135.9	129.1	93.5	266.5	279.6
13	301.2	273.4	262.7	259.2	264.5	265.7	288.7	276.2	281.1	272.0	265.6	266.3	283.6	286.5	285.2	278.0	300.0	115.7	187.3	298.7	270.1	259.8	283.6	281.6
14	278.5	280.8	283.5	291.6	297.1	286.3	68.6	73.6	118.5	108.3	87.0	55.0	86.4	82.7	74.3	68.0	81.3	84.8	114.5	90.8	276.4	282.7	283.8	60.4
15	130.1	289.7	291.3	292.1	287.4	292.6	295.1	290.9	288.5	287.4	293.4	300.3	300.9	288.1	277.9	275.9	267.0	269.1	281.7	276.5	290.0	53.9	42.6	76.8
16	147.4	101.1	88.8	96.8	57.7	46.0	46.3	42.3	49.7	103.7	50.6	89.2	4.2	10.2	160.3	299.3	150.8	74.6	22.7	83.1	93.3	61.1	71.2	51.1
17	92.9	87.6	77.8	61.5	116.8	276.2	292.8	266.7	70.2	50.5	69.7	48.6	83.9	79.4	89.2	89.7	81.7	89.0	86.8	72.1	66.4	88.3	103.8	65.7
18	53.3	59.6	77.2	223.5	281.0	285.3	287.3	288.5	276.5	246.2	181.7	120.0	88.7	83.2	110.3	131.0	115.6	92.7	21.1	282.9	275.0	283.0	285.2	282.7
19	283.7	286.4	284.0	289.6	287.6	286.1	290.7	288.7	314.7	298.0	286.6	293.7	286.5	297.0	297.6	291.1	299.6	289.0	290.6	297.9	299.1	289.7	297.3	297.7
20	288.1	285.7	285.5	282.0	284.4	288.4	289.6	282.9	281.7	289.9	294.7	290.4	291.5	292.6	295.3	290.0	289.0	291.1	286.8	285.1	291.6	296.4	298.0	296.5
21	295.4	293.0	295.6	296.5	300.9	301.9	293.0	290.4	286.4	291.4	287.6	279.8	277.9	281.4	280.8	280.1	288.9	276.1	185.0	140.6	145.1	109.3	116.4	79.8
22	87.0	341.1	298.7	60.5	33.5	53.4	337.3	265.2	270.8	156.5	93.2	94.6	117.6	110.5	108.3	120.4	102.6	121.2	98.0	139.6	295.1	278.1	285.8	290.4
23	297.2	297.7	296.5	294.8	291.0	289.6	295.6	293.1	281.9	287.7	298.3	289.2	269.3	268.3	164.5	135.9	131.0	128.4	96.6	235.8	294.1	285.7	299.8	298.6
24	291.2	294.8	262.0	268.3	301.4	295.0	291.7	298.5	289.0	280.3	289.6	288.7	287.3	286.5	283.2	285.6	274.7	280.8	277.9	287.9	294.8	295.2	284.9	269.9
25	273.2	315.0	288.0	76.7	22.8	228.7	280.1	288.0	293.6	293.3	289.5	265.3	273.5	115.0	60.6	24.7	15.8	22.8	45.6	58.9	62.4	63.6	91.8	35.0
26	44.7	43.8	60.9	249.0	86.1	54.5	101.9	118.5	122.3	110.1	113.2	110.7	127.7	51.8	64.8	58.4	7.4	48.0	71.6	86.0	141.0	154.3	75.5	71.7
27	91.5	286.4	283.3	281.8	285.1	283.7	285.3	297.9	284.0	290.8	281.2	280.5	289.9	291.0	275.0	285.5	291.5	293.0	294.0	302.8	294.2	290.5	291.4	297.6
28	295.7	292.4	290.6	298.9	275.1	286.6	277.4	288.8	285.0	286.8	280.4	289.7	286.4	281.4	287.8	282.4	280.5	280.3	282.7	282.3	285.6	287.5	290.4	289.5
29	294.2	298.9	301.9	295.0	298.7	303.8	303.6	299.3	299.3	295.8	277.7	286.4	291.6	281.2	280.4	284.6	285.7	285.3	286.7	290.7	291.7	290.3	296.2	303.1
30	301.1	299.7	280.9	296.6	288.1	283.7	278.7	292.8	293.3	286.4	280.2	278.0	275.5	146.4	95.5	133.1	134.6	134.8	107.1	88.2	86.6	103.8	95.0	105.6
31	73.4	76.0	79.4	77.2	76.4	58.4	84.5	88.8	97.9	89.1	85.7	97.4	100.7	105.1	104.9	103.0	111.0	107.1	109.4	102.4	105.1	106.3	106.1	103.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	102.2	104.7	105.0	103.5	103.5	109.3	107.3	111.7	109.1	111.7	108.2	111.9	104.0	106.4	104.5	101.5	91.7	94.2	95.0	87.1	81.6	76.3	86.5	96.6
2	89.7	105.3	80.8	77.3	76.4	73.3	78.5	83.1	77.7	72.5	64.3	60.1	68.4	81.0	94.2	111.9	111.4	110.6	108.7	97.2	94.4	97.2	109.9	107.6
3	103.0	110.5	108.5	104.4	102.4	111.4	105.0	127.4	127.7	249.7	278.2	302.5	300.5	288.9	287.3	290.0	309.4	321.2	301.6	200.3	330.5	286.0	281.2	280.3
4	288.7	309.3	31.5	269.9	275.6	276.0	273.5	276.8	298.0	296.2	300.6	283.2	148.0	126.1	119.6	117.2	99.6	119.3	130.7	75.6	299.6	286.1	282.0	291.9
5	283.3	289.9	283.0	287.5	273.6	309.0	38.3	305.0	317.3	62.2	73.6	69.8	99.8	124.7	121.2	130.1	103.6	120.4	67.0	87.5	101.6	119.8	93.8	96.1
6	91.3	66.9	44.4	49.5	62.1	66.4	84.6	77.4	74.5	90.1	91.5	91.5	91.3	88.3	107.6	103.9	110.3	108.5	105.4	100.1	99.3	100.0	95.4	100.7
7	93.3	96.8	96.3	97.7	102.6	98.7	105.8	106.8	98.5	89.0	72.3	42.7	38.9	27.3	66.0	112.0	125.2	96.2	113.8	134.3	115.2	87.8	95.9	89.4
8	103.5	136.5	275.7	284.8	122.1	283.6	279.5	257.8	269.8	99.6	77.3	98.9	88.1	105.5	98.7	80.6	73.8	63.9	82.9	94.5	96.6	97.1	101.5	102.6
9	105.3	100.6	106.7	112.2	113.7	113.0	97.3	101.5	106.8	98.7	96.5	95.2	99.2	86.5	62.9	45.7	32.5	39.1	32.8	39.1	33.9	31.9	34.1	59.2
10	84.0	138.1	92.4	85.1	263.3	277.4	287.3	284.4	283.7	97.9	318.9	315.0	286.8	291.7	290.7	283.7	286.9	287.2	283.5	290.0	297.5	304.9	293.6	283.4
11	286.0	287.5	280.0	280.0	282.6	284.6	279.7	290.8	286.0	297.7	299.6	292.5	287.5	266.9	147.5	97.4	41.2	44.3	49.0	64.5	97.8	111.4	104.9	96.5
12	88.0	103.1	104.3	106.3	100.6	106.3	96.1	93.7	86.2	81.7	118.5	118.2	110.4	105.3	111.0	124.3	116.2	119.6	113.3	114.7	114.5	106.3	103.6	102.3
13	89.5	93.9	96.9	87.2	93.7	98.2	100.9	98.1	96.5	102.7	99.1	96.3	91.6	80.4	82.5	67.6	87.8	82.8	100.5	98.0	90.3	88.3	87.2	85.4
14	92.9	111.3	129.4	104.8	90.2	102.6	104.9	107.7	117.8	112.4	93.9	94.8	119.7	114.5	125.4	237.2	85.7	282.2	158.4	250.8	96.0	212.1	293.0	280.4
15	285.4	36.7	81.2	50.4	62.6	67.8	71.8	74.2	93.5	77.6	78.4	84.1	129.5	230.5	31.8	189.4	92.2	64.7	73.4	70.9	286.1	278.6	287.1	285.0
16	293.4	292.5	269.1	277.1	295.8	286.3	292.8	295.6	283.3	297.0	303.0	301.0	285.9	293.8	293.5	290.7	283.0	283.3	291.6	298.2	287.7	287.3	284.8	292.2
17	290.2	287.2	295.6	289.7	282.0	288.6	283.8	297.3	299.0	290.2	295.8	284.4	276.7	39.6	96.4	96.0	93.2	78.2	78.6	74.6	79.3	71.9	89.4	102.6
18	97.2	96.4	97.1	104.9	103.8	101.1	96.5	101.2	106.6	105.4	64.9	105.6	114.7	106.4	107.1	71.1	87.8	92.0	106.1	107.9	73.9	98.4	94.5	86.4
19	95.4	87.1	72.5	105.1	101.4	54.5	278.1	278.5	43.8	279.1	297.2	357.0	280.7	278.2	279.9	277.6	270.8	276.1	278.9	282.5	294.6	287.1	286.2	304.9
20	305.2	299.8	302.6	283.5	298.8	304.1	300.1	307.8	303.2	288.0	292.3	295.6	293.8	294.5	289.3	290.8	294.0	281.6	280.0	288.8	300.7	297.3	292.9	275.8
21	263.7	259.4	271.1	291.8	294.2	320.8	322.0	323.8	324.6	307.0	285.1	279.7	268.7	263.7	258.3	258.7	257.8	271.1	283.4	289.2	300.1	297.9	251.3	304.8
22	271.5	271.6	276.1	283.0	282.6	292.6	310.6	313.9	297.5	299.7	296.1	287.4	285.8	277.2	287.2	285.6	270.0	238.8	261.4	280.7	285.2	287.9	281.2	173.4
23	136.9	97.8	120.9	76.7	84.0	67.3	38.9	75.6	262.6	268.1	78.4	87.6	90.2	121.8	95.2	70.3	288.9	116.9	97.6	210.7	274.0	288.8	285.7	315.2
24	273.9	287.9	302.3	280.4	297.1	279.1	254.1	98.0	249.8	279.6	81.9	95.0	226.2	116.2	96.2	88.2	94.1	89.6	102.6	97.2	95.9	104.3	93.1	97.8
25	117.9	99.0	99.7	139.1	264.1	154.4	89.8	94.0	96.9	107.0	103.4	94.1	259.5	245.0	278.9	281.7	182.3	145.8	281.3	270.4	286.0	288.8	164.4	186.5
26	180.2	276.3	283.0	276.4	288.4	286.7	293.9	284.0	281.2	283.7	290.6	271.8	305.4	95.4	104.2	110.4	67.7	290.2	134.5	284.2	282.0	273.7	260.2	273.0
27	278.3	280.5	283.8	292.9	301.9	308.1	288.6	269.2	258.0	268.2	259.2	245.0	262.6	255.8	269.7	258.1	265.5	272.0	296.5	295.7	309.2	321.0	320.2	309.4
28	308.2	283.5	253.2	261.9	287.8	306.1	314.1	312.2	298.7	301.0	288.4	259.7	259.1	260.8	209.8	141.4	349.0	33.8	86.1	72.5	117.1	196.3	296.1	285.6
29	92.1	81.2	102.0	91.7	97.0	85.1	85.8	87.5	84.9	127.8	127.2	113.3	111.8	109.9	110.5	112.5	143.1	70.0	34.5	48.2	275.3	280.7	281.8	43.3
30	70.8	321.7	277.6	267.2	278.5	290.0	288.5	300.1	294.1	306.6	295.9	286.1	279.5	270.9	268.5	280.7	278.6	280.9	298.5	289.7	274.4	276.7	271.3	270.8

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	266.9	278.8	300.9	287.7	286.8	292.9	289.7	283.5	286.8	285.7	258.5	91.1	89.0	90.2	106.2	71.7	68.0	91.1	71.9	100.2	79.7	78.8	82.2	289.2
2	283.8	289.8	287.5	282.7	286.8	284.6	289.3	282.2	313.8	289.8	278.4	282.8	278.5	279.4	271.5	290.4	293.1	285.6	298.8	291.1	289.7	290.9	294.5	294.7
3	287.0	279.3	289.0	294.5	295.2	298.2	289.8	291.6	288.3	291.8	301.8	285.3	283.5	287.5	285.1	289.7	285.4	279.2	282.9	279.8	285.7	283.0	280.8	280.2
4	286.0	288.8	295.9	289.4	294.0	283.0	283.5	270.9	269.3	273.5	260.2	279.0	268.7	277.3	274.4	270.6	263.9	280.6	292.2	286.4	277.2	286.2	272.8	271.0
5	283.3	281.6	287.3	275.3	279.3	292.0	285.5	291.8	280.5	264.5	274.3	283.9	281.3	286.4	282.3	274.6	287.3	292.3	298.7	269.2	292.1	285.9	298.5	287.1
6	293.6	292.0	290.5	293.8	286.8	294.8	282.3	283.2	291.0	289.9	286.5	289.6	275.4	284.0	276.9	278.5	281.0	275.9	280.3	291.3	292.6	300.9	307.0	295.3
7	307.1	297.8	303.7	295.3	299.0	285.8	290.6	290.1	285.6	288.4	292.2	287.9	284.2	277.5	276.6	277.2	274.5	275.5	279.8	279.9	289.9	290.6	290.0	288.4
8	290.6	293.3	293.0	291.9	298.8	302.3	299.0	300.9	308.3	302.4	290.4	289.6	283.1	273.7	268.4	269.3	264.7	276.3	289.5	272.6	286.7	286.2	284.9	93.1
9	103.6	91.3	95.4	97.7	93.0	99.3	93.9	101.0	95.2	100.4	88.9	95.2	95.8	108.8	103.6	113.5	115.4	112.0	110.0	111.4	109.6	117.7	108.2	109.4
10	99.6	120.4	181.4	3.9	329.1	224.0	289.7	286.4	286.7	271.4	270.7	254.3	255.9	262.1	75.1	73.4	350.5	97.4	96.4	287.7	286.9	285.2	284.9	284.8
11	114.0	105.6	105.6	90.9	91.5	91.9	96.1	95.8	98.1	99.5	87.9	76.4	92.8	97.6	144.4	125.7	287.7	293.2	289.2	285.7	286.4	282.0	285.2	292.7
12	295.4	296.5	296.1	295.3	298.0	297.3	301.1	304.4	301.7	303.6	300.6	299.9	299.2	292.5	296.3	293.4	289.8	284.5	291.7	309.4	308.9	302.7	292.3	289.6
13	289.7	301.6	290.8	284.0	279.8	291.6	287.6	285.6	275.7	270.1	285.5	279.0	92.8	127.8	115.7	103.3	121.7	125.5	109.3	103.9	79.8	82.2	106.5	100.9
14	85.6	88.4	62.2	63.7	104.8	58.1	62.9	78.7	87.5	110.0	105.4	96.9	111.4	117.5	94.9	98.8	96.7	88.0	76.6	29.1	94.1	287.9	51.9	319.5
15	351.2	304.2	337.1	269.2	208.2	263.0	290.9	307.8	291.3	288.0	291.0	271.8	257.7	278.5	292.9	297.0	290.6	288.3	299.7	290.7	286.2	283.1	281.8	279.7
16	273.8	281.9	278.6	274.5	285.9	286.5	280.8	273.6	271.8	267.4	274.2	282.2	285.6	282.5	282.4	283.2	292.9	292.0	297.0	285.1	287.8	285.0	285.1	283.7
17	280.9	279.9	278.0	279.8	282.6	291.4	287.9	281.9	272.2	268.0	263.8	266.0	266.7	272.9	126.5	107.0	125.3	114.1	111.7	99.4	103.0	100.9	108.8	113.6
18	99.3	99.1	104.0	104.7	100.0	100.0	99.4	102.8	109.5	115.9	110.6	116.3	105.4	106.1	108.3	101.6	92.7	266.7	280.3	280.2	277.7	258.7	271.5	279.5
19	275.4	287.6	291.1	288.0	298.6	296.9	280.9	268.9	257.0	268.4	251.5	256.2	277.8	275.1	281.6	275.7	282.0	290.4	287.5	281.4	281.6	274.9	276.4	279.8
20	279.0	282.3	283.2	282.2	289.0	293.5	291.9	290.1	294.0	285.5	285.4	285.8	286.8	290.1	289.0	285.3	288.3	290.5	284.4	284.7	290.1	278.2	273.9	283.1
21	277.5	273.9	277.8	287.4	289.7	295.1	294.0	296.1	282.9	273.3	279.5	276.4	279.0	283.7	282.1	279.9	283.7	276.4	273.9	276.2	273.4	277.6	282.3	282.9
22	293.4	286.7	280.4	293.4	297.0	302.5	312.5	309.6	302.4	301.3	302.0	293.0	279.7	292.0	283.1	291.9	284.3	270.2	280.3	287.6	275.8	268.5	275.5	281.9
23	280.7	281.0	266.6	256.8	253.1	253.7	258.4	244.8	277.0	295.9	284.6	279.0	278.0	280.1	286.6	297.4	293.1	279.3	274.7	271.1	267.9	270.7	268.3	275.5
24	267.5	266.1	267.8	270.6	270.8	264.5	269.4	267.8	269.9	266.0	265.4	264.2	264.4	269.1	270.7	274.8	275.4	273.0	302.6	290.1	271.7	311.0	284.3	275.8
25	287.3	283.3	280.6	285.3	282.8	264.9	167.3	19.7	331.9	294.1	89.0	104.4	82.1	89.6	84.7	264.4	44.4	277.7	111.0	112.2	275.4	288.6	286.8	274.6
26	283.6	280.7	266.3	278.3	275.3	257.4	280.4	274.9	284.7	285.2	282.5	267.9	269.1	259.5	282.8	289.3	292.5	278.0	281.0	285.6	309.4	295.4	287.4	290.0
27	288.7	289.2	294.1	279.2	277.3	282.1	279.7	276.6	272.8	272.0	273.0	275.1	272.7	274.4	278.4	274.1	279.3	281.7	289.2	289.8	289.5	272.9	257.2	256.8
28	260.8	264.9	271.8	271.3	288.1	281.1	283.5	283.4	280.2	283.6	300.8	282.0	277.7	277.0	276.1	277.5	282.0	278.2	281.7	287.5	318.2	306.8	297.2	298.3
29	282.7	287.5	285.9	288.1	286.3	288.0	283.2	286.6	285.9	287.6	284.9	317.7	262.3	111.9	86.1	91.8	88.2	84.6	83.7	86.0	81.0	84.2	83.4	90.4
30	80.2	62.7	282.5	282.7	64.1	116.4	283.8	309.8	55.0	99.4	80.2	94.9	93.6	94.0	94.4	80.0	85.7	98.1	70.9	286.6	286.9	284.1	285.7	284.2
31	287.5	289.1	287.0	284.6	288.4	287.4	287.4	285.6	286.3	287.1	287.9	276.2	259.2	277.0	283.0	282.1	270.9	270.7	271.3	271.8	291.4	284.2	296.5	290.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	296.6	286.8	286.8	286.5	290.1	281.7	291.0	297.4	293.2	283.4	288.9	285.5	279.2	285.5	285.9	278.9	272.5	279.0	278.9	289.6	301.4	293.1	280.7	275.7
2	277.2	279.9	283.0	302.7	303.8	300.5	303.1	303.1	310.8	309.9	306.5	292.5	277.9	278.6	281.4	283.2	285.3	281.5	277.6	281.3	280.2	277.2	281.4	282.5
3	279.7	275.6	278.7	276.2	279.4	274.4	272.8	279.7	271.3	275.9	276.1	278.6	279.7	285.2	282.9	290.2	289.2	287.0	283.0	278.8	280.5	280.5	279.3	277.3
4	278.2	279.2	276.8	273.0	277.9	275.9	277.1	282.3	283.5	283.7	280.2	286.3	286.8	285.9	285.8	283.9	290.5	286.4	288.2	294.3	286.7	278.5	275.0	270.0
5	269.4	268.6	269.3	272.4	272.9	269.0	274.2	277.4	274.8	267.0	265.6	270.1	273.1	271.6	272.9	275.1	280.2	287.6	133.6	105.3	106.3	118.2	106.4	105.7
6	109.6	110.0	116.6	108.6	99.4	110.5	153.3	175.2	117.6	115.5	268.5	261.0	264.2	130.2	265.0	277.6	300.3	283.5	295.4	300.7	286.7	304.0	304.6	297.4
7	294.3	289.7	291.1	289.5	293.6	290.7	284.7	284.4	284.1	277.8	280.3	286.0	289.3	291.4	293.6	292.3	301.4	294.0	305.6	297.2	299.5	290.7	270.2	271.6
8	296.9	301.5	296.6	285.8	269.2	262.2	294.9	296.3	290.3	277.0	280.2	79.7	93.7	104.5	102.6	115.1	101.7	104.4	105.0	100.7	98.8	99.4	98.4	94.2
9	95.2	96.7	91.9	94.5	102.0	99.3	105.2	110.6	105.8	104.5	103.2	107.0	103.0	102.3	102.5	104.2	108.5	103.7	113.3	98.2	93.1	94.5	98.0	110.2
10	102.6	105.8	105.7	101.7	91.7	96.1	50.9	72.6	224.1	290.4	271.4	282.3	133.1	91.6	78.5	86.1	79.4	81.7	91.7	88.0	47.8	59.3	89.5	98.4
11	80.1	82.5	103.4	95.2	100.2	111.3	96.6	83.6	103.0	256.5	275.9	284.4	75.3	119.5	265.3	89.6	306.4	238.0	248.8	283.9	289.1	290.0	288.6	279.7
12	281.6	276.5	281.1	288.8	288.3	297.0	289.0	286.6	280.3	302.8	298.4	285.9	286.3	284.5	274.0	269.1	268.5	268.3	290.1	294.6	287.9	268.9	288.4	275.1
13	291.3	295.1	284.1	288.5	284.8	286.9	290.1	279.0	284.8	286.2	284.6	104.8	138.6	126.5	94.6	124.8	127.1	286.3	293.4	235.4	286.7	73.4	278.0	297.5
14	295.2	281.4	262.8	278.9	292.1	284.5	288.5	287.5	285.0	293.3	283.4	296.1	303.3	331.3	282.5	270.5	281.8	294.6	291.7	298.5	299.7	293.0	277.5	280.8
15	264.8	356.2	61.2	354.9	250.1	262.4	270.6	260.7	239.4	278.0	288.5	283.4	289.4	279.5	52.7	92.4	104.5	105.7	72.6	92.3	89.4	103.2	95.5	112.8
16	119.8	107.5	116.1	142.2	134.2	113.6	273.3	71.0	74.7	112.5	78.7	266.5	292.5	285.8	285.5	289.0	279.2	293.7	284.9	289.6	283.2	284.0	285.1	287.3
17	283.0	285.8	285.2	287.2	286.1	282.8	284.0	286.2	287.5	288.9	288.9	289.1	291.2	287.2	282.6	300.6	290.2	293.9	262.5	278.6	298.2	289.7	285.7	286.3
18	287.8	294.4	294.5	292.7	281.4	270.2	256.1	263.8	277.1	284.8	272.9	258.5	271.2	266.4	263.2	271.2	266.9	270.0	265.3	267.0	269.6	271.9	279.9	273.7
19	282.5	273.1	271.1	269.8	255.9	262.6	265.9	267.3	267.9	269.2	277.7	277.3	263.7	269.7	270.5	266.6	260.6	260.2	269.8	263.9	267.6	261.0	267.6	263.3
20	270.6	283.2	282.8	281.5	273.2	280.9	279.0	273.4	290.7	294.1	284.1	291.5	284.3	284.7	290.4	287.1	290.1	285.8	287.8	290.3	289.9	290.1	292.3	294.3
21	287.8	281.5	279.8	279.4	280.8	280.4	284.0	284.2	284.5	289.9	291.9	291.7	290.5	281.9	280.3	272.6	273.9	272.6	272.5	267.4	267.2	271.2	274.7	277.7
22	283.9	269.5	271.5	271.7	268.6	271.8	264.3	264.9	264.0	265.5	270.2	269.9	271.8	273.7	275.1	275.9	261.1	271.2	281.1	266.9	259.7	253.7	249.7	254.4
23	278.7	273.6	287.1	280.3	79.6	266.0	265.5	270.4	263.4	267.6	271.3	268.9	270.3	276.4	46.8	114.7	135.5	113.3	103.4	92.0	127.9	108.4	107.5	118.6
24	124.0	130.6	107.6	103.3	93.9	96.6	95.8	103.3	107.2	118.3	122.9	125.3	105.8	102.5	92.0	108.8	108.1	98.6	109.9	121.1	132.2	123.9	83.2	303.3
25	284.3	281.5	285.4	284.8	289.6	287.6	287.7	285.4	285.8	285.4	281.9	282.2	284.8	286.3	285.1	284.0	281.3	287.9	285.6	286.7	294.9	295.3	293.7	291.0
26	287.8	289.9	290.1	286.5	286.2	282.2	281.7	284.8	281.8	286.0	287.6	283.9	291.3	283.1	286.3	297.2	299.1	301.5	299.0	283.8	259.6	259.1	254.1	252.3
27	259.0	268.6	264.9	269.5	281.9	273.6	278.4	276.2	272.1	278.4	274.3	282.1	276.2	267.8	268.6	270.9	258.2	258.3	260.6	263.8	273.7	276.3	285.9	296.0
28	282.6	271.9	276.3	274.2	272.4	270.7	274.0	271.5	273.8	273.2	275.1	271.6	267.6	273.9	272.0	268.1	270.5	272.4	283.7	289.1	293.9	291.9	294.9	292.8
29	292.6	291.3	291.4	291.2	288.5	288.2	288.5	286.7	285.6	281.0	282.1	279.4	285.9	290.5	288.9	288.3	289.3	288.0	289.1	293.9	292.9	293.5	287.2	288.2
30	288.3	288.1	291.8	291.1	293.8	294.2	297.8	297.2	299.8	295.6	298.4	290.4	284.7	271.5	280.9	290.1	278.5	280.1	276.9	278.1	274.8	271.9	279.0	276.9

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	297.7	311.7	307.2	309.4	292.4	271.9	276.5	262.4	256.2	274.5	289.8	283.8	273.8	287.1	273.1	309.4	277.4	102.5	66.7	46.5	79.3	67.9	56.6	63.9
2	47.4	61.1	37.5	60.4	75.9	43.2	56.5	53.4	63.0	81.4	103.1	90.6	115.8	148.4	134.0	112.5	105.2	111.9	105.2	107.2	119.6	129.9	118.0	122.2
3	113.1	111.5	109.8	104.8	100.2	99.5	102.2	114.2	108.1	101.5	96.9	86.9	98.5	98.2	91.7	97.2	102.0	97.4	91.2	99.0	99.1	94.9	95.1	103.1
4	116.2	131.3	119.0	127.2	130.0	125.7	123.2	118.9	106.5	137.6	128.1	121.7	118.5	129.3	127.2	115.4	122.6	114.2	101.3	101.3	77.5	71.3	66.8	80.3
5	116.1	99.5	92.7	89.6	103.3	98.0	82.4	66.3	89.6	110.8	99.0	127.0	117.5	99.3	91.6	109.9	128.7	117.1	118.0	133.4	121.7	136.3	136.3	127.2
6	121.3	124.9	130.4	130.4	98.6	297.4	281.9	285.2	245.9	285.4	316.3	127.9	116.8	270.9	107.6	78.4	91.5	62.3	87.5	281.4	281.9	272.1	288.8	278.2
7	338.2	11.8	283.5	291.9	277.8	269.9	274.0	273.8	283.6	291.8	282.4	275.4	283.6	295.4	296.0	271.3	262.5	265.8	94.7	86.7	90.4	62.1	53.4	77.0
8	90.3	103.4	99.9	106.7	99.3	98.4	93.4	97.7	104.2	107.2	107.8	106.3	105.1	110.0	110.4	108.0	103.7	100.6	103.5	110.0	114.4	123.6	103.2	83.9
9	64.9	102.2	115.7	180.8	280.6	113.6	52.9	358.3	83.2	60.0	90.1	339.4	300.6	305.1	291.3	290.6	284.2	288.1	293.1	288.5	290.3	292.8	303.0	300.9
10	292.5	277.1	269.8	296.9	292.9	293.2	287.9	280.2	275.0	270.2	281.5	272.9	284.0	276.3	280.0	290.7	283.2	290.0	293.1	291.7	285.3	283.2	290.1	295.7
11	291.0	292.9	295.0	296.4	294.2	304.9	293.8	298.7	303.6	303.3	293.0	292.0	296.7	288.3	294.4	298.5	294.4	292.8	290.8	281.8	288.1	291.4	303.7	304.9
12	317.8	317.9	307.2	307.7	296.3	284.1	281.0	292.6	282.1	291.1	293.1	272.3	293.2	287.4	265.7	272.0	258.3	242.6	242.1	264.9	285.1	306.9	287.0	300.5
13	288.0	307.2	275.3	282.5	285.7	282.3	269.0	221.0	263.0	44.2	81.6	286.2	295.5	281.6	275.9	275.2	275.5	268.4	278.6	280.7	81.6	81.8	87.7	90.6
14	82.3	78.6	84.5	113.7	107.2	110.4	86.5	63.3	81.8	111.7	93.6	87.7	79.6	99.5	104.8	91.7	75.0	111.6	77.9	94.7	93.6	98.4	86.8	92.9
15	94.6	104.6	102.5	97.6	106.8	100.7	80.8	77.3	77.6	74.0	64.8	54.8	103.9	84.8	107.3	93.3	111.5	106.4	98.0	144.9	236.7	270.0	282.6	282.7
16	231.4	102.4	132.8	127.2	119.3	94.6	78.3	59.1	86.7	91.0	90.3	66.9	54.5	91.5	49.4	51.6	43.0	43.4	29.9	38.1	57.7	68.8	91.0	119.0
17	112.3	120.8	88.6	87.7	94.5	105.0	109.2	109.0	121.5	105.9	128.9	132.0	124.0	124.7	108.5	112.6	99.3	109.5	91.0	93.8	95.2	109.6	86.4	102.2
18	79.7	99.9	104.1	93.5	109.0	89.6	106.9	108.2	110.3	112.9	119.5	120.8	123.3	120.5	99.5	112.6	110.7	106.8	95.7	100.3	94.7	101.5	88.9	105.9
19	100.7	99.5	96.8	93.1	106.2	92.5	83.8	89.1	90.2	101.4	92.4	90.9	99.3	100.5	95.2	95.8	97.0	104.4	103.0	106.7	102.1	99.8	95.0	98.8
20	102.1	104.5	106.3	108.4	95.2	103.7	176.8	221.4	181.8	117.3	150.0	219.4	128.3	154.0	133.8	186.8	142.4	283.6	280.7	277.6	288.3	283.4	271.6	255.3
21	296.8	290.8	289.5	96.4	11.2	333.9	46.8	65.8	78.6	39.1	236.7	293.4	255.0	252.1	282.4	295.4	267.3	272.6	266.8	259.8	277.5	259.1	293.0	282.1
22	283.1	109.4	103.1	105.8	108.6	127.4	115.4	73.5	88.0	103.3	123.1	92.1	96.8	87.2	97.2	80.1	85.9	80.4	108.5	71.8	90.4	84.3	59.7	89.8
23	109.7	130.5	110.5	90.1	74.4	86.7	53.6	109.2	70.0	76.3	287.1	270.1	272.8	268.3	264.0	267.9	271.6	268.9	271.7	270.8	288.0	291.3	280.1	276.7
24	271.8	264.5	268.4	268.0	276.1	280.5	284.9	288.3	288.8	280.8	282.3	287.9	277.5	280.0	273.2	289.8	322.3	311.2	290.0	295.1	297.3	292.6	258.5	270.5
25	86.0	92.7	103.6	142.0	113.9	138.0	132.5	130.5	132.3	137.9	129.9	116.4	113.1	93.3	69.5	88.2	83.7	101.4	56.3	40.7	293.9	306.1	299.8	305.5
26	277.7	268.3	270.4	278.2	280.3	277.5	279.5	282.7	294.2	284.0	282.1	275.2	275.1	285.0	281.5	280.3	276.7	284.5	278.2	282.7	293.8	287.5	294.6	291.6
27	287.0	293.8	297.2	295.2	291.7	292.2	284.9	285.9	284.0	279.2	275.7	271.9	275.9	273.8	272.4	275.4	276.0	277.2	280.9	278.3	278.4	279.8	286.2	285.8
28	285.7	282.5	277.6	277.3	285.5	289.0	284.2	290.2	283.0	288.6	286.4	286.1	286.6	290.1	291.0	291.6	293.8	293.4	295.1	292.2	288.2	288.6	286.7	289.3
29	288.5	288.4	286.5	287.4	288.0	283.4	276.1	275.0	275.5	272.2	270.3	270.9	274.9	270.7	269.3	269.3	266.9	256.7	255.3	258.9	263.8	265.3	265.2	260.7
30	266.4	265.7	263.7	262.4	265.1	269.1	270.3	271.9	273.3	271.9	274.4	272.5	278.1	276.1	274.0	277.5	279.1	277.5	282.1	277.2	274.1	283.4	278.6	279.0
31	282.6	277.9	282.2	285.9	284.6	285.1	284.5	282.2	278.3	277.2	278.4	284.1	276.7	275.7	277.1	276.1	276.5	274.3	276.1	275.4	279.3	283.4	280.8	283.0

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	70.9	83.0	77.9	33.6	21.7	16.7	12.2	11.8	10.9	10.8	16.3	16.0	14.0	15.8	12.9	12.6	13.4	14.0	12.9	14.0	15.0	14.4	13.4	14.5	83.0	10.8	22.9
2	13.9	13.4	14.3	14.0	13.7	14.5	14.5	14.6	14.3	12.9	12.5	12.8	12.0	13.5	13.7	14.7	14.8	13.2	14.1	14.1	13.6	13.8	14.5	14.1	14.8	12.0	13.8
3	14.4	13.0	15.2	13.1	14.8	13.9	13.7	13.7	13.5	12.8	13.9	14.4	14.6	13.2	12.4	11.8	11.3	13.5	12.4	11.4	11.2	11.1	12.1	13.4	15.2	11.1	13.1
4	12.0	11.6	10.5	11.0	10.9	12.4	12.9	12.4	10.9	11.4	10.9	11.0	11.6	11.6	11.6	11.1	11.6	11.2	11.6	12.3	12.3	12.5	11.8	12.7	12.9	10.5	11.7
5	12.2	12.6	13.1	13.0	12.7	12.8	13.1	12.6	13.0	12.9	13.0	13.7	14.0	15.2	14.6	14.9	14.9	13.5	13.5	12.7	12.4	12.9	13.3	12.7	15.2	12.2	13.3
6	13.0	15.0	15.2	13.2	14.8	14.7	13.5	13.1	14.0	15.3	15.6	14.1	14.7	13.7	12.6	13.7	13.2	13.4	12.3	10.6	10.1	10.1	10.3	9.8	15.6	9.8	13.2
7	10.7	10.7	11.1	10.7	9.8	9.9	10.7	10.8	11.4	11.5	11.8	12.8	11.8	12.3	12.4	12.4	12.6	11.7	11.2	11.2	10.3	9.9	10.6	11.9	12.8	9.8	11.3
8	12.5	12.3	12.0	12.6	12.4	12.7	12.7	12.6	12.5	12.1	12.1	11.9	11.8	13.1	12.3	12.4	11.5	9.3	11.3	11.4	12.8	11.8	11.3	10.4	13.1	9.3	12.0
9	11.7	12.9	12.5	12.4	12.5	10.6	11.8	13.4	12.8	12.3	12.4	12.4	13.3	12.6	12.4	11.7	12.9	12.6	13.3	14.0	13.5	13.0	13.9	13.9	14.0	10.6	12.7
10	13.0	14.1	14.2	12.9	13.4	12.8	12.5	12.3	11.8	13.9	13.5	12.4	13.9	12.7	14.5	16.8	15.8	13.2	12.0	15.1	14.6	13.7	12.8	12.4	16.8	11.8	13.5
11	13.1	13.0	13.2	12.9	13.0	13.4	13.8	12.8	13.5	12.8	12.7	12.8	12.8	12.5	12.8	11.8	12.5	11.0	11.9	10.9	11.6	11.5	9.9	10.1	13.8	9.9	12.4
12	12.0	13.0	13.2	12.9	13.4	13.5	14.7	14.0	14.6	13.7	13.0	13.9	14.3	14.0	12.2	10.8	12.8	12.4	11.4	12.6	13.9	13.9	13.9	13.0	14.7	10.8	13.2
13	14.0	13.1	12.9	12.8	13.5	13.5	13.2	13.8	12.7	12.9	13.2	13.0	14.1	13.6	12.8	13.3	15.1	13.9	13.0	12.6	13.4	12.6	12.6	13.1	15.1	12.6	13.3
14	13.9	14.4	16.8	17.1	15.2	20.8	75.9	72.0	70.4	90.0	61.1	35.9	14.4	16.9	15.8	19.0	39.8	39.7	23.9	36.6	38.3	15.0	11.7	13.1	90.0	11.7	32.8
15	15.3	17.8	22.2	23.7	27.8	28.6	26.7	32.2	26.8	21.4	23.9	31.8	16.2	16.6	19.7	27.9	32.9	25.3	26.5	27.0	23.2	58.0	18.4	18.7	58.0	15.3	25.4
16	31.1	77.6	99.3	49.6	72.4	14.9	16.5	16.2	16.7	14.3	17.4	16.3	14.7	13.1	16.2	14.8	15.2	53.1	73.0	83.5	20.7	59.9	36.9	27.2	99.3	13.1	36.3
17	99.5	29.7	16.2	32.9	20.7	26.7	29.1	48.3	42.3	47.2	66.1	27.9	17.1	14.9	20.9	16.9	21.0	24.0	23.0	24.5	24.8	41.9	30.0	16.9	99.5	14.9	31.8
18	21.7	15.6	21.4	17.9	21.2	26.8	57.3	76.4	96.0	80.1	50.1	102.0	67.1	64.3	72.2	37.2	60.2	16.4	15.1	34.4	22.9	21.9	31.8	13.7	102.0	13.7	43.5
19	28.1	23.7	24.4	29.5	26.9	28.9	38.5	46.7	27.5	40.4	80.5	39.0	65.1	57.8	27.6	16.6	28.3	32.1	63.3	67.8	43.1	23.1	20.2	21.7	80.5	16.6	37.5
20	29.2	35.0	24.6	20.4	25.8	36.4	46.1	38.1	44.1	35.2	46.2	38.3	27.2	21.3	25.2	16.7	29.4	27.9	22.5	15.3	54.1	84.8	65.9	29.8	84.8	15.3	35.0
21	19.9	18.0	23.1	40.3	27.2	28.8	20.7	23.8	21.2	47.4	43.7	42.4	22.7	20.7	20.7	21.6	35.2	30.4	34.5	24.9	19.5	19.0	12.7	9.9	47.4	9.9	26.2
22	16.4	28.9	20.7	25.1	26.0	22.8	18.2	23.2	43.8	40.6	38.0	90.9	58.7	87.1	16.6	16.3	18.1	19.7	78.7	26.7	19.4	14.5	14.5	18.7	90.9	14.5	32.6
23	16.0	14.7	15.5	15.7	21.4	16.7	15.1	15.4	15.2	16.1	16.5	15.7	17.1	19.9	16.3	16.0	15.6	21.6	20.1	14.3	12.9	14.4	15.4	13.4	21.6	12.9	16.3
24	19.0	13.8	14.9	12.3	13.7	76.1	39.2	50.0	75.2	26.7	37.9	45.3	30.8	46.6	54.3	43.8	40.9	46.2	38.3	14.5	27.0	33.1	26.3	11.7	76.1	11.7	34.9
25	14.3	13.1	42.8	30.6	90.2	98.2	17.4	15.9	16.8	18.9	20.0	17.1	17.7	18.4	17.5	20.4	21.0	19.7	20.9	18.6	20.2	14.1	14.6	14.5	98.2	13.1	25.5
26	14.7	14.5	16.3	17.0	18.4	15.2	13.7	18.5	13.8	20.4	14.9	15.2	12.6	13.9	13.8	11.8	40.8	41.1	26.9	12.4	21.4	29.1	39.4	12.8	41.1	11.8	19.5
27	18.9	23.8	18.2	39.5	29.9	32.7	32.4	16.4	19.5	13.9	22.6	20.3	16.1	21.1	14.8	13.3	15.5	14.9	11.9	16.7	19.9	17.3	18.7	22.1	39.5	11.9	20.4
28	21.1	24.1	31.9	30.2	76.3	97.6	50.3	48.2	24.1	36.5	31.1	20.2	15.1	35.8	32.0	68.8	56.2	62.1	59.3	52.2	94.1	44.0	17.5	17.1	97.6	15.1	43.6
29	16.0	16.9	17.1	16.5	17.8	17.1	16.8	16.3	16.2	15.2	13.4	17.6	13.9	15.0	15.4	14.8	16.1	15.8	16.8	98.5	27.0	63.3	13.7	12.6	98.5	12.6	21.7
30	12.6	13.7	14.4	15.4	16.5	19.3	16.2	15.5	21.2	26.4	29.0	30.8	14.8	14.1	15.3	15.0	12.2	11.4	14.6	15.9	11.7	14.0	10.9	11.6	30.8	10.9	16.3
31	11.1	11.5	10.6	10.3	12.0	11.1	11.5	11.2	13.4	11.8	12.3	11.3	11.2	11.4	13.3	12.1	11.3	11.8	12.7	11.9	14.1	13.6	16.7	17.4	17.4	10.3	12.3
Max.	**99.5**	**83.0**	**99.3**	**49.6**	**90.2**	**98.2**	**75.9**	**76.4**	**96.0**	**90.0**	**80.5**	**102.0**	**67.1**	**87.1**	**72.2**	**68.8**	**60.2**	**62.1**	**78.7**	**98.5**	**94.1**	**84.8**	**65.9**	**29.8**	**102.0**		
Min.	**10.7**	**10.7**	**10.5**	**10.3**	**9.8**	**9.9**	**10.7**	**10.8**	**10.9**	**10.8**	**10.9**	**11.0**	**11.2**	**11.4**	**11.6**	**10.8**	**11.3**	**9.3**	**11.2**	**10.6**	**10.1**	**9.9**	**9.9**	**9.8**		**9.3**	
Avg.	**20.7**	**20.8**	**22.1**	**20.3**	**23.8**	**25.5**	**22.9**	**24.3**	**24.8**	**24.8**	**25.7**	**25.5**	**20.2**	**22.0**	**19.2**	**18.4**	**22.0**	**21.8**	**24.0**	**24.5**	**21.9**	**23.9**	**18.6**	**15.0**			**22.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	19.5	14.2	27.6	15.4	8.2	6.1	8.2	9.9	7.4	16.1	6.8	13.6	24.7	16.4	6.1	6.9	20.7	25.1	46.9	52.2	48.2	22.4	15.0	8.9	52.2	6.1	18.6
2	18.5	11.8	33.3	85.1	59.0	67.0	65.9	87.4	18.6	18.9	15.2	18.3	14.0	14.2	14.2	13.6	13.4	13.4	18.2	15.8	14.7	15.5	20.0	18.3	87.4	11.8	28.5
3	12.9	13.6	13.9	15.2	16.3	14.1	13.6	12.0	14.3	11.7	16.9	13.7	12.9	13.7	12.6	12.4	11.6	13.0	12.4	12.3	12.8	13.1	12.8	12.9	16.9	11.6	13.3
4	12.4	11.6	11.8	14.9	12.2	10.7	14.7	75.8	8.1	10.1	10.1	17.4	56.0	13.9	13.1	11.6	9.7	15.4	36.4	32.8	18.1	14.6	16.0	17.0	75.8	8.1	19.4
5	10.3	10.8	15.4	16.2	13.6	13.3	13.9	18.2	14.7	15.4	16.3	15.1	15.3	16.2	12.7	11.2	11.0	11.8	12.4	13.9	14.4	12.8	12.9	12.3	18.2	10.3	13.8
6	18.1	16.5	13.0	12.4	17.3	20.0	18.7	19.9	11.1	14.5	15.3	16.5	16.1	15.3	15.3	14.7	15.6	14.0	12.2	12.9	12.7	12.9	12.6	11.2	20.0	11.1	15.0
7	11.9	11.3	11.5	13.0	12.7	13.3	13.6	11.9	13.3	13.6	14.8	12.2	12.3	13.6	11.4	12.7	13.8	13.4	13.3	11.8	14.6	32.5	14.3	18.1	32.5	11.3	13.9
8	28.2	48.1	11.6	45.4	54.2	54.0	33.5	101.4	23.4	26.8	23.2	25.5	23.7	35.4	30.8	16.8	20.0	18.6	17.5	18.1	26.8	56.5	44.0	29.1	101.4	11.6	33.9
9	25.2	25.4	22.8	14.5	14.0	17.4	15.2	16.2	17.7	42.6	38.0	64.6	46.8	30.4	16.1	14.8	56.6	16.9	20.0	13.2	20.3	20.7	23.0	15.5	64.6	13.2	25.3
10	28.7	20.0	26.5	17.1	16.4	15.0	13.3	12.6	12.6	12.5	13.3	12.0	12.5	15.3	12.7	11.1	8.9	8.8	11.4	11.0	11.9	10.8	49.3	15.1	49.3	8.8	15.8
11	10.7	11.7	15.0	64.6	24.3	27.3	18.6	79.9	45.9	10.8	12.6	11.7	11.6	11.7	12.3	14.9	12.5	12.7	12.3	13.4	13.1	16.0	14.9	13.0	79.9	10.7	20.5
12	12.7	11.5	9.9	11.5	12.1	11.5	11.6	13.5	12.7	14.7	14.7	13.4	12.9	14.1	12.8	16.6	13.5	14.4	13.9	13.3	63.1	52.0	46.5	86.2	86.2	9.9	21.2
13	45.0	60.3	40.9	48.0	20.6	20.0	19.2	17.7	14.6	21.4	18.1	51.0	16.6	18.9	19.7	18.8	17.0	17.1	20.3	17.6	20.4	24.2	19.6	22.4	60.3	14.6	25.4
14	26.1	23.9	23.2	22.9	19.9	19.5	24.1	18.5	19.9	29.9	12.7	11.8	12.0	13.2	13.1	12.2	12.5	13.8	14.6	14.3	14.1	13.8	12.4	13.0	29.9	11.8	17.1
15	15.4	15.0	14.5	16.1	15.7	16.2	16.6	17.0	16.3	20.0	14.0	15.9	15.8	16.0	16.7	14.8	19.2	10.9	17.2	19.7	63.3	62.9	29.8	18.7	63.3	10.9	20.7
16	18.5	19.7	25.5	18.1	19.0	26.7	16.8	18.0	24.4	23.0	27.3	28.1	36.0	27.1	36.1	51.0	33.6	66.2	102.0	42.7	36.9	43.9	94.4	80.3	102.0	16.8	38.1
17	25.5	35.7	33.0	21.9	48.6	27.1	20.4	19.2	23.9	36.0	29.3	26.3	17.0	17.8	17.1	15.0	19.5	35.8	21.8	16.5	14.6	13.2	13.4	13.8	48.6	13.2	23.4
18	13.4	14.7	25.6	39.6	49.6	45.6	40.2	28.3	21.1	15.2	13.4	14.1	22.4	14.3	14.2	10.3	14.2	27.7	28.8	33.6	42.0	29.6	22.2	23.3	49.6	10.3	25.1
19	34.9	35.3	71.2	56.9	92.2	94.6	32.1	67.9	24.5	20.0	20.0	19.3	18.1	19.6	19.0	22.1	19.9	17.1	16.8	17.0	17.9	16.7	16.7	17.6	94.6	16.7	32.8
20	18.4	24.9	18.0	15.5	13.3	13.3	15.1	24.3	40.0	50.4	23.1	22.5	31.4	35.2	17.3	14.5	15.3	18.4	16.7	28.7	22.6	16.2	20.8	70.2	70.2	13.3	24.4
21	75.9	81.8	88.2	79.3	55.9	94.0	82.0	74.6	59.4	24.3	15.8	14.9	20.6	17.9	19.7	17.4	15.1	19.5	17.7	19.9	18.7	18.2	18.4	22.9	94.0	14.9	40.5
22	15.9	17.9	15.1	19.4	23.5	19.4	38.2	28.1	36.7	21.6	16.3	25.1	26.4	30.8	26.1	33.4	18.2	14.5	28.0	25.7	22.0	33.3	33.5	29.3	38.2	14.5	24.9
23	30.3	41.9	24.6	41.4	36.3	12.6	13.6	17.6	13.7	11.8	12.1	13.2	12.5	12.9	12.9	12.9	13.2	12.6	13.4	13.1	13.5	12.6	12.2	12.8	41.9	11.8	17.6
24	12.9	13.2	13.2	13.5	14.7	12.9	13.7	14.1	15.0	15.6	15.1	13.9	14.6	15.1	14.0	13.5	13.9	14.5	14.0	13.8	14.5	12.0	12.2	12.5	15.6	12.0	13.9
25	11.5	10.6	12.4	11.4	10.7	11.1	12.1	12.8	13.6	14.3	14.8	14.6	14.6	12.5	17.4	58.8	19.7	17.3	24.0	46.5	34.2	18.2	39.1	37.8	58.8	10.6	20.4
26	42.3	37.8	20.7	37.4	16.2	22.2	23.5	19.5	86.5	57.6	26.0	67.2	54.6	62.8	89.1	15.1	26.5	18.7	15.3	15.2	17.4	13.6	17.1	13.8	89.1	13.6	34.0
27	23.3	16.7	15.8	15.9	15.9	14.6	15.0	14.8	14.2	13.2	13.7	52.1	62.4	79.4	15.3	84.3	39.0	30.0	87.1	91.9	57.6	17.8	37.3	58.0	91.9	13.2	36.9
28	47.3	29.0	32.7	41.7	56.1	34.3	34.9	29.6	14.3	20.3	53.2	72.6	45.2	38.0	50.8	42.5	15.2	15.2	17.6	13.2	16.4	14.3	12.3	11.5	72.6	11.5	31.6
29	16.3	15.2	16.5	14.9	16.6	17.8	24.2	15.2	15.1	16.0	12.6	12.9	12.2	15.4	14.2	16.9	12.8	11.8	12.0	14.6	15.6	16.4	16.0	13.2	24.2	11.8	15.2
Max.	**75.9**	**81.8**	**88.2**	**85.1**	**92.2**	**94.6**	**82.0**	**101.4**	**86.5**	**57.6**	**53.2**	**72.6**	**62.4**	**79.4**	**89.1**	**84.3**	**56.6**	**66.2**	**102.0**	**91.9**	**63.3**	**62.9**	**94.4**	**86.2**	**102.0**		
Min.	**10.3**	**10.6**	**9.9**	**11.4**	**8.2**	**6.1**	**8.2**	**9.9**	**7.4**	**10.1**	**6.8**	**11.7**	**11.6**	**11.7**	**6.1**	**6.9**	**8.9**	**8.8**	**11.4**	**11.0**	**11.9**	**10.8**	**12.2**	**8.9**		**6.1**	
Avg.	**23.5**	**24.1**	**24.3**	**28.9**	**27.1**	**26.6**	**23.5**	**30.9**	**22.5**	**21.3**	**18.4**	**24.5**	**23.8**	**22.7**	**20.1**	**21.1**	**18.3**	**18.6**	**23.9**	**22.9**	**24.6**	**22.6**	**24.4**	**25.1**			**23.5**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.8	13.9	14.5	14.5	14.2	14.9	15.0	14.1	12.4	15.2	90.0	32.6	18.8	21.9	15.8	18.6	11.6	15.9	24.9	33.7	25.3	26.0	30.1	26.8	90.0	11.6	22.3
2	47.3	32.9	18.1	18.8	26.4	20.5	24.3	35.4	19.4	19.8	28.4	36.8	36.4	39.1	18.0	20.0	23.3	94.8	67.1	84.9	50.6	85.2	78.7	43.8	94.8	18.0	40.4
3	34.6	37.4	31.9	27.5	48.1	48.1	22.7	19.4	20.6	38.5	29.2	39.1	21.8	20.4	21.5	22.8	22.6	35.6	23.1	17.4	19.2	14.6	14.7	12.6	48.1	12.6	26.8
4	20.6	16.0	12.8	20.8	19.4	29.3	21.4	24.8	41.4	38.9	53.3	54.1	53.6	47.6	39.4	30.9	26.9	31.7	41.1	42.4	35.3	24.3	49.5	22.3	54.1	12.8	33.3
5	16.2	19.3	17.2	16.4	17.4	20.4	17.8	15.2	15.2	16.2	16.9	18.4	16.3	14.2	16.9	20.2	24.9	32.8	48.5	46.6	24.6	15.4	16.0	16.6	48.5	14.2	20.8
6	14.8	12.0	11.5	16.4	24.4	25.2	35.9	28.3	35.7	24.2	37.9	17.2	36.4	42.2	38.7	45.5	21.8	17.9	26.3	67.9	63.4	61.6	95.6	91.5	95.6	11.5	37.2
7	93.3	63.2	11.6	24.2	73.8	27.1	25.9	23.0	26.2	33.5	25.0	49.6	16.0	12.4	14.9	13.6	13.4	16.1	16.8	15.9	16.4	17.1	15.6	16.1	93.3	11.6	27.5
8	14.5	15.8	13.5	11.4	12.2	25.4	21.5	58.4	35.7	21.6	24.1	26.8	28.4	34.4	33.6	25.3	18.7	18.4	31.1	27.7	32.7	68.4	93.6	52.5	93.6	11.4	31.1
9	88.2	74.6	73.0	98.7	53.7	34.5	20.6	26.7	44.7	48.0	16.3	17.1	52.7	26.6	19.8	17.5	13.3	12.4	14.7	13.5	11.5	15.3	46.1	95.3	98.7	11.5	38.9
10	20.1	34.8	17.2	30.1	24.6	13.9	13.3	13.5	13.1	12.5	12.4	11.4	13.2	13.9	13.8	12.0	12.3	13.4	14.0	13.6	12.2	12.1	10.3	10.2	34.8	10.2	15.3
11	10.6	9.6	12.6	12.7	11.5	12.6	13.0	14.3	14.2	12.9	12.8	12.7	15.3	15.7	15.5	15.0	16.3	14.4	13.7	16.0	15.0	14.8	14.8	14.7	16.3	9.6	13.8
12	13.5	12.9	13.3	12.9	13.5	13.3	11.1	12.3	13.5	13.4	12.5	13.3	14.1	14.9	14.7	15.1	15.9	14.8	14.4	14.8	14.3	12.4	13.9	14.9	15.9	11.1	13.7
13	15.6	15.8	15.6	15.8	15.5	15.2	15.0	16.1	17.0	16.9	16.3	15.9	16.2	16.5	15.1	16.0	15.4	15.3	14.1	15.2	15.3	14.4	13.7	12.4	17.0	12.4	15.4
14	12.3	13.0	13.7	13.1	13.1	16.4	13.1	14.0	13.4	13.6	13.6	13.8	76.9	23.3	45.6	28.8	9.5	14.1	17.2	22.4	28.2	24.0	31.1	23.6	76.9	9.5	21.2
15	16.4	19.4	16.4	18.1	24.7	21.6	23.5	18.1	18.9	24.6	23.5	25.6	22.7	24.8	24.8	19.8	22.8	21.6	20.4	17.1	18.2	17.2	13.7	19.9	25.6	13.7	20.6
16	14.0	19.2	34.3	42.3	48.3	59.6	29.5	48.3	66.1	85.0	30.6	24.8	21.2	15.2	16.3	41.5	63.2	71.2	21.2	11.8	7.5	26.1	100.4	62.7	100.4	7.5	40.0
17	11.6	15.1	34.7	17.3	10.1	18.0	23.3	27.3	20.5	20.5	14.0	17.7	15.0	16.5	18.2	15.6	15.8	14.9	15.4	15.6	16.7	16.1	14.8	14.1	34.7	10.1	17.4
18	13.6	12.9	13.6	14.9	14.6	15.5	14.0	14.8	13.7	13.9	14.4	13.7	12.4	11.8	12.6	14.0	14.1	14.1	15.3	16.6	14.5	13.6	14.7	13.5	16.6	11.8	14.0
19	13.3	13.4	13.8	13.0	13.6	12.9	13.1	13.8	13.2	14.3	14.8	12.2	13.4	13.7	13.8	14.9	11.7	11.1	11.2	11.5	11.9	12.3	13.1	13.1	14.9	11.1	13.1
20	13.0	12.8	12.4	12.6	12.6	12.0	11.1	12.0	10.2	10.7	12.2	11.8	12.8	13.7	13.2	12.7	13.1	12.5	12.5	13.6	13.0	13.1	13.5	13.3	13.7	10.2	12.5
21	14.0	14.4	13.4	14.0	13.5	12.5	13.8	13.7	12.2	10.9	10.7	9.8	10.8	10.8	13.0	13.1	12.0	11.0	10.0	10.9	13.3	14.4	12.2	13.2	14.4	9.8	12.4
22	12.3	10.6	9.9	9.4	10.0	10.6	11.7	12.3	13.2	13.5	13.5	13.1	11.8	12.7	12.1	11.7	13.3	14.7	13.4	14.7	14.6	15.2	13.6	14.4	15.2	9.4	12.6
23	13.7	14.0	14.5	12.3	14.1	12.9	11.1	11.4	12.5	13.4	14.1	13.0	12.9	12.3	12.6	12.9	13.1	13.1	13.0	13.6	13.8	13.8	12.5	13.0	14.5	11.1	13.1
24	12.8	13.4	13.5	12.4	11.1	12.6	13.3	13.4	12.9	13.6	13.3	13.4	13.3	13.2	13.3	13.8	13.9	14.0	13.0	12.9	13.6	13.5	14.0	16.1	16.1	11.1	13.3
25	13.1	15.6	59.6	18.3	19.6	12.2	11.7	12.9	12.9	12.4	11.9	14.0	14.2	12.7	13.7	14.1	14.4	14.5	14.5	14.0	13.7	13.5	14.0	13.0	59.6	11.7	15.9
26										13.4				14.9	13.9	13.2	14.1	14.5	14.5	13.8	12.9	11.6	13.0	14.0	14.9	11.6	13.7
27	14.7	15.6	14.4	14.7	15.1	14.2	15.9	17.2	15.9	13.9	13.2	14.8	13.6	13.4	12.7	12.8	15.0	13.1	13.0	13.9	13.0	15.1	14.2	17.3	17.3	12.7	14.4
28	14.9	12.8	10.3	10.5	10.2	10.3	10.0	9.8	11.4	12.3	14.4	13.3	13.7	13.3	13.3	14.0	13.4	12.5	12.9	13.0	12.3	13.4	6.8	10.4	14.9	6.8	12.0
29	9.0	54.1	33.6	22.2	18.0	21.7	17.4	23.6	14.7	19.8	30.9	40.7	22.0	21.6	20.9	16.8	22.1	22.7	19.0	19.4	22.8	28.3	26.1	31.4	54.1	9.0	24.1
30	25.7	15.5	23.5	15.8	20.7	21.8	27.3	23.7	31.0	28.3	24.3	24.2	25.5	33.6	42.0	30.0	34.7	24.7	22.3	43.8	30.4	21.2	18.0	18.6	43.8	15.5	26.1
31	24.3	23.3	19.2	21.3	17.3	13.9	15.4	17.5	20.7	16.1	20.5	18.0	35.1	60.6	79.5	47.6	47.4	47.2	40.0	40.2	36.1	46.7	43.8	39.9	79.5	13.9	33.0
Max.	**93.3**	**74.6**	**73.0**	**98.7**	**73.8**	**59.6**	**35.9**	**58.4**	**66.1**	**85.0**	**90.0**	**54.1**	**76.9**	**60.6**	**79.5**	**47.6**	**63.2**	**94.8**	**67.1**	**84.9**	**63.4**	**85.2**	**100.4**	**95.3**	**100.4**		
Min.	**9.0**	**9.6**	**9.9**	**9.4**	**10.0**	**10.3**	**10.0**	**9.8**	**10.2**	**10.7**	**10.7**	**9.8**	**10.8**	**10.8**	**12.1**	**11.7**	**9.5**	**11.0**	**10.0**	**10.9**	**7.5**	**11.6**	**6.8**	**10.2**		**6.8**	
Avg.	**21.7**	**21.8**	**20.4**	**20.1**	**21.4**	**20.0**	**17.8**	**20.2**	**20.7**	**21.3**	**22.2**	**21.3**	**22.9**	**21.2**	**21.6**	**20.0**	**19.4**	**22.4**	**20.9**	**23.5**	**20.7**	**22.9**	**28.5**	**25.5**			**21.6**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	39.7	32.4	27.9	41.9	34.4	38.2	41.6	56.4	30.8	20.3	25.2	39.3	24.4	32.5	33.9	31.4	35.5	28.7	19.5	23.5	24.5	40.3	29.1	97.2	97.2	19.5	35.4
2	73.1	23.4	12.4	12.3	10.7	11.6	10.5	11.4	10.9	10.7	10.7	12.3	12.2	12.0	16.2	15.4	26.3	84.9	36.2	36.8	14.9	34.0	36.5	32.0	84.9	10.5	23.6
3	24.4	26.5	28.3	21.8	22.7	26.4	42.0	29.3	20.0	15.9	15.8	9.2	28.5	31.0	35.4	31.5	33.4	27.8	31.2	11.5	12.1	19.2	10.6	14.9	42.0	9.2	23.7
4	18.4	19.5	21.5	20.1	32.5	26.4	36.5	42.9	35.8	40.9	40.4	51.7	56.1	43.6	26.3	16.7	20.4	16.7	19.9	21.1	28.8	25.2	89.5	15.1	89.5	15.1	31.9
5	14.6	16.2	14.2	12.4	13.7	12.8	15.2	17.6	15.4	16.4	16.6	17.7	16.6	18.0	19.3	19.0	20.6	19.9	19.4	17.7	16.5	16.1	18.2	21.2	21.2	12.4	16.9
6	21.0	17.2	19.7	19.2	16.4	19.7	20.6	12.6	12.5	12.9	13.4	14.2	14.0	13.6	13.9	16.5	15.6	14.7	15.6	17.2	17.1	15.9	16.0	15.6	21.0	12.5	16.0
7	14.8	15.6	15.5	17.2	17.5	15.3	18.0	19.6	16.7	17.8	14.9	15.0	15.7	17.0	15.6	14.7	14.0	15.7	14.4	20.6	19.8	23.6	17.1	14.2	23.6	14.0	16.7
8	10.9	12.7	16.1	14.1	14.0	16.8	15.3	15.0	20.9	12.4	13.7	15.3	16.9	95.1	19.0	34.8	17.4	36.8	43.0	30.8	38.4	47.1	44.8	16.2	95.1	10.9	25.7
9	19.7	15.8	15.3	14.7	19.0	15.3	17.0	16.1	15.6	15.1	17.3	17.5	16.4	16.4	14.0	11.4	20.3	21.2	19.8	19.9	20.2	18.4	21.6	18.3	21.6	11.4	17.4
10	15.4	20.9	17.2	16.7	14.8	13.5	15.2	13.2	11.4	11.9	13.5	13.4	48.5	52.3	53.8	49.3	43.3	13.3	15.0	14.4	14.0	21.1	12.5	15.3	53.8	11.4	22.1
11	15.3	13.6	17.8	11.5	13.3	11.3	12.0	11.9	13.7	12.0	11.6	14.2	16.9	15.3	15.5	17.5	16.2	15.0	14.3	13.4	13.9	13.9	13.2	13.8	17.8	11.3	14.0
12	14.5	16.7	14.1	12.5	12.9	12.4	13.6	13.5	12.8	12.6	12.1	14.3	13.8	13.0	13.4	12.8	12.7	12.8	13.4	14.2	14.0	15.2	17.3	14.7	17.3	12.1	13.7
13	14.7	14.9	13.0	11.5	15.1	16.3	14.5	13.3	19.6	19.0	23.3	57.0	67.3	16.4	38.0	39.6	16.4	17.8	18.1	17.1	16.5	18.4	18.0	17.4	67.3	11.5	22.2
14	15.7	16.6	15.9	15.1	14.4	15.1	17.1	16.3	17.7	16.7	15.8	16.2	16.8	16.4	13.8	15.9	16.4	13.8	14.1	14.7	15.5	16.0	14.9	14.6	17.7	13.8	15.6
15	17.5	14.2	11.9	17.6	14.6	18.0	14.2	20.0	20.5	82.6	58.7	21.3	83.3	13.8	16.5	14.2	13.3	18.9	21.1	20.9	21.4	19.1	18.9	21.3	83.3	11.9	24.7
16	17.6	15.8	18.2	15.1	15.0	15.0	14.0	12.7	14.0	16.0	15.5	17.3	18.4	18.7	19.7	20.2	18.9	19.5	21.2	19.0	20.3	18.7	22.1	19.4	22.1	12.7	17.6
17	17.0	23.1	22.8	18.4	24.9	25.6	25.7	22.1	15.7	16.0	15.3	13.7	17.2	16.4	15.8	13.2	15.1	12.5	12.5	17.7	17.7	16.9	13.5	13.9	25.7	12.5	17.6
18	13.3	10.8	16.5	17.1	15.0	19.0	22.8	35.1	81.7	23.2	14.4	9.0	19.8	27.9	32.4	39.3	25.1	33.2	31.0	40.6	32.1	15.5	21.6	16.8	81.7	9.0	25.5
19	19.3	12.1	32.2	25.7	16.4	14.8	16.2	27.8	20.7	17.4	18.5	36.4	29.7	34.2	35.7	33.6	38.1	50.0	66.0	62.5	40.9	22.3	19.3	21.3	66.0	12.1	29.6
20	31.6	19.9	23.9	27.9	35.2	38.9	38.7	36.6	44.9	84.3	89.8	62.5	37.5	35.4	47.2	67.9	79.8	69.3	71.6	47.7	38.0	44.9	50.1	44.6	89.8	19.9	48.7
21	36.9	48.5	52.0	40.7	41.5	38.9	37.1	43.3	46.3	56.6	52.4	59.2	44.9	63.7	68.3	61.3	58.0	37.1	22.3	27.7	15.2	16.8	36.5	29.7	68.3	15.2	43.1
22	23.4	12.9	11.3	8.9	22.3	17.6	21.6	12.0	11.7	26.0	18.0	13.5	12.5	14.0	17.7	19.4	18.4	11.7	20.1	32.9	38.0	95.8	6.7	10.9	95.8	6.7	20.7
23	17.6	65.5	70.9	56.4	13.2	17.9	13.5	13.1	13.2	12.6	13.4	13.7	12.4	12.8	13.9	14.6	14.3	15.7	13.6	13.8	14.1	12.9	14.1	13.0	70.9	12.4	20.3
24	12.9	14.0	15.0	14.5	14.1	14.6	14.4	13.5	13.2	15.1	15.6	16.6	14.7	14.6	14.9	14.3	14.8	16.0	16.3	18.5	23.2	28.2	20.3	25.2	28.2	12.9	16.4
25	27.0	24.7	16.2	15.8	17.1	19.2	28.7	23.5	15.4	13.5	15.2	13.5	16.9	18.1	17.3	16.9	17.1	17.3	17.0	18.2	20.4	13.3	11.4	12.5	28.7	11.4	17.7
26	11.5	12.0	10.5	11.1	10.6	10.7	11.0	10.6	11.1	12.9	14.1	14.4	13.8	12.8	12.6	13.7	11.4	12.5	12.4	12.9	12.8	11.2	11.7	14.0	14.4	10.5	12.2
27	14.3	14.1	12.0	13.7	13.1	12.8	12.8	14.8	13.7	14.5	13.8	13.1	13.8	12.8	11.6	10.5	12.4	11.5	11.8	10.5	10.6	12.1	12.2	12.1	14.8	10.5	12.7
28	11.8	12.8	14.2	15.0	13.8	11.4	11.6	12.8	14.5	13.2	12.7	10.6	12.8	11.9	13.7	14.9	13.7	15.1	12.4	14.0	14.0	13.4	14.5	13.9	15.1	10.6	13.3
29	14.0	13.3	13.0	11.5	11.2	11.9	12.5	12.2	12.8	11.4	11.2	12.4	12.9	15.6	14.6	15.1	14.4	16.7	14.5	14.2	15.1	13.7	13.1	14.2	16.7	11.2	13.4
30	15.9	15.9	15.3	17.9	20.7	24.4	17.0	23.2	18.8	12.9	13.1	13.6	13.5	15.2	17.1	21.5	84.9	88.1	23.8	19.0	16.2	12.1	17.1	14.8	88.1	12.1	23.0
Max.	**73.1**	**65.5**	**70.9**	**56.4**	**41.5**	**38.9**	**42.0**	**56.4**	**81.7**	**84.3**	**89.8**	**62.5**	**83.3**	**95.1**	**68.3**	**67.9**	**84.9**	**88.1**	**71.6**	**62.5**	**40.9**	**95.8**	**89.5**	**97.2**	**97.2**		
Min.	**10.9**	**10.8**	**10.5**	**8.9**	**10.6**	**10.7**	**10.5**	**10.6**	**10.9**	**10.7**	**10.7**	**9.0**	**12.2**	**11.9**	**11.6**	**10.5**	**11.4**	**11.5**	**11.8**	**10.5**	**10.6**	**11.2**	**6.7**	**10.9**		**6.7**	
Avg.	**20.5**	**19.7**	**20.2**	**18.9**	**18.3**	**18.7**	**20.0**	**20.8**	**20.7**	**22.1**	**21.2**	**21.6**	**24.6**	**24.3**	**23.2**	**23.9**	**25.3**	**26.1**	**22.7**	**22.1**	**20.5**	**23.0**	**22.1**	**20.6**			**21.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	15.9	13.9	17.2	22.8	15.6	16.2	15.8	16.3	16.8	16.2	16.1	14.7	15.0	15.6	13.4	15.4	14.9	14.6	15.0	16.1	15.7	14.1	14.0	14.6	22.8	13.4	15.7
2	18.0	17.9	15.1	13.5	12.0	13.7	13.6	13.7	15.2	16.4	16.2	16.6	36.0	14.7	15.6	13.9	16.0	22.9	18.2	16.2	13.7	11.8	31.8	56.5	56.5	11.8	18.7
3	33.3	32.9	18.4	14.9	20.9	29.6	20.8	34.5	74.8	68.2	69.3	38.6	44.6	33.0	18.6	19.5	25.2	29.4	19.6	19.2	26.8	18.8	15.4	20.3	74.8	14.9	31.1
4	16.8	18.6	21.7	19.8	22.5	18.7	22.5	24.0	20.0	17.5	18.4	17.0	22.0	26.4	53.9	40.8	44.9	45.6	68.8	70.8	20.8	25.6	23.3	18.6	70.8	16.8	29.1
5	14.0	13.0	12.1	12.4	13.8	11.5	11.3	13.0	17.3	17.7	17.8	21.1	13.4	14.6	16.0	16.4	17.2	17.2	19.4	18.2	13.8	24.0	10.9	9.4	24.0	9.4	15.2
6	8.4	59.6	37.6	57.5	16.6	61.8	30.9	30.2	29.5	29.8	23.7	16.9	12.7	11.1	14.7	29.4	31.2	18.6	9.5	12.0	14.9	41.6	52.0	59.6	61.8	8.4	29.6
7	52.7	59.0	45.7	39.8	36.8	48.2	41.5	42.9	42.0	20.6	22.6	35.0	19.6	17.0	16.6	14.9	20.6	19.0	19.6	27.4	50.8	35.0	42.3	28.1	59.0	14.9	33.2
8	22.3	29.2	24.6	17.4	13.7	22.5	20.6	20.2	14.7	13.5	19.0	21.6	26.0	27.7	29.1	25.1	34.9	24.7	20.8	16.7	15.3	16.7	20.4	21.0	34.9	13.5	21.6
9	15.2	18.3	18.8	14.8	15.2	15.7	14.7	16.9	16.7	26.5	17.5	15.6	14.5	18.1	17.0	14.7	22.7	20.8	21.1	33.7	34.9	30.7	23.1	43.6	43.6	14.5	20.9
10	38.2	18.8	23.2	30.3	24.0	22.1	21.3	18.7	18.2	22.8	13.7	14.6	14.1	15.9	15.0	14.4	17.3	17.1	16.2	17.4	16.2	49.0	74.8	49.9	74.8	13.7	24.3
11	38.2	21.6	28.3	51.8	42.3	41.4	44.7	41.3	28.7	17.5	46.1	49.7	42.0	36.5	29.3	30.7	33.9	30.4	29.3	29.3	26.7	25.6	30.1	29.5	51.8	17.5	34.4
12	28.9	29.0	21.7	20.1	18.7	17.7	20.4	15.0	16.6	16.7	19.9	16.2	15.9	21.7	26.3	30.3	34.7	40.1	35.2	44.8	41.6	28.4	26.5	35.8	44.8	15.0	25.9
13	28.9	32.8	34.8	23.9	16.8	15.4	16.8	17.6	18.0	23.5	18.5	18.2	11.5	13.0	11.0	28.1	21.7	24.8	19.4	25.8	31.0	49.3	44.6	43.2	49.3	11.0	24.5
14	33.1	16.2	21.8	16.3	17.3	20.0	40.5	87.4	75.8	69.5	75.8	88.6	67.2	58.0	66.2	83.4	80.9	70.4	38.9	76.2	66.3	24.2	18.5	25.7	88.6	16.2	51.6
15	31.5	50.7	81.4	18.5	18.7	24.3	51.3	27.3	19.3	83.5	40.1	26.9	19.4	30.7	57.8	65.2	57.4	31.6	23.3	9.0	13.6	40.8	27.0	20.7	83.5	9.0	36.3
16	72.1	45.5	18.1	27.8	16.1	17.5	14.5	11.5	11.6	14.1	10.6	10.2	13.5	15.8	43.5	32.7	40.9	43.2	34.9	48.5	41.8	56.4	8.4	37.5	72.1	8.4	28.6
17	67.8	25.5	14.5	12.4	11.7	14.1	15.4	15.8	15.2	14.7	16.0	15.9	17.7	40.8	25.8	58.1	75.1	59.4	49.8	59.5	43.5	42.0	47.3	30.1	75.1	11.7	32.8
18	18.8	40.9	41.8	24.8	20.0	35.2	23.3	41.5	51.2	30.1	19.1	27.5	47.5	27.5	27.0	91.4	76.7	74.3	76.5	47.9	90.3	74.7	51.6	25.8	91.4	18.8	45.2
19	23.1	15.5	45.3	55.3	87.3	93.5	31.4	12.3	71.6	15.7	20.5	20.7	29.6	23.3	24.1	24.2	16.3	18.6	14.1	14.4	16.7	15.2	17.9	18.5	93.5	12.3	30.2
20	17.9	16.3	13.9	14.8	15.7	15.3	12.9	14.4	13.3	13.5	16.2	14.7	15.5	16.2	18.0	20.0	57.6	27.8	29.7	23.4	37.9	72.2	10.1	6.6	72.2	6.6	21.4
21	7.7	7.8	14.8	11.1	60.6	18.0	12.4	12.8	16.1	16.0	16.3	87.0	48.4	58.2	35.5	33.2	32.2	21.6	28.4	26.3	81.0	87.0	16.8	15.2	87.0	7.7	31.9
22	19.6	14.7	15.3	17.7	18.4	16.7	15.9	14.4	15.0	16.3	15.7	15.3	20.5	84.8	83.0	72.0	81.8	56.6	88.9	78.4	26.3	43.0	28.1	36.9	88.9	14.4	37.3
23	42.5	37.8	39.5	40.2	35.9	33.2	33.0	31.8	42.7	51.4	59.3	46.0	53.5	42.3	33.5	33.9	31.9	18.9	24.8	13.7	12.6	23.0	15.3	22.5	59.3	12.6	34.1
24	17.5	18.1	14.2	11.6	13.0	14.8	29.6	18.5	18.8	57.8	46.9	38.3	29.8	32.2	76.6	51.3	40.5	55.7	75.7	74.1	47.7	58.8	33.9	30.7	76.6	11.6	37.8
25	9.1	18.4	10.6	14.9	54.2	76.3	46.5	71.5	63.7	24.2	15.7	22.9	42.9	51.7	71.1	77.8	44.4	38.8	72.6	49.5	33.0	53.7	23.5	23.0	77.8	9.1	42.1
26	18.6	14.6	12.6	11.3	12.7	12.0	10.7	13.4	13.4	12.7	15.0	18.0	17.8	17.4	17.5	17.7	19.5	18.4	19.2	20.3	17.7	19.0	18.2	18.6	20.3	10.7	16.1
27	19.0	19.1	14.8	15.2	15.6	14.7	15.0	18.4	15.6	14.7	15.3	12.6	17.0	17.2	17.8	21.1	16.5	16.7	16.9	18.6	18.7	27.1	25.2	18.5	27.1	12.6	17.6
28	18.0	21.3	15.9	23.7	25.8	18.9	15.1	15.8	12.8	13.4	16.2	17.8	15.9	17.9	19.4	18.9	19.6	17.5	16.3	17.1	17.3	18.4	22.4	16.9	25.8	12.8	18.0
29	22.4	20.2	19.9	12.4	12.0	12.0	11.5	12.6	12.3	12.2	15.7	16.5	18.6	27.0	63.3	22.3	23.4	28.6	17.3	26.2	32.4	26.8	66.5	12.0	66.5	11.5	22.7
30	10.8	13.6	33.9	18.2	31.6	33.2	66.6	36.5	23.3	30.4	38.3	41.2	51.6	69.9	45.5	48.0	76.2	54.0	54.4	69.6	78.0	53.7	43.9	31.7	78.0	10.8	43.9
31	12.3	8.6	10.7	9.2	10.8	14.5	17.0	18.6	28.0	54.3	57.1	67.0	56.4	46.3	48.4	38.2	39.1	35.7	33.0	27.0	24.2	27.8	24.8	23.4	67.0	8.6	30.5
Max.	**72.1**	**59.6**	**81.4**	**57.5**	**87.3**	**93.5**	**66.6**	**87.4**	**75.8**	**83.5**	**75.8**	**88.6**	**67.2**	**84.8**	**83.0**	**91.4**	**81.8**	**74.3**	**88.9**	**78.4**	**90.3**	**87.0**	**74.8**	**59.6**	**93.5**		
Min.	**7.7**	**7.8**	**10.6**	**9.2**	**10.8**	**11.5**	**10.7**	**11.5**	**11.6**	**12.2**	**10.6**	**10.2**	**11.5**	**11.1**	**11.0**	**13.9**	**14.9**	**14.6**	**9.5**	**9.0**	**12.6**	**11.8**	**8.4**	**6.6**		**6.6**	
Avg.	**25.6**	**24.8**	**24.4**	**22.4**	**24.1**	**26.4**	**24.4**	**25.1**	**27.4**	**27.5**	**26.7**	**28.5**	**28.1**	**30.4**	**33.9**	**35.6**	**37.6**	**32.7**	**33.1**	**33.8**	**32.9**	**36.6**	**29.3**	**27.2**			**29.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.7	33.0	36.6	31.1	28.3	30.1	43.7	30.7	29.0	33.4	27.7	33.7	41.0	27.1	20.7	18.2	28.1	22.0	34.7	20.7	22.9	24.4	19.0	17.5	43.7	17.5	28.4
2	16.4	19.4	18.0	15.4	15.8	16.9	13.7	14.5	15.6	16.7	20.9	19.1	20.7	17.3	15.3	17.8	36.0	82.8	53.5	74.3	97.7	35.2	21.0	25.2	97.7	13.7	29.1
3	39.1	22.9	20.4	21.2	92.1	36.7	30.9	68.1	70.4	37.7	16.8	19.8	41.0	46.8	24.9	28.0	53.9	79.1	20.6	20.3	14.9	24.7	27.7	24.4	92.1	14.9	36.8
4	23.3	52.4	90.7	20.8	49.7	78.3	101.5	57.0	76.7	79.1	77.3	41.4	19.9	24.7	32.1	23.0	16.3	19.2	55.5	23.9	50.7	72.5	27.0	20.9	101.5	16.3	47.3
5	28.7	18.4	27.1	28.2	36.9	42.2	27.7	49.4	48.6	39.9	43.7	27.1	29.5	35.7	42.0	60.2	51.8	33.9	31.4	36.1	42.3	85.2	66.2	38.7	85.2	18.4	40.5
6	19.3	14.4	18.4	15.0	15.0	15.5	18.0	14.1	17.8	16.9	17.5	16.1	17.7	17.1	18.8	19.3	21.0	21.8	19.9	18.0	25.5	27.1	17.7	26.9	27.1	14.1	18.7
7	18.8	19.3	15.7	13.4	13.3	13.3	14.4	15.7	14.5	13.5	14.7	14.9	13.1	13.5	12.8	12.8	43.9	53.0	51.2	50.3	55.9	18.6	42.0	67.9	67.9	12.8	25.7
8	9.3	9.4	11.0	22.9	69.2	78.7	19.0	17.6	14.7	15.0	14.7	15.9	16.1	14.5	12.8	19.6	22.3	17.8	19.4	16.1	19.5	17.4	20.5	25.6	78.7	9.3	21.6
9	16.0	15.0	18.0	16.6	16.6	15.9	16.8	15.1	15.9	12.5	13.2	13.6	14.0	15.3	17.2	17.6	15.3	16.7	16.7	16.9	13.0	13.6	13.4	15.2	18.0	12.5	15.4
10	14.9	15.2	14.8	14.0	14.1	13.9	13.9	13.5	12.6	14.2	14.2	14.2	16.2	15.3	72.6	54.7	42.9	30.9	65.5	44.7	35.6	42.7	59.5	54.5	72.6	12.6	29.4
11	44.9	14.7	17.5	38.9	24.2	74.6	17.0	13.6	13.2	16.6	43.3	26.8	30.3	35.2	36.7	49.1	79.9	35.3	34.4	46.1	26.6	30.7	37.9	20.3	79.9	13.2	33.7
12	15.2	15.7	13.9	15.3	14.6	16.0	15.4	14.3	15.3	15.1	13.9	16.6	16.7	13.9	17.0	15.7	14.9	16.1	14.2	13.5	13.2	15.0	14.1	14.1	17.0	13.2	15.0
13	13.5	12.7	12.5	12.9	14.0	14.3	13.3	13.8	15.6	15.9	14.5	14.8	15.1	17.8	16.7	15.5	14.3	19.4	15.0	15.6	54.5	13.8	73.3	68.7	73.3	12.5	21.1
14	34.2	37.9	58.5	15.1	16.0	15.4	13.8	18.3	16.2	14.0	14.4	15.3	12.5	13.5	15.3	15.5	16.5	59.3	31.0	27.0	27.2	38.5	89.9	64.0	89.9	12.5	28.3
15	14.2	13.6	12.5	26.0	16.6	16.0	12.8	11.7	13.2	14.3	15.2	16.6	15.1	18.5	19.0	18.1	16.9	17.8	17.7	17.1	17.5	17.6	16.9	14.9	26.0	11.7	16.2
16	12.3	15.1	14.7	14.7	15.8	14.1	14.1	12.7	12.7	13.5	14.3	15.7	13.7	16.1	18.4	74.6	24.5	26.5	30.1	42.3	19.0	46.4	65.0	23.3	74.6	12.3	23.7
17	56.0	43.7	78.7	85.2	87.5	15.4	15.3	14.6	14.5	16.3	94.0	20.4	16.5	14.3	14.3	12.9	11.9	12.6	12.5	11.1	15.5	15.9	18.7	15.6	94.0	11.1	29.7
18	23.1	35.0	52.7	73.0	47.1	73.0	81.3	14.2	15.6	15.0	14.5	13.2	16.1	19.8	55.3	19.2	17.2	19.6	26.1	31.4	19.7	13.2	60.5	7.0	81.3	7.0	31.8
19	32.4	45.7	62.6	72.3	78.3	65.1	18.7	14.3	15.2	14.1	15.1	58.8	32.8	51.6	48.8	44.4	55.1	37.7	49.7	40.7	35.1	32.8	45.7	49.0	78.3	14.1	42.3
20	27.3	26.1	15.1	30.9	18.3	35.2	39.1	43.4	21.7	33.9	20.5	29.3	48.4	41.4	48.4	79.0	88.3	61.3	40.3	36.9	41.1	48.8	15.1	38.9	88.3	15.1	38.7
21	20.7	18.1	21.2	22.0	31.0	25.0	32.6	15.3	23.4	25.0	28.3	25.5	19.0	46.2	37.4	49.6	55.3	56.4	38.2	47.8	19.0	27.5	27.1	76.3	76.3	15.3	32.8
22	14.1	10.3	7.3	7.6	90.0	61.6	52.6	96.5	16.2	37.2	23.4	33.9	55.7	72.6	55.3	39.2	21.2	13.8	16.1	13.4	12.0	14.1	15.4	12.4	96.5	7.3	33.0
23	8.0	11.2	17.8	17.2	28.2	34.1	30.4	24.7	41.2	29.8	25.8	28.9	33.0	38.6	44.1	55.4	50.0	69.2	57.5	75.7	64.3	42.0	28.6	19.4	75.7	8.0	36.5
24	23.1	18.7	29.9	56.6	13.2	28.9	20.2	22.1	22.4	17.7	16.8	59.2	48.2	48.4	14.1	19.4	19.2	28.3	33.9	33.6	41.8	46.5	49.0	37.4	59.2	13.2	31.2
25	38.8	24.7	42.9	47.2	54.7	41.8	39.9	29.1	31.8	44.9	46.2	41.6	32.9	26.5	26.1	47.5	29.6	34.8	32.4	36.7	43.0	34.9	32.3	23.3	54.7	23.3	36.8
26	18.8	20.5	20.5	20.1	25.2	34.9	52.1	23.7	27.8	21.6	18.3	16.2	20.4	17.2	16.0	15.7	18.5	18.6	20.4	20.1	18.4	16.7	16.3	20.0	52.1	15.7	21.6
27	19.7	22.9	35.6	45.4	56.8	38.7	40.1	73.0	75.0	51.1	49.9	27.2	16.6	20.4	19.2	20.2	24.3	58.7	69.8	56.3	36.4	64.5	43.8	74.4	75.0	16.6	43.3
28	86.9	69.9	38.0	9.3	6.9	36.5	39.9	15.3	15.4	16.2	15.1	14.4	15.4	18.4	20.3	20.7	69.6	43.3	20.9	55.8	47.6	62.8	65.9	29.9	86.9	6.9	34.8
29	23.2	18.3	27.4	29.7	13.5	17.3	49.4	25.7	57.9	82.7	98.6	61.0	29.1	23.5	57.7	47.4	32.8	42.6	80.7	48.8	54.3	63.2	40.4	33.8	98.6	13.5	44.1
30	31.1	27.6	83.7	18.7	8.7	8.0	7.6	31.1	18.3	23.7	19.4	20.7	31.9	50.5	58.6	35.3	31.1	35.9	34.7	24.1	22.6	48.9	78.8	7.4	83.7	7.4	31.6
Max.	**86.9**	**69.9**	**90.7**	**85.2**	**92.1**	**78.7**	**101.5**	**96.5**	**76.7**	**82.7**	**98.6**	**61.0**	**55.7**	**72.6**	**72.6**	**79.0**	**88.3**	**82.8**	**80.7**	**75.7**	**97.7**	**85.2**	**89.9**	**76.3**	**101.5**		
Min.	**8.0**	**9.4**	**7.3**	**7.6**	**6.9**	**8.0**	**7.6**	**11.7**	**12.6**	**12.5**	**13.2**	**13.2**	**12.5**	**13.5**	**12.8**	**12.8**	**11.9**	**12.6**	**12.5**	**11.1**	**12.0**	**13.2**	**13.4**	**7.0**		**6.9**	
Avg.	**25.7**	**24.1**	**31.1**	**28.6**	**33.7**	**33.6**	**30.2**	**27.4**	**26.6**	**26.6**	**28.7**	**25.7**	**25.0**	**27.7**	**30.3**	**32.2**	**34.1**	**36.2**	**34.8**	**33.8**	**33.6**	**35.2**	**38.3**	**32.2**			**30.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.6	7.6	7.9	16.6	9.7	29.6	48.9	29.3	57.0	16.3	13.2	21.3	32.2	28.2	50.0	52.3	69.6	63.4	58.3	70.4	47.2	66.1	75.3	53.4	75.3	7.6	38.8
2	35.1	24.4	26.5	33.6	40.0	47.6	32.8	50.6	54.2	41.2	30.9	45.3	30.4	25.8	40.7	29.3	30.4	23.5	42.1	24.7	32.2	42.4	37.6	41.6	54.2	23.5	36.0
3	30.3	45.5	83.5	50.0	46.9	39.9	37.8	57.2	54.5	35.0	25.1	26.5	33.5	32.8	35.4	35.4	44.4	49.4	42.6	59.2	21.5	30.6	30.1	23.4	83.5	21.5	40.4
4	20.6	18.7	15.3	19.6	40.4	70.5	62.8	54.9	28.7	20.6	32.9	26.0	46.6	33.9	34.0	28.0	22.4	25.3	15.8	29.1	25.2	16.8	21.1	27.9	70.5	15.3	30.7
5	23.6	17.6	27.5	18.6	29.6	22.5	61.6	34.4	15.7	17.0	28.5	24.1	22.4	22.8	17.3	19.3	18.2	23.1	19.7	26.7	34.8	21.4	17.6	55.3	61.6	15.7	25.8
6	34.0	37.2	17.0	74.4	35.5	81.2	84.9	92.1	34.3	20.5	18.3	33.4	22.8	33.9	42.8	30.9	47.6	21.1	27.2	28.2	43.6	19.2	36.5	61.9	92.1	17.0	40.8
7	31.4	21.8	20.6	25.9	26.8	33.1	53.8	21.1	28.8	41.0	51.9	39.0	16.9	33.0	53.6	26.3	40.0	51.3	60.2	63.1	51.0	25.9	75.2	50.6	75.2	16.9	39.3
8	8.4	14.7	71.6	95.1	72.1	16.0	18.8	16.4	18.1	16.8	15.7	15.9	18.0	15.9	17.5	14.3	13.6	14.8	15.7	15.6	78.5	53.5	13.7	49.5	95.1	8.4	29.2
9	72.4	51.8	36.4	41.6	46.6	27.7	32.8	17.8	16.7	67.6	45.4	50.5	60.5	30.9	27.3	19.2	31.3	46.2	59.7	58.6	51.0	13.0	30.0	38.1	72.4	13.0	40.5
10	23.3	34.9	28.8	26.0	17.5	25.2	22.4	33.4	51.3	50.2	52.1	39.3	31.1	40.5	25.1	33.0	32.3	46.7	29.0	13.0	15.3	15.6	24.2	27.1	52.1	13.0	30.7
11	27.6	35.7	52.1	27.9	26.2	43.9	34.1	44.8	23.1	45.0	42.2	43.1	32.7	58.3	80.6	61.6	51.3	53.7	49.1	86.7	82.6	42.4	34.1	41.6	86.7	23.1	46.7
12	8.4	19.5	42.1	52.8	23.2	78.1	61.0	37.4	28.7	34.9	47.3	47.4	32.4	25.5	19.5	19.0	11.4	11.8	10.9	12.5	12.9	10.3	10.2	14.4	78.1	8.4	28.0
13	29.4	43.0	28.9	30.7	63.9	24.7	18.8	14.8	58.0	41.5	49.8	33.9	41.0	67.4	80.0	53.5	62.6	52.6	45.4	56.0	50.7	38.9	18.1	21.4	80.0	14.8	42.7
14	22.7	36.7	10.2	23.4	19.3	16.7	10.4	14.9	20.1	19.5	17.3	31.6	17.6	24.4	28.6	27.7	31.8	20.4	20.2	21.6	13.9	18.1	14.3	13.8	36.7	10.2	20.6
15	11.5	19.7	36.5	13.3	22.1	15.6	30.2	36.8	18.7																36.8	11.5	22.7
16	18.1	17.3	9.0	25.5	32.8	29.8	19.0	14.0	20.9	44.0	31.0	53.9	52.5	40.6	52.5	37.8	44.7	41.4	46.6	44.6	39.7	33.8	43.2	42.5	53.9	9.0	34.8
17	47.9	43.1	35.4	26.4	55.9	14.8	15.5	16.2	15.2	13.9	13.4	13.4	16.2	15.6	15.2	16.1	16.2	17.3	16.2	16.1	18.7	17.7	17.8	15.7	55.9	13.4	21.2
18	15.8	13.9	12.4	13.8	13.8	12.6	14.8	15.7	14.4	14.5	14.6	12.8	13.6	16.8	15.8	14.0	15.4	13.9	15.6	15.9	14.9	14.1	15.4	15.2	16.8	12.4	14.6
19	11.9	13.1	12.6	12.8	12.5	13.2	13.2	12.7	13.2	13.7	14.6	14.3	15.9	16.0	16.5	16.0	19.8	19.5	13.6	14.3	19.9	15.3	16.7	20.3	20.3	11.9	15.1
20	18.8	16.7	11.3	12.9	11.5	14.0	15.4	15.3	16.2	15.9	15.5	16.7	16.3	15.1	15.2	16.5	15.6	14.9	14.8	17.2	14.1	15.2	14.5	13.5	18.8	11.3	15.1
21	13.2	24.2	28.7	20.9	18.6	13.6	17.8	16.5	26.9	24.2	18.6	19.7	15.5	16.5	14.5	15.6	16.3	18.1	18.5	17.4	18.0	23.5	19.3	19.2	28.7	13.2	19.0
22	15.4	16.8	14.5	14.3	14.1	14.5	12.6	16.5	13.1	15.1	80.7	27.3	51.2	68.9	48.2	23.7	39.5	48.0	34.9	23.5	22.2	37.0	87.8	12.9	87.8	12.6	31.4
23	12.8	14.8	29.2	25.9	19.4	13.9	12.6	14.7	15.3	19.8	18.3	17.6	15.0	15.3	16.1	55.5	36.1	68.5	70.4	70.2	43.1	41.3	34.8	61.5	70.4	12.6	30.9
24	69.6	12.8	23.2	44.6	16.7	36.7	28.1	13.9	16.7	17.2	12.1	12.1	12.2	13.4	15.4	26.0	95.2	31.3	27.8	14.3	27.0	74.3	19.4	12.9	95.2	12.1	28.0
25	17.4	22.5	19.4	31.1	29.0	22.0	18.6	14.7	16.7	33.9	16.6	14.2	16.0	16.6	16.1	16.6	16.0	60.6	24.0	40.3	25.1	12.9	29.3	63.7	63.7	12.9	24.7
26	14.0	7.2	11.1	69.0	48.0	14.6	14.2	14.5	14.6	15.8	16.3	14.7	13.8	14.3	15.1	16.1	15.9	17.5	13.4	76.4	42.5	34.8	68.6	80.9	80.9	7.2	27.6
27	35.1	21.2	16.8	10.3	10.2	11.8	25.3	13.1	17.7	16.7	27.5	35.8	38.6	46.5	43.5	34.0	16.7	29.4	17.8	19.4	18.4	96.3	6.6	15.3	96.3	6.6	26.0
28	75.5	88.1	24.0	18.5	18.0	16.7	14.9	13.6	12.6	12.8	13.1	13.9	13.5	17.3	17.1	14.1	15.4	15.2	16.8	18.3	19.0	15.8	22.1	17.5	88.1	12.6	21.8
29	12.1	13.5	12.3	11.6	11.3	11.2	12.3	13.5	14.4	13.1	13.2	15.3	17.7	14.0	15.8	15.7	21.0	20.0	18.0	22.9	18.2	14.5	14.3	12.5	22.9	11.2	14.9
30	12.2	16.5	14.4	12.7	12.8	14.4	14.5	15.0	16.5	14.9	13.8	14.2	16.4	16.2	18.4	17.0	18.3	14.3	15.6	14.9	14.3	14.9	18.2	15.2	18.4	12.2	15.2
31	16.5	14.2	18.3	14.9	14.8	13.8	13.6	13.2	14.7	12.8	12.8	11.3	13.3	14.2	14.4	14.3	14.9	15.2	17.6	19.5	17.3	20.6	18.1	13.2	20.6	11.3	15.1
Max.	**75.5**	**88.1**	**83.5**	**95.1**	**72.1**	**81.2**	**84.9**	**92.1**	**58.0**	**67.6**	**80.7**	**53.9**	**60.5**	**68.9**	**80.6**	**61.6**	**95.2**	**68.5**	**70.4**	**86.7**	**82.6**	**96.3**	**87.8**	**80.9**	**96.3**		
Min.	**7.6**	**7.2**	**7.9**	**10.3**	**9.7**	**11.2**	**10.4**	**12.7**	**12.6**	**12.8**	**12.1**	**11.3**	**12.2**	**13.4**	**14.4**	**14.0**	**11.4**	**11.8**	**10.9**	**12.5**	**12.9**	**10.3**	**6.6**	**12.5**		**6.6**	
Avg.	**25.6**	**25.3**	**25.7**	**29.5**	**27.7**	**27.1**	**28.2**	**25.5**	**24.7**	**25.5**	**26.7**	**26.1**	**25.9**	**27.7**	**30.1**	**26.6**	**30.8**	**31.6**	**29.3**	**33.7**	**31.1**	**29.9**	**29.5**	**31.7**			**28.1**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	17.1	15.9	18.1	18.8	16.9	14.6	13.0	12.8	15.7	19.9	23.8	78.2	38.7	40.9	51.8	36.1	52.5	38.0	30.8	12.2	31.4	36.2	43.7	25.4	78.2	12.2	29.3
2	36.3	20.2	35.0	32.4	39.6	37.2	32.8	28.0	31.6	28.7	19.4	55.2	33.2	40.1	39.0	55.4	24.2	70.2	79.0	59.2	44.9	33.6	28.0	18.3	79.0	18.3	38.4
3	95.6	91.9	87.9	90.3	49.6	24.1	26.5	18.9	20.2	24.8	21.0	62.2	49.7	22.4	28.8	38.2	48.0	39.0	65.6	30.2	22.7	20.6	18.8	18.2	95.6	18.2	42.3
4	23.3	16.8	26.3	45.7	29.6	30.1	16.7	23.5	26.3	26.0	26.5	48.3	51.3	29.7	40.9	43.5	68.0	79.6	42.0	73.6	51.3	39.5	12.6	10.2	79.6	10.2	36.7
5	16.6	14.7	20.2	23.1	77.2	26.3	9.8	8.6	18.5	77.1	26.7	25.6	24.8	29.1	41.2	53.2	26.7	38.8	30.7	21.0	21.8	53.8	32.0	24.6	77.2	8.6	30.9
6	22.1	11.5	55.4	24.2	10.8	11.5	13.1	29.3	83.6	13.4	86.3	15.7	85.6	33.1	25.3	58.9	35.5	29.1	27.1	24.1	22.3	24.6	41.6	16.3	86.3	10.8	33.3
7	8.4	25.7	21.4	27.7	16.1	15.1	18.0	14.4	10.9	15.0	15.4	15.0	16.1	18.1	21.7	19.9	19.3	19.8	19.7	22.5	23.8	15.4	22.2	25.1	27.7	8.4	18.6
8	22.3	49.6	9.5	10.8	18.1	22.5	14.6	57.6	37.5	23.6	45.2	29.5	31.0	47.1	53.1	43.0	31.5	57.5	40.5	29.5	28.4	82.5	6.5	8.6	82.5	6.5	33.3
9	10.0	8.7	5.6	17.7	11.6	57.5	54.4	22.8	13.0	13.0	15.7	15.4	15.1	18.1	18.1	71.4	36.2	42.0	34.6	41.8	53.5	44.7	51.2	42.4	71.4	5.6	29.8
10	75.5	56.5	59.0	43.8	18.8	18.2	31.8	37.7	57.0	48.7	33.5	52.5	47.4	78.4	58.6	97.1	64.6	57.4	51.1	72.0	83.8	34.6	75.3	43.9	97.1	18.2	54.1
11	37.0	35.1	24.5	25.8	52.4	28.0	20.7	41.8	32.8	46.2	93.5	58.5	54.9	55.9	17.0	43.2	70.7	39.5	30.3	20.2	39.0	23.8	8.0	8.7	93.5	8.0	37.8
12	13.9	31.8	21.8	17.6	16.2	15.4	27.1	20.4	15.5	18.2	15.6	15.5	79.1	26.3	51.8	31.2	50.0	34.4	28.6	27.6	21.4	28.6	61.8	72.7	79.1	13.9	30.9
13	89.5	21.1	20.2	16.0	19.1	17.8	33.4	13.7	14.1	11.0	15.3	16.0	19.1	14.4	38.9	29.2	79.8	95.3	71.0	50.7	78.6	82.5	34.0	56.5	95.3	11.0	39.0
14	37.1	81.0	16.8	23.9	47.2	28.5	93.2	59.0	31.3	23.4	17.0	38.5	27.7	31.3	18.5	16.1	14.2	13.2	18.2	55.6	63.3	29.4	23.2	87.2	93.2	13.2	37.3
15	93.6	20.4	12.5	12.1	14.6	12.2	11.7	12.5	13.4	12.4	13.7	15.2	17.2	16.9	26.3	27.0	16.0	12.2	44.1	21.1	26.0	33.2	48.0	49.6	93.6	11.7	24.2
16	34.7	76.8	60.4	58.1	36.1	20.4	11.7	13.7	21.6	14.9	51.8	58.4	41.5	90.4	99.6	95.8	75.9	80.7	89.1	91.2	69.4	61.6	41.4	21.6	99.6	11.7	54.9
17	37.1	59.2	30.7	41.3	22.9	38.9	78.2	44.9	95.7	24.2	40.1	20.6	48.1	40.6	29.2	25.2	41.4	38.7	39.9	50.9	39.1	45.6	29.5	37.5	95.7	20.6	41.6
18	40.0	35.2	42.6	84.9	12.1	28.5	12.5	16.3	42.1	72.4	64.1	58.5	32.5	33.8	33.1	32.8	32.8	36.0	96.2	22.0	14.9	28.6	20.4	32.9	96.2	12.1	38.6
19	17.9	19.8	12.4	10.8	11.0	11.6	18.9	27.4	96.4	12.3	14.0	13.8	14.7	12.7	13.1	13.2	12.9	13.6	14.3	12.5	12.7	12.8	12.6	11.3	96.4	10.8	17.6
20	13.9	13.1	13.9	13.3	14.3	12.9	11.7	12.2	13.3	12.0	12.2	12.9	11.8	11.3	12.8	13.6	13.3	12.7	14.4	14.0	12.6	11.1	13.2	11.7	14.4	11.1	12.8
21	12.5	13.7	11.9	12.6	13.1	12.6	14.7	12.8	12.3	11.7	12.4	12.4	12.1	13.4	13.0	12.6	13.0	20.6	89.3	17.8	10.0	46.1	50.4	32.3	89.3	10.0	20.1
22	35.0	82.8	75.4	55.3	41.1	48.9	90.6	54.9	17.4	90.9	41.2	21.6	33.8	35.4	39.6	23.9	37.6	29.7	52.3	73.8	44.6	16.3	15.8	14.1	90.9	14.1	44.7
23	13.8	12.8	11.9	13.3	13.6	13.5	12.6	13.3	16.7	16.3	13.3	13.8	15.6	14.0	72.5	21.3	23.7	15.3	22.7	96.7	77.2	82.8	12.6	13.7	96.7	11.9	26.4
24	22.9	22.5	21.6	22.6	13.9	16.6	13.7	14.8	13.8	14.4	14.4	13.7	14.1	13.3	14.1	16.7	15.4	15.1	15.9	13.7	12.3	13.5	14.2	9.5	22.9	9.5	15.5
25	24.9	28.9	43.2	69.7	93.3	84.5	29.5	12.7	12.6	14.5	30.2	64.7	14.2	79.7	35.2	30.7	45.8	38.0	43.1	28.5	23.4	33.1	25.9	16.3	93.3	12.6	38.4
26	23.3	19.0	29.1	64.1	73.5	26.5	24.0	19.4	19.5	15.3	21.3	35.3	14.7	37.4	33.1	27.4	38.4	39.6	35.4	24.3	31.2	46.3	52.8	23.4	73.5	14.7	32.3
27	73.4	8.9	9.7	8.7	12.5	12.9	76.8	39.5	13.1	13.7	13.9	13.1	12.8	13.6	15.3	15.0	11.8	12.2	12.0	11.6	12.5	10.3	11.2	11.5	76.8	8.7	18.6
28	15.0	13.8	13.2	13.4	18.8	17.4	16.2	13.8	14.6	13.0	14.3	13.2	13.8	14.9	12.6	13.9	13.9	12.7	13.2	14.2	15.0	14.8	15.3	15.8	18.8	12.6	14.5
29	12.2	14.5	12.5	14.4	13.4	12.2	13.0	12.1	13.1	18.9	14.8	16.8	15.3	17.7	19.9	18.3	16.5	16.9	17.3	16.5	13.5	13.0	12.7	13.8	19.9	12.1	15.0
30	13.1	13.8	13.9	14.1	13.6	13.6	12.6	14.5	11.4	13.8	14.7	15.0	16.1	80.2	50.3	32.3	46.3	47.8	37.7	37.4	30.9	39.9	52.9	31.3	80.2	11.4	27.8
31	39.1	59.3	44.6	35.5	36.9	43.5	49.5	29.9	32.7	28.7	28.7	23.4	21.7	26.5	29.1	18.0	18.7	19.0	20.8	23.5	24.7	28.3	42.0	38.9	59.3	18.0	31.8
Max.	**95.6**	**91.9**	**87.9**	**90.3**	**93.3**	**84.5**	**93.2**	**59.0**	**96.4**	**90.9**	**93.5**	**78.2**	**85.6**	**90.4**	**99.6**	**97.1**	**79.8**	**95.3**	**96.2**	**96.7**	**83.8**	**82.8**	**75.3**	**87.2**	**99.6**		
Min.	**8.4**	**8.7**	**5.6**	**8.7**	**10.8**	**11.5**	**9.8**	**8.6**	**10.9**	**11.0**	**12.2**	**12.4**	**11.8**	**11.3**	**12.6**	**12.6**	**11.8**	**12.2**	**12.0**	**11.6**	**10.0**	**10.3**	**6.5**	**8.6**		**5.6**	
Avg.	**33.1**	**32.1**	**28.4**	**31.0**	**28.3**	**25.0**	**29.1**	**24.3**	**28.0**	**25.4**	**28.1**	**30.6**	**29.8**	**33.4**	**34.0**	**34.7**	**35.3**	**36.0**	**39.6**	**35.8**	**34.1**	**35.1**	**30.0**	**27.2**			**31.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	24.4	23.7	21.7	33.5	21.1	16.5	22.2	16.8	20.1	16.5	17.8	21.3	25.1	25.2	20.8	18.9	15.1	18.1	20.9	36.8	40.9	27.0	28.6	34.4	40.9	15.1	23.6
2	25.2	29.9	33.6	28.6	33.7	41.7	36.4	43.1	35.2	39.9	46.3	42.6	47.6	30.0	35.3	20.4	20.9	25.7	26.8	23.5	44.2	22.3	23.1	23.2	47.6	20.4	32.5
3	23.1	23.9	23.4	25.5	19.5	23.3	30.9	55.1	53.7	77.3	25.6	12.3	13.3	15.3	19.6	24.4	17.6	13.8	37.1	80.3	77.3	19.0	29.8	15.3	80.3	12.3	31.5
4	13.4	74.7	95.7	10.3	30.2	54.4	13.7	12.7	12.7	11.1	23.4	14.8	77.8	26.6	32.7	34.8	37.0	28.8	24.7	68.2	51.4	20.6	8.3	21.0	95.7	8.3	33.3
5	14.1	20.0	12.1	43.3	75.3	71.6	81.2	65.0	74.1	53.9	19.8	30.7	39.4	24.4	31.8	30.8	30.9	52.4	75.6	35.6	27.6	21.1	48.6	23.0	81.2	12.1	41.8
6	24.6	35.9	17.3	17.1	27.7	32.5	48.3	52.1	23.8	44.7	27.9	26.2	32.0	34.9	18.3	17.6	15.6	19.1	19.3	23.5	18.2	18.3	16.7	18.7	52.1	15.6	26.3
7	51.4	17.8	17.6	18.9	20.7	25.3	19.6	25.3	31.0	26.3	34.7	50.0	47.3	52.7	36.6	31.5	29.2	19.3	26.6	41.1	40.1	29.8	42.8	40.8	52.7	17.6	32.3
8	14.8	58.2	72.4	57.7	81.6	51.7	32.5	74.0	56.3	82.6	33.3	35.0	18.9	15.4	26.1	34.9	30.6	37.0	39.7	20.0	14.9	19.1	17.3	16.7	82.6	14.8	39.2
9	16.3	15.4	15.9	18.8	20.5	24.5	18.3	17.1	18.2	15.3	17.9	38.9	58.7	59.4	44.6	57.3	61.1	52.2	51.1	48.5	44.1	45.4	37.1	23.5	61.1	15.3	34.2
10	24.6	60.1	31.4	75.6	72.8	44.6	31.3	20.5	76.9	55.6	43.3	55.7	14.6	13.6	14.2	16.7	14.9	15.0	17.4	16.3	15.4	15.2	17.1	21.2	76.9	13.6	32.7
11	17.9	16.0	15.2	15.5	12.8	13.7	15.2	16.3	20.5	15.8	14.4	14.4	13.3	41.1	45.5	47.3	67.8	81.7	61.5	39.8	20.4	14.7	14.9	31.0	81.7	12.8	27.8
12	30.8	23.9	21.6	11.5	19.8	18.5	30.0	31.4	24.9	21.5	18.8	15.8	20.3	18.9	20.0	25.3	17.8	21.5	21.2	17.2	24.2	23.7	25.3	23.5	31.4	11.5	22.0
13	24.2	32.2	23.2	31.8	29.9	28.7	23.6	27.0	19.3	17.7	21.2	24.6	26.9	33.1	37.0	43.0	45.3	32.6	18.9	19.1	18.4	15.8	16.1	14.8	45.3	14.8	26.0
14	19.4	34.7	71.2	66.4	74.3	34.5	43.5	65.9	23.1	21.3	20.8	16.2	22.3	16.5	54.1	74.8	54.8	78.6	50.2	91.1	68.9	95.2	73.0	59.9	95.2	16.2	51.3
15	21.8	61.0	47.6	25.3	37.0	44.2	38.9	31.3	25.3	20.7	38.0	34.1	81.5	53.0	75.9	66.4	42.9	49.7	55.0	46.9	59.6	26.9	27.7	22.6	81.5	20.7	43.0
16	39.6	18.3	22.6	28.8	16.3	14.8	14.6	13.9	16.0	14.2	13.3	14.2	14.0	14.0	14.6	14.9	17.4	16.0	18.8	18.6	17.1	24.3	19.9	16.7	39.6	13.3	18.0
17	17.4	16.2	17.8	17.0	18.7	17.3	18.8	20.2	15.8	12.6	12.3	15.0	20.3	45.7	30.4	34.3	26.4	31.3	32.8	38.4	43.2	34.7	29.6	27.8	45.7	12.3	24.8
18	18.1	17.6	17.1	24.1	20.8	18.6	17.2	25.9	36.2	65.7	57.9	41.0	41.2	24.1	21.5	28.0	32.5	23.3	26.2	31.0	34.0	25.1	23.1	26.9	65.7	17.1	29.0
19	24.0	32.5	31.7	34.5	43.6	68.5	24.2	85.8	38.0	57.0	86.2	58.2	16.7	22.3	15.3	14.5	14.7	14.3	13.7	16.3	14.9	16.3	17.3	19.5	86.2	13.7	32.5
20	20.4	22.7	39.0	16.1	14.8	15.6	13.7	15.9	16.7	15.5	14.3	15.8	16.0	15.6	17.6	17.2	16.0	17.7	18.8	24.2	55.6	43.6	21.0	32.6	55.6	13.7	21.5
21	17.7	20.7	18.3	20.4	16.5	17.2	17.5	14.1	16.9	13.2	17.9	19.7	16.7	16.4	15.2	16.4	21.0	18.5	19.2	19.0	19.5	22.2	52.1	34.4	52.1	13.2	20.0
22	12.6	10.0	7.7	8.2	7.0	16.7	11.0	11.2	13.8	10.8	12.3	13.2	15.7	14.9	12.3	11.6	13.0	17.7	23.5	31.4	25.6	30.0	16.0	88.3	88.3	7.0	18.1
23	15.5	12.2	29.6	54.7	27.8	21.9	80.7	61.4	70.6	59.5	78.5	12.4	43.5	15.2	46.3	39.3	30.9	67.1	73.5	80.5	23.1	28.5	19.1	79.0	80.7	12.2	44.6
24	29.5	53.9	67.8	10.3	41.6	62.3	79.1	81.7	74.7	49.5	78.9	27.8	78.0	32.8	16.3	15.8	12.0	15.6	26.8	27.6	25.6	18.1	20.4	18.8	81.7	10.3	40.2
25	19.8	18.8	17.5	90.3	80.5	70.7	56.4	25.2	33.5	52.6	20.9	18.4	66.2	76.8	13.8	58.0	56.6	72.4	62.9	39.0	31.8	40.2	50.5	70.7	90.3	13.8	47.6
26	74.2	49.8	15.9	16.7	14.8	16.2	21.5	18.5	15.3	17.3	26.5	16.8	94.8	25.5	36.7	64.4	69.2	86.7	32.5	65.8	18.2	36.6	24.9	14.7	94.8	14.7	36.4
27	10.0	9.7	11.4	15.9	13.3	16.6	21.7	14.4	18.4	19.9	15.1	12.0	21.0	14.1	17.4	15.8	15.7	21.7	12.5	13.8	14.9	13.2	15.1	13.7	21.7	9.7	15.3
28	13.1	25.1	17.5	18.1	30.9	34.5	18.5	14.6	17.0	17.2	20.1	13.2	13.9	13.4	39.2	43.4	70.5	61.0	32.8	38.7	48.7	94.3	44.8	32.7	94.3	13.1	32.2
29	17.5	12.7	22.8	17.1	41.2	33.0	12.9	11.2	16.4	19.0	36.4	17.8	23.0	19.8	30.9	49.3	59.2	42.7	51.3	32.5	82.7	6.9	30.1	64.6	82.7	6.9	31.3
30	99.7	59.4	38.4	13.0	20.1	17.2	17.3	15.9	19.3	18.1	15.1	14.7	16.8	15.6	14.3	15.5	15.1	19.0	14.1	14.3	10.0	7.8	7.5	7.5	99.7	7.5	21.1
Max.	**99.7**	**74.7**	**95.7**	**90.3**	**81.6**	**71.6**	**81.2**	**85.8**	**76.9**	**82.6**	**86.2**	**58.2**	**94.8**	**76.8**	**75.9**	**74.8**	**70.5**	**86.7**	**75.6**	**91.1**	**82.7**	**95.2**	**73.0**	**88.3**	**99.7**		
Min.	**10.0**	**9.7**	**7.7**	**8.2**	**7.0**	**13.7**	**11.0**	**11.2**	**12.7**	**10.8**	**12.3**	**12.0**	**13.3**	**13.4**	**12.3**	**11.6**	**12.0**	**13.8**	**12.5**	**13.8**	**10.0**	**6.9**	**7.5**	**7.5**		**6.9**	
Avg.	**25.8**	**30.2**	**29.8**	**28.8**	**32.8**	**32.2**	**30.4**	**32.8**	**31.1**	**32.1**	**30.3**	**24.8**	**34.6**	**27.5**	**28.5**	**32.7**	**32.4**	**35.7**	**33.5**	**36.6**	**34.3**	**28.5**	**27.2**	**31.2**			**31.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.5	25.7	21.6	19.6	13.3	19.7	70.5	10.0	7.5	8.0	63.3	54.0	20.5	44.4	45.5	66.6	39.5	24.3	23.6	15.3	16.4	16.0	34.3	44.4	70.5	7.5	29.8
2	7.6	24.1	28.1	7.7	9.3	9.5	15.2	15.9	70.8	52.1	18.9	17.1	18.6	15.8	17.2	15.5	13.6	15.6	14.2	16.0	16.0	15.5	14.0	15.6	70.8	7.6	19.3
3	15.9	16.1	17.1	16.8	18.8	15.4	15.5	17.6	16.2	15.8	15.3	17.7	16.8	13.4	15.0	13.1	16.2	16.5	14.6	14.7	12.6	10.7	8.4	7.6	18.8	7.6	14.9
4	7.4	9.0	9.0	9.6	9.7	10.2	15.9	9.9	15.5	22.9	56.1	16.0	15.0	14.4	13.5	14.5	12.6	15.2	10.7	9.2	9.5	16.1	17.9	19.2	56.1	7.4	15.0
5	24.2	15.8	17.8	18.3	16.8	15.6	16.3	16.9	17.4	20.5	21.0	17.4	15.1	14.8	14.7	12.4	13.7	13.9	13.0	11.9	13.6	14.2	20.7	12.8	24.2	11.9	16.2
6	13.7	12.9	11.7	26.1	16.2	15.4	26.3	18.7	15.7	14.7	14.0	14.3	16.0	15.3	16.7	15.3	16.0	15.5	16.3	14.0	14.7	15.3	14.0	17.3	26.3	11.7	16.1
7	17.1	15.1	14.8	16.1	14.3	16.8	17.3	16.7	18.1	17.1	15.9	16.8	17.1	17.2	17.7	19.9	20.9	18.4	18.4	19.1	18.3	19.4	16.2	15.4	20.9	14.3	17.3
8	15.0	15.7	14.8	16.1	14.6	16.1	16.3	16.9	14.9	14.2	13.1	14.2	15.1	17.3	16.0	14.1	13.4	14.3	13.8	10.2	10.8	14.1	30.7	35.3	35.3	10.2	16.1
9	26.3	18.3	19.5	18.6	16.1	28.2	24.4	21.0	16.1	17.9	14.2	15.8	18.4	21.3	16.2	17.3	22.8	21.1	18.5	17.5	16.1	21.1	18.6	16.8	28.2	14.2	19.3
10	16.9	21.3	79.5	100.6	90.7	95.6	52.5	68.6	58.3	16.2	18.3	22.2	16.5	28.7	59.7	33.8	85.8	39.9	76.8	17.6	11.3	7.5	13.9	38.8	100.6	7.5	44.6
11	38.1	15.8	21.8	16.8	12.6	14.0	12.0	11.2	15.6	16.8	30.1	35.5	28.6	33.4	57.7	34.1	25.9	12.8	15.4	18.5	21.0	17.9	17.1	15.1	57.7	11.2	22.4
12	12.8	12.7	12.4	11.5	11.0	12.2	12.2	11.8	11.3	11.5	12.4	13.0	11.8	14.8	13.1	16.6	17.5	15.7	14.0	13.4	12.9	11.9	15.3	13.8	17.5	11.0	13.2
13	14.9	15.9	23.9	18.1	18.2	14.8	15.4	17.0	16.2	22.0	53.1	68.8	53.6	34.6	21.7	19.3	22.1	15.2	15.9	16.8	17.7	18.4	16.9	27.0	68.8	14.8	24.1
14	25.1	38.4	22.2	34.5	24.4	18.0	17.3	16.7	13.4	14.5	26.3	18.8	15.8	13.4	20.6	17.9	26.4	23.6	84.9	66.4	44.6	30.6	81.3	56.0	84.9	13.4	31.3
15	76.0	71.3	53.4	94.9	95.9	80.7	59.7	20.0	24.9	13.1	58.3	54.9	14.1	22.5	14.4	15.0	14.0	15.3	13.1	13.8	14.1	15.3	15.1	14.6	95.9	13.1	36.9
16	15.4	14.3	16.6	16.2	14.7	15.3	16.1	17.0	16.3	15.9	15.4	15.8	14.8	15.4	14.6	16.8	15.2	13.3	12.8	14.9	14.5	15.0	14.5	15.3	17.0	12.8	15.3
17	15.0	15.3	15.3	16.8	15.8	14.7	17.8	16.6	17.1	15.3	12.2	13.0	13.6	14.3	83.2	32.7	21.1	16.9	14.1	17.1	28.7	22.7	17.1	21.4	83.2	12.2	20.3
18	19.4	17.5	17.8	18.0	19.3	13.8	36.5	56.5	28.1	23.4	20.0	21.7	22.6	16.6	16.0	23.7	52.4	62.9	27.2	15.2	17.7	20.2	16.3	14.2	62.9	13.8	24.9
19	18.5	28.7	15.6	22.4	13.4	29.0	34.2	36.6	24.6	29.9	19.6	19.5	16.4	15.5	14.9	15.5	15.8	14.4	16.9	15.4	15.6	14.7	14.4	15.6	36.6	13.4	19.9
20	15.4	15.3	15.4	16.3	14.9	13.7	14.2	14.5	13.4	15.3	14.5	14.7	16.1	13.9	15.4	16.5	15.1	15.2	15.6	17.5	15.4	17.2	16.8	16.7	17.5	13.4	15.4
21	16.0	17.8	16.0	15.4	14.8	13.6	13.6	15.9	17.9	16.7	15.7	16.2	16.1	16.0	16.4	16.3	16.9	16.8	16.8	17.2	17.3	17.4	16.3	17.8	17.9	13.6	16.3
22	17.5	18.4	17.9	19.1	14.2	14.8	17.7	18.4	16.3	15.1	14.5	14.4	19.3	26.3	16.7	15.6	15.7	15.0	15.1	14.3	15.9	17.1	14.0	24.0	26.3	14.0	17.0
23	67.6	43.0	13.6	16.6	14.2	18.2	21.2	15.1	21.8	14.8	15.2	15.5	15.7	17.5	26.2	15.6	18.1	22.3	20.4	18.1	15.6	17.1	17.6	16.9	67.6	13.6	20.8
24	18.4	18.9	17.4	18.7	20.7	19.0	18.7	19.6	20.6	19.2	16.9	15.9	17.0	21.6	22.6	20.7	16.9	16.8	21.2	25.4	19.8	44.8	19.2	28.8	44.8	15.9	20.8
25	37.8	37.5	36.9	11.9	15.3	70.3	87.0	90.0	68.5	83.9	91.0	57.8	15.7	28.5	33.4	89.4	87.9	57.3	77.9	49.0	55.7	20.7	8.6	36.8	91.0	8.6	52.0
26	42.1	31.9	16.8	21.3	22.5	28.3	22.4	22.9	23.7	25.7	13.0	76.3	35.9	28.8	15.8	25.9	11.2	15.5	15.7	26.9	14.6	14.3	16.1	14.3	76.3	11.2	24.2
27	14.1	15.6	14.2	15.9	15.8	15.8	14.9	14.9	14.6	15.4	14.9	15.2	14.5	15.7	16.6	16.0	15.9	16.3	14.7	14.0	13.0	16.5	14.5	14.5	16.6	13.0	15.2
28	16.7	16.2	15.6	15.1	8.2	16.4	7.5	14.0	42.8	28.1	78.9	76.8	39.8	25.4	6.9	7.1	5.6	8.6	10.7	8.3	38.9	40.8	27.2	20.5	78.9	5.6	24.0
29	34.9	8.2	7.3	14.4	10.1	11.5	8.5	8.0	10.9	9.2	13.3	98.2	64.0	43.6	13.4	18.6	15.8	8.8	20.7	19.9	19.9	54.8	11.5	41.2	98.2	7.3	23.6
30	15.6	79.6	85.0	76.2	76.5	73.7	36.3	96.8	89.4	11.8	22.1	22.1	9.6	17.8	12.7	12.8	14.1	11.4	88.0	8.5	11.4	6.3	5.9	7.8	96.8	5.9	37.1
31	7.5	11.4	10.2	11.5	7.1	9.6	7.1	7.1	9.5	8.2	9.4	18.8	35.7	7.8	14.2	9.6	15.0	14.0	15.4	27.5	9.1	8.1	11.6	12.2	35.7	7.1	12.4
Max.	**76.0**	**79.6**	**85.0**	**100.6**	**95.9**	**95.6**	**87.0**	**96.8**	**89.4**	**83.9**	**91.0**	**98.2**	**64.0**	**44.4**	**83.2**	**89.4**	**87.9**	**62.9**	**88.0**	**66.4**	**55.7**	**54.8**	**81.3**	**56.0**	**100.6**		
Min.	**7.4**	**8.2**	**7.3**	**7.7**	**7.1**	**9.5**	**7.1**	**7.1**	**7.5**	**8.0**	**9.4**	**13.0**	**9.6**	**7.8**	**6.9**	**7.1**	**5.6**	**8.6**	**10.7**	**8.3**	**9.1**	**6.3**	**5.9**	**7.6**		**5.6**	
Avg.	**22.4**	**23.1**	**22.6**	**24.2**	**21.9**	**24.5**	**24.5**	**24.3**	**24.8**	**20.2**	**26.3**	**29.3**	**21.3**	**20.8**	**22.5**	**21.9**	**23.0**	**19.4**	**24.7**	**18.8**	**18.5**	**19.1**	**18.6**	**21.5**			**22.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	21.6	13.4	28.5	8.5	17.4	18.3	31.7	18.0	11.5	16.4	22.4	15.9	18.1	15.4	16.4	17.1	18.1	18.0	17.2	17.5	16.0	17.0	16.9	17.8	31.7	8.5	17.9
2	17.5	16.1	17.2	15.5	14.5	15.0	14.1	14.8	17.6	17.2	18.3	16.1	14.8	16.3	17.0	17.2	16.5	15.2	14.6	14.4	15.2	15.5	15.1	15.7	18.3	14.1	15.9
3	17.3	16.3	15.3	15.9	15.5	14.8	15.1	15.4	15.1	16.0	15.4	14.3	16.3	17.2	16.4	14.6	14.8	14.7	15.2	15.1	14.4	14.7	14.1	14.5	17.3	14.1	15.3
4	14.6	15.2	15.1	14.3	15.9	15.1	15.1	14.7	14.8	14.9	14.7	13.6	13.1	14.7	14.0	14.5	12.8	14.3	14.9	13.2	14.4	15.1	14.0	14.4	15.9	12.8	14.5
5	14.2	14.2	14.1	14.7	16.4	16.2	15.3	17.4	15.4	15.6	13.3	14.6	14.5	11.8	11.4	11.6	12.2	17.8	100.6	18.3	16.7	28.3	27.3	17.9	100.6	11.4	19.6
6	21.5	35.4	48.6	26.2	55.8	32.3	75.7	62.6	54.1	47.8	73.5	87.0	40.6	47.3	59.6	15.0	13.8	15.4	14.1	13.4	15.2	16.6	19.4	17.5	87.0	13.4	37.8
7	16.1	13.5	14.2	14.9	14.3	14.7	16.9	16.8	16.0	15.9	15.3	15.3	15.9	16.0	17.3	16.7	11.7	14.5	16.5	13.6	13.0	17.6	13.5	18.2	18.2	11.7	15.4
8	18.9	22.1	17.8	14.2	16.3	19.1	21.6	18.5	33.1	74.1	58.5	82.4	28.9	22.4	25.0	27.9	15.0	17.3	18.9	20.1	15.0	16.8	14.7	17.2	82.4	14.2	26.5
9	15.5	15.6	13.3	17.1	17.5	20.5	28.7	33.8	21.0	21.2	20.6	19.9	16.4	16.4	17.9	18.0	19.2	15.9	21.2	18.4	13.6	15.6	17.2	21.4	33.8	13.3	19.0
10	17.5	17.7	19.6	20.8	18.2	81.9	61.1	41.2	45.1	57.6	26.0	20.2	47.1	19.7	34.6	21.7	20.2	41.0	28.4	44.2	47.7	32.3	27.9	16.1	81.9	16.1	33.7
11	20.6	27.5	24.5	26.7	23.2	21.9	22.1	16.4	85.5	78.6	50.5	19.5	43.7	71.2	79.5	59.6	52.7	21.6	65.7	41.4	16.6	16.6	17.7	17.7	85.5	16.4	38.4
12	17.9	16.6	19.4	20.0	19.5	14.6	20.3	23.7	20.8	19.4	18.5	18.9	17.9	17.2	18.0	16.7	17.0	13.8	19.9	17.6	20.8	21.6	31.4	60.2	60.2	13.8	20.9
13	17.3	29.2	22.8	13.0	9.4	11.9	21.2	48.7	40.1	14.3	37.9	36.7	32.6	26.5	22.8	26.7	27.7	46.0	89.7	100.1	64.7	62.2	91.0	53.4	100.1	9.4	39.4
14	58.6	47.2	74.2	17.7	36.7	62.8	25.3	12.6	10.3	15.8	6.3	36.6	57.5	58.9	21.3	18.4	18.0	21.0	21.5	18.0	19.4	18.2	25.2	23.2	74.2	6.3	30.2
15	23.5	91.5	80.3	89.0	50.3	18.1	21.4	18.6	13.6	22.6	14.0	8.0	24.6	47.5	72.3	67.1	30.1	30.7	20.2	25.6	43.9	11.1	14.3	17.4	91.5	8.0	35.7
16	12.3	18.6	19.7	17.6	22.1	73.7	35.7	66.3	21.8	61.7	58.4	34.5	19.0	21.2	17.0	18.9	14.1	21.0	12.0	9.0	10.8	8.8	13.5	28.5	73.7	8.8	26.5
17	8.2	7.6	5.1	6.4	6.2	10.9	6.1	9.4	11.5	9.5	14.3	37.5	14.3	11.9	22.7	36.5	34.3	26.4	19.9	27.9	16.1	11.4	9.4	6.3	37.5	5.1	15.4
18	8.7	9.6	14.8	21.3	22.8	22.6	16.0	17.6	15.3	17.4	19.2	17.1	16.1	12.6	12.6	15.6	15.9	14.9	13.0	13.2	13.3	12.9	15.1	17.7	22.8	8.7	15.6
19	17.7	21.6	14.4	15.0	15.5	14.9	16.8	15.5	16.3	15.8	16.0	15.8	14.4	15.0	14.4	15.6	14.7	15.3	19.1	18.4	21.5	15.3	16.0	15.6	21.6	14.4	16.3
20	14.1	15.0	14.9	14.7	17.0	18.4	16.4	18.9	13.2	13.7	14.6	13.5	14.4	14.3	13.3	13.3	14.0	14.0	14.0	13.3	13.4	14.1	13.7	13.2	18.9	13.2	14.6
21	14.7	16.3	15.5	15.8	14.7	14.7	14.5	15.6	15.3	13.2	12.4	12.7	12.3	14.4	14.5	14.1	14.5	15.5	15.4	15.0	13.7	14.0	13.9	13.4	16.3	12.3	14.4
22	15.8	11.1	11.7	11.8	12.5	13.4	13.0	13.1	13.6	13.7	15.3	15.1	13.6	13.9	12.4	15.1	16.9	20.6	17.3	19.3	17.5	24.8	15.7	13.4	24.8	11.1	15.0
23	19.6	17.9	61.4	41.6	83.1	21.2	13.0	14.3	14.8	21.5	21.9	17.3	13.2	22.3	74.3	36.5	32.3	14.1	11.7	14.8	24.6	17.5	11.8	19.1	83.1	11.7	26.7
24	33.1	41.8	28.5	22.4	15.3	17.6	18.4	18.7	23.6	21.9	21.3	23.3	18.0	19.4	22.1	21.7	21.0	51.9	32.8	17.6	64.3	92.1	91.7	82.3	92.1	15.3	34.2
25	14.7	14.6	14.8	14.9	12.7	13.9	13.2	14.2	13.6	13.8	14.5	14.3	15.6	15.0	15.4	15.3	15.8	14.8	16.4	15.4	13.5	15.0	14.4	15.8	16.4	12.7	14.6
26	16.0	16.1	15.2	15.5	15.6	15.3	15.1	15.7	15.3	14.7	14.5	15.5	12.1	15.4	13.6	11.3	12.1	11.7	12.8	17.6	13.7	14.6	14.0	13.2	17.6	11.3	14.4
27	13.3	14.6	15.8	16.2	15.5	14.9	16.6	14.9	15.7	18.8	17.0	19.5	14.1	15.7	15.7	15.1	13.6	15.5	15.8	13.2	13.4	14.9	24.4	30.5	30.5	13.2	16.4
28	36.6	11.7	12.4	12.7	13.0	12.2	13.1	12.8	13.8	13.3	15.5	13.4	12.8	14.6	16.6	15.3	17.0	17.4	16.3	14.4	12.3	14.2	12.8	12.1	36.6	11.7	14.8
29	12.7	13.0	12.4	12.9	13.7	13.2	13.7	13.7	13.9	15.4	15.6	15.3	14.6	13.3	14.8	15.0	14.7	14.8	14.7	12.8	13.2	12.3	15.7	15.2	15.7	12.3	14.0
30	14.4	14.7	14.6	14.7	14.1	14.6	14.9	14.5	14.1	16.0	14.7	17.1	17.1	15.6	16.9	16.7	17.5	17.9	18.0	17.4	18.0	14.7	16.6	16.8	18.0	14.1	15.9
Max.	**58.6**	**91.5**	**80.3**	**89.0**	**83.1**	**81.9**	**75.7**	**66.3**	**85.5**	**78.6**	**73.5**	**87.0**	**57.5**	**71.2**	**79.5**	**67.1**	**52.7**	**51.9**	**100.6**	**100.1**	**64.7**	**92.1**	**91.7**	**82.3**	**100.6**		
Min.	**8.2**	**7.6**	**5.1**	**6.4**	**6.2**	**10.9**	**6.1**	**9.4**	**10.3**	**9.5**	**6.3**	**8.0**	**12.1**	**11.8**	**11.4**	**11.3**	**11.7**	**11.7**	**11.7**	**9.0**	**10.8**	**8.8**	**9.4**	**6.3**		**5.1**	
Avg.	**18.8**	**21.2**	**23.2**	**19.4**	**21.2**	**22.3**	**21.4**	**21.6**	**21.5**	**24.3**	**23.0**	**23.4**	**20.8**	**21.8**	**24.7**	**21.3**	**18.9**	**20.1**	**24.3**	**21.0**	**20.9**	**20.5**	**21.9**	**21.9**			**21.6**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (Climatronics)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.9	18.8	13.2	13.9	15.0	13.3	14.9	17.5	15.1	14.8	20.2	79.1	20.6	44.3	54.6	76.4	102.2	22.0	27.7	16.9	19.7	15.8	15.9	21.4	102.2	13.2	29.2
2	13.2	14.7	20.2	26.5	18.9	25.2	26.6	29.6	47.6	63.0	55.6	21.8	23.0	35.2	27.1	18.0	16.4	19.9	21.0	18.9	25.7	17.6	18.1	16.4	63.0	13.2	25.8
3	21.8	27.7	22.2	23.5	18.9	19.8	21.3	19.0	24.4	25.7	20.5	29.2	29.6	26.5	17.7	25.8	16.3	17.6	16.0	26.4	16.7	14.3	16.8	16.7	29.6	14.3	21.4
4	17.0	18.8	17.4	19.1	23.0	29.2	46.7	41.3	42.2	18.6	42.7	29.3	14.4	15.0	16.6	15.7	19.5	27.3	33.4	28.1	19.2	17.0	16.9	16.8	46.7	14.4	24.4
5	23.1	31.7	32.5	20.7	29.7	34.5	30.0	55.7	51.5	46.6	56.1	34.0	19.6	20.2	14.2	20.9	20.8	17.9	21.1	20.4	19.8	24.0	19.2	16.9	56.1	14.2	28.4
6	23.6	17.9	14.9	12.8	17.3	46.2	28.8	55.2	98.0	63.5	96.8	96.3	74.1	61.2	61.7	31.2	22.6	36.6	35.1	61.0	14.4	83.5	15.0	66.9	98.0	12.8	47.3
7	79.7	89.0	53.7	64.5	20.4	17.3	17.3	16.8	19.2	15.0	16.3	16.4	15.6	16.6	13.7	19.6	12.3	13.1	84.7	92.9	34.4	18.8	33.0	24.5	92.9	12.3	33.5
8	23.0	21.4	16.9	16.3	16.5	17.2	16.9	17.4	15.8	17.7	17.4	21.0	16.3	16.8	16.3	20.0	17.1	17.5	19.9	25.1	33.0	36.9	32.7	49.1	49.1	15.8	21.6
9	40.5	48.3	68.3	82.1	64.4	46.4	64.9	63.0	67.5	16.1	49.3	71.2	14.9	13.3	15.2	16.3	17.5	15.4	16.2	14.2	13.1	14.3	15.5	17.9	82.1	13.1	36.1
10	18.4	21.3	23.1	26.5	15.8	16.6	16.0	16.7	15.0	15.2	15.9	16.5	18.1	16.8	17.6	15.7	16.3	16.9	16.5	15.7	17.2	16.3	17.2	15.1	26.5	15.0	17.3
11	18.3	16.3	18.7	24.8	21.0	20.6	17.5	15.0	14.9	18.9	14.2	13.8	13.8	13.6	12.8	13.6	14.6	17.9	20.0	16.7	19.2	15.5	18.2	24.6	24.8	12.8	17.3
12	24.1	15.5	14.3	15.7	17.1	14.6	18.0	17.4	19.0	19.5	18.2	27.4	32.2	15.6	15.9	16.3	20.9	13.6	21.7	19.0	18.4	24.6	19.7	16.3	32.2	13.6	19.0
13	17.4	15.9	27.6	26.0	18.3	29.2	52.1	59.5	62.4	75.1	98.8	13.4	49.1	18.3	37.0	25.0	41.0	25.5	18.2	49.9	34.4	17.4	14.3	10.1	98.8	10.1	34.8
14	10.8	9.6	12.9	25.0	19.7	19.6	17.9	17.7	25.1	28.5	14.4	13.8	18.3	13.1	13.1	28.7	17.8	15.8	20.1	21.6	21.5	25.7	25.1	20.3	28.7	9.6	19.0
15	29.0	16.4	21.7	17.9	12.0	18.9	13.8	10.7	21.9	18.2	22.6	20.6	21.0	22.0	51.7	40.4	46.9	11.8	20.8	55.6	14.4	14.4	13.7	19.7	55.6	10.7	23.2
16	28.4	19.9	21.5	10.2	13.7	21.8	25.9	23.3	23.2	34.2	25.2	31.1	21.9	16.7	18.3	27.1	28.3	33.8	24.2	32.6	33.8	59.5	55.4	28.1	59.5	10.2	27.4
17	12.6	29.9	61.9	50.3	65.5	34.5	21.5	26.6	20.2	12.5	26.3	19.3	19.4	16.7	19.6	29.4	21.7	23.1	33.9	20.5	21.0	27.9	30.9	26.2	65.5	12.5	28.0
18	17.5	30.3	22.8	30.4	38.2	48.2	37.5	25.9	14.6	19.5	15.1	17.0	17.0	22.3	16.3	21.4	18.9	26.1	25.9	22.4	20.1	24.3	20.8	20.0	48.2	14.6	23.9
19	17.5	19.9	24.8	22.8	22.2	30.5	28.9	22.7	21.6	35.3	18.4	12.6	17.0	17.3	13.8	18.5	17.9	20.2	18.0	20.3	21.0	21.5	17.4	17.4	35.3	12.6	20.7
20	20.4	22.1	27.3	29.9	60.9	72.4	80.8	94.8	98.4	93.7	67.8	76.2	27.4	45.1	48.7	67.0	69.9	58.1	37.0	29.2	15.8	15.9	20.0	17.0	98.4	15.8	49.8
21	29.8	60.7	69.3	64.6	79.2	96.6	92.1	101.4	51.2	85.3	100.5	85.2	59.0	21.8	26.9	20.9	17.1	20.7	29.5	35.8	48.7	43.2	17.5	11.2	101.4	11.2	52.8
22	79.5	25.7	28.1	26.1	27.3	19.1	19.2	15.8	29.1	24.0	8.0	18.8	15.0	30.3	26.4	16.5	17.6	36.2	37.6	28.5	28.6	28.1	42.2	20.1	79.5	8.0	27.0
23	18.1	21.6	25.8	35.7	46.8	77.9	91.3	65.0	25.4	29.9	53.0	17.3	18.4	17.9	17.3	20.3	19.5	18.3	19.3	19.9	17.7	16.3	22.6	22.2	91.3	16.3	30.7
24	20.6	18.8	19.5	20.3	20.4	19.5	16.7	16.1	16.1	19.2	18.4	15.3	16.8	18.1	17.7	28.6	30.5	28.5	16.0	14.3	12.6	21.6	17.2	66.3	66.3	12.6	21.2
25	33.7	25.1	35.2	31.1	28.4	23.0	18.5	13.5	16.9	21.2	32.6	29.6	32.2	39.1	43.5	17.3	27.8	21.9	18.8	63.5	18.9	18.2	18.7	24.8	63.5	13.5	27.2
26	21.6	19.9	18.6	18.9	18.5	21.9	17.8	17.3	15.4	16.7	17.6	17.8	16.7	31.6	24.3	20.1	19.3	19.9	18.6	18.5	17.6	17.0	18.1	15.3	31.6	15.3	19.1
27	15.4	14.7	13.4	13.6	13.0	12.4	14.4	14.3	14.8	14.1	14.0	13.9	14.7	14.1	14.1	15.1	14.7	14.9	15.6	13.9	14.1	14.7	13.9	14.5	15.6	12.4	14.3
28	14.5	15.4	14.7	14.6	14.1	14.7	14.5	13.8	14.0	13.5	14.3	13.3	13.3	11.6	12.2	13.0	11.8	12.1	11.8	12.6	13.2	13.3	13.8	13.2	15.4	11.6	13.5
29	13.7	13.4	14.3	13.9	14.6	16.4	16.6	14.9	14.5	14.5	15.7	15.6	14.2	13.9	13.1	13.6	14.3	13.7	13.4	12.8	13.7	15.8	13.7	14.2	16.6	12.8	14.4
30	14.5	15.0	16.2	13.9	14.8	14.4	15.2	14.5	15.2	13.5	13.4	15.0	13.8	14.0	13.3	13.5	14.6	13.7	14.4	13.8	13.0	15.0	14.0	13.8	16.2	13.0	14.3
31	14.5	14.1	15.0	14.0	13.3	13.7	14.8	14.3	14.7	13.9	14.9	13.7	14.4	13.7	13.8	14.6	14.9	14.2	15.6	15.5	15.8	15.3	14.7	14.6	15.8	13.3	14.5
Max.	**79.7**	**89.0**	**69.3**	**82.1**	**79.2**	**96.6**	**92.1**	**101.4**	**98.4**	**93.7**	**100.5**	**96.3**	**74.1**	**61.2**	**61.7**	**76.4**	**102.2**	**58.1**	**84.7**	**92.9**	**48.7**	**83.5**	**55.4**	**66.9**	**102.2**		
Min.	**10.8**	**9.6**	**12.9**	**10.2**	**12.0**	**12.4**	**13.8**	**10.7**	**14.0**	**12.5**	**8.0**	**12.6**	**13.3**	**11.6**	**12.2**	**13.0**	**11.8**	**11.8**	**11.8**	**12.6**	**12.6**	**13.3**	**13.7**	**10.1**		**8.0**	
Avg.	**24.5**	**24.2**	**26.0**	**26.6**	**26.4**	**29.2**	**29.9**	**30.5**	**30.5**	**29.6**	**32.7**	**29.5**	**23.0**	**22.3**	**23.4**	**23.9**	**24.5**	**21.4**	**23.9**	**27.6**	**20.9**	**23.3**	**20.7**	**22.3**			**25.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.7	1.5	1.8	1.9	4.8	7.3	8.3	7.9	8.0	8.3	6.9	7.0	7.1	7.1	7.3	7.9	7.5	7.8	7.1	8.0	8.1	7.7	7.3	7.8	8.3	1.5	6.5
2	8.1	8.3	8.3	8.4	8.7	8.5	9.6	8.5	9.1	10.1	9.9	10.0	9.9	8.5	9.7	8.1	8.3	9.3	8.7	8.6	8.3	8.4	7.6	6.9	10.1	6.9	8.8
3	6.4	6.5	6.1	5.9	6.3	7.5	7.0	7.5	7.6	7.5	6.7	6.5	6.6	7.2	7.3	8.0	8.2	7.0	7.4	8.2	8.4	8.6	7.9	8.0	8.6	5.9	7.3
4	8.6	8.9	9.2	9.2	9.5	8.8	8.4	9.3	9.7	9.1	9.9	10.0	9.4	9.8	9.6	9.9	9.5	9.6	9.6	9.3	9.6	9.7	9.9	9.3	10.0	8.4	9.4
5	10.0	9.9	9.7	10.2	10.1	10.2	10.4	10.8	10.8	11.4	10.9	10.9	10.9	10.0	10.4	10.2	10.1	11.0	10.9	11.4	11.4	11.0	10.8	10.8	11.4	9.7	10.6
6	10.0	8.7	8.4	9.0	8.9	8.5	8.6	8.5	8.2	7.5	7.8	8.4	8.4	9.3	9.2	9.1	9.8	9.2	9.8	10.7	10.2	10.3	10.2	10.5	10.7	7.5	9.1
7	10.0	10.0	9.9	10.5	11.0	10.7	10.9	11.1	10.5	10.9	10.4	10.1	11.2	11.6	11.5	11.0	11.1	11.3	11.5	11.5	11.7	12.1	11.8	10.4	12.1	9.9	11.0
8	10.1	10.7	10.8	10.8	11.1	11.1	11.1	11.6	11.3	11.6	11.5	11.7	12.2	11.3	12.3	12.2	12.7	14.7	12.9	11.7	11.9	12.5	13.3	14.1	14.7	10.1	11.9
9	13.2	12.0	12.2	11.9	11.6	13.6	12.8	11.1	11.1	11.1	11.6	11.4	11.5	12.2	12.5	12.0	10.6	10.7	10.7	9.9	10.2	11.1	10.4	10.0	13.6	9.9	11.5
10	10.0	9.5	9.0	9.5	9.8	10.1	9.7	9.8	10.3	9.3	9.8	11.3	10.3	10.3	8.4	7.1	7.6	9.9	10.5	8.2	8.3	10.1	10.7	10.4	11.3	7.1	9.6
11	9.7	10.1	9.8	10.2	9.9	9.4	9.5	10.5	10.2	10.0	10.8	10.2	10.0	9.7	9.4	10.4	9.9	11.0	10.4	11.0	10.8	11.1	12.2	11.8	12.2	9.4	10.3
12	10.2	9.6	9.4	9.8	9.7	9.6	9.3	9.7	9.6	10.2	10.4	9.9	10.2	9.4	11.7	12.7	10.5	10.8	12.1	11.5	9.8	10.3	10.6	11.3	12.7	9.3	10.4
13	10.5	10.7	11.2	11.1	10.6	11.2	10.7	10.4	10.7	11.0	10.9	10.5	9.6	9.9	10.2	10.3	11.0	11.7	12.1	12.2	11.0	11.2	10.3	10.9	12.2	9.6	10.8
14	10.5	11.1	8.7	7.2	6.0	4.3	1.1	1.0	0.9	1.0	0.7	3.6	5.9	4.6	4.9	4.1	3.1	3.1	2.2	2.6	4.3	6.6	10.7	10.5	11.1	0.7	4.9
15	9.1	8.5	7.0	7.0	5.8	4.9	4.3	4.3	5.3	3.9	3.8	2.4	2.3	3.3	2.4	2.9	2.7	1.9	1.8	3.0	1.7	2.3	2.3	1.6	9.1	1.6	3.9
16	1.1	0.9	0.7	1.0	2.4	4.3	3.8	5.5	4.9	5.8	4.5	4.7	5.0	6.5	5.2	4.0	3.3	1.2	0.7	1.0	2.6	1.3	1.2	1.8	6.5	0.7	3.1
17	0.5	1.5	2.7	2.1	4.5	5.1	5.5	5.7	6.7	6.9	6.8	9.1	9.8	13.2	9.9	10.7	8.2	7.2	5.9	3.9	3.5	2.6	2.7	2.6	13.2	0.5	5.7
18	2.1	1.8	1.7	2.1	1.3	1.3	1.0	0.5	0.5	0.5	0.8	0.5	0.5	0.4	0.4	1.2	1.4	1.9	2.8	2.1	2.2	3.6	3.6	4.1	4.1	0.4	1.6
19	3.9	4.3	5.0	4.6	6.1	5.2	4.7	4.8	7.0	5.7	4.8	6.1	5.8	6.5	8.0	7.6	7.0	6.9	5.6	4.3	5.0	7.8	7.8	6.6	8.0	3.9	5.9
20	6.4	5.6	6.2	5.8	6.0	5.5	4.4	5.6	5.3	6.2	5.6	4.7	4.9	5.4	5.4	5.8	4.3	3.3	2.5	2.2	1.2	1.0	1.4	1.8	6.4	1.0	4.4
21	1.7	2.3	2.3	2.7	2.8	2.6	3.1	3.1	3.8	4.2	4.9	4.0	5.0	6.1	6.7	7.5	7.3	7.2	6.6	9.1	11.6	13.2	13.8	13.4	13.8	1.7	6.0
22	10.6	6.1	8.1	6.4	6.9	6.7	4.2	3.8	2.4	2.0	2.5	1.1	2.0	4.3	6.5	7.3	5.5	4.9	2.1	3.5	4.2	4.2	4.3	3.9	10.6	1.1	4.7
23	4.2	5.8	6.7	8.4	6.4	6.3	6.9	6.9	8.3	8.5	8.8	8.6	8.6	9.3	8.8	9.2	7.5	4.5	3.8	8.6	13.0	10.9	9.5	8.4	13.0	3.8	7.8
24	7.0	7.9	6.9	7.3	5.0	1.7	0.9	2.0	1.1	3.4	3.5	3.7	3.7	3.6	3.2	3.4	3.3	2.3	1.8	2.2	3.2	3.3	3.3	3.6	7.9	0.9	3.6
25	3.0	1.9	1.4	1.0	1.3	1.6	5.7	6.3	5.7	4.9	4.8	4.8	4.4	5.8	6.0	7.0	7.5	8.4	7.2	10.4	8.1	9.0	8.2	7.8	10.4	1.0	5.5
26	7.2	7.0	6.8	6.4	5.3	6.1	6.8	4.5	5.1	5.2	4.9	5.5	6.3	6.4	6.3	6.5	3.4	1.1	2.2	2.3	1.1	1.1	1.5	3.4	7.2	1.1	4.7
27	4.0	3.5	3.5	4.6	5.8	5.6	5.3	9.0	8.4	8.5	8.3	8.4	9.1	9.3	9.4	9.8	9.3	8.6	9.6	8.7	7.7	7.4	7.1	6.4	9.8	3.5	7.4
28	5.4	4.6	3.4	2.6	1.6	1.2	2.4	2.4	3.0	3.0	1.7	2.4	2.6	1.7	1.8	1.4	1.3	1.1	0.4	0.4	0.6	3.3	4.4	4.1	5.4	0.4	2.4
29	4.8	4.6	4.6	5.7	4.8	5.0	6.0	5.2	4.6	4.8	5.6	5.3	6.4	7.3	5.9	5.5	3.5	3.0	1.7	1.4	2.1	1.7	2.4	2.7	7.3	1.4	4.3
30	3.1	3.7	4.1	3.4	3.4	4.2	3.9	4.5	3.2	3.6	3.4	5.2	7.4	6.8	6.3	6.8	8.8	8.4	7.0	6.6	9.5	8.9	10.2	8.8	10.2	3.1	5.9
31	8.8	8.4	9.1	9.4	8.4	8.7	9.1	10.0	7.9	8.2	9.0	10.6	10.0	9.3	7.1	7.2	8.2	7.3	6.5	6.0	5.4	5.5	4.5	3.8	10.6	3.8	7.9
Max.	**13.2**	**12.0**	**12.2**	**11.9**	**11.6**	**13.6**	**12.8**	**11.6**	**11.3**	**11.6**	**11.6**	**11.7**	**12.2**	**13.2**	**12.5**	**12.7**	**12.7**	**14.7**	**12.9**	**12.2**	**13.0**	**13.2**	**13.8**	**14.1**	**14.7**		
Min.	**0.5**	**0.9**	**0.7**	**1.0**	**1.3**	**1.2**	**0.9**	**0.5**	**0.5**	**0.5**	**0.7**	**0.5**	**0.5**	**0.4**	**0.4**	**1.2**	**1.3**	**1.1**	**0.4**	**0.4**	**0.6**	**1.0**	**1.2**	**1.6**		**0.4**	
Avg.	**6.8**	**6.6**	**6.6**	**6.6**	**6.6**	**6.7**	**6.6**	**6.8**	**6.8**	**6.9**	**6.8**	**7.0**	**7.3**	**7.6**	**7.5**	**7.6**	**7.2**	**7.0**	**6.6**	**6.8**	**7.0**	**7.3**	**7.5**	**7.3**			**7.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.6	2.3	1.5	2.2	2.5	2.6	2.0	2.0	2.4	2.1	2.5	1.6	1.0	1.2	1.9	2.1	1.5	1.3	0.4	0.6	0.6	1.2	1.9	2.6	2.6	0.4	1.8
2	1.6	2.3	1.6	0.4	0.5	0.7	1.1	1.3	3.4	4.3	5.4	6.7	7.2	6.7	6.9	7.8	7.3	7.3	5.8	8.6	7.6	7.4	5.6	8.0	8.6	0.4	4.8
3	10.8	8.7	9.1	8.5	9.5	9.3	9.3	9.9	9.3	9.5	8.8	8.8	9.2	8.3	7.5	7.4	7.4	6.9	7.7	7.6	6.6	5.6	5.5	4.9	10.8	4.9	8.2
4	5.6	5.6	5.5	4.8	5.1	6.5	4.4	1.1	2.4	2.6	2.9	2.0	1.1	3.8	3.5	3.3	2.7	3.5	2.9	2.6	3.3	4.1	4.9	6.1	6.5	1.1	3.8
5	8.6	9.6	8.2	7.1	9.5	10.1	10.7	8.7	8.7	8.9	8.6	9.0	8.8	8.5	9.8	10.1	10.4	9.6	8.5	8.2	6.4	6.8	6.3	6.2	10.7	6.2	8.6
6	4.5	3.9	4.6	2.9	2.6	3.0	2.9	3.4	4.3	4.7	5.0	4.4	4.2	4.5	5.9	6.7	7.4	8.1	9.4	9.2	8.8	8.0	9.3	9.6	9.6	2.6	5.7
7	9.9	10.2	9.8	8.7	9.0	8.7	7.8	9.0	8.0	8.1	7.4	8.1	7.9	6.4	8.3	7.0	7.1	7.0	5.8	6.1	5.1	3.1	3.8	3.1	10.2	3.1	7.3
8	2.2	0.9	2.1	1.0	1.1	1.6	1.5	2.4	6.5	5.4	5.1	6.7	7.5	5.8	4.4	8.5	6.7	7.4	9.2	7.3	6.9	3.0	5.4	5.2	9.2	0.9	4.7
9	6.7	5.7	7.4	10.4	10.9	10.4	9.2	9.0	7.4	4.0	2.4	1.4	2.3	2.0	2.3	1.8	0.6	2.6	4.0	3.8	2.4	3.4	2.8	4.0	10.9	0.6	4.9
10	3.2	2.4	2.5	3.7	2.6	3.6	4.9	4.9	4.8	4.3	3.9	5.3	4.5	3.8	2.1	2.8	2.3	2.4	2.8	2.8	2.3	1.8	0.4	3.2	5.3	0.4	3.2
11	2.2	2.7	2.1	0.6	1.1	0.8	1.1	0.8	1.5	4.2	3.2	2.5	4.3	5.9	5.4	6.0	6.5	5.8	6.7	7.9	9.0	9.1	9.6	10.5	10.5	0.6	4.6
12	11.5	11.5	12.5	11.8	12.2	12.8	12.3	11.2	11.3	10.6	10.7	12.2	12.4	11.1	10.7	10.1	10.2	9.9	9.0	8.2	3.0	1.1	0.8	1.4	12.8	0.8	9.5
13	3.9	4.7	6.4	7.0	8.5	8.8	9.7	10.5	12.3	9.6	9.0	5.5	9.5	8.9	7.8	6.6	6.8	6.9	5.9	5.6	5.6	6.4	7.5	7.5	12.3	3.9	7.5
14	7.3	7.3	6.2	5.3	6.4	6.5	6.1	5.9	5.7	4.5	11.9	11.3	11.6	11.0	11.3	12.4	11.7	11.7	10.3	10.8	11.3	11.5	12.8	11.2	12.8	4.5	9.2
15	9.3	10.7	10.3	9.5	10.2	9.6	8.5	8.7	8.3	7.6	9.2	7.5	7.0	7.3	8.1	8.0	6.8	9.1	7.5	4.6	2.1	2.1	5.2	7.0	10.7	2.1	7.7
16	7.5	8.1	7.3	7.9	9.1	9.3	10.3	10.8	8.9	8.8	9.9	9.0	7.0	6.1	4.8	2.1	2.5	1.7	1.0	3.6	1.7	1.2	1.7	1.8	10.8	1.0	5.9
17	3.6	4.4	5.3	4.4	4.2	4.4	6.7	6.9	6.2	5.2	6.9	8.2	12.0	11.0	12.0	12.3	10.4	8.7	6.9	8.6	8.1	8.7	7.7	8.8	12.3	3.6	7.6
18	10.8	11.6	11.8	10.4	9.0	10.1	11.1	12.8	13.0	12.2	9.5	8.4	6.8	7.7	7.1	5.9	6.3	5.9	4.6	5.8	3.6	4.0	3.7	4.0	13.0	3.6	8.2
19	3.5	3.2	3.4	2.0	2.1	2.1	2.1	3.0	6.8	8.0	8.0	9.5	9.5	10.1	9.6	8.5	10.7	12.1	12.1	10.5	10.5	9.0	8.9	9.0	12.1	2.0	7.3
20	8.9	8.2	10.6	11.0	13.0	11.9	10.7	9.8	7.5	4.3	4.6	5.7	6.1	7.4	7.4	7.8	10.7	9.6	9.2	6.6	7.2	8.4	6.1	2.3	13.0	2.3	8.1
21	2.4	2.7	2.4	2.6	2.7	2.6	2.7	2.9	3.6	7.4	9.3	9.1	7.4	7.4	6.6	6.8	5.9	4.6	5.6	5.7	4.8	5.9	5.0	4.9	9.3	2.4	5.0
22	6.9	6.9	7.2	6.5	6.0	6.8	3.6	3.8	3.4	5.8	7.3	5.4	4.6	7.1	7.5	7.4	7.7	7.3	5.6	5.0	4.0	4.1	4.0	3.8	7.7	3.4	5.7
23	2.6	1.6	1.5	1.5	1.0	3.3	4.1	4.3	4.6	6.1	5.5	5.6	6.6	6.3	6.1	5.6	5.4	6.0	5.8	6.0	5.8	6.4	6.6	6.8	6.8	1.0	4.8
24	6.4	6.5	6.6	6.3	7.3	6.8	6.8	7.4	7.2	6.6	7.1	7.2	7.5	7.5	7.2	8.4	8.7	7.6	7.7	7.9	7.4	7.7	7.7	7.9	8.7	6.3	7.3
25	9.6	9.2	9.1	9.5	10.2	9.8	8.7	7.8	7.6	7.0	6.4	6.2	6.8	8.4	7.3	5.2	6.9	7.3	6.0	2.9	2.9	5.6	4.1	4.2	10.2	2.9	7.0
26	3.0	4.0	5.0	2.5	4.5	4.8	3.0	3.8	1.8	1.3	2.0	2.3	1.2	0.6	1.1	2.8	2.4	3.2	4.3	4.9	4.2	4.1	3.4	3.2	5.0	0.6	3.0
27	2.5	4.0	4.1	4.4	4.2	3.6	4.5	3.4	4.4	3.8	3.8	2.1	0.9	0.4	2.7	1.2	2.1	1.7	1.6	1.4	4.2	5.4	3.6	2.8	5.4	0.4	3.0
28	2.9	2.4	2.0	2.0	2.2	3.1	3.3	3.4	4.8	4.1	1.3	1.1	1.5	1.0	1.3	1.1	4.0	3.7	3.1	4.3	3.8	3.7	5.2	5.5	5.5	1.0	2.9
29	4.7	5.1	5.9	5.2	4.3	4.7	3.6	4.7	4.7	4.4	5.6	5.7	5.9	4.8	4.1	3.4	4.5	5.8	7.0	6.6	6.9	6.4	6.0	6.7	7.0	3.4	5.3
Max.	**11.5**	**11.6**	**12.5**	**11.8**	**13.0**	**12.8**	**12.3**	**12.8**	**13.0**	**12.2**	**11.9**	**12.2**	**12.4**	**11.1**	**12.0**	**12.4**	**11.7**	**12.1**	**12.1**	**10.8**	**11.3**	**11.5**	**12.8**	**11.2**	**13.0**		
Min.	**1.6**	**0.9**	**1.5**	**0.4**	**0.5**	**0.7**	**1.1**	**0.8**	**1.5**	**1.3**	**1.3**	**1.1**	**0.9**	**0.4**	**1.1**	**1.1**	**0.6**	**1.3**	**0.4**	**0.6**	**0.6**	**1.1**	**0.4**	**1.4**		**0.4**	
Avg.	**5.7**	**5.7**	**5.9**	**5.5**	**5.9**	**6.2**	**5.9**	**6.0**	**6.2**	**6.0**	**6.3**	**6.2**	**6.3**	**6.2**	**6.2**	**6.2**	**6.3**	**6.4**	**6.1**	**6.0**	**5.4**	**5.4**	**5.4**	**5.6**			**6.0**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.2	6.1	5.6	5.6	6.0	6.0	5.7	4.9	5.5	3.8	2.9	4.6	6.4	6.0	4.8	5.1	7.7	5.6	6.6	6.4	6.8	7.4	5.7	5.7	7.7	2.9	5.7
2	3.5	6.7	8.3	9.6	6.2	7.9	6.0	5.0	4.8	3.7	2.8	2.4	2.6	3.2	4.0	4.9	4.0	1.2	0.8	0.5	1.3	0.7	1.1	2.0	9.6	0.5	3.9
3	3.1	2.0	2.4	2.9	4.5	4.9	7.9	8.2	7.4	7.2	8.5	8.1	8.6	8.8	7.4	5.9	5.4	3.6	3.9	4.8	8.3	8.6	8.2	8.3	8.8	2.0	6.2
4	7.4	7.8	7.8	6.2	6.5	7.9	10.0	9.9	9.1	8.7	7.7	7.4	5.2	4.8	4.5	5.4	5.9	5.6	5.5	5.1	6.2	8.0	5.8	7.2	10.0	4.5	6.9
5	8.9	10.9	11.3	12.0	12.6	11.2	12.3	13.0	12.8	12.3	10.8	9.1	8.9	11.5	9.4	8.5	6.8	6.8	8.0	8.9	10.4	11.2	10.2	9.0	13.0	6.8	10.3
6	8.4	8.9	7.5	8.4	6.4	5.5	4.6	4.4	4.4	4.5	4.3	4.0	4.0	3.8	4.3	4.0	4.5	4.4	3.1	1.6	2.2	2.0	2.3	1.7	8.9	1.6	4.5
7	0.8	1.4	2.9	1.8	1.1	3.2	1.9	2.8	2.4	1.8	1.6	1.9	3.3	4.8	4.8	5.5	5.6	4.5	4.3	4.6	4.1	3.8	4.3	4.6	5.6	0.8	3.2
8	6.1	5.3	5.7	4.7	4.5	2.9	2.0	0.7	3.2	4.6	4.3	4.0	5.2	4.1	3.5	6.1	9.1	7.7	4.9	4.8	5.0	2.8	3.0	4.0	9.1	0.7	4.5
9	2.3	2.9	2.2	2.9	2.2	3.3	4.4	3.3	3.0	3.0	4.5	4.1	2.7	3.0	3.7	4.3	5.6	6.3	5.3	5.4	5.0	3.3	1.0	0.8	6.3	0.8	3.5
10	2.8	1.9	2.4	1.4	1.7	4.5	5.9	6.0	6.1	6.2	6.1	6.6	5.6	5.2	5.1	5.5	5.0	4.7	4.6	4.9	5.1	5.9	7.0	7.1	7.1	1.4	4.9
11	6.9	7.3	6.0	5.9	7.1	6.6	6.4	6.2	6.3	6.8	7.1	7.6	7.1	6.6	5.8	6.3	5.5	6.4	6.0	4.7	4.9	4.9	5.4	5.2	7.6	4.7	6.2
12	6.6	7.1	7.2	7.0	6.7	7.0	8.2	6.8	6.4	6.2	7.0	7.2	6.5	6.0	6.1	6.0	6.1	6.2	6.1	5.9	6.0	6.4	6.0	5.5	8.2	5.5	6.5
13	5.3	5.2	5.1	5.2	5.5	5.9	5.7	5.6	5.7	5.7	6.3	6.7	7.1	7.9	8.3	7.9	7.8	7.9	8.4	7.5	7.6	8.2	7.7	7.8	8.4	5.1	6.8
14	7.8	7.6	7.9	7.9	8.6	7.8	8.5	8.1	7.6	7.3	6.7	5.2	1.7	1.2	1.1	1.9	3.2	3.1	2.9	3.2	3.6	3.4	4.7	4.7	8.6	1.1	5.2
15	6.4	7.4	6.3	6.0	7.0	7.3	7.7	6.7	9.1	7.7	7.4	6.3	5.7	5.0	5.8	6.1	5.6	5.1	4.4	3.8	4.7	5.5	5.7	5.6	9.1	3.8	6.2
16	5.4	5.1	3.0	1.5	1.5	1.5	3.1	1.4	1.0	1.3	2.0	1.3	1.5	1.5	0.9	0.3	0.5	0.4	0.8	1.4	1.8	1.4	0.3	0.9	5.4	0.3	1.7
17	1.9	2.0	1.5	1.7	2.1	1.7	1.6	2.1	2.4	2.3	4.0	3.4	3.8	3.6	3.8	3.7	4.0	3.9	5.2	7.8	7.0	6.8	7.4	7.7	7.8	1.5	3.8
18	8.2	8.3	8.4	7.6	7.7	7.0	7.9	6.8	7.4	7.3	7.6	7.8	9.0	9.7	9.2	8.6	7.6	8.3	7.3	6.7	7.8	8.4	7.9	8.7	9.7	6.7	8.0
19	8.6	8.8	8.3	8.9	8.6	9.0	8.8	9.2	9.2	8.4	9.2	10.3	10.1	10.4	10.3	9.5	10.2	10.5	10.5	10.3	9.7	9.2	8.5	8.6	10.5	8.3	9.4
20	8.5	8.9	9.1	8.9	8.6	9.5	9.7	9.3	10.1	9.9	9.1	10.1	8.8	8.8	9.4	9.4	9.2	9.5	9.4	9.0	8.9	9.3	9.7	9.8	10.1	8.5	9.3
21	9.2	9.2	9.5	9.4	9.4	9.8	8.6	9.1	10.1	10.5	10.2	9.4	10.4	10.4	8.5	7.2	9.2	9.5	9.3	9.2	8.5	8.5	8.6	6.9	10.5	6.9	9.2
22	6.4	6.4	7.1	8.1	8.7	9.4	8.2	8.2	7.6	6.9	7.5	7.9	8.9	8.2	8.9	8.8	8.4	7.9	8.1	8.2	7.8	7.9	8.7	8.7	9.4	6.4	8.0
23	8.3	8.5	8.4	10.2	8.7	8.9	10.6	9.5	9.1	9.3	10.5	9.6	9.9	11.0	11.1	10.3	10.4	10.2	9.3	9.2	8.9	8.3	8.7	8.2	11.1	8.2	9.5
24	8.3	8.6	8.1	8.7	9.6	9.0	7.7	8.1	8.8	8.7	9.2	9.3	9.4	8.8	8.8	8.2	8.4	8.5	8.5	8.6	8.5	8.3	7.9	7.8	9.6	7.7	8.6
25	6.1	3.3	0.9	1.2	3.7	5.1	5.2	5.4	5.2	6.1	8.1	7.0	6.3	6.6	7.0	6.8	7.3	7.5	7.1	7.3	7.4	7.2	6.9	7.8	8.1	0.9	5.9
26										7.9				7.9	8.8	9.1	8.3	7.2	7.7	7.5	7.9	7.7	7.0	7.3	9.1	7.0	7.9
27	6.8	7.0	7.8	7.2	7.4	8.9	8.0	6.5	6.4	6.8	7.2	7.9	7.9	8.5	8.4	8.3	6.9	7.7	7.3	6.5	7.0	6.5	6.7	5.9	8.9	5.9	7.3
28	5.5	6.4	7.1	7.8	9.3	9.6	9.4	9.7	9.1	8.8	8.1	8.7	7.4	7.7	7.8	6.5	6.3	5.9	4.8	4.7	4.1	2.3	2.0	2.1	9.7	2.0	6.7
29	1.8	0.7	2.9	3.0	3.4	3.8	4.3	4.0	3.8	3.8	3.8	4.1	4.7	5.1	6.0	6.4	5.5	5.2	5.2	6.1	7.2	7.7	8.4	8.4	8.4	0.7	4.8
30	7.6	8.0	8.6	10.4	10.5	9.9	9.7	10.2	8.6	7.9	8.4	8.3	7.3	7.6	7.0	6.4	6.0	7.4	7.4	5.2	6.2	5.9	6.0	6.3	10.5	5.2	7.8
31	5.0	5.0	5.1	4.7	4.2	3.9	3.9	3.8	4.1	4.0	4.3	3.8	4.3	4.0	3.4	4.1	4.8	5.0	5.1	4.0	4.9	5.0	6.0	6.5	6.5	3.4	4.5
Max.	**9.2**	**10.9**	**11.3**	**12.0**	**12.6**	**11.2**	**12.3**	**13.0**	**12.8**	**12.3**	**10.8**	**10.3**	**10.4**	**11.5**	**11.1**	**10.3**	**10.4**	**10.5**	**10.5**	**10.3**	**10.4**	**11.2**	**10.2**	**9.8**	**13.0**		
Min.	**0.8**	**0.7**	**0.9**	**1.2**	**1.1**	**1.5**	**1.6**	**0.7**	**1.0**	**1.3**	**1.6**	**1.3**	**1.5**	**1.2**	**0.9**	**0.3**	**0.5**	**0.4**	**0.8**	**0.5**	**1.3**	**0.7**	**0.3**	**0.8**		**0.3**	
Avg.	**6.0**	**6.2**	**6.2**	**6.2**	**6.3**	**6.6**	**6.8**	**6.5**	**6.6**	**6.4**	**6.6**	**6.5**	**6.3**	**6.5**	**6.4**	**6.3**	**6.5**	**6.2**	**6.1**	**5.9**	**6.3**	**6.2**	**6.1**	**6.2**			**6.3**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.5	6.7	7.2	6.2	5.1	6.3	4.4	3.4	4.8	5.8	4.8	4.3	5.4	4.5	5.0	4.9	4.3	5.2	5.9	4.1	3.4	2.4	2.5	1.7	7.2	1.7	4.8
2	1.3	3.4	5.5	5.8	6.3	6.2	6.1	6.2	6.0	5.9	5.7	5.5	5.5	5.6	4.0	3.2	1.8	1.3	2.6	2.1	3.4	3.4	3.6	4.2	6.3	1.3	4.4
3	5.0	5.2	4.9	5.5	5.6	6.1	4.8	3.8	3.2	2.7	3.9	5.0	4.5	3.7	4.3	4.6	4.7	5.0	5.2	7.2	7.6	8.2	8.7	9.3	9.3	2.7	5.4
4	9.8	10.8	10.8	10.7	10.2	10.5	8.7	8.3	7.7	5.2	4.8	5.2	5.0	4.4	4.5	5.4	4.7	4.5	2.9	2.3	2.0	2.1	1.9	6.6	10.8	1.9	6.2
5	7.0	7.1	8.2	8.5	9.6	9.6	9.5	8.5	8.9	9.0	9.2	8.6	9.8	9.0	8.9	9.1	7.9	8.0	8.2	8.1	8.5	8.3	7.1	8.1	9.8	7.0	8.5
6	7.7	9.6	8.2	7.6	8.1	6.3	6.0	8.2	8.5	8.2	8.1	7.7	7.9	8.1	8.2	7.0	7.1	6.6	6.2	5.0	4.9	5.2	4.8	5.4	9.6	4.8	7.1
7	5.6	5.8	6.0	4.3	4.8	5.5	5.0	3.9	5.4	5.9	6.7	7.0	6.9	7.0	6.5	6.8	6.5	5.8	6.4	3.8	3.5	3.4	4.1	4.1	7.0	3.4	5.4
8	5.7	5.4	4.6	4.7	5.1	4.1	4.0	4.2	3.3	5.2	4.3	3.6	3.1	1.5	2.3	3.2	2.8	2.5	2.5	2.3	1.4	1.1	1.0	3.9	5.7	1.0	3.4
9	3.9	3.9	5.1	4.7	4.4	6.1	5.8	6.6	6.8	6.9	6.3	6.9	6.5	7.2	8.6	10.0	6.5	6.2	6.6	6.5	6.0	6.5	5.5	4.9	10.0	3.9	6.2
10	4.9	6.3	5.1	4.1	5.1	7.2	6.8	6.5	7.2	7.5	7.6	7.3	3.7	0.6	0.0	0.0	1.3	5.9	5.1	5.5	5.3	3.5	3.9	3.6	7.6	0.0	4.7
11	3.9	3.7	3.4	5.4	6.5	7.6	7.6	8.3	7.7	8.5	8.6	7.7	6.5	6.9	7.2	6.6	6.9	7.7	7.7	8.3	7.3	7.0	7.1	7.5	8.6	3.4	6.9
12	7.1	6.4	6.9	9.4	9.6	8.7	7.6	7.3	7.5	8.0	8.9	8.5	9.6	8.4	8.7	8.6	8.8	9.0	8.1	7.6	7.7	6.3	4.9	6.6	9.6	4.9	7.9
13	7.8	7.9	7.7	7.6	6.1	6.0	6.3	5.7	3.9	3.6	2.1	1.2	0.8	1.2	1.5	3.9	4.9	5.0	5.5	5.9	5.5	5.5	6.2	6.7	7.9	0.8	4.9
14	7.5	7.4	7.8	8.9	9.1	8.3	7.7	9.1	8.6	8.4	9.0	8.4	8.1	6.9	7.3	6.9	6.3	7.4	7.2	6.0	5.9	4.4	5.2	4.9	9.1	4.4	7.4
15	3.8	4.4	5.0	3.4	3.6	2.9	3.6	3.1	2.5	1.2	0.8	0.2	1.7	4.0	5.3	6.0	6.0	5.4	5.0	6.0	4.8	5.0	6.5	7.0	7.0	0.2	4.0
16	9.7	10.9	9.1	9.4	9.3	10.2	11.2	11.4	9.7	7.8	8.3	7.8	7.8	8.1	10.2	10.3	10.8	9.7	7.9	8.5	8.3	7.4	7.3	8.8	11.4	7.3	9.2
17	9.2	7.4	7.0	9.9	6.6	5.7	5.6	5.4	6.3	6.3	6.2	6.9	5.9	5.5	7.4	7.2	6.7	6.3	6.9	5.6	5.6	6.2	7.1	6.2	9.9	5.4	6.6
18	5.5	6.5	4.9	5.5	5.0	4.4	2.5	1.7	0.9	2.0	2.5	3.0	2.8	2.7	2.9	3.2	3.7	3.5	3.2	2.9	3.5	3.0	2.7	2.7	6.5	0.9	3.4
19	2.5	2.4	2.8	4.3	4.6	4.6	5.0	3.3	2.8	3.1	4.0	5.2	5.0	5.0	4.2	3.7	3.5	3.1	2.8	2.8	3.7	4.3	3.1	3.2	5.2	2.4	3.7
20	3.9	5.7	4.7	4.1	4.0	4.0	4.3	4.8	5.5	4.0	4.8	5.8	7.1	6.5	6.3	4.4	3.8	4.7	4.5	4.6	4.2	4.7	4.3	4.4	7.1	3.8	4.8
21	5.0	4.8	5.1	4.8	4.1	4.6	4.7	5.0	4.4	3.9	4.0	3.9	4.8	4.8	4.2	4.8	4.3	4.6	4.0	3.8	3.3	2.8	3.6	3.2	5.1	2.8	4.3
22	4.2	3.7	3.8	3.1	2.8	2.9	3.3	3.0	2.5	2.8	2.6	2.8	2.9	3.2	2.7	2.6	2.7	2.4	1.6	1.8	1.5	0.9	1.8	2.0	4.2	0.9	2.6
23	1.6	1.4	1.2	3.0	6.4	5.4	6.0	6.0	6.4	6.8	6.0	6.5	7.2	6.5	6.4	6.3	6.3	5.9	6.3	5.9	5.3	5.1	5.1	5.8	7.2	1.2	5.4
24	5.6	5.7	8.4	8.8	9.1	9.8	8.9	9.6	10.2	8.9	9.3	8.0	8.6	8.9	8.8	8.9	7.9	7.5	6.0	5.0	4.7	2.6	3.7	3.0	10.2	2.6	7.4
25	3.8	3.9	6.6	7.0	6.4	5.4	4.0	3.8	6.4	7.7	6.9	7.5	7.1	7.5	8.4	8.5	8.6	7.7	6.8	6.0	4.2	5.4	5.8	4.5	8.6	3.8	6.2
26	4.5	4.5	4.6	5.2	6.1	7.0	7.1	7.6	7.4	7.3	7.4	7.2	7.4	8.0	8.1	7.6	8.9	8.6	7.6	7.3	7.0	7.9	7.3	5.8	8.9	4.5	7.0
27	5.7	5.4	6.7	6.1	6.5	7.0	7.4	7.3	7.4	7.2	7.8	7.6	7.5	7.7	8.3	8.6	7.3	7.4	7.1	7.5	8.0	7.4	7.1	7.4	8.6	5.4	7.2
28	7.9	7.5	7.0	6.4	8.2	8.6	8.8	7.5	7.6	8.1	8.8	9.5	8.9	9.4	9.0	7.7	7.9	7.6	8.1	7.2	6.6	6.2	6.1	6.2	9.5	6.1	7.8
29	5.6	6.2	6.2	5.9	6.5	6.1	5.2	5.0	5.5	6.1	7.0	6.3	6.4	5.6	5.7	5.4	5.2	4.9	4.8	4.8	4.6	4.9	4.9	5.0	7.0	4.6	5.6
30	4.2	4.3	4.2	3.6	2.6	2.8	3.6	2.8	3.3	4.7	4.5	4.6	5.0	4.6	3.4	2.7	1.8	1.0	2.1	2.5	2.5	2.9	3.2	3.3	5.0	1.0	3.4
Max.	**9.8**	**10.9**	**10.8**	**10.7**	**10.2**	**10.5**	**11.2**	**11.4**	**10.2**	**9.0**	**9.3**	**9.5**	**9.8**	**9.4**	**10.2**	**10.3**	**10.8**	**9.7**	**8.2**	**8.5**	**8.5**	**8.3**	**8.7**	**9.3**	**11.4**		
Min.	**1.3**	**1.4**	**1.2**	**3.0**	**2.6**	**2.8**	**2.5**	**1.7**	**0.9**	**1.2**	**0.8**	**0.2**	**0.8**	**0.6**	**0.0**	**0.0**	**1.3**	**1.0**	**1.6**	**1.8**	**1.4**	**0.9**	**1.0**	**1.7**		**0.0**	
Avg.	**5.5**	**5.8**	**6.0**	**6.1**	**6.2**	**6.3**	**6.1**	**5.9**	**5.9**	**6.0**	**6.0**	**6.0**	**6.0**	**5.8**	**5.9**	**5.9**	**5.6**	**5.7**	**5.5**	**5.2**	**5.0**	**4.8**	**4.9**	**5.2**			**5.7**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.5	3.9	3.7	4.4	5.0	4.5	4.3	4.6	4.1	4.4	5.2	5.0	5.5	6.3	7.3	6.1	6.3	6.0	6.3	5.0	4.6	4.5	3.4	2.0	7.3	2.0	4.8
2	2.6	2.3	3.7	5.4	6.4	6.0	5.2	6.0	5.7	5.2	5.0	4.5	3.9	5.8	5.9	6.0	5.3	5.1	4.9	5.5	5.9	6.1	3.2	1.9	6.4	1.9	4.9
3	2.3	2.7	2.5	2.6	2.1	1.8	1.2	1.1	0.8	0.7	2.2	4.1	3.4	5.7	5.8	6.5	5.9	6.6	5.6	7.0	8.4	7.6	7.7	8.0	8.4	0.7	4.3
4	8.9	9.0	8.9	7.8	7.5	8.1	6.6	6.2	7.3	6.9	7.0	6.7	5.2	3.4	2.7	1.9	1.8	2.2	1.5	1.4	1.8	2.2	1.3	3.3	9.0	1.3	5.0
5	5.3	4.8	4.7	4.3	4.4	4.7	4.6	4.5	4.5	3.9	3.2	4.4	5.1	4.8	4.5	3.8	3.1	3.0	2.5	2.6	2.6	2.0	1.8	2.0	5.3	1.8	3.8
6	1.5	2.2	1.7	1.3	1.4	0.9	1.9	2.6	3.1	2.4	2.4	2.4	3.8	4.6	5.7	4.9	4.7	5.8	5.7	6.9	6.2	5.4	5.4	4.3	6.9	0.9	3.6
7	4.9	4.8	5.6	5.4	5.2	5.0	5.5	5.1	4.6	7.0	7.7	6.4	7.5	6.6	6.6	7.1	7.7	7.5	7.0	6.7	5.2	6.1	6.0	6.1	7.7	4.6	6.1
8	6.5	6.7	7.5	9.1	10.6	8.2	8.1	7.8	8.0	8.6	8.0	8.5	8.0	8.3	7.8	8.1	8.3	8.5	9.0	8.6	9.4	9.6	9.8	8.8	10.6	6.5	8.4
9	8.8	8.8	9.1	9.2	9.6	10.0	9.1	8.6	9.2	6.7	8.8	9.4	8.5	7.5	8.0	7.6	6.0	6.1	5.0	3.3	3.0	2.0	2.0	2.2	10.0	2.0	7.0
10	1.2	2.5	3.4	3.7	4.1	3.9	3.2	3.2	3.3	3.3	4.3	4.1	4.4	4.2	4.7	4.8	3.8	3.4	3.2	2.9	2.1	1.4	1.0	3.0	4.8	1.0	3.3
11	3.6	3.4	3.4	2.1	2.4	5.2	5.8	6.3	7.7	7.5	7.1	7.0	7.8	8.9	10.9	11.0	10.8	11.2	13.2	13.0	12.3	13.4	12.8	13.0	13.4	2.1	8.3
12	11.9	13.2	12.7	11.9	10.9	10.5	9.1	10.7	9.2	8.0	7.5	8.9	9.3	9.5	9.3	8.5	7.7	7.5	6.4	5.3	5.9	6.4	6.8	6.0	13.2	5.3	8.9
13	6.7	7.2	7.2	6.6	5.9	4.5	3.6	3.4	4.7	6.3	6.2	5.4	6.8	6.3	6.5	6.6	8.5	7.6	8.2	7.8	6.9	5.3	3.7	5.0	8.5	3.4	6.1
14	4.9	6.9	7.6	7.6	7.4	7.7	4.5	2.7	3.3	2.9	2.9	2.7	2.5	3.2	3.5	2.4	3.0	2.7	3.0	1.7	2.7	2.2	2.4	2.5	7.7	1.7	3.9
15	2.0	1.0	0.5	2.6	1.3	1.1	0.7	1.1	1.8	1.5	1.4	1.8	1.8	2.0	2.7	2.8	3.3	3.6	4.4	6.2	4.0	2.2	2.1	1.6	6.2	0.5	2.2
16	1.2	3.5	5.6	4.9	6.7	6.7	7.4	5.8	5.1	6.2	6.7	6.1	6.0	4.6	3.1	2.9	2.9	2.2	2.4	1.9	1.2	1.0	2.0	1.3	7.4	1.0	4.1
17	0.3	2.6	4.3	4.9	4.8	4.2	4.8	4.5	4.7	4.7	4.0	3.9	3.2	2.6	2.2	2.1	2.0	2.4	2.4	1.9	1.9	2.8	2.5	2.1	4.9	0.3	3.1
18	2.5	2.1	2.9	3.5	2.5	2.7	2.8	2.7	3.1	3.2	3.2	2.9	3.4	4.7	4.6	2.5	2.1	2.8	2.9	4.5	2.9	1.8	1.8	2.6	4.7	1.8	2.9
19	1.5	1.9	1.3	0.9	0.7	0.4	1.0	1.4	1.9	4.4	3.6	3.7	2.8	3.4	3.7	3.6	4.3	4.3	4.7	4.7	4.4	4.2	3.5	2.9	4.7	0.4	2.9
20	3.5	3.7	4.6	4.8	4.7	4.6	4.6	6.1	6.1	5.5	4.8	5.4	4.8	4.4	3.7	3.3	2.5	2.2	1.7	1.6	1.9	1.3	1.8	2.3	6.1	1.3	3.7
21	2.0	2.1	1.9	1.6	2.4	4.1	5.1	4.8	4.2	4.2	4.0	2.5	3.0	3.0	2.7	3.4	2.9	2.3	2.2	2.1	0.8	1.7	2.6	2.4	5.1	0.8	2.8
22	2.1	2.8	3.6	3.4	3.5	4.9	5.9	6.4	6.2	5.6	5.4	4.9	3.2	2.5	3.2	3.6	3.3	4.0	2.8	3.6	7.0	6.8	8.4	7.7	8.4	2.1	4.6
23	8.6	8.5	8.9	8.4	8.6	9.3	10.0	7.6	7.8	8.4	7.5	8.2	8.3	8.3	10.2	8.2	8.9	9.7	8.5	9.6	9.3	8.4	8.8	7.7	10.2	7.5	8.7
24	9.4	9.3	9.7	9.6	8.9	7.9	5.3	6.2	6.2	4.0	3.9	3.3	4.6	5.3	3.9	4.5	4.6	2.5	2.2	2.0	1.7	0.9	1.4	1.2	9.7	0.9	4.9
25	1.8	1.6	1.6	1.9	0.9	0.9	1.4	0.7	1.7	2.2	2.5	2.9	3.2	2.6	2.5	2.3	2.9	2.9	1.9	1.7	1.4	0.7	1.6	2.0	3.2	0.7	1.9
26	2.5	4.2	4.6	4.5	4.0	5.5	5.4	5.0	5.5	6.1	6.1	6.0	5.6	6.0	6.3	6.3	6.1	6.5	5.2	5.2	5.4	4.0	3.5	4.8	6.5	2.5	5.2
27	4.8	5.6	5.8	5.3	5.0	5.6	6.1	5.1	6.2	6.5	7.0	7.5	6.8	5.9	5.2	5.0	5.5	5.8	4.8	3.9	3.8	3.2	2.8	3.8	7.5	2.8	5.3
28	3.7	3.2	3.8	4.0	3.6	4.1	4.8	6.0	6.2	6.5	7.2	5.6	6.1	5.9	5.1	4.6	4.5	5.0	5.2	4.7	4.1	3.8	2.8	2.4	7.2	2.4	4.7
29	1.6	2.3	3.6	5.1	6.0	6.6	6.7	6.3	6.2	5.7	4.7	4.3	3.3	3.1	2.7	2.1	2.1	2.2	2.2	2.1	1.8	0.9	0.5	1.4	6.7	0.5	3.5
30	1.7	1.6	1.4	1.4	0.8	1.1	0.6	1.9	2.7	2.6	4.0	3.3	3.7	3.8	4.8	4.3	3.2	5.3	4.2	3.7	3.9	4.8	5.2	6.3	6.3	0.6	3.2
31	7.3	7.3	7.9	6.8	6.7	6.7	6.5	6.6	6.1	4.8	4.3	4.2	4.6	5.3	4.8	6.2	6.1	6.7	7.6	8.3	8.3	7.3	8.0	8.6	8.6	4.2	6.5
Max.	**11.9**	**13.2**	**12.7**	**11.9**	**10.9**	**10.5**	**10.0**	**10.7**	**9.2**	**8.6**	**8.8**	**9.4**	**9.3**	**9.5**	**10.9**	**11.0**	**10.8**	**11.2**	**13.2**	**13.0**	**12.3**	**13.4**	**12.8**	**13.0**	**13.4**		
Min.	**0.3**	**1.0**	**0.5**	**0.9**	**0.7**	**0.4**	**0.6**	**0.7**	**0.8**	**0.7**	**1.4**	**1.8**	**1.8**	**2.0**	**2.2**	**1.9**	**1.8**	**2.2**	**1.5**	**1.4**	**0.8**	**0.7**	**0.5**	**1.2**		**0.3**	
Avg.	**4.2**	**4.6**	**5.0**	**5.0**	**5.0**	**5.1**	**4.9**	**4.9**	**5.1**	**5.0**	**5.1**	**5.0**	**5.0**	**5.1**	**5.2**	**4.9**	**4.8**	**5.0**	**4.7**	**4.7**	**4.5**	**4.2**	**4.1**	**4.2**			**4.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.2	7.1	6.4	6.2	7.3	7.2	6.2	7.0	8.0	7.4	7.1	7.0	6.6	7.4	8.6	8.2	7.7	8.1	6.9	8.8	9.3	8.7	9.7	9.7	9.7	6.2	7.7
2	8.8	8.0	7.8	8.0	8.0	7.8	8.7	8.2	7.7	7.5	6.5	7.3	6.3	6.0	6.6	4.8	2.4	1.2	1.2	1.1	1.2	3.0	3.9	2.5	8.8	1.1	5.6
3	1.9	2.7	3.4	2.2	1.6	3.7	4.7	2.5	1.2	2.6	4.8	4.2	4.6	4.2	3.3	2.9	4.6	3.9	5.0	4.5	3.2	2.4	2.1	1.1	5.0	1.1	3.2
4	1.2	1.4	0.5	2.5	2.3	1.2	0.7	1.7	1.1	1.2	1.4	2.5	2.6	2.2	2.6	2.0	1.8	2.0	2.1	3.2	2.9	2.8	3.4	3.4	3.4	0.5	2.0
5	3.2	3.5	3.0	3.3	3.7	4.3	4.8	4.5	3.8	4.3	3.8	4.3	5.5	4.4	4.3	3.5	4.0	4.1	5.4	4.3	3.4	1.1	1.8	1.2	5.5	1.1	3.7
6	2.4	5.3	3.9	4.1	4.0	3.2	2.9	3.5	3.7	4.3	4.6	5.0	4.8	5.2	5.1	4.7	3.5	3.2	3.4	4.7	3.6	4.5	3.5	3.6	5.3	2.4	4.0
7	4.0	4.5	5.1	6.1	6.6	8.5	8.4	7.8	8.0	8.1	7.4	7.2	7.8	7.7	7.5	6.7	4.7	3.3	2.4	2.1	2.4	3.5	3.2	2.1	8.5	2.1	5.6
8	3.0	3.3	2.4	1.5	0.8	2.3	3.7	4.4	6.0	6.8	6.8	6.2	5.7	6.3	6.2	4.3	4.5	5.5	4.1	4.9	5.5	4.7	3.9	3.7	6.8	0.8	4.4
9	6.0	6.0	6.6	5.7	5.4	5.5	5.7	6.8	6.5	8.0	7.2	6.9	6.7	5.9	5.6	5.4	6.4	6.3	6.2	6.3	6.6	6.2	5.7	5.1	8.0	5.1	6.2
10	5.5	5.5	5.9	6.0	5.9	5.6	5.5	5.7	6.0	5.6	5.2	5.0	4.7	3.9	1.9	2.9	3.4	4.1	2.7	2.1	2.1	2.0	2.0	2.1	6.0	1.9	4.2
11	1.8	2.2	1.8	1.3	0.9	1.5	2.2	3.2	2.2	1.9	1.3	1.0	1.4	1.8	2.1	2.5	1.7	2.5	2.0	1.3	0.9	0.4	1.5	1.0	3.2	0.4	1.7
12	2.5	3.5	5.2	5.7	6.4	5.4	5.6	6.1	5.7	5.9	6.8	5.9	5.8	6.1	5.2	4.9	4.8	4.7	5.2	6.1	5.9	5.4	5.7	5.9	6.8	2.5	5.4
13	6.1	6.6	6.8	6.6	5.7	5.2	6.1	6.2	4.9	4.6	4.9	4.5	3.5	3.5	4.1	4.5	4.3	3.7	3.2	2.9	2.4	1.7	0.8	1.8	6.8	0.8	4.4
14	1.8	1.5	3.8	5.1	4.9	4.9	5.3	4.6	4.8	4.4	4.9	4.7	5.7	5.8	4.9	4.5	3.9	2.9	2.3	1.4	1.6	2.3	1.2	1.7	5.8	1.2	3.7
15	4.8	6.2	6.4	6.6	7.1	6.4	7.3	6.7	6.2	5.1	5.7	5.3	5.8	5.4	5.6	6.1	5.7	5.1	5.7	5.4	4.4	4.0	4.8	5.7	7.3	4.0	5.7
16	5.9	5.5	6.2	5.9	5.3	5.7	6.0	5.9	6.1	5.5	5.4	4.9	5.0	4.3	3.6	2.1	2.3	2.4	2.1	1.8	1.8	0.7	0.9	1.2	6.2	0.7	4.0
17	0.6	1.0	0.6	0.3	0.3	2.9	4.0	4.4	4.4	3.9	2.7	2.7	2.8	3.3	4.1	4.3	3.7	3.6	2.9	3.6	3.3	2.4	2.6	2.3	4.4	0.3	2.8
18	2.4	1.6	0.9	0.5	0.3	1.2	1.8	4.7	4.6	5.0	5.4	5.9	5.0	3.8	3.3	3.2	3.7	3.5	2.9	2.3	2.0	1.1	1.1	2.1	5.9	0.3	2.8
19	1.1	0.9	0.6	0.5	0.4	1.9	4.4	5.9	5.9	5.3	4.3	3.2	2.8	3.1	3.2	2.6	2.4	3.4	2.5	3.2	3.1	2.9	2.3	2.2	5.9	0.4	2.8
20	2.5	2.0	1.6	2.0	1.5	1.3	1.6	1.5	1.3	1.4	2.0	3.2	4.3	4.8	4.6	3.0	2.8	3.2	3.5	3.0	4.0	3.1	3.0	3.1	4.8	1.3	2.7
21	2.8	2.3	1.6	1.6	1.2	1.1	2.2	1.6	1.9	1.8	0.9	1.1	1.3	2.2	2.2	2.6	2.6	2.6	2.6	2.3	2.5	1.6	1.6	1.0	2.8	0.9	1.9
22	1.7	1.8	1.6	1.8	0.9	0.9	1.6	1.2	1.1	2.4	2.1	1.8	1.6	1.9	1.5	2.0	2.1	2.6	3.1	3.0	3.0	2.9	2.9	4.2	4.2	0.9	2.1
23	4.2	4.5	3.6	3.3	3.6	3.5	2.7	3.0	3.4	2.9	4.0	4.6	4.9	4.1	3.6	3.9	3.2	2.6	2.4	2.4	2.8	3.1	3.2	2.6	4.9	2.4	3.4
24	2.3	2.8	3.1	3.1	4.2	3.1	3.8	3.6	4.1	4.7	6.2	3.4	3.3	3.5	4.4	4.2	3.3	2.6	4.1	5.0	3.9	4.0	4.4	5.5	6.2	2.3	3.9
25	5.8	6.6	6.1	7.0	6.9	7.8	7.4	8.0	6.9	5.7	6.2	7.8	7.7	7.8	7.0	6.0	6.9	6.4	5.9	6.1	6.1	6.3	6.3	5.5	8.0	5.5	6.7
26	7.8	7.2	6.8	6.8	5.5	5.1	2.6	4.9	5.3	5.8	7.5	9.1	8.1	9.1	9.5	9.7	8.1	7.2	6.3	5.6	5.5	5.7	5.9	5.6	9.7	2.6	6.7
27	6.0	6.2	5.3	5.0	3.5	4.2	3.9	2.9	3.6	4.1	3.0	2.2	2.0	1.9	2.2	1.9	2.1	2.8	2.7	2.5	2.0	1.9	2.5	1.4	6.2	1.4	3.2
28	0.7	0.8	1.3	2.2	2.2	1.1	1.5	3.3	4.1	4.4	5.2	5.4	4.5	4.1	3.3	3.0	3.3	3.1	2.1	2.8	2.6	1.9	1.5	1.5	5.4	0.7	2.7
29	1.7	1.6	2.0	2.4	3.5	3.1	1.6	1.9	2.6	2.3	2.2	1.5	2.7	3.5	3.0	4.1	4.8	5.1	3.6	3.5	2.7	2.5	3.8	3.3	5.1	1.5	2.9
30	2.6	1.6	1.4	1.4	2.0	2.1	2.2	1.1	1.1	1.9	2.1	2.8	2.6	2.6	2.5	2.3	2.3	2.3	2.4	1.9	1.6	1.4	1.5	2.2	2.8	1.1	2.0
Max.	**8.8**	**8.0**	**7.8**	**8.0**	**8.0**	**8.5**	**8.7**	**8.2**	**8.0**	**8.1**	**7.5**	**9.1**	**8.1**	**9.1**	**9.5**	**9.7**	**8.1**	**8.1**	**6.9**	**8.8**	**9.3**	**8.7**	**9.7**	**9.7**	**9.7**		
Min.	**0.6**	**0.8**	**0.5**	**0.3**	**0.3**	**0.9**	**0.7**	**1.1**	**1.1**	**1.2**	**0.9**	**1.0**	**1.3**	**1.8**	**1.5**	**1.9**	**1.7**	**1.2**	**1.2**	**1.1**	**0.9**	**0.4**	**0.8**	**1.0**		**0.3**	
Avg.	**3.6**	**3.8**	**3.7**	**3.8**	**3.7**	**3.9**	**4.2**	**4.4**	**4.4**	**4.5**	**4.6**	**4.6**	**4.5**	**4.5**	**4.4**	**4.1**	**3.9**	**3.8**	**3.6**	**3.6**	**3.4**	**3.1**	**3.2**	**3.1**			**3.9**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.3	2.6	2.1	1.7	2.1	1.3	0.9	0.7	1.5	2.6	3.8	4.6	5.5	7.2	5.5	4.9	4.5	3.9	3.4	2.9	3.5	3.0	2.9	4.2	7.2	0.7	3.2
2	5.0	5.0	5.0	5.3	4.7	3.9	3.4	3.7	3.3	4.6	3.8	5.2	5.2	4.6	6.1	7.0	5.9	5.2	5.3	6.0	7.4	6.1	4.7	4.2	7.4	3.3	5.0
3	4.9	3.1	2.6	4.2	4.9	6.6	6.4	5.8	5.0	5.3	6.8	7.2	5.9	6.3	4.2	3.8	4.1	4.5	3.7	2.1	3.7	4.2	4.4	3.9	7.2	2.1	4.7
4	3.3	3.8	3.7	3.5	3.0	1.1	1.2	1.4	1.8	1.3	1.9	1.6	2.2	2.4	2.6	3.4	3.1	2.8	2.2	2.6	2.4	2.1	2.2	2.0	3.8	1.1	2.4
5	2.5	2.4	2.4	2.7	2.1	2.0	0.7	1.5	2.3	2.2	1.9	2.7	2.4	2.3	3.1	2.1	2.7	2.8	2.6	2.0	2.4	2.0	1.9	1.6	3.1	0.7	2.2
6	1.3	1.6	1.9	0.7	1.3	1.0	0.6	0.9	2.4	3.2	2.6	2.3	2.5	2.8	3.2	2.8	3.2	3.2	2.8	2.3	1.8	1.4	1.0	0.7	3.2	0.6	2.0
7	1.5	1.9	3.0	2.4	3.8	6.0	4.9	5.7	4.5	4.1	3.5	3.4	3.2	3.3	3.4	4.2	3.3	2.1	2.1	2.2	2.0	1.3	0.4	1.2	6.0	0.4	3.1
8	1.8	2.0	0.7	0.6	1.6	3.6	3.2	4.4	3.6	4.0	4.1	3.8	4.3	4.0	3.4	3.4	3.7	3.1	3.1	2.2	0.8	0.5	1.7	0.6	4.4	0.5	2.7
9	1.5	0.7	1.3	1.1	1.0	1.9	2.3	3.0	3.6	3.6	3.0	3.4	3.3	4.9	5.8	6.9	5.3	4.1	3.4	3.2	5.6	6.1	4.6	3.8	6.9	0.7	3.5
10	3.9	3.7	4.0	4.3	4.5	4.7	4.2	3.8	2.7	3.0	3.3	3.5	3.1	1.8	2.3	2.4	1.5	1.5	1.9	2.5	2.5	2.2	2.1	1.9	4.7	1.5	3.0
11	2.0	2.1	3.0	2.9	2.9	2.8	2.2	2.3	1.9	1.9	2.0	2.3	2.8	2.3	2.7	3.0	2.8	3.0	2.8	2.2	2.2	1.9	1.7	1.9	3.0	1.7	2.4
12	1.9	0.9	0.7	0.8	1.0	0.6	1.3	2.7	3.7	4.0	4.3	4.4	5.5	5.4	6.2	5.7	6.6	7.0	7.1	6.6	6.5	7.9	7.8	7.4	7.9	0.6	4.4
13	5.9	4.8	4.6	3.9	3.2	3.3	2.8	1.9	1.6	1.9	1.5	2.3	1.7	2.2	2.2	2.5	2.1	2.3	2.3	2.0	2.1	1.8	2.0	2.1	5.9	1.5	2.6
14	1.7	1.8	1.1	1.4	1.6	1.9	1.8	1.4	1.7	1.7	2.1	2.2	2.2	2.5	2.3	2.7	2.4	2.4	2.3	2.4	1.7	1.9	1.9	1.8	2.7	1.1	2.0
15	2.3	1.7	0.5	1.8	1.9	2.2	1.8	1.5	2.4																2.4	0.5	1.8
16	7.7	7.5	8.0	7.2	6.4	6.3	6.7	7.5	7.1	5.5	5.9	4.8	5.8	5.9	5.7	7.1	6.6	6.8	6.5	6.8	6.7	7.3	6.7	7.5	8.0	4.8	6.7
17	6.8	4.5	3.9	3.0	4.0	6.4	5.5	5.8	6.0	7.0	8.1	8.7	6.8	7.1	6.9	6.4	5.5	5.2	5.6	4.9	4.7	4.5	4.5	5.8	8.7	3.0	5.7
18	5.9	5.6	6.9	5.3	5.3	6.2	5.3	4.8	5.9	5.5	5.1	5.8	5.7	5.6	6.0	6.7	5.9	5.5	4.7	4.5	4.5	4.2	4.0	3.5	6.9	3.5	5.4
19	3.3	3.8	4.1	4.3	4.1	4.5	4.4	4.5	5.1	5.4	5.3	5.4	5.5	5.2	4.9	4.6	3.9	4.3	5.1	4.3	2.6	2.9	2.9	3.1	5.5	2.6	4.3
20	2.8	3.2	5.0	4.8	4.7	3.4	4.0	3.7	3.7	4.0	5.5	5.2	4.7	5.5	6.1	6.3	6.2	6.3	5.5	4.5	4.7	4.4	3.7	4.0	6.3	2.8	4.7
21	4.5	3.5	1.8	1.7	3.3	4.3	3.0	2.7	2.7	2.6	3.0	3.2	3.5	3.8	4.2	4.2	4.5	3.5	3.8	2.9	2.9	2.5	3.0	3.3	4.5	1.7	3.3
22	3.8	4.2	4.1	4.4	4.9	4.5	4.6	3.7	3.8	2.9	1.5	1.3	2.1	2.7	4.1	4.0	4.3	3.0	2.9	2.4	3.0	1.9	0.6	1.2	4.9	0.6	3.2
23	1.1	1.3	1.3	1.4	2.4	2.7	2.7	2.6	2.9	2.8	3.5	3.6	4.3	4.4	4.0	3.1	2.6	2.2	1.9	2.3	3.5	4.1	4.2	2.6	4.4	1.1	2.8
24	1.5	1.8	2.1	1.5	2.7	2.2	2.4	4.5	3.1	2.9	4.4	5.2	4.5	4.1	3.5	2.7	2.3	2.2	1.6	1.0	0.8	1.0	1.8	2.3	5.2	0.8	2.6
25	1.4	1.9	1.8	1.9	2.0	3.2	4.2	4.9	5.1	3.5	5.3	5.9	5.4	5.2	4.9	4.6	4.1	3.5	3.7	1.0	1.7	1.9	2.1	1.4	5.9	1.0	3.3
26	1.7	2.2	1.5	1.8	4.0	6.0	5.7	5.1	5.1	5.2	5.5	6.2	6.6	6.3	5.2	4.7	4.3	3.1	3.0	2.0	2.3	2.4	1.5	1.7	6.6	1.5	3.9
27	2.7	2.6	2.3	2.7	3.2	3.1	1.8	2.0	2.6	2.4	3.4	5.1	4.5	3.3	3.0	2.5	2.2	1.2	1.2	1.3	2.0	1.1	2.2	1.9	5.1	1.1	2.5
28	0.3	0.7	2.2	3.0	3.8	4.4	5.0	6.3	6.2	6.4	6.4	6.6	6.4	5.0	5.4	5.8	5.5	6.4	5.5	5.0	4.9	5.6	4.3	3.6	6.6	0.3	4.8
29	4.9	4.6	5.5	5.8	6.1	6.6	6.0	5.2	6.4	8.3	7.0	6.3	5.3	6.3	6.1	6.1	5.4	5.4	4.7	4.6	3.7	2.9	3.1	4.9	8.3	2.9	5.5
30	4.6	5.1	6.7	7.0	7.4	6.9	6.2	6.7	6.4	7.2	7.6	6.9	6.8	6.5	7.2	7.4	7.3	8.9	8.2	7.2	7.1	5.2	3.6	5.0	8.9	3.6	6.6
31	6.3	8.1	5.4	7.0	6.1	6.2	6.8	8.0	7.8	9.2	9.0	8.8	8.2	7.8	8.1	8.6	7.9	6.1	5.3	4.4	4.9	3.5	3.4	6.7	9.2	3.4	6.8
Max.	**7.7**	**8.1**	**8.0**	**7.2**	**7.4**	**6.9**	**6.8**	**8.0**	**7.8**	**9.2**	**9.0**	**8.8**	**8.2**	**7.8**	**8.1**	**8.6**	**7.9**	**8.9**	**8.2**	**7.2**	**7.4**	**7.9**	**7.8**	**7.5**	**9.2**		
Min.	**0.3**	**0.7**	**0.5**	**0.6**	**1.0**	**0.6**	**0.6**	**0.7**	**1.5**	**1.3**	**1.5**	**1.3**	**1.7**	**1.8**	**2.2**	**2.1**	**1.5**	**1.2**	**1.2**	**1.0**	**0.8**	**0.5**	**0.4**	**0.6**		**0.3**	
Avg.	**3.3**	**3.2**	**3.2**	**3.2**	**3.5**	**3.9**	**3.6**	**3.8**	**3.9**	**4.1**	**4.4**	**4.6**	**4.5**	**4.6**	**4.6**	**4.7**	**4.3**	**4.0**	**3.8**	**3.3**	**3.5**	**3.3**	**3.0**	**3.2**			**3.8**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.7	7.3	7.0	5.6	5.7	6.0	7.0	6.6	5.9	4.0	3.1	2.5	3.2	4.1	2.3	2.2	2.1	2.1	2.3	2.5	3.2	3.6	3.4	3.9	7.3	2.1	4.3
2	4.2	3.4	3.4	3.8	3.2	2.7	2.8	2.7	3.0	2.9	2.6	3.0	4.2	4.1	3.7	2.5	2.2	2.6	1.8	1.7	1.8	1.6	1.5	0.9	4.2	0.9	2.8
3	0.9	1.1	0.6	0.5	1.0	1.8	1.4	1.4	1.7	1.4	1.9	1.8	2.6	2.7	2.4	2.4	2.4	2.1	2.4	2.8	3.0	2.7	3.4	3.6	3.6	0.5	2.0
4	3.2	3.8	3.2	2.4	2.3	1.8	1.7	1.8	2.0	1.8	2.0	2.4	2.5	2.5	2.7	3.0	2.7	2.1	2.8	3.0	2.4	2.4	1.7	1.8	3.8	1.7	2.4
5	2.4	2.3	2.2	1.7	0.7	1.0	1.2	1.7	1.3	0.7	1.9	2.4	2.2	2.8	3.1	2.7	3.2	2.4	2.3	1.7	1.6	1.3	1.6	1.8	3.2	0.7	1.9
6	1.6	1.6	0.7	1.2	1.7	1.5	1.5	1.7	0.4	1.3	1.6	2.4	2.4	2.6	3.2	2.6	3.2	3.1	3.5	3.6	3.2	2.9	1.2	2.2	3.6	0.4	2.1
7	3.6	2.5	2.7	2.5	3.1	3.5	3.1	3.5	5.3	5.0	5.2	5.4	4.8	4.2	3.9	4.2	4.3	4.0	3.7	3.6	3.1	3.1	2.8	3.3	5.4	2.5	3.8
8	2.3	1.3	2.9	2.5	2.5	1.7	2.6	1.2	2.2	3.3	2.9	2.8	2.8	2.4	2.6	3.1	3.0	1.9	2.2	2.3	2.0	0.8	2.4	2.5	3.3	0.8	2.3
9	2.2	2.4	2.3	2.0	1.9	1.1	1.2	2.7	4.1	5.0	4.8	4.8	5.3	4.3	3.8	3.3	2.9	2.7	3.6	3.2	3.3	2.0	2.8	2.6	5.3	1.1	3.1
10	2.7	2.6	2.3	1.9	2.0	1.7	2.7	2.1	1.6	1.8	1.8	2.0	2.7	2.2	2.3	2.1	2.9	3.5	2.9	1.8	2.2	3.2	2.2	2.7	3.5	1.6	2.3
11	2.5	2.2	1.7	1.6	1.6	2.7	2.5	2.6	2.0	2.7	2.5	3.7	4.0	3.5	3.2	2.5	2.2	2.2	1.8	1.8	0.9	1.6	2.7	2.6	4.0	0.9	2.4
12	1.9	2.8	2.9	3.3	3.6	3.8	2.9	2.9	2.5	2.4	2.8	2.5	1.4	1.7	1.5	1.5	1.5	2.5	1.3	1.2	1.6	1.7	1.6	0.7	3.8	0.7	2.2
13	1.3	2.8	3.3	3.3	3.0	3.1	2.2	3.2	3.0	3.1	2.9	3.5	3.2	4.3	2.3	2.0	0.6	1.5	2.2	1.3	0.8	1.0	2.0	1.4	4.3	0.6	2.4
14	1.2	1.5	1.8	2.1	1.6	1.5	0.9	1.7	0.9	0.9	1.1	0.5	0.7	1.1	1.6	1.3	1.1	1.3	0.9	0.5	0.6	1.0	1.5	0.4	2.1	0.4	1.2
15	1.0	2.4	5.1	5.3	4.3	5.4	5.6	5.1	4.8	4.8	4.0	3.8	3.8	3.5	2.4	2.2	2.4	2.2	1.3	0.7	0.5	1.6	1.9	2.2	5.6	0.5	3.2
16	2.6	2.0	2.3	2.5	2.4	2.7	3.1	2.9	2.6	3.3	2.6	2.4	4.0	2.2	2.1	2.6	2.6	2.7	2.8	2.4	2.3	2.9	2.7	2.4	4.0	2.0	2.6
17	1.5	1.0	1.5	1.7	1.5	0.9	1.2	1.0	0.9	3.0	2.6	3.1	3.1	3.5	2.9	3.0	3.2	3.8	4.3	4.0	3.0	3.5	3.3	2.5	4.3	0.9	2.5
18	2.4	2.8	1.8	1.1	1.9	1.9	2.2	2.2	1.1	1.3	1.1	1.6	2.5	2.6	2.4	2.1	1.1	1.5	1.4	1.7	2.4	2.0	2.8	2.5	2.8	1.1	1.9
19	3.1	1.9	2.7	2.7	2.1	1.7	1.5	2.1	1.8	5.0	4.9	5.6	4.4	4.8	5.5	5.1	4.5	4.5	3.8	4.9	4.8	4.1	4.5	5.7	5.7	1.5	3.8
20	4.9	4.7	4.9	5.4	5.3	5.9	6.3	5.6	5.4	6.1	6.5	6.5	6.7	6.3	5.3	5.3	5.3	5.1	4.8	3.9	3.0	3.3	3.1	2.9	6.7	2.9	5.1
21	3.3	3.2	3.5	4.2	4.3	4.8	4.6	4.4	4.5	4.8	4.5	3.6	3.5	3.6	3.8	4.0	4.2	3.6	2.3	2.4	2.9	1.8	1.4	2.0	4.8	1.4	3.6
22	1.7	0.8	1.0	1.8	2.2	1.9	1.0	0.6	1.2	0.9	0.6	1.1	1.3	1.6	1.3	2.1	1.7	1.8	1.6	0.2	2.0	2.4	3.1	4.3	4.3	0.2	1.6
23	4.9	5.1	5.8	5.6	5.0	5.5	5.9	5.8	5.2	6.2	6.4	5.9	4.6	3.5	1.9	2.7	2.1	1.8	0.8	0.7	0.9	1.0	1.8	1.9	6.4	0.7	3.8
24	1.7	1.9	2.7	3.6	3.8	3.7	3.8	4.8	5.2	4.8	4.4	4.3	5.4	5.6	5.5	5.6	5.3	5.5	4.8	4.3	3.6	4.1	3.3	3.5	5.6	1.7	4.2
25	2.5	1.2	0.9	1.5	1.6	1.1	3.0	3.5	4.5	3.8	1.9	1.0	1.5	1.7	2.8	3.4	2.4	3.2	3.3	2.9	2.9	3.2	2.1	3.0	4.5	0.9	2.5
26	2.7	1.8	1.7	0.8	0.9	1.8	2.3	1.9	1.6	1.2	1.6	1.4	1.6	2.6	2.5	3.1	4.0	3.4	3.1	2.7	1.6	1.8	1.8	1.9	4.0	0.8	2.1
27	1.1	1.4	1.5	2.2	2.0	1.2	0.7	2.8	4.2	4.2	3.9	5.1	4.7	3.8	4.0	3.7	4.7	4.2	4.5	3.9	3.6	3.3	2.9	3.5	5.1	0.7	3.2
28	2.9	3.3	3.3	3.4	2.3	3.2	2.7	3.5	3.0	2.3	3.5	4.3	4.1	4.0	4.3	4.0	4.6	4.6	4.6	4.1	3.6	2.7	3.3	2.8	4.6	2.3	3.5
29	3.4	3.6	4.2	3.5	4.1	4.7	4.7	4.7	5.0	4.5	5.6	5.2	5.8	5.4	5.2	5.4	6.0	5.3	4.8	3.8	4.2	4.3	3.8	2.6	6.0	2.6	4.6
30	3.4	2.9	3.4	3.4	3.7	4.5	5.0	5.0	5.6	5.2	4.6	4.0	3.1	2.3	2.4	2.3	2.5	2.8	3.0	4.0	3.8	4.2	3.9	4.0	5.6	2.3	3.7
31	4.3	5.5	7.5	6.9	7.1	5.9	5.1	6.5	8.7	9.8	8.7	9.5	10.0	9.9	10.9	10.0	9.0	10.5	9.6	8.4	7.2	5.3	4.3	5.8	10.9	4.3	7.8
Max.	**6.7**	**7.3**	**7.5**	**6.9**	**7.1**	**6.0**	**7.0**	**6.6**	**8.7**	**9.8**	**8.7**	**9.5**	**10.0**	**9.9**	**10.9**	**10.0**	**9.0**	**10.5**	**9.6**	**8.4**	**7.2**	**5.3**	**4.5**	**5.8**	**10.9**		
Min.	**0.9**	**0.8**	**0.6**	**0.5**	**0.7**	**0.9**	**0.7**	**0.6**	**0.4**	**0.7**	**0.6**	**0.5**	**0.7**	**1.1**	**1.3**	**1.3**	**0.6**	**1.3**	**0.8**	**0.2**	**0.5**	**0.8**	**1.2**	**0.4**		**0.2**	
Avg.	**2.7**	**2.7**	**2.9**	**2.9**	**2.8**	**2.9**	**3.0**	**3.2**	**3.3**	**3.5**	**3.4**	**3.5**	**3.6**	**3.5**	**3.3**	**3.3**	**3.2**	**3.2**	**3.0**	**2.8**	**2.6**	**2.6**	**2.6**	**2.7**			**3.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.4	7.4	7.9	4.8	8.3	9.6	7.6	8.7	8.2	8.7	7.5	6.2	6.4	6.1	6.6	7.0	6.4	6.2	6.5	5.5	4.7	5.9	4.9	5.2	9.6	4.7	6.8
2	6.5	5.8	5.4	5.7	5.8	6.7	7.4	7.2	8.0	5.7	6.8	7.2	6.6	5.3	5.6	5.3	7.1	6.6	6.6	6.6	6.1	6.5	7.8	6.8	8.0	5.3	6.5
3	6.9	6.0	6.4	6.4	7.4	6.7	5.7	3.8	2.2	2.1	3.4	4.5	3.9	2.8	2.3	1.6	2.4	3.3	2.0	0.9	0.9	1.3	1.0	1.5	7.4	0.9	3.6
4	1.6	1.2	0.6	1.9	1.5	1.1	2.0	2.7	3.5	3.7	2.8	3.5	1.9	2.2	2.3	2.4	2.2	2.5	1.8	0.6	0.8	1.3	2.2	2.0	3.7	0.6	2.0
5	1.8	1.2	1.6	0.5	0.4	0.7	0.4	0.8	0.5	1.0	1.1	1.4	1.7	2.1	2.5	3.1	1.9	1.4	0.8	0.7	1.5	1.5	0.9	1.8	3.1	0.4	1.3
6	2.0	2.6	3.6	2.7	4.0	4.4	4.2	5.1	6.3	6.9	7.7	8.7	8.2	8.0	9.8	10.5	11.2	10.5	10.1	9.7	11.1	10.6	11.2	9.2	11.2	2.0	7.4
7	5.2	9.6	9.3	8.4	8.1	7.6	9.9	8.3	7.3	7.6	7.5	7.5	6.5	6.3	4.9	3.8	2.8	4.3	3.2	2.5	1.6	1.4	0.9	1.0	9.9	0.9	5.6
8	1.8	1.3	0.4	1.3	1.3	0.7	0.7	1.9	2.1	1.7	2.4	4.7	6.7	7.1	7.5	6.5	6.8	7.7	7.5	9.2	11.5	8.9	9.2	9.3	11.5	0.4	4.9
9	7.8	8.0	8.2	7.3	7.7	5.8	7.2	7.9	7.6	7.8	5.5	4.9	4.1	4.2	7.2	5.6	5.2	4.5	5.1	5.2	5.1	5.0	4.9	4.3	8.2	4.1	6.1
10	2.4	1.5	1.0	0.5	0.4	0.8	0.4	1.1	0.9	0.6	1.7	2.4	4.0	4.1	3.9	3.9	4.7	4.5	3.4	2.8	2.7	2.9	2.8	2.7	4.7	0.4	2.3
11	3.4	4.2	4.3	4.4	4.3	4.6	3.9	3.0	3.5	4.0	4.1	3.7	3.4	2.9	3.4	2.3	3.5	2.6	2.6	3.2	4.5	5.6	5.3	5.5	5.6	2.3	3.8
12	5.9	5.8	8.4	10.0	8.1	9.0	8.0	6.9	6.1	5.3	5.0	5.7	5.3	5.7	6.1	6.2	5.9	6.1	7.0	7.8	7.4	7.6	6.2	6.5	10.0	5.0	6.7
13	7.4	8.8	10.5	9.5	9.5	9.2	10.1	11.3	13.1	12.9	12.9	12.9	11.9	10.8	9.6	7.0	5.7	7.7	8.1	8.3	8.9	8.9	8.2	7.9	13.1	5.7	9.6
14	6.6	4.7	3.0	3.4	2.6	5.1	2.6	2.4	5.1	4.8	4.8	5.1	4.6	4.0	2.2	1.2	1.3	1.4	1.2	1.1	0.8	0.8	1.2	0.5	6.6	0.5	2.9
15	1.1	0.8	1.4	3.4	4.0	3.9	3.9	4.4	3.8	3.4	6.2	5.4	2.6	0.4	0.0	0.2	5.4	4.0	2.7	1.9	0.8	1.6	1.4	1.6	6.2	0.0	2.7
16	0.9	1.6	2.6	3.1	4.8	3.6	3.2	3.4	3.0	3.1	4.2	3.8	4.3	4.2	4.6	5.3	5.3	5.8	5.2	4.1	3.5	2.5	4.1	5.5	5.8	0.9	3.8
17	5.6	5.8	4.6	5.1	4.4	4.7	3.9	3.4	3.3	4.0	4.3	3.8	1.5	2.8	4.0	4.8	5.6	4.7	5.0	6.0	6.4	5.6	7.7	7.3	7.7	1.5	4.8
18	8.5	9.2	9.5	7.2	8.8	8.8	8.7	6.7	5.5	4.0	3.4	3.6	5.6	6.4	7.5	6.4	5.5	5.4	4.3	3.5	6.5	8.5	8.5	8.4	9.5	3.4	6.7
19	8.1	4.8	4.3	3.5	2.2	1.7	1.9	2.0	0.9	1.0	0.9	1.1	2.5	1.9	3.0	3.6	3.4	3.8	4.0	3.4	2.4	2.9	3.1	2.1	8.1	0.9	2.9
20	2.5	2.4	2.2	4.7	4.6	4.1	5.2	4.4	4.0	5.5	6.2	5.1	4.3	4.7	4.1	4.3	4.4	4.2	3.3	2.2	0.8	0.6	1.2	1.0	6.2	0.6	3.6
21	1.3	1.6	1.8	2.2	2.9	3.1	3.6	4.7	4.7	4.2	4.9	4.6	4.5	4.9	5.2	4.9	4.4	5.0	4.0	3.2	2.5	1.6	1.0	0.8	5.2	0.8	3.4
22	2.2	2.5	3.0	2.8	3.1	2.7	4.1	4.3	4.3	4.8	5.0	4.5	3.9	3.7	3.8	3.5	2.3	1.4	1.3	1.2	1.5	1.3	2.0	1.0	5.0	1.0	2.9
23	2.2	1.5	1.8	0.9	1.0	0.8	0.6	1.0	0.5	0.5	0.8	1.5	0.8	1.8	1.1	0.8	1.2	1.5	1.4	0.6	1.3	0.8	1.5	0.5	2.2	0.5	1.1
24	1.0	0.9	0.6	1.4	1.8	0.6	1.2	0.8	1.2	1.2	1.5	3.4	1.2	2.5	3.5	4.0	4.8	4.5	3.9	3.6	4.6	4.6	5.4	4.6	5.4	0.6	2.6
25	4.5	4.4	4.5	2.2	1.1	1.8	2.0	3.5	2.6	1.7	4.0	4.4	1.3	1.1	1.7	0.8	0.8	1.3	1.1	1.2	1.3	2.1	2.3	2.2	4.5	0.8	2.2
26	1.9	1.5	2.1	2.6	2.6	2.4	1.9	2.3	2.2	2.2	2.1	2.1	1.0	1.0	1.9	1.4	1.8	1.0	1.6	1.8	1.4	1.2	1.2	2.1	2.6	1.0	1.8
27	3.1	3.3	3.5	4.0	3.9	4.1	3.7	3.1	3.7	3.8	4.1	4.3	3.2	3.6	2.9	2.7	3.2	2.4	3.5	3.1	3.6	4.6	3.7	4.5	4.6	2.4	3.6
28	5.0	2.8	2.7	2.5	1.3	2.1	2.3	3.5	3.3	2.9	4.0	4.1	3.8	3.6	3.5	2.7	2.0	2.3	2.2	1.9	1.3	0.7	0.9	1.6	5.0	0.7	2.6
29	5.1	5.7	4.3	5.2	2.9	3.3	4.5	4.7	4.3	2.8	2.0	2.5	3.1	2.7	2.3	1.2	0.8	1.6	1.7	2.4	1.3	2.3	1.7	0.5	5.7	0.5	2.9
30	0.3	0.7	1.6	1.9	2.3	3.0	3.4	3.9	3.0	3.2	4.4	5.0	4.8	5.0	3.9	4.2	4.2	2.8	2.2	1.9	2.9	3.3	2.9	3.1	5.0	0.3	3.1
Max.	**8.5**	**9.6**	**10.5**	**10.0**	**9.5**	**9.6**	**10.1**	**11.3**	**13.1**	**12.9**	**12.9**	**12.9**	**11.9**	**10.8**	**9.8**	**10.5**	**11.2**	**10.5**	**10.1**	**9.7**	**11.5**	**10.6**	**11.2**	**9.3**	**13.1**		
Min.	**0.3**	**0.7**	**0.4**	**0.5**	**0.4**	**0.6**	**0.4**	**0.8**	**0.5**	**0.5**	**0.8**	**1.1**	**0.8**	**0.4**	**0.0**	**0.2**	**0.8**	**1.0**	**0.8**	**0.6**	**0.8**	**0.6**	**0.9**	**0.5**		**0.0**	
Avg.	**4.0**	**3.9**	**4.0**	**4.0**	**4.0**	**4.1**	**4.2**	**4.2**	**4.2**	**4.0**	**4.4**	**4.6**	**4.1**	**4.1**	**4.2**	**3.9**	**4.1**	**4.0**	**3.8**	**3.5**	**3.7**	**3.7**	**3.9**	**3.7**			**4.0**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.6	2.0	1.8	2.3	2.3	1.5	0.9	2.0	2.3	1.6	0.5	1.4	1.9	1.6	2.2	2.3	2.1	2.4	2.8	3.7	3.2	3.0	2.0	1.2	3.7	0.5	2.1
2	2.0	1.5	1.1	2.3	2.3	2.3	2.5	2.0	0.9	1.6	2.9	3.3	3.9	4.6	4.4	5.3	5.7	4.4	5.4	4.3	5.0	5.3	7.2	5.5	7.2	0.9	3.6
3	5.5	4.9	4.9	3.8	2.4	4.2	3.3	3.2	3.2	3.7	3.2	3.5	3.7	5.0	4.7	4.3	3.6	3.5	3.4	3.5	3.1	2.8	2.9	3.2	5.5	2.4	3.7
4	3.3	3.0	3.0	2.6	3.1	2.8	2.7	3.6	2.9	2.2	2.3	3.8	3.6	3.9	3.6	3.9	3.4	2.5	2.7	3.3	2.6	3.6	3.6	3.1	3.9	2.2	3.1
5	2.9	2.6	2.4	2.5	2.9	3.4	3.4	3.2	3.2	2.7	3.4	3.9	4.3	3.9	3.8	4.0	4.5	4.1	4.2	2.8	2.4	2.7	2.0	2.7	4.5	2.0	3.2
6	2.2	2.6	2.8	2.3	2.6	2.5	2.0	4.3	3.6	3.2	4.1	4.8	4.5	5.0	4.7	4.6	4.3	4.4	4.2	3.9	3.0	3.0	2.5	2.3	5.0	2.0	3.5
7	2.7	2.8	3.4	3.8	4.3	5.5	5.6	5.5	5.6	6.1	7.3	6.7	6.9	7.7	7.3	6.7	6.3	6.9	6.9	6.5	6.6	6.0	7.0	6.4	7.7	2.7	5.9
8	6.7	6.1	6.6	6.2	6.4	6.1	5.2	5.5	5.1	5.1	6.1	6.6	5.8	5.4	4.3	4.5	3.1	3.2	2.9	3.1	2.6	2.6	1.4	3.1	6.7	1.4	4.7
9	4.3	5.8	6.6	7.0	6.9	7.0	7.4	8.5	9.0	7.4	8.4	8.1	8.8	8.0	10.7	11.3	10.1	9.8	9.5	10.1	10.1	8.1	7.5	7.1	11.3	4.3	8.2
10	6.3	4.8	1.9	1.2	0.9	1.4	2.5	1.7	2.0	3.3	3.0	2.6	2.3	1.3	2.4	2.4	0.5	1.5	0.9	1.7	1.8	2.6	2.2	1.4	6.3	0.5	2.2
11	3.0	5.6	5.6	7.3	9.7	9.8	10.7	10.9	10.1	10.8	9.5	10.3	7.7	3.3	1.9	3.4	2.9	5.9	4.4	4.3	3.8	4.9	6.7	7.3	10.9	1.9	6.7
12	8.1	7.9	8.3	9.6	9.7	9.9	9.3	8.5	8.9	9.2	8.8	8.7	9.0	7.6	8.3	7.0	7.0	7.6	7.9	6.9	6.2	7.7	6.3	6.4	9.9	6.2	8.1
13	6.8	6.0	5.3	5.9	5.7	6.1	6.4	5.0	4.7	3.2	1.6	0.9	2.1	2.6	3.7	4.3	5.2	5.2	5.5	5.9	4.8	5.4	4.2	2.6	6.8	0.9	4.5
14	4.0	2.8	3.3	3.3	3.3	2.8	2.3	2.2	2.2	2.0	2.0	2.1	2.1	2.1	1.9	1.9	1.8	2.2	1.3	0.7	1.4	1.1	0.6	0.7	4.0	0.6	2.1
15	0.5	0.4	0.7	0.5	0.4	0.1	0.8	0.8	1.4	1.6	1.7	1.8	3.5	3.7	3.8	4.0	4.3	4.4	5.4	5.3	4.9	4.6	4.7	4.9	5.4	0.1	2.7
16	4.7	5.1	4.9	4.9	5.4	5.3	5.6	5.2	5.3	4.9	5.5	5.7	5.7	5.4	5.5	5.2	5.8	6.4	6.3	5.8	5.7	5.9	6.2	5.7	6.4	4.7	5.5
17	5.9	5.7	6.4	6.0	6.2	6.9	6.4	5.5	5.8	5.9	5.8	4.7	4.2	2.4	0.4	1.6	1.6	3.1	4.3	4.5	4.1	4.5	5.9	5.8	6.9	0.4	4.7
18	5.9	6.0	6.8	6.8	7.0	7.3	5.9	4.6	6.4	5.7	5.5	4.5	5.3	5.9	6.0	4.7	3.8	1.6	2.1	3.7	3.7	3.3	3.8	3.7	7.3	1.6	5.0
19	3.0	2.0	2.9	2.6	2.7	1.7	1.9	2.6	3.4	2.4	3.9	4.2	4.6	4.5	5.2	4.2	4.0	5.7	6.2	5.9	5.6	5.5	5.6	5.8	6.2	1.7	4.0
20	5.7	5.9	5.1	4.5	5.1	5.6	5.9	5.9	5.7	4.8	5.6	6.6	6.8	7.5	6.6	6.7	7.2	7.0	6.8	5.6	6.0	5.6	5.5	5.7	7.5	4.5	6.0
21	5.8	5.6	6.1	6.2	6.3	6.4	5.2	4.9	4.3	5.1	6.2	5.6	5.9	6.0	5.8	5.6	5.0	5.1	4.4	4.4	5.0	5.5	4.4	5.1	6.4	4.3	5.4
22	6.3	4.8	5.4	5.5	7.7	7.5	6.3	6.3	7.6	7.3	7.8	8.0	6.1	3.8	4.4	4.8	5.5	6.9	6.4	5.6	4.6	3.9	4.3	3.4	8.0	3.4	5.8
23	2.0	2.2	3.9	4.1	4.3	4.8	4.2	4.3	4.8	5.3	5.2	5.5	5.3	4.9	3.7	6.9	7.0	7.4	8.1	8.7	10.3	10.3	8.6	9.0	10.3	2.0	5.9
24	8.2	7.8	8.0	6.3	6.4	7.4	7.0	6.9	7.2	9.5	9.2	8.9	7.6	6.9	6.3	6.0	5.8	4.6	3.4	1.9	1.8	1.0	2.1	2.1	9.5	1.0	5.9
25	1.3	1.2	0.9	1.4	1.2	1.3	1.1	0.4	0.9	0.7	1.5	1.5	2.0	1.8	2.2	0.5	0.9	0.2	1.6	1.9	1.7	2.2	2.6	1.9	2.6	0.2	1.4
26	2.1	2.1	3.6	3.6	3.1	2.3	1.7	2.4	1.6	1.6	2.1	0.8	1.3	2.1	1.8	2.0	3.7	4.2	4.9	2.3	3.2	4.1	4.2	5.5	5.5	0.8	2.8
27	5.8	5.5	5.8	6.4	6.2	7.2	7.9	7.2	6.6	6.5	6.7	6.6	6.9	6.2	6.3	5.5	6.0	5.4	5.8	6.3	6.9	4.9	4.8	5.4	7.9	4.8	6.2
28	5.2	4.7	3.7	3.2	2.3	1.4	2.0	1.7	0.8	0.8	0.6	0.6	0.8	1.9	2.5	2.4	2.6	3.0	2.3	2.8	1.4	1.4	1.4	2.5	5.2	0.6	2.2
29	1.7	2.4	2.4	2.2	2.4	2.1	2.3	2.6	2.1	2.2	1.5	0.5	0.0	0.2	1.8	1.6	1.8	1.7	2.1	3.1	2.4	1.3	2.3	1.7	3.1	0.0	1.8
30	1.6	0.8	0.4	0.6	1.5	1.6	0.7	0.8	1.2	2.0	1.9	1.9	1.7	1.4	1.5	1.9	1.8	1.4	1.2	2.2	2.2	1.9	2.1	2.1	2.2	0.4	1.5
31	2.2	2.1	2.2	2.0	2.3	2.2	2.5	2.4	2.1	2.0	2.3	1.1	0.7	1.9	1.7	2.0	1.3	1.7	2.4	2.3	2.7	2.6	2.4	2.3	2.7	0.7	2.1
Max.	**8.2**	**7.9**	**8.3**	**9.6**	**9.7**	**9.9**	**10.7**	**10.9**	**10.1**	**10.8**	**9.5**	**10.3**	**9.0**	**8.0**	**10.7**	**11.3**	**10.1**	**9.8**	**9.5**	**10.1**	**10.3**	**10.3**	**8.6**	**9.0**	**11.3**		
Min.	**0.5**	**0.4**	**0.4**	**0.5**	**0.4**	**0.1**	**0.7**	**0.4**	**0.8**	**0.7**	**0.5**	**0.5**	**0.0**	**0.2**	**0.4**	**0.5**	**0.5**	**0.2**	**0.9**	**0.7**	**1.4**	**1.0**	**0.6**	**0.7**		**0.0**	
Avg.	**4.1**	**4.0**	**4.1**	**4.1**	**4.3**	**4.4**	**4.2**	**4.2**	**4.2**	**4.2**	**4.4**	**4.4**	**4.4**	**4.1**	**4.2**	**4.2**	**4.1**	**4.3**	**4.4**	**4.3**	**4.2**	**4.1**	**4.1**	**4.0**			**4.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.9	2.4	1.5	2.3	2.0	1.7	1.6	1.8	2.0	2.6	3.4	4.9	4.1	4.8	4.6	3.7	3.8	4.3	4.7	5.2	4.7	4.4	4.2	4.0	5.2	1.5	3.4
2	4.5	4.8	4.4	4.7	5.9	6.2	7.1	6.5	5.7	5.9	5.7	6.0	6.9	7.5	6.9	6.5	7.4	8.2	8.1	8.7	8.3	8.4	8.7	8.6	8.7	4.4	6.7
3	8.0	8.0	8.2	7.5	7.9	7.8	7.2	7.5	7.5	6.8	7.2	7.3	6.9	6.5	6.5	6.9	7.2	7.0	6.5	6.7	7.1	6.9	6.9	7.1	8.2	6.5	7.2
4	6.8	6.7	6.5	6.7	6.1	5.8	5.9	6.4	6.1	6.1	6.2	6.7	6.7	6.5	6.6	6.5	6.8	5.7	5.9	6.6	6.2	6.0	6.4	6.1	6.8	5.7	6.3
5	6.3	6.2	6.4	6.1	6.5	6.1	5.6	6.3	5.6	5.3	6.3	5.7	5.6	6.0	5.1	4.2	3.3	2.3	2.2	5.2	5.2	2.9	3.1	3.8	6.5	2.2	5.1
6	4.4	2.6	1.9	3.7	2.7	2.9	1.7	1.6	2.2	3.5	1.1	0.7	1.4	1.8	1.0	2.6	4.8	4.0	4.6	5.0	5.6	4.2	3.5	5.3	5.6	0.7	3.0
7	5.9	6.3	6.9	7.9	8.6	8.5	7.7	8.6	8.9	9.2	9.6	8.7	7.8	6.8	5.8	5.8	6.7	5.6	5.1	6.5	5.4	3.5	3.1	2.1	9.6	2.1	6.7
8	2.4	2.8	2.7	2.4	2.6	2.6	1.9	1.0	1.0	0.8	1.3	1.3	3.3	5.1	5.8	6.6	7.7	7.7	7.6	8.5	8.5	9.3	10.1	11.5	11.5	0.8	4.8
9	12.6	13.1	13.4	11.2	9.9	9.9	7.6	6.6	8.9	9.6	11.5	10.9	12.2	11.8	11.4	10.9	10.9	11.7	9.7	10.7	11.0	10.5	10.0	8.3	13.4	6.6	10.6
10	9.3	8.8	8.4	7.2	6.2	3.6	3.1	4.1	2.8	1.7	2.5	2.8	4.2	6.2	8.5	8.7	7.5	8.3	8.9	6.3	5.7	5.7	7.6	8.7	9.3	1.7	6.1
11	8.5	6.3	5.9	6.4	5.7	4.9	5.4	5.6	2.4	1.6	1.4	1.5	0.3	0.6	1.8	0.5	1.7	2.5	1.4	2.4	4.3	4.9	4.6	4.4	8.5	0.3	3.6
12	4.8	4.8	3.8	3.8	4.5	6.3	4.5	3.3	3.7	4.2	5.2	4.8	5.0	4.6	4.8	4.7	4.7	4.8	3.2	3.0	2.7	2.2	1.4	1.7	6.3	1.4	4.0
13	2.2	1.4	1.5	2.4	2.3	2.5	2.0	1.0	1.3	1.7	1.7	2.3	3.0	4.2	3.9	2.9	2.9	1.2	0.9	0.3	0.9	0.6	1.0	0.9	4.2	0.3	1.9
14	1.2	1.3	1.1	2.2	1.4	1.3	1.2	2.1	2.1	2.2	2.4	1.2	1.5	2.3	2.4	2.1	2.5	2.6	1.8	2.1	2.0	2.3	1.7	3.2	3.2	1.1	1.9
15	2.1	0.7	0.5	0.9	1.9	2.3	2.4	2.5	3.2	2.6	1.9	2.5	2.0	0.8	1.5	1.2	2.7	2.8	2.9	2.4	5.8	6.9	6.6	6.0	6.9	0.5	2.7
16	6.6	6.4	4.7	3.6	3.7	2.5	2.2	0.5	0.9	1.2	0.8	1.3	2.5	1.5	1.8	1.8	1.8	1.1	1.7	2.1	2.0	2.0	1.9	1.5	6.6	0.5	2.3
17	2.4	2.4	2.7	2.6	2.4	2.8	2.5	2.5	1.8	2.7	1.5	1.4	2.6	2.2	2.0	1.1	1.6	1.7	3.2	2.0	2.1	2.9	2.5	2.7	3.2	1.1	2.3
18	2.4	2.4	2.6	2.1	2.8	2.9	4.3	3.6	3.7	2.9	3.7	4.0	3.5	4.6	4.4	3.8	4.0	4.0	4.6	4.8	3.9	4.8	4.9	4.8	4.9	2.1	3.7
19	4.5	4.1	4.5	5.0	6.2	6.5	6.2	6.0	5.4	5.7	5.9	6.5	6.2	5.9	6.1	6.3	6.2	6.5	5.8	5.9	5.9	6.3	6.0	6.5	6.5	4.1	5.8
20	7.4	6.9	7.1	7.4	4.9	4.5	5.3	4.7	6.6	6.1	6.7	7.5	6.9	7.6	7.4	7.5	7.2	7.1	7.4	7.8	7.8	7.4	7.6	8.0	8.0	4.5	6.9
21	7.0	6.2	6.3	7.1	8.1	7.9	7.8	7.5	7.2	8.3	8.5	9.0	8.7	7.9	7.8	7.3	7.4	6.6	5.5	5.6	6.2	5.6	5.3	4.2	9.0	4.2	7.0
22	3.1	6.0	6.0	5.7	5.9	4.7	5.8	5.9	5.5	5.6	4.7	4.5	4.9	4.7	5.1	5.1	4.4	4.2	3.5	4.8	5.3	4.8	5.1	4.5	6.0	3.1	5.0
23	3.0	2.4	1.3	1.0	1.4	1.7	4.1	3.3	3.4	3.4	2.7	3.5	3.9	1.8	1.7	2.9	4.1	4.4	5.7	5.5	3.6	8.6	9.7	8.5	9.7	1.0	3.8
24	7.8	6.2	6.1	7.2	8.9	9.4	9.6	7.8	7.1	6.5	5.9	5.3	5.6	4.6	4.9	4.2	4.0	2.2	2.7	3.8	2.2	1.0	1.0	3.3	9.6	1.0	5.3
25	6.6	6.9	7.2	6.9	8.0	7.1	7.2	7.3	7.3	6.6	5.9	7.0	6.7	7.4	7.2	7.9	8.2	9.7	8.3	8.7	8.8	8.1	7.8	7.5	9.7	5.9	7.5
26	8.2	7.9	7.9	7.4	8.2	8.3	8.5	7.8	7.8	6.8	6.8	6.3	6.5	6.6	6.1	7.0	6.6	6.4	6.4	5.5	5.8	5.9	6.2	6.5	8.5	5.5	7.0
27	5.8	5.0	5.6	4.8	4.1	5.3	4.2	4.3	5.1	4.0	4.4	3.2	3.2	4.5	4.9	4.6	6.1	6.1	5.9	5.7	5.4	4.6	3.0	2.5	6.1	2.5	4.7
28	3.5	6.7	6.3	6.8	5.6	6.3	6.3	6.3	5.6	5.2	5.0	5.3	6.1	6.3	5.3	4.9	5.7	6.2	7.0	7.5	8.0	7.1	7.9	8.1	8.1	3.5	6.2
29	8.7	8.5	9.1	8.7	8.5	8.5	8.9	9.4	9.5	8.4	8.8	8.3	9.3	9.8	9.6	9.6	10.0	9.5	10.2	11.4	10.7	10.7	8.0	8.7	11.4	8.0	9.3
30	9.3	8.3	8.8	8.4	9.2	8.8	8.0	8.3	8.5	7.9	8.0	6.9	7.4	9.0	6.5	6.7	7.2	7.6	6.7	6.3	6.4	7.3	5.8	6.3	9.3	5.8	7.7
Max.	**12.6**	**13.1**	**13.4**	**11.2**	**9.9**	**9.9**	**9.6**	**9.4**	**9.5**	**9.6**	**11.5**	**10.9**	**12.2**	**11.8**	**11.4**	**10.9**	**10.9**	**11.7**	**10.2**	**11.4**	**11.0**	**10.7**	**10.1**	**11.5**	**13.4**		
Min.	**1.2**	**0.7**	**0.5**	**0.9**	**1.4**	**1.3**	**1.2**	**0.5**	**0.9**	**0.8**	**0.8**	**0.7**	**0.3**	**0.6**	**1.0**	**0.5**	**1.6**	**1.1**	**0.9**	**0.3**	**0.9**	**0.6**	**1.0**	**0.9**		**0.3**	
Avg.	**5.6**	**5.4**	**5.3**	**5.3**	**5.4**	**5.3**	**5.2**	**5.0**	**4.9**	**4.8**	**4.9**	**4.9**	**5.2**	**5.3**	**5.3**	**5.2**	**5.5**	**5.4**	**5.3**	**5.6**	**5.6**	**5.5**	**5.4**	**5.5**			**5.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Speed (RMYoung) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.8	4.3	6.1	6.0	6.9	7.7	7.0	5.6	5.9	4.6	3.0	0.4	1.4	1.9	1.2	1.5	0.7	1.9	2.8	3.4	3.0	2.9	3.4	3.7	7.7	0.4	3.8
2	3.6	3.7	4.2	3.7	3.0	4.6	4.9	4.5	4.0	3.8	4.6	5.8	6.1	6.6	8.0	8.7	9.1	8.2	8.1	7.9	7.4	8.0	7.0	8.2	9.1	3.0	6.0
3	7.3	7.1	7.4	7.7	8.4	8.3	8.0	7.5	8.3	7.6	8.7	9.5	8.9	10.2	11.1	10.8	10.8	10.7	11.2	10.3	10.7	10.2	8.8	7.8	11.2	7.1	9.1
4	5.8	5.2	5.6	6.3	5.2	5.6	4.1	3.5	3.1	4.5	3.8	4.7	6.2	6.1	5.1	4.8	4.3	5.0	4.2	3.6	3.8	3.7	3.8	4.1	6.3	3.1	4.7
5	3.4	3.1	3.0	2.9	3.4	3.3	3.1	1.5	2.7	3.0	2.9	3.9	5.5	5.8	6.9	5.0	5.1	6.0	5.3	5.2	6.0	5.2	5.2	4.9	6.9	1.5	4.3
6	5.6	5.6	5.3	5.0	4.0	1.8	1.6	0.8	0.6	0.9	0.6	0.7	0.8	0.7	0.4	0.8	1.6	0.4	0.9	0.5	1.0	0.4	0.8	0.6	5.6	0.4	1.7
7	0.5	0.6	1.1	0.7	2.5	4.0	4.4	4.7	4.2	5.4	5.7	5.0	5.4	4.6	4.4	2.9	2.9	2.2	0.9	0.9	1.5	2.7	3.0	4.6	5.7	0.5	3.1
8	4.2	6.3	7.8	9.4	9.9	10.8	12.0	12.0	10.2	10.6	11.4	9.2	11.1	10.7	10.4	11.2	11.6	8.4	7.8	7.3	5.2	3.7	4.7	3.9	12.0	3.7	8.7
9	5.1	3.1	3.5	1.8	1.6	2.0	0.7	0.8	1.3	1.1	0.4	1.7	4.3	4.8	3.9	3.7	3.7	4.8	4.5	5.5	6.6	5.6	3.9	4.2	6.6	0.4	3.3
10	4.1	3.3	2.9	3.9	4.7	4.1	5.1	6.2	6.2	5.8	5.8	6.0	5.2	5.0	5.0	4.9	5.7	4.8	4.6	4.6	5.1	5.2	4.8	5.3	6.2	2.9	4.9
11	4.7	5.4	4.1	2.7	3.5	3.6	4.4	4.9	4.8	4.9	5.4	5.5	5.4	5.4	5.6	5.1	4.8	3.9	3.4	2.7	3.4	4.6	4.7	3.0	5.6	2.7	4.4
12	2.5	2.7	3.3	3.4	4.1	5.1	4.6	5.4	4.1	3.8	4.4	3.5	3.8	6.7	6.8	6.0	4.9	4.8	3.0	4.1	4.1	3.6	3.6	3.1	6.8	2.5	4.2
13	4.3	3.8	3.3	2.8	4.1	3.1	2.0	0.9	1.3	0.5	0.5	2.4	1.2	1.5	2.3	2.4	1.7	3.3	2.3	0.6	2.5	2.5	2.3	2.8	4.3	0.5	2.3
14	2.7	2.8	2.8	3.4	3.3	3.6	3.5	4.6	3.9	3.3	3.8	3.7	3.9	3.5	3.0	3.8	3.7	2.8	2.7	2.9	5.0	4.4	4.3	5.0	5.0	2.7	3.6
15	5.3	5.8	6.2	7.2	8.1	6.7	7.8	7.5	5.4	4.0	3.5	3.4	2.4	0.7	0.0	0.9	0.5	0.2	0.7	0.0	0.0	0.0	0.0	0.0	8.1	0.0	3.2
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.4	5.2	5.2	0.0	0.5
17	6.9	4.8	3.5	4.4	3.6	4.7	5.7	4.9	5.3	6.4	4.5	4.9	6.1	6.1	5.9	5.3	5.8	5.3	4.8	5.1	4.0	4.2	4.2	3.1	6.9	3.1	5.0
18	3.4	3.4	4.2	4.8	4.2	3.6	4.8	6.7	8.2	6.9	6.7	7.1	7.2	6.0	6.3	6.6	6.3	7.0	7.4	7.3	7.5	7.0	6.3	5.9	8.2	3.4	6.0
19	6.1	6.1	5.3	5.9	4.8	5.6	5.9	6.0	6.1	6.2	6.0	6.6	7.1	7.1	7.6	7.3	7.2	7.8	7.5	8.2	8.5	8.6	9.1	9.3	9.3	4.8	6.9
20	8.7	7.5	6.9	5.5	3.2	2.6	1.8	1.6	1.8	2.2	0.6	1.1	2.6	2.2	2.3	1.2	1.3	2.2	2.0	1.3	1.7	1.6	2.5	2.9	8.7	0.6	2.8
21	1.2	0.8	0.6	0.7	0.8	0.6	0.4	0.5	0.7	0.3	0.3	0.6	2.3	3.4	2.8	4.5	3.8	5.1	2.8	2.3	0.8	0.9	1.5	1.7	5.1	0.3	1.6
22	0.6	2.8	2.5	3.0	2.3	2.7	2.6	2.5	3.2	2.8	2.5	1.9	1.1	0.6	1.4	1.5	1.6	2.3	2.1	2.6	2.7	3.2	3.4	2.5	3.4	0.6	2.3
23	2.5	2.8	2.4	2.2	2.2	1.3	0.9	1.0	1.4	1.5	1.8	7.7	7.5	8.1	8.8	8.3	6.7	7.3	7.2	8.4	6.9	5.8	5.5	6.1	8.8	0.9	4.8
24	8.0	7.7	8.1	7.8	6.3	5.6	6.7	6.7	7.1	7.0	7.2	7.7	8.7	8.4	6.4	4.4	2.7	2.5	2.3	4.3	7.4	6.0	3.0	1.5	8.7	1.5	6.0
25	2.3	2.6	3.6	4.8	4.7	3.3	5.1	6.5	5.5	5.3	3.6	3.4	2.7	2.9	3.9	3.5	2.8	2.2	2.2	2.6	3.7	4.9	5.2	5.3	6.5	2.2	3.9
26	7.1	8.4	8.7	8.3	8.1	8.3	10.3	12.2	11.9	12.2	11.4	11.7	13.0	7.7	7.9	9.1	9.5	8.3	9.9	9.9	9.6	10.6	9.5	10.8	13.0	7.1	9.8
27	9.7	8.4	7.9	7.7	7.7	7.7	7.3	7.4	7.1	7.6	7.3	6.9	6.2	6.2	6.4	6.6	6.5	6.4	6.5	6.9	6.7	6.6	6.3	6.3	9.7	6.2	7.1
28	6.3	6.3	6.8	6.8	6.6	5.7	5.7	6.0	6.4	6.8	7.1	7.1	7.3	7.8	7.0	6.6	7.2	6.8	6.0	5.7	5.5	5.6	5.6	5.7	7.8	5.5	6.4
29	6.2	6.2	6.3	6.3	6.2	6.5	6.2	6.4	6.9	6.5	6.3	5.5	6.8	6.6	6.4	6.5	5.8	5.7	6.1	6.6	6.4	6.5	6.2	6.3	6.9	5.5	6.3
30	5.8	6.4	6.2	5.9	6.2	6.9	7.7	7.2	7.3	7.5	7.9	7.4	7.3	7.9	8.0	7.9	7.7	7.5	7.9	8.6	9.1	8.6	8.4	8.7	9.1	5.8	7.5
31	8.6	9.1	9.2	9.3	10.0	10.2	9.8	10.3	9.5	9.7	9.4	10.4	9.6	9.7	9.9	9.3	9.2	9.4	9.8	9.2	8.8	9.1	9.1	9.2	10.4	8.6	9.5
Max.	**9.7**	**9.1**	**9.2**	**9.4**	**10.0**	**10.8**	**12.0**	**12.2**	**11.9**	**12.2**	**11.4**	**11.7**	**13.0**	**10.7**	**11.1**	**11.2**	**11.6**	**10.7**	**11.2**	**10.3**	**10.7**	**10.6**	**9.5**	**10.8**	**13.0**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**4.8**	**4.7**	**4.8**	**4.8**	**4.8**	**4.8**	**5.0**	**5.0**	**5.0**	**4.9**	**4.7**	**5.0**	**5.4**	**5.3**	**5.3**	**5.2**	**5.0**	**4.9**	**4.7**	**4.8**	**5.0**	**5.0**	**4.9**	**4.9**			**5.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	181.9	273.2	169.5	277.0	270.0	265.3	260.5	261.7	260.1	259.6	264.2	263.4	263.3	266.3	262.7	262.8	272.3	269.5	264.0	271.5	272.4	264.3	265.4	266.6
2	267.4	267.6	267.2	268.8	274.3	284.5	288.8	281.1	283.0	284.7	290.1	291.4	287.0	284.8	285.3	281.9	282.4	286.2	280.6	264.7	261.7	268.2	268.8	270.8
3	268.6	267.4	274.9	267.4	272.5	276.9	272.4	272.6	271.0	271.6	270.8	277.1	282.4	287.2	288.6	292.5	291.9	290.0	292.4	294.7	292.2	292.5	291.4	287.0
4	288.5	287.7	293.6	293.7	289.5	286.9	285.2	286.1	291.3	291.1	290.4	289.2	289.4	288.8	291.0	290.4	290.0	289.0	288.7	286.8	285.5	285.6	287.4	287.5
5	288.3	285.1	286.0	283.8	284.0	285.5	283.6	284.1	284.3	284.8	284.2	281.7	277.5	279.0	277.5	280.5	280.1	285.5	287.1	288.0	288.7	288.2	288.1	286.9
6	288.6	284.7	285.3	286.2	283.3	285.6	288.2	284.5	281.4	276.0	275.3	277.5	275.0	274.3	285.5	284.2	286.7	283.5	292.3	295.0	296.6	296.4	295.9	296.5
7	291.1	291.2	290.1	290.2	292.4	294.9	292.1	291.9	287.4	286.9	287.0	286.4	287.2	285.9	286.4	287.4	286.3	286.9	289.8	289.6	290.0	290.9	290.2	287.0
8	284.9	284.6	287.8	285.2	284.6	285.0	287.2	287.2	286.6	288.8	286.8	284.9	292.4	284.8	286.3	286.0	290.8	296.4	293.2	291.1	286.7	291.3	290.7	293.6
9	288.1	286.0	284.6	287.6	285.4	295.0	293.4	286.2	288.5	287.9	283.8	287.1	285.1	283.8	283.7	287.6	286.6	280.0	280.1	276.8	276.0	277.5	275.6	277.9
10	277.8	276.3	278.9	282.7	281.6	283.3	283.7	281.7	280.0	271.1	270.7	276.1	277.1	275.1	272.8	271.3	275.0	269.2	270.0	268.9	267.8	273.2	274.8	275.5
11	277.5	276.6	274.6	277.1	277.5	273.9	279.6	283.0	279.4	279.5	280.5	283.9	281.5	283.1	283.6	286.9	284.6	288.5	290.9	292.9	290.8	290.7	295.1	292.4
12	289.0	284.8	283.1	284.4	281.9	275.6	276.5	277.4	276.0	275.6	275.5	278.7	279.2	279.6	287.0	291.4	285.0	286.4	289.1	284.7	276.4	274.6	274.8	275.3
13	273.0	275.1	277.4	280.3	275.0	277.3	276.0	276.8	281.5	275.8	275.1	282.1	280.8	274.2	276.0	278.6	277.2	284.8	281.4	280.8	285.7	290.2	294.2	283.4
14	280.6	285.9	278.4	259.6	268.6	276.8	332.7	293.4	298.4	74.2	74.8	84.8	77.2	81.7	73.4	87.8	47.6	57.1	92.8	60.7	112.7	122.0	104.9	107.5
15	111.5	106.7	106.9	115.0	119.2	111.7	126.7	107.2	67.3	88.8	92.3	90.7	92.3	103.4	121.6	104.7	122.7	101.7	77.8	54.6	82.7	72.8	87.0	93.9
16	71.2	269.2	24.4	86.1	347.0	293.3	294.1	297.3	287.8	282.3	279.2	284.1	291.3	300.6	288.7	299.4	288.2	234.7	200.6	201.6	273.4	299.0	290.9	282.4
17	334.4	90.8	81.6	98.9	61.0	60.8	69.5	107.0	103.5	122.8	115.4	87.5	89.4	86.9	97.3	93.9	103.7	118.1	112.1	126.9	124.1	87.0	102.4	132.0
18	105.6	87.7	73.1	93.4	104.6	101.9	97.7	72.1	346.5	33.0	268.6	0.7	69.9	51.1	61.2	283.4	286.6	84.1	94.5	116.0	104.7	69.7	69.0	92.9
19	63.5	60.6	46.0	57.0	31.8	68.7	85.3	92.4	109.9	81.0	123.0	135.9	123.9	89.9	98.8	91.3	100.7	97.8	116.7	90.1	92.6	101.3	100.6	107.8
20	109.8	113.4	117.0	106.2	104.1	98.0	107.7	95.8	99.2	89.0	85.6	83.9	77.7	78.4	87.7	69.6	69.3	80.3	108.6	88.0	62.9	288.3	294.3	70.8
21	94.0	104.9	94.8	112.4	96.5	107.6	115.2	110.0	129.8	103.7	78.5	103.8	127.8	125.7	114.0	101.4	123.9	113.1	96.1	93.9	94.9	96.5	84.1	71.6
22	74.3	63.6	66.4	61.0	63.4	49.6	47.8	50.6	50.6	70.5	81.9	194.0	265.2	265.8	286.1	286.7	275.0	275.8	324.9	285.6	276.7	287.5	287.3	296.4
23	303.3	285.7	290.6	277.8	285.2	306.6	306.8	295.0	290.1	295.0	289.1	302.3	294.8	288.5	303.4	303.4	293.0	310.5	313.0	290.9	281.8	273.3	272.5	281.9
24	293.2	272.2	272.6	262.4	268.7	282.6	299.1	74.9	83.1	119.7	102.9	100.0	124.5	89.2	32.6	70.9	86.7	110.0	115.2	59.2	65.3	70.5	79.5	52.4
25	55.2	56.0	73.8	82.6	218.3	49.9	294.9	293.2	286.1	283.6	286.2	295.3	284.1	286.8	288.4	288.3	275.4	277.1	278.0	271.6	277.2	291.4	288.6	285.0
26	289.2	291.5	287.3	293.7	307.7	305.1	293.1	287.0	254.7	268.9	260.1	261.3	256.1	260.3	268.1	264.8	289.3	291.1	284.6	284.0	282.3	276.2	75.0	67.2
27	56.8	81.3	52.6	49.1	54.8	65.9	108.1	92.3	92.7	113.6	111.6	98.8	107.1	110.1	113.1	121.0	120.1	121.9	107.3	112.2	114.2	120.9	119.5	109.9
28	122.2	113.9	143.6	157.7	275.1	319.3	117.9	92.3	65.6	46.3	90.9	47.2	49.3	65.9	64.2	67.2	66.8	59.4	75.1	282.3	81.9	284.5	286.6	291.9
29	286.4	294.8	288.4	286.5	280.3	280.9	286.1	288.5	289.6	291.2	292.5	290.1	283.6	275.5	272.9	290.9	273.2	265.9	270.7	354.0	35.7	312.7	264.5	267.2
30	266.0	265.5	268.5	276.4	271.6	271.6	271.2	265.9	282.7	269.1	268.9	272.7	285.9	266.8	275.7	280.4	289.4	291.9	279.9	289.0	293.2	292.6	297.8	295.2
31	294.1	297.6	304.3	297.1	300.7	307.8	306.1	296.6	289.2	315.4	294.5	302.1	308.6	309.3	316.6	303.9	295.7	293.4	299.9	305.1	305.4	287.5	265.3	253.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	262.8	290.0	285.8	282.4	287.9	283.0	284.9	282.2	286.0	282.1	287.1	282.5	277.1	277.0	279.4	282.5	282.4	287.3	300.8	293.4	311.9	276.6	285.0	280.0
2	288.3	280.0	286.5	98.2	300.9	324.9	317.0	269.2	263.3	252.9	254.4	259.5	280.4	283.7	284.6	294.3	306.0	306.7	311.8	289.1	285.2	289.3	310.0	297.3
3	282.2	293.3	288.7	281.1	288.3	294.9	282.8	299.1	293.7	291.4	274.5	273.9	272.6	270.6	253.5	257.4	258.8	263.3	262.5	264.9	267.3	270.5	270.2	271.0
4	269.9	269.5	270.3	270.8	268.7	268.3	276.0	308.6	282.6	286.9	287.6	280.9	288.4	271.3	282.3	280.6	283.8	271.4	265.0	269.4	262.1	270.8	275.9	265.0
5	248.9	246.9	252.9	264.3	296.7	297.4	293.2	273.9	260.5	270.5	277.3	257.6	269.2	267.6	259.2	258.5	258.9	260.5	265.3	264.6	273.7	270.4	272.5	271.4
6	279.7	279.8	275.2	292.6	294.3	289.5	278.7	286.0	287.2	280.0	279.3	271.7	274.1	270.2	277.1	269.9	265.6	255.0	245.2	251.4	256.6	257.5	258.7	251.2
7	252.7	252.0	253.0	256.0	259.9	261.9	263.1	260.1	264.0	263.9	267.9	264.2	267.1	268.7	265.6	270.9	270.1	270.4	271.5	270.3	271.4	292.4	276.6	284.9
8	296.0	278.7	282.1	272.1	283.8	272.3	284.4	308.9	109.1	130.3	148.4	105.1	107.7	137.3	129.1	89.0	104.2	98.1	90.9	109.5	103.2	155.4	151.3	131.3
9	108.2	100.8	99.1	99.1	108.6	102.4	99.3	106.9	104.4	92.8	71.0	23.1	92.7	71.4	53.1	59.6	119.9	265.1	263.2	243.8	263.3	286.0	285.1	296.0
10	270.0	254.8	266.1	249.2	267.7	273.1	268.1	273.1	277.5	264.9	270.3	268.5	269.9	278.7	282.6	275.9	285.1	281.9	279.7	284.9	281.7	287.4	274.4	271.3
11	286.0	280.9	291.8	293.0	278.5	296.8	288.0	355.4	74.7	269.4	276.3	274.0	268.1	269.6	271.0	274.0	273.9	273.9	269.0	259.0	249.8	258.3	273.2	280.2
12	286.1	293.1	298.2	293.6	292.5	293.3	288.0	279.5	281.2	277.1	280.8	285.3	287.4	285.5	301.6	277.6	273.8	254.9	259.0	269.1	289.4	281.8	285.9	82.8
13	59.1	88.8	106.5	106.6	98.9	93.1	101.9	100.0	87.8	105.1	104.0	107.5	103.0	106.0	106.5	105.0	100.7	97.7	108.2	104.4	105.3	105.9	103.5	99.9
14	118.0	118.4	111.0	125.6	106.3	102.1	116.5	117.1	117.9	131.1	294.2	289.3	284.9	286.5	287.5	288.4	289.2	284.4	285.2	284.2	282.8	288.5	291.0	295.6
15	295.7	287.2	286.6	286.0	287.3	292.0	301.1	300.3	288.3	302.4	293.3	287.4	277.5	272.6	277.7	293.2	271.6	293.9	278.2	271.2	104.6	284.5	94.5	98.0
16	95.9	117.2	107.6	91.5	92.0	100.9	103.0	101.4	122.4	111.6	102.1	97.2	100.7	100.0	102.8	199.8	184.7	194.4	84.7	65.3	95.1	115.3	136.8	350.2
17	57.8	58.3	60.1	72.7	96.4	113.7	109.0	120.1	106.9	106.9	96.1	104.5	98.2	93.1	103.8	115.6	100.0	103.7	89.4	78.5	80.6	80.5	87.3	99.4
18	102.0	104.0	97.9	95.3	82.2	81.3	88.4	95.2	94.0	97.6	101.1	96.0	85.1	87.4	99.3	108.2	105.0	95.4	92.3	66.1	97.3	106.0	128.8	106.9
19	119.2	104.9	114.6	270.5	33.8	201.9	278.5	249.4	92.7	94.3	97.4	98.3	101.8	99.1	100.9	106.5	102.2	104.9	104.6	102.0	92.4	97.5	90.8	94.9
20	93.9	91.9	94.1	85.9	88.7	101.2	100.2	85.6	81.0	78.4	99.6	90.3	90.6	99.3	90.6	99.1	100.9	97.9	95.7	91.2	97.0	97.5	102.5	167.3
21	70.9	89.2	73.4	49.5	123.1	13.0	86.1	70.6	102.1	95.9	100.6	100.7	94.5	88.1	91.0	95.0	88.0	93.7	97.4	93.1	103.0	92.4	99.5	102.0
22	87.4	88.6	84.1	92.4	104.3	99.7	133.7	114.5	116.0	112.2	88.9	111.6	97.6	86.3	98.6	91.4	104.2	101.4	91.6	95.7	92.1	96.3	90.5	72.1
23	68.5	96.7	96.2	273.0	284.7	264.7	261.0	265.6	272.6	264.6	266.4	266.5	265.1	266.9	266.7	269.0	268.1	265.0	265.7	264.2	265.9	264.4	260.6	261.6
24	265.5	265.3	264.0	267.8	263.2	262.2	265.0	261.6	268.8	268.1	270.8	262.0	263.9	272.2	270.3	269.5	276.3	280.1	280.8	280.7	283.4	288.6	287.8	286.4
25	291.0	296.6	291.4	296.9	295.3	294.1	290.2	290.0	286.8	277.4	277.4	275.2	273.5	268.7	268.2	103.6	114.1	111.5	103.4	89.2	99.2	91.2	86.2	50.0
26	78.8	82.4	100.9	72.6	97.2	93.9	116.0	101.3	150.4	225.9	284.3	260.8	112.9	75.9	131.0	266.6	263.5	255.8	254.3	255.4	260.7	250.9	272.1	279.8
27	279.8	270.3	271.3	273.0	272.3	269.7	267.4	272.3	266.0	269.2	273.2	291.4	100.6	71.0	267.0	334.2	94.3	93.2	298.5	252.4	125.7	117.2	121.7	139.3
28	113.1	145.2	149.0	110.0	131.0	96.2	101.6	96.2	97.1	102.0	250.0	100.9	110.2	81.3	86.5	80.9	264.6	265.5	273.8	299.0	283.4	273.4	292.5	298.0
29	280.3	264.4	284.2	285.2	255.6	285.0	287.7	267.7	267.2	268.7	255.6	255.7	254.1	261.1	268.9	267.8	260.8	257.8	260.6	264.2	268.3	280.3	277.5	284.4

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	281.8	282.0	275.8	266.6	274.0	271.6	268.7	264.9	266.4	269.2	296.5	111.5	88.4	83.9	84.9	90.3	85.1	100.7	144.6	151.7	131.6	113.2	129.6	117.4
2	123.9	109.1	96.4	101.8	122.4	104.8	123.5	126.9	127.3	124.5	110.4	86.3	99.7	127.3	118.6	101.7	134.8	177.7	312.4	34.0	283.5	267.6	295.9	89.5
3	94.8	91.2	74.6	71.8	53.7	118.7	124.4	115.6	93.6	95.9	90.2	96.0	99.2	110.6	110.7	112.3	119.7	124.2	130.2	121.8	97.2	89.2	99.4	98.8
4	109.4	108.4	111.3	77.7	56.7	79.9	102.2	103.4	85.5	89.4	74.9	77.6	98.1	95.1	152.4	93.4	100.2	113.0	107.3	89.9	86.0	72.2	111.6	94.8
5	82.9	91.7	99.6	100.2	97.4	96.4	94.3	88.1	91.2	92.6	89.9	91.7	88.2	82.1	87.1	97.8	115.7	85.6	76.8	81.1	98.5	102.3	95.6	90.5
6	98.8	92.4	93.9	89.3	88.1	99.1	84.3	76.9	98.7	102.1	74.3	94.4	101.2	107.6	89.0	90.2	105.0	97.8	105.8	189.0	70.4	285.6	317.9	113.1
7	228.7	280.3	267.9	274.8	256.1	295.0	276.6	277.7	281.1	298.8	264.5	308.8	299.8	293.6	281.0	287.3	289.6	285.1	287.2	282.9	284.2	281.3	278.0	280.9
8	274.8	272.7	289.6	293.3	295.8	272.0	265.9	266.0	123.9	99.3	111.7	131.0	102.2	130.7	134.1	100.5	95.8	99.1	94.8	95.9	94.6	154.2	350.7	94.5
9	75.1	128.5	147.4	141.4	287.6	271.0	270.2	282.1	293.0	278.5	275.5	268.0	261.2	272.0	275.4	272.5	286.5	292.5	286.5	298.8	295.3	282.5	285.5	305.0
10	279.1	281.3	256.4	282.7	283.1	281.4	288.7	298.5	295.0	294.4	291.3	287.9	284.3	282.5	283.0	287.1	287.4	287.9	283.3	282.4	290.9	294.7	294.9	292.0
11	294.7	293.7	287.7	286.2	291.0	288.5	285.2	282.2	283.7	287.4	287.4	288.7	284.6	282.0	279.2	275.9	276.0	281.6	287.7	279.1	273.0	276.8	281.0	281.6
12	287.3	286.7	287.4	287.6	284.1	288.7	291.3	288.3	286.3	286.3	287.0	285.9	285.4	284.5	277.3	278.6	277.7	278.2	269.6	269.5	268.3	264.5	267.7	270.0
13	275.0	278.8	274.7	279.0	280.7	281.9	284.1	277.5	276.6	278.6	281.3	277.1	273.1	273.9	275.6	278.1	281.0	282.6	286.9	283.5	277.9	280.8	282.4	285.7
14	286.8	288.4	286.1	287.6	289.5	279.4	263.4	265.6	263.7	258.1	262.2	272.8	279.3	91.0	115.8	96.1	93.7	95.7	89.2	89.9	90.5	123.1	95.7	119.2
15	94.0	100.5	93.8	105.1	92.7	93.7	93.9	96.9	99.2	111.5	116.2	112.9	94.9	106.4	95.4	93.3	101.5	116.1	118.1	134.2	107.8	98.0	105.1	114.7
16	118.5	108.8	117.4	277.1	275.9	176.6	105.5	338.7	330.9	6.3	81.7	105.0	107.5	93.2	95.1	184.9	251.0	252.9	279.3	280.0	282.3	285.6	301.9	251.4
17	275.3	268.9	275.6	295.8	289.8	290.9	295.4	268.9	269.4	272.9	251.5	253.6	264.9	281.7	270.6	273.9	284.4	290.4	287.8	284.9	283.3	284.8	283.6	286.8
18	286.0	285.5	285.9	280.9	281.8	282.1	278.2	275.5	282.6	283.2	285.6	286.3	288.9	289.5	286.9	283.1	279.3	287.0	286.4	283.7	288.6	284.9	271.6	267.3
19	269.6	273.3	279.0	274.0	279.4	279.4	281.1	275.4	274.0	275.0	279.1	290.5	286.0	287.3	285.6	282.9	290.8	291.9	291.5	292.0	291.0	288.7	284.8	285.6
20	289.8	286.5	288.7	289.2	286.4	286.3	289.2	289.7	294.5	291.9	287.5	285.5	282.0	276.5	276.3	276.1	280.0	275.6	274.4	272.3	274.1	269.7	268.6	268.3
21	269.0	269.8	268.9	270.2	276.7	273.2	273.1	273.3	268.8	265.7	265.5	268.0	265.6	266.8	266.4	269.2	268.7	262.4	265.9	264.8	263.4	269.0	267.8	269.5
22	273.1	274.0	272.2	270.0	268.3	270.6	273.2	266.1	269.1	272.0	261.9	261.1	260.8	260.3	258.0	256.7	260.8	265.2	259.2	268.9	267.5	273.3	271.3	273.3
23	276.2	279.4	284.5	285.8	283.8	286.1	290.1	294.8	289.7	288.9	284.3	286.4	285.6	284.8	286.1	283.3	286.6	286.8	284.9	284.8	279.5	281.3	285.9	286.6
24	284.3	281.4	285.9	292.4	289.4	285.0	276.9	276.2	278.3	279.3	276.4	271.8	272.2	267.3	265.4	269.1	276.1	275.6	273.9	273.9	277.2	275.6	280.2	276.4
25	266.6	272.0	296.9	275.4	272.7	267.3	267.7	269.6	268.0	264.1	262.0	273.1	274.0	263.3	262.0	260.1	272.6	279.5	278.0	278.8	283.2	284.5	276.8	279.0
26										288.6				281.5	286.8	283.5	283.2	277.3	275.9	283.2	290.5	296.1	294.6	284.2
27	280.9	282.2	281.9	289.3	282.3	270.8	275.0	274.3	276.1	277.9	290.7	281.7	278.2	285.4	284.4	285.1	281.0	284.5	284.4	284.6	288.7	277.8	275.8	284.9
28	290.2	295.9	302.4	296.6	298.1	296.1	296.3	297.6	294.9	293.7	283.7	280.4	276.0	269.2	272.7	267.0	266.3	265.9	260.9	265.4	268.3	278.8	283.0	287.8
29	284.8	293.9	69.5	86.7	70.7	65.7	100.6	86.5	95.3	84.9	79.8	89.0	109.9	103.1	100.8	109.2	105.5	104.1	103.8	103.1	94.6	90.7	93.0	96.1
30	81.9	76.1	81.4	104.5	102.9	102.3	97.6	101.3	95.3	94.9	106.2	102.1	108.0	96.7	104.0	94.6	101.5	96.4	98.2	96.1	89.9	91.6	94.1	94.6
31	95.3	93.5	105.5	108.6	115.5	114.8	104.7	75.4	70.9	84.5	69.1	96.1	85.0	60.2	90.2	71.1	81.3	74.9	94.7	97.7	95.9	90.9	103.7	96.0

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	93.0	90.9	97.1	94.8	96.3	98.6	87.5	91.7	93.0	99.9	115.7	118.3	120.5	113.8	115.7	127.6	115.8	104.5	95.3	113.9	128.2	129.8	134.5	201.8
2	240.0	273.3	289.2	288.1	293.4	293.2	295.4	293.8	296.5	300.1	298.4	297.8	291.7	291.7	276.0	269.7	268.6	28.0	75.3	105.1	88.7	81.1	91.1	61.0
3	86.5	93.8	92.0	95.9	71.1	76.3	24.4	59.4	61.7	91.2	100.7	86.7	93.3	59.5	52.2	54.3	69.7	82.1	87.5	110.5	108.3	98.8	110.0	109.1
4	104.2	97.2	95.6	100.2	91.3	93.7	90.4	80.9	90.0	89.8	98.1	88.1	75.2	91.1	105.9	104.8	119.7	95.4	107.7	127.0	103.2	93.7	9.1	288.1
5	291.1	288.1	292.5	296.1	289.6	294.3	292.9	285.5	286.7	296.2	294.3	285.7	281.3	274.6	272.8	270.0	269.8	267.3	263.1	262.3	267.8	271.1	270.7	275.3
6	281.9	280.2	295.5	303.0	287.5	293.6	309.3	296.5	297.2	297.6	295.9	293.9	291.5	288.9	287.2	285.3	288.2	291.3	287.0	276.8	279.9	277.6	278.3	277.5
7	273.1	279.0	276.1	287.2	286.7	285.6	288.7	289.0	286.6	281.7	288.2	283.0	277.6	274.8	282.0	272.4	266.9	268.2	267.2	271.7	274.2	287.3	286.0	298.9
8	296.4	295.8	290.8	302.7	299.6	266.2	257.2	252.0	252.8	252.5	268.4	269.4	267.3	255.6	63.2	62.8	64.0	45.2	37.8	63.1	97.4	118.6	243.5	278.4
9	289.9	286.5	289.9	289.9	296.0	295.9	295.2	294.4	282.9	294.7	300.5	286.9	287.9	285.4	290.0	293.4	274.1	265.5	266.2	266.8	268.2	269.5	276.7	299.2
10	289.6	296.5	305.1	297.9	287.9	292.0	301.4	289.7	291.4	293.6	284.8	284.6	282.3	274.6	0.0	0.0	271.6	269.5	271.3	269.8	271.0	282.4	299.4	298.3
11	293.9	303.2	308.1	307.6	304.1	299.1	300.9	295.9	298.3	299.5	296.7	300.4	289.0	282.3	268.4	279.8	272.9	273.1	274.7	282.9	284.1	285.6	284.9	283.2
12	280.5	277.3	280.1	277.8	281.0	282.7	296.1	292.3	290.0	289.0	292.1	284.6	291.6	301.7	300.9	305.1	302.5	299.8	297.8	301.5	303.7	308.7	310.0	300.0
13	282.0	282.7	300.7	295.2	302.1	296.1	282.5	283.6	268.2	242.5	244.4	60.5	25.1	94.1	47.6	271.2	264.5	273.2	272.7	276.8	280.8	280.0	290.9	284.9
14	276.5	276.1	270.4	274.0	272.4	272.6	278.3	280.5	281.7	285.2	286.1	289.5	283.2	282.9	289.7	282.9	286.2	289.4	290.5	290.9	292.1	295.6	298.5	296.2
15	293.6	303.3	295.9	284.5	288.9	289.3	272.1	269.8	265.0	168.9	128.8	60.3	29.0	299.6	283.5	292.6	299.4	292.2	288.0	276.8	287.0	273.1	270.2	290.5
16	278.0	277.2	286.5	286.9	282.3	288.3	291.0	294.7	290.4	297.6	297.9	302.9	319.6	312.6	287.9	275.0	271.7	279.2	283.3	283.2	285.4	303.1	295.9	284.3
17	291.3	291.3	287.1	275.4	284.7	293.4	307.3	297.3	299.3	294.3	292.1	292.6	284.4	281.4	289.9	294.3	292.0	292.7	293.8	278.2	276.8	282.2	296.4	300.4
18	314.1	304.2	296.8	287.6	252.7	246.9	274.1	295.1	339.0	84.4	113.5	131.5	115.2	101.4	88.7	84.5	81.0	71.9	67.7	89.2	60.8	119.4	101.4	82.1
19	103.3	103.5	65.7	39.3	32.3	35.8	44.1	53.6	100.8	73.8	65.5	63.2	50.3	47.1	57.6	95.6	85.1	88.4	67.1	74.4	63.2	69.7	88.7	45.4
20	66.9	76.3	72.5	56.3	49.1	58.1	39.4	47.3	58.7	44.1	81.3	70.1	55.1	54.0	39.3	21.1	23.4	20.5	6.7	54.2	72.4	30.3	33.8	43.1
21	50.9	51.7	33.8	37.2	36.0	44.9	33.5	40.5	36.4	38.2	42.2	20.9	35.2	36.0	40.0	35.0	50.6	40.4	66.9	80.3	122.6	129.9	90.2	83.0
22	64.9	63.9	46.5	51.3	93.0	76.1	79.6	104.5	123.7	122.0	88.5	85.2	96.7	107.9	117.9	127.6	135.1	127.9	120.1	95.7	96.7	2.5	285.3	284.4
23	283.6	300.2	329.0	306.7	300.3	273.2	249.6	240.6	249.2	257.2	261.4	258.4	258.3	263.9	267.0	269.3	268.0	280.4	287.8	290.9	295.7	300.5	302.1	297.8
24	302.2	297.8	282.0	281.2	287.1	285.1	287.3	289.6	287.0	278.0	278.9	281.3	281.7	279.4	277.5	273.8	277.3	278.2	275.2	283.5	297.9	309.5	288.1	276.2
25	289.7	311.4	278.1	271.7	285.1	309.8	324.0	301.1	291.9	297.1	298.6	294.2	281.9	266.7	269.4	269.2	272.5	272.5	274.3	277.4	284.5	304.9	296.3	294.6
26	304.2	300.3	297.2	303.6	302.6	298.0	299.3	294.4	294.5	298.6	291.4	285.9	285.4	287.2	286.7	286.8	292.1	295.2	293.3	292.3	289.0	291.4	292.5	288.6
27	286.0	288.7	294.9	296.0	287.5	292.3	291.4	284.7	285.0	282.9	286.3	290.5	286.4	288.1	293.3	302.8	292.3	295.7	294.9	299.1	295.5	295.1	292.9	289.6
28	287.5	283.6	284.9	280.3	294.3	298.8	295.7	300.2	285.1	289.7	289.6	299.0	289.3	289.6	291.0	278.3	288.8	290.4	290.8	288.9	286.9	286.7	286.9	286.9
29	297.6	289.3	292.8	297.1	296.8	298.4	303.6	305.2	294.9	297.1	294.7	296.4	284.0	273.1	268.9	264.7	262.3	275.5	279.9	284.5	281.1	286.3	287.2	287.2
30	280.8	252.9	252.8	254.9	272.5	269.6	259.0	271.6	269.9	258.5	260.2	265.2	276.3	273.6	276.9	276.7	254.7	236.0	269.4	278.7	275.5	290.4	274.7	264.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	271.2	262.6	262.1	287.9	298.4	289.8	272.4	272.9	272.1	274.2	282.1	284.8	282.0	283.6	273.7	277.5	274.6	272.0	274.2	273.9	275.6	286.4	294.6	298.7
2	294.7	292.7	294.7	302.0	295.5	287.7	284.1	288.5	285.3	280.1	273.8	268.2	274.0	276.8	274.3	264.8	268.8	291.8	290.9	289.6	289.0	293.0	253.7	277.0
3	296.6	270.4	264.6	264.5	278.7	290.9	281.4	283.9	292.6	285.2	109.3	82.8	74.8	108.8	95.0	94.2	94.6	82.2	95.0	102.6	103.7	100.5	90.1	97.6
4	94.9	98.0	103.1	96.0	98.0	97.1	96.8	93.6	93.7	95.1	95.6	97.9	90.7	90.8	89.4	100.0	206.7	208.4	169.7	199.1	274.5	263.4	276.9	294.8
5	300.4	294.1	296.5	300.8	294.9	298.7	302.6	295.5	288.1	275.4	268.3	267.2	288.5	275.1	279.0	278.0	280.7	282.8	282.6	261.4	246.0	272.3	280.2	291.5
6	285.5	34.4	101.5	272.8	283.1	282.6	94.9	68.3	65.0	60.9	83.2	94.2	93.7	91.2	80.2	58.0	57.5	98.0	106.4	101.8	82.0	44.5	49.6	43.6
7	59.6	64.7	77.2	87.7	83.8	99.2	90.6	77.4	88.4	87.9	93.7	108.4	98.0	95.4	94.3	93.1	91.6	86.7	85.6	81.6	74.8	75.7	76.0	78.5
8	85.9	107.1	102.4	83.0	83.6	95.4	94.1	91.6	87.6	84.9	94.9	90.9	100.1	95.7	102.0	104.4	101.8	96.6	93.6	92.2	91.5	90.8	92.2	101.6
9	92.9	95.0	96.9	96.5	91.9	92.1	94.9	100.0	95.9	114.3	95.0	94.8	94.3	95.0	89.9	92.9	104.9	100.6	112.8	108.9	92.8	69.5	81.5	100.5
10	287.7	263.7	278.5	291.1	288.9	277.5	266.6	265.2	257.6	273.9	265.8	270.3	268.9	273.7	275.3	276.7	274.5	277.5	282.9	277.6	268.0	116.1	90.0	105.3
11	99.9	69.1	79.2	85.8	70.3	74.8	76.6	92.9	90.7	73.1	38.5	45.5	63.8	74.9	72.9	75.3	76.9	82.5	85.9	90.0	96.4	90.7	89.7	97.8
12	101.6	109.4	101.2	105.7	101.4	102.8	107.1	97.1	103.2	104.9	103.5	96.2	99.1	98.4	90.9	69.4	67.4	77.5	80.0	77.5	78.6	82.2	80.6	82.2
13	89.3	86.7	77.6	65.7	56.1	71.5	45.4	52.9	54.8	98.3	103.5	94.5	111.0	109.9	107.9	90.3	97.6	101.1	102.0	94.9	85.0	55.5	56.3	73.1
14	96.1	94.5	99.0	102.7	102.8	102.0	97.6	187.2	107.7	255.1	283.5	286.4	279.4	266.0	224.6	265.1	214.7	260.6	255.3	89.4	242.7	278.6	263.0	265.2
15	283.7	274.9	73.4	290.5	262.3	256.9	236.7	278.6	259.9	165.4	121.1	120.6	100.7	92.3	33.6	36.6	88.2	119.8	105.8	89.8	80.0	80.4	135.8	83.6
16	273.2	70.4	71.8	87.9	103.6	99.9	86.0	87.6	108.6	98.1	97.1	98.0	92.5	94.9	61.6	46.9	37.4	79.8	160.6	138.9	114.9	79.4	283.8	288.5
17	295.8	283.3	292.2	296.5	293.9	292.0	292.7	281.1	284.6	294.1	276.5	277.9	283.0	283.3	113.7	104.9	60.7	121.1	129.0	126.5	138.0	119.5	112.0	111.9
18	111.9	112.3	69.4	73.5	39.7	88.7	100.0	90.5	79.4	72.6	67.8	85.6	64.5	92.6	76.9	18.9	51.3	126.7	16.8	13.7	46.4	43.6	51.1	62.7
19	42.3	40.5	75.1	74.4	252.0	343.7	286.5	276.7	334.0	292.9	269.5	258.1	281.0	251.8	261.0	250.9	252.9	262.4	262.5	267.2	279.0	283.1	275.1	268.7
20	282.0	276.8	287.3	287.2	283.1	258.9	262.6	255.1	269.4	272.0	279.8	278.7	278.5	280.0	279.3	269.6	223.3	123.7	126.7	126.8	88.0	40.1	290.5	285.4
21	284.5	286.3	287.0	285.4	267.7	258.1	251.7	262.7	272.8	282.7	281.6	182.7	125.8	85.4	87.3	125.0	117.2	131.8	117.5	139.2	113.1	26.5	293.6	298.5
22	300.8	308.5	320.1	302.2	290.5	283.1	278.9	273.9	272.7	274.3	283.1	285.0	281.8	122.6	60.7	64.9	65.6	16.4	65.1	68.8	100.9	87.9	94.7	88.4
23	73.4	76.2	77.7	69.7	75.9	89.5	96.5	84.7	75.7	96.0	110.1	83.1	84.0	82.0	93.7	87.2	85.3	98.0	99.0	101.1	106.1	87.4	100.2	100.4
24	101.2	97.5	101.8	97.8	98.3	96.9	71.8	82.6	95.8	53.6	58.2	77.2	59.2	43.6	20.5	26.9	57.5	60.8	180.0	94.6	121.1	99.9	290.0	282.0
25	282.3	288.3	282.8	284.2	295.9	293.8	283.6	322.1	59.6	98.7	104.5	90.1	71.4	68.3	48.6	42.5	26.5	54.4	64.8	96.6	122.8	166.3	279.4	275.6
26	316.1	307.4	299.8	298.3	301.9	299.4	296.6	288.3	294.7	293.9	295.8	275.2	270.9	274.5	274.5	270.1	268.9	279.7	267.6	280.8	278.3	285.5	291.5	295.4
27	297.5	296.8	298.7	293.7	285.9	281.0	276.9	290.3	285.1	291.3	289.2	293.9	289.4	279.6	294.7	282.3	264.2	264.8	271.1	284.8	286.9	309.4	336.4	314.2
28	305.5	304.2	305.9	300.0	320.9	324.2	310.5	310.0	306.2	300.3	291.6	278.9	275.2	274.8	276.1	284.7	265.7	256.1	259.2	257.9	273.3	305.3	300.4	259.7
29	259.6	272.9	296.8	303.6	301.9	296.2	296.4	299.4	291.8	296.4	279.3	280.5	281.3	266.2	120.3	103.4	104.6	122.7	138.7	138.3	67.3	42.2	56.2	285.5
30	284.4	286.3	284.6	284.7	285.3	285.4	280.7	80.5	75.0	78.2	93.8	89.2	108.1	65.2	57.8	44.3	34.3	24.4	53.4	11.3	4.5	26.8	54.9	90.4
31	96.4	100.2	98.4	99.4	97.7	98.0	91.3	86.1	73.0	55.0	36.6	70.1	50.5	47.3	32.4	47.5	57.4	50.8	50.3	52.3	47.9	52.9	53.0	75.3

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	77.7	74.2	79.9	101.2	101.0	93.6	75.5	77.2	89.3	78.5	81.5	77.6	100.9	92.3	103.1	99.6	95.9	96.8	98.8	98.4	102.9	106.8	107.1	103.3
2	107.5	110.1	104.1	105.3	101.1	104.9	102.2	102.5	90.5	100.6	101.6	105.9	102.5	102.7	112.1	102.2	94.9	202.0	83.7	43.2	263.7	292.6	278.0	278.0
3	275.2	274.4	288.9	288.1	253.8	83.4	89.7	108.4	242.2	100.0	99.5	107.5	140.1	59.2	87.7	100.1	55.5	24.3	82.7	74.8	80.8	76.6	80.7	100.6
4	84.0	60.6	320.1	82.8	64.0	104.8	171.9	83.6	308.5	61.9	138.6	96.9	93.8	84.8	79.9	100.3	75.0	83.4	62.5	46.3	50.3	21.7	69.5	65.8
5	53.2	94.2	77.5	77.6	64.4	54.3	63.4	63.5	88.8	94.0	89.2	81.4	95.2	84.1	91.4	89.2	97.7	78.8	106.9	94.8	105.9	206.2	265.7	286.6
6	287.1	301.9	294.5	282.5	289.0	281.8	272.1	260.5	272.7	272.3	272.3	280.3	278.6	276.9	278.4	275.3	264.4	255.7	259.0	273.1	300.8	308.0	312.6	314.4
7	308.0	310.2	300.6	287.0	286.7	283.2	281.9	282.0	282.2	284.7	283.4	282.0	298.7	290.9	291.8	292.3	282.0	118.6	113.0	104.0	105.8	54.5	52.5	40.7
8	43.1	38.6	56.8	73.6	217.1	325.6	284.3	285.7	281.7	289.2	291.5	281.4	286.1	290.5	292.3	280.0	271.3	288.7	270.6	270.5	284.5	289.0	285.1	313.9
9	294.8	293.3	291.5	267.8	276.3	277.4	281.3	284.6	284.8	292.6	294.5	295.7	295.6	294.3	290.9	289.5	290.1	281.9	280.6	284.2	292.9	290.4	288.3	276.0
10	275.5	277.7	281.7	283.5	284.1	285.3	287.2	288.6	292.3	284.7	285.4	281.1	282.1	282.3	291.1	153.3	158.7	168.6	153.0	112.0	121.4	131.7	84.5	99.6
11	61.0	80.1	75.2	97.6	121.0	275.7	260.7	254.1	260.3	265.6	59.9	77.1	115.7	108.7	103.2	100.7	55.0	60.3	56.7	108.8	104.4	93.0	294.0	280.3
12	293.0	290.9	289.1	283.9	283.9	285.5	288.0	287.8	279.4	281.2	287.1	283.6	285.2	297.0	286.3	277.8	280.7	283.0	283.7	292.1	295.2	282.5	280.5	280.3
13	284.8	286.0	288.3	286.4	285.0	289.5	292.1	289.9	281.4	280.9	284.5	284.2	280.3	281.1	279.6	275.6	280.6	272.0	261.5	253.3	268.1	39.2	69.7	288.6
14	246.7	36.9	265.7	271.0	273.9	281.4	299.4	288.4	290.4	305.1	299.7	297.8	293.4	289.8	284.6	285.0	284.1	267.8	120.4	120.9	135.5	133.7	24.8	298.1
15	284.4	295.6	304.4	289.4	277.7	281.3	297.4	300.2	299.2	295.9	291.9	296.4	287.7	272.6	272.5	271.6	275.6	284.9	281.8	286.4	284.9	282.0	282.5	282.8
16	295.9	290.8	286.3	286.8	275.2	278.2	282.8	295.9	292.2	289.1	285.9	281.3	283.2	282.0	279.6	123.7	122.1	124.8	122.1	108.9	58.5	40.1	332.7	285.1
17	303.7	306.8	322.1	66.6	269.9	279.3	290.4	272.1	271.1	278.5	295.7	126.0	131.1	130.1	135.0	136.1	134.2	137.8	129.5	139.3	129.8	128.0	135.4	128.0
18	123.7	135.2	225.5	260.3	237.9	137.6	14.1	279.2	275.2	281.4	282.6	291.2	291.2	273.8	119.7	119.3	133.6	133.0	115.6	117.7	38.6	41.1	325.7	285.1
19	288.9	288.8	272.7	291.2	318.6	290.3	299.0	302.8	277.3	279.1	282.4	277.1	112.8	120.7	129.4	114.1	118.6	146.5	103.4	135.3	127.2	137.7	116.9	139.3
20	55.4	68.6	52.3	60.1	65.3	103.8	111.4	83.7	87.1	105.3	90.0	78.7	57.8	45.6	32.9	271.9	336.6	52.3	89.6	111.5	53.9	61.9	104.5	83.2
21	49.0	84.4	113.1	108.7	100.2	95.2	73.1	103.9	105.6	117.5	107.6	118.0	93.7	106.0	107.3	69.0	74.2	65.2	86.6	90.7	113.9	82.9	89.0	40.2
22	289.6	289.9	285.2	285.7	69.2	300.7	99.5	94.9	95.6	84.8	114.6	126.3	108.6	92.8	112.4	118.0	78.5	98.3	98.5	89.4	90.8	96.5	80.3	88.6
23	86.3	87.0	86.5	72.8	59.4	58.9	72.3	63.9	36.1	62.9	42.1	50.7	46.9	35.6	47.1	32.0	44.2	93.7	159.3	144.6	73.6	91.4	78.7	69.0
24	108.3	95.6	47.9	48.1	105.9	86.5	79.2	91.6	92.4	98.1	92.2	62.3	57.0	63.1	89.7	102.9	100.4	105.6	100.2	96.9	90.1	109.5	122.5	92.5
25	71.0	76.3	74.9	53.4	45.6	59.8	78.4	87.4	80.2	72.7	81.4	69.4	84.3	69.9	68.4	64.5	57.8	70.0	83.8	81.5	75.5	93.9	95.6	105.4
26	114.2	108.6	112.6	101.4	99.9	92.5	118.3	100.7	98.7	100.4	103.2	110.9	114.5	106.3	111.9	110.1	111.3	105.7	99.8	108.0	105.7	105.1	105.7	106.2
27	100.4	98.5	102.5	81.0	106.3	68.8	88.4	70.5	34.1	23.7	64.7	104.5	77.6	89.4	102.4	123.4	104.2	47.8	118.5	134.7	123.8	108.7	114.6	81.3
28	306.5	286.7	289.2	285.4	284.0	296.8	284.6	297.9	286.1	284.5	292.6	294.1	292.4	282.8	280.5	274.8	141.1	53.5	90.6	109.6	84.5	115.8	77.0	88.9
29	76.5	92.6	63.9	119.3	89.2	112.6	126.4	108.6	72.9	21.3	324.9	126.9	95.1	86.2	31.9	22.5	21.2	29.0	18.8	7.9	18.2	3.3	50.9	56.2
30	68.3	70.8	304.9	287.1	287.6	285.4	285.9	304.9	99.3	120.5	104.6	97.2	98.2	93.9	103.6	107.8	105.1	117.5	134.2	135.9	126.9	85.8	299.0	285.1

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	289.6	286.0	284.3	286.1	289.5	286.3	280.9	290.0	76.2	107.2	91.1	83.6	78.2	51.7	22.7	11.2	7.9	349.8	16.2	31.9	62.2	36.0	15.7	85.1
2	107.8	93.4	98.8	95.1	105.1	75.2	85.8	88.4	30.7	56.3	68.2	66.6	68.4	73.0	81.9	87.4	101.3	99.5	98.1	69.7	54.7	38.5	50.5	78.0
3	78.7	84.2	54.8	84.4	74.1	84.9	80.0	79.1	89.3	112.3	113.4	112.2	113.3	107.1	123.8	112.5	90.9	125.1	63.3	69.2	86.3	74.1	87.5	89.5
4	71.3	58.8	53.7	55.0	54.8	116.9	87.3	82.0	88.1	93.9	101.4	102.2	113.1	79.6	96.2	125.0	100.9	123.2	95.2	62.5	107.8	136.9	130.9	105.9
5	106.7	93.7	95.6	109.5	93.0	71.4	89.8	96.2	67.4	73.3	101.7	125.5	117.6	134.6	145.3	110.0	133.6	119.1	110.0	114.8	111.1	92.1	88.2	287.4
6	289.7	277.7	286.4	293.8	282.1	333.7	295.0	126.5	93.0	133.8	114.1	109.3	121.8	114.0	97.5	110.9	84.9	91.7	97.0	96.2	118.3	106.5	100.9	286.8
7	85.0	82.6	64.2	40.2	71.7	63.9	32.2	90.7	76.5	63.3	49.1	52.4	95.2	54.3	12.0	29.6	35.9	28.3	152.2	161.9	147.4	127.1	264.0	279.0
8	284.1	287.3	285.7	323.5	291.8	296.0	299.6	282.0	282.2	282.2	287.4	289.6	286.4	279.4	286.2	295.2	287.5	285.5	268.5	281.5	169.9	272.0	281.2	315.9
9	112.8	145.6	120.7	114.8	154.8	76.7	71.5	68.7	48.6	88.6	94.3	117.0	135.5	98.8	99.3	85.2	87.6	86.3	89.2	109.0	67.5	108.1	98.6	99.9
10	112.1	94.7	84.3	88.5	78.0	86.2	86.0	97.7	112.8	125.4	100.2	73.1	97.2	122.9	103.5	75.0	102.9	112.7	130.2	143.5	142.7	135.3	130.6	111.1
11	114.8	87.9	80.5	85.0	69.7	69.0	87.0	70.6	111.1	127.5	117.2	101.6	77.0	70.4	32.3	46.0	56.9	89.0	83.0	91.7	53.1	113.2	104.5	289.1
12	285.9	302.0	290.4	302.2	292.3	304.1	70.4	114.3	69.7	57.0	40.9	25.1	46.9	77.8	86.7	104.8	111.8	111.4	110.0	111.5	110.0	108.4	110.0	100.9
13	89.1	82.0	106.6	108.7	119.3	76.1	106.5	86.7	117.6	131.6	113.4	156.5	134.3	131.0	89.6	93.9	99.3	130.6	117.5	121.6	76.3	72.5	85.7	84.3
14	72.6	49.6	108.0	76.1	42.0	67.2	76.6	58.3	89.8	123.4	121.7	113.5	126.4	117.0	126.7	121.6	119.2	127.8	135.5	136.2	125.3	130.6	139.8	136.1
15	138.9	127.9	72.4	62.6	80.8	107.0	141.3	137.6	101.1															
16	98.9	97.1	117.9	110.5	95.5	96.6	102.4	104.2	96.5	71.3	101.7	84.4	81.5	85.4	87.0	76.3	74.5	88.6	79.1	69.7	73.4	71.3	60.9	65.1
17	67.9	51.5	53.3	51.2	277.3	280.4	281.1	282.0	290.5	295.0	291.9	293.9	283.6	289.2	288.4	287.5	276.9	278.6	288.0	280.6	281.5	285.3	290.6	295.6
18	293.1	297.7	298.1	307.2	300.4	298.9	293.1	290.1	293.1	296.3	292.4	296.6	294.8	283.8	282.8	289.3	286.8	280.7	282.3	282.5	281.6	287.2	282.8	288.0
19	292.9	293.6	294.7	292.5	287.8	286.2	281.2	279.3	283.7	286.7	291.3	287.8	283.4	281.3	276.8	282.2	281.2	282.6	291.7	290.2	300.2	306.2	304.3	288.7
20	297.4	289.8	300.9	297.5	303.7	312.8	305.4	303.3	301.8	294.3	289.3	281.3	286.1	289.3	281.7	280.8	282.1	281.7	276.0	274.4	287.9	292.6	306.6	303.3
21	306.2	268.7	281.1	282.1	280.4	277.0	281.2	268.5	270.3	255.5	281.9	277.9	284.5	275.3	275.5	272.8	274.5	278.3	293.8	278.3	283.6	302.4	299.9	285.9
22	273.9	278.4	291.2	280.7	284.4	288.6	296.8	287.5	278.9	273.9	307.4	110.6	106.7	31.9	37.4	84.3	35.8	15.7	83.2	86.8	60.2	102.2	349.6	278.6
23	286.3	274.7	279.9	297.5	272.5	266.8	265.7	275.9	277.4	293.0	284.4	278.3	279.6	281.9	286.3	245.1	130.9	170.8	93.1	92.7	43.6	34.9	37.1	121.9
24	267.9	287.3	289.4	274.8	279.4	285.6	291.4	304.6	298.8	297.4	313.7	307.9	290.8	300.2	299.4	286.2	195.9	126.3	102.6	89.4	94.4	277.9	284.7	284.8
25	281.9	287.3	287.4	303.2	292.8	274.8	290.0	289.2	292.2	290.9	286.6	279.5	277.1	284.4	280.0	287.7	278.2	256.1	116.6	96.1	98.1	75.6	99.0	275.0
26	285.5	286.7	289.2	305.1	278.5	282.3	280.0	278.2	274.4	271.5	270.8	276.4	286.3	285.3	284.3	285.0	286.9	286.2	287.0	260.8	119.8	145.3	146.8	27.6
27	25.2	50.7	60.3	54.9	55.5	62.7	74.6	79.9	108.3	121.5	87.1	43.4	30.9	25.1	53.8	56.8	51.3	97.2	130.6	148.7	141.1	345.5	283.1	283.3
28	288.1	256.6	281.0	279.0	279.5	278.7	269.8	278.9	286.3	288.5	287.4	284.0	282.7	278.1	287.1	292.9	283.8	264.2	272.2	278.3	274.8	291.3	307.8	335.5
29	330.9	315.3	308.5	305.7	301.5	301.6	307.2	308.5	290.0	292.3	293.5	290.9	291.6	295.1	281.3	287.0	278.3	273.9	291.5	294.8	307.2	301.3	300.2	301.6
30	307.7	291.1	287.1	292.2	287.9	287.8	283.7	286.3	289.4	296.5	295.1	297.1	304.2	301.1	288.3	283.7	282.9	289.7	286.9	296.4	303.4	301.3	309.2	305.6
31	298.4	286.7	309.0	298.4	314.5	307.4	303.5	297.3	291.4	296.5	292.9	295.2	293.7	284.0	280.2	284.5	287.0	283.7	290.3	280.3	281.0	295.0	294.8	296.0

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	273.0	271.1	278.0	275.0	278.9	275.3	283.6	288.9	283.2	275.2	287.1	301.5	143.8	156.0	98.5	108.0	119.2	114.9	132.2	57.4	65.5	50.3	54.9	57.0
2	53.0	77.4	85.6	62.4	52.5	64.6	48.5	82.8	66.3	62.8	78.8	33.2	32.4	25.8	47.9	49.0	91.7	103.5	56.1	84.6	68.8	147.3	144.3	97.6
3	319.1	288.4	62.9	26.3	65.3	70.1	84.6	80.0	119.8	114.1	133.3	96.7	85.5	88.4	64.4	83.0	109.3	102.5	92.2	134.8	127.5	122.3	118.3	99.6
4	97.5	77.3	64.2	52.6	69.8	64.4	77.9	85.6	95.9	80.0	68.5	72.6	35.7	70.4	48.9	64.9	64.1	320.2	25.1	330.0	29.2	83.8	91.6	80.5
5	68.2	69.1	90.2	75.0	136.7	284.8	286.1	276.1	291.1	20.6	108.7	98.2	95.4	120.6	109.2	114.7	145.2	132.2	121.1	121.8	116.7	66.3	104.5	144.8
6	142.3	150.5	100.2	286.6	286.8	287.0	290.9	295.4	35.3	93.0	88.2	111.9	153.4	278.7	278.6	273.9	266.2	273.1	281.6	282.0	286.1	295.8	266.7	279.2
7	278.6	294.4	301.9	313.9	304.4	294.0	312.0	307.4	300.6	291.9	291.6	282.0	284.8	278.9	276.4	281.0	276.7	270.2	282.6	266.8	270.9	289.5	298.1	281.4
8	272.4	293.4	284.1	287.6	289.1	287.6	293.7	328.3	291.5	273.4	297.3	289.3	130.8	95.6	82.0	77.6	66.9	119.5	119.4	129.3	116.6	9.6	283.5	287.2
9	286.1	288.2	286.2	287.8	283.1	283.8	311.6	281.1	304.3	296.9	276.6	279.8	292.3	276.3	289.5	160.8	137.5	129.4	143.0	135.9	134.4	133.3	135.0	82.3
10	46.3	32.2	45.2	53.4	78.0	63.0	83.7	76.7	70.8	50.0	76.9	61.2	56.5	34.5	50.7	88.2	39.3	24.2	48.5	106.5	94.8	50.7	22.2	44.0
11	81.2	102.6	59.5	58.0	61.1	54.1	40.3	33.0	38.8	55.8	323.5	348.7	19.5	6.2	78.8	60.2	78.8	91.7	102.3	140.7	103.2	281.7	288.2	285.8
12	285.6	287.0	274.8	262.1	258.1	257.4	272.8	268.1	291.5	292.3	286.1	282.7	47.4	109.3	130.9	104.0	110.1	104.6	119.3	132.4	126.1	92.6	266.7	272.1
13	292.0	272.9	262.3	258.8	264.1	265.1	288.4	276.0	280.8	271.5	265.1	265.5	282.6	285.8	285.4	276.6	288.3	102.7	187.3	299.2	270.3	268.8	283.4	284.0
14	279.9	280.5	283.5	291.8	297.0	286.1	65.5	71.9	118.3	108.2	86.3	62.3	89.5	84.3	73.5	67.4	80.9	84.0	113.4	78.0	276.5	283.5	284.2	65.2
15	128.5	287.5	290.2	291.1	286.4	292.0	294.1	289.7	287.0	286.5	292.5	299.8	300.7	287.4	277.4	275.8	266.5	268.4	278.1	280.8	289.0	56.4	41.8	75.6
16	146.2	97.7	86.2	94.9	56.6	45.4	45.1	41.4	48.9	102.6	48.7	87.8	3.9	8.6	145.8	299.3	149.9	71.2	24.6	79.7	90.4	60.2	69.7	50.2
17	92.7	87.7	76.9	59.7	116.3	279.0	294.0	270.1	42.1	49.5	68.4	47.7	82.6	78.2	88.4	88.3	80.6	87.7	85.4	70.3	64.5	87.0	102.6	63.9
18	51.9	58.6	75.2	227.2	281.4	285.4	287.6	289.1	277.7	248.4	181.4	120.7	87.8	82.9	111.0	130.7	115.9	92.3	21.9	283.0	274.5	283.5	285.1	282.4
19	283.5	287.1	284.1	290.0	288.0	286.6	291.3	288.7	327.6	297.3	285.5	293.2	285.6	296.6	296.8	290.4	299.1	288.3	289.7	297.4	298.2	288.7	296.6	296.8
20	287.0	284.9	284.3	281.2	283.4	287.6	288.7	281.5	281.0	288.9	293.8	289.5	290.8	291.9	294.7	289.4	288.4	290.3	285.5	283.8	290.7	295.6	297.2	295.4
21	294.7	292.3	295.0	295.7	300.5	301.3	292.3	289.4	285.4	290.7	286.4	278.9	276.7	280.2	279.8	279.3	288.0	275.4	183.7	140.8	144.6	108.7	116.2	77.0
22	86.1	340.0	300.0	58.8	32.8	52.7	344.8	264.3	270.7	152.1	95.0	94.4	115.6	109.8	107.0	119.5	101.5	119.9	97.7	99.7	294.3	276.8	284.8	289.3
23	297.0	297.1	295.9	294.0	290.2	288.7	295.2	291.9	280.6	286.7	297.6	288.3	268.2	267.3	163.5	135.0	130.0	127.8	100.3	225.5	290.8	289.3	299.8	298.9
24	289.1	295.5	262.2	267.8	301.0	294.4	291.1	298.3	288.1	279.4	288.9	288.0	286.6	285.4	282.3	284.8	274.0	279.9	277.0	287.1	294.2	293.9	283.3	269.4
25	273.5	314.9	287.8	75.4	24.8	233.7	280.3	287.2	292.8	292.4	290.3	267.6	273.0	113.3	59.2	24.0	15.2	21.8	43.9	57.5	61.3	62.5	90.6	34.3
26	43.6	43.1	59.9	249.9	92.3	53.9	101.3	118.1	121.6	109.1	112.5	110.4	127.0	50.7	63.2	56.4	7.1	46.9	69.9	84.8	140.5	153.5	73.7	71.1
27	91.7	287.2	283.8	282.1	285.5	284.5	281.9	296.4	283.2	290.0	280.3	279.6	289.4	290.5	274.3	284.9	291.2	292.4	293.4	302.5	293.7	289.9	290.7	297.1
28	294.9	291.7	289.6	298.4	273.7	285.3	275.8	287.6	284.4	286.2	279.5	288.9	285.7	280.7	287.1	281.8	279.7	279.6	281.7	281.6	284.8	286.6	289.0	288.5
29	293.8	298.2	301.5	294.4	298.1	303.5	303.3	298.8	298.6	295.0	276.9	285.8	291.1	280.4	280.0	283.9	284.9	284.5	285.9	289.6	290.7	289.8	295.7	302.5
30	300.9	299.2	279.6	296.0	287.1	282.5	277.3	291.8	292.2	285.2	278.7	277.1	274.6	145.3	93.7	132.1	134.0	133.9	105.9	86.7	86.1	102.6	93.9	104.4
31	72.2	74.5	77.2	75.9	75.2	56.9	83.1	87.9	97.2	88.2	84.7	96.4	99.8	104.2	104.2	102.1	110.2	106.3	108.7	101.6	104.5	105.6	105.7	102.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	101.6	103.9	104.4	102.8	102.6	108.7	106.6	111.0	108.3	110.8	107.4	111.4	103.2	105.5	103.7	100.7	91.0	93.4	94.2	86.0	80.5	75.0	85.8	95.6
2	89.1	104.5	79.5	76.1	74.7	71.7	76.8	81.6	76.2	70.4	62.5	57.3	67.1	80.1	93.5	111.2	110.8	109.9	108.0	96.3	93.6	96.4	109.2	106.7
3	102.2	109.7	107.8	103.6	101.6	110.6	104.1	126.4	126.7	249.2	277.5	301.7	300.4	288.1	286.5	289.5	309.3	322.3	304.1	203.0	332.7	287.4	277.5	280.1
4	288.9	303.0	11.1	269.6	273.5	278.0	273.4	275.9	297.5	295.6	300.4	282.4	145.4	125.1	118.3	115.8	98.2	118.1	130.1	71.5	287.9	285.5	282.6	291.5
5	284.2	290.5	283.6	294.7	277.8	315.5	21.6	303.2	329.2	53.0	72.7	68.6	99.0	123.8	120.3	129.7	104.1	119.4	78.2	80.9	100.9	119.0	93.7	95.4
6	90.4	65.8	43.5	48.4	61.0	65.1	83.6	76.1	73.7	89.2	90.5	90.7	90.5	87.6	106.7	103.0	109.4	107.7	104.6	99.3	98.5	99.1	94.5	100.0
7	92.6	96.0	95.5	96.9	101.9	97.9	105.1	106.1	97.6	88.2	71.0	41.0	37.3	26.1	65.1	111.6	125.1	95.6	113.1	133.3	114.2	87.0	94.7	87.8
8	102.7	136.5	271.9	284.9	122.5	285.1	278.0	255.5	267.5	99.9	76.4	97.7	86.9	104.4	97.3	79.0	72.5	62.0	81.6	93.6	95.6	96.2	100.5	101.7
9	104.4	99.7	105.7	111.3	112.9	112.1	96.4	100.5	105.8	97.8	95.7	94.4	97.6	84.9	60.5	43.4	29.8	37.4	31.6	37.5	32.4	30.2	32.6	57.8
10	82.6	131.7	85.5	85.4	289.3	277.8	285.6	283.7	278.3	99.7	319.8	314.6	285.8	290.8	290.0	282.9	286.2	286.4	282.8	289.3	297.0	304.6	293.1	283.0
11	285.1	286.7	279.2	279.1	281.7	283.6	278.4	290.0	285.0	297.2	299.1	291.8	286.8	265.8	147.7	95.7	38.6	39.3	44.3	62.9	96.4	110.2	103.5	94.9
12	86.4	101.6	102.8	104.8	99.3	104.9	94.7	92.5	85.2	80.6	117.6	117.3	109.6	104.5	110.1	123.7	115.5	119.0	112.5	113.9	113.6	105.4	102.6	101.3
13	88.5	92.5	95.4	85.7	92.3	96.9	99.5	96.9	95.1	101.2	97.6	94.5	89.9	78.7	80.8	66.2	86.2	81.7	99.5	96.8	89.2	87.2	86.1	84.4
14	91.7	110.1	127.1	103.4	88.0	101.5	102.2	106.8	116.9	111.5	93.0	93.8	118.9	113.5	125.4	226.1	81.4	277.7	157.8	246.8	95.4	212.5	288.2	284.0
15	284.7	37.2	79.0	49.3	61.0	66.0	69.6	72.8	92.5	76.4	76.8	82.5	92.7	357.0	0.0	92.1	88.5	62.9	72.4	70.3	291.2	279.3	288.3	285.2
16	294.0	293.7	269.2	277.1	295.3	285.5	292.3	295.7	282.3	296.3	302.9	300.7	285.8	293.6	293.4	290.4	282.3	282.5	291.5	298.3	287.3	286.4	284.2	292.2
17	289.7	286.8	295.3	289.4	281.4	288.0	283.4	296.8	299.0	289.9	295.4	283.7	276.8	38.0	95.2	94.6	92.0	77.2	77.6	73.1	78.2	70.9	88.6	101.9
18	96.6	95.7	96.3	104.2	103.2	100.4	95.6	100.5	105.9	106.2	64.1	104.8	113.6	105.8	106.4	70.1	87.2	91.4	105.6	107.0	72.7	97.2	93.2	85.0
19	94.2	85.7	71.3	104.6	100.2	51.1	278.3	277.0	43.0	280.1	317.9	358.2	280.1	277.8	279.2	276.6	270.4	275.5	278.2	281.9	294.5	286.7	285.7	305.7
20	305.6	300.0	303.1	283.2	298.8	304.1	300.0	307.9	303.2	287.2	291.8	295.4	293.3	293.9	288.7	290.2	293.4	281.0	279.1	289.0	299.3	297.6	293.5	275.3
21	262.5	257.8	269.8	290.4	293.2	321.5	323.0	324.8	325.5	307.1	284.6	279.3	268.2	263.0	257.6	258.0	257.1	270.8	282.9	289.1	300.5	297.3	254.2	305.1
22	270.2	271.1	275.9	282.2	282.0	291.4	310.5	314.1	296.9	299.2	295.7	286.6	285.4	276.7	286.6	285.4	269.4	238.0	261.1	281.0	285.4	288.1	281.4	160.4
23	136.6	96.8	120.7	78.7	82.9	65.3	54.6	72.8	281.1	275.5	91.1	84.8	81.2	120.6	91.6	69.5	290.1	113.7	95.6	212.9	275.0	292.6	286.8	302.1
24	274.4	289.6	302.5	281.4	298.5	281.3	258.1	78.6	253.4	279.3	82.4	94.7	224.5	116.1	95.7	87.7	93.6	89.0	102.2	96.8	95.4	103.8	92.5	97.4
25	117.6	98.4	99.3	135.0	267.2	153.2	87.2	93.8	97.0	107.5	102.9	93.5	259.6	239.0	278.6	281.2	182.1	145.5	282.9	271.1	286.7	289.0	163.8	186.7
26	179.0	281.5	282.8	276.3	288.5	287.2	294.9	284.3	281.7	284.1	291.1	271.4	307.7	96.3	103.2	108.6	65.4	289.3	134.8	285.3	281.3	275.1	262.3	272.0
27	277.3	279.9	282.8	292.0	301.5	308.2	287.1	268.4	257.5	267.6	258.5	244.3	262.0	255.0	269.1	257.3	264.5	271.5	296.2	294.6	308.7	321.6	320.5	309.2
28	307.6	282.1	252.4	262.2	287.1	305.1	313.4	312.3	298.4	300.6	288.0	258.9	258.5	260.1	209.3	139.7	348.3	32.1	85.2	70.2	116.6	235.4	293.8	286.5
29	91.3	80.4	101.4	91.0	96.3	84.5	85.1	86.7	84.2	127.6	126.7	112.7	111.2	109.2	110.0	110.8	137.7	68.6	33.0	46.8	279.3	281.0	281.2	34.1
30	42.8	322.7	277.0	266.4	276.7	289.0	287.5	299.4	293.4	306.5	295.4	285.6	279.1	270.4	268.2	280.4	277.6	280.1	298.5	288.8	274.0	275.9	270.7	270.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	267.0	279.7	302.0	287.8	286.7	294.0	289.3	284.0	287.0	285.5	247.0	90.1	88.1	89.2	105.2	69.9	67.0	90.4	70.7	99.5	79.2	78.4	81.9	289.0
2	284.2	290.0	288.0	283.2	287.5	285.0	288.4	282.2	310.9	286.1	277.4	282.3	278.1	278.9	270.7	289.8	292.7	285.0	298.4	290.6	289.6	290.5	293.6	294.2
3	286.4	278.6	288.4	294.0	294.9	297.9	289.5	291.1	287.8	291.2	302.0	284.5	282.9	287.0	284.3	289.4	284.9	278.4	282.1	278.9	284.9	281.8	279.8	279.3
4	285.2	288.3	295.9	288.8	293.5	282.3	282.2	270.4	269.3	274.2	259.0	278.2	268.2	276.7	273.6	270.1	263.2	280.1	291.9	285.7	276.6	285.5	271.8	270.1
5	282.2	281.1	286.5	274.6	278.4	291.6	284.6	290.8	280.0	263.5	273.5	283.3	280.8	285.7	281.6	273.7	286.8	291.8	298.2	268.8	292.7	286.2	298.4	287.0
6	294.0	292.2	290.4	293.9	286.9	295.3	282.9	282.1	290.0	288.8	286.1	289.3	274.7	283.4	276.1	277.6	280.4	275.3	279.8	290.8	292.1	300.8	307.2	295.0
7	307.4	297.7	303.7	295.0	298.8	285.6	290.2	289.8	285.0	287.8	291.8	287.6	283.9	277.2	275.9	276.4	274.0	275.1	279.1	279.1	289.5	290.1	289.6	287.7
8	290.1	292.9	292.4	291.7	298.7	302.4	299.2	300.9	308.6	302.5	290.0	289.3	282.7	273.1	267.5	268.7	264.1	275.8	288.3	272.4	287.1	286.7	285.5	92.8
9	103.1	90.8	94.9	97.1	92.5	98.9	93.3	100.3	94.6	99.8	88.3	94.4	95.0	108.1	102.8	112.7	114.8	111.3	109.4	110.7	108.9	117.0	107.5	108.9
10	99.0	120.0	182.3	0.6	336.5	194.5	286.6	284.4	284.5	270.6	270.0	253.2	255.3	261.8	71.5	72.0	25.6	97.3	102.8	287.8	287.3	285.7	285.0	285.7
11	114.8	104.9	104.9	89.8	90.4	90.8	94.8	94.7	97.0	98.2	86.6	74.9	91.4	96.1	144.2	124.7	286.0	292.8	288.0	285.4	286.0	281.3	284.5	292.1
12	294.9	296.0	295.4	294.4	297.5	297.0	300.7	304.2	301.3	303.3	300.1	299.8	298.7	292.2	296.0	293.2	289.3	284.0	291.1	309.5	308.9	302.6	291.9	289.0
13	289.0	301.4	290.4	283.1	279.3	290.9	286.7	284.9	274.6	269.4	285.5	280.5	91.7	127.2	115.1	102.7	121.2	124.9	108.6	103.1	79.3	81.7	105.8	100.0
14	84.6	87.5	61.2	62.5	103.5	56.8	62.1	78.1	86.6	109.1	104.3	95.8	110.6	116.6	94.3	97.8	96.0	87.0	65.6	44.7	83.9	290.9	47.6	325.1
15	16.8	306.2	339.1	272.6	354.7	303.9	290.8	308.2	290.9	288.2	291.3	268.2	256.9	277.8	292.3	296.7	290.0	287.8	299.1	290.0	285.1	281.9	280.9	278.4
16	272.8	281.0	277.4	273.7	285.2	285.9	279.9	272.6	270.5	266.4	272.8	281.1	284.9	281.8	281.2	282.5	292.7	291.5	296.5	284.5	287.0	284.2	283.9	283.0
17	280.1	278.8	277.5	279.1	281.8	291.2	287.3	281.0	271.1	267.0	262.8	265.2	266.1	272.6	138.3	106.0	124.7	113.3	110.8	98.7	102.0	100.2	108.0	112.9
18	98.7	98.4	103.4	104.1	99.3	99.3	98.5	101.5	108.8	115.4	109.9	115.7	104.5	105.2	107.7	100.6	91.9	267.1	280.4	280.0	277.7	258.6	270.7	278.4
19	275.1	288.0	290.8	288.2	298.4	298.2	281.9	269.2	257.0	268.1	250.5	255.2	276.7	273.9	280.7	274.5	280.8	289.5	286.5	280.7	280.2	273.9	275.2	278.9
20	278.0	281.3	282.6	280.9	288.0	292.5	291.1	288.7	293.2	284.5	284.2	285.5	286.3	289.6	288.6	284.2	287.4	289.7	283.5	283.7	289.6	277.2	273.1	282.1
21	276.8	273.0	277.0	286.9	289.1	294.6	293.3	296.0	282.1	272.5	278.3	275.4	278.0	282.9	281.1	278.9	282.9	275.8	273.5	275.2	272.5	276.8	281.7	282.0
22	293.3	286.6	279.7	293.1	296.7	302.5	313.1	309.7	302.3	301.2	301.8	292.3	279.2	291.9	283.0	291.6	283.5	269.7	279.4	286.8	274.5	267.9	274.9	282.2
23	280.8	279.9	265.9	255.9	252.2	252.9	257.5	244.2	276.5	295.3	283.6	278.0	277.3	279.5	286.1	296.8	292.8	278.7	274.0	270.4	267.2	269.6	267.8	274.6
24	266.7	265.2	266.9	269.7	269.7	263.9	268.7	267.1	269.0	265.4	264.4	263.3	263.7	268.7	269.8	273.7	274.8	272.3	302.7	289.6	271.4	311.4	284.5	275.7
25	286.8	284.6	282.2	286.0	282.5	264.1	129.8	345.7	334.2	309.8	91.8	100.6	81.6	89.0	83.9	255.8	48.8	278.3	113.0	111.4	275.1	288.0	286.3	275.3
26	284.4	280.7	265.7	277.3	274.5	257.2	279.9	274.6	284.4	285.9	282.9	269.9	271.1	254.6	281.7	289.0	292.2	277.3	280.0	285.5	309.7	294.7	287.0	289.1
27	287.6	288.5	293.6	278.5	276.6	281.2	278.7	275.7	272.3	271.0	272.1	274.5	271.7	273.4	277.6	272.9	278.3	280.8	288.8	288.9	288.6	271.8	256.3	256.2
28	260.2	264.0	271.3	270.7	288.2	281.9	284.1	283.9	289.4	283.5	291.1	285.4	280.7	278.0	276.0	277.9	282.4	278.4	283.1	287.2	315.0	307.6	296.5	297.9
29	283.5	286.7	286.1	287.6	286.5	288.1	284.1	287.2	286.1	288.4	285.9	310.1	230.7	98.9	85.4	90.9	87.2	83.7	83.8	85.4	80.3	80.9	82.7	88.8
30	78.2	59.3	309.0	303.2	62.5	116.7	284.7	311.0	56.5	98.7	79.2	94.2	92.5	93.1	93.3	79.2	84.6	98.0	88.3	287.0	287.4	284.9	286.6	285.2
31	288.6	289.6	287.5	284.9	289.6	287.8	288.2	286.1	286.8	287.7	288.4	277.4	265.1	277.7	283.7	282.4	271.0	270.4	271.1	271.6	290.9	283.5	296.4	290.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	296.7	286.7	285.8	287.2	290.6	282.1	291.9	297.7	293.5	283.3	288.3	284.6	278.1	285.0	285.4	278.6	271.7	278.5	278.3	289.2	301.5	293.1	280.1	274.7
2	276.4	279.3	282.3	302.5	303.9	300.3	303.1	303.4	311.3	310.1	306.6	291.9	277.3	277.6	280.6	282.5	284.3	280.3	276.6	280.2	279.0	276.3	280.7	281.5
3	278.8	274.5	277.6	275.3	278.5	273.6	271.7	279.1	270.5	274.8	275.4	277.5	278.8	284.5	282.0	289.5	288.6	286.2	282.0	277.7	279.3	279.4	278.2	275.9
4	277.1	278.2	275.5	272.3	276.7	274.9	276.3	281.7	282.4	282.5	279.1	285.2	285.9	284.7	284.6	282.9	289.6	284.9	287.0	293.3	285.7	277.3	274.0	268.8
5	268.2	267.7	268.2	270.8	272.1	267.7	273.3	276.6	273.8	265.7	264.5	269.0	271.8	270.6	271.5	274.4	279.7	287.0	131.1	104.8	105.6	117.6	105.6	105.2
6	109.0	109.5	115.6	107.9	97.8	109.8	155.6	174.8	117.7	115.2	268.5	246.7	262.6	129.0	263.7	276.6	299.7	282.4	294.8	300.3	286.2	304.1	304.6	297.2
7	293.7	289.2	290.4	288.6	293.1	290.0	283.7	283.6	283.0	276.6	278.9	285.2	288.5	290.4	293.1	291.7	301.3	293.6	305.1	296.6	299.0	289.8	269.6	270.7
8	296.9	301.5	296.0	285.2	268.5	261.5	295.0	296.5	290.4	281.2	281.5	83.4	92.9	103.9	101.9	114.4	100.9	103.7	104.2	99.8	97.9	98.6	97.4	93.3
9	94.4	95.9	91.2	93.7	101.0	98.4	104.3	109.7	105.0	103.7	102.5	106.3	102.1	101.6	101.6	103.4	107.9	102.8	112.4	97.3	92.1	93.5	97.1	109.3
10	101.7	104.9	104.9	100.8	90.9	94.2	48.8	71.4	224.2	291.3	271.0	282.2	132.6	90.7	77.0	84.6	77.9	80.2	90.5	86.6	45.7	58.2	88.2	97.2
11	79.0	81.2	102.4	93.8	99.2	110.5	95.6	82.8	101.5	257.9	279.7	285.2	83.5	100.3	266.6	73.3	305.0	237.3	247.9	284.2	288.5	289.5	287.6	279.2
12	280.8	275.8	280.5	288.5	287.6	296.5	288.3	285.4	279.3	302.7	297.8	285.2	285.5	284.1	273.3	268.5	267.6	267.4	289.7	294.0	287.1	268.0	288.2	275.2
13	291.7	295.8	284.2	288.6	285.0	287.1	290.5	278.0	285.1	286.1	284.3	102.7	133.9	125.6	93.3	123.6	128.8	288.8	293.2	246.6	281.5	66.2	268.6	293.5
14	295.2	278.0	265.0	278.9	292.5	284.9	290.8	287.8	285.2	292.9	284.0	297.9	303.0	330.2	281.5	269.4	280.5	294.2	292.0	298.7	299.2	292.3	276.7	279.9
15	263.9	14.9	67.3	348.9	250.1	261.2	269.7	259.8	238.6	277.5	288.7	283.6	290.6	283.3	50.7	93.8	103.9	105.1	71.6	91.1	88.1	102.2	94.6	112.2
16	119.2	106.8	115.8	142.2	133.7	113.8	272.2	53.1	71.6	104.7	70.9	266.5	291.9	287.4	285.6	289.4	279.3	295.9	286.1	290.2	283.8	284.7	286.4	287.9
17	283.6	286.6	285.9	287.9	286.6	283.4	284.4	286.5	287.7	289.3	289.2	291.8	291.0	286.5	282.7	301.3	291.4	294.6	262.1	279.2	298.3	289.3	285.9	286.8
18	288.2	294.9	295.1	293.2	281.4	270.1	255.5	263.3	276.4	284.0	272.3	257.8	270.7	265.5	262.5	270.6	266.4	269.3	264.4	266.1	268.6	271.2	279.4	272.9
19	282.0	272.6	270.4	268.8	254.8	261.7	265.3	266.4	266.9	268.1	276.8	276.4	262.5	268.7	269.3	265.5	259.7	259.2	268.7	262.7	266.6	259.8	266.7	262.3
20	269.5	282.4	281.4	280.3	272.0	279.7	277.9	272.2	289.6	293.6	283.0	290.3	283.4	284.1	289.5	286.4	289.0	285.0	287.1	289.8	288.8	289.4	291.3	293.4
21	287.1	280.5	279.1	278.5	279.2	279.1	282.7	283.5	283.8	289.1	291.0	290.9	289.3	280.5	279.1	271.1	272.5	270.8	271.3	266.4	265.9	270.2	273.5	276.7
22	283.7	268.6	270.3	270.9	267.5	270.7	263.3	263.8	263.0	264.3	269.0	268.8	270.9	272.7	274.5	275.0	260.7	270.6	280.3	266.2	258.7	253.1	248.9	253.4
23	278.2	272.7	291.6	279.0	74.7	265.2	264.4	269.5	262.8	267.5	270.6	268.1	269.4	275.9	44.0	114.2	135.3	112.8	102.7	91.3	127.3	107.5	106.4	117.8
24	123.6	130.1	106.8	102.8	93.3	95.9	95.2	102.7	106.6	117.6	122.3	124.8	105.0	101.8	91.2	108.0	107.3	98.0	109.2	120.5	133.0	126.0	80.6	302.8
25	283.7	280.5	285.0	284.0	289.0	287.0	286.9	284.6	285.0	284.6	281.1	281.1	284.0	285.6	284.1	283.1	280.3	287.2	284.8	286.1	294.4	294.9	292.9	290.2
26	286.5	289.0	289.0	286.0	285.4	281.4	280.8	283.6	280.9	285.0	286.6	282.6	290.3	282.2	285.4	296.2	298.4	300.9	298.1	282.4	258.5	258.0	253.3	251.6
27	258.0	267.6	263.7	268.5	281.4	272.6	277.5	275.5	271.2	277.7	273.4	281.7	275.4	266.8	267.9	269.9	257.0	257.3	259.4	262.7	272.7	275.7	285.6	296.0
28	282.6	270.8	275.3	273.4	271.4	269.9	273.0	270.8	273.1	272.1	274.1	270.6	266.7	272.5	270.6	266.9	269.1	271.0	282.5	288.3	292.9	291.1	293.9	291.7
29	291.7	290.6	290.3	290.3	287.6	287.3	287.6	285.8	284.4	280.0	281.1	277.9	285.0	289.5	287.2	287.5	287.9	286.9	287.1	292.6	291.7	292.3	286.1	286.8
30	287.1	286.8	291.0	290.1	292.9	293.4	296.8	296.4	299.5	294.7	297.7	289.3	283.4	270.3	279.6	289.3	277.3	278.8	275.8	277.0	273.4	270.6	278.1	275.6

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	297.4	312.0	307.0	309.4	291.4	270.2	274.7	261.2	255.4	273.7	289.2	299.5	274.8	287.2	276.0	309.0	295.7	102.1	65.4	45.3	78.3	66.7	55.2	62.8
2	46.1	59.9	36.5	59.7	75.1	41.9	55.4	52.2	61.3	78.8	101.7	90.0	115.1	147.9	133.6	111.7	104.3	111.1	104.4	106.5	119.0	129.1	117.2	121.3
3	112.3	110.5	108.9	103.8	99.3	98.7	101.5	113.4	107.3	100.8	96.1	86.2	97.8	97.5	90.8	96.4	101.2	96.7	90.5	98.3	98.4	94.2	94.4	102.3
4	115.7	130.8	118.1	126.5	129.2	124.8	122.2	117.8	105.8	137.2	127.0	120.8	117.6	128.5	126.6	114.7	121.8	113.2	99.9	100.1	76.4	70.2	65.8	79.0
5	115.1	97.9	91.3	88.4	102.2	96.9	81.5	68.3	87.7	110.1	98.3	126.7	116.9	98.9	90.8	109.4	128.2	116.4	117.6	133.0	120.9	136.0	136.0	126.6
6	120.7	124.5	129.9	129.9	97.6	297.6	282.7	288.4	41.5	291.3	313.2	125.9	114.7	272.4	72.3	77.2	90.8	81.4	82.9	289.3	284.1	316.4	289.3	280.6
7	322.9	356.3	277.9	299.1	277.9	269.2	272.9	273.1	283.5	291.0	281.6	274.5	282.7	294.8	295.6	270.3	261.7	265.2	90.9	110.1	91.3	61.2	52.3	76.0
8	89.6	102.8	99.4	105.9	98.5	97.5	92.6	97.1	103.5	106.4	107.1	105.8	104.5	109.4	109.6	107.3	103.0	100.0	102.7	109.5	113.7	123.1	102.4	83.2
9	64.1	101.5	115.2	179.2	280.4	113.4	47.6	2.1	83.6	58.6	92.0	324.3	300.1	304.7	290.8	289.6	283.1	287.7	292.7	287.7	289.1	292.0	302.6	300.6
10	291.7	275.9	268.7	296.4	292.1	293.0	287.3	279.1	274.1	269.1	280.6	271.7	283.1	275.3	279.2	290.3	282.0	289.6	292.6	291.0	284.5	282.3	289.2	295.3
11	290.5	292.1	294.2	295.5	293.8	304.4	292.9	298.1	303.0	303.0	291.6	291.6	296.0	287.5	293.6	297.8	293.7	292.2	290.0	280.7	287.2	290.8	303.8	304.9
12	318.3	318.5	307.4	307.4	295.9	283.1	280.2	291.5	280.9	290.4	292.5	271.3	292.7	286.5	264.1	270.3	257.3	241.8	240.8	263.4	284.0	306.8	286.7	299.9
13	287.2	306.9	274.2	281.7	284.6	281.3	268.2	222.7	263.8	36.7	345.3	286.2	293.6	282.3	275.3	275.9	265.4	267.3	278.6	282.2	80.7	80.9	86.5	89.4
14	81.2	77.3	83.4	113.1	106.4	109.8	85.7	62.0	80.8	111.2	92.6	86.7	78.7	98.0	103.4	90.3	73.9	110.7	76.5	93.9	92.8	97.5	85.9	92.0
15	93.4	103.4	101.4	96.6	105.5	99.6	79.8	76.5	76.7	73.0	63.5	53.2	102.6	68.9	102.2	87.1	82.9	113.2	93.8	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.0	89.6	118.2
17	111.4	119.7	86.8	85.8	93.2	104.1	108.0	107.8	120.7	104.8	128.5	131.6	123.1	123.6	107.0	111.5	98.2	108.5	89.5	92.4	93.9	108.0	84.7	101.4
18	78.3	98.7	102.8	92.1	108.2	88.6	105.9	107.2	109.2	111.9	118.6	120.3	122.6	119.7	98.7	111.7	110.1	105.9	94.8	99.4	93.7	100.7	88.1	105.2
19	100.0	98.6	95.9	92.4	105.4	91.8	83.3	88.2	89.5	100.5	91.6	90.2	98.5	99.8	94.6	95.1	96.5	103.7	102.2	105.9	101.4	99.1	94.2	98.0
20	101.2	103.7	105.7	107.6	93.8	103.6	176.2	226.9	181.3	114.1	159.6	217.0	127.8	153.7	132.8	183.9	147.5	283.9	279.3	277.7	288.6	284.1	271.1	254.9
21	294.9	297.8	290.5	96.1	13.3	4.3	26.0	150.3	76.4	30.4	16.8	297.8	256.2	251.1	281.8	294.8	266.1	271.8	266.2	258.2	282.8	259.7	293.2	282.6
22	301.5	108.7	102.4	105.5	108.0	126.8	114.2	72.3	86.7	101.9	121.9	91.2	96.3	86.4	96.2	79.0	84.5	79.4	107.7	71.1	89.3	82.9	58.7	88.7
23	108.7	129.7	109.4	89.2	73.0	84.2	76.8	109.4	67.9	73.8	294.1	269.4	272.0	267.6	263.2	267.6	270.8	267.9	271.0	270.0	287.6	290.9	279.7	276.0
24	271.5	263.7	267.7	267.4	275.3	279.9	283.9	287.5	287.9	280.1	281.6	287.2	276.5	278.8	272.1	289.2	323.1	311.1	288.9	294.5	296.8	291.7	257.6	269.1
25	85.0	91.8	102.8	141.9	113.4	137.9	132.1	130.1	131.9	137.7	129.5	115.5	112.1	93.1	68.6	87.0	82.6	100.7	55.0	40.0	293.3	306.0	299.4	305.6
26	277.3	267.7	269.2	277.2	279.6	276.6	278.6	281.5	293.8	282.7	280.8	274.2	274.0	284.3	280.9	279.4	276.0	283.0	277.1	281.7	293.0	286.7	293.4	290.5
27	285.8	292.8	296.0	294.1	290.6	290.7	283.4	284.6	282.6	277.6	273.8	270.6	274.0	271.9	270.5	273.5	274.1	275.5	279.1	276.4	276.5	277.6	283.9	283.7
28	283.5	280.5	275.5	275.1	283.3	287.0	282.3	288.5	280.6	286.4	283.9	283.7	284.4	287.8	288.5	289.2	291.3	290.9	292.4	288.9	284.8	285.5	283.9	286.3
29	285.5	285.3	283.4	284.6	285.2	280.3	273.3	272.1	272.9	269.6	267.8	268.3	271.6	267.5	265.9	266.4	264.3	254.7	253.5	257.3	261.5	263.0	263.1	258.5
30	263.9	263.5	261.4	260.2	262.7	266.3	267.7	269.1	270.3	269.3	271.3	269.7	274.1	272.7	270.9	274.0	275.8	274.5	279.0	274.1	270.9	280.4	274.9	275.6
31	279.3	274.8	279.1	282.5	281.4	281.7	281.0	278.7	275.0	274.6	275.5	280.9	273.8	273.5	274.7	273.3	274.0	271.5	273.7	272.6	276.7	280.3	277.4	280.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	70.1	81.3	77.5	33.4	22.5	17.1	12.8	12.1	11.3	11.2	17.1	16.2	14.6	16.2	13.0	13.1	13.8	15.0	13.4	14.5	15.4	14.6	14.1	14.9	81.3	11.2	23.1
2	14.3	13.8	15.1	14.2	14.5	15.3	15.8	15.4	15.5	13.8	13.4	13.7	13.4	14.3	14.4	15.9	15.8	14.1	15.1	14.6	14.2	14.1	15.1	14.5	15.9	13.4	14.6
3	14.9	13.8	15.4	13.8	15.2	14.6	14.3	14.3	14.2	13.6	14.2	15.0	15.4	14.3	13.2	12.7	11.9	14.3	13.2	11.8	12.1	12.0	12.8	13.9	15.4	11.8	13.8
4	13.0	12.3	11.2	11.6	11.7	12.9	13.7	13.1	11.6	12.4	11.7	12.0	12.5	12.3	12.2	12.1	12.1	12.2	12.2	13.1	13.4	13.3	12.5	13.7	13.7	11.2	12.5
5	13.2	13.3	14.2	14.1	13.6	13.8	13.9	13.7	13.8	13.5	14.1	14.4	14.4	16.0	15.3	15.6	15.7	14.3	14.6	13.3	13.4	13.7	14.4	13.4	16.0	13.2	14.2
6	14.0	15.8	15.6	14.1	15.9	15.4	14.1	14.0	14.8	15.9	15.9	14.7	15.4	13.9	13.2	14.3	13.6	14.1	13.0	11.4	10.8	10.5	10.9	10.5	15.9	10.5	13.8
7	11.5	11.4	12.2	11.6	11.0	10.5	11.7	11.7	12.2	12.3	12.8	13.5	13.1	13.3	13.3	13.2	13.1	12.4	11.8	12.0	11.5	10.5	11.2	12.9	13.5	10.5	12.1
8	13.1	12.8	12.8	13.6	12.8	13.5	13.7	13.6	13.7	13.2	13.0	12.8	12.5	13.7	13.3	13.3	12.3	10.2	12.0	12.6	13.7	12.9	12.2	11.1	13.7	10.2	12.9
9	12.6	13.6	13.1	13.1	13.3	11.6	12.6	14.1	13.7	13.3	13.2	13.4	13.6	13.4	13.5	12.8	13.8	13.5	13.8	14.7	14.1	13.4	14.4	14.2	14.7	11.6	13.5
10	13.6	14.7	14.6	14.0	14.5	13.5	13.6	13.2	12.6	14.0	14.0	12.8	14.6	13.3	15.2	17.6	16.5	13.7	12.4	15.7	15.2	14.2	13.3	13.0	17.6	12.4	14.2
11	14.0	13.6	13.8	13.4	13.7	14.0	14.8	13.7	14.2	13.5	13.2	13.2	13.4	13.4	14.0	12.6	13.3	11.8	12.9	11.6	12.5	12.3	10.6	10.9	14.8	10.6	13.1
12	12.8	13.8	14.0	13.9	14.0	14.4	15.3	14.5	15.2	14.2	13.8	14.7	15.0	14.9	13.3	11.4	13.5	13.3	12.4	13.3	14.7	14.4	14.1	13.5	15.3	11.4	13.9
13	14.4	13.8	13.7	13.9	14.1	13.8	13.9	14.4	13.7	13.6	13.7	13.9	15.0	13.7	13.2	13.9	15.3	14.8	13.7	13.1	14.4	13.5	13.3	14.0	15.3	13.1	14.0
14	14.7	15.0	17.4	17.6	15.6	21.0	73.4	63.0	65.7	83.1	53.5	36.5	14.4	16.9	15.9	19.1	39.7	38.6	23.7	36.1	38.8	15.3	11.7	13.0	83.1	11.7	31.7
15	15.3	17.8	22.5	24.0	28.1	28.6	26.7	32.6	26.5	21.4	23.8	31.0	16.3	16.6	20.0	28.3	32.6	25.0	26.8	27.4	23.1	53.9	18.5	18.6	53.9	15.3	25.2
16	25.5	77.4	92.9	41.8	72.4	15.9	17.5	16.6	17.5	15.2	18.0	17.0	15.5	13.9	17.2	15.6	16.0	51.2	61.6	79.7	21.0	56.8	30.6	27.3	92.9	13.9	34.8
17	93.8	30.7	16.1	32.6	20.7	26.2	29.0	48.8	42.9	47.4	65.7	28.2	17.2	14.7	20.9	16.9	21.2	24.2	23.4	24.6	25.2	42.0	30.1	17.2	93.8	14.7	31.6
18	21.5	15.4	21.2	17.9	21.3	27.2	47.3	56.2	89.0	74.5	50.2	79.7	43.5	17.1	41.8	30.9	60.2	16.2	15.0	34.6	22.8	22.0	31.7	13.6	89.0	13.6	36.3
19	27.8	23.6	23.9	29.7	26.2	28.2	38.1	46.6	27.6	40.9	81.1	39.9	65.5	58.1	27.5	16.5	28.6	32.6	63.4	67.8	43.4	23.0	20.1	21.6	81.1	16.5	37.6
20	29.4	35.3	24.8	20.4	25.7	36.7	46.7	38.2	44.6	35.7	46.4	38.4	27.0	21.7	25.1	16.9	29.4	27.7	22.7	15.2	49.7	82.6	63.6	27.6	82.6	15.2	34.6
21	19.6	18.0	23.0	40.0	27.0	28.9	20.9	24.0	21.5	47.4	43.7	42.3	23.0	21.1	20.9	21.7	35.9	30.6	34.4	24.8	19.4	18.8	12.5	9.8	47.4	9.8	26.2
22	16.4	28.6	20.7	25.0	26.2	22.8	18.0	23.4	43.5	40.1	38.5	91.6	59.2	87.0	17.1	17.1	19.0	20.7	77.8	27.7	19.8	15.2	15.3	19.8	91.6	15.2	32.9
23	16.8	15.6	16.3	16.3	22.8	17.8	16.0	16.2	16.0	16.8	17.4	16.6	18.0	20.5	17.3	17.1	16.1	22.5	21.3	15.2	13.5	14.9	15.9	14.3	22.8	13.5	17.1
24	20.1	14.4	15.3	12.6	14.3	68.6	34.1	44.2	72.6	26.6	37.5	45.5	31.2	47.3	52.5	44.2	40.9	45.6	38.2	14.6	26.8	33.1	26.3	11.9	72.6	11.9	34.1
25	14.5	13.2	37.3	28.1	90.3	95.3	18.4	16.9	17.6	19.5	21.1	18.0	18.5	19.0	18.5	21.0	21.6	20.5	22.0	19.2	20.8	14.8	15.5	15.6	95.3	13.2	25.7
26	15.3	15.4	16.9	18.1	19.8	16.0	14.6	19.5	14.1	20.5	15.3	15.6	13.2	14.4	14.2	12.1	42.0	35.6	22.4	12.1	19.2	22.3	31.4	13.4	42.0	12.1	18.9
27	19.4	24.2	18.6	39.3	29.9	30.9	32.7	16.4	19.5	14.0	22.9	20.2	16.0	21.2	14.9	13.6	15.8	15.2	11.9	16.8	20.0	17.6	18.8	22.2	39.3	11.9	20.5
28	21.2	24.2	32.2	30.6	74.9	97.3	50.5	47.7	23.8	36.4	31.0	20.0	15.0	35.2	31.6	67.0	53.3	58.1	36.2	40.6	82.2	42.4	18.6	18.1	97.3	15.0	41.2
29	17.0	17.8	17.8	17.3	18.7	18.1	17.5	17.3	16.9	15.9	14.4	18.3	14.7	16.2	16.1	15.9	16.8	16.1	16.9	86.9	26.7	63.0	14.1	13.1	86.9	13.1	21.8
30	12.9	13.9	14.9	16.0	16.8	19.8	16.5	15.9	22.0	26.8	30.7	31.1	15.6	14.4	16.3	15.8	12.9	12.2	15.1	16.8	12.1	14.6	11.6	12.3	31.1	11.6	17.0
31	11.7	12.1	11.6	10.9	12.8	11.9	12.2	12.1	14.4	13.1	13.1	12.0	12.3	12.5	14.6	12.5	12.1	12.5	13.4	12.7	14.8	14.3	17.1	17.9	17.9	10.9	13.1
Max.	**93.8**	**81.3**	**92.9**	**41.8**	**90.3**	**97.3**	**73.4**	**63.0**	**89.0**	**83.1**	**81.1**	**91.6**	**65.5**	**87.0**	**52.5**	**67.0**	**60.2**	**58.1**	**77.8**	**86.9**	**82.2**	**82.6**	**63.6**	**27.6**	**97.3**		
Min.	**11.5**	**11.4**	**11.2**	**10.9**	**11.0**	**10.5**	**11.7**	**11.7**	**11.3**	**11.2**	**11.7**	**12.0**	**12.3**	**12.3**	**12.2**	**11.4**	**11.9**	**10.2**	**11.8**	**11.4**	**10.8**	**10.5**	**10.6**	**9.8**		**9.8**	
Avg.	**20.8**	**21.2**	**22.2**	**20.4**	**24.2**	**25.5**	**22.9**	**23.7**	**24.9**	**24.8**	**25.9**	**25.2**	**20.0**	**21.0**	**18.7**	**18.7**	**22.4**	**21.9**	**23.1**	**24.0**	**21.8**	**23.7**	**18.5**	**15.4**			**22.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	20.0	14.7	23.2	16.2	8.5	6.3	8.2	9.5	7.4	14.9	7.2	11.3	21.5	16.3	5.8	6.3	19.0	12.0	25.9	45.9	31.1	19.3	14.2	9.0	45.9	5.8	15.6
2	19.2	11.3	31.2	71.5	43.8	58.7	54.3	82.8	19.0	19.2	15.6	18.5	14.7	15.0	14.9	14.6	14.4	14.4	19.3	16.7	15.3	16.1	20.6	19.2	82.8	11.3	26.7
3	13.7	14.4	14.7	15.8	17.2	14.6	13.9	12.7	15.1	12.2	17.3	14.3	13.3	14.2	12.8	12.4	12.0	13.3	13.0	12.6	13.1	13.3	13.2	13.5	17.3	12.0	13.9
4	12.7	11.9	12.4	15.4	12.5	11.3	15.4	56.0	8.2	10.6	10.5	17.6	52.7	14.4	13.6	12.1	9.8	15.7	35.7	33.8	18.9	15.1	16.4	17.2	56.0	8.2	18.7
5	10.7	11.2	15.7	16.3	14.4	13.9	15.0	18.8	14.8	15.6	17.1	15.5	15.5	16.4	13.1	11.5	11.5	12.2	12.8	14.2	14.5	13.0	13.2	12.9	18.8	10.7	14.2
6	19.3	17.2	13.5	13.0	18.5	20.7	19.6	20.3	11.8	15.0	15.8	17.0	16.4	15.9	15.9	15.3	16.0	14.3	12.5	13.2	13.2	13.4	13.1	11.5	20.7	11.5	15.5
7	12.4	11.6	12.0	13.4	13.2	13.8	14.2	12.4	13.6	14.3	15.3	12.9	12.6	14.0	11.6	13.4	14.3	13.9	13.8	12.4	15.7	32.7	14.9	19.0	32.7	11.6	14.5
8	26.5	37.7	11.2	41.9	53.8	52.4	33.2	100.5	23.5	27.2	23.5	25.8	24.1	35.8	31.0	16.7	20.1	18.6	17.6	18.1	26.9	54.5	44.6	29.4	100.5	11.2	33.1
9	25.1	25.2	22.9	14.5	14.1	17.5	15.3	16.3	17.8	42.0	38.2	58.7	46.3	30.7	16.2	15.0	52.8	17.5	20.1	13.7	20.8	21.5	23.6	16.4	58.7	13.7	25.1
10	29.0	20.1	26.9	17.6	16.8	15.6	13.9	13.2	13.1	13.0	13.7	12.5	13.0	16.2	13.0	11.7	9.0	9.2	12.0	11.3	12.2	10.6	26.4	15.6	29.0	9.0	15.2
11	11.1	12.2	15.7	39.6	24.7	25.3	13.2	77.9	45.3	11.1	13.0	12.2	12.1	12.3	12.7	15.1	13.3	13.4	12.7	13.9	13.4	16.2	15.4	13.9	77.9	11.1	19.4
12	13.4	12.5	10.8	12.1	12.9	12.3	12.7	14.3	13.5	15.5	15.5	14.4	14.1	15.1	13.8	17.3	14.0	14.6	14.1	13.6	62.1	43.1	33.1	85.6	85.6	10.8	20.8
13	45.4	60.7	41.1	48.3	20.8	20.0	19.2	17.8	14.6	21.6	18.3	51.0	16.6	19.0	19.9	18.9	17.1	17.1	20.6	17.6	20.5	24.3	19.6	22.5	60.7	14.6	25.5
14	26.2	24.2	23.3	23.2	20.1	19.5	24.3	18.6	20.1	30.0	13.5	12.5	12.7	13.8	13.8	13.2	13.2	14.5	15.1	15.5	14.8	14.9	13.3	13.5	30.0	12.5	17.7
15	16.0	15.8	14.9	16.6	16.2	17.1	17.3	17.6	16.9	20.6	14.7	16.6	16.6	16.9	17.2	15.2	19.6	11.9	18.0	20.0	62.6	59.3	30.1	18.7	62.6	11.9	21.1
16	18.5	19.8	25.4	18.1	19.0	27.0	16.8	18.0	24.7	23.1	27.3	28.3	36.0	27.1	36.1	50.0	33.3	66.3	91.2	42.5	37.2	42.7	93.4	79.5	93.4	16.8	37.6
17	25.5	35.6	33.1	22.1	48.9	27.2	20.5	19.4	24.0	36.1	29.4	26.6	17.0	17.9	17.2	15.1	19.3	35.9	21.8	16.3	14.6	13.2	13.2	13.7	48.9	13.2	23.5
18	13.6	14.7	26.0	40.2	49.7	46.1	40.2	28.3	21.1	15.2	13.6	14.4	22.3	14.2	14.3	10.4	14.2	27.8	28.8	33.5	42.4	30.0	22.7	23.6	49.7	10.4	25.3
19	35.5	35.8	68.8	56.6	91.0	94.6	32.3	68.0	25.1	20.1	19.9	19.2	18.2	19.8	19.1	22.1	20.0	17.1	16.5	16.9	17.8	16.5	16.7	17.5	94.6	16.5	32.7
20	18.4	24.8	17.8	15.4	13.2	13.3	14.9	24.5	40.4	50.0	23.2	22.7	31.4	35.3	17.3	14.5	15.2	18.3	16.7	28.4	22.6	16.1	20.7	70.4	70.4	13.2	24.4
21	76.3	80.8	86.5	79.0	55.7	93.8	82.0	74.2	59.2	24.5	15.8	14.9	20.6	17.9	19.8	17.3	15.1	19.6	17.7	20.0	18.6	18.2	18.3	22.9	93.8	14.9	40.4
22	16.1	17.8	15.2	19.4	23.5	19.5	38.6	28.4	37.3	21.8	16.3	25.1	26.4	31.2	26.3	33.2	17.9	14.5	28.1	26.2	22.1	33.5	34.1	28.3	38.6	14.5	25.0
23	30.5	42.0	24.6	42.1	34.2	13.0	14.1	18.3	14.4	12.0	12.6	13.6	13.0	13.4	13.7	13.4	13.6	13.2	13.6	13.6	14.0	13.4	12.7	13.2	42.1	12.0	18.0
24	13.2	13.8	13.4	14.0	14.9	13.1	14.2	14.6	15.5	16.0	15.5	14.3	14.9	15.6	14.6	14.1	14.7	15.3	14.8	14.7	15.0	13.1	13.3	13.6	16.0	13.1	14.4
25	12.4	11.5	13.2	12.3	11.4	12.1	12.8	13.7	14.3	15.3	15.3	15.1	15.1	12.7	17.9	58.0	19.8	17.3	24.0	47.3	34.3	18.2	39.3	37.5	58.0	11.4	20.9
26	41.1	37.2	20.7	36.9	16.1	22.2	23.7	19.4	83.8	56.5	26.0	66.0	52.0	43.7	83.7	15.6	27.1	19.2	15.6	15.4	17.4	14.1	17.5	14.4	83.8	14.1	32.7
27	23.8	17.3	16.6	16.7	16.2	14.9	15.4	15.3	14.6	13.9	14.3	51.7	54.8	47.9	15.7	84.2	38.9	30.2	84.4	90.4	57.2	17.9	37.3	58.2	90.4	13.9	35.3
28	47.1	30.3	32.2	40.6	55.5	32.8	35.1	28.6	14.5	21.2	51.6	68.1	44.1	35.6	51.0	40.7	15.5	15.7	18.0	14.0	17.4	14.4	12.9	12.1	68.1	12.1	31.2
29	17.0	15.4	17.0	15.6	16.7	18.5	24.5	15.2	15.3	16.2	13.1	13.4	12.8	15.7	14.7	17.3	13.4	12.2	12.7	15.0	15.9	17.2	16.5	13.9	24.5	12.2	15.6
Max.	**76.3**	**80.8**	**86.5**	**79.0**	**91.0**	**94.6**	**82.0**	**100.5**	**83.8**	**56.5**	**51.6**	**68.1**	**54.8**	**47.9**	**83.7**	**84.2**	**52.8**	**66.3**	**91.2**	**90.4**	**62.6**	**59.3**	**93.4**	**85.6**	**100.5**		
Min.	**10.7**	**11.2**	**10.8**	**12.1**	**8.5**	**6.3**	**8.2**	**9.5**	**7.4**	**10.6**	**7.2**	**11.3**	**12.1**	**12.3**	**5.8**	**6.3**	**9.0**	**9.2**	**12.0**	**11.3**	**12.2**	**10.6**	**12.7**	**9.0**		**5.8**	
Avg.	**23.8**	**24.1**	**24.1**	**27.7**	**26.7**	**26.4**	**23.3**	**30.2**	**22.7**	**21.5**	**18.7**	**24.3**	**23.5**	**21.2**	**20.2**	**21.2**	**18.4**	**18.5**	**23.0**	**23.0**	**24.2**	**22.3**	**23.5**	**25.4**			**23.2**

Total Hours in Month 696 **Hours Data Available** 696 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	14.5	14.9	15.0	15.0	14.6	15.2	15.5	14.3	12.9	15.7	89.9	32.8	18.6	22.0	15.5	18.6	11.5	16.0	25.5	33.9	25.4	25.5	30.0	27.2	89.9	11.5	22.5
2	46.9	32.8	18.0	18.8	26.9	20.6	24.6	35.7	19.9	20.1	28.6	37.0	36.4	39.6	18.4	20.0	23.9	94.9	54.7	63.4	52.5	88.4	72.0	41.4	94.9	18.0	39.0
3	34.1	37.2	31.9	27.2	47.5	47.6	23.0	19.5	20.4	38.9	29.5	39.5	21.7	20.4	21.6	22.9	22.9	35.4	23.5	17.8	19.3	14.5	14.8	12.5	47.6	12.5	26.8
4	20.8	16.3	12.9	20.6	19.4	29.0	21.6	25.0	41.7	38.7	53.9	54.3	53.4	47.7	40.2	31.0	27.1	31.9	41.9	42.8	35.6	24.1	49.1	22.3	54.3	12.9	33.4
5	16.1	19.2	17.2	16.4	17.4	20.3	17.7	15.1	15.0	16.1	16.7	18.4	16.2	14.1	17.1	20.3	25.0	32.6	47.9	46.7	24.8	15.2	15.7	16.5	47.9	14.1	20.7
6	14.7	11.8	11.5	16.4	24.4	25.1	35.9	28.1	35.8	23.7	38.1	17.2	36.8	42.7	38.8	45.5	21.8	17.7	26.2	66.4	59.7	58.7	94.9	87.5	94.9	11.5	36.6
7	87.6	61.0	12.1	24.9	74.1	26.8	26.0	22.9	25.8	32.9	24.8	47.5	16.9	13.6	16.0	14.7	14.6	16.9	18.1	16.8	17.6	18.4	16.7	17.1	87.6	12.1	27.7
8	15.3	16.2	14.2	12.1	12.9	25.8	22.4	53.9	36.2	21.6	24.3	27.2	28.6	34.7	33.9	25.3	18.6	18.4	30.9	27.5	32.6	66.7	92.7	52.8	92.7	12.1	31.0
9	86.7	74.6	71.6	98.2	54.2	34.8	21.0	27.2	44.8	47.6	16.3	17.8	52.7	26.8	20.1	18.0	14.4	13.3	15.7	13.8	12.3	16.0	46.9	84.0	98.2	12.3	38.7
10	20.5	34.7	16.7	31.1	26.6	14.7	14.1	14.5	14.1	13.6	13.1	12.6	14.1	14.6	14.6	13.1	13.2	14.3	14.6	14.8	13.1	12.9	11.0	10.9	34.7	10.9	16.1
11	11.4	10.3	13.1	13.6	12.6	13.7	13.8	14.8	15.0	13.6	13.7	13.7	16.5	16.4	16.6	15.6	16.7	15.4	14.6	16.5	15.7	15.4	15.6	15.4	16.7	10.3	14.6
12	14.3	14.0	14.2	13.9	14.0	14.1	12.1	13.0	14.2	14.5	13.7	14.4	15.1	15.8	15.9	16.1	16.3	15.4	14.9	15.0	14.8	12.8	14.1	15.2	16.3	12.1	14.5
13	16.6	16.7	16.4	16.6	16.4	16.4	15.5	17.1	17.6	17.3	17.3	16.8	17.1	17.0	15.9	16.8	16.2	16.4	15.0	16.5	16.2	15.3	14.6	13.6	17.6	13.6	16.3
14	13.0	13.9	14.7	14.3	14.2	17.2	13.4	14.3	14.0	13.8	13.9	14.2	74.4	22.9	36.2	28.9	9.3	14.0	17.0	21.7	28.3	24.2	31.4	24.1	74.4	9.3	21.0
15	16.2	19.3	16.3	17.9	24.8	21.6	23.5	17.9	18.8	24.7	23.6	25.6	22.6	24.8	24.7	19.7	22.9	21.8	20.6	17.4	18.3	17.2	13.7	20.1	25.6	13.7	20.6
16	14.2	19.2	34.8	42.1	48.0	59.7	30.0	48.0	65.9	83.7	30.2	24.6	21.7	15.2	15.9	29.3	38.0	46.0	19.3	10.9	7.3	14.4	72.7	50.6	83.7	7.3	35.1
17	11.7	15.7	32.4	17.6	10.3	18.4	24.2	27.4	21.1	20.7	14.5	18.2	15.5	17.3	18.6	16.1	16.4	15.5	16.4	16.6	17.4	16.6	16.0	15.1	32.4	10.3	17.9
18	14.6	14.1	14.5	15.5	15.5	16.4	14.5	15.4	14.3	14.7	15.2	14.1	13.0	12.7	13.6	15.3	14.9	14.8	16.0	17.6	15.5	14.7	15.4	14.0	17.6	12.7	14.8
19	13.8	13.6	14.5	13.6	14.5	13.6	13.9	14.4	13.9	14.9	15.1	13.0	14.0	14.3	14.5	15.3	12.5	11.8	12.0	12.0	12.7	13.2	14.0	13.9	15.3	11.8	13.7
20	13.8	13.5	13.3	13.2	13.6	12.9	12.1	12.8	11.0	11.9	13.4	12.8	13.5	14.3	13.8	13.2	13.6	13.0	13.3	14.1	13.9	13.8	13.7	13.8	14.3	11.0	13.3
21	14.5	14.9	14.2	14.1	14.0	13.0	14.2	14.1	12.6	11.0	10.9	11.3	11.1	11.1	13.3	13.9	12.4	11.3	10.3	11.3	13.8	14.9	12.5	13.5	14.9	10.3	12.8
22	12.7	11.1	10.3	10.1	10.4	11.0	12.4	13.0	13.6	14.0	13.6	13.6	12.0	13.2	12.3	12.3	13.8	15.1	13.2	15.1	14.7	15.7	14.2	14.7	15.7	10.1	13.0
23	14.5	14.9	15.4	13.1	14.9	13.9	12.4	12.2	13.1	14.4	15.0	13.9	13.6	13.1	13.5	14.2	14.2	13.7	14.2	14.3	14.7	14.4	13.3	13.6	15.4	12.2	13.9
24	13.9	14.2	14.3	13.3	12.4	13.2	14.1	14.1	13.1	14.0	13.9	13.9	13.6	13.6	13.6	14.4	15.0	14.4	13.4	13.4	13.9	13.9	14.7	16.4	16.4	12.4	13.9
25	13.5	16.0	51.2	18.4	20.7	13.0	12.4	13.7	13.2	12.9	12.2	14.6	14.6	13.4	14.1	14.1	14.9	15.4	14.9	14.8	14.3	14.7	14.4	13.8	51.2	12.2	16.0
26										14.4				15.7	15.1	14.1	15.1	15.5	14.9	14.9	13.9	12.4	13.6	14.7	15.7	12.4	14.5
27	16.0	16.5	15.2	15.5	15.8	14.9	16.5	17.5	16.6	14.5	13.7	15.2	14.3	14.0	14.0	13.7	15.5	13.9	13.6	14.5	13.4	15.4	14.7	17.8	17.8	13.4	15.1
28	15.8	13.4	11.0	11.0	11.1	10.8	11.0	10.8	12.0	13.1	15.6	14.2	14.6	14.1	14.1	14.3	13.9	13.0	13.4	13.4	12.7	13.8	6.9	10.7	15.8	6.9	12.7
29	8.8	32.8	34.1	22.3	18.2	21.7	17.4	23.6	14.6	19.8	30.7	40.8	22.0	21.7	20.8	16.8	22.2	22.8	19.0	19.4	22.7	28.8	26.7	31.6	40.8	8.8	23.3
30	25.9	15.6	23.7	16.0	20.9	22.1	27.8	23.9	31.2	28.6	24.6	23.9	26.0	33.4	42.3	29.8	35.0	24.8	22.2	44.3	30.7	21.5	17.9	18.6	44.3	15.6	26.3
31	24.2	23.3	19.3	21.2	17.5	14.2	15.7	17.7	20.8	16.1	20.7	17.6	35.0	59.1	79.2	47.0	46.9	46.4	39.7	40.0	36.1	46.7	44.2	40.4	79.2	14.2	32.9
Max.	**87.6**	**74.6**	**71.6**	**98.2**	**74.1**	**59.7**	**35.9**	**53.9**	**65.9**	**83.7**	**89.9**	**54.3**	**74.4**	**59.1**	**79.2**	**47.0**	**46.9**	**94.9**	**54.7**	**66.4**	**59.7**	**88.4**	**94.9**	**87.5**	**98.2**		
Min.	**8.8**	**10.3**	**10.3**	**10.1**	**10.3**	**10.8**	**11.0**	**10.8**	**11.0**	**11.0**	**10.9**	**11.3**	**11.1**	**11.1**	**12.3**	**12.3**	**9.3**	**11.3**	**10.3**	**10.9**	**7.3**	**12.4**	**6.9**	**10.7**		**6.9**	
Avg.	**21.9**	**21.4**	**20.5**	**20.5**	**21.9**	**20.4**	**18.3**	**20.4**	**21.1**	**21.7**	**22.6**	**21.7**	**23.2**	**21.6**	**21.7**	**20.0**	**19.0**	**22.0**	**20.9**	**23.2**	**21.1**	**22.9**	**27.7**	**25.0**			**21.7**

Total Hours in Month 744 **Hours Data Available** 732 **Data Recovery** 98.4%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	40.2	32.8	28.1	42.3	34.7	38.7	40.6	56.5	30.8	20.2	25.4	39.2	24.6	32.8	34.1	31.6	35.8	28.9	19.4	23.6	24.6	40.6	25.5	96.2	96.2	19.4	35.3
2	73.9	23.3	13.4	12.9	11.7	12.6	11.2	12.4	11.5	11.3	11.5	13.4	13.1	13.1	17.3	15.7	26.6	83.7	36.0	36.0	14.7	33.4	36.3	31.8	83.7	11.2	24.0
3	24.5	26.6	28.2	21.7	22.3	26.5	40.8	29.7	20.3	16.0	15.8	9.1	28.2	30.4	35.4	31.7	32.7	27.7	29.9	11.6	12.1	19.2	10.7	14.9	40.8	9.1	23.6
4	18.4	19.3	21.8	20.2	32.7	26.3	37.2	42.8	36.1	40.6	39.8	52.2	55.9	43.8	26.3	16.8	20.6	16.7	20.0	21.1	28.8	25.0	87.6	16.0	87.6	16.0	31.9
5	15.8	16.9	14.9	13.0	14.4	13.5	16.0	18.2	16.2	17.2	17.4	18.8	17.5	18.5	20.4	19.3	20.8	20.8	20.2	18.2	17.1	16.9	18.8	21.8	21.8	13.0	17.6
6	22.2	17.6	20.7	20.1	17.1	20.6	21.3	13.7	13.3	13.6	14.4	15.1	14.6	14.5	14.6	17.6	16.7	15.5	16.7	17.9	18.1	16.4	16.5	15.9	22.2	13.3	16.9
7	15.6	16.5	15.9	17.8	18.4	16.5	18.8	20.6	17.6	18.6	15.9	16.0	16.1	17.5	16.4	15.1	14.5	16.2	15.2	21.5	20.8	24.6	17.9	14.8	24.6	14.5	17.5
8	11.4	13.7	17.3	14.8	14.3	17.1	15.5	16.0	20.9	12.7	14.2	15.9	17.4	95.0	19.1	34.6	17.6	35.8	41.6	30.8	37.5	40.3	43.5	16.4	95.0	11.4	25.6
9	20.4	16.4	16.4	15.2	19.8	16.2	18.1	16.8	16.6	16.4	18.2	18.4	17.2	17.0	14.7	12.5	20.9	21.6	20.0	20.0	20.8	19.0	22.1	18.9	22.1	12.5	18.1
10	16.5	22.2	18.5	17.4	15.6	14.6	16.2	14.0	12.1	12.9	14.0	14.2	16.1	17.0	0.0	0.0	14.8	13.5	15.2	14.9	14.7	21.7	13.2	16.1	22.2	0.0	14.4
11	16.4	14.3	18.8	12.3	14.2	11.9	13.0	13.0	14.4	12.7	12.4	15.1	17.6	15.9	16.0	18.8	17.0	15.5	15.1	14.5	14.9	14.9	14.1	14.9	18.8	11.9	14.9
12	15.5	17.8	15.1	13.3	13.7	13.5	14.6	14.0	13.3	13.2	12.6	14.9	14.7	13.7	14.3	13.7	13.4	13.6	14.1	15.1	14.9	16.4	18.5	15.4	18.5	12.6	14.6
13	15.1	15.7	14.0	12.5	16.0	17.2	15.5	14.3	19.7	19.4	23.9	55.4	61.3	16.2	37.2	39.9	17.1	18.6	19.3	18.0	17.4	19.6	19.0	18.1	61.3	12.5	22.5
14	16.7	17.3	16.5	16.1	15.3	16.1	17.8	17.2	19.2	17.6	16.8	17.5	17.6	17.2	14.8	17.0	17.4	14.8	14.7	15.4	16.4	16.8	15.8	15.1	19.2	14.7	16.6
15	18.2	14.9	12.8	18.4	15.5	18.9	14.7	20.1	21.3	80.6	32.4	17.3	82.5	14.8	17.2	15.4	14.1	19.4	21.2	21.4	22.4	20.1	19.6	22.2	82.5	12.8	24.0
16	18.1	16.5	19.4	16.0	16.2	15.7	14.7	13.3	15.0	17.0	16.1	18.0	19.1	19.5	20.6	20.6	19.6	20.1	21.9	20.0	21.0	19.3	23.2	20.3	23.2	13.3	18.4
17	18.0	23.5	23.3	18.9	25.7	26.6	26.2	22.9	16.5	16.9	16.1	14.9	18.0	17.5	16.6	14.3	15.9	13.4	13.0	18.6	18.8	17.9	14.2	14.8	26.6	13.0	18.5
18	14.1	11.6	17.6	18.2	15.5	19.5	23.0	34.4	74.6	23.5	14.6	9.2	20.2	26.7	30.8	38.5	25.2	32.6	31.4	40.6	31.1	15.7	21.8	16.7	74.6	9.2	25.3
19	19.3	12.0	32.1	25.6	15.8	14.8	16.1	28.0	20.5	17.2	18.4	36.6	29.4	33.4	34.7	33.5	38.1	50.6	65.1	61.8	40.6	21.5	18.9	21.2	65.1	12.0	29.4
20	31.8	19.8	23.8	27.7	35.0	38.7	38.2	36.1	44.0	83.5	90.9	62.5	37.1	35.0	46.5	67.4	78.0	67.7	70.5	47.4	37.4	44.3	49.1	43.8	90.9	19.8	48.2
21	36.2	48.6	51.9	40.2	41.2	38.8	36.2	42.8	45.7	55.8	50.8	58.0	44.5	62.7	67.3	60.2	57.1	37.0	22.4	27.4	15.6	17.2	36.5	29.4	67.3	15.6	42.6
22	23.6	12.6	11.3	8.9	22.4	17.6	21.5	11.7	12.0	26.4	17.9	13.3	12.4	14.0	18.2	20.1	19.1	11.9	20.1	33.0	37.1	87.5	6.5	10.7	87.5	6.5	20.4
23	14.5	60.7	68.5	53.8	14.3	18.6	14.0	13.4	13.4	12.9	13.7	13.9	12.4	13.6	14.6	14.9	14.8	16.5	14.7	14.7	14.8	13.7	14.7	13.4	68.5	12.4	20.2
24	13.4	14.8	15.5	15.4	14.7	15.5	15.3	14.0	13.8	15.8	16.4	17.3	15.5	15.4	15.7	14.9	15.4	16.7	17.7	19.2	23.6	29.5	21.0	25.5	29.5	13.4	17.2
25	27.4	25.3	16.9	16.2	18.5	20.0	28.9	23.9	16.3	14.3	15.9	14.4	17.6	18.5	17.8	17.9	17.8	18.1	18.2	18.6	21.0	14.1	12.4	13.3	28.9	12.4	18.5
26	12.3	12.8	11.5	11.9	11.5	11.2	11.7	11.8	12.0	13.7	15.1	15.2	14.7	13.8	13.4	14.4	12.3	13.2	13.3	14.0	13.7	12.1	12.4	14.8	15.2	11.2	13.0
27	15.4	15.1	13.4	14.7	14.0	13.8	13.6	15.2	14.6	15.2	14.8	13.8	14.8	13.5	12.3	10.9	13.4	12.0	12.3	11.2	11.5	13.0	13.0	12.9	15.4	10.9	13.5
28	13.0	14.2	14.6	15.8	14.5	11.8	12.3	13.4	15.1	13.9	13.6	11.5	13.6	12.6	14.5	15.9	14.5	15.8	13.8	14.9	15.2	14.4	15.1	14.8	15.9	11.5	14.1
29	14.8	14.2	13.8	12.7	11.8	12.7	13.4	12.8	13.6	12.2	12.2	13.2	13.7	16.1	15.2	15.4	14.8	17.2	15.2	15.2	16.2	14.7	13.8	14.9	17.2	11.8	14.2
30	16.5	16.1	15.9	19.0	20.8	25.4	17.8	23.7	19.1	13.3	13.7	14.1	14.0	15.7	17.9	22.0	84.1	80.8	23.5	19.8	17.0	12.7	17.3	15.1	84.1	12.7	23.1
Max.	**73.9**	**60.7**	**68.5**	**53.8**	**41.2**	**38.8**	**40.8**	**56.5**	**74.6**	**83.5**	**90.9**	**62.5**	**82.5**	**95.0**	**67.3**	**67.4**	**84.1**	**83.7**	**70.5**	**61.8**	**40.6**	**87.5**	**87.6**	**96.2**	**96.2**		
Min.	**11.4**	**11.6**	**11.3**	**8.9**	**11.5**	**11.2**	**11.2**	**11.7**	**11.5**	**11.3**	**11.5**	**9.1**	**12.4**	**12.6**	**0.0**	**0.0**	**12.3**	**11.9**	**12.3**	**11.2**	**11.5**	**12.1**	**6.5**	**10.7**		**0.0**	
Avg.	**21.0**	**20.1**	**20.7**	**19.4**	**18.9**	**19.4**	**20.5**	**21.2**	**21.0**	**22.5**	**20.8**	**21.9**	**23.7**	**23.5**	**21.8**	**22.7**	**24.7**	**26.2**	**23.1**	**22.6**	**21.0**	**23.1**	**22.3**	**21.0**			**21.8**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	16.4	14.1	17.8	23.6	16.6	16.9	16.4	16.6	17.0	16.9	16.6	15.5	16.0	16.5	14.1	16.3	15.5	15.5	15.4	16.8	16.4	15.1	14.8	15.2	23.6	14.1	16.3
2	18.9	18.5	15.8	14.4	12.7	14.6	14.3	14.6	16.1	17.1	16.5	17.0	32.8	15.5	16.0	14.2	16.3	23.8	19.3	16.9	14.3	12.9	32.0	55.6	55.6	12.7	19.2
3	33.8	33.0	19.0	15.1	21.3	30.5	21.0	28.5	55.3	59.4	66.0	38.7	43.9	33.4	18.6	19.4	25.3	29.3	19.6	19.2	27.0	18.8	15.3	20.2	66.0	15.1	29.7
4	16.6	18.5	21.6	19.9	22.5	18.7	22.6	23.9	20.1	17.5	18.4	16.9	22.1	26.7	49.3	38.9	43.8	45.6	65.6	66.5	21.3	25.9	23.7	19.7	66.5	16.6	28.6
5	15.1	13.8	12.7	13.2	14.5	12.4	12.1	14.0	17.9	18.4	18.6	21.6	14.1	15.1	16.5	17.2	17.9	17.4	19.9	18.2	14.2	24.5	11.2	9.2	24.5	9.2	15.8
6	8.7	59.1	37.7	55.8	16.9	45.8	31.6	30.2	29.2	29.9	23.5	16.9	12.5	11.2	14.7	29.5	30.8	18.4	9.5	11.9	15.0	40.8	51.7	58.8	59.1	8.7	28.7
7	52.5	59.2	46.2	40.0	36.9	48.2	40.8	43.1	42.1	20.6	22.7	35.5	19.5	16.9	16.7	14.8	20.6	19.1	19.7	27.7	49.7	35.4	42.3	28.1	59.2	14.8	33.3
8	22.4	29.1	24.6	17.4	13.6	22.5	20.5	20.2	14.7	13.6	19.0	21.6	26.3	27.8	29.2	25.3	34.9	24.6	20.9	16.6	15.2	16.9	20.4	20.9	34.9	13.6	21.6
9	15.0	18.2	18.9	14.7	15.2	15.6	14.6	16.7	16.6	26.6	17.6	15.5	14.5	18.1	16.9	14.7	22.9	20.8	21.3	33.7	35.5	30.6	23.0	43.9	43.9	14.5	20.9
10	30.4	19.1	23.8	31.1	24.8	22.9	21.6	18.8	18.6	23.1	13.9	15.3	14.5	16.5	15.6	15.4	18.1	18.1	16.9	18.2	16.6	46.6	56.1	49.2	56.1	13.9	23.6
11	38.4	21.4	28.4	51.9	42.0	41.9	44.7	41.8	28.6	17.8	45.9	49.2	41.9	37.6	29.4	30.9	34.4	30.7	29.6	29.2	26.8	25.9	30.4	29.9	51.9	17.8	34.5
12	29.1	29.3	21.7	20.2	18.8	17.9	20.3	15.0	16.5	16.7	19.8	16.0	15.9	22.0	26.4	30.2	34.4	40.4	35.2	43.9	41.2	28.4	26.5	35.7	43.9	15.0	25.9
13	28.7	32.8	34.9	24.1	16.7	15.3	16.9	17.8	18.0	23.8	18.6	18.1	11.5	13.0	11.1	28.2	21.9	25.6	19.4	26.2	31.4	49.1	43.3	43.4	49.1	11.1	24.6
14	33.3	16.2	21.8	16.2	17.4	20.1	40.3	87.5	75.7	70.9	74.6	88.3	65.8	58.1	66.0	83.9	81.3	69.5	37.2	75.1	65.0	24.2	18.8	25.7	88.3	16.2	51.4
15	31.7	44.7	66.4	19.0	18.0	22.1	43.2	22.8	19.6	83.6	36.6	26.5	19.2	31.0	56.6	64.1	56.4	32.0	23.0	9.0	13.6	40.8	26.7	20.4	83.6	9.0	34.5
16	69.8	45.5	18.1	28.2	16.1	17.7	14.4	11.5	11.7	14.2	10.6	10.2	13.6	15.8	43.3	32.5	39.5	40.6	33.6	48.5	40.4	54.3	8.6	23.5	69.8	8.6	27.6
17	38.9	25.4	15.4	13.4	12.8	15.2	16.0	16.6	16.0	15.5	17.0	16.4	18.3	40.4	26.0	59.0	74.1	59.6	51.0	59.4	42.4	42.7	47.6	30.4	74.1	12.8	32.1
18	19.3	39.2	42.1	24.5	19.9	35.1	23.3	41.4	50.6	29.7	19.1	26.5	46.8	26.9	27.1	89.6	74.5	74.5	74.5	46.5	90.1	71.4	50.1	25.4	90.1	19.1	44.5
19	21.7	15.5	43.2	48.0	76.4	58.9	11.4	12.7	72.1	16.2	20.8	21.3	30.5	23.8	24.5	24.6	16.5	19.1	14.7	15.2	17.1	16.2	18.4	18.6	76.4	11.4	27.4
20	18.6	16.8	15.0	15.9	16.8	15.3	13.2	14.7	13.9	14.0	16.8	15.3	16.5	16.8	18.7	20.7	58.1	28.9	30.2	23.2	38.1	69.1	10.0	6.6	69.1	6.6	21.8
21	7.7	8.1	14.4	10.9	60.2	18.4	13.1	13.5	16.8	16.5	16.7	87.5	48.9	58.4	35.1	32.9	32.3	22.2	28.3	25.8	73.6	84.1	17.5	15.6	87.5	7.7	31.6
22	20.3	15.5	16.3	18.3	19.0	17.6	16.4	15.0	15.6	17.0	16.6	15.9	20.9	84.3	82.5	71.7	81.8	55.0	88.5	77.8	26.1	42.8	28.2	37.4	88.5	15.0	37.5
23	42.3	37.9	39.6	40.4	36.2	33.6	33.2	31.9	42.8	51.5	59.8	46.5	53.8	42.9	33.5	34.1	32.1	18.9	25.2	13.7	12.6	22.8	15.2	22.5	59.8	12.6	34.3
24	17.4	18.2	14.1	11.5	12.9	15.0	29.6	18.7	19.1	57.0	46.5	38.3	29.7	32.2	75.6	49.9	40.2	54.8	75.6	74.8	40.2	55.2	25.8	26.9	75.6	11.5	36.6
25	8.3	16.4	9.7	15.3	32.9	61.1	43.5	63.8	60.8	24.1	15.8	23.3	42.3	50.2	70.5	77.6	43.8	39.0	72.4	48.8	33.4	53.4	24.2	23.8	77.6	8.3	39.8
26	19.6	15.4	13.4	12.0	13.8	12.5	11.2	14.3	13.9	13.5	16.1	18.7	18.7	18.2	18.5	18.5	20.3	19.2	19.6	20.9	18.3	20.0	19.2	19.7	20.9	11.2	16.9
27	20.1	20.0	15.6	16.0	16.1	15.4	15.7	19.4	16.6	15.9	16.3	13.7	17.4	18.0	18.8	22.3	17.3	17.6	18.1	19.6	19.8	28.6	25.1	19.2	28.6	13.7	18.4
28	18.9	22.0	16.5	25.0	26.8	19.2	16.2	17.0	13.7	14.2	16.8	18.5	16.8	18.5	20.0	19.7	20.4	18.0	16.7	17.5	18.0	19.3	23.1	17.2	26.8	13.7	18.8
29	22.7	20.6	21.0	13.3	12.9	13.0	12.7	13.6	13.0	13.2	16.7	17.4	19.1	27.5	62.8	22.1	23.5	28.6	17.2	25.7	31.2	17.2	46.0	12.1	62.8	12.1	21.8
30	9.5	11.7	33.0	17.7	21.6	28.1	53.8	37.0	23.5	29.3	38.3	40.9	53.1	69.6	44.7	48.2	74.5	52.8	53.5	69.2	77.4	52.7	43.6	31.9	77.4	9.5	42.3
31	12.3	8.6	10.6	9.1	10.7	14.5	16.4	18.8	27.7	53.6	56.0	66.2	54.9	45.7	47.0	37.5	39.3	35.2	32.3	27.2	24.1	27.7	24.7	23.8	66.2	8.6	30.2
Max.	**69.8**	**59.2**	**66.4**	**55.8**	**76.4**	**61.1**	**53.8**	**87.5**	**75.7**	**83.6**	**74.6**	**88.3**	**65.8**	**84.3**	**82.5**	**89.6**	**81.8**	**74.5**	**88.5**	**77.8**	**90.1**	**84.1**	**56.1**	**58.8**	**90.1**		
Min.	**7.7**	**8.1**	**9.7**	**9.1**	**10.7**	**12.4**	**11.2**	**11.5**	**11.7**	**13.2**	**10.6**	**10.2**	**11.5**	**11.2**	**11.1**	**14.2**	**15.5**	**15.5**	**9.5**	**9.0**	**12.6**	**12.9**	**8.6**	**6.6**		**6.6**	
Avg.	**24.5**	**24.6**	**24.2**	**22.5**	**23.0**	**24.4**	**23.3**	**24.9**	**26.9**	**27.5**	**26.7**	**28.7**	**28.1**	**30.6**	**33.7**	**35.6**	**37.5**	**32.7**	**33.0**	**33.6**	**32.4**	**35.9**	**27.9**	**26.8**			**28.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	26.6	33.1	36.7	31.4	28.4	30.1	43.8	30.6	29.1	33.8	28.3	33.8	41.3	27.2	20.8	18.2	28.2	22.0	34.6	20.6	23.0	24.6	19.1	17.5	43.8	17.5	28.4
2	16.4	19.5	18.2	15.4	15.8	16.9	13.7	14.5	15.4	16.5	20.8	19.2	20.8	17.3	15.4	17.8	36.0	81.3	51.9	73.0	92.9	36.0	20.6	25.4	92.9	13.7	28.8
3	38.6	23.0	20.9	20.9	89.2	34.0	30.5	65.4	68.2	37.3	16.8	19.9	41.3	46.3	25.3	28.5	53.0	77.8	20.8	20.4	15.0	24.7	27.7	24.7	89.2	15.0	36.3
4	22.3	46.9	77.1	20.8	43.5	75.6	90.4	52.8	76.4	73.9	72.8	41.3	20.1	24.6	32.2	23.1	16.3	19.3	54.6	23.7	49.4	70.7	26.8	21.2	90.4	16.3	44.8
5	28.1	18.3	27.0	28.1	35.7	41.9	27.4	49.5	49.0	40.0	43.1	26.9	29.6	35.8	42.4	60.9	52.8	34.0	31.9	36.2	42.4	77.2	64.2	38.7	77.2	18.3	40.0
6	20.4	15.2	19.3	16.3	15.6	16.5	18.5	14.9	18.6	17.8	18.0	17.4	18.6	18.2	19.3	20.2	21.5	22.3	20.4	18.8	26.4	27.7	18.5	27.8	27.8	14.9	19.5
7	19.9	20.2	16.5	14.3	14.4	14.0	15.3	16.3	15.1	14.4	16.0	15.9	14.1	14.5	13.6	13.8	44.2	53.1	51.1	48.1	56.0	18.8	41.8	65.8	65.8	13.6	26.1
8	9.5	9.4	10.9	22.7	66.1	72.3	20.3	18.3	15.8	15.9	15.6	16.8	17.3	15.7	14.1	20.2	22.9	19.1	20.2	17.0	20.5	18.7	21.4	26.0	72.3	9.4	21.9
9	16.7	15.9	18.9	17.4	17.5	17.0	18.1	16.1	17.3	13.8	14.5	14.8	14.7	16.0	18.0	18.6	16.2	17.6	17.8	17.8	14.0	14.6	14.2	16.3	18.9	13.8	16.4
10	15.8	15.8	15.8	14.9	15.4	14.9	14.9	14.7	13.3	15.2	15.0	15.2	17.1	16.2	72.6	55.9	44.5	32.1	65.3	43.8	36.4	41.7	59.5	52.3	72.6	13.3	29.9
11	43.1	14.6	17.2	38.9	23.5	74.2	18.0	14.1	13.7	16.9	40.4	25.8	30.3	34.7	36.4	48.1	79.1	34.5	33.7	44.9	25.9	19.3	36.1	18.3	79.1	13.7	32.6
12	16.2	16.7	15.0	16.2	15.9	17.3	16.3	15.5	16.4	16.0	15.1	17.6	17.7	14.7	17.8	16.0	15.8	17.0	15.0	14.7	14.1	16.0	14.9	15.3	17.8	14.1	16.0
13	14.4	13.8	13.3	14.0	14.6	15.1	14.2	14.5	16.7	16.6	16.0	15.4	15.8	18.7	17.4	16.2	14.8	20.8	15.5	16.0	54.9	14.0	56.6	67.3	67.3	13.3	21.1
14	32.8	34.4	55.3	15.8	16.9	16.2	14.6	19.4	16.9	14.8	15.2	16.0	13.7	14.8	16.2	16.4	17.5	59.0	29.9	26.3	27.2	38.5	81.5	59.1	81.5	13.7	27.8
15	14.9	14.3	13.5	26.6	18.0	17.2	13.9	12.3	14.1	15.3	16.4	17.2	16.2	19.3	19.7	19.2	17.5	18.9	18.6	18.2	18.3	18.1	17.8	15.6	26.6	12.3	17.1
16	13.1	15.9	15.9	15.9	16.1	14.9	15.1	13.6	14.1	14.2	15.2	16.4	14.8	17.1	19.3	74.6	24.5	26.7	29.7	42.1	19.4	20.9	59.6	20.9	74.6	13.1	22.9
17	38.3	30.8	60.6	56.7	53.7	15.5	16.6	15.3	15.0	17.3	94.0	20.6	17.2	14.6	15.0	13.2	12.2	12.6	12.6	11.3	16.0	16.1	19.6	15.8	94.0	11.3	25.4
18	23.5	34.4	44.0	52.9	28.1	69.6	80.0	14.9	16.2	16.1	15.5	14.4	17.0	20.6	55.4	19.3	17.7	20.1	26.5	30.9	19.8	13.1	59.7	7.2	80.0	7.2	29.9
19	18.5	31.0	53.4	47.6	58.3	62.6	19.6	15.5	15.7	14.8	16.5	59.6	33.0	51.9	50.7	44.4	55.7	38.7	49.8	41.5	35.3	33.6	45.7	49.1	62.6	14.8	39.3
20	27.4	26.1	15.4	30.9	18.8	33.1	39.5	43.4	21.2	33.3	20.0	29.8	47.5	41.1	47.4	77.6	86.2	60.9	40.0	37.0	40.5	48.2	15.4	38.7	86.2	15.4	38.3
21	20.8	18.1	21.2	22.0	30.4	24.8	31.7	15.2	23.6	25.2	27.0	25.6	18.8	45.8	37.7	48.5	54.7	55.0	37.5	47.3	19.2	27.7	27.7	75.8	75.8	15.2	32.6
22	12.7	10.7	6.6	7.8	89.4	60.8	51.8	95.3	15.8	37.0	24.3	34.4	52.7	73.2	54.9	39.8	20.9	13.8	16.1	13.4	12.0	14.1	15.2	12.4	95.3	6.6	32.7
23	8.1	11.1	17.7	17.2	28.1	32.4	30.9	24.7	41.1	29.7	25.5	28.7	32.4	38.1	43.9	54.6	49.5	68.7	59.2	76.7	63.5	41.8	28.6	19.5	76.7	8.1	36.3
24	22.2	18.5	30.0	54.8	13.2	29.0	20.0	22.4	22.5	17.6	16.8	58.8	47.9	47.6	14.1	19.5	19.2	28.4	33.9	33.7	41.9	47.1	49.4	37.4	58.8	13.2	31.1
25	39.2	24.7	43.1	46.9	55.0	41.7	40.3	29.3	32.0	45.2	46.0	41.8	33.3	27.0	26.4	47.4	29.7	34.9	32.7	37.5	43.2	35.2	32.4	23.4	55.0	23.4	37.0
26	19.0	20.4	20.6	20.1	25.3	35.1	51.6	23.7	27.8	21.7	18.4	16.2	20.5	17.2	16.2	15.9	18.7	18.6	20.2	20.2	18.3	16.8	16.3	20.1	51.6	15.9	21.6
27	19.7	23.1	35.9	45.4	56.8	38.7	40.3	72.7	73.2	49.4	49.5	27.4	16.8	20.2	19.3	20.7	24.3	58.2	70.3	56.7	36.8	63.0	43.9	73.3	73.3	16.8	43.1
28	60.8	56.8	33.9	9.5	7.1	33.6	37.7	16.5	16.3	17.2	15.8	15.2	16.4	19.3	20.7	21.3	69.3	43.0	21.3	56.3	46.5	62.7	65.7	29.9	69.3	7.1	33.0
29	23.5	18.4	27.6	30.3	13.5	17.4	49.5	26.0	58.0	79.9	96.9	59.8	27.6	24.4	55.2	46.7	31.3	41.1	79.9	47.4	52.9	61.5	40.1	33.8	96.9	13.5	43.4
30	31.2	27.4	82.6	18.9	9.0	8.3	7.6	29.1	16.7	24.3	18.8	20.6	32.1	50.6	57.8	35.7	31.3	35.8	35.1	24.2	22.2	49.6	77.6	7.8	82.6	7.6	31.4
Max.	**60.8**	**56.8**	**82.6**	**56.7**	**89.4**	**75.6**	**90.4**	**95.3**	**76.4**	**79.9**	**96.9**	**59.8**	**52.7**	**73.2**	**72.6**	**77.6**	**86.2**	**81.3**	**79.9**	**76.7**	**92.9**	**77.2**	**81.5**	**75.8**	**96.9**		
Min.	**8.1**	**9.4**	**6.6**	**7.8**	**7.1**	**8.3**	**7.6**	**12.3**	**13.3**	**13.8**	**14.5**	**14.4**	**13.7**	**14.5**	**13.6**	**13.2**	**12.2**	**12.6**	**12.6**	**11.3**	**12.0**	**13.1**	**14.2**	**7.2**		**6.6**	
Avg.	**23.8**	**22.6**	**29.5**	**26.4**	**31.1**	**33.0**	**30.1**	**27.5**	**26.8**	**26.7**	**28.8**	**26.1**	**25.2**	**28.1**	**30.5**	**32.4**	**34.2**	**36.2**	**34.9**	**33.9**	**33.5**	**33.7**	**37.3**	**31.9**			**30.2**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.2	8.1	8.0	16.3	9.6	29.9	38.1	21.7	52.0	16.4	13.2	21.1	32.2	28.4	48.8	51.0	68.2	61.4	57.1	69.5	46.8	64.8	74.0	53.2	74.0	8.0	37.4
2	35.6	24.5	26.8	33.9	40.5	47.3	33.0	51.3	53.8	40.8	30.9	45.2	30.5	25.7	41.1	29.3	31.4	23.4	42.6	24.9	32.2	42.3	36.9	41.7	53.8	23.4	36.1
3	30.5	44.2	80.0	50.1	46.8	40.0	37.8	57.8	54.9	35.6	25.1	26.5	33.9	32.8	35.9	35.0	44.7	49.8	42.4	57.6	21.1	30.5	30.2	23.4	80.0	21.1	40.3
4	20.8	18.8	15.2	19.4	40.0	70.4	55.4	54.6	29.0	20.2	32.8	25.8	47.4	34.1	34.3	28.2	22.4	25.9	15.4	29.6	25.1	17.1	21.1	28.2	70.4	15.2	30.5
5	23.4	17.4	27.7	18.7	29.6	22.3	52.8	35.2	15.8	17.1	28.6	24.3	22.9	23.6	18.0	19.5	18.4	23.2	19.9	26.8	35.1	21.6	17.8	54.1	54.1	15.8	25.6
6	34.1	32.2	16.6	60.6	29.8	79.4	68.8	87.2	34.5	21.0	18.4	33.7	22.9	34.5	43.4	31.2	47.1	21.4	26.5	29.5	44.9	19.1	33.5	59.7	87.2	16.6	38.8
7	29.3	21.9	20.6	25.9	26.7	32.9	52.7	20.9	28.7	40.7	51.6	38.8	17.3	33.2	52.5	25.9	38.5	49.8	60.0	64.0	50.5	26.4	50.5	31.2	64.0	17.3	37.1
8	8.8	15.4	50.2	80.7	66.9	16.9	19.2	17.3	19.4	17.8	16.7	16.9	18.9	17.1	18.2	15.0	14.3	15.6	16.5	16.0	76.3	38.7	13.8	42.6	80.7	8.8	27.1
9	64.2	34.5	36.6	41.6	46.8	27.5	33.5	17.9	16.9	66.7	46.0	51.2	60.8	31.5	27.3	19.2	31.7	46.6	60.2	59.2	50.8	13.0	30.1	38.2	66.7	13.0	39.7
10	23.8	35.4	28.9	26.1	17.6	25.3	22.5	33.4	51.4	49.4	52.9	38.5	30.9	40.0	25.6	32.9	32.3	46.2	29.4	13.7	15.8	16.5	24.6	27.0	52.9	13.7	30.8
11	28.0	35.8	51.4	28.1	25.9	42.2	34.3	43.6	23.4	45.7	41.5	41.8	32.5	58.7	78.9	60.3	50.5	53.6	49.8	86.0	81.9	42.5	34.9	41.1	86.0	23.4	46.3
12	8.0	16.6	25.4	36.7	14.4	32.0	34.9	38.0	28.8	34.8	46.9	46.5	31.9	26.2	19.6	19.0	11.5	11.8	10.9	12.6	13.0	10.3	10.2	14.3	46.9	8.0	23.1
13	29.7	43.7	28.8	31.4	64.4	24.7	18.7	14.7	58.5	40.5	46.8	34.4	40.1	69.2	78.9	53.7	62.3	52.8	46.0	55.9	49.9	37.4	17.8	21.1	78.9	14.7	42.6
14	23.0	37.0	9.4	23.7	20.2	17.0	10.4	14.8	19.9	19.9	17.6	32.4	17.9	24.7	29.3	28.1	32.1	21.6	21.0	22.3	14.1	18.8	14.7	14.1	37.0	9.4	21.0
15	12.0	20.1	34.1	13.5	21.9	15.6	30.7	37.3	18.6																37.3	12.0	22.6
16	18.4	17.3	9.1	26.1	33.3	30.4	18.9	14.0	20.7	43.9	31.3	54.6	52.9	41.5	53.0	37.6	44.7	41.6	47.1	44.8	40.2	33.9	43.2	42.2	54.6	9.1	35.0
17	48.0	43.3	35.8	26.7	55.5	15.5	16.5	17.0	15.9	15.0	13.9	14.6	17.5	16.5	16.3	17.0	16.8	18.0	16.6	17.1	19.7	18.3	19.0	16.6	55.5	13.9	22.0
18	17.0	14.9	13.3	14.9	14.5	13.3	16.1	16.7	15.6	15.3	15.7	13.9	14.2	18.0	17.1	14.9	15.9	14.9	16.7	17.2	15.7	15.0	16.2	16.0	18.0	13.3	15.5
19	12.8	13.8	13.4	13.8	13.5	14.0	13.9	13.5	14.2	14.6	15.7	15.3	17.1	16.9	17.3	16.7	21.1	20.6	14.5	15.2	20.9	16.3	17.9	21.6	21.6	12.8	16.0
20	20.3	17.5	12.2	13.9	12.4	14.9	16.4	16.3	17.2	16.8	16.7	17.2	17.2	16.0	16.1	17.4	16.9	15.5	16.0	17.8	15.0	16.4	15.3	14.0	20.3	12.2	16.1
21	14.3	24.3	29.4	21.1	19.4	14.5	18.4	16.9	28.0	24.4	19.6	20.6	16.5	17.4	15.2	16.3	17.2	18.8	19.8	18.3	18.8	24.2	20.1	19.9	29.4	14.3	19.7
22	16.7	18.3	15.4	15.0	14.9	15.5	13.3	17.0	14.0	16.1	79.6	27.6	50.9	66.9	47.5	24.2	38.8	46.1	35.2	23.5	22.0	37.2	69.4	11.8	79.6	11.8	30.7
23	12.7	14.6	25.5	26.4	19.9	14.8	12.7	15.6	15.9	20.6	19.5	18.2	15.8	16.5	16.6	55.0	37.2	69.3	70.7	70.2	42.7	41.1	34.2	62.2	70.7	12.7	31.2
24	67.9	13.6	23.6	45.1	17.6	36.9	29.0	14.8	17.9	18.3	13.3	13.1	13.3	14.4	16.4	26.6	94.8	31.7	27.6	13.7	23.5	67.8	18.2	13.4	94.8	13.1	28.0
25	17.4	23.7	20.2	31.4	29.8	23.4	19.6	16.0	17.5	34.5	17.2	15.0	16.9	17.2	16.4	17.3	17.2	61.2	24.2	35.5	24.9	13.1	29.4	62.8	62.8	13.1	25.1
26	14.6	7.6	11.4	68.2	47.2	15.2	15.0	15.4	15.7	16.6	17.4	15.9	14.8	15.2	16.1	16.9	16.6	18.5	14.3	75.9	42.9	35.1	67.4	76.3	76.3	7.6	27.9
27	30.6	21.8	17.0	10.6	10.4	12.0	25.4	13.0	17.8	16.9	27.4	35.5	37.9	45.0	42.9	33.8	16.7	29.6	17.9	19.8	19.0	92.2	7.0	16.0	92.2	7.0	25.7
28	36.7	69.3	24.0	18.8	18.9	17.0	15.8	14.7	13.5	13.7	13.7	14.9	14.5	18.0	18.2	14.5	16.0	15.8	17.7	19.4	19.7	16.7	23.1	18.4	69.3	13.5	20.1
29	12.1	14.8	13.3	12.6	12.3	11.8	12.9	14.5	15.1	14.0	13.9	15.7	18.4	14.8	16.3	16.3	21.8	21.2	18.7	23.4	19.1	15.3	15.1	13.2	23.4	11.8	15.7
30	12.9	17.2	15.4	13.3	13.8	14.7	15.2	15.6	16.9	15.9	14.2	14.9	17.5	17.2	19.1	18.0	19.1	15.2	16.2	15.7	15.4	15.8	19.2	16.1	19.2	12.9	16.0
31	17.0	15.1	19.3	16.1	16.4	14.8	14.9	14.3	15.5	13.7	13.8	12.4	14.0	14.9	15.4	15.4	15.9	16.4	18.5	20.0	18.3	22.0	18.8	14.0	22.0	12.4	16.1
Max.	**67.9**	**69.3**	**80.0**	**80.7**	**66.9**	**79.4**	**68.8**	**87.2**	**58.5**	**66.7**	**79.6**	**54.6**	**60.8**	**69.2**	**78.9**	**60.3**	**94.8**	**69.3**	**70.7**	**86.0**	**81.9**	**92.2**	**74.0**	**76.3**	**94.8**		
Min.	**8.0**	**7.6**	**8.0**	**10.6**	**9.6**	**11.8**	**10.4**	**13.0**	**13.5**	**13.7**	**13.2**	**12.4**	**13.3**	**14.4**	**15.2**	**14.5**	**11.5**	**11.8**	**10.9**	**12.6**	**13.0**	**10.3**	**7.0**	**11.8**		**7.0**	
Avg.	**24.2**	**24.3**	**24.4**	**28.4**	**27.4**	**25.9**	**26.3**	**25.5**	**25.1**	**25.9**	**27.1**	**26.6**	**26.3**	**28.2**	**30.4**	**26.9**	**31.1**	**31.9**	**29.6**	**33.8**	**31.2**	**29.3**	**28.1**	**30.8**			**27.8**

Total Hours in Month 744 **Hours Data Available** 729 **Data Recovery** 98.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	17.7	16.7	18.8	19.8	17.8	15.5	13.4	13.6	16.5	20.4	24.6	77.1	39.4	41.3	51.7	35.9	52.7	38.8	31.2	12.2	31.6	36.3	43.1	25.2	77.1	12.2	29.6
2	36.0	20.3	33.5	31.9	39.8	36.1	32.9	27.7	31.4	28.7	19.4	54.2	32.8	39.1	38.6	54.8	24.2	70.2	76.7	57.5	44.0	30.2	27.2	18.2	76.7	18.2	37.7
3	85.8	90.0	83.5	68.4	47.7	24.1	26.3	18.3	20.2	24.8	21.8	63.1	47.4	21.9	28.8	38.4	47.3	39.3	65.5	31.0	23.2	21.0	19.3	18.1	90.0	18.1	40.6
4	23.0	16.9	25.0	44.3	29.7	29.7	16.5	23.6	26.3	26.1	25.6	47.8	50.9	29.5	39.5	42.6	68.5	77.4	39.6	71.3	50.0	39.7	12.6	10.2	77.4	10.2	36.1
5	16.6	14.7	20.1	23.4	70.9	19.5	9.7	8.6	17.3	70.3	26.6	25.2	25.0	29.5	41.9	53.9	26.6	39.4	30.9	21.0	22.2	52.5	31.0	25.4	70.9	8.6	30.1
6	22.6	11.6	51.8	20.6	11.4	11.9	13.6	26.0	71.1	13.3	84.3	15.8	85.0	33.2	25.4	60.0	36.0	30.0	26.9	25.2	23.3	25.0	34.6	16.9	85.0	11.4	32.3
7	8.7	26.4	22.5	29.2	17.1	16.1	19.4	15.4	11.6	16.0	16.6	16.1	16.7	19.2	22.2	20.8	19.9	20.5	20.6	23.1	24.6	15.9	22.9	25.8	29.2	8.7	19.5
8	23.0	44.3	9.9	11.5	18.2	22.7	15.0	53.8	33.5	23.9	45.9	30.4	31.6	46.5	53.4	43.0	31.3	57.8	41.0	29.8	28.5	80.7	6.4	8.7	80.7	6.4	32.9
9	10.2	8.6	5.7	16.6	10.7	51.6	53.0	23.2	13.7	13.6	16.5	16.2	16.2	19.3	19.0	71.4	36.3	42.4	35.4	42.6	54.2	45.0	52.4	42.6	71.4	5.7	29.9
10	74.7	54.5	58.2	42.1	18.8	18.4	31.7	37.2	55.4	47.9	32.8	52.3	47.0	77.5	57.6	95.2	62.5	56.4	48.9	71.2	83.4	34.6	73.1	43.4	95.2	18.4	53.1
11	36.6	34.8	24.5	25.9	52.0	27.5	21.0	40.7	32.7	45.9	91.9	56.6	53.6	55.0	17.2	41.3	70.1	38.6	30.7	20.2	36.5	15.4	8.5	9.1	91.9	8.5	36.9
12	14.7	32.4	21.7	18.4	17.2	16.4	28.3	21.2	16.1	18.7	16.4	16.1	78.1	26.3	43.4	30.9	46.3	34.6	28.7	23.2	19.2	28.8	53.9	51.5	78.1	14.7	29.3
13	86.3	21.6	20.9	16.6	19.9	18.5	34.5	14.4	14.6	11.2	16.3	16.4	20.2	15.5	37.4	27.3	59.8	89.8	71.1	49.5	72.2	77.3	32.7	51.1	89.8	11.2	37.3
14	35.4	81.0	16.5	24.8	45.3	28.3	86.8	59.3	30.4	23.0	16.9	25.7	18.8	27.6	18.4	16.2	14.2	13.3	18.0	29.7	37.7	28.2	23.8	63.8	86.8	13.3	32.6
15	92.1	14.1	13.4	13.1	15.7	13.1	12.7	13.5	14.5	13.2	14.9	15.8	18.0	17.3	26.6	28.2	16.6	12.8	24.0	17.3	25.4	18.3	47.7	48.6	92.1	12.7	22.8
16	35.8	77.1	59.2	58.1	36.0	20.3	11.8	13.7	21.5	14.8	49.7	58.1	40.2	88.3	100.0	94.6	77.9	81.0	87.7	90.2	68.1	60.0	40.5	21.4	100.0	11.8	54.4
17	37.3	41.8	28.6	40.1	23.4	33.5	73.5	40.4	81.1	23.9	40.4	20.4	47.7	40.9	28.3	25.5	42.1	39.2	40.1	50.7	39.0	45.2	29.6	37.9	81.1	20.4	39.6
18	39.2	35.5	42.1	81.8	12.4	28.3	13.0	15.7	42.0	71.2	54.9	58.0	32.6	32.7	27.2	33.0	31.4	35.6	95.3	22.4	14.9	28.8	21.5	33.0	95.3	12.4	37.6
19	18.5	20.2	13.2	11.2	11.7	12.0	18.8	27.9	87.8	13.2	15.2	14.9	15.5	13.6	14.0	14.3	13.7	14.8	15.0	13.4	13.7	14.1	13.4	12.1	87.8	11.2	18.0
20	14.7	13.9	14.8	14.3	15.1	13.8	12.6	13.0	14.5	13.1	13.0	13.8	12.7	12.4	13.4	14.9	14.0	13.6	15.1	14.5	13.4	11.7	14.0	12.2	15.1	11.7	13.7
21	13.0	14.2	12.7	13.4	13.9	13.6	15.6	13.6	13.1	12.5	13.4	13.1	12.6	14.1	13.8	13.6	13.7	21.1	89.3	16.3	10.3	46.4	48.7	31.1	89.3	10.3	20.5
22	35.2	79.2	72.6	53.8	40.3	47.3	76.4	42.8	17.8	87.2	36.9	21.0	28.4	35.3	39.2	24.3	37.4	30.5	52.1	40.3	43.4	16.8	16.8	14.8	87.2	14.8	41.2
23	14.7	13.7	12.9	14.1	14.5	14.4	13.4	14.2	17.2	17.0	13.9	15.1	16.4	14.7	71.3	21.8	24.3	15.3	17.4	93.9	59.5	79.9	13.2	14.1	93.9	12.9	25.7
24	20.3	23.3	22.4	22.8	14.8	17.5	14.7	15.7	14.8	15.4	15.1	14.4	14.7	14.3	14.8	17.4	16.2	16.0	17.1	14.4	12.8	14.6	14.9	9.9	23.3	9.9	16.2
25	26.4	29.6	40.2	67.6	90.7	81.1	23.4	13.2	13.7	15.6	29.0	59.3	14.5	80.1	35.0	29.4	44.2	37.0	42.5	28.4	23.3	32.9	25.9	16.0	90.7	13.2	37.4
26	22.7	18.8	29.2	61.5	61.7	26.9	23.8	19.8	19.9	14.7	21.4	35.4	14.7	37.3	32.9	27.5	36.6	39.7	35.0	24.0	31.4	45.6	52.7	23.3	61.7	14.7	31.5
27	73.4	9.2	9.5	9.0	13.0	12.5	65.6	29.2	14.0	14.6	14.7	13.8	13.6	14.4	15.9	15.5	12.8	12.9	12.8	12.6	13.3	10.9	11.9	12.4	73.4	9.0	18.2
28	16.1	14.9	13.9	14.1	19.4	18.4	17.1	14.7	15.7	13.9	15.1	14.5	14.6	15.8	13.7	14.9	14.6	13.7	14.0	14.9	15.8	15.9	16.3	16.7	19.4	13.7	15.4
29	12.9	15.4	13.3	15.3	14.7	13.0	14.1	13.0	14.2	19.5	16.0	17.8	16.4	18.7	20.6	19.4	17.7	17.8	18.0	17.3	14.5	13.9	13.7	14.8	20.6	12.9	15.9
30	14.1	14.7	14.7	15.0	14.4	14.2	13.0	15.5	12.7	14.8	15.7	15.6	16.9	79.7	50.0	32.7	47.0	48.0	38.0	37.3	31.0	39.8	52.9	30.9	79.7	12.7	28.3
31	38.0	59.2	44.6	36.1	37.2	43.4	49.6	29.9	32.9	28.9	29.1	23.5	21.7	26.5	29.2	17.9	18.7	18.9	21.1	23.6	24.2	27.9	41.9	38.9	59.2	17.9	31.8
Max.	**92.1**	**90.0**	**83.5**	**81.8**	**90.7**	**81.1**	**86.8**	**59.3**	**87.8**	**87.2**	**91.9**	**77.1**	**85.0**	**88.3**	**100.0**	**95.2**	**77.9**	**89.8**	**95.3**	**93.9**	**83.4**	**80.7**	**73.1**	**63.8**	**100.0**		
Min.	**8.7**	**8.6**	**5.7**	**9.0**	**10.7**	**11.9**	**9.7**	**8.6**	**11.6**	**11.2**	**13.0**	**13.1**	**12.6**	**12.4**	**13.4**	**13.6**	**12.8**	**12.8**	**12.8**	**12.2**	**10.3**	**10.9**	**6.4**	**8.7**		**5.7**	
Avg.	**32.8**	**31.2**	**28.1**	**30.2**	**27.9**	**24.5**	**28.1**	**23.5**	**27.0**	**25.4**	**27.9**	**30.2**	**29.5**	**33.5**	**33.6**	**34.7**	**34.7**	**36.0**	**38.7**	**33.5**	**32.4**	**34.0**	**29.6**	**25.8**			**30.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	24.3	23.9	21.8	33.8	21.5	16.6	22.3	16.8	20.2	16.6	17.7	21.3	25.2	25.2	21.1	19.0	15.1	18.1	20.9	36.9	40.6	27.2	28.4	34.7	40.6	15.1	23.7
2	25.1	30.0	33.8	28.7	34.2	41.8	36.3	43.8	35.3	39.3	46.0	42.7	47.4	30.3	35.5	20.6	21.0	25.8	27.2	23.6	44.3	22.4	23.3	23.3	47.4	20.6	32.6
3	23.0	24.1	23.5	25.7	19.6	23.3	30.2	55.2	54.4	77.5	26.4	13.3	14.3	15.8	19.2	24.2	18.5	14.8	31.1	79.1	75.8	15.7	14.8	15.5	79.1	13.3	30.6
4	13.4	57.3	74.4	10.1	22.4	46.7	13.5	12.8	13.1	11.8	24.1	15.3	77.0	27.0	33.0	34.7	36.9	28.8	24.6	32.8	24.0	18.8	8.6	20.0	77.0	8.6	28.4
5	13.7	19.0	12.3	35.1	59.3	57.5	66.6	46.2	54.8	36.9	19.8	31.1	39.2	24.8	32.3	30.6	28.6	52.4	57.7	26.8	27.6	20.9	48.5	22.6	66.6	12.3	36.0
6	24.6	36.2	17.6	17.4	27.5	32.2	48.3	51.4	23.8	45.2	28.1	26.5	32.5	35.1	18.2	17.7	15.7	19.1	19.3	23.7	18.2	18.2	16.7	18.6	51.4	15.7	26.3
7	51.0	17.9	17.5	18.8	20.9	25.7	19.9	25.3	31.3	26.5	34.6	49.0	46.1	52.2	36.6	31.8	28.5	19.4	26.7	40.7	38.8	29.7	36.9	34.0	52.2	17.5	31.7
8	14.9	57.0	66.0	55.4	80.7	35.4	27.4	71.6	55.1	76.6	32.0	35.3	18.9	15.4	26.3	34.7	30.9	37.1	39.4	20.1	15.0	18.9	16.9	16.7	80.7	14.9	37.4
9	16.3	15.4	15.9	18.9	20.7	24.6	18.1	17.0	18.3	15.2	17.8	38.8	59.6	59.3	44.7	56.7	59.9	52.3	49.7	47.2	43.7	44.7	36.3	23.1	59.9	15.2	33.9
10	24.6	51.1	22.7	40.4	44.4	36.1	19.9	21.1	59.5	43.8	42.2	56.4	15.7	14.7	15.3	17.6	15.9	15.9	18.5	17.1	15.8	16.1	17.7	21.2	59.5	14.7	27.6
11	18.7	16.8	15.9	16.7	13.5	14.7	16.2	16.7	21.1	16.6	15.1	15.6	14.0	41.1	46.2	47.5	66.8	80.6	60.7	40.2	20.3	14.8	14.9	30.7	80.6	13.5	28.1
12	31.1	23.7	21.5	11.5	20.0	18.7	30.4	31.6	25.0	21.5	19.2	16.0	20.4	18.8	19.9	25.6	18.0	21.6	21.3	17.2	24.3	23.8	25.5	23.6	31.6	11.5	22.1
13	24.2	32.5	23.1	32.2	30.4	28.9	23.8	27.6	19.3	17.8	21.5	24.6	27.3	33.5	36.9	43.0	45.7	32.3	18.9	18.9	18.4	15.9	16.1	14.7	45.7	14.7	26.1
14	17.9	35.3	70.7	66.3	74.5	34.9	40.4	65.2	23.5	21.6	20.8	16.1	22.7	16.7	50.8	67.6	47.5	74.7	43.3	84.3	59.4	91.9	69.5	35.5	91.9	16.1	47.9
15	8.6	53.8	47.1	25.7	37.0	44.1	38.0	31.2	25.2	20.6	38.1	34.2	25.7	6.6	0.0	15.7	36.6	49.5	52.6	44.1	54.2	27.4	27.9	22.2	54.2	0.0	31.9
16	27.0	18.5	23.3	30.0	16.9	15.8	14.9	14.4	16.5	14.9	14.0	15.0	14.6	14.7	15.3	15.2	18.2	17.0	19.4	19.1	18.1	23.7	20.3	17.4	30.0	14.0	18.1
17	18.1	17.4	18.5	18.0	19.8	18.5	19.1	21.0	16.6	13.2	12.9	15.6	20.0	40.8	30.5	34.4	26.7	31.4	32.9	38.6	43.1	34.7	29.5	27.7	43.1	12.9	25.0
18	18.0	17.5	17.1	24.0	20.8	18.6	17.0	26.1	36.0	65.3	57.7	40.9	39.9	24.2	21.5	28.5	32.1	23.3	26.8	31.3	34.2	25.0	23.3	27.0	65.3	17.0	29.0
19	24.1	32.6	31.7	34.9	43.1	65.8	23.8	83.5	31.8	38.2	66.9	54.1	16.9	21.6	16.0	15.1	15.1	14.9	14.4	17.0	15.3	16.8	18.0	20.1	83.5	14.4	30.5
20	21.0	23.3	33.9	16.9	15.7	16.4	14.5	16.8	18.0	16.1	15.1	16.3	16.7	16.4	18.2	17.9	16.8	18.0	19.2	24.3	51.0	31.8	20.8	31.8	51.0	14.5	21.1
21	17.0	19.6	18.6	20.9	17.4	18.1	18.6	15.5	18.0	14.0	18.4	20.1	17.6	17.6	16.0	17.0	21.8	19.4	19.7	19.5	20.8	22.5	39.9	31.7	39.9	14.0	20.0
22	12.2	10.1	7.7	8.2	7.1	17.2	12.0	12.5	14.7	11.4	13.3	13.9	16.4	15.8	13.2	12.4	13.3	17.7	23.8	23.4	25.9	31.1	16.5	85.5	85.5	7.1	18.1
23	15.8	12.0	29.2	47.4	27.8	14.7	62.9	57.6	49.9	35.1	40.2	10.6	27.8	15.1	33.6	28.1	31.8	66.0	72.7	63.4	22.8	27.1	19.3	49.4	72.7	10.6	35.8
24	29.6	28.5	57.3	10.2	40.5	51.2	79.7	74.2	75.0	47.1	72.9	27.8	75.8	32.2	16.3	15.9	12.1	15.6	27.1	27.4	25.8	18.0	20.1	18.7	79.7	10.2	37.5
25	19.8	18.9	17.5	89.3	74.3	69.2	54.9	25.4	33.7	48.2	20.9	18.5	63.5	68.6	14.0	57.4	45.2	69.6	63.5	39.0	31.7	39.7	49.2	71.2	89.3	14.0	46.0
26	74.9	41.1	16.3	17.2	14.9	16.5	22.7	19.6	16.0	18.2	27.5	17.6	94.0	22.5	36.6	64.3	68.3	84.1	31.4	63.2	18.0	17.8	21.3	15.1	94.0	14.9	35.0
27	10.0	10.1	11.8	16.6	14.2	17.6	22.7	14.5	19.6	20.4	15.4	12.4	21.9	14.5	17.8	15.6	16.2	22.3	13.0	14.5	16.2	14.1	16.5	14.5	22.7	10.0	15.9
28	14.1	25.2	17.5	18.7	31.2	35.5	19.3	15.5	18.2	18.2	21.0	13.7	14.6	13.8	39.4	44.4	67.1	58.7	32.7	36.6	46.8	86.3	38.9	27.9	86.3	13.7	31.5
29	16.6	12.8	22.9	17.3	41.4	33.3	12.9	11.3	16.4	19.4	36.4	17.9	22.9	19.9	30.8	48.5	47.1	41.5	48.6	32.2	81.4	7.2	29.6	59.4	81.4	7.2	30.3
30	68.5	54.4	36.6	13.0	20.5	18.3	18.5	17.0	20.4	19.0	15.9	15.5	17.9	16.5	15.4	16.1	15.6	19.9	14.9	14.6	10.0	8.0	7.8	7.8	68.5	7.8	20.1
Max.	**74.9**	**57.3**	**74.4**	**89.3**	**80.7**	**69.2**	**79.7**	**83.5**	**75.0**	**77.5**	**72.9**	**56.4**	**94.0**	**68.6**	**50.8**	**67.6**	**68.3**	**84.1**	**72.7**	**84.3**	**81.4**	**91.9**	**69.5**	**85.5**	**94.0**		
Min.	**8.6**	**10.1**	**7.7**	**8.2**	**7.1**	**14.7**	**12.0**	**11.3**	**13.1**	**11.4**	**12.9**	**10.6**	**14.0**	**6.6**	**0.0**	**12.4**	**12.1**	**14.8**	**13.0**	**14.5**	**10.0**	**7.2**	**7.8**	**7.8**		**0.0**	
Avg.	**23.9**	**27.9**	**28.1**	**27.3**	**31.1**	**30.3**	**28.8**	**31.9**	**29.4**	**29.5**	**28.4**	**24.9**	**32.2**	**25.7**	**25.7**	**30.6**	**31.1**	**35.4**	**32.4**	**33.9**	**32.7**	**27.0**	**25.8**	**28.7**			**29.3**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.8	26.9	22.4	20.5	13.8	18.2	44.6	9.9	7.5	7.9	62.2	33.4	20.6	42.0	44.0	65.4	38.6	24.6	23.8	15.3	16.6	16.5	34.6	34.0	65.4	7.5	27.3
2	7.8	23.9	17.9	8.0	9.5	9.8	11.6	15.2	61.1	40.0	19.6	17.8	19.1	16.7	18.1	16.4	14.6	16.7	15.0	16.8	16.8	16.4	14.8	16.4	61.1	7.8	18.3
3	17.2	17.1	17.8	17.6	20.0	16.6	16.7	18.6	17.0	16.6	16.0	18.6	18.1	14.8	15.6	14.3	16.7	17.5	15.4	15.4	13.5	11.1	8.7	8.0	20.0	8.0	15.8
4	7.8	9.5	9.4	10.0	10.2	10.7	16.6	10.5	15.7	23.9	48.1	17.0	16.1	15.2	14.1	15.1	13.3	16.2	11.1	9.9	9.7	17.1	18.3	19.8	48.1	7.8	15.2
5	25.5	16.2	19.3	19.0	17.3	16.4	17.4	18.1	18.1	21.1	21.9	18.3	16.3	15.8	15.3	12.7	14.5	15.0	13.6	12.0	14.0	14.6	22.9	13.4	25.5	12.0	17.0
6	14.2	13.5	12.1	26.5	16.8	16.1	27.4	19.6	16.8	15.6	14.6	15.2	17.0	16.1	17.6	16.1	16.8	16.5	17.1	14.6	15.3	15.9	14.9	18.2	27.4	12.1	16.9
7	18.0	15.6	15.3	17.0	14.6	17.7	18.4	17.7	19.1	18.3	16.6	17.5	17.7	17.9	18.3	20.7	21.2	19.3	19.2	20.0	19.3	20.1	16.9	16.8	21.2	14.6	18.1
8	15.5	16.4	15.6	16.8	15.3	16.7	17.1	17.9	15.9	15.3	13.9	15.2	16.1	17.7	16.9	14.7	14.2	14.6	14.4	10.1	11.0	14.9	25.1	35.8	35.8	10.1	16.5
9	26.3	18.3	19.5	18.7	16.1	28.4	24.3	21.0	16.1	17.8	14.1	15.7	18.3	21.4	16.0	17.3	23.2	21.1	18.5	17.6	16.1	21.1	18.7	16.9	28.4	14.1	19.3
10	16.9	21.4	76.6	95.2	83.0	92.3	49.9	67.1	49.3	16.9	19.0	22.6	16.9	28.9	58.2	33.5	78.0	40.2	69.4	16.7	10.3	7.4	14.2	29.7	95.2	7.4	42.2
11	38.8	15.8	22.1	16.8	12.6	13.9	12.0	11.2	15.6	16.8	30.7	35.8	28.9	33.5	57.3	34.1	21.5	13.7	16.5	19.2	21.8	18.7	18.6	15.8	57.3	11.2	22.6
12	13.5	13.3	13.2	12.4	12.1	12.9	12.8	12.3	12.0	12.2	13.3	13.7	12.6	15.3	13.9	17.2	18.2	17.0	14.8	14.3	14.0	12.6	15.6	14.7	18.2	12.0	13.9
13	15.8	16.9	24.5	18.7	19.2	15.5	16.1	17.7	17.2	22.3	52.2	66.4	47.8	34.3	21.8	19.1	22.4	15.3	15.9	16.9	17.7	18.4	17.1	27.1	66.4	15.3	24.0
14	24.2	38.3	22.3	33.9	24.5	17.7	17.2	16.6	13.3	14.3	26.5	18.5	15.5	13.0	20.3	17.8	26.1	23.6	81.2	26.4	35.5	30.9	69.4	46.3	81.2	13.0	28.0
15	53.7	51.0	52.8	86.2	50.3	1.2	35.2	18.1	18.6	13.2	57.9	40.9	14.4	23.2	15.3	15.7	14.7	16.1	13.8	14.5	15.1	15.8	16.1	15.3	86.2	1.2	27.9
16	16.0	14.9	17.4	16.5	15.9	16.0	17.1	17.5	16.9	16.5	15.9	16.6	15.8	16.7	15.7	17.7	15.9	14.2	13.7	16.0	15.1	16.0	15.6	16.5	17.7	13.7	16.1
17	15.8	16.3	16.2	18.1	16.7	15.6	18.7	17.4	17.7	15.8	12.7	13.4	14.1	14.3	69.6	32.6	20.8	17.1	14.2	17.1	28.7	22.7	17.1	21.5	69.6	12.7	20.2
18	19.4	17.4	17.9	17.9	19.3	13.8	36.2	56.7	28.3	23.5	20.0	21.8	22.8	16.7	16.1	23.2	51.4	62.3	26.8	15.6	18.1	21.0	16.2	14.6	62.3	13.8	24.9
19	19.2	28.4	16.3	22.5	13.9	29.1	34.5	37.6	24.3	30.2	20.1	19.8	17.0	16.2	15.8	16.0	16.6	15.5	17.6	16.1	16.0	15.5	15.1	16.6	37.6	13.9	20.4
20	16.2	15.7	16.4	17.2	15.8	14.4	15.1	15.5	14.4	16.0	15.4	15.6	17.0	14.6	16.4	17.2	16.1	15.9	16.6	18.0	16.3	17.9	17.6	17.5	18.0	14.4	16.2
21	16.7	18.7	16.4	15.9	16.2	14.4	14.2	16.1	18.7	17.2	16.3	17.0	16.7	16.8	17.2	16.7	17.9	17.5	17.2	18.0	17.8	18.1	16.5	18.5	18.7	14.2	16.9
22	18.3	19.0	18.9	20.3	15.2	15.7	18.2	19.4	17.3	15.7	15.4	15.2	20.3	27.3	17.3	16.4	16.2	15.7	16.0	15.2	16.4	17.3	14.7	22.0	27.3	14.7	17.6
23	65.1	42.4	13.9	17.1	14.6	19.1	22.0	15.4	22.2	15.6	16.1	16.3	16.6	17.7	27.3	16.6	18.6	23.3	20.9	18.6	16.4	17.6	18.5	17.8	65.1	13.9	21.2
24	18.8	19.5	18.2	19.0	21.3	19.8	19.8	20.3	21.5	20.0	17.8	16.5	17.7	22.4	23.2	21.5	17.5	17.1	22.3	25.9	20.0	41.7	19.7	29.3	41.7	16.5	21.3
25	38.7	31.5	25.8	10.1	14.8	70.5	77.8	69.7	63.5	83.5	88.1	54.5	16.0	28.6	33.2	69.1	70.2	37.2	71.9	48.3	53.8	19.3	8.6	37.3	88.1	8.6	46.8
26	42.3	31.2	17.2	22.1	22.7	28.3	22.7	23.1	23.7	23.2	13.7	68.7	35.3	24.3	15.8	23.8	11.9	16.3	16.0	26.2	15.7	14.8	17.0	15.3	68.7	11.9	23.8
27	14.8	16.6	15.0	16.5	16.7	16.8	15.6	16.1	15.3	16.0	15.3	15.6	15.2	16.3	17.5	16.8	16.6	17.4	16.0	14.8	13.9	16.9	15.1	15.1	17.5	13.9	15.9
28	17.3	16.7	15.9	15.6	8.3	12.5	6.9	12.4	21.7	17.3	37.4	70.4	25.7	20.4	7.2	7.0	5.6	8.5	11.0	8.4	32.4	39.9	25.3	21.0	70.4	5.6	19.4
29	24.8	7.6	7.4	13.2	10.2	11.1	8.0	8.0	10.3	8.8	11.2	76.5	13.6	11.3	13.1	18.3	15.7	8.4	20.8	19.9	20.0	51.1	11.5	40.0	76.5	7.4	18.4
30	12.6	72.2	59.5	73.4	68.6	72.5	26.6	86.8	88.7	11.8	22.3	22.2	9.5	17.7	12.8	12.5	14.1	11.0	76.5	9.1	11.8	6.2	5.8	7.6	88.7	5.8	33.8
31	7.4	11.1	10.4	11.6	7.3	9.5	7.2	7.3	9.3	8.3	9.5	19.8	29.8	7.5	13.5	8.8	14.4	14.0	15.6	28.0	9.4	8.2	11.8	12.7	29.8	7.2	12.2
Max.	**65.1**	**72.2**	**76.6**	**95.2**	**83.0**	**92.3**	**77.8**	**86.8**	**88.7**	**83.5**	**88.1**	**76.5**	**47.8**	**42.0**	**69.6**	**69.1**	**78.0**	**62.3**	**81.2**	**48.3**	**53.8**	**51.1**	**69.4**	**46.3**	**95.2**		
Min.	**7.4**	**7.6**	**7.4**	**8.0**	**7.3**	**1.2**	**6.9**	**7.3**	**7.5**	**7.9**	**9.5**	**13.4**	**9.5**	**7.5**	**7.2**	**7.0**	**5.6**	**8.4**	**11.0**	**8.4**	**9.4**	**6.2**	**5.8**	**7.6**		**1.2**	
Avg.	**21.6**	**22.4**	**21.4**	**24.0**	**20.4**	**22.0**	**22.5**	**23.6**	**23.5**	**19.7**	**25.0**	**27.3**	**19.3**	**19.8**	**22.4**	**21.4**	**22.4**	**19.3**	**24.3**	**17.9**	**18.3**	**19.2**	**18.5**	**21.0**			**21.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	22.0	13.1	19.5	8.7	17.4	18.4	31.2	18.5	11.6	16.6	22.8	17.0	18.8	16.4	17.3	17.6	18.5	19.2	17.6	18.4	16.9	17.8	17.6	18.7	31.2	8.7	18.0
2	18.1	17.1	17.7	16.5	15.3	16.0	14.9	15.5	18.5	18.1	19.2	16.9	15.4	17.2	17.7	18.1	17.4	16.0	15.5	14.6	15.6	16.2	15.8	16.7	19.2	14.6	16.7
3	17.7	17.1	16.1	16.7	16.3	15.3	15.4	16.1	15.5	16.8	16.2	15.3	17.2	17.9	17.0	15.3	15.3	15.6	15.7	15.7	15.2	15.5	15.0	15.4	17.9	15.0	16.0
4	15.3	16.1	15.7	15.1	16.5	15.9	16.3	15.5	15.6	15.9	15.5	14.4	14.1	15.2	15.0	15.6	13.7	15.0	15.6	13.8	15.2	15.7	14.4	14.7	16.5	13.7	15.2
5	14.6	14.8	14.6	15.3	17.3	16.6	16.0	17.9	15.8	15.9	13.9	15.5	15.3	12.4	11.7	12.2	12.6	16.8	101.2	18.5	16.8	28.5	26.2	17.9	101.2	11.7	19.9
6	21.4	35.0	48.2	26.5	54.4	32.4	71.8	62.0	53.3	46.0	67.8	81.1	37.3	47.0	52.8	15.2	14.9	15.7	14.5	13.9	16.0	17.1	19.7	18.2	81.1	13.9	36.8
7	16.4	14.2	15.0	15.9	15.2	15.6	17.6	17.6	17.2	16.9	16.0	16.1	16.6	16.7	18.2	17.5	12.6	15.4	17.8	14.4	13.8	18.2	13.6	18.0	18.2	12.6	16.1
8	18.7	22.8	18.4	14.3	16.5	18.7	21.8	15.5	28.1	62.3	42.7	74.6	29.0	22.5	25.1	28.2	14.9	17.4	19.0	20.1	15.0	16.8	14.6	17.0	74.6	14.3	24.7
9	15.4	15.6	13.2	17.1	17.4	20.5	29.1	34.0	21.0	21.3	20.8	20.1	16.4	16.5	17.7	18.0	19.3	15.8	21.2	18.4	13.6	15.6	17.2	21.7	34.0	13.2	19.0
10	17.6	17.8	19.7	20.9	18.2	81.6	58.7	41.4	44.8	54.3	25.7	20.5	46.2	19.7	35.2	21.7	20.1	41.1	28.3	44.7	47.0	32.5	28.0	16.1	81.6	16.1	33.4
11	20.5	27.8	24.5	27.0	23.4	22.0	22.1	16.3	81.5	77.1	48.0	19.3	22.7	74.3	79.3	11.8	51.1	21.7	62.1	42.1	17.1	17.4	18.6	18.4	81.5	11.8	35.3
12	18.8	17.6	19.9	20.6	20.8	15.7	21.0	24.2	21.7	20.1	19.6	19.3	18.4	17.9	18.2	17.2	17.6	14.1	20.7	18.5	20.9	21.9	31.5	54.4	54.4	14.1	21.3
13	17.9	29.9	21.0	12.9	9.9	11.4	21.3	38.8	36.8	12.9	37.4	24.5	27.8	27.0	21.4	26.8	23.2	42.8	84.8	70.0	63.8	53.0	73.9	47.6	84.8	9.9	34.9
14	53.1	40.0	72.2	18.2	34.4	54.0	18.1	12.2	9.5	14.5	5.8	28.8	56.5	53.4	21.8	18.1	18.3	21.5	21.5	18.1	19.9	18.4	25.5	23.9	72.2	5.8	28.2
15	22.9	76.1	60.3	80.7	43.9	18.4	21.5	19.0	13.8	23.0	14.1	8.3	25.2	40.7	69.2	59.0	30.0	31.0	20.0	25.0	42.8	11.1	14.3	17.6	80.7	8.3	32.8
16	12.5	18.6	19.8	17.9	22.3	73.7	34.2	42.6	19.9	54.0	51.6	34.4	19.5	21.8	17.6	19.1	14.1	20.2	12.3	9.4	11.0	8.9	13.7	28.0	73.7	8.9	24.9
17	8.6	7.8	5.2	6.5	6.3	11.0	6.3	9.7	11.8	9.7	14.5	32.1	14.6	12.2	23.2	33.0	34.0	26.1	20.5	28.3	16.2	11.7	9.7	6.4	34.0	5.2	15.2
18	8.8	9.7	14.8	21.8	23.1	23.0	17.1	18.3	15.7	17.8	19.7	18.0	16.4	13.2	13.2	16.2	16.7	15.5	13.8	13.7	13.7	13.8	15.5	18.6	23.1	8.8	16.2
19	18.1	22.4	14.9	15.4	16.1	15.4	17.4	16.1	16.9	16.5	16.6	16.2	14.9	15.4	15.0	16.0	15.0	15.7	19.4	18.6	21.9	15.7	16.6	15.6	22.4	14.9	16.7
20	14.7	16.0	15.6	15.1	17.7	18.9	16.8	19.5	14.2	14.5	15.5	14.4	15.2	15.0	14.0	14.2	14.8	14.9	15.0	14.2	14.6	14.8	14.6	13.9	19.5	13.9	15.3
21	15.5	16.9	16.1	16.6	15.4	15.3	15.3	16.4	16.2	14.4	13.4	13.2	13.2	14.9	15.2	14.5	14.8	15.8	15.7	15.5	14.1	14.7	14.4	14.1	16.9	13.2	15.1
22	16.0	11.5	12.3	12.3	13.0	13.8	13.6	13.6	14.2	14.1	16.0	15.3	14.2	14.6	13.1	15.5	17.4	21.1	17.8	19.3	17.7	25.4	16.3	14.1	25.4	11.5	15.5
23	19.8	18.0	53.8	40.4	81.9	21.0	13.5	14.9	15.2	22.4	22.3	17.5	13.7	22.4	73.4	36.9	32.0	14.3	11.7	14.8	24.8	17.8	11.8	19.6	81.9	11.7	26.4
24	33.6	42.3	28.3	22.2	15.2	17.6	18.5	18.7	23.7	22.1	21.6	23.6	18.0	19.4	22.2	21.9	20.8	51.9	32.6	17.9	61.0	90.2	91.0	81.4	91.0	15.2	34.0
25	15.8	15.2	15.6	15.5	13.5	15.2	14.4	15.1	14.2	14.6	14.8	15.1	16.5	16.2	16.0	16.0	16.2	15.8	17.4	16.2	14.6	15.8	15.2	16.6	17.4	13.5	15.5
26	16.9	16.9	15.9	16.6	16.2	16.4	15.9	16.3	15.6	15.4	15.2	16.1	12.6	16.4	14.7	12.1	12.7	12.4	13.5	18.1	13.8	14.6	14.3	13.7	18.1	12.1	15.1
27	13.9	15.1	16.4	16.5	16.2	15.8	16.9	15.3	16.1	19.1	17.3	20.0	14.4	16.2	16.0	15.4	13.9	16.0	15.8	13.6	13.8	15.4	25.8	31.0	31.0	13.6	16.9
28	36.9	12.5	13.0	12.9	13.8	12.8	13.9	13.5	14.2	13.5	16.0	14.0	13.3	15.4	16.6	16.0	17.3	18.2	16.9	15.0	13.4	14.8	13.8	13.3	36.9	12.5	15.5
29	13.4	13.8	13.4	13.4	14.1	14.5	14.2	14.6	14.7	15.9	16.0	16.3	15.6	14.1	15.5	15.6	16.1	15.6	15.8	13.6	14.0	13.3	16.5	16.0	16.5	13.3	14.8
30	14.9	15.1	15.6	15.4	14.8	15.4	16.0	15.2	14.9	16.8	15.4	17.6	17.6	16.3	17.7	17.7	17.9	18.2	18.5	18.1	18.6	15.5	17.6	17.4	18.6	14.8	16.6
Max.	**53.1**	**76.1**	**72.2**	**80.7**	**81.9**	**81.6**	**71.8**	**62.0**	**81.5**	**77.1**	**67.8**	**81.1**	**56.5**	**74.3**	**79.3**	**59.0**	**51.1**	**51.9**	**101.2**	**70.0**	**63.8**	**90.2**	**91.0**	**81.4**	**101.2**		
Min.	**8.6**	**7.8**	**5.2**	**6.5**	**6.3**	**11.0**	**6.3**	**9.7**	**9.5**	**9.7**	**5.8**	**8.3**	**12.6**	**12.2**	**11.7**	**11.8**	**12.6**	**12.4**	**11.7**	**9.4**	**11.0**	**8.9**	**9.7**	**6.4**		**5.2**	
Avg.	**19.0**	**20.9**	**22.2**	**19.5**	**21.2**	**22.4**	**21.4**	**20.8**	**21.4**	**23.8**	**22.4**	**22.5**	**20.2**	**21.9**	**24.7**	**19.7**	**19.1**	**20.4**	**24.4**	**20.4**	**21.1**	**20.6**	**21.8**	**21.9**			**21.4**

Total Hours in Month 720 **Hours Data Available** 720 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble Williamsport Meterological Station - Wind Sigma (RMYoung)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	27.6	19.8	14.0	14.4	15.7	13.8	15.7	17.8	15.8	14.9	20.2	59.2	18.0	43.2	46.3	74.0	91.0	21.6	27.7	16.9	19.7	16.2	16.0	21.5	91.0	13.8	27.5
2	13.3	14.7	19.4	26.6	18.9	25.1	26.4	28.6	47.1	62.8	56.2	21.8	23.0	35.1	27.6	18.5	16.3	19.9	21.1	18.8	26.1	17.7	18.2	16.6	62.8	13.3	25.8
3	21.6	27.6	22.3	23.6	19.0	19.8	21.3	19.2	24.4	25.8	20.5	29.2	29.5	26.7	17.7	25.7	16.2	17.6	15.9	26.5	16.7	14.3	16.7	16.7	29.5	14.3	21.4
4	17.1	19.1	17.6	19.6	23.3	29.5	46.8	41.7	42.1	19.1	43.1	29.8	14.5	15.2	16.9	15.8	20.0	27.3	33.3	27.4	19.2	17.0	16.9	16.5	46.8	14.5	24.5
5	23.3	31.4	32.8	20.5	29.8	34.5	30.1	48.4	50.9	45.7	56.4	33.4	19.8	20.1	14.1	21.0	21.1	18.0	21.2	20.7	20.1	24.5	19.6	17.3	56.4	14.1	28.1
6	23.8	18.1	15.2	13.2	17.3	46.4	27.0	50.7	82.1	49.3	78.9	79.0	64.5	44.7	34.9	27.4	22.5	15.5	29.4	40.9	10.7	70.5	11.8	57.4	82.1	10.7	38.8
7	71.3	66.6	44.9	47.7	19.8	17.6	18.1	17.3	19.9	15.4	17.2	17.0	16.2	17.5	14.2	19.6	12.4	13.0	67.9	76.5	34.5	18.9	32.4	24.3	76.5	12.4	30.0
8	23.1	21.4	16.8	16.4	16.5	17.1	17.0	17.2	15.8	17.8	17.5	21.2	16.3	16.8	16.4	20.1	17.1	17.5	19.7	25.1	33.4	37.0	32.4	48.5	48.5	15.8	21.6
9	41.0	48.2	68.1	81.7	63.2	45.0	23.4	41.0	63.9	14.0	32.4	71.4	15.5	13.8	15.6	17.2	18.0	16.5	16.7	14.8	14.3	14.9	16.4	18.5	81.7	13.8	32.7
10	19.1	22.2	23.4	27.4	16.9	17.6	17.1	17.4	15.8	15.9	16.7	17.2	18.9	17.7	18.1	16.3	17.0	17.5	17.4	16.7	17.8	17.3	17.9	15.9	27.4	15.8	18.1
11	19.1	17.3	19.5	24.8	21.7	21.2	18.0	15.7	15.4	19.9	15.2	14.2	14.3	14.6	13.7	14.3	14.9	18.8	20.9	17.4	19.9	16.1	19.0	25.4	25.4	13.7	18.0
12	24.6	15.9	14.9	16.6	18.0	15.2	18.3	18.5	19.6	19.9	18.8	27.8	32.1	16.3	16.0	16.8	21.2	14.0	21.5	19.6	19.3	25.3	20.2	16.8	32.1	14.0	19.5
13	17.9	16.3	27.6	26.3	19.5	29.7	50.2	56.7	57.4	63.7	80.3	13.2	45.0	17.3	36.7	19.0	26.2	25.9	18.3	43.8	34.6	17.4	14.4	10.2	80.3	10.2	32.0
14	10.7	9.5	12.7	25.2	19.7	19.7	17.7	17.8	25.0	28.8	14.2	13.6	18.2	13.3	13.1	28.7	17.7	15.9	20.0	21.7	21.5	25.4	25.3	20.3	28.8	9.5	19.0
15	28.7	16.4	21.7	17.8	12.1	19.2	13.7	10.6	21.7	18.1	22.3	20.7	20.9	12.4	3.2	32.3	13.1	4.2	19.3	0.0	0.0	0.0	0.0	0.0	32.3	0.0	13.7
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.2	55.1	28.7	55.1	0.0	4.7
17	12.7	29.9	61.3	50.2	65.5	34.4	21.9	26.8	20.5	12.6	27.0	20.5	19.5	17.2	19.7	29.6	21.8	23.3	34.5	20.4	21.3	28.2	30.8	26.4	65.5	12.6	28.2
18	17.4	30.5	23.0	30.5	38.1	47.9	38.5	26.1	14.6	19.6	15.3	17.3	17.3	22.6	16.2	21.6	19.1	26.4	26.0	22.6	20.0	24.4	20.8	20.1	47.9	14.6	24.0
19	17.4	19.9	24.3	22.7	22.0	30.2	29.3	22.7	21.8	35.5	18.5	12.5	17.1	17.3	13.5	18.4	17.4	20.4	17.9	20.2	21.2	21.6	17.6	17.6	35.5	12.5	20.7
20	20.4	22.1	27.5	29.9	58.4	70.8	78.7	93.3	95.6	94.0	52.1	73.1	26.2	44.3	48.2	64.8	62.5	55.8	34.4	28.2	15.6	14.0	20.3	17.3	95.6	14.0	47.8
21	25.7	40.6	52.3	52.2	74.7	91.6	71.1	86.8	46.3	42.4	72.0	68.3	58.1	22.0	27.4	21.8	17.5	21.2	29.7	31.4	40.4	36.8	17.3	10.3	91.6	10.3	44.1
22	58.2	26.2	28.4	26.1	27.7	19.4	19.4	15.6	29.2	23.6	8.1	18.8	14.4	18.2	26.4	16.4	17.5	36.0	37.9	28.4	28.3	27.6	41.4	20.1	58.2	8.1	25.6
23	18.2	22.2	25.6	35.8	45.7	68.3	80.1	59.4	25.7	29.1	43.2	17.8	19.2	18.6	17.7	21.0	19.6	18.8	19.3	20.6	18.6	17.1	23.5	22.7	80.1	17.1	29.5
24	21.0	19.4	20.3	20.7	21.0	20.2	17.7	17.0	16.7	20.0	18.9	15.8	17.5	19.0	18.3	29.8	29.1	28.8	16.2	15.1	13.3	22.3	17.1	65.6	65.6	13.3	21.7
25	33.9	24.9	34.5	31.5	28.6	23.4	18.8	13.9	17.3	21.9	33.1	29.8	31.9	38.0	42.2	17.2	27.9	21.9	18.8	62.2	19.4	19.3	19.7	25.9	62.2	13.9	27.3
26	22.2	20.7	18.9	19.4	19.1	22.6	18.3	17.7	16.5	17.5	18.4	18.4	17.5	32.4	25.1	20.7	19.8	20.8	19.5	19.1	18.4	17.5	19.3	15.9	32.4	15.9	19.8
27	16.2	15.7	14.4	14.4	13.6	13.5	15.0	15.1	15.7	14.6	14.2	14.7	15.2	14.4	14.6	15.7	15.2	15.7	16.2	14.6	14.8	15.7	15.2	15.7	16.2	13.5	15.0
28	15.5	16.1	15.3	15.4	15.1	15.9	15.4	15.1	15.3	14.8	15.5	14.1	14.3	13.1	13.2	14.5	13.3	13.4	13.1	14.0	14.6	14.7	14.9	14.3	16.1	13.1	14.6
29	15.1	14.9	15.4	15.2	15.8	17.5	17.0	15.3	15.4	15.0	16.0	15.8	14.9	14.0	13.3	13.8	14.7	13.9	13.6	12.9	14.1	15.8	14.3	14.1	17.5	12.9	14.9
30	14.7	15.2	16.1	13.4	14.7	14.7	15.6	14.5	15.4	14.2	14.2	15.2	14.4	14.8	13.9	14.4	15.8	14.7	15.7	14.5	13.6	16.2	14.8	14.7	16.2	13.4	14.8
31	15.8	14.9	16.2	15.3	14.9	15.0	16.5	15.3	15.7	14.7	15.9	14.9	15.0	14.4	14.4	15.2	15.4	14.7	15.7	15.9	15.7	16.1	15.8	15.5	16.5	14.4	15.4
Max.	**71.3**	**66.6**	**68.1**	**81.7**	**74.7**	**91.6**	**80.1**	**93.3**	**95.6**	**94.0**	**80.3**	**79.0**	**64.5**	**44.7**	**48.2**	**74.0**	**91.0**	**55.8**	**67.9**	**76.5**	**40.4**	**70.5**	**55.1**	**65.6**	**95.6**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**22.8**	**22.5**	**24.7**	**25.6**	**26.0**	**28.3**	**26.9**	**28.2**	**29.0**	**26.5**	**28.8**	**27.0**	**21.9**	**20.8**	**20.3**	**22.6**	**21.6**	**19.6**	**22.5**	**23.5**	**19.3**	**21.6**	**20.5**	**21.6**			**23.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Appendix E

Validated Manual Particulate Data

Not Applicable.

APPENDIX 26H

2008 Annual Data Report, Pebble North Head Station, for the Pebble Project Meteorological Monitoring Program

2008 Annual Data Report
Pebble North Head Station

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

April 2009

This data report has been prepared and reviewed by the following:

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April 13 2009
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Pebble North Head Station
2008 Annual Data Report

for the

Pebble Project
Meteorological Monitoring Program

Iliamna, Alaska

April 2009

prepared for

The Pebble Limited Partnership,
care of Pebble Mines Corp.
Anchorage, Alaska

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CONTENTS

Executive Summary **1**

1.0 Introduction **4**

1.1 Project Summary 4
1.2 Measurements Method Table 5
1.3 Variations from the Quality Assurance Project Plan 5

2.0 Station Performance Summary **10**

2.1 Significant Project Events 10
2.2 Missing, Invalid, and Adjusted Data 11
2.3 Network Data Completeness 11
2.4 Precision Statistics 14
2.4.1 Monitoring Network Precision Statistics 14
2.4.2 Analytical Laboratory Precision Statistics 14
2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples 14
2.5 Accuracy Statistics 14
2.5.1 Instrument Calibration Statistics 14
2.5.2 Independent Quality Assurance Audits 14

3.0 Monitoring Data Network Summary **20**

3.1 Air Quality Data Summary 20
3.2 Meteorological Data Summary 20
3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology 20
3.2.2 Temperature Climatology 33
3.3.3 Other Meteorological Parameters 38

4.0 References **43**

List of Figures

1-1. Map of the Pebble Project Area 7
1-2. Map of the Pebble North Head Station 8
1-3. Pebble North Head Meteorological Monitoring Station 9
3-1. 2008 Pebble North Head Wind Roses 23
3-2. Quarterly Pebble North Head Wind Roses (Climatronics) 24
3-3. Quarterly Pebble North Head Wind Roses (RM Young) 25
3-4. 2008 Wind Rose Superimposed on Site Map 32
3-5. Hourly Average 2-Meter and 10-Meter Temperatures 36

3-6. Hourly Average Vertical Temperature Difference 37
3-7. Hourly Average Relative Humidity 40
3-8. Barometric Pressure 41
3-9. Hourly Average Solar Radiation 42

List of Tables

E-1. Meteorological Data Capture – Valid Hours per Month 2
E-2. Meteorological Data Capture – Percent Data Capture 3
1-1. Meteorological Measurement Methods 6
2-1. Chronology of Significant Events 10
2-2. Percentage of Final Data Flagged 12
2-3. Pebble North Head Station Percent Data Capture 13
2-4. September 27, 2007 Performance Audit Summary 16
2-5. April 8, 2008 Performance Audit Summary 17
2-6. September 11, 2008 Performance Audit Summary 18
3-1. Average and Maximum Wind Speeds 21
3-2. Average and Maximum Wind Speeds at Seldovia Airport 21
3-3. 2008 Annual Wind Rose Analysis Table (Climatronics) 26
3-4. Quarter A Wind Rose Analysis Table (Climatronics) 27
3-5. Quarter B Wind Rose Analysis Table (Climatronics) 27
3-6. Quarter C Wind Rose Analysis Table (Climatronics) 28
3-7. Quarter D Wind Rose Analysis Table (Climatronics) 28
3-8. 2008 Annual Wind Rose Analysis Table (RM Young) 29
3-9. Quarter A Wind Rose Analysis Table (RM Young) 30
3-10. Quarter B Wind Rose Analysis Table (RM Young) 30
3-11. Quarter C Wind Rose Analysis Table (RM Young) 31
3-12. Quarter D Wind Rose Analysis Table (RM Young) 31
3-13. 2-Meter Temperature Summary 34
3-14. 10-Meter Temperature Summary 35
3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary 39

List of Appendices

A Data Processing Specifications and Statistical Formulae
B Precision Data
C Accuracy Data
D Validated Continuous Data Summaries
E Validated Manual Particulate Data

Executive Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG, Inc., dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and air quality permitting needs for the Pebble Project.

Prevention of Significant Deterioration (PSD) quality meteorological monitoring for the Pebble North Head station began on September 27, 2007 and will be ongoing. This report provides details of the 2008 calendar year of meteorological measurements collected from January 1, 2008 through December 31, 2008 at a possible port location.

Table E-1 and E-2 provide monthly and annual valid data capture hours and the percent data capture, respectively, for the Pebble North Head meteorological monitoring station. The Pebble North Head meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the primary wind speed sensor and the relative humidity, which did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarter A (January 1, 2008 through March 31, 2008) as a result of storm damage to sensors. However, the collocated secondary PSD-quality wind speed sensor (RM Young Co., model 05305-AQ) had greater than 90 percent data capture during this same period. Therefore, measurements from the secondary PSD-quality instrument can be used to supplement data requirements for possible future modeling and permitting needs. Additionally, the solar sensor did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarters B, C and D due to instrument failure below 35 W/m^2.

Table E-1. Meteorological Data Capture – Valid Hours per Month

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	728	724	724	500[4]	500[4]	500[4]	744	741	741	148[5]	714	733
February 2008	692	692	692	538	538	538	696	696	696	696	696	696
March 2008	744	744	744	744	744	744	744	744	744	744	744	744
April 2008	717	717	717	717	717	717	716	663	716	720	180[6]	720
May 2008	744	744	744	744	744	744	744	744	744	744	0	744
June 2008	720	720	720	720	720	720	720	720	720	708	0	720
July 2008	744	744	744	744	744	744	744	744	744	744	0	744
August 2008	744	744	744	744	744	744	744	744	744	744	0	744
September 2008	716	591[3]	591[3]	716	716	716	716	716	716	716	0	716
October 2008	744	744	744	744	744	744	744	744	744	744	0	744
November 2008	720	720	720	720	720	720	720	720	720	720	0	720
December 2008	744	744	744	744	744	744	717	717	717	744	0	744
Monitoring Year	**8,757**	**8,628**	**8,628**	**8,375**	**8,375**	**8,375**	**8,749**	**8,693**	**8,746**	**8,172**	**2,335**	**8,769**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] The 10 meter temperature sensor data dramatically drifted from the baseline data on September 6. The sensor was replaced 5 days later on September 11, 2008.
[4] Sensor was damage in storm during monitoring Quarter A-repaired on February 7, 2008.
[5] Sensor head found missing and replaced on January 30, 2008.
[6] Solar sensor failed below 35 W/m^2 on September 11, 2008 audit. All data invalidated from April 8, 2008.

Table E-2. Meteorological Data Capture – Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	97.8%	97.3%	97.3%	67.2%[4]	67.2%[4]	67.2%[4]	100%	99.6%	99.6%	19.9%[5]	96.0%	98.5%
February 2008	99.4%	99.4%	99.4%	77.3%	77.3%	77.3%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.1%**	**98.9%**	**98.9%**	**81.6%**	**81.6%**	**81.6%**	**100%**	**99.9%**	**99.9%**	**72.7%**	**98.6%**	**99.5%**
April 2008	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.4%	92.1%	99.4%	100%	25.0%[6]	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	98.3%	0.0%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**97.4%**	**99.8%**	**99.5%**	**8.2%**	**100%**
July 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
September 2008	99.4%	82.1%[3]	82.1%[3]	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	0.1%	99.4%
Quarter C	**99.8%**	**94.2%**	**94.2%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**0.0%**	**99.8%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
December 2008	100%	100%	100%	100%	100%	100%	96.4%	96.4%	96.4%	100%	0.0%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**98.8%**	**98.8%**	**98.8%**	**100%**	**0.0%**	**100%**
Monitoring Year	**99.7%**	**98.2%**	**98.2%**	**95.3%**	**95.3%**	**95.3%**	**99.6%**	**99.0%**	**99.6%**	**93.0%**	**26.6%**	**99.8%**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] The 10 meter temperature sensor data dramatically drifted from the baseline data on September 6. The sensor was replaced 5 days later on September 11, 2008.
[4] Sensor was damage in storm during monitoring Quarter A-repaired on February 7, 2008.
[5] Sensor head found missing and replaced on January 30, 2008.
[6] Solar sensor failed below 35 W/m^2 on September 11, 2008 audit. All data invalidated from April 8, 2008.

1.0 Introduction

1.1 Project Summary

On behalf of The Pebble Limited Partnership, care of Pebble Mines Corp., its general partner, HCG Inc, dba. Hoefler Consulting Group is collecting meteorological data to support baseline environmental studies, mine design objectives, and future air quality permitting needs for the Pebble Project. This meteorological monitoring project currently consists of seven PSD-quality meteorological monitoring stations. Four stations are located in the deposit area; Pebble 1, Pebble 4, Pebble 5, and Pebble 6. Three stations are located in the proposed Port area; Pebble Port, Williamsport, and North Head. Data from the additional non-PSD meteorological monitoring station, Pebble 3 and Pebble 5A, are being used for engineering and mine design purposes. This report focuses on the first year of measurements collected at the North Head station from January 1, 2008 through December 31, 2008. A separate annual data report has been prepared for each of the other meteorological monitoring stations.

Figure 1-1 is a map of the Pebble Project meteorological monitoring sites in southwest Alaska. Figures 1-2 and 1-3 provide a higher resolution map and photograph, respectively, of the Pebble North Head station.

The Pebble North Head station collects data for the following meteorological parameters:

- Air temperature, two meters above ground level (degrees Celsius [°C]);
- Air temperature, ten meters above ground level (degrees Celsius [°C]);
- Temperature difference (ΔT, “Delta T” (degrees Celsius [°C]));
- Wind speed (meters per second [m/s]);
- Wind direction (degrees [°]);
- Wind direction standard deviation (wind sigma [σ_θ]);
- Relative humidity (percent [%]);
- Solar radiation (Watts per square meter [W/m^2]); and
- Barometric Pressure (millibar [mb]).

Measurements of these parameters will provide at least one year of representative surface observations for use in air dispersion modeling and for future air quality permitting.

1.2 Measurements Method Table

Table 1-1 lists each parameter measured at the Pebble North Head station and includes the sensor manufacturer and model number, measurement range, accuracy, sampling frequency, and sample averaging period. All instruments meet or exceed the U.S. Environmental Protection Agency (EPA) PSD requirements for range accuracies, thresholds, response times, resolutions, damping ratios, and other measures of instrument performance. For this project, wind speed and wind direction measurements are collected using two different types of PSD-quality sensors collocated at 10-meters above ground level. The Climatronics F460 (CLM) features a three-cup anemometer and separate wind vane while the RM Young 05305-AQ (RMY) is a propeller-vane anemometer, which is a single unit consisting of a four-blade propeller fitted to the front end of a wind vane. Deploying two separate wind sensors at the Pebble North Head station serves primarily to prevent the loss of valid data in the event that one of the sensors is damaged or subjected to inclement weather conditions, such as icing. Because the manufacturers' stated wind speed accuracy, wind direction accuracy, and wind speed threshold values of the CLM sensor are better than those of the RMY sensor, the CLM sensor has been designated as the "primary" wind instrument for the Pebble North Head station.

1.3 Variations from the Quality Assurance Project Plan

During the 2008 monitoring year, no variations occurred from the Pebble Project Meteorological Monitoring Quality Assurance Project Plan (QAPP).

Table 1-1. Meteorological Measurement Methods

Parameter	Sensor Manufacturer/ Model Number	Measurement Method	Range	Accuracy	Sampling Frequency	Averaging Period
Ambient Temperature	Met One, Inc. Model 062 MP	Solid state thermistor	+50°C to -50°C	± 0.05°C	1 second	1 hour
Wind Speed[1]	Climatronics, Inc. F460 (P/N 100075)	Three-cup anemometer, LED photo chopper	0 to 65 m/s	± 0.15 m/s or 1%	1 second	1 hour
Wind Direction[1]	Climatronics, Inc. F460 (P/N 100076)	Light-weight vane, Low torque potentiometer	0 to 360°	± 2°	1 second	1 hour
Wind Speed[1]	RM Young Co. 05305-AQ	Propeller, magnetically induced AC sine wave	0 to 40 m/s	± 0.2 m/s or 1%	1 second	1 hour
Wind Direction[1]	RM Young Co. 05305-AQ	Light-weight vane, Low torque potentiometer	0 to 360°	± 3°	1 second	1 hour
Relative Humidity	Vaisala, Inc. HMP 45C	Capacitive polymer chip	0.8 to 100%	± 2%	1 second	1 hour
Solar Radiation	LI-COR, Inc. LI-200	Silicon photovoltaic detector	0 to 3,000 W/m^2 (400 to 1,100 nm)	± 5%	1 second	1 hour
Barometric Pressure	Vaisala, Inc. PTB 101B	Silicon capacitive sensor	600 to 1060 mb	± 0.5 mb	1 hour[2]	N/A[2]

[1]Wind speed and wind direction measurements are collected using two different types of PSD-quality sensors.
[2]Instantaneous barometric pressure measurements are collected for one second during every hour.

Figure 1-1. Map of the Pebble Project Area

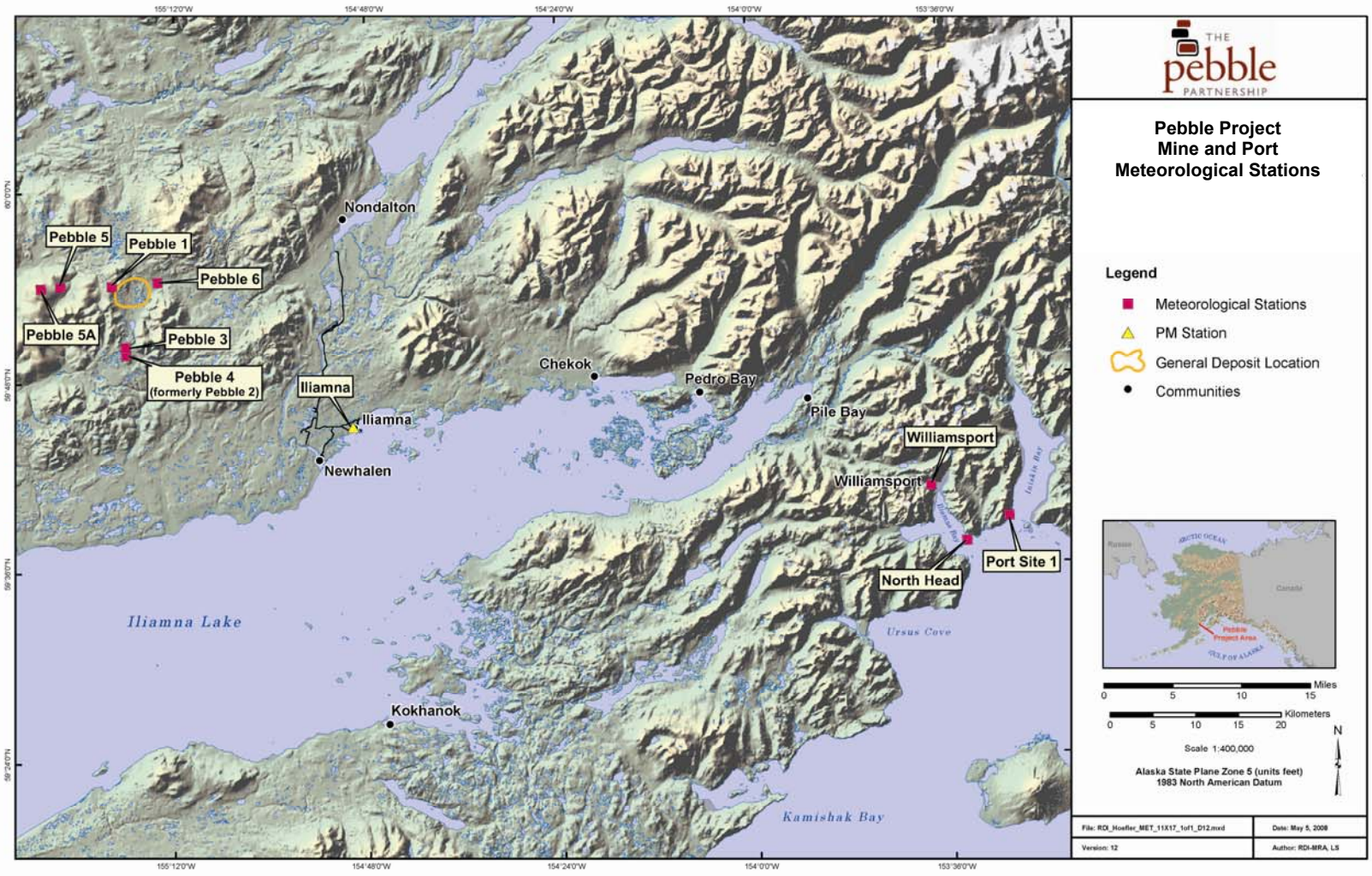


Figure 1-2. Map of the Pebble North Head Station

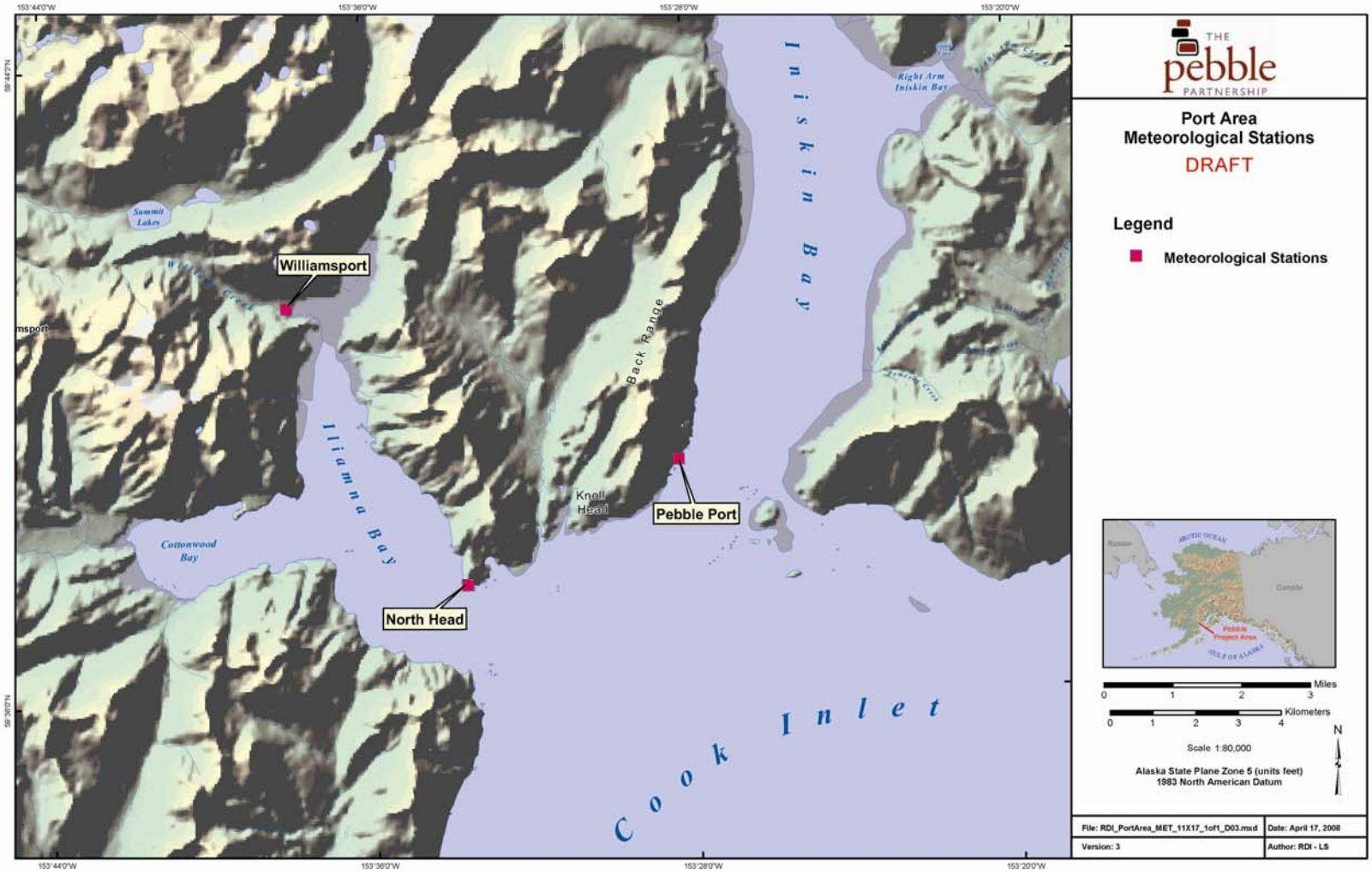


Figure 1-3. Pebble North Head Meteorological Monitoring Station

2.0 Station Performance Summary

2.1 Significant Project Events

Table 2-1 summarizes the significant events that occurred at the Pebble North Head station relevant to the 2008 meteorological monitoring year.

Table 2-1. Chronology of Significant Events

Date	Event
January 1, 2008	Beginning of 2008 monitoring year.
January 30, 2008	Repaired the following storm damage: 10m aspirator mount, RH sensor (head missing).
February 7, 2008	Repaired Climatronic wind system cable.
April 8, 2008	Full audit performed (RM Young wind direction failed due to a broken cable; cable repaired, and linearity and azimuth retested with instrument alignment key in original orientation). Data invalidated to April 6, 2008.
April 30, 2008	Change radio settings, check site (all OK).
May 16, 2008	Fly-by check of site (OK).
September 6, 2008	Vertical temperature difference started noticeably drifting from baseline calibration. Problem corrected on September 11, 2008
September 11, 2008	Full audit performed (All sensors passed with the exception of the 10-m thermistor and the vertical temperature difference. The matched pair of thermistors was replaced and the sensors re-audited. Additionally the solar sensor failed at the low end (below 35W/m^2).
December 31, 2008	End of 2008 monitoring year.

2.2 Missing, Invalid, and Adjusted Data

The data collected at the Pebble North Head station were carefully reviewed during the quality assurance process. Some data were removed as a result of planned site activities, including data collected during station system and performance audits and calibrations. All data were validated only after being screened by the criteria listed in Table 8-4 of *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005). Table 2-2 lists the quantities of data that were flagged according to EPA criteria, yet not removed from the refined data set. All flagged data were carefully examined, but generally remained in the refined data set unless dictated by certain circumstances, including values outside the normal range of variation, consecutive repetitive values recorded for an unidentified reason, maintenance activity at the site, and impairing damage to sensors.

2.3 Network Data Completeness

Data completeness is a measure of the amount of data actually collected compared to the amount of data that could have been collected. Data completeness was calculated by dividing the number of valid hours of data by the total number of hours during the monitoring period. The data quality objective (DQO) for data completeness for the Pebble Project Meteorological Monitoring Program is 90 percent data capture per quarter for each parameter listed in Section 1.1. Table 2-3 provides a summary of data completeness, in terms of a percentage, for the second monitoring year at the Pebble North Head station.

The Pebble North Head meteorological monitoring station met all PSD requirements during the monitoring year with the exception of the primary wind speed sensor and the relative humidity, which did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarter A (January 1, 2008 through March 31, 2008) as a result of storm damage to sensors. However, the collocated secondary PSD-quality wind speed sensor (RM Young Co., model 05305-AQ) had greater than 90 percent data capture during this same period. Therefore, measurements from the secondary PSD-quality instrument can be used to supplement data requirements for possible future modeling and permitting needs. Additionally, the solar sensor did not meet the minimum PSD monitoring requirement of 90 percent data capture or better during Monitoring Quarters B, C and D due to instrument failure below 35 W/m^2.

Table 2-2. Percentage of Final Data Flagged

Parameter	Flagging Criteria[1]	Percent Flagged
Wind Speed (Climatronics)	Value is < 0 m/s, > 25 m/s	0.6%
	< 0.1 m/s variation for 3 consecutive hours	0.6%
	<0.5 m/s variation for 12 consecutive hours	0.0%
Wind Direction (Climatronics)	Value is < 0°, > 360°	0.0%
	<1° variation over 3 consecutive hours	2.9%
	< 10° variation over 18 consecutive hours	3.4%
Wind Speed (RM Young)	Value is < 0 m/s, > 25 m/s	0.3%
	< 0.1 m/s variation for 3 consecutive hours	0.9%
	< 0.5 m/s variation for 12 consecutive hours	0.2%
Wind Direction (RM Young)	Value is < 0°, > 360°	0.0%
	< 1° variation over 3 consecutive hours	3.4%
	< 10° variation over 18 consecutive hours	3.7%
Temperature (2 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	2.0%
	Value is > record high, < record low	0.0%
Temperature (10 meters)	> 5°C variation from previous hour	0.1%
	< 0.5°C variation for 12 consecutive hours	2.4%
	Value is > record high, < record low	0.0%
Temperature Difference, ΔT	Value is > 0.8°C during the daytime	0.6%
	Value is < -0.8°C during the night	0.0%
	Value is > 5°C, < -3°C	0.0%
Relative Humidity (Dew Point Temperature)[2]	Value is > ambient temperature	0.0%
	> 5°C variation from previous hour	6.4%
	< 0.5°C variation for 12 consecutive hours	7.4%
	Equals ambient temperature for 12 consecutive hours	6.1%
Solar Radiation	> 0 W/m^2 at night	60.4%
	Greater than the maximum possible value for date and latitude	0.0%
Barometric Pressure	> 1060 mb (sea level)	0.0%
	< 940 mb (sea level)	0.0%
	> 6 mb variation for 3 consecutive hours	0.1%

[1]Based upon Table 8-4: Suggested Data Screening Criteria in *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (EPA-454/R-99-005).
[2]Guidance document provides criteria relative to dew point temperature.

Table 2-3. Pebble North Head Station Percent Data Capture

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	97.8%	97.3%	97.3%	67.2%[4]	67.2%[4]	67.2%[4]	100%	99.6%	99.6%	19.9%[5]	96.0%	98.5%
February 2008	99.4%	99.4%	99.4%	77.3%	77.3%	77.3%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.1%**	**98.9%**	**98.9%**	**81.6%**	**81.6%**	**81.6%**	**100%**	**99.9%**	**99.9%**	**72.7%**	**98.6%**	**99.5%**
April 2008	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.4%	92.1%	99.4%	100%	25.0%[6]	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	98.3%	0.0%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**97.4%**	**99.8%**	**99.5%**	**8.2%**	**100%**
July 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
September 2008	99.4%	82.1%[3]	82.1%[3]	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	0.1%	99.4%
Quarter C	**99.8%**	**94.2%**	**94.2%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**0.0%**	**99.8%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
December 2008	100%	100%	100%	100%	100%	100%	96.4%	96.4%	96.4%	100%	0.0%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**98.8%**	**98.8%**	**98.8%**	**100%**	**0.0%**	**100%**
Monitoring Year	**99.7%**	**98.2%**	**98.2%**	**95.3%**	**95.3%**	**95.3%**	**99.6%**	**99.0%**	**99.6%**	**93.0%**	**26.6%**	**99.8%**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] The 10 meter temperature sensor data dramatically drifted from the baseline data on September 6. The sensor was replaced 5 days later on September 11, 2008.
[4] Sensor was damage in storm during monitoring Quarter A-repaired on February 7, 2008.
[5] Sensor head found missing and replaced on January 30, 2008.
[6] Solar sensor failed below 35 W/m^2 on September 11, 2008 audit. All data invalidated from April 8, 2008.

2.4 Precision Statistics

2.4.1 Monitoring Network Precision Statistics

Not applicable.

2.4.2 Analytical Laboratory Precision Statistics

Not applicable.

2.4.3 Analytical Laboratory Precision Statistics for Lead Analysis of Particulate Samples

Not applicable.

2.5 Accuracy Statistics

2.5.1 Instrument Calibration Statistics

Not applicable.

2.5.2 Independent Quality Assurance Audits

A performance audit was performed on all station sensors on September 27, 2007 to check sensor operation against certified audit equipment. All sensors passed. The results of the performance audit are presented in Table 2-4.

The first annual performance audit for 2008 was conducted on all instruments at the Pebble North Head station on April 8, 2008. All sensors passed except the RM Young sensor. A broken cable was repaired and the linearity and azimuth were tested with instrument alignment key in original orientation. Additionally, the data logger time was found to be off by one hour and was corrected. The results of this audit are presented in Table 2-5.

The second annual performance audit for 2008 was conducted on all instruments at the Pebble North Head station on September 11, 2008. All sensors passed with the exception of the 10 m temperature, air temperature difference and solar sensor. The temperature sensors were replaced and a second audit was conducted. Temperature data was invalidated from September 6, 2008 through September 11, 2008. The solar sensor failed at the low end (below 35 W/m^2) but passed above 35 W/m^2. The results of this audit are presented in Table 2-6.

The performance audit involves reading the DAS output for each meteorological sensor and comparing the value with the input from an appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. For each reading, the difference between the station value and the predicted value is compared with established PSD limits to assess the accuracy of the sensor. All complete performance audit reports are available in Appendix C.

A technical systems audit was performed during the September 11, 2008 performance audit. During each of these audits, the power supply, DAS, communications system, and audited sensors all worked properly. The systems audit found that the station is well-planned, equipped with PSD quality equipment, and properly sited according to criteria recommended by EPA. The operator provided adequate manuals for system maintenance and proper documentation to report operation and quality control activities. The operator was knowledgeable and competent with all meteorological equipment, communications equipment, and the power supply system. Appendix C contains the complete technical systems audit report.

Table 2-4. September 27, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.20	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.20	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	<0.060	Pass
Wind Dir. Azim. Align. (as-found)[1]	≤ ±5	Degree	N/A	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.4	Pass
Wind Direction Linearity	≤ 3	Degree	1.3	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.1	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.005	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)[1]	≤ ±5	Degree	N/A	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.3	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.4	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-7.2[2]	Pass

[1] No as-found test for initial installation.

[2] Max percent error value of 7.2 within limit of 5% input + resolution, see audit.

Table 2-5. April 8, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:03[1]	Fail
2-m Temperature Accuracy	≤ ±0.5	°C	0.36	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.36	Pass
Air Temperature Difference	≤ ±0.1	°C	0.0	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.9	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	3.6	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-3.2	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.5	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	g-cm	0.5	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A[2]	Fail
Wind Direction Accuracy	≤ ±5	Degree	2.0	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.5	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-5.2[3]	Pass

[1] DAS time set one hour forward to Alaska Standard Time.
[2] Broken wire on instrument, no in situ azimuth test.
[3] Max percent error value of 5.2 within limit of 5% input + resolution, see audit.

Table 2-6. September 11, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:10	Pass
2-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.17	Pass
10-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	4.78	Fail
Air Temperature Difference (In Situ)	≤ ±0.1	°C	4.62	Fail
2-m Temperature Accuracy (New)	≤ ±0.5	°C	0.27	Pass
10-m Temperature Accuracy (New)	≤ ±0.5	°C	0.30	Pass
Air Temperature Difference (New)	≤ ±0.1	°C	0.03	Pass
Relative Humidity/Dew Point	≤ ±1.5	°C	0.8	Pass
Climatronics Wind System (In Situ)				
Wind Speed Torque	≤ 0.35	gm-cm	0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	5.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	3.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.3	Pass
Climatronics Wind System (Replacement Direction Sensor & Speed Bearing)				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	4.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.6	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.5	Pass

Table 2-6 (Cont.) September 11, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
RM Young Wind System (In Situ)				
Wind Speed Torque	≤ 1.0	gm-cm	0.8	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	11.0	Pass
Wind Dir. Azim. Alignment (as-found)	≤ ±5	Degree	4.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.8	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
RM Young Wind System (Replacement)				
Wind Speed Torque	≤ 1.0	gm-cm	0.4	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	6.0	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.2	Pass
Wind Direction Linearity	≤ 3	Degree	1.2	Pass
Wind Dir. Azim. Alignment (as-left)	≤ ±5	Degree	4.7	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	N/A[1]	Fail

[1] Sensor failed at low end below 35 W/m^2 but passed always above 35W/m^2.

3.0 Monitoring Data Network Summary

3.1 Air Quality Data Summary

Not applicable.

3.2 Meteorological Data Summary

3.2.1 Wind Speed (WS) and Wind Direction (WD) Climatology

Table 3-1 provides a summary of Climatronics (CLM) and RM Young (RMY) wind speed measurements during the second year of meteorological monitoring at the Pebble North Head station. The mean hourly average wind speed during the monitoring year was 8.18 meters per second (m/s) and 7.85 m/s for the CLM and RMY sensors, respectively. Maximum hourly average wind speeds of 29.30 m/s and 27.86 m/s were measured by the CLM and RMY sensors, respectively, on February 14, 2008. Table 3-2 provides the mean and maximum daily wind speeds at the Seldovia meteorological station, located approximately 105 kilometers (km) from the Pebble North Head Station. During the monitoring year the mean daily average wind speed at the Seldovia airport was 1.25 m/s, while the maximum daily average wind speed was 10.28 m/s on January 21, 2008 and March 3, 2008.

Table 3-1 indicates that the RMY statistical values are generally 95 percent of the CLM values. A further analysis revealed the negative bias of the RMY sensor relative to the CLM sensor was found to be greatest during periods of turbulent winds. In particular, the agreement between the RMY and CLM measurements was best (>95 percent) when wind sigma values were less than 30 degrees and when winds were blowing from the northern end of Iniskin Bay. This observation is in agreement with studies that have found propeller-vane instruments have an inherent negative bias in turbulent winds due to the propeller-vane lagging behind the instantaneous wind direction. (e.g., Kristensen, 1994; Kristensen et al., 2001). While the cup anemometer appears to be less susceptible to under-reporting of wind speeds in turbulent winds, the vane-propeller anemometer was found to be a high-precision PSD-quality instrument less susceptible to icing than the cup anemometer. Therefore, the deployment of both sensor types has been advantageous for meteorological monitoring under an array of inclement weather conditions encountered at the Pebble Project site.

Table 3-1. Average and Maximum Wind Speeds

Monitoring Period	Mean Hourly Average Wind Speed (m/s) (CLM)	Mean Hourly Average Wind Speed (m/s) (RMY)	Maximum Hourly Average Wind Speed (m/s) (CLM)	Maximum Hourly Average Wind Speed (m/s) (RMY)
Quarter A	10.28	9.49	29.30	27.86
Quarter B	7.95	7.64	25.38	24.17
Quarter C	6.34	6.10	24.01	22.57
Quarter D	8.56	8.18	27.50	26.15
Monitoring Year	**8.18**	**7.85**	**29.30**	**27.86**

Table 3-2. Average and Maximum Wind Speeds at Seldovia Airport

Monitoring Period	Mean Hourly Average Wind Speed (m/s)	Maximum Hourly Average Wind Speed (m/s)
Quarter A	1.50	10.28
Quarter B	1.25	9.39
Quarter C	0.86	8.05
Quarter D	1.38	8.05
Monitoring Year	**1.25**	**10.28**

Figure 3-1 provides wind roses for the CLM and RMY wind instruments during the 2008 monitoring year collocated at the Pebble North Head station. Winds were predominantly from the east and northwest. Figures 3-2 and 3-3 present the quarterly wind roses for the CLM and RMY sensors, respectively. All of the quarterly wind roses are characterized by a predominant wind component from the northwest. Quarter A and D wind roses display a minor wind component from the northeast and east direction. Quarter B and C wind roses display a major wind component for the east direction and a minor wind component from the southeast.

Tables 3-3 through 3-7 are the annual and quarterly wind analysis tables for the CLM wind measurements. Tables 3-8 through 3-12 are the annual and quarterly wind analysis tables for the RMY wind measurements.

Figure 3-4 shows the 2008 year wind rose for the Climatronics wind sensor superimposed over a map of the Pebble North Head site and vicinity. The wind rose is centered over the Pebble North Head station and shows that, on an annual basis, winds at the site predominantly blow to the northwest and east.

Figure 3-1. 2008 Pebble North Head Wind Roses

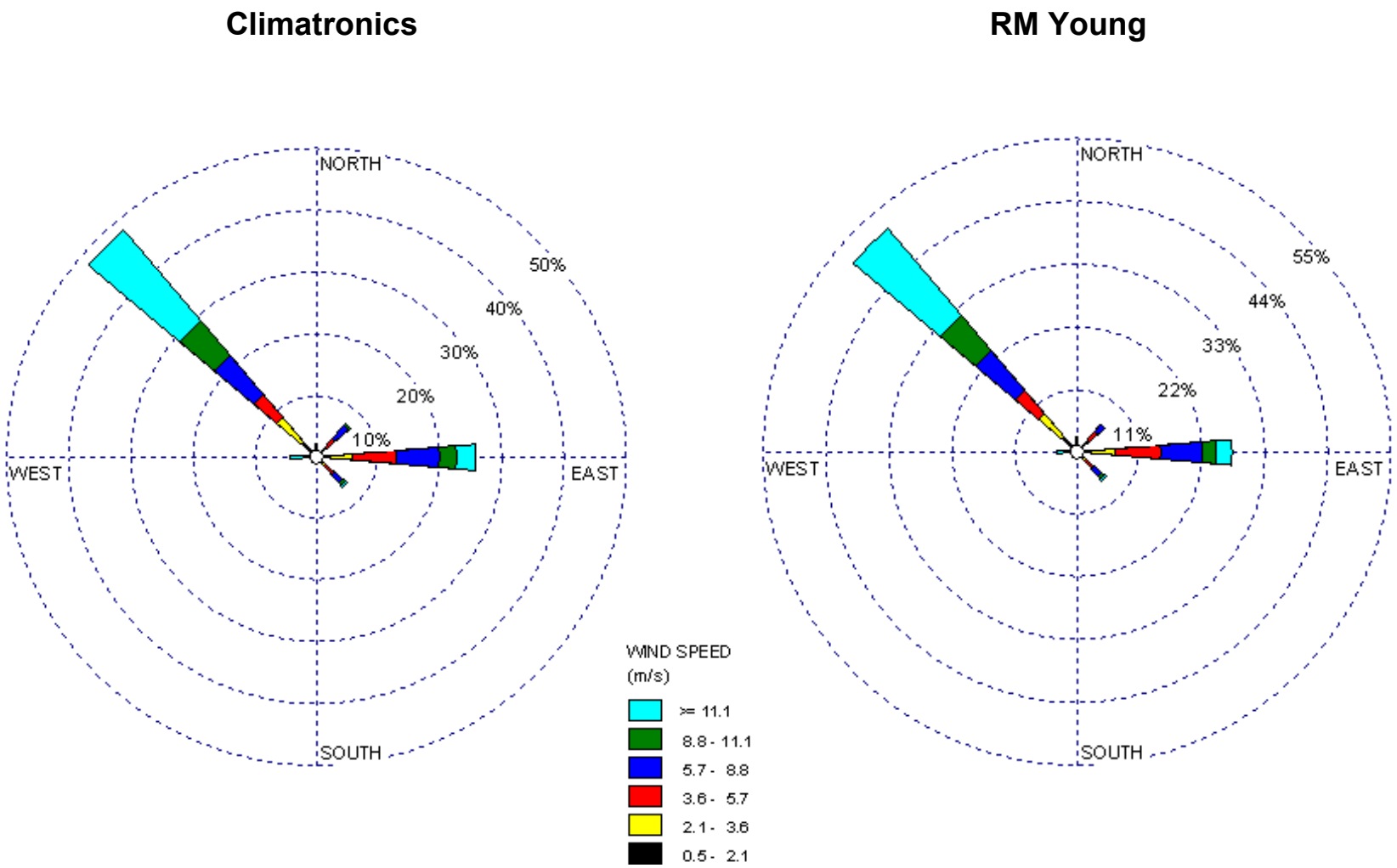
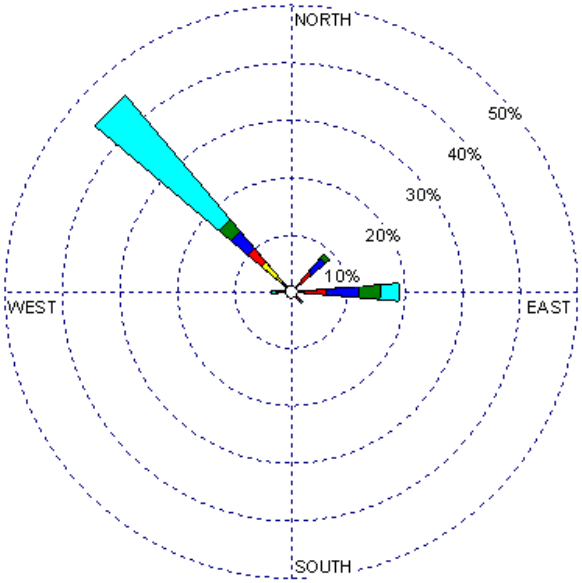
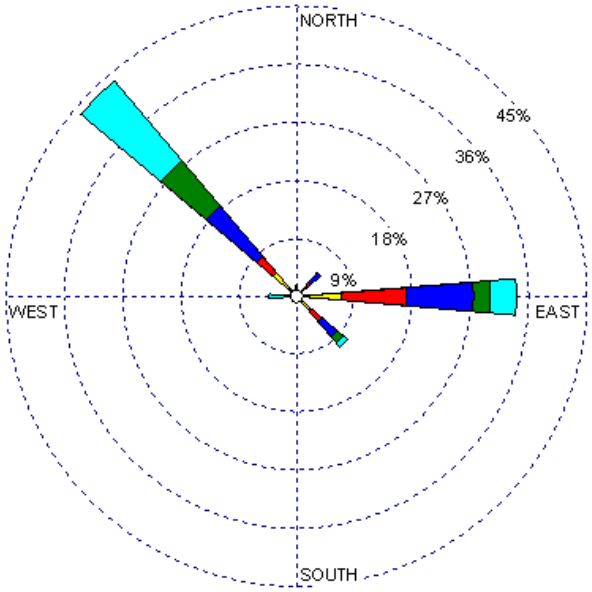


Figure 3-2. Quarterly Pebble North Head Wind Roses (Climatronics)

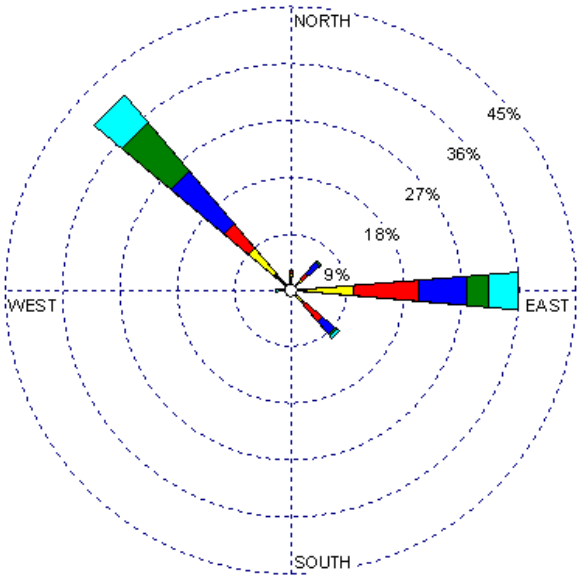
Quarter A (1/1/2008 – 3/31/2008)[1]



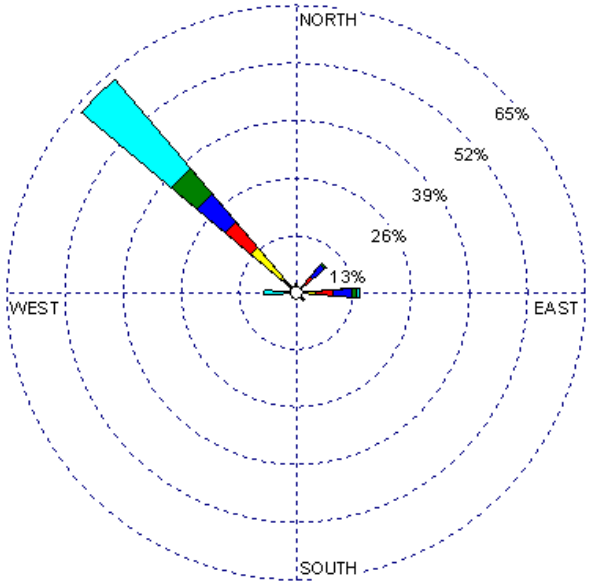
Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)



[1] Data invalidated due to sensor failure January 21, 2008 through February 7, 2008.

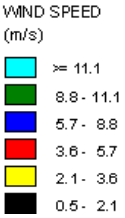
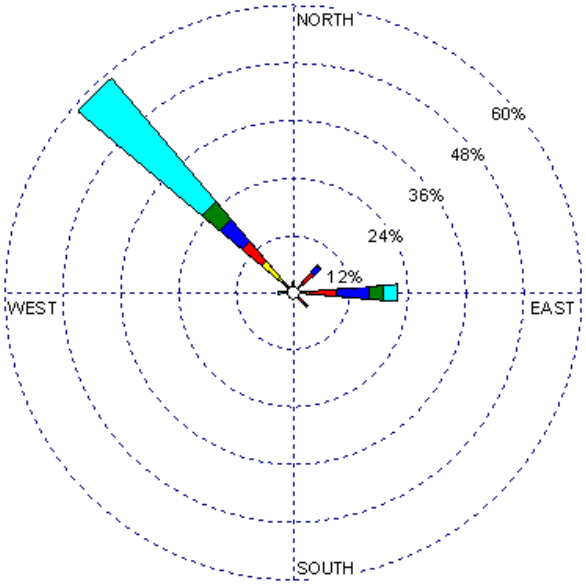
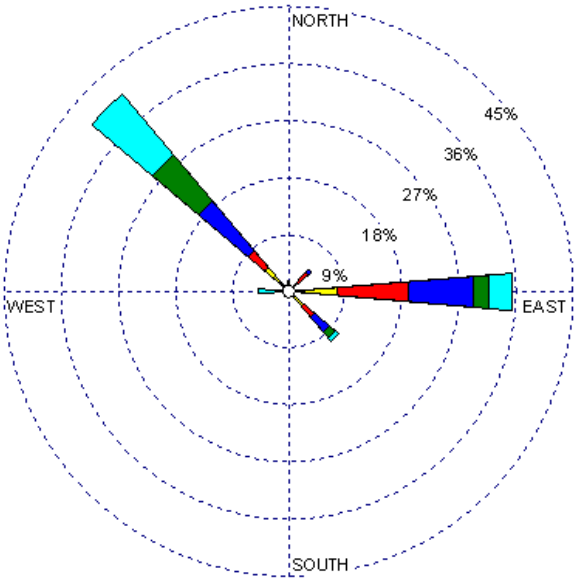


Figure 3-3. Quarterly Pebble North Head Wind Roses (RM Young)

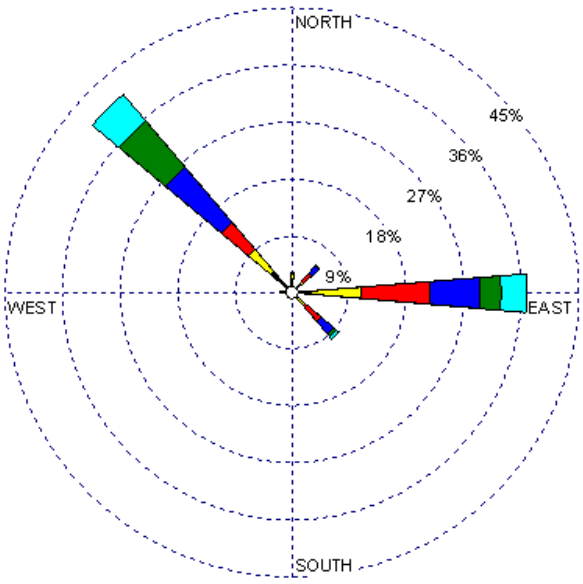
Quarter A (1/1/2008 – 3/31/2008)



Quarter B (4/1/2008 – 6/30/2008)



Quarter C (7/1/2008 – 9/30/2008)



Quarter D (10/1/2008 – 12/31/2008)

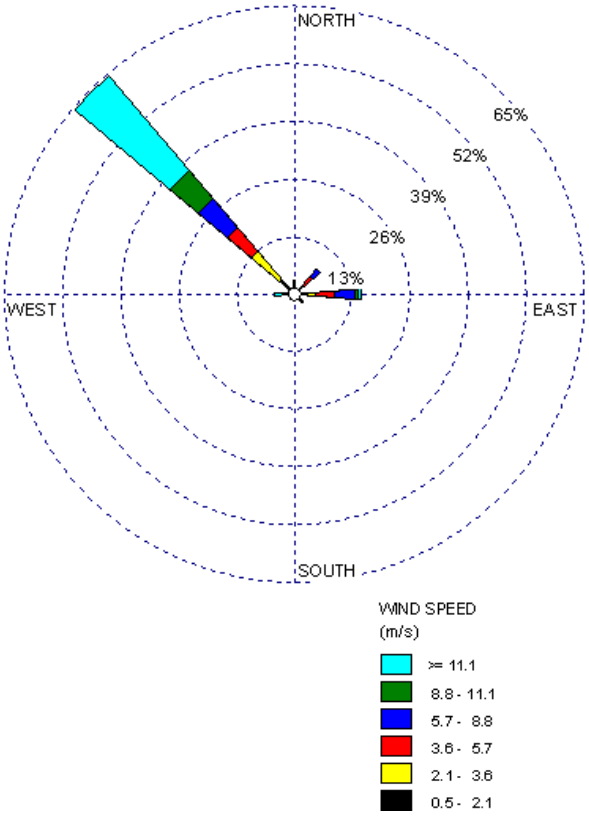


Table 3-3. 2008 Annual Wind Rose Analysis Table (Climatronics)

Station ID: Pebble North Head (Climatronics) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.21%	0.57%	0.26%	0.15%	0.00%	0.00%	2.19%
NE	0.81%	0.88%	2.36%	2.76%	0.46%	0.02%	7.28%
E	1.79%	4.12%	7.01%	6.96%	2.69%	3.21%	25.78%
SE	0.79%	1.18%	1.94%	1.65%	0.56%	0.39%	6.50%
S	0.26%	0.15%	0.06%	0.00%	0.00%	0.00%	0.47%
SW	0.32%	0.25%	0.10%	0.00%	0.00%	0.00%	0.67%
W	0.83%	0.88%	0.40%	0.09%	0.13%	2.15%	4.48%
NW	3.14%	5.42%	4.78%	8.29%	7.31%	19.10%	48.04%
Sub-Total:	9.14%	13.45%	16.91%	19.89%	11.14%	24.87%	95.40%
Calms (<0.5m/s):							4.60%
Total:							100.00%

Table 3-4. Quarter A Wind Rose Analysis Table (Climatronics)[1]

Station ID: Pebble North Head (Climatronics) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	0.27%	0.37%	0.46%	0.32%	0.00%	0.00%	1.42%
NE	0.27%	0.41%	3.98%	3.11%	0.92%	0.05%	8.75%
E	0.60%	1.69%	3.94%	5.68%	3.66%	3.30%	18.86%
SE	0.37%	0.55%	1.01%	0.46%	0.27%	0.14%	2.79%
S	0.23%	0.09%	0.14%	0.00%	0.00%	0.00%	0.46%
SW	0.41%	0.27%	0.18%	0.00%	0.00%	0.00%	0.87%
W	0.82%	1.10%	0.64%	0.14%	0.00%	0.96%	3.66%
NW	2.47%	4.40%	3.16%	3.85%	2.61%	28.30%	44.78%
Sub-Total:	5.45%	8.88%	13.51%	13.55%	7.46%	32.74%	81.59%
Calms (<0.5m/s):							18.39%
Total:							100.00%

[1] Data invalidated due to sensor failure January 21, 2008 through February 7, 2008.

Table 3-5. Quarter B Wind Rose Analysis Table (Climatronics)

Station ID: Pebble North Head (Climatronics) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.28%	0.41%	0.05%	0.00%	0.00%	0.00%	1.74%
NE	0.87%	0.60%	1.42%	2.06%	0.00%	0.00%	4.95%
E	2.20%	4.81%	9.95%	10.40%	2.66%	3.99%	34.01%
SE	0.92%	2.06%	2.34%	3.07%	1.19%	0.92%	10.50%
S	0.18%	0.14%	0.00%	0.00%	0.00%	0.00%	0.32%
SW	0.18%	0.18%	0.09%	0.00%	0.00%	0.00%	0.46%
W	0.50%	0.92%	0.32%	0.00%	0.00%	2.61%	4.35%
NW	1.97%	2.89%	3.35%	10.17%	9.12%	16.18%	43.68%
Sub-Total:	8.11%	12.01%	17.51%	25.71%	12.97%	23.69%	100.00%
Calms (<0.5m/s):							0.00%
Total:							100.00%

Table 3-6. Quarter C Wind Rose Analysis Table (Climatronics)

Station ID: Pebble North Head (Climatronics) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	2.04%	0.82%	0.32%	0.05%	0.00%	0.00%	3.22%
NE	1.36%	0.95%	1.36%	2.40%	0.32%	0.05%	6.43%
E	2.67%	7.25%	10.28%	7.52%	3.44%	4.66%	35.82%
SE	1.00%	1.68%	3.94%	2.58%	0.45%	0.41%	10.05%
S	0.45%	0.14%	0.09%	0.00%	0.00%	0.00%	0.68%
SW	0.36%	0.23%	0.09%	0.00%	0.00%	0.00%	0.68%
W	0.72%	0.63%	0.23%	0.14%	0.32%	0.45%	2.49%
NW	3.71%	5.16%	5.07%	10.91%	9.92%	5.75%	40.53%
Sub-Total:	12.32%	16.85%	21.38%	23.60%	14.45%	11.32%	99.91%
Calms (<0.5m/s):							0.09%
Total:							100.00%

Table 3-7. Quarter D Wind Rose Analysis Table (Climatronics)

Station ID: Pebble North Head (Climatronics) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.22%	0.68%	0.23%	0.23%	0.00%	0.00%	2.36%
NE	0.72%	1.54%	2.67%	3.44%	0.59%	0.00%	8.97%
E	1.68%	2.72%	3.89%	4.26%	1.00%	0.91%	14.45%
SE	0.86%	0.45%	0.45%	0.50%	0.32%	0.09%	2.67%
S	0.18%	0.23%	0.00%	0.00%	0.00%	0.00%	0.41%
SW	0.32%	0.32%	0.05%	0.00%	0.00%	0.00%	0.68%
W	1.27%	0.86%	0.41%	0.09%	0.18%	4.57%	7.38%
NW	4.39%	9.19%	7.52%	8.20%	7.56%	26.22%	63.09%
Sub-Total:	10.64%	15.99%	15.22%	16.71%	9.65%	31.79%	100.00%
Calms (<0.5m/s):							0.00%
Total:							100.00%

Table 3-8. 2008 Annual Wind Rose Analysis Table (RM Young)

Station ID: Pebble North Head (RM Young) Run ID: 2008
Start Date: January 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.62%	0.64%	0.31%	0.09%	0.00%	0.02%	2.68%
NE	0.92%	1.27%	2.69%	1.55%	0.13%	0.00%	6.55%
E	2.22%	4.49%	7.99%	7.33%	2.31%	2.83%	27.18%
SE	0.95%	1.24%	1.80%	1.75%	0.61%	0.41%	6.76%
S	0.31%	0.11%	0.03%	0.00%	0.00%	0.10%	0.56%
SW	0.34%	0.23%	0.09%	0.00%	0.00%	0.11%	0.78%
W	0.91%	0.80%	0.25%	0.08%	0.11%	1.60%	3.76%
NW	3.69%	5.32%	5.32%	9.04%	8.02%	19.83%	51.21%
Sub-Total:	10.95%	14.10%	18.48%	19.84%	11.18%	24.92%	99.48%
Calms (<0.5m/s):							0.51%
Total:							100.00%

Table 3-9. Quarter A Wind Rose Analysis Table (RM Young)

Station ID: Pebble North Head (RM Young) Run ID: Quarter A
Start Date: January 1, 2008 End Date: March 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.01%	0.55%	0.69%	0.23%	0.00%	0.09%	2.56%
NE	0.32%	1.51%	3.98%	1.69%	0.32%	0.00%	7.83%
E	1.37%	2.01%	5.77%	6.78%	2.93%	2.98%	21.84%
SE	0.87%	0.73%	1.14%	0.82%	0.32%	0.23%	4.12%
S	0.32%	0.14%	0.09%	0.00%	0.00%	0.00%	0.55%
SW	0.55%	0.32%	0.18%	0.00%	0.00%	0.00%	1.05%
W	0.96%	1.05%	0.32%	0.14%	0.00%	0.96%	3.43%
NW	3.34%	5.59%	5.22%	5.91%	4.90%	33.61%	58.56%
Sub-Total:	8.75%	11.90%	17.40%	15.57%	8.47%	37.87%	99.95%
Calms (<0.5m/s):							0.04%
Total:							100.00%

Table 3-10. Quarter B Wind Rose Analysis Table (RM Young)

Station ID: Pebble North Head (RM Young) Run ID: Quarter B
Start Date: April 1, 2008 End Date: June 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.46%	0.28%	0.05%	0.00%	0.00%	0.00%	1.79%
NE	0.99%	0.75%	2.30%	0.85%	0.00%	0.00%	4.89%
E	2.58%	5.12%	11.18%	10.29%	2.49%	3.71%	35.39%
SE	1.03%	2.11%	2.26%	3.15%	1.27%	0.66%	10.48%
S	0.19%	0.05%	0.00%	0.00%	0.00%	0.42%	0.66%
SW	0.24%	0.09%	0.09%	0.00%	0.00%	0.47%	0.89%
W	0.61%	0.75%	0.19%	0.09%	0.19%	3.10%	4.93%
NW	2.35%	2.63%	3.62%	10.20%	9.45%	12.50%	40.74%
Sub-Total:	9.45%	11.80%	19.69%	24.58%	13.39%	20.86%	99.77%
Calms (<0.5m/s):							0.23%
Total:							100.00%

Table 3-11. Quarter C Wind Rose Analysis Table (RM Young)

Station ID: Pebble North Head (RM Young) Run ID: Quarter C
Start Date: July 1, 2008 End Date: September 30, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	2.22%	0.68%	0.27%	0.05%	0.00%	0.00%	3.22%
NE	1.54%	0.91%	1.72%	1.54%	0.09%	0.00%	5.80%
E	3.17%	7.88%	10.60%	7.79%	3.31%	3.99%	36.73%
SE	1.00%	1.81%	3.31%	2.58%	0.45%	0.59%	9.74%
S	0.36%	0.14%	0.05%	0.00%	0.00%	0.00%	0.54%
SW	0.27%	0.18%	0.09%	0.00%	0.00%	0.00%	0.54%
W	0.77%	0.63%	0.23%	0.05%	0.23%	0.23%	2.13%
NW	4.57%	4.48%	5.53%	11.46%	9.56%	5.34%	40.94%
Sub-Total:	13.90%	16.71%	21.78%	23.46%	13.63%	10.14%	99.64%
Calms (<0.5m/s):							0.35%
Total:							100.00%

Table 3-12. Quarter D Wind Rose Analysis Table (RM Young)

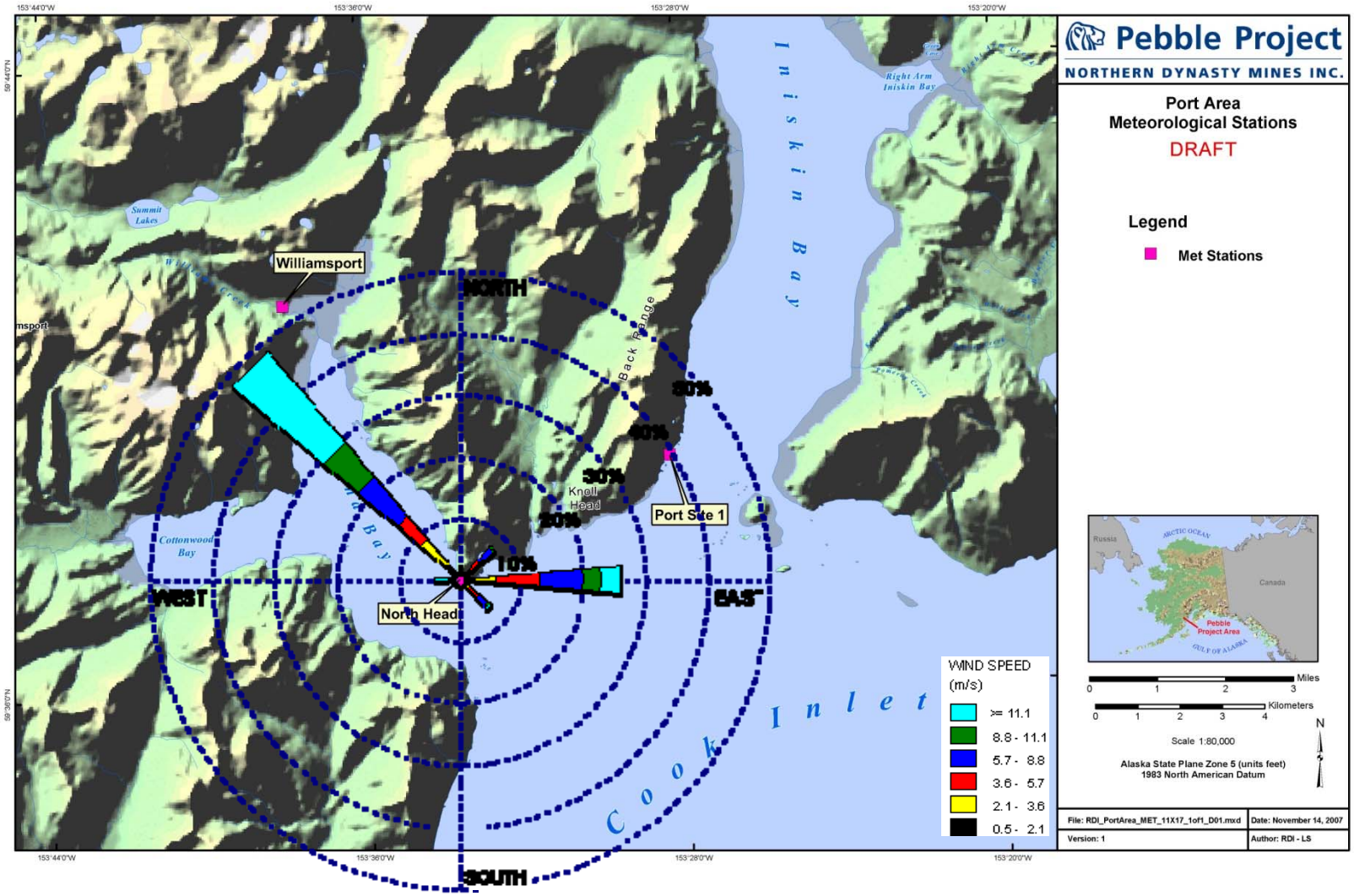
Station ID: Pebble North Head (RM Young) Run ID: Quarter D
Start Date: October 1, 2008 End Date: December 31, 2008

Frequency Distribution
(Percent)

Speed (m/s)

Direction	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
N	1.77%	1.04%	0.23%	0.09%	0.00%	0.00%	3.13%
NE	0.82%	1.90%	2.76%	2.08%	0.09%	0.00%	7.65%
E	1.77%	2.94%	4.48%	4.57%	0.54%	0.68%	14.99%
SE	0.91%	0.32%	0.50%	0.50%	0.41%	0.18%	2.81%
S	0.36%	0.14%	0.00%	0.00%	0.00%	0.00%	0.50%
SW	0.32%	0.32%	0.00%	0.00%	0.00%	0.00%	0.63%
W	1.27%	0.77%	0.27%	0.05%	0.05%	2.17%	4.57%
NW	4.44%	8.47%	6.84%	8.61%	8.20%	27.76%	64.31%
Sub-Total:	11.64%	15.90%	15.08%	15.90%	9.28%	30.80%	98.60%
Calms (<0.5m/s):							1.37%
Total:							100.00%

Figure 3-4. 2008 Wind Rose Superimposed on Site Map



3.2.2 Temperature Climatology

Tables 3-13 and 3-14 give the maximum and minimum daily mean temperatures, monthly mean temperatures, and maximum and minimum hourly average temperatures for the 2-meter and 10-meter temperature measurements, respectively. The 2008 annual mean temperature was 2.3°C at the 2-meter height. This annual mean temperature is slightly lower in comparison to the annual mean temperature of 2.5°C observed at the Seldovia meteorological station from January 1, 2008 through December 31, 2008. Hourly average temperatures at the Pebble North Head station varied from a maximum of 21.0°C on July 31, 2008 to a minimum of -24.2°C on January 12, 2008.

Figure 3-5 provides a graph of the 2-meter and 10-meter hourly average temperatures. Considerable temperature variations occurred throughout the late-autumn and winter months. Figure 3-5 also includes a plot of average daily temperatures recorded at the meteorological monitoring station in Seldovia, Alaska. Both the Pebble North Head station and the Seldovia meteorological monitoring station are located in the Cook Inlet maritime climate zone.

Figure 3-6 shows a plot of the vertical temperature difference (the difference between 10-m and 2-m temperature values) during the monitoring year. The greatest positive vertical temperature difference was 1.5°C measured on February 8, 2008. The greatest negative temperature difference was -1.4°C measured on May 19, 2008.

Table 3-13. 2-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Maximum Temperature (°C)	Minimum Temperature (°C)
January 2008	3.0	-22.7	-8.5	5.1	-24.2
February 2008	4.4	-16.8	-5.4	6.1	-19.6
March 2008	4.0	-13.2	-2.2	5.3	-14.8
Quarter A	**4.4**	**-22.7**	**-5.3**	**6.1**	**-24.2**
April 2008	6.7	-7.1	-0.3	9.3	-9.5
May 2008	11.1	3.2	6.2	14.0	1.4
June 2008	11.8	6.6	8.8	13.7	5.0
Quarter B	**11.8**	**-7.1**	**4.9**	**14.0**	**-9.5**
July 2008	17.3	9.3	11.3	21.0	7.8
August 2008	15.5	10.6	12.3	18.2	9.2
September 2008	12.1	6.6	9.5	13.7	5.7
Quarter C	**17.3**	**6.6**	**11.1**	**21.0**	**5.7**
October 2008	7.5	-5.7	1.4	9.1	-6.9
November 2008	3.5	-13.5	-2.9	5.6	-14.6
December 2008	5.1	-18.3	-2.7	7.2	-19.3
Quarter D	**7.5**	**-18.3**	**-1.4**	**9.1**	**-19.3**
Monitoring Year	**17.3**	**-22.7**	**2.3**	**21.0**	**-24.2**

Table 3-14. 10-Meter Temperature Summary

Period	Max Daily Mean Temp (°C)	Min Daily Mean Temp (°C)	Monthly Mean Temp (°C)	Maximum Temperature (°C)	Minimum Temperature (°C)
January 2008	3.1	-23.0	-8.6	5.1	-24.3
February 2008	4.4	-17.0	-5.4	6.2	-19.6
March 2008	4.1	-13.5	-2.3	5.4	-15.3
Quarter A	**4.4**	**-23.0**	**-5.4**	**6.2**	**-24.3**
April 2008	6.9	-7.3	-0.4	9.4	-9.8
May 2008	11.1	3.1	6.2	13.8	1.3
June 2008	11.8	6.4	8.7	13.6	4.8
Quarter B	**11.8**	**-7.3**	**4.8**	**13.8**	**-9.8**
July 2008	17.2	9.1	11.3	20.9	7.9
August 2008	15.6	10.5	12.3	18.4	9.2
September 2008	12.3	6.5	9.7	14.8	5.6
Quarter C	**17.2**	**6.5**	**11.1**	**20.9**	**5.6**
October 2008	7.6	-5.9	1.3	9.0	-7.2
November 2008	3.6	-13.8	-3.0	5.7	-15.0
December 2008	5.3	-18.9	-2.8	7.2	-20.0
Quarter D	**7.6**	**-18.9**	**-1.5**	**9.0**	**-20.0**
Monitoring Year	**17.2**	**-23.0**	**2.3**	**20.9**	**-24.3**

Figure 3-5. Hourly Average 2-Meter and 10-Meter Temperatures

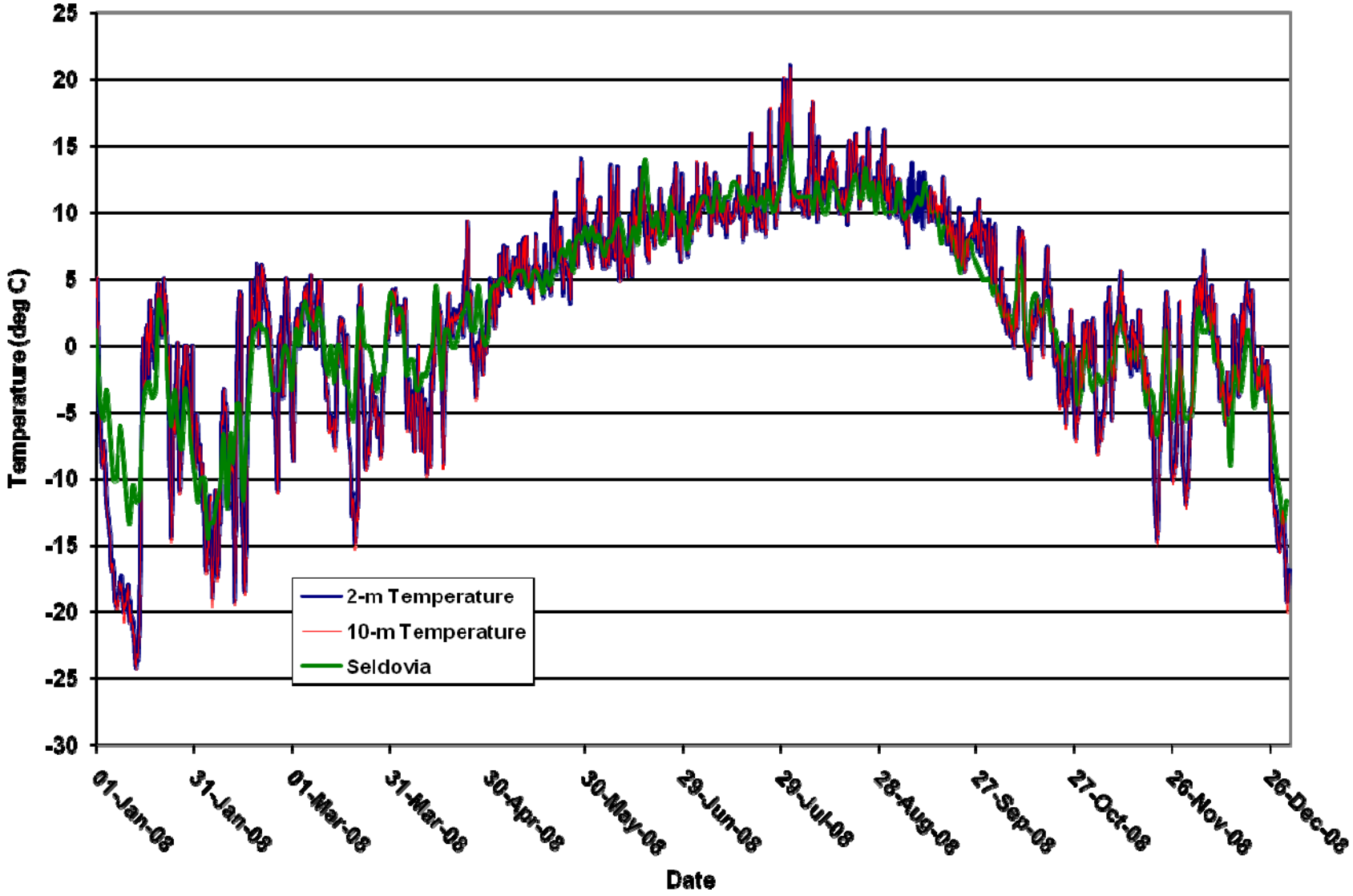
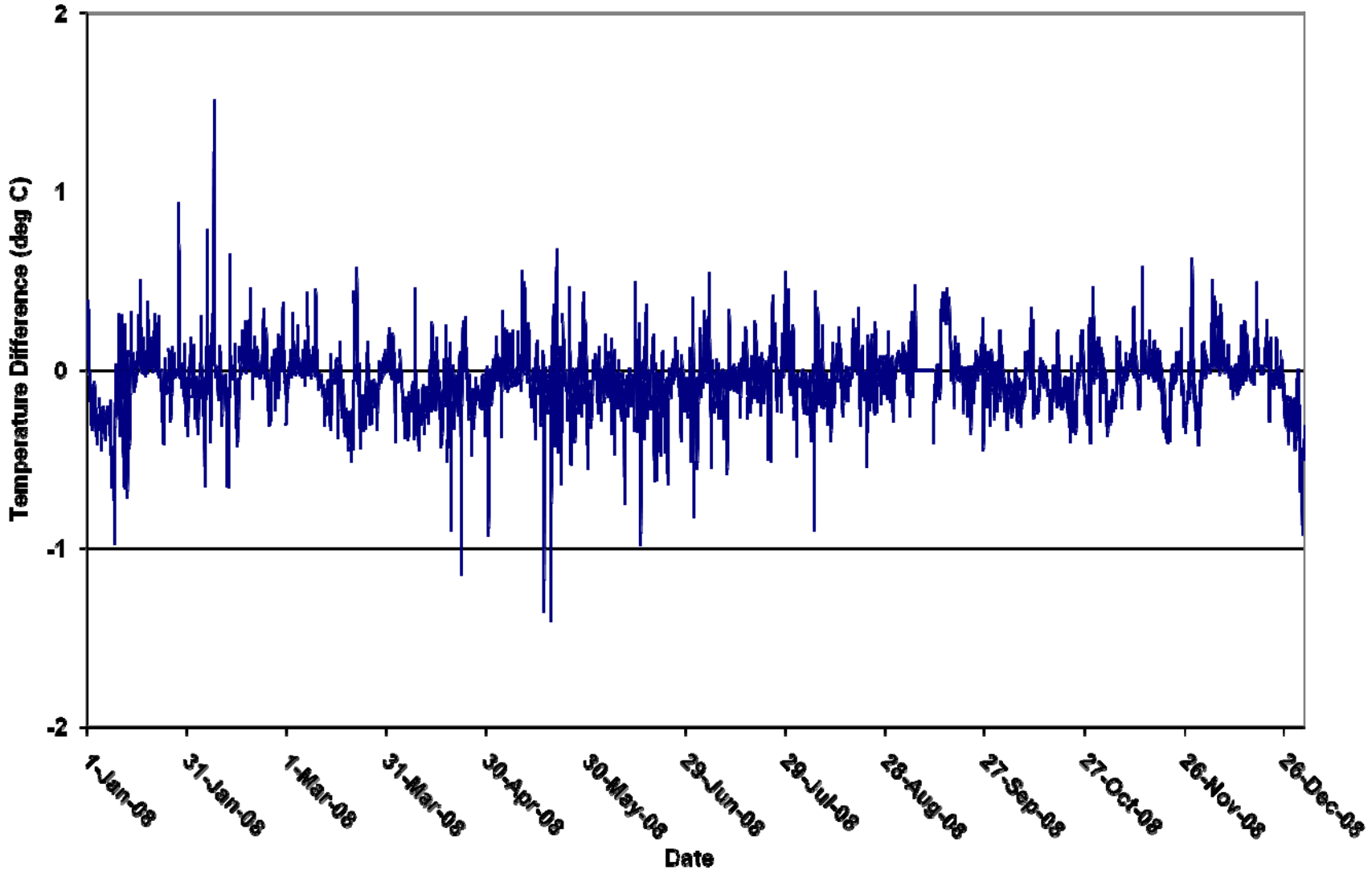


Figure 3-6. Hourly Average Vertical Temperature Difference



3.3.3 Other Meteorological Parameters

Other meteorological parameters measured at the Pebble North Head station include relative humidity, barometric pressure, and solar radiation.

Table 3-15 provides a summary of the relative humidity, barometric pressure, and solar radiation at the Pebble North Head station during the 2008 monitoring year.

Figure 3-7 is a plot of the annual hourly average relative humidity. Relative humidity at the Pebble North Head site varied from a low of 19.7 percent on February 9, 2008 to a high of 100 percent. The mean relative humidity during the monitoring year was 75.5 percent. The mean relative humidity at the Seldovia meteorological station for the monitoring period was 81 percent.

Figure 3-8 is a plot of the annual hourly instantaneous barometric pressure measurements. Barometric pressure varied from a minimum of 962 mb on February 19, 2008, to a maximum of 1,036 mb observed on December 13, 2008. The mean barometric pressure during the monitoring year was 1,003 mb. The mean barometric pressure at the Seldovia meteorological station for the monitoring period was 1,007 mb.

Figure 3-9 is a plot of the annual hourly average solar radiation. The maximum hourly average solar radiation was 640 W/m^2 recorded on April 6, 2008 at 2:00 pm. The mean hourly average solar radiation for the monitoring year was 54 W/m^2.

Relative humidity, barometric pressure, and solar radiation data are available in monthly tabular format in Appendix D.

Table 3-15. Relative Humidity, Barometric Pressure, and Solar Radiation Summary

Period	Mean Relative Humidity (%)	Minimum Relative Humidity (%)	Maximum Relative Humidity (%)	Mean Barometric Pressure (mb)	Minimum Barometric Pressure (mb)	Maximum Barometric Pressure (mb)	Mean Solar Radiation (W/m^2)	Maximum Solar Radiation (W/m^2)
January 2008	77.9	34.4	91.6	1,000	974	1,028	14.2	209.7
February 2008	68.9	19.7	97.5	995	962	1,014	39.8	346.9
March 2008	75.6	31.0	99.3	999	973	1,018	87.1	574.8
Quarter A	**72.9**	**19.7**	**99.3**	**998**	**962**	**1,028**	**47.7**	**574.8**
April 2008	71.0	32.0	100.0	1,009	990	1,036	127.8[1]	639.6[1]
May 2008	73.7	39.7	97.0	1,008	976	1,023	—	—
June 2008	79.9	33.1	99.6	1,009	991	1,021	—	—
Quarter B	**74.8**	**32.0**	**100.0**	**1,009**	**976**	**1,036**	**—**	**—**
July 2008	80.0	43.1	99.1	1,006	995	1,018	—	—
August 2008	80.5	39.7	99.0	1,004	987	1,019	—	—
September 2008	77.9	44.4	99.1	1,003	982	1,019	—	—
Quarter C	**79.5**	**39.7**	**99.1**	**1,004**	**982**	**1,019**	—	—
October 2008	72.4	42.7	98.8	998	980	1,018	—	—
November 2008	76.0	44.6	98.7	996	970	1,020	—	—
December 2008	73.7	35.0	99.4	1,008	964	1,038	—	—
Quarter D	**74.0**	**35.0**	**99.4**	**1,001**	**964**	**1,038**	—	—
Monitoring Year	**75.5**	**19.7**	**100.0**	**1,003**	**962**	**1,038**	**53.8**	**639.6**

[1] Solar sensor failed below 35 W/m^2 on September 11, 2008 audit. All data below invalidated from April 8, 2008.

Figure 3-7. Hourly Average Relative Humidity

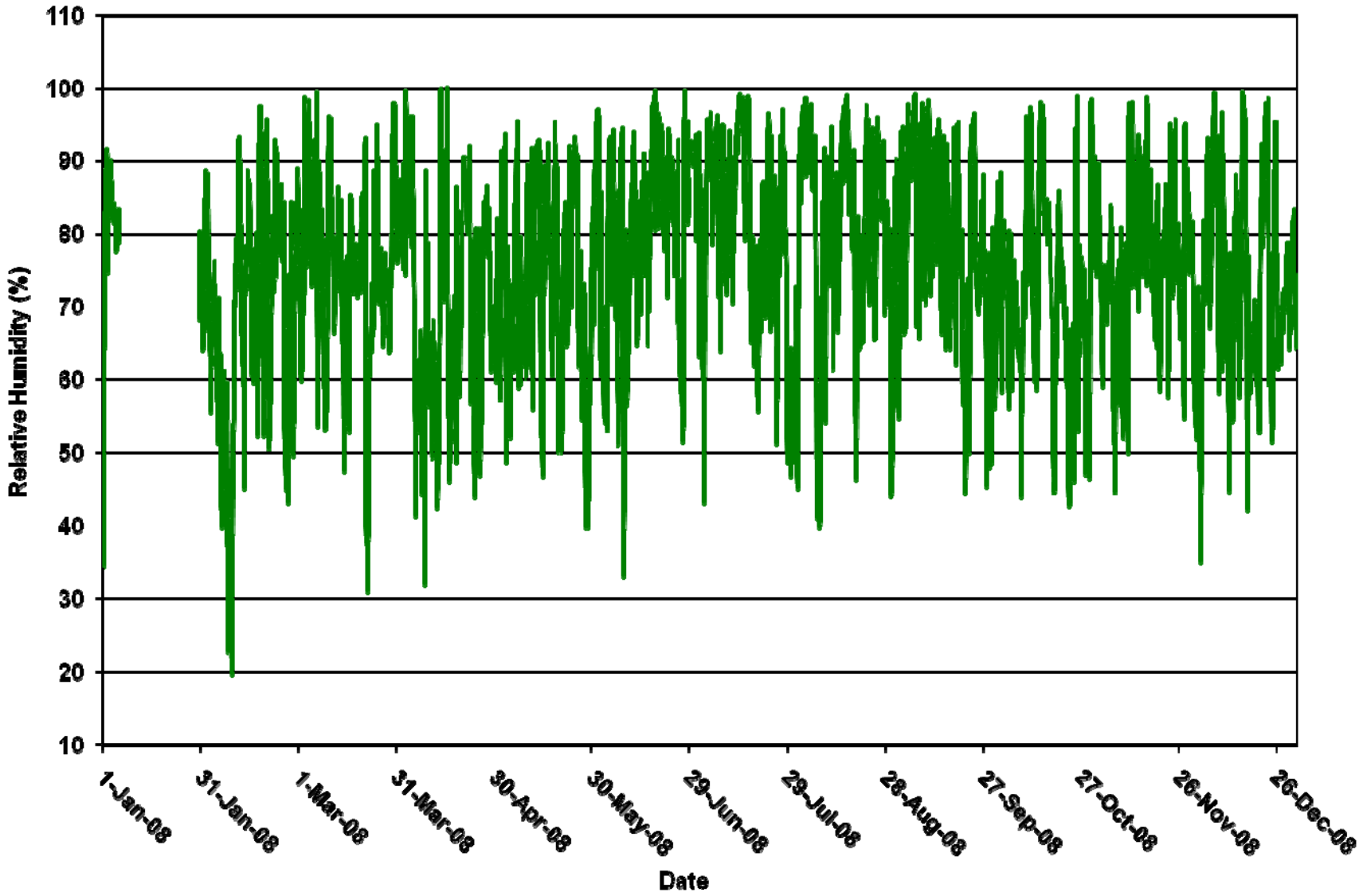


Figure 3-8. Barometric Pressure

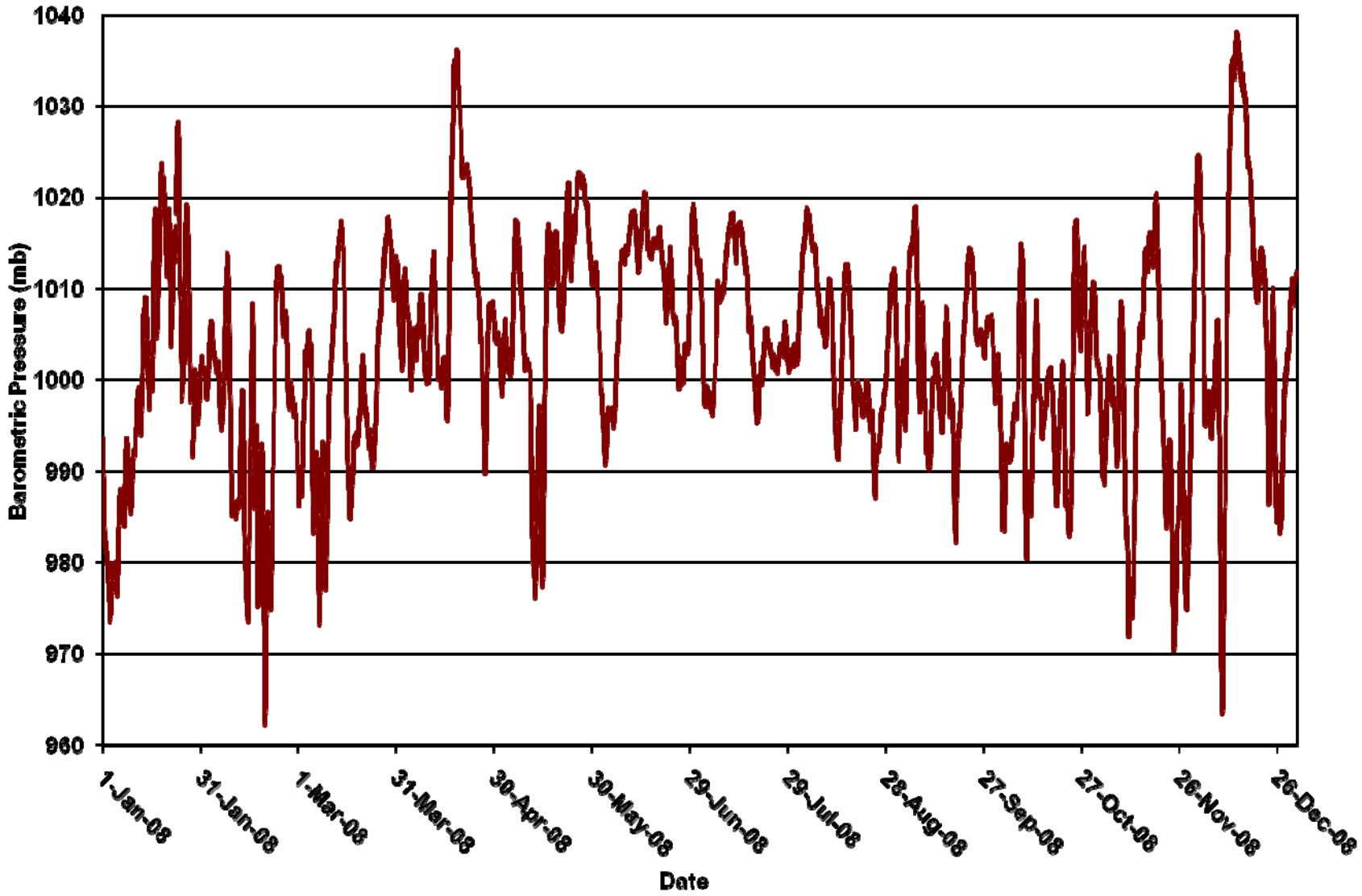
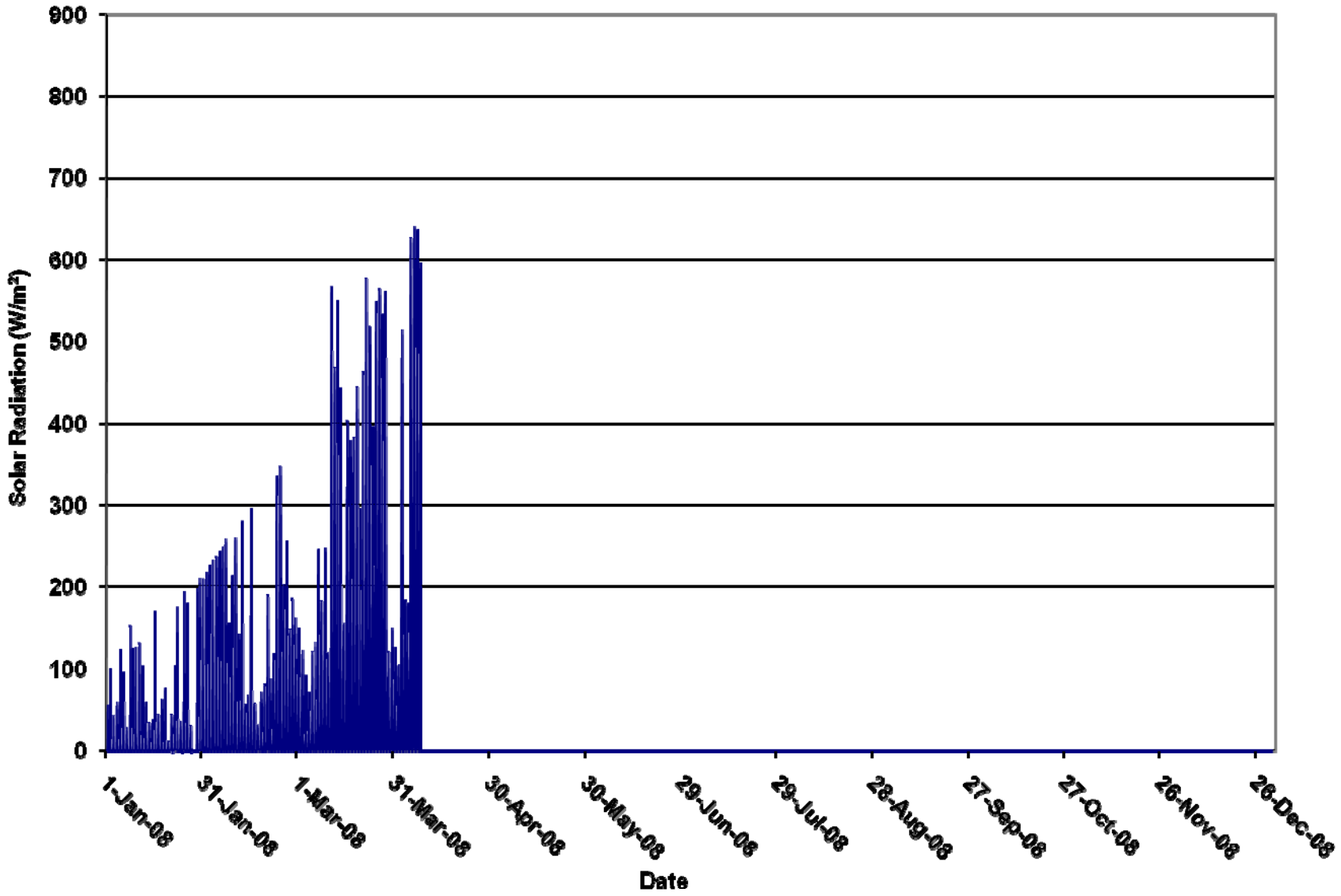


Figure 3-9. Hourly Average Solar Radiation



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Appendix A

Data Processing Specifications and Statistical Formulae

A.1 Data Recovery Percentage

Data completeness for meteorological monitoring methods was calculated assuming a minimum of 90 percent valid hourly average data to calculate quarterly average data completeness and a minimum of 90 percent quarterly data completeness for four consecutive quarters.

Quarterly data completeness (DC_i) was determined using the following equation:

$$DC_i = h_v/h_i \times 100$$

Where: h_v = number of hours of valid data actually collected
h_i = number of possible valid hours of data collection during the monitoring period

Table A-1. Station Performance Summary – Data Recovery 2008

Period	Meteorological Parameters											
	2-m Temp	10-m Temp	Δ T	WS (CLM)[1]	WD (CLM)	Sigma (CLIM)	WS (RMY)[2]	WD (RMY)	Sigma (RMY)	RH	Solar	BP
January 2008	97.8%	97.3%	97.3%	67.2%[4]	67.2%[4]	67.2%[4]	100%	99.6%	99.6%	19.9%[5]	96.0%	98.5%
February 2008	99.4%	99.4%	99.4%	77.3%	77.3%	77.3%	100%	100%	100%	100%	100%	100%
March 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Quarter A	**99.1%**	**98.9%**	**98.9%**	**81.6%**	**81.6%**	**81.6%**	**100%**	**99.9%**	**99.9%**	**72.7%**	**98.6%**	**99.5%**
April 2008	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.4%	92.1%	99.4%	100%	25.0%[6]	100%
May 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
June 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	98.3%	0.0%	100%
Quarter B	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.9%**	**99.8%**	**97.4%**	**99.8%**	**99.5%**	**8.2%**	**100%**
July 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
August 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
September 2008	99.4%	82.1%[3]	82.1%[3]	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	0.1%	99.4%
Quarter C	**99.8%**	**94.2%**	**94.2%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**99.8%**	**0.0%**	**99.8%**
October 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
November 2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0.0%	100%
December 2008	100%	100%	100%	100%	100%	100%	96.4%	96.4%	96.4%	100%	0.0%	100%
Quarter D	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**98.8%**	**98.8%**	**98.8%**	**100%**	**0.0%**	**100%**
Monitoring Year	**99.7%**	**98.2%**	**98.2%**	**95.3%**	**95.3%**	**95.3%**	**99.6%**	**99.0%**	**99.6%**	**93.0%**	**26.6%**	**99.8%**

[1] CLM = Climatronics wind speed and wind direction sensor.
[2] RMY = R.M. Young wind speed and wind direction sensor.
[3] The 10 meter temperature sensor data dramatically drifted from the baseline data on September 6. The sensor was replaced 5 days later on September 11, 2008.
[4] Sensor was damage in storm during monitoring Quarter A-repaired on February 7, 2008.
[5] Sensor head found missing and replaced on January 30, 2008.
[6] Solar sensor failed below 35 W/m^2 on September 11, 2008 audit. All data invalidated from April 8, 2008.

A.2 Data Bias Correction Using Calibration Information

Not Applicable.

A.3 Estimation of Pasquill-Gifford Stability Categories

Not Applicable.

Appendix B

Precision Data

Not Applicable.

Appendix C

Accuracy Data

CONTENTS

1. Pebble North Head Station September 2007 Quality Assurance Systems Audit and Performance Audit

2. Pebble North Head Station April 2008 Quality Assurance Performance Audit

3. Pebble North Head Station September 2008 Quality Assurance Systems Audit and Performance Audit

Pebble North Head PSD Meteorological Monitoring Station

September 2007

Quality Assurance Systems Audit and Performance Audit

Pebble Project
NORTHERN DYNASTY MINES INC.

for the

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for

Northern Dynasty Mines, Inc.

Pebble North Head
PSD Meteorological Monitoring Station
September 2007
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

Northern Dynasty Mines, Inc.
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 10
3.1.7 Solar Radiation 10

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble North Head Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 North Head September 27, 2007 Performance Audit Summary 11

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

Hoefler Consulting Group, Inc. (HCG) operates meteorological monitoring stations for Northern Dynasty Mines, Inc. (NDM) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the North Head monitoring station located near a potential mine port site.

The North Head station is located at North Head, where Iniskin Bay meets Iliamna Bay in Cook Inlet. The station is situated at the 75 foot level of the 525 foot high North Head knoll. The station is situated on a relatively flat bench, near the water's edge. The North Head station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' northeast of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble North Head station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for NDM to serve as an official review of the Pebble North Head station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

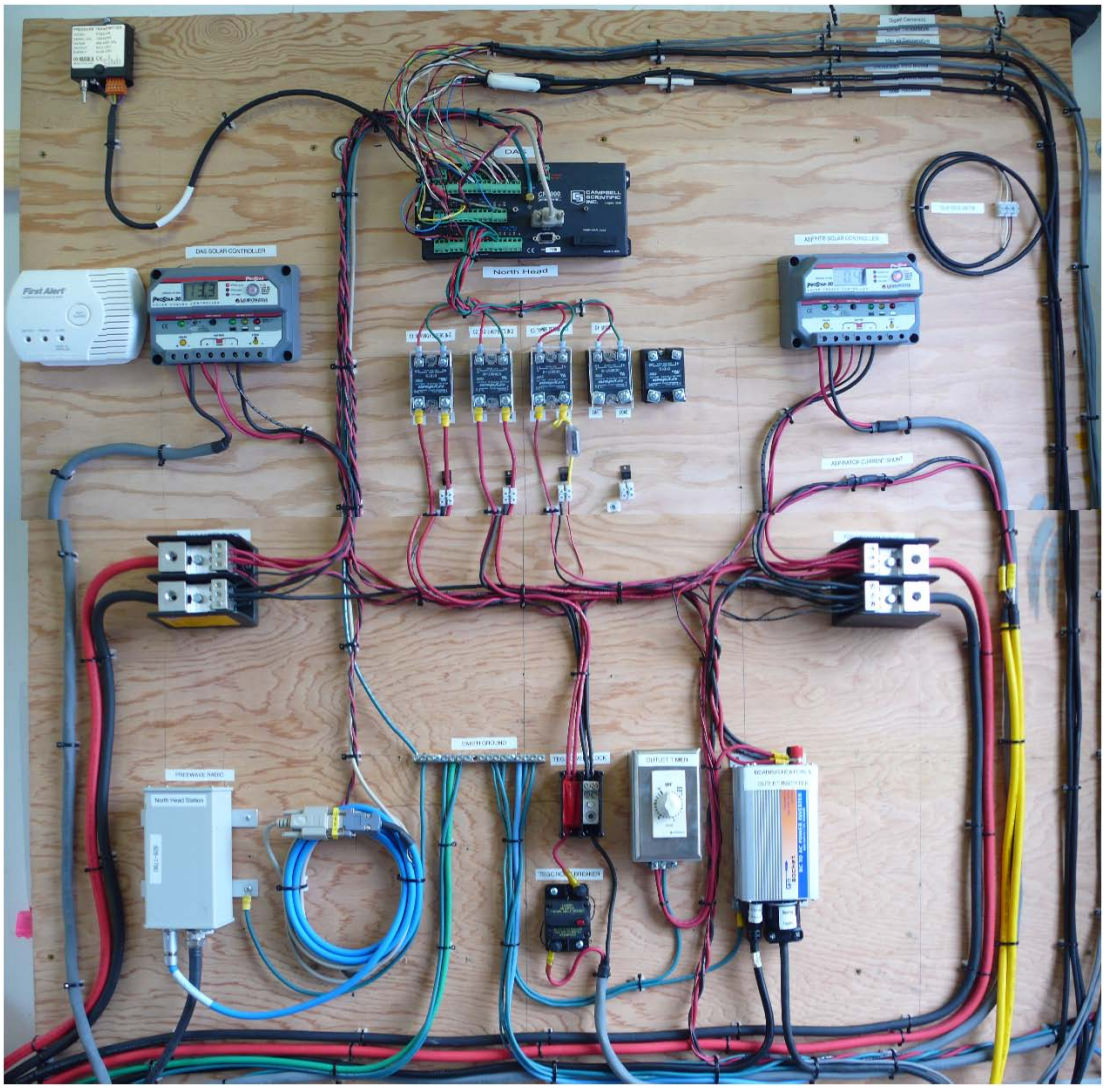
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the North Head station was conducted in late September 2007. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble North Head meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2” liquid-tight conduit runs from the 12’ height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4’ by 4’ plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble North Head Station DAS Wiring Panel



The Campbell Scientific CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of three 70-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar

controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Two solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the solar power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program, although not updated to include North Head. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. The Pebble North Head station is representative of the generic Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and most meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the

sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The North Head station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the North Head station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Maintain complete equipment manuals for station in digital or paper form
- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. A well excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audits were conducted at the North Head station on September 27, 2007, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and yielded errors below the PSD limits. Summary audit results are contained in Tables 3-2 and 3-3, and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 North Head September 27, 2007 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	-0:07	Pass
2-m Temperature Accuracy	≤ ±0.5	°C	0.20	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.20	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	0.2	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.0049	oz-in	<0.003	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 0.104	oz-in	<0.060	Pass
Wind Dir. Azim. Align. (as-found)[1]	≤ ±5	Degree	N/A	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.4	Pass
Wind Direction Linearity	≤ 3	Degree	1.3	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.1	Pass
RM Young Wind System				
Wind Speed Torque	≤ 0.014	oz-in	0.005	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	g-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)[1]	≤ ±5	Degree	N/A	N/A
Wind Direction Accuracy	≤ ±5	Degree	2.7	Pass
Wind Direction Linearity	≤ 3	Degree	1.3	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.4	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-7.2[2]	Pass

1. No as-found test for initial installation.
2. Max % error value of 7.2 within limit of 5% input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

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"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble North Head PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Pebble North Head PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble North Head station is located on a bench at North Head knoll where Iniskin Bay meets Iliamna Bay. The 75' high rocky bench overlooking Cook Inlet is relatively flat and vegetated with low shrubs. North Head knoll rises to 525' elevation south of the station.

1.2 Site Location

1.2.1 Coordinates

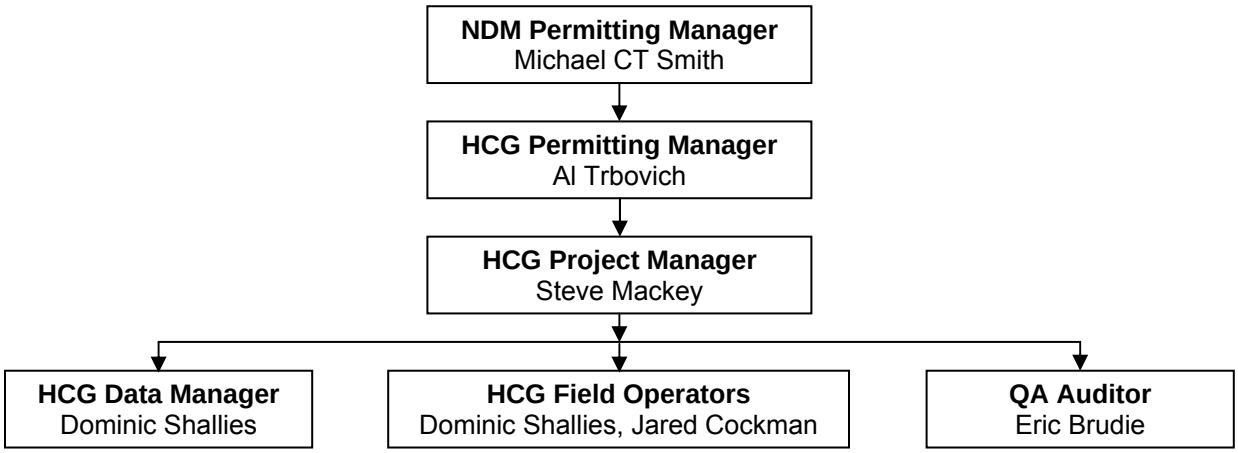
Indicated by Operator	Determined by Auditor
59° 37' N	59° 37.433' N
153° 34' W	153° 33.633 W
Elevation: 75 feet	Elevation: 75 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: Locked building at a very remote location.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR1000	11725
DAS Wiring Panel	Campbell Scientific	CR1000	11396
Temperature (2-meter)	Met One	062MP	G3473, ID #2/2
Temperature (10-meter)	Met One	062MP	G3473, ID #1/2
Relative Humidity	Vaisala	HMP45AC	C0540041
Temperature Aspirators	Met One	076B-4	G4411 & G4412
New Primary Wind Speed	Climatronics	F460-100075	5192
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2325
Primary Wind Direction	Climatronics	F460-100076	4868
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1492
Wind Sigma	Campbell Scientific	DAS Calculated	11725
Backup Wind Speed/Direction	RM Young	05305 Wind Mon-AQ	78078
Backup Wind Spd Prop	RM Young	08254	64950
Barometric Pressure	Vaisala	PTB101B	C0910005
Solar Radiation	LI-COR	Li-200SX	PY56189

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 70-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by two 70-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble North Head PSD Meteorological Station Systems Audit

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: None.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

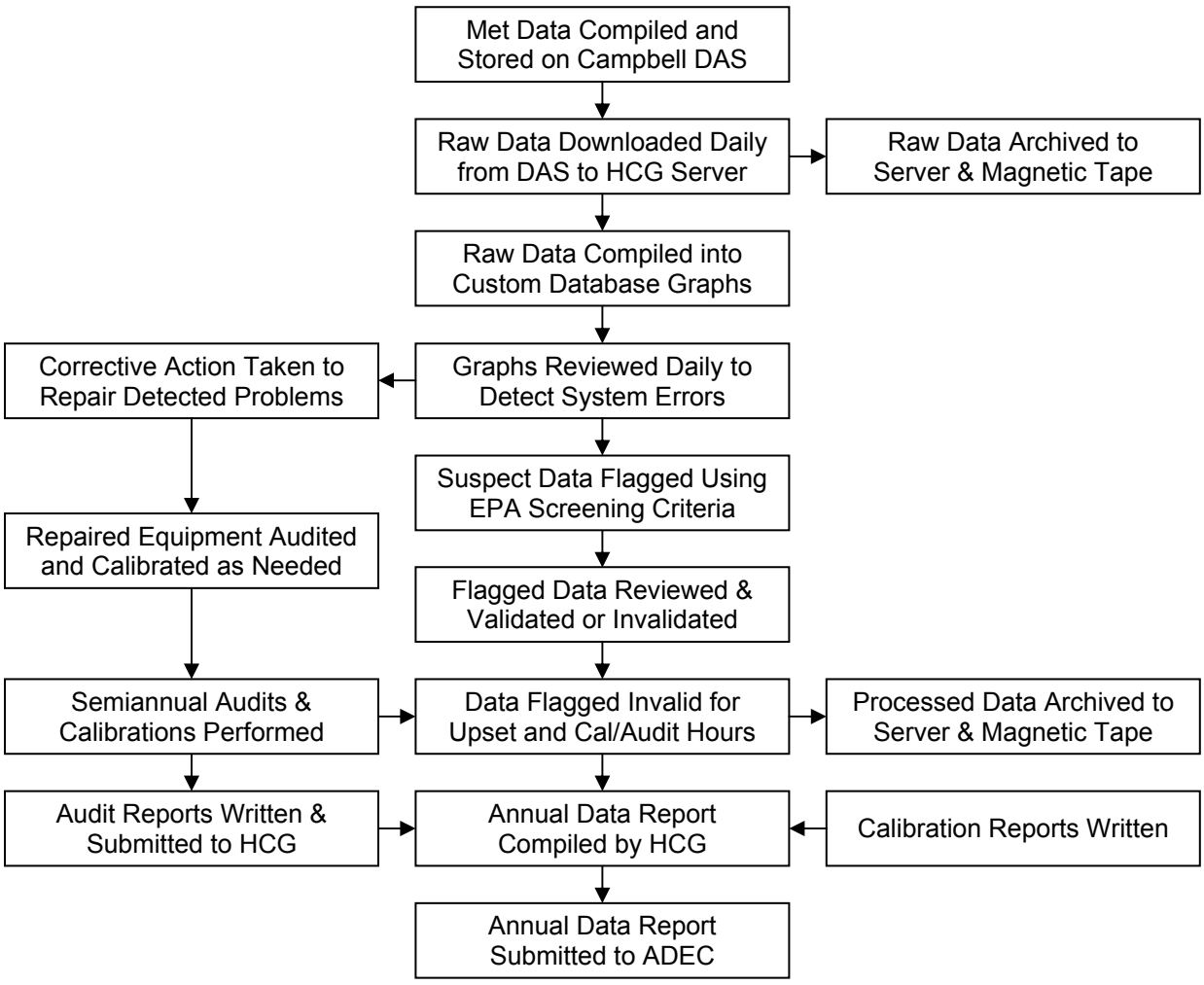
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: NDM Operator: Dominic Alternate: Steve Mackey Date: Sep 27, 2007
Witnesses: Dominic Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.
Are written procedures for data handling available for the project?	■ Yes □ No	Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing? ■ Yes □ No Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use? ■ Yes □ No Comments: None.

Are adjusted and unadjusted data sets maintained? ■ Yes □ No Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.
- Maintain all equipment manuals in the field or on the field computer.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 27, 2007

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
8:59:00	8:58:53	**-00:00:07**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G3473 # 2/2 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G3473 # 1/2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: ?
End: ?

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	41.96	42.16	0.20	Pass	42.16	0.20	Pass	0.00	Pass
Warm	15 to 25	21.93	21.92	-0.01	Pass	21.92	-0.01	Pass	0.00	Pass
Ice Bath	0	0.15	0.15	0.00	Pass	0.15	0.00	Pass	0.00	Pass
Cold	-15 to -25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Very Cold	-35 to -45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Max Abs. Error		0.20	**PASS**		0.20	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: No dry ice available to run cold temperature tests.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** C0540041 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1307	68.3	9.4	3.9	67.4	9.7	4.0	0.1	Pass
1444	75.4	9.3	5.3	75.1	9.7	5.5	0.2	Pass
1527	76.2	9.3	5.4	76.1	9.5	5.5	0.1	Pass
					Max Abs. Error		0.2	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 27, 2007

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5192	**Cup #:**	2325	**Range:**	0-60	**m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4868	**Vane #:**	1492	**Range:**	0-360	**Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Watters Mdl 366-3	**S.N.#:**	4864	
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674					
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell Mdl 366-0	**S.N.#:**	5042	
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	18.0	**E of N**		

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: ? End: ?

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New Instrument/DAS - No In-Situ Test				
Time: Begin: N/A End: N/A		**Max Abs. Error**		
		Mean Abs. Error		

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	180.5	0.5	Pass
West	270.0	271.0	1.0	Pass
North	360.0	0.1	0.1	Pass
East	90.0	90.1	0.1	Pass
North	360.0	0.1	0.1	Pass
West	270.0	272.1	2.1	Pass
South	180.0	180.3	0.3	Pass
East	90.0	91.2	1.2	Pass
	Max Abs. Error		**2.1**	**PASS**
	Mean Abs. Error		**0.7**	**PASS**

Time: Begin: 1113 End: 1117

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	30.3	0.3	Pass	330.0	332.1	2.1	Pass
60.0	60.9	0.9	Pass	355.0	357.4	2.4	Pass
90.0	91.2	1.2	Pass	30.0	30.3	0.3	Pass
120.0	121.6	1.6	Pass	60.0	60.8	0.8	Pass
150.0	151.4	1.4	Pass	90.0	91.2	1.2	Pass
180.0	181.2	1.2	Pass	120.0	121.4	1.4	Pass
210.0	211.3	1.3	Pass	150.0	151.4	1.4	Pass
240.0	241.2	1.2	Pass	180.0	181.4	1.4	Pass
270.0	271.6	1.6	Pass	**Max Abs. Error**		**2.4**	**PASS**
300.0	301.6	1.6	Pass	**Mean Abs. Error**		**1.3**	**PASS**

Time: Begin: 1145 End: 1150

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.0049	<0.003	**PASS**
New	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.104	<0.060	**PASS**
New	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
East Flank Augustine	336.2	336.5	0.3	Pass
North Iniskin Island	268.9	269.1	0.2	Pass
Peak 3673	145.9	145.7	-0.2	Pass
South Cottonwood Bay	102.6	102.3	-0.3	Pass
Compass	171.0	169.9	-1.1	Pass
Time: Begin: 1330		**Max Abs. Error**	**1.1**	**PASS**
End: 1410		**Mean Abs. Error**	**0.4**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 27, 2007

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.5 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 78078	**Prop #:** 64950	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Watters Mdl 366-3	**S.N.#:** 4864				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 18.0	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: ? End: ?

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
New Instrument/DAS - No In-Situ Test				
Time: Begin: N/A		**Max Abs. Error**		
End: N/A		**Mean Abs. Error**		

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	32.3	2.3	Pass	150.0	149.5	-0.5	Pass	270.0	270.5	0.5	Pass
60.0	62.7	2.7	Pass	180.0	178.4	-1.6	Pass	300.0	301.3	1.3	Pass
90.0	91.3	1.3	Pass	210.0	209.1	-0.9	Pass	330.0	332.0	2.0	Pass
120.0	120.4	0.4	Pass	240.0	239.3	-0.7	Pass	355.0	355.8	0.8	Pass
					Time: Begin:	?		**Max Abs. Error**		**2.7**	**PASS**
					End:	?		**Mean Abs. Error**		**1.3**	**PASS**

WIND SPD TORQUE TEST

Bearings Replaced?	Limit oz-in	Torque oz-in	Pass/ Fail?
In-Situ	0.014	0.005	**PASS**
New	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Replaced?	Limit gm-cm	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	7.0	**PASS**
New	11.0	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
East Flank Augustine	336.2	337.0	0.8	Pass
North Iniskin Island	268.9	268.7	-0.2	Pass
Peak 3673	145.9	147.9	2.0	Pass
South Cottonwood Bay	102.6	105.0	2.4	Pass
Compass	171.0	171.9	0.9	Pass
Time: Begin: 1330		**Max Abs. Error**	**2.4**	**PASS**
End: 1410		**Mean Abs. Error**	**1.3**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Northern Dynasty **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 27, 2007

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C0910005 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1303	29.70	29.61	1002.64	1004.30	1.7	Pass
1407	29.69	29.60	1002.30	1003.80	1.5	Pass
			Max Abs. Error		1.7	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

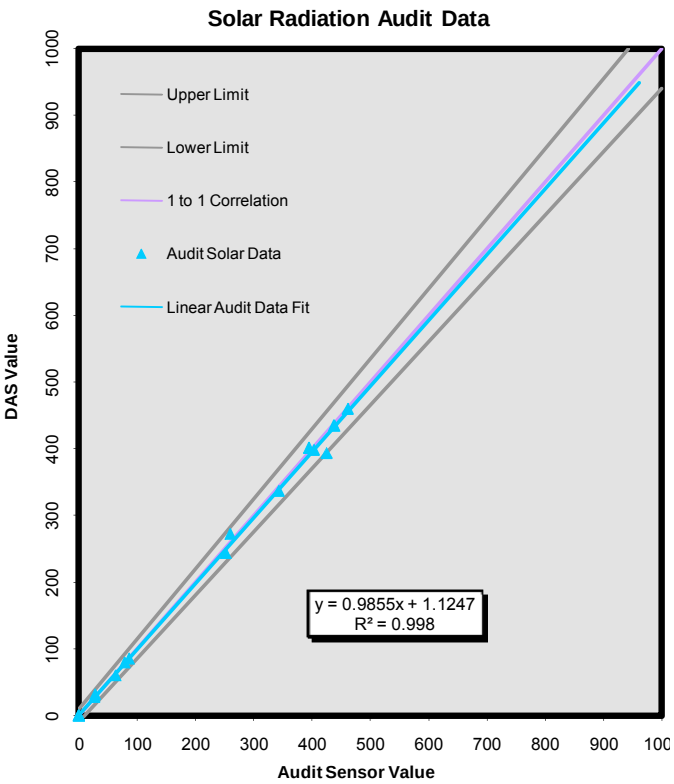
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

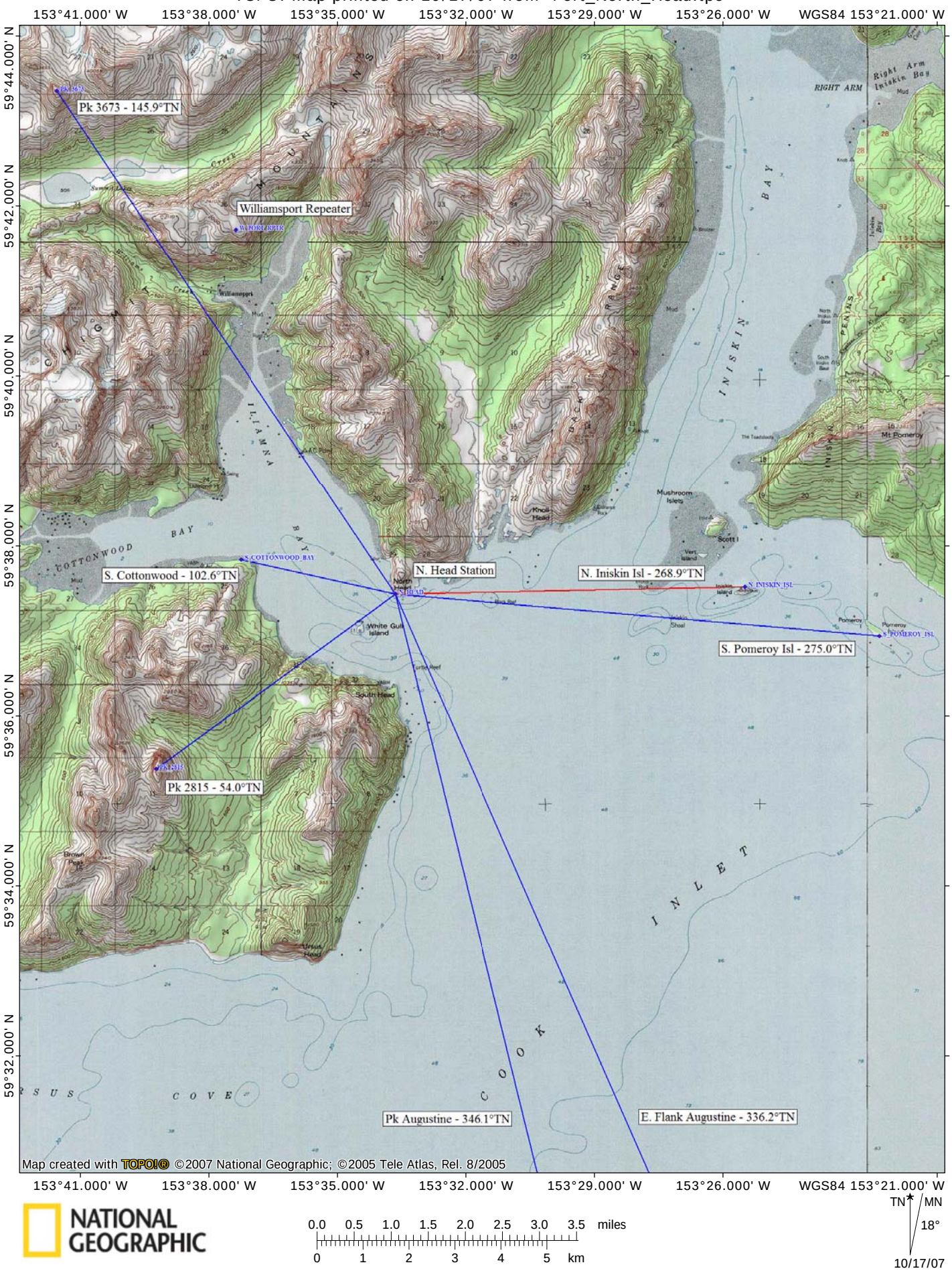
Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56189 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
852	86.3	85.5	-0.8	±14.3	-0.9%	Pass
1120	461.3	460.5	-0.8	±33.1	-0.2%	Pass
1136	437.7	435.6	-2.1	±31.9	-0.5%	Pass
1245	438.4	434.8	-3.6	±31.9	-0.8%	Pass
1800	63.4	60.4	-3.1	±13.2	-4.8%	Pass
1900	27.2	28.2	1.0	±11.4	n/a	Pass
2000	0.2	0.7	0.5	±10.0	n/a	Pass
2100	0.0	0.0	0.0	±10.0	n/a	Pass
600	0.0	0.0	0.0	±10.0	n/a	Pass
700	0.1	0.3	0.2	±10.0	n/a	Pass
800	28.2	31.9	3.7	±11.4	n/a	Pass
900	78.9	79.6	0.7	±13.9	0.8%	Pass
1000	259.7	272.4	12.7	±23.0	4.9%	Pass
1100	394.5	402.0	7.5	±29.7	1.9%	Pass
1200	425.0	394.2	-30.8	±31.3	-7.2%	Pass
1300	403.4	398.9	-4.5	±30.2	-1.1%	Pass
1400	342.8	337.4	-5.4	±27.1	-1.6%	Pass
1500	252.3	243.6	-8.7	±22.6	-3.4%	Pass
Corr. Val	**0.9990**	**Max Abs. Percent Error**			**7.2%**	**PASS**
R² Value	**0.9980**	**Intercept**	**1.1**	**Slope**	**0.9855**	**PASS**



Begin Date: 09/26/07 **End Date:** 09/27/07

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.


TOPO! map printed on 10/17/07 from "Port_North_Head.tpo"
153°41.000' W
153°38.000' W
153°35.000' W
153°32.000' W
153°29.000' W
153°26.000' W
WGS84 153°21.000' W
59°44.000' N
59°42.000' N
59°40.000' N
59°38.000' N
59°36.000' N
59°34.000' N
59°32.000' N
Pk 3673 - 145.9°TN
Williamsport Repeater
S. Cottonwood - 102.6°TN
N. Head Station
N. Iniskin Isl - 268.9°TN
S. Pomeroy Isl - 275.0°TN
Pk 2815 - 54.0°TN
Pk Augustine - 346.1°TN
E. Flank Augustine - 336.2°TN
Map created with TOPO!® ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles
0 1 2 3 4 5 km
TN MN
18°
10/17/07

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

Black unit

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

R.M. Young Company
2801 Aero Park Drive
Traverse City, Michigan 49686 USA

Certificate of Calibration and Testing

Test Unit:			
Model:	18801	Serial Number:	CA01674
Description:	Anemometer Drive - 10 to 10,000 RPM		
	- Comprised of Models 18820 Control Unit & 18830 Motor Assembly		

R.M. Young Company certifies that the above equipment has been inspected and calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technologies (NIST).

Nominal Motor Rpm	Output Frequency (1) Hz	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6000	3200	6000	6000
8100	4320	8100	8100
9900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output
(2) Frequency output produces 32 pulses per revolution of the motor shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 22 November 2006

Tested By EJ

Houston Precision, Inc. Calibration Report

8729 Gulf Freeway
Houston, TX 77017-6504

Company:	Hoefler Consulting Group	**Doc #:**	36861
Address:	3401 Minnesota Drive Suite 300 Anchorage, AK 99503	**Date:**	10/25/2006
		PO#:	1208-003-161
Contact:	Chris Lindsey	**Page:**	1
Dept:			

Gage:	Torque Watch m#366-3	**Control:**	4864
Mfg:	Water's	**Model:**	Torque Watch m#366-3
Location:		**Serial #:**	4864

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by: Caltech Calibration
Original Certificate (attached) # 4074

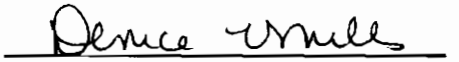
Reference HPI S/O # 14307

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:

:

Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 10/25/2007**

Certified By: Denice V. Mills Signature: 

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4074
Instrument Make: Water TQ Watch
Model: 366-3
S/N: 4864
ID: 4864

Date: 10-25-06
Temp: 74 Deg f
Humidity: 43%
Rec. In Tol.
Due Date: 10-25-07

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by:_____

Comments:

Standards Used	Model	Certification Number	Due Date
Troemner Weights	**1156**	**822/270636-04**	**3-01-08**
In. Oz. Range Red	**As Found**	**After Adjust**	**Final Reading**
.003	.003	none	.003
.009	.008	none	.008
.015	.014	none	.014
.021	.022	none	.022
.027	.028	none	.028
.03	.02	none	.02
Black			
.03	.03	none	.03
.024	.024	none	.024
.018	.017	none	.017
.012	.011	none	.011
.006	.005	none	.005
.003	.002	none	.002

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

Houston Precision, Inc.

8729 Gulf Freeway
Houston, TX 77017-6504

Calibration Report

Company:	Hoefler Consulting Group	**Doc #:**	37827
Address:		**Date:**	1/10/2007
	3401 Minnesota Drive, Suite 300		
	Anchorage, AK 99503	**PO#:**	1208-004-403
Contact:	Dominic Shallies	**Page:**	1
Dept:			

Gage:	Torque Watch	**Control:**	5042
Mfg:	HONEYWELL	**Model:**	366
Location:	Calibration Lab	**Serial #:**	5042

Parameters:

Parameter:

Text:

Comments:

Calibration Completed by:Cal-Tech Calibration, Inc.
Original Certificate (attached) #4327

Reference HPI S/O #14549

We certify the equipment used for this calibration is traceable to NIST through one or more of the following numbers:
: VENDOR MASTER
Last / Next Cal Dates: -->

Gage Status: PASS **Next Calibration Due: 1/10/2008**

Certified By: Denice V. Mills Signature: Denice V Mills

This certificate is not valid unless all 1 page(s) are present.
*Laboratory Environmental Conditions: Temperature: 68°F +/- 3.6°F and/or 20C +/- 2C, Relative Humidity: between 40% and 60%.
*Calibration measurements are performed in accordance with guidelines set forth in ANSI/NCSL Z540-1-1994 and Houston Precision's Quality manual.
*The measurement of uncertainity has not been taken into account when reporting readings "in" or "out of tolerance" on this calibration report.
*If additional information regarding this calibration is required, please contact this laboratory.
*All calibrations have been performed under the supervision and authority of Omar Martinez, Lab Manager.
*Any number of factors may cause the subject of this calibration to drift out of calibration before the recommended interval has expired.
HPI will not be held responsible for the calibration status of an item whose calibration interval exceeds the actual validity of the calibration.
*This Report shall not be reproduced expect in full, or with the expressed written permission of Houston Precision, Inc.
End of document.

Certificate of Calibration

The instrument listed below meets or exceeds published specifications and has been calibrated under controlled conditions and is traceable to the National Institute of Standards and Technology(N.I.S.T.), or to accepted intrinsic standards of measurement, or by the ratio type of self-calibration techniques. Cal-Tech Calibration conforms to the following, ANSI/NCSL Z540-1-1994, ISO/IEC 25/17025.

Customer: Houston Precision
Certificate Number: 4327
Instrument Make: Honeywell Torque Watch
Model: 366
S/N: none
ID: 5042

Date: 1-10-07
Temp: 72 Deg f
Humidity: 39%
Rec. In Tol.
Due Date: 1-10-08

This report may not be reproduced, except in full without written permission from Cal-Tec Calibration.

Certification by: J. Sears

Accuracy: +\- 1% of reading.

Comments:

Standards Used	Model	Certification Number	Due Date
Acculab	300g	822/270236-04	12-01-07

Reading In/oz	As Found	After Adjust	Final Reading
0.10	0.1	none	0.1
0.20	0.19	none	0.19
0.40	0.40	none	0.40
0.60	0.60	none	0.60

Cal-Tech Calibration, Inc.
1314 FM 646 West /Ste. 15 / Dickinson, Texas 77539 /Phone 281-614-0050 / Fax 281-614-0046

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner:
Name: DOMINIC SHALLIES

Address: 3401 MINNESOTA DR. STE # 300

City, State, Zip: ANCHORAGE, AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 2ND Day of NOVEMBER 2006

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: RA 7277

ORDER NUMBER: 23732

LOT NUMBER: 19802

MODEL NUMBER: 5008

SERIAL NUMBER: 508079319

CALIBRATION DATE: 11-2-06

RECALIBRATION DUE DATE: 11-2-07

Signed: Linda Lenyen
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

Chinook Engineering
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THE EPPLEY LABORATORY, INC.
12 Sheffield Ave., P.O. Box 419, Newport, RI 02840 USA
Telephone: 401-847-1020 Fax: 401-847-1031
Email: eplab@mail.bbsnet.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments for Precision Measurements Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20 to 40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one-half a solar constant). The adopted calibration temperature is 25 °C.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$9.29 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Ninth International Pyrheliometric Comparisons (IPC IX) at Davos, Switzerland in September-October 2000.

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to:
Hoefler Consulting Group
Anchorage, Alaska

Date of Test: November 30, 2006

In Charge of Test: R. T. Eppman

S.O. Number: 60951
Date: November 30, 2006

Reviewed by: Thomas D. Kirk

Remarks:

Pebble North Head Station
April 2008
Quality Assurance Performance Audit

for the:

Pebble Project
Meteorological Monitoring Program
Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corp.

prepared by:

Hoefler
CONSULTING GROUP

Pebble North Head
PSD Meteorological Monitoring Station
April 2008
Quality Assurance Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 PERFORMANCE AUDIT 2

2.1 Performance Audit Methodology 2

2.1.1 Data Acquisition System 3
2.1.2 Air Temperature and Air Temperature Difference 3
2.1.3 Relative Humidity 3
2.1.4 Wind Speed 4
2.1.5 Wind Direction 4
2.1.6 Barometric Pressure 6
2.1.7 Solar Radiation 6

2.2 Performance Audit Results 6

2.3 Performance Audit Recommendations 6

3.0 REFERENCES 8

LIST of FIGURES and TABLES

Table 2-1 Performance Audit Methods and Acceptable Limits 2
Table 2-2 North Head April 8, 2008 Performance Audit Summary 7

LIST of APPENDICES

A PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
B AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for The Pebble Limited Partnership, care of Pebble Mines Corporation (PMC); in support of the Pebble Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the North Head monitoring station located near a potential project port site.

The North Head station is located at North Head, where Iniskin Bay meets Iliamna Bay in Cook Inlet. The station is situated at the 75 foot level of the 525 foot high North Head knoll. The station is situated on a relatively flat bench, near the water's edge. The North Head station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' northeast of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble North Head station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR10X DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for PMC to serve as a quantitative review of the Pebble North Head station. To that end, a Performance Audit was undertaken in order to demonstrate that the equipment installed at the meteorological monitoring station is operating correctly and meets the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 PERFORMANCE AUDIT

2.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 2-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 2-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

2.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

2.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6” diameter by 9” high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

2.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and

temperature readings are used. For the audit; instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

2.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

2.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the

compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

2.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

2.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change. An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

2.2 Performance Audit Results

The performance audit was conducted at the North Head station on April 8, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and after repairing the RM Young wiring, all sensors yielded errors below the PSD limits. The instrumentation cable for the RM Young anemometer had apparently failed during a recent high wind event, judging by a review of the data. The cable was repaired and the instrument passed all subsequent tests without adjusting the azimuth alignment. The time on the DAS was one hour fast due to being reset to Daylight Saving Time on March 26, 2008. The data set was shifted one hour forward of Alaska Standard Time by the HCG polling computer, but should be recoverable by adjusting the data timestamp. Table 2-2 contains summary data from the field audit and complete audit reports and audit equipment calibration certificates are contained in Appendix A and Appendix B respectively.

2.3 Performance Audit Recommendations

- Manually adjust DAS clocks and ensure that the reference computer is always set to Alaska Standard Time.

Table 2-2 North Head April 8, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	1:00:03	Fail[1]
2-m Temperature Accuracy	≤ ±0.5	°C	0.36	Pass
10-m Temperature Accuracy	≤ ±0.5	°C	0.36	Pass
Air Temperature Difference	≤ ±0.1	°C	0.00	Pass
Relative Humidity (dew point)	≤ ±1.5	°C	-0.9	Pass
Climatronics Wind System				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	3.6	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	-3.2	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.5	Pass
Wind Direction Linearity	≤ 3	Degree	1.1	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	1.4	Pass
RM Young Wind System				
Wind Speed Torque	≤ 1.0	gm-cm	0.5	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	7.0	Pass
Wind Dir. Azim. Align. (as-found)	≤ ±5	Degree	N/A	Fail[2]
Wind Direction Accuracy	≤ ±5	Degree	2.0	Pass
Wind Direction Linearity	≤ 3	Degree	0.8	Pass
Wind Dir. Azim. Align. (as-left)	≤ ±5	Degree	2.5	Pass
Barometric Pressure	≤ ±3	Mbar	1.7	Pass
Solar Radiation	≤ ±5+Res	% input	-5.2	Pass[3]

1. DAS time set one hour forward to Alaska Standard Time.
2. Broken wire on instrument, no in situ azimuth test.
3. Max % error value of 5.2 within limit of 5% input + resolution, see audit.

3.0 REFERENCES

"Draft Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Meteorological Measurement Methods Validation Criteria", ADEC, November 2007.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 8, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: Data polling server reset DAS clock ahead one hour to Daylight Saving Time on 3/26/08, need to adjust data set. DAS SN# 11725, Wire Panel SN# 11396.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
10:27:30	11:27:33	**1:00:03**	**FAIL**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G3473 # 2/2	**Range:**	-50 to 50 **°C**
10-M Thermistor:	**Make:**	Met One	**Model:**	062MP	**S.N.#:**	G3473 # 1/2	**Range:**	-50 to 50 **°C**
Audit Digital Thermometer:	**Make:**	Van Waters & Rogers	**Model:**	61220/601	**S.N.#:**	51091749	**Range:**	-40 to 150 **°C**
Audit Probe:	**Make:**	Van Waters & Rogers	**Model:**	61220/604	**S.N.#:**	240301145	**Range:**	-40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1400
End: 1445

THERMISTOR COLLOCATED STANDARD TEST										
Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	36.24	36.14	-0.10	Pass	36.14	-0.10	Pass	0.00	Pass
Warm	15 to 25	17.91	17.88	-0.03	Pass	17.88	-0.03	Pass	0.00	Pass
Ice Bath	0	-0.04	0.07	0.11	Pass	0.07	0.11	Pass	0.00	Pass
Cold	-15 to -25	-21.70	-21.67	0.03	Pass	-21.67	0.03	Pass	0.00	Pass
Very Cold	-35 to -45	-40.04	-39.68	0.36	Pass	-39.68	0.36	Pass	0.00	Pass
		Max Abs. Error		0.36	**PASS**		0.36	**PASS**	0.00	**PASS**

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: None.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor:	**Make:**	Vaisala	**Model:**	HMP45AC	**S.N.#:**	C2730046	**Range:**	0.8 to 100 **% RH**
Audit Equipment:	**Make:**	Vaisala	**Model:**	HMI 41	**S.N.#:**	X0650080	**Range:**	0 to 100 **% RH**
Audit Equipment:	**Probe#**	HMI41 X07450015						

RH COLLOCATED STANDARD TEST								
Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
1140	48.4	-3.9	-12.2	50.2	-3.8	-12.2	0.0	Pass
1254	42.9	-2.7	-12.2	46.2	-2.6	-12.4	-0.2	Pass
1310	43.6	-2.5	-12.1	45.0	-2.6	-13.0	-0.9	Pass
					Max Abs. Error		0.9	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 8, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5192	**Cup #:**	2325	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4868	**Vane #:**	1492	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.9	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1403 End: 1405

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
East Flank Augustine	336.2	333.6	-2.6	Pass
North Iniskin Island	268.9	265.8	-3.1	Pass
Peak 3673	145.9	144.0	-1.9	Pass
South Cottonwood Bay	102.6	100.4	-2.2	Pass
Pk 2815	54.0	53.6	-0.4	Pass
Compass	208.5	205.3	-3.2	Pass
Max Abs. Error			**3.2**	**PASS**
Mean Abs. Error			**2.2**	**GOOD**

Time: Begin: 1200 End: 1240

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	179.2	-0.8	Pass
West	270.0	269.4	-0.6	Pass
North	360.0	0.2	0.2	Pass
East	90.0	90.5	0.5	Pass
North	360.0	0.2	0.2	Pass
West	270.0	268.4	-1.6	Pass
South	180.0	178.9	-1.1	Pass
East	90.0	90.8	0.8	Pass
Max Abs. Error			**1.6**	**PASS**
Mean Abs. Error			**0.7**	**PASS**

Time: Begin: 1346 End: 1349

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.2	-0.8	Pass	330.0	328.1	-1.9	Pass
60.0	60.0	0.0	Pass	355.0	354.1	-0.9	Pass
90.0	89.2	-0.8	Pass	30.0	29.2	-0.8	Pass
120.0	119.3	-0.7	Pass	60.0	59.9	-0.1	Pass
150.0	148.7	-1.3	Pass	90.0	89.5	-0.5	Pass
180.0	178.7	-1.3	Pass	120.0	119.6	-0.4	Pass
210.0	208.3	-1.7	Pass	150.0	148.9	-1.1	Pass
240.0	238.1	-1.9	Pass	180.0	178.7	-1.3	Pass
270.0	267.5	-2.5	Pass	**Max Abs. Error**		**2.5**	**PASS**
300.0	298.4	-1.6	Pass	**Mean Abs. Error**		**1.1**	**PASS**

Time: Begin: 1357 End: 1359

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	<0.2	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	3.6	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Compass	212.5	212.6	0.1	Pass
North Iniskin Island	268.9	269.2	0.3	Pass
East Flank Augustine	336.2	335.9	-0.3	Pass
South Cottonwood Bay	102.6	104.0	1.4	Pass
Peak 3673	145.9	146.8	0.9	Pass
Max Abs. Error			**1.4**	**PASS**
Mean Abs. Error			**0.6**	**GOOD**

Time: Begin: 1540 End: 1615

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 8, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ*

Height: 10.5 **Meters**

Wind Sensor:	**Make:** RM Young	**Model:** 05305 AQ	**S.N.#:** 78078	**Prop #:** 64950	**Range:** 0-360	**Deg**			
Spd Audit Eq:	**Low Spd:** RM Young	**Model:** 18811	**S.N.#:** CA02136	**Torque:** Honeywell 366-3m	**S.N.#:** 5103				
Spd Audit Eq:	**High Spd:** RM Young	**Model:** 18801	**S.N.#:** CA01674						
Dir Audit Eq:	**Linearity:** RMY Mdl 18112 Bench Stand	**S.N.#:** None	**Torque:** RMY Mdl 18331 Torque Gauge	**S.N.#:** None					
Dir Audit Eq:	**Compass:** Brunton	**Model:** 11-F5008	**S.N.#:** 5080799319	**Magnetic Declin:** 17.9	**E of N**				

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1525 End: 1530

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Broken wire -				
No In-Situ Test				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	31.1	1.1	Pass	150.0	148.7	-1.3	Pass	270.0	269.5	-0.5	Pass
60.0	60.0	0.0	Pass	180.0	179.0	-1.0	Pass	300.0	298.9	-1.1	Pass
90.0	89.5	-0.5	Pass	210.0	209.5	-0.5	Pass	330.0	328.0	-2.0	Pass
120.0	119.2	-0.8	Pass	240.0	239.6	-0.4	Pass	355.0	354.3	-0.7	Pass
				Time: Begin:	1456	**Max Abs. Error**		**2.0**	**PASS**		
				End:	1458	**Mean Abs. Error**		**0.8**	**PASS**		

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	0.5	**PASS**
New	1.0	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	7.0	**PASS**
New	11.0	0.153	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
Compass	212.5	212.9	0.4	Pass
North Iniskin Island	268.9	269.5	0.6	Pass
East Flank Augustine	336.2	337.1	0.9	Pass
South Cottonwood Bay	102.6	105.1	2.5	Pass
Peak 3673	145.9	147.6	1.7	Pass
Time: Begin: 1540	**Max Abs. Error**	**2.5**	**PASS**	
End: 1615	**Mean Abs. Error**	**1.2**	**GOOD**	

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Upon arrival RM Young sensor outputing speed but not direction, due to one broken wire. Cable repaired and then linearity tested and azimuth tested with instrument alignment key in original orientation.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Mines Corp **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Apr 8, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C0910005 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST						
Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
1310	29.65	29.56	1000.9	1002.27	1.3	Pass
1620	29.62	29.53	999.9	1001.66	1.7	Pass
			Max Abs. Error		1.7	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/26/07	
Audit Inst	Offset Amount
24.11	-0.11
26.28	-0.10
28.10	-0.10
30.09	-0.09
Intercept	**-0.18**
Slope	**0.0031**

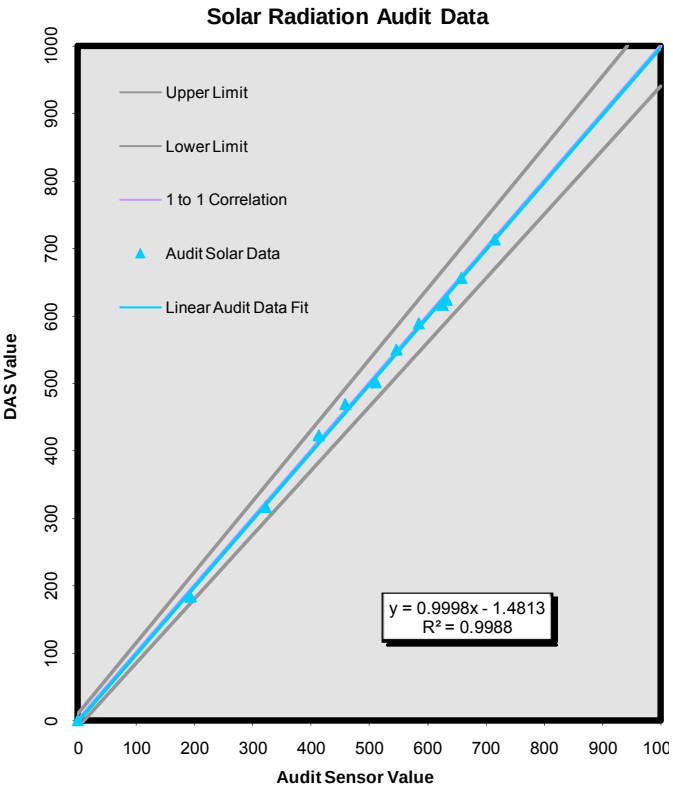
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: None.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

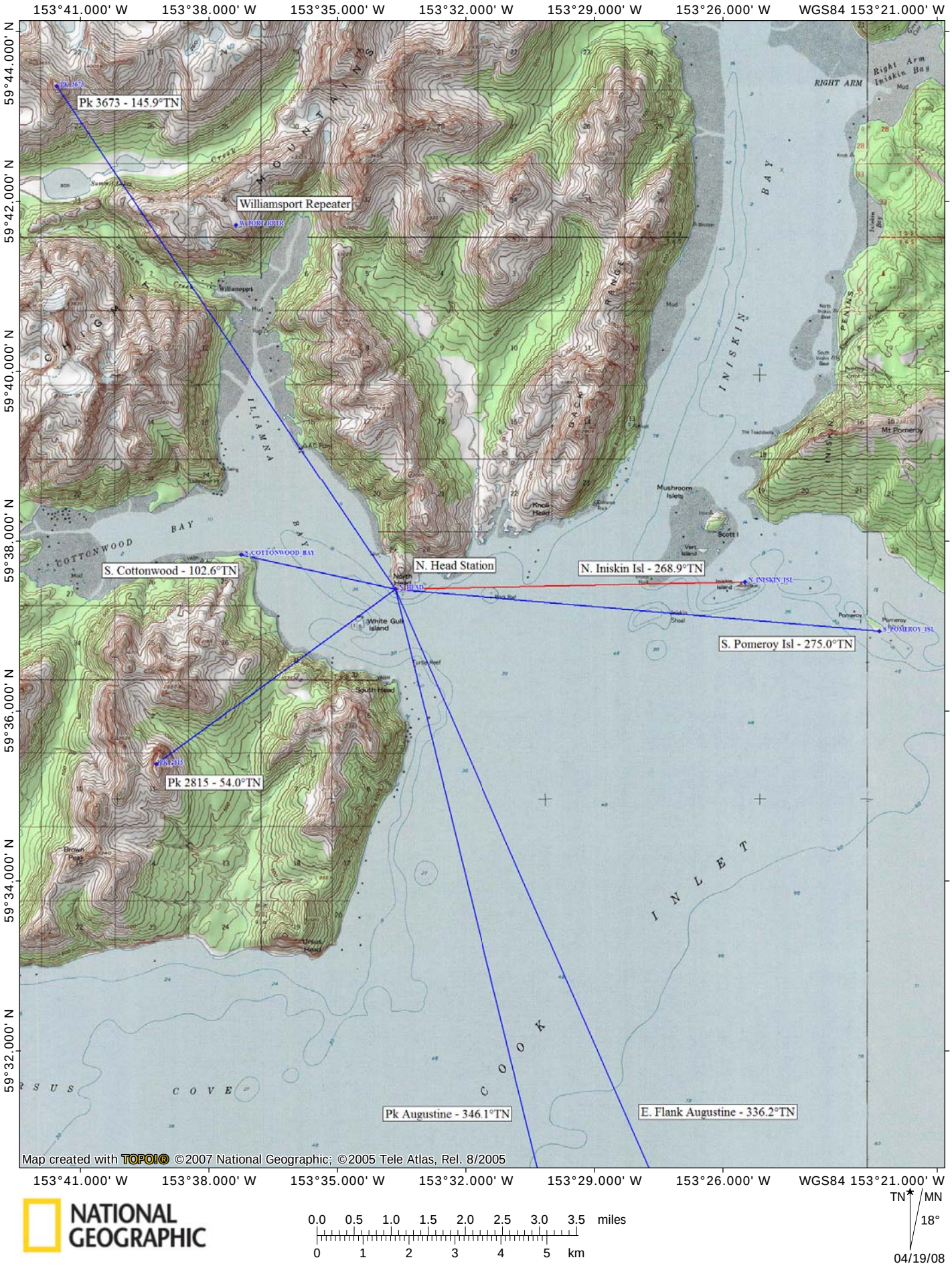
Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56189 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
1125	322.4	316.3	-6.1	±26.1	-1.9%	Pass
1129	510.9	501.5	-9.4	±35.5	-1.8%	Pass
1256	625.8	615.9	-9.9	±41.3	-1.6%	Pass
1306	632.7	623.6	-9.1	±41.6	-1.4%	Pass
1505	657.4	656.5	-0.9	±42.9	-0.1%	Pass
1527	714.7	713.4	-1.3	±45.7	-0.2%	Pass
1628	193.3	183.3	-10.0	±19.7	-5.2%	Pass
1635	0.0	0.0	0.0	±10.0	n/a	Pass
1300	584.7	588.8	4.1	±39.2	0.7%	Pass
1400	546.4	550.1	3.7	±37.3	0.7%	Pass
1500	458.7	469.0	10.3	±32.9	2.2%	Pass
1600	413.0	422.6	9.6	±30.7	2.3%	Pass
Corr. Val	**0.9994**	**Max Abs. Percent Error**			**5.2%**	**PASS**
R² Value	**0.9988**	**Intercept**	**-1.5**	**Slope**	**0.9998**	**PASS**



Begin: 04/08/08 (Date) 1120 (Time) **End:** 04/08/08 (Date) 1640 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: None.


TOPO! map printed on 04/19/08 from "Port_North_Head.tpo"
153°41.000' W
153°38.000' W
153°35.000' W
153°32.000' W
153°29.000' W
153°26.000' W
WGS84 153°21.000' W
59°44.000' N
59°42.000' N
59°40.000' N
59°38.000' N
59°36.000' N
59°34.000' N
59°32.000' N
Pk 3673 - 145.9°TN
Williamsport Repeater
N. Head Station
N. Iniskin Isl - 268.9°TN
S. Cottonwood - 102.6°TN
S. Pomeroy Isl - 275.0°TN
Pk 2815 - 54.0°TN
Pk Augustine - 346.1°TN
E. Flank Augustine - 336.2°TN
Map created with TOPO!® ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles
0 1 2 3 4 5 km
TN MN
18°
04/19/08

APPENDIX B
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Alaska Calibration, Inc.

Troubleshooting, Repair and Calibration of
Test & Measurement Equipment

Black unit

CERTIFICATE OF CALIBRATION

WORK ORDER NO. 9665 **TRACEABILITY CERTIFICATE** 07041701

ISSUED TO: Hoefler Consulting Group, Inc

INSTRUMENT:61220-601,Digital Thermometer & 61220-604 Temperature Probe, Fisher Scientific, S/N's 51091749 & 240301145

DATE DONE: April 17, 2007 **DATE DUE:** April 16, 2008

CERTIFIED BY METROLOGIST: A.T. Grabowski A.T. Grabowski **TEMPERATURE:** 69°F **HUMIDITY:** 43% RH

INCOMING STATUS: This instrument was in (XX) was out of ( ) tolerance when received.

CALIBRATION APPARATUS USED

MODEL	NOMENCLATURE	MFR	SERIAL NO.	DUE DATE
MK3900	Temperature Chamber	Delta Design	89308	NCR
32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Made as Needed	Natural Phys. Const.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	A135	11/13/07
DP41-RTD	Digital Thermometer	Omega Engineering	4381337	11/13/07

CHARTED TEMPERATURE READINGS

Laboratory Probe	Test Instrument Thermometer	System Uncertainty
-50.013°C	- 50.025°C	0.009°C
-25.038°C	- 25.052°C	0.009°C
0.007°C	0.011°C	0.009°C
+ 25.033°C	+25.047°C	0.009°C
+50.004°C	+50.012°C	0.009°C

RANGE/LIMITATIONS: Calibrated over entire range.

PROCEDURE & ACCURACY STATEMENT: T.O. 33K5-4-42-1. Accuracy: See Chart Above.

NIST TRACEABLE REPORT NUMBERS

MODEL	NOMENCLATURE	MFR	DUE DATE	REPORT NO.
RFJA0TL150CA060	Temperature Probe	Watlow/Gordon	11/13/07	G209372
-32°F/ 0°C	Ice Bath	Alaska Calibration, Inc	Natural Phys. Const.	Made as Needed

COMPLIANCE

Alaska Calibration Inc.'s calibration practices and procedures comply with the requirements of ANSI/ISO/ Z540-1 and ANSI/ISO/IEC 17025: 2000 and relevant requirements of ISO 9002:1994. The standards used are certified as being traceable to the National Institute of Standards and Technology (NIST), by comparison to SI units through laboratory standards in an unbroken chain of Calibrations through appropriate primary and national measurement standards, derived from an acceptable value of a natural physical constant, or derived by the ratio type of self calibration techniques. Certificate shall not be reproduced, except in full, without the written approval of Alaska Calibration, Inc.

4706 Harding Drive, Suite A, Anchorage, Alaska 99517-3119 (907) 677-1993

VAISALA Certificate of Calibration

Report #: 060407-X0740015-RH RMA #: 95-60966 **Calibration Date: Jun-04-2007**

Model #: HMI41/HMP41 **Serial #: X0650080/X0740015**

Instrument Type: Humidity Transmitter
Instrument Range: 0 to 100%, RH
Instrument Range: -20 to +60 °C, T

Calibration Procedure: 11603100
Recommended Calibration Due Date: Jun-04-2008

Customer: HOEFLER CONSULTING GROUP

City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0%* against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement. *Note: the 0% RH point is not ISO17025 Accredited.

Calibration Data (As Left)

Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.07	21.10	0.03	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	0.10	0.07	2.00	0.50 *
11.17	11.30	0.13	2.00	0.92
32.67	32.50	-0.17	2.00	1.01
74.78	74.80	0.02	2.00	1.02

Problem Noted: **No "As Found" Data. Intermittent readings from Temp Sensor. Damage to Temp Sensor. RH sensor dirty.**
Action Taken: **Replaced Temp and RH sensors. The unit was calibrated.**

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Numbers TN 274176 and TN 274579-07. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 4A			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900610	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7405020	Aug. 4, 2006	Aug. 4, 2007
HMK13B	513796	Mar. 26, 2007	Sep. 26, 2007
HMP233	V4310014	May. 22, 2007	Aug. 22, 2007
HMT333	B0920003	May. 22, 2007	Aug. 22, 2007
HMI41/HMP45	S0720005	Mar. 5, 2007	Jun. 5, 2007

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.40 %RH

Approved By

Technical Operator
Matthew Nocivelli

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

YOUNG

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: 18811 (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft
(2) 27106D produces 10 pulses per revolution of the anemometer shaft
(3) Indicated on the Control Unit LCD display

*Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration DP4863

Date of inspection 26 July 2007

Tested By EJ

R.M. YOUNG COMPANY 2801 Aero Park Drive, Traverse City Michigan 49686-9171 USA
TEL. (231) 946-3980 FAX: (231) 946-4772 Email: met sales@youngusa com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 28 Nov 2007
Inspection Interval One Year

Tested By EJC

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150 Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Ester Gozon

Ester Gozon, Quality Manager

Printed: 10/12/2007

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Easter Gozon

Easter Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner Name: HOEFLER Consulting Group

Address: 340 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER:

MODEL NUMBER: 5008

SERIAL NUMBER: 5080199319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072607. 01 C

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/26/07 Lab temperature 73.0 ℉
Lab pressure 664.9 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.11	0.11	-0.11
26.18	26.28	0.10	-0.10
28.00	28.10	0.10	-0.10
30.00	30.09	0.09	-0.09

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES **NO**
Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: RLS Date: 7/26/2007

Correction: RLS **Corrected Date:** **10/04/07**

Roger L. Sanders, PE

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Email: info@eppleylab.com Internet: www.eppleylab.com

EPLAB
Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: K. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Pebble North Head Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

for the:

Pebble Project

Meteorological Monitoring Program

Iliamna, Alaska

prepared for:

Pebble Limited Partnership,
care of Pebble Mines Corporation

prepared by:

Hoefler
CONSULTING GROUP

Pebble North Head
PSD Meteorological Monitoring Station
September 2008
Quality Assurance Systems Audit
and Performance Audit

Prepared for:

The Pebble Limited Partnership,
care of Pebble Mines Corporation
Anchorage, Alaska

Prepared by:

Hoefler Consulting Group, Inc.
3401 Minnesota Drive, Suite 300
Anchorage, Alaska 99503

TABLE of CONTENTS

1.0 INTRODUCTION 1

2.0 SYSTEMS AUDIT 2

2.1 Systems Audit Methodology 2

2.2 Meteorological Station Onsite Systems Audit 2

2.3 Operations, Data Management and Documentation Systems Audit 4

2.4 Comments and Suggestions 5

3.0 PERFORMANCE AUDIT 6

3.1 Performance Audit Methodology 6

3.1.1 Data Acquisition System 7
3.1.2 Air Temperature and Air Temperature Difference 7
3.1.3 Relative Humidity 7
3.1.4 Wind Speed 8
3.1.5 Wind Direction 8
3.1.6 Barometric Pressure 9
3.1.7 Solar Radiation 9

3.2 Performance Audit Results 10

3.3 Performance Audit Recommendations 10

4.0 REFERENCES 12

LIST of FIGURES and TABLES

Figure 2-1 Pebble North Head Station DAS Wiring Panel 3
Table 3-1 Performance Audit Methods and Acceptable Limits 6
Table 3-2 North Head September 11, 2008 Performance Audit Summary 10

LIST of APPENDICES

A SYSTEMS AUDIT DATA SHEETS
B PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP
C AUDIT EQUIPMENT CALIBRATION CERTIFICATES

1.0 INTRODUCTION

HCG Inc., dba Hoefler Consulting Group (HCG) operates meteorological monitoring stations for Pebble Limited Partnership (PLP) in support of the Pebble Mine Project near Iliamna, Alaska. The air monitoring program is one component of ongoing baseline environmental studies being conducted to support mine permitting, mine design and mine transportation infrastructure development. The stations meet Prevention of Significant Deterioration (PSD) guidelines, although PSD permits may not be required. This report covers the North Head monitoring station located near a potential mine port site.

The North Head station is located at North Head, where Iniskin Bay meets Iliamna Bay in Cook Inlet. The station is situated at the 75 foot level of the 525 foot high North Head knoll. The station is situated on a relatively flat bench, near the water's edge. The North Head station consists of an instrumented 11-meter sectional tower secured with three guy wires. Approximately 20' northeast of the tower is a 5' by 7' insulated building which houses the datalogger and power supply system. The Pebble North Head station is instrumented with PSD quality sensors monitoring the following parameters:

- Ambient Temperature (ºC): Met One 062MP Thermistor Probe at 2-m
- Temperature Difference (ºC): Met One 062MP Thermistors at 2-m and 10-m
- Relative Humidity (%RH): Vaisala HMP45AC Relative Humidity Sensor
- Wind Speed 1 (m/s): Climatronics F460 P/N 100075 Wind Speed Sensor
- Wind Direction 1 (°): Climatronics F460 P/N 100076 Wind Direction Sensor
- Wind Speed 2 (m/s): RM Young 05305 Wind Monitor-AQ
- Wind Direction 2 (°): RM Young 05305 Wind Monitor-AQ
- Sigma Theta (°): Campbell Scientific CR1000 DAS calculated (Yamartino)
- Barometric Pressure (mbar): Vaisala PT101B Barometric Pressure Sensor
- Solar Radiation (W/m2): LI-COR Li-200SX Solar Radiation Pyranometer.

This report has been prepared for PLP to serve as an official review of the Pebble North Head station and a review of the overall Pebble Project Meteorological Monitoring Program. To that end, Systems and Performance Audits were undertaken in order to help demonstrate that the equipment and procedures used for collecting meteorological data by HCG meet the requirements set forth by the U.S. Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC).

2.0 SYSTEMS AUDIT

2.1 Systems Audit Methodology

In the *Quality Assurance Handbook for Air Pollution Measurement Systems* and the *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, EPA provides guidance for conducting systems audits. EPA recommends that a systems audit be conducted to serve as a qualitative review of all aspects of a meteorological monitoring program. The systems audit includes a review of the program plan, station site, facilities, equipment, personnel, procedures, record keeping, data validation and data reporting. The systems audit should be completed within the first 30 days of operation and every year thereafter.

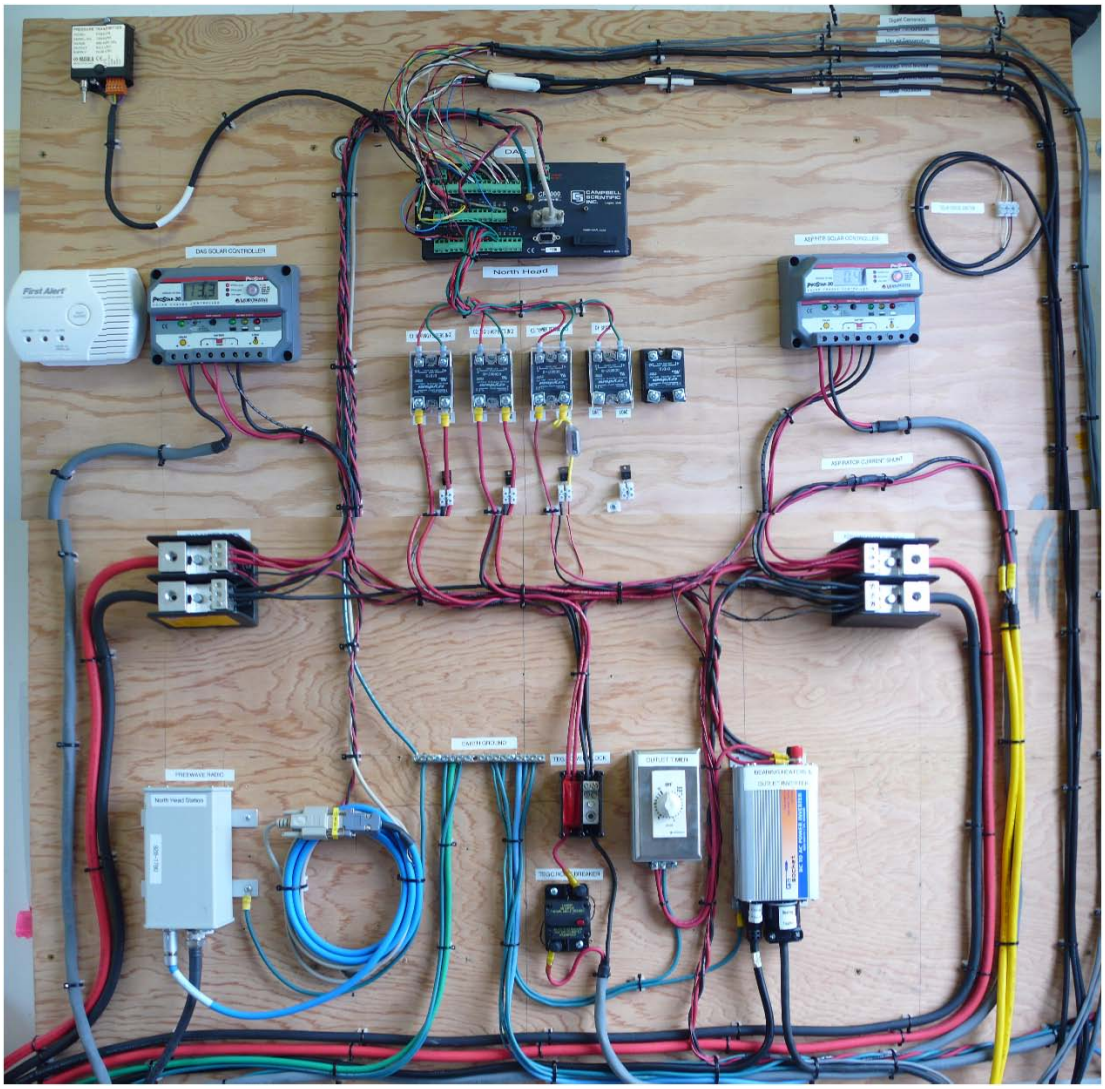
The *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* was completed by HCG in August 2006. This systems audit consisted of a review of the plan, site visits and personnel interviews. Personnel were also observed during station maintenance and calibration operations. All aspects of the program not specifically mentioned in the Plan were reviewed to determine consistency with EPA and ADEC guidelines. The complete systems audit report contained in Appendix A is organized into six major sections; 1) General Program Information, 2) Monitoring Program Staff Organization, 3) Meteorological Monitoring Station Equipment, 4) Standard Operating Procedures, 5) Documentation, 6) Data Processing and Validation, 7) Quality Assurance and Quality Control (QA/QC), and 8) Comments and Suggestions. Each section consists of a question and answer format with additional comments to provide clarity. Flow charts are also used to accurately document program staff organization and the data handling process. A complete list of the references used for the systems audit is contained in Section 4.

2.2 Meteorological Station Onsite Systems Audit

The on-site systems audit of the North Head station was conducted in September 2008. Eric Brudie of HCG completed the systems audit with Dominic Shallies of HCG assisting and witnessing. Mr. Brudie serves as an independent auditor on this project and is not involved with day to day operations of the station.

The Pebble North Head meteorological monitoring station is founded on a stable, well anchored tower with PSD quality sensors securely affixed. In order to protect instrumentation wires; 2" liquid-tight conduit runs from the 12' height on the tower to the prefab building. The data acquisition system (DAS), communications system, solar controllers and power distribution system are mounted on a 4' by 4' plywood wiring panel mounted in the building, see photo.

Figure 2-1 Pebble North Head Station DAS Wiring Panel



The Campbell Scientific CR1000 DAS wiring is well organized and needs no further discussion. Constant communication between the DAS and a dedicated polling computer in the HCG office is integral to this installation. FreeWave spread spectrum radio modems transmit the signal to a SixNet industrial phone modem which is linked to the grid in Iliamna. The met station radio and base radio rely on directional Yagi antennas focused on an omni-directional antenna at the repeater radio. The repeater radio is powered by one 70-Watt solar panel buffered through a solar controller and five 100 Amp-Hr deep cycle gel cell batteries.

Power generation at the meteorological monitoring station consists of three 70-Watt solar panels and a Global Thermoelectric Generator (TEG). One solar panel is dedicated to the DAS and meteorological instrumentation; wired through a solar controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. Two solar panels are dedicated to the aspirator fans, Climatronics bearing heaters, shelter lighting and 120VAC power; also wired through a solar

controller and buffered through two 200 Amp-Hr deep cycle gel cell batteries. The shelter lights and 120VAC inverter for laptop use are routed through manual timers to ensure use only when operators are on site. During the winter months, November through April, the TEG is turned on to supplement the solar power system. The TEG power is routed through relays wired to the DAS control ports which isolate the critical DAS/sensor system during upset conditions. Climatronics heaters are also controlled through relays programmed to limit heater use to weather conditions conducive to icing. All system battery voltages are monitored by the DAS and the thermistor aspirator fans are wired through a current shunt in order to monitor fan operation.

2.3 Operations, Data Management and Documentation Systems Audit

This phase of the systems audit consists of a review of the HCG *Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program* (Plan), and other system documentation, and a review of system operations. System operations include physically running the station and subsequent data management.

The Plan is a comprehensive document which adequately details the Pebble meteorological monitoring program, although not updated to include North Head. Program objectives, installations, operations, data management and quality assurance are all clearly outlined. The Pebble North Head station is representative of the generic Plan design. The Plan provides standard operating procedures and standard forms for all equipment field calibrations and audits. Station operators also had complete DAS and most meteorological sensor manuals on hand at the station. Plan and documentation review are covered further in Appendix A.

Station operators were observed during calibration and maintenance procedures and appeared knowledgeable about all facets of operating the monitoring station. Data are downloaded daily using an automated script on a dedicated polling computer located at the HCG office. The raw data are appended to a station file located on the HCG server, which is backed up daily. The data manager copies the raw data to a custom Access/Excel database, leaving the raw data unaltered. The custom database creates a series of graphs of all meteorological data as well as some station operational parameters. These plots are reviewed 5-6 days per week in order to immediately identify station upsets. An example is a graph of solar radiation and battery voltage; which reveals potential problems with daily charge cycles. Both the Climatronics and RM Young Wind sensor data are plotted together to indicate problems with one of the sensors. All station parameters are plotted with ranges and pairings intended to best reveal upset conditions. Problems are immediately identified and corrective action planned and executed. Steps are taken to flag data which may have been identified as suspect during this graphical data review. Data generated during station maintenance, audits and calibrations are also flagged as invalid.

Prior to compilation of data summary reports, data are screened using EPA recommended screening criteria. Data flagged as outliers by the screening program are further reviewed for consistency with prevailing conditions and then permanently invalidated or validated. Data

ultimately invalidated are permanently removed from the database and the reasoning is codified in a special column in the database. This cleaned dataset is used for all subsequent data summaries, wind roses, data reports and capture rate calculations. More detailed discussion of the operations and data management are contained in the Systems Audit Appendix A.

2.4 Comments and Suggestions

The North Head station is a well designed and operated meteorological monitoring station. The remote station is equipped with a robust and sophisticated power supply which is constantly monitored. The systems audit revealed that HCG possesses the necessary organization, personnel, training, equipment, quality assurance, and quality control procedures to accurately collect and report PSD quality data. HCG adequately maintains the North Head station and practices sufficient data review and preventive maintenance to avoid unnecessary data loss.

The following recommendations are made to the program in order to improve the operation of the stations and ensure their operation is in accordance with standards:

- Maintain complete equipment manuals for station in digital or paper form
- Create custom site visit procedural and inventory checklists
- Keep files on site containing copies of previous visit checklists
- Always use paper calibration forms as well as computer entered forms.

3.0 PERFORMANCE AUDIT

3.1 Performance Audit Methodology

During the performance audit, the station datalogger is interfaced with a portable laptop computer to display the outputs for the meteorological sensors. The value of each meteorological sensor is compared to the output value from the appropriate piece of audit equipment or from calibrated instruments collocated with the sensor. The difference between the station's datalogger reading and the output from each audit instrument is compared with established PSD limits to determine the accuracy of each sensor. Additionally, threshold torques for wind speed and wind direction are measured with audit equipment and compared with manufacturer torques corresponding to the PSD threshold speed of 0.5 m/s. Table 3-1 provides a summary of the performance audit methods and limits used to audit each parameter at the stations.

Table 3-1 Performance Audit Methods and Acceptable Limits

Parameter	Audit Method	EPA/Manufacturer Limit
Datalogger Time	NOAA Clock	≤ ±5:00 minutes from AST
Temperature Accuracy	Collocated NIST thermistor	≤ ±0.5 °C
Temperature Difference	Collocated NIST thermistor	≤ ±0.1 °C
Relative Humidity	Collocated NIST RH sensor	≤ ±1.5 °C of dew point
Wind Speed Accuracy	Synchronous rpm motor	≤ ±0.2 m/s + 5 % observed
Wind Spd Torque (Clim)	Torque watch	≤ 0.35 g-cm (0.0049 oz-in)
Wind Spd Torque (RMY)	Torque watch	≤ 1.0 g-cm (0.014 oz-in)
Wind Direction Alignment	GPS, compass or landmark	≤ ±5° from true azimuth
Wind Direction Accuracy	Linearity tester	≤ ±5° per audit point
Wind Direction Linearity	Linearity tester	≤ 3° mean absolute average
Wind Dir Torque (Clim)	Torque watch	≤ 7.5 g-cm (0.104 oz-in)
Wind Dir Torque (RMY)	Vane torque gauge	≤ 11 g-cm (0.153 oz-in)
Barometric Pressure	Collocated NIST BP sensor	≤ ±3 mbar
Solar Radiation	Collocated NIST sensor	≤ ±5% of input+resolutuion[1]

1. This audit limit is modified from PSD standard, as discussed below.

3.1.1 Data Acquisition System

An audit of the datalogger is conducted by comparing all datalogger outputs to the audit standards, as described below. The datalogger time is checked against an instantaneous time reading from the National Oceanic and Atmospheric Administration (NOAA) clock in Boulder, Colorado, via a global positioning system (GPS) handheld unit or telephone contact with the NOAA clock.

3.1.2 Air Temperature and Air Temperature Difference

The 2-meter and 10-meter thermistors are removed from their aspirator shields and collocated with a National Institute of Standards and Technology (NIST) traceable digital thermometer. The station thermistors and the transfer standard NIST thermometer are taped together and immersed in insulated thermoses containing a series of fluid baths; hot water (35°C to 45°C), warm water (15°C to 25°C), water/ice bath (0°C), cold glycol (-15°C to -25°C) and very cold glycol (-35°C to -45°C). Dry ice is used to cool the glycol baths. Each liquid bath is agitated and allowed to equilibrate before simultaneous readings are taken from the three instruments.

An alternate method can also be used for the low temperature audits, employing a Thermal Mass Device (TMD). The TMD consists of a 6" diameter by 9" high solid aluminum block milled to fit snuggly inside of an insulated Dewar flask. On the top of the TMD, and in corresponding locations on the flask lid, are holes sized to accommodate a variety of Campbell, Climatronics, Met-One and VWR thermistors. The TMD is cooled to the target temperatures by contact with dry ice and then placed in the insulated flask. The audit and station thermistors are inserted through the flask lid and into the appropriate holes in the TMD. After the TMD and the thermistors are allowed to equilibrate, readings for all thermistors are simultaneously taken. The aluminum TMD has a very high thermal conductivity and when allowed to equilibrate inside of the insulated flask, thermal gradients across the TMD are very small.

In all cases, the difference between the individual station thermistors and the NIST standard are compared to the PSD temperature accuracy limit of ±0.5°C. The difference between the two station thermistors (10-m°C minus 2-m°C) is compared to the PSD temperature difference limit of ±0.1°C.

3.1.3 Relative Humidity

Relative humidity (RH) is audited using a collocated NIST traceable RH sensor. The NIST sensor and the field sensor are collocated out of direct sunlight to eliminate solar radiation effects, preferably inside of the motor aspirated shield. If the NIST standard reads directly in dew point °C, those readings are used; if not, relative humidity and temperature readings are used. For the audit, instantaneous readings of dew point, relative humidity and ambient temperature are recorded from the transfer standard and the DAS. All relative humidity and temperature readings are converted to dew point in order to assess the PSD error limit of ±1.5°C dew point.

3.1.4 Wind Speed

Anemometers are audited to determine their accuracies in reading known wind speeds and to ascertain the sensor's threshold torque. The Climatronics and RM Young sensors are audited in very similar manners and are discussed together. The instruments are tested after removal from the tower and after removal of the sensor's props or cups.

First, an RM Young synchronous motor is attached to the shaft of the anemometer by using brand specific coupling devices. The sensor shaft is rotated at several different known revolutions per minute (rpm). Each rotational speed in rpm is equated to a wind speed in meters per second (m/s) by using the anemometer manufacturer's linear calibration formula. The difference between the calculated input speed in m/s and the datalogger output is compared to established PSD limits for each input rpm.

Next, a high precision torque watch is attached to the shaft of the anemometer, once again using custom couplings. Torque readings are made in both directions in each quadrant along the axis of rotation of the shaft. The maximum reading is recorded for the torque required to turn the shaft of the anemometer. The torque value recorded during the audit is compared to manufacturer's torque corresponding to the minimum PSD threshold speed of 0.5m/s.

3.1.5 Wind Direction

The wind direction sensors are first audited as-found to determine the accuracy of their alignment with respect to true north (true azimuth alignment) using one of four methods. In one method, a handheld GPS unit is used to measure the position of the auditor with respect to a waypoint captured under the wind sensor's position on the tower. Using binoculars, the tail of the wind vane is aligned with the auditor's position at a distance of several hundred feet from the tower. The GPS bearing back to the tower waypoint is then compared to the DAS reading. The difference between the two should not exceed ±5° per audit point. This procedure is repeated at least 4 times, once per quadrant, generally near the cardinal directions. The second method uses a calibrated precision compass mounted on a gimbal and tripod. The compass declination is preset for the specific location and date using one of a variety of magnetic declination computer models. The sensor tail is aligned toward the auditor while auditor sights the compass toward the sensor and readings are taken in a similar manner to the GPS method.

Another option is to align the tail of the sensor with a distant identifiable landmark of know bearing. The bearing to the landmark may be ascertained using a variety of methods. One method involves physically capturing a distant GPS waypoint, such as at a discernable structure or emissions stack. Bearings to inaccessible natural landmarks, usually distant mountain peaks, are acquired through the use of various computer mapping programs, such as Natural Geographic's TOPO program or USGS digital raster graphics (DRGs) loaded into AutoCAD. The bearing from the station location to the landmark is compared to the DAS reading. This method yields the most accurate audit value, but is limited by weather and availability of

discernable landmarks. The final method is to align the vane with the tower guy wires or preset survey markers, whose bearing has been ascertained using precision survey equipment.

The wind direction accuracy and linearity are subsequently audited after the wind direction sensor is removed from the tower. The Climatronics sensor is mounted on a Climatronics Model 101984 linearity tester and the RM Young sensor is mounted on an RM Young Model 18112 Vane Angle Bench Stand. Both test fixtures are keyed to their respective sensor and graduated from 0° to 360°. A series of readings starting at 30° and then clockwise in 30° increments are taken. The RM Young is read from 30° to 360° and the Climatronics is read from 30° to 540°. The Climatronics sensor is tested 180° past 360° in order to test the second potentiometer used in some DAS programming. Although not required, the Climatronics sensor is also tested with the vane attached in order to ascertain sensor accuracy and linearity relative to the instrument crossarm. The vane is aligned along the axis of the crossarm to yield the 0°/360° and 180° values and against a square held to the crossarm for the 90° and 270° directions. Four readings are taken in a clockwise direction and four are taken counterclockwise to complete the test. For both the linearity test fixture and crossarm tests, individual error values are assessed for the PSD accuracy limit of ±5° per point and the mean absolute average error is assessed against the linearity limit of 3°.

Next, the RM Young wind direction threshold is tested by measuring wind vane torque using an RM Young Model 18331 Vane Torque Gauge. This device saddles the wind vane and a calibrated spring is pulled to determine maximum torque from readings taken in both directions in all four quadrants. The Climatronics wind direction starting torque is measured with the vane removed by using a precision torque watch in the same manner as the wind speed torque. The highest torque readings are compared to specific manufacturer limits for instrument staring torque.

Finally, the wind direction sensors are placed back on the tower and as-left audits of the azimuth alignments are conducted to ensure the instruments are properly reinstalled.

3.1.6 Barometric Pressure

Barometric pressure (BP) is audited using a collocated NIST traceable BP sensor. The difference between the NIST sensor and the station sensor are compared to the PSD limit of ±3 mbar.

3.1.7 Solar Radiation

Outputs of the station sensor are compared to the output of a level collocated audit solar radiation sensor. The audit sensor is connected to an independent audit datalogger with the scan interval and clock synchronized with the station DAS. Hourly average solar radiation readings and instantaneous readings are recorded during the audit and then input into a custom spreadsheet to calculate a linear regression for the data. The PSD limit for solar radiation audits is ±5% of observed, but this standard is very difficult to obtain at the northern latitude of this installation. This EPA standard is currently undergoing review and is expected to change.

An excepted substitute is that individual DAS and audit data pairs are compared to a limit of ±5% of observed **+ EPA minimum instrument resolution (10W/m²)**. Individual data pairs are evaluated against this standard, but the overall set is restricted to a 5% error by limiting allowable linear slope to 1.0±0.05.

3.2 Performance Audit Results

The performance audits were conducted at the North Head station on September 11, 2008, with Dominic Shallies of HCG assisting. All sensors were challenged with certified audit equipment and with the exception of the 10-m thermistor, yielded errors below the PSD limits. The matched pair of thermistors was replaced and the sensors re-audited. Summary audit results are contained in Table 3-2 and complete audit reports and audit equipment calibration certificates are contained in Appendix B and Appendix C respectively.

3.3 Performance Audit Recommendations

- None.

Table 3-2 North Head September 11, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Datalogger Time	≤ ±5:00	Min:Sec	0:10	Pass
2-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	0.17	Pass
10-m Temperature Accuracy (In Situ)	≤ ±0.5	°C	4.78	Fail
Air Temperature Difference (In Situ)	≤ ±0.1	°C	4.62	Fail
2-m Temperature Accuracy (New)	≤ ±0.5	°C	0.27	Pass
10-m Temperature Accuracy (New)	≤ ±0.5	°C	0.30	Pass
Air Temperature Difference (New)	≤ ±0.1	°C	0.03	Pass
Relative Humidity (Dew Point)	≤ ±1.5	°C	0.8	Pass
Climatronics Wind System (In Situ)				
Wind Speed Torque	≤ 0.35	gm-cm	0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	5.0	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	3.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.3	Pass

Table 3-2 (Cont.) North Head September 11, 2008 Performance Audit Summary

Parameter	Limit	Units	Max Err	Status
Climatronics Wind System (Replacement)				
Wind Speed Torque	≤ 0.35	gm-cm	<0.2	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 7.5	gm-cm	4.5	Pass
Wind Direction Accuracy	≤ ±5	Degree	1.6	Pass
Wind Direction Linearity	≤ 3	Degree	0.6	Pass
Wind Dir. Azim. Alignment	≤ ±5	Degree	1.5	Pass
RM Young Wind System (In Situ)				
Wind Speed Torque	≤ 1.0	gm-cm	0.8	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	11.0	Pass
Wind Dir. Azim. Alignment (as-found)[1]	≤ ±5	Degree	4.3	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.8	Pass
Wind Direction Linearity	≤ 3	Degree	1.9	Pass
RM Young Wind System (Replacement)				
Wind Speed Torque	≤ 1.0	gm-cm	0.4	Pass
Low Wind Spd. Accuracy (≤5m/s)	≤ ±0.2	m/s	0.00	Pass
High Wind Spd. Accuracy (>5m/s)	≤ ±5	% input	0.0	Pass
Wind Direction Torque	≤ 11	gm-cm	6.0	Pass
Wind Direction Accuracy	≤ ±5	Degree	2.2	Pass
Wind Direction Linearity	≤ 3	Degree	1.2	Pass
Wind Dir. Azim. Alignment (as-left)	≤ ±5	Degree	4.7	Pass
Barometric Pressure	≤ ±3	Mbar	0.1	Pass
Solar Radiation	≤ ±5+Res	% input	6.5	Pass[1]

1. Maximum error within limit of 5% of input + resolution, see audit.

4.0 REFERENCES

"Quality Assurance Project Plan for the Pebble Project Meteorological Monitoring Program", Hoefler Consulting Group, Inc., August 2006.

"Quality Assurance Manual for Ambient Air Quality Monitoring" ADEC, August 1996.

"Elements for Ambient Air Monitoring Quality Assurance Project Plan (QAPP)", ADEC, September 2004.

"Ambient Air and/or Meteorological Monitoring Quality Assurance Project Plan (QAPP) Review Checklist", ADEC, September 2004.

"Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)", EPA-450/4-87-007, May 1987.

"Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring", EPA-40 CFR Part 58, Appendix B, November 2004.

"On-Site Meteorological Program Guidance for Regulatory Modeling Applications", EPA-450/4-87-013, August 1995.

"Meteorological Monitoring Guidance for Regulatory Modeling Applications", EPA-454/R-99-005, February 2000.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part I, Ambient Air Quality Monitoring Program Quality System Development", EPA-454/R-98-004, August 1998.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume IV: Meteorological Measurements", EPA/600/R-94/038d, March 1995.

"Quality Assurance Handbook for Air Pollution Measurement Systems, Volume V: Precipitation Measurement Systems", EPA/600/R-94/038e, April 1994.

APPENDIX A
SYSTEMS AUDIT DATA SHEETS

Pebble North Head PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

TABLE OF CONTENTS

1.0 GENERAL PROGRAM INFORMATION 2
1.1 Site Description 2
1.2 Site Location 2
1.2.1 Coordinates 2
1.2.2 Appearance and Safety 2
2.0 MONITORING PROGRAM STAFF ORGANIZATION 2
3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT 3
3.1 Inventory 3
3.2 Equipment Evaluation 3
3.2.1 Data Acquisition System (DAS) and Communications System 3
3.2.2 Power Supply System 4
3.2.3 Meteorological Monitoring Sensors 4
3.2.4 EPA PSD Meteorological Instrument Standards 4
3.3 Station Location and Sensor Placement 6
3.3.1 Tower 6
3.3.2 Temperature Sensors 6
3.3.3 Relative Humidity Sensor 6
3.3.4 Wind Speed and Wind Direction Sensors 6
3.3.5 Barometric Pressure Sensor 7
3.3.6 Solar Radiation Sensor 7
4.0 STANDARD OPERATING PROCEDURES 7
4.1 General 7
4.2 DAS and Meteorological Sensors 7
5.0 DOCUMENTATION 8
5.1 System Reference and Maintenance Manuals 8
5.2 Station Monitoring Plan and Report Forms 8
6.0 DATA PROCESSING AND VALIDATAION 9
6.1 Overall Data Management 9
6.2 Data Collection and Initial Data Review 9
6.3 Corrective Actions 10
6.4 Data Validation 10
6.5 Data Capture 11
6.6 Data Reporting 11
7.0 QUALITY ASSURANCE AND QUALITY CONTROL 11
7.1 Quality Assurance Program 11
7.2 Quality Assurance Methods and Audits 11
8.0 COMMENTS AND SUGGESTIONS 12

Pebble North Head PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

1.0 GENERAL PROGRAM INFORMATION

1.1 Site Description

The Pebble North Head station is located on a bench at North Head knoll where Iniskin Bay meets Iliamna Bay. The 75' high rocky bench overlooking Cook Inlet is relatively flat and vegetated with low shrubs. North Head knoll rises to 525' elevation south of the station.

1.2 Site Location

1.2.1 Coordinates

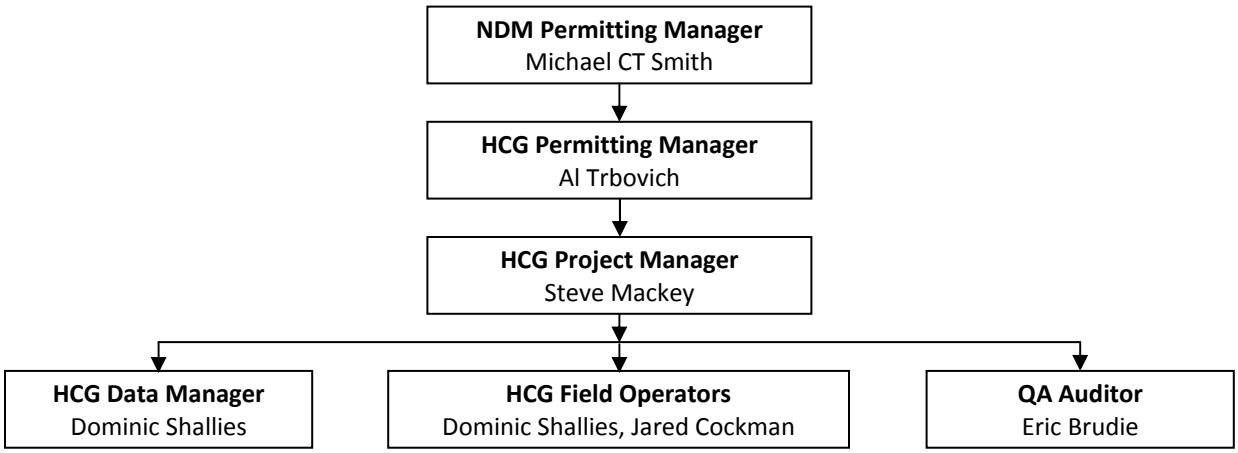
Indicated by Operator	Determined by Auditor
59° 37' N	59° 37.433' N
153° 34' W	153° 33.633 W
Elevation: 75 feet	Elevation: 75 feet

1.2.2 Appearance and Safety

Does the site appear clean, organized and well maintained?	■ Yes □ No	Comments: None.
Does the site appear to be safe and reasonably hazard free?	■ Yes □ No	Comments: None.
Does the site have a shelter for operators?	■ Yes □ No	Comments: None.
Does the site have emergency equipment such as a first aid kit available?	■ Yes □ No	Comments: None.
Does the site have adequate measures to prevent human tampering?	■ Yes □ No	Comments: Locked building at a very remote location.
Does the site have adequate measures to prevent damage from animals?	■ Yes □ No	Comments: Cables protected in liquid-tight conduit and electronics inside shelter.

2.0 MONITORING PROGRAM STAFF ORGANIZATION

- Draw a diagram of the organizational structure of the monitoring program, including names and titles:



Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.0 METEOROLOGICAL MONITORING STATION EQUIPMENT

3.1 Inventory

Parameter	Make	Model	Serial No.
DAS	Campbell Scientific	CR1000	11725
DAS Wiring Panel	Campbell Scientific	CR1000	11396
Old Temperature (2-meter)	Met One	062MP	G3473, ID #2/2
Old Temperature (10-meter)	Met One	062MP	G3473, ID #1/2
New Temperature (2-meter)	Met One	062MP	G4106, ID #1/2
New Temperature (10-meter)	Met One	062MP	G4106, ID #2/2
Relative Humidity	Vaisala	HMP45AC	C2730046
Temperature Aspirators	Met One	076B-4	G4411 & G4412
Old Primary Wind Speed	Climatronics	F460-100075	5192
New Primary Wind Speed	Climatronics	F460-100075	5008
Primary Wind Speed Cups	Climatronics	HD Al. P/N 101287	2325
Primary Wind Direction	Climatronics	F460-100076	4868
Primary Wind Direction Vane	Climatronics	HD P/N 101288	1492
Wind Sigma	Campbell Scientific	DAS Calculated	11725
Old Backup Wind Spd/Dir	RM Young	05305 Wind Mon-AQ	78078
New Backup Wind Spd/Dir	RM Young	05305 Wind Mon-AQ	780780
Backup Wind Spd Prop	RM Young	08254	64950
Barometric Pressure	Vaisala	PTB101B	C0910005
Solar Radiation	LI-COR	Li-200SX	PY56189

3.2 Equipment Evaluation

3.2.1 Data Acquisition System (DAS) and Communications System

Is the DAS well protected from the elements with adequate room for maintenance?	■ Yes □ No	Comments: DAS inside of a weatherproof building, mounted on a 4'x4' wiring panel.
Is the DAS rated for operation in the expected local temperature range?	■ Yes □ No	Comments: -55°C to + 85°C.
Are all sensor cables neatly and securely connected to the correct DAS channels?	■ Yes □ No	Comments: Well organized wiring panel.
Is remote communication to the DAS system available to operators?	■ Yes □ No	Comments: DAS connected to FreeWave network linked to SixNet modem on telephone grid.
Are all components of the DAS and communications system operational?	■ Yes □ No	Comments: None.
Are the DAS and communication equipment properly grounded?	■ Yes □ No	Comments: 8' ground rod wired to central ground buss.
Are the DAS and communication equipment protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.2.2 Power Supply System

Does the system have a stable power supply or line power? ■ Yes □ No Comments: Very robust alternative power supply described below.

- Describe the meteorological monitoring station power supply system.

The DAS, communications equipment and meteorological sensors are powered by one 70-Watt solar panel, buffered through two 200 amp-hr deep cycle gel cell batteries. The aspirator fans and Climatronics wind sensor heaters are powered by two 70-Watt solar panels buffered through two 200 amp-hr deep cycle gel cell batteries. During the winter months (November through April), the aspirator/heater system is also powered by a propane Thermo-Electric Generator (TEG). The isolated DAS and Aspirator power systems can be interconnected during upset conditions through an array of relays managed through the DAS control ports. The DAS monitors battery levels and can connect the two power systems should one run low. The DAS also has algorithms programmed to assess weather conditions and limit heater use when not essential.

3.2.3 Meteorological Monitoring Sensors

Do all sensors appear to be clean, intact, in good condition and well maintained? ■ Yes □ No Comments: None.

Are all sensors operational, online and reporting data? ■ Yes □ No Comments: None.

Do all sensors meet EPA criteria for PSD quality sensors? ■ Yes □ No Comments: See table below.

Are spare parts stocked for items which are frequently worn out or broken? ■ Yes □ No Comments: Spare props, cups and vanes onsite and spare bearings in field kit.

3.2.4 EPA PSD Meteorological Instrument Standards

Parameter	Instrument Specifications	EPA Standard	Pass?
Air Temperature (2-M, 10-M & Delta-T) – Met One Mdl. 062MP			
Accuracy (2-m & 10-m):	±0.05 °C	±0.5 °C	Yes
Accuracy (Delta-T):	±0.02 °C	±0.1 °C	Yes
Range (Operating Temp):	-50°C to +50°C	-20°C to +30°C	Yes
*Resolution. (2-m & 10-m):	0.01°C	0.1°C	Yes
*Resolution (Delta-T):	0.01°C	0.02°C	Yes
Response Time:	10 seconds	≤1 minute	Yes
Relative Humidity – Vaisala Mdl. HMP45AC			
Accuracy:	±2/3% at 0-90/90-100% RH	±1.5°C Dew Point**	Yes
Range:	0.8% to 100% RH	-30°C to +30°C Dew Point**	Yes
*Resolution:	0.1% RH	1% RH	Yes
Response Time:	10 sec	≤30 minutes	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
* For all instruments; resolutions are the result of instrument type, configuration and DAS programming.			
** EPA criteria in units of dew point, RH and operating temperature ranges meet these criteria.			

Pebble North Head PSD Meteorological Station Systems Audit

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Parameter (Continued)	Instrument Specifications	EPA Standard	Pass?
Wind Speed – Climatronics Mdl. F460-100075			
Accuracy:	±0.07 m/s or ±1% of obs.	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 65 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<4.0 m (HD Alum. Cups)	≤5 m	Yes
Operating Temperatures:	-40°C to +60°C	-30°C to + 30°C	Yes
Wind Direction – Climatronics Mdl. F460-100076			
Accuracy:	±2°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.22 m/s	≤0.5 m/s	Yes
Distance Constant:	<2.5 m (Heavy Duty Vane)	≤5 m	Yes
Damping Ratio:	>0.4 @10° initial angle	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +60°C	-30°C to + 30°C	Yes
Wind Speed – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±0.2 m/s or 1% of observed	±0.2 m/s + 5% of observed	Yes
Range:	0.0 m/s to 50 m/s	0.5 m/s to 50 m/s	Yes
*Resolution:	0.01m/s	0.1 m/s	Yes
Threshold Speed:	0.4 m/s	≤0.5 m/s	Yes
Distance Constant:	2.1 m	≤5 m	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Wind Direction – RM Young Mdl. 05305 Wind Monitor-AQ			
Accuracy:	±3°	±5°	Yes
Range:	0° to 360°	0° to 360°	Yes
*Resolution:	0.1°	1°	Yes
Threshold Speed:	0.5 m/s @10° displacement	≤0.5 m/s	Yes
Distance Constant:	1.2 m	≤5 m	Yes
Damping Ratio:	0.45	0.4 to 0.7	Yes
Operating Temperatures:	-50°C to +50°C	-30°C to + 30°C	Yes
Barometric Pressure – Vaisala Mdl. PTB101B			
Accuracy:	±0.5 mbar	±3 mbar	Yes
Range:	600 mbar to 1060 mbar	Not Specified	N/A
*Resolution:	0.1 mbar	0.5 mbar	Yes
Response Time:	300 msec	Not Specified	N/A
Operating Temperatures:	-40°C to +60°C	Not Specified	N/A
Solar Radiation – LI-COR Mdl. Li-200SX Pyranometer			
Accuracy:	±5% Observed	±5% Observed	Yes
Range:	0 W/m^2 to 3000 W/m^2	Not Specified	N/A
*Resolution:	1 W/m^2	10 W/m^2	Yes
Response Time:	10 µs	5 seconds	Yes
Spectral Response:	400 nm to 1,100 nm	285 nm to 2800 nm	No
Operating Temperatures:	-40°C to +65°C	-20°C to +40°C	Yes

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

3.3 Station Location and Sensor Placement

3.3.1 Tower

Do all obstructions exist below a 1:10 slope away from the tower base?	■ Yes □ No	Comments: None.
Is the height of the tower at least 10 meters above the ground?	■ Yes □ No	Comments: None.
Is the tower stable and plumb?	■ Yes □ No	Comments: None.
Is the tower protected from lightning?	□ Yes ■ No	Comments: There is no lighting protection, but area not prone to strikes.

3.3.2 Temperature Sensors

Are the sensors mounted at least 2-m above open level ground at least 9-m in diameter?	■ Yes □ No	Comments: None.
Are the temperature difference probes at heights of 2-m and 10-m above the ground?	■ Yes □ No	Comments: None.
Are the sensors at a distance greater than four times the height of any obstruction?	■ Yes □ No	Comments: None.
Is the ground beneath the temperature sensors natural native material?	■ Yes □ No	Comments: None.
Is the site free of any natural features that could bias temperature data (e.g. open water, sloping ridge, etc.)?	■ Yes □ No	Comments: None.
Is the site free of any man-made features that could bias temperature data (e.g. asphalt, concrete, exhaust plumes, etc.)?	■ Yes □ No	Comments: None.
Are the sensors located at least 30 meters from large paved areas?	■ Yes □ No	Comments: None.
Is the ambient temperature sensor protected from the influence of solar radiation?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shield.
Are the temperature difference sensors located in identical aspirated shields?	■ Yes □ No	Comments: Housed in Met One Mdl 076B-4 Motor Aspirated Radiation Shields.

3.3.3 Relative Humidity Sensor

Is the relative humidity sensor open to the atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in 2-m aspirated shield with temperature sensor.

3.3.4 Wind Speed and Wind Direction Sensors

Is the horizontal distance between the instruments and any obstruction at least 10 times the height of the obstruction?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are the instruments at least 1.5 times nearby building height(s) above the building roof(s), or 10-m high?	■ Yes □ No	Comments: None.
Are the wind speed and wind direction sensors stable and plumb?	■ Yes □ No	Comments: None.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: Climatronics Sensors mounted on a crossarm which meets this criterion.
Is the distance of the sensor on the cross-arm at least twice the diameter of the tower?	■ Yes □ No	Comments: RM Young sensor mounted on an extension arm which meets this criterion.
Is the wind direction sigma theta data being collected according to EPA requirements?	■ Yes □ No	Comments: DAS calculated using Yamartino method and a one-second scan interval.

3.3.5 Barometric Pressure Sensor

Is the barometric pressure sensor open to atmosphere & protected from precipitation?	■ Yes □ No	Comments: Housed in unsealed shelter, mounted on the wiring panel.

3.3.6 Solar Radiation Sensor

Is the instrument situated above the plane of any obstructions that could cast shadows?	■ Yes □ No	Comments: None.
Is the sensor situated south of the tower to minimize obstruction from the tower?	■ Yes □ No	Comments: None.

4.0 STANDARD OPERATING PROCEDURES

4.1 General

Is the station visited on a preset schedule?	■ Yes □ No	Comments: None.
Have standard SOPs been developed, and are they being followed by the operators?	■ Yes □ No	Comments: None.
Does the operator follow a preventative maintenance schedule?	■ Yes □ No	Comments: None.
Are site visits and maintenance activities properly documented in a Station Log?	■ Yes □ No	Comments: Site visit memos are compiled.
Are station operators knowledgeable and competent regarding effective operation?	■ Yes □ No	Comments: None.
Have operators attended any formal training for operating met monitoring stations?	■ Yes □ No	Comments: Lead operator has formal training and all operators have onsite experience.
Are copies of the NIST certifications for the calibration equipment made available?	■ Yes □ No	Comments: Attached.

4.2 DAS and Meteorological Sensors

Are regular multipoint QC checks performed on the DAS?	■ Yes □ No	Comments: DAS audited by virtue of the instrument output values.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are regular multipoint QC checks performed on the meteorological sensors?	■ Yes □ No	Comments: None.
Are the sensors visually inspected for defects and problems?	■ Yes □ No	Comments: None.
Are ambient conditions compared with sensor readings from the DAS?	■ Yes □ No	Comments: DAS output compared to Iliamna Airport weather station.
Are data frequently reviewed for reasonableness and completeness?	■ Yes □ No	Comments: None.
Is a copy of the datalogger program made available for review?	■ Yes □ No	Comments: None.

5.0 DOCUMENTATION

5.1 System Reference and Maintenance Manuals

Does the operator have all required DAS and meteorological instrument manuals?	■ Yes □ No	Comments: On-site and at HCG offices.
Does the operator have configuration and wiring schematics specific to the station?	■ Yes □ No	Comments: Operator carries wiring schematics.

5.2 Station Monitoring Plan and Report Forms

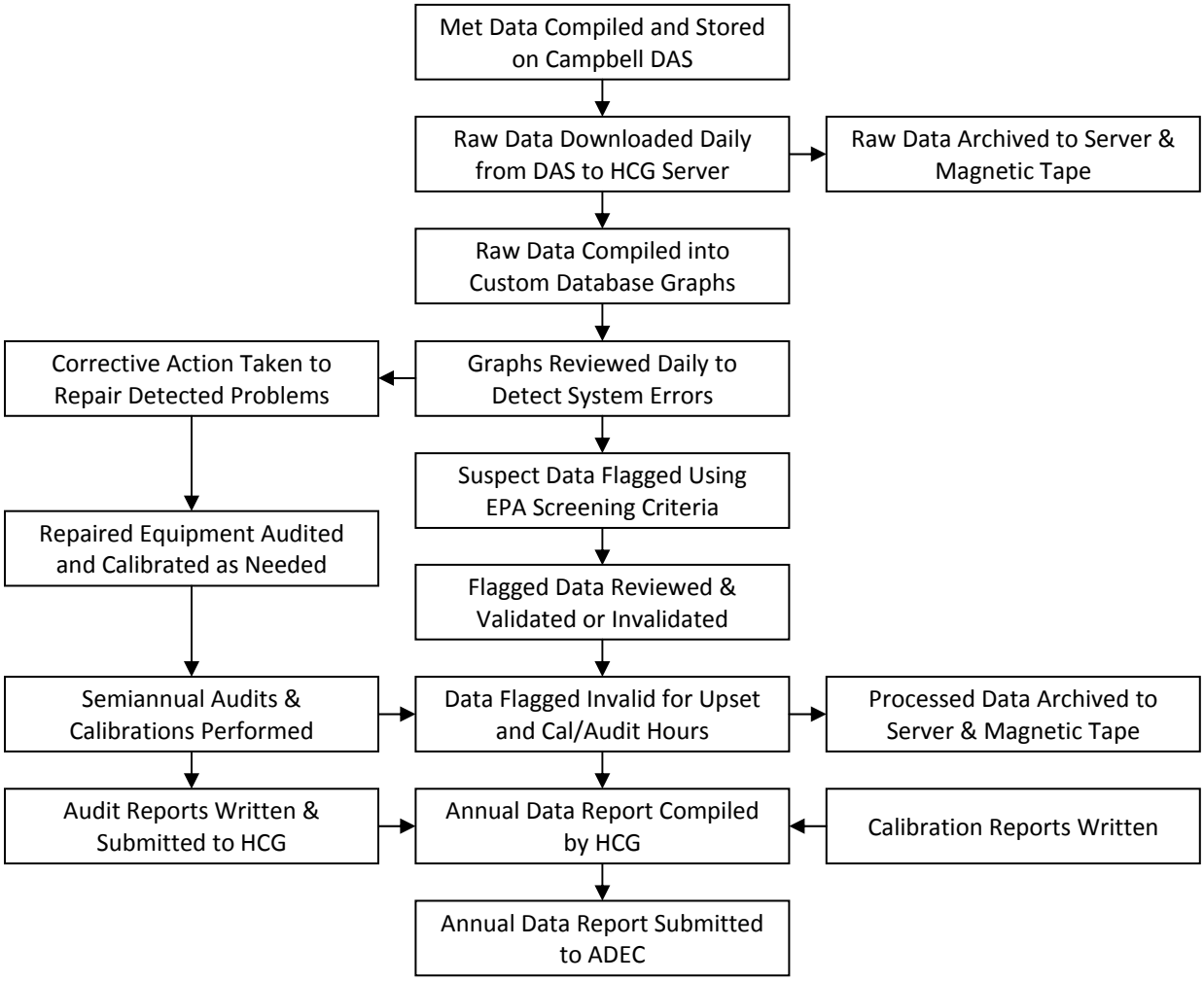
Is the Monitoring/QA plan comprehensive and reflective of the actual installation?	■ Yes □ No	Comments: None.
Does the Monitoring/QA plan indicate the intended use for the data collected during the monitoring program?	■ Yes □ No	Comments: Collect PSD quality data to meet dispersion modeling requirements and satisfy mine/transportation design requirements.
Does the system outlined in the QA plan meet the objectives outlined above?	■ Yes □ No	Comments: PSD quality installation.
Does the QA Plan indicate the intended schedule for reports to be submitted?	■ Yes □ No	Comments: None.
Does the station have an activity log?	□ Yes ■ No	Comments: Site visit memos written after each visit to supplant a log book.
Does the station have a formal Site Visit and Checklist Form?	□ Yes ■ No	Comments: No formal checklist used.
Does the station have an adequate Operations Manual?	■ Yes □ No	Comments: Monitoring/QA plan and equipment manuals.
Does the station have an adequate calibration form and copies of previous audits & cals?	■ Yes □ No	Comments: None.
Are report forms and site logs properly completed and current?	■ Yes □ No	Comments: None.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

6.0 DATA PROCESSING and VALIDATAION

6.1 Overall Data Management

- Diagram the flow of data from monitoring equipment to submission of a final report.



6.2 Data Collection and Initial Data Review

Is the station polled and data downloaded on a regular basis?	■ Yes □ No	Comments: Daily via RF modem and telephony modem.
Are the monitoring station data reviewed on a regular basis?	■ Yes □ No	Comments: Data imported into custom graphs and reviewed 5-6 days per week.
Are the monitoring station data screened on a regular basis?	■ Yes □ No	Comments: Data screened using EPA criteria prior to summary compilations.
Are procedures in place for backing up raw data?	■ Yes □ No	Comments: Raw data files are backed up on the HCG server and on magnetic tape.

Owner: PLP Operator: Dominic Shallies Alternate: Steve Mackey Date: Sep 11, 2008
Witnesses: Dominic Shallies Auditor: Eric Brudie

Are written procedures for data handling available for the project? ■ Yes □ No Comments: None.

- Describe the data polling process and initial data evaluation.

Data is downloaded from the station on a daily basis using a dedicated data polling computer located at the HCG office. The raw *.dat file is appended to the existing raw station data file located on the HCG server, which is backed up to tape daily. The raw data are copied to an Access/Excel database file which generates custom graphs of the various meteorological and operational parameters. These graphs are reviewed 5-6 days per week in order to identify station problems. This graphical data review is the frontline of maintaining a complete and defensible dataset. Station upsets are instantly identified and repaired within days. Copies of both the raw unadjusted data and the custom database files are retained for a minimum of 5 years.

6.3 Corrective Actions

Are procedures established for initiating corrective actions during data processing? ■ Yes □ No Comments: Daily graphical data review and subsequent reactions.

- Describe procedures for initiating, tracking and closing corrective actions.

When nonconformance issues are recognized during graphical review, the Lead Operator/Data Manager plans and executes corrective action. A calibration check is performed on any sensor which is repaired or replaced during the action. A site visit memo outlining the nature of the problem and repairs undertaken is written and saved to the station file. Any quantifiable error is also documented for possible data validation. The Operator/Data Manager ensures the erroneous data are flagged for the period from initial noncompliance until repair and calibration are affected.

6.4 Data Validation

Are data validation procedures established and in use? ■ Yes □ No Comments: None.

Are adjusted and unadjusted data sets maintained? ■ Yes □ No Comments: Both are backed up on the HCG server and magnetic tape.

- Describe the initial data validation procedure.

Data is compiled in a custom Excel spreadsheet programmed to evaluate meteorological data against EPA recommended PSD data screening criteria. The data are screened for events such as; extended periods of zero wind speed (indicating icing or worn bearings), temperatures outside of the known monthly max/min for the area, etc. Nonconforming data are flagged by the screening program for further investigation. Also, data periods for individual parameters are flagged for times when the corresponding instrument was undergoing field servicing, calibrations or audits. Periods when instruments are known to have been out of calibration or malfunctioning are also flagged.

- Describe procedures for validating and invalidating flagged data (outliers).

Data flagged during the screening process described above are manually reviewed. If the data have a quantifiable, consistent and documented bias, they may be adjusted and then validated. Specific guidelines are detailed in the Plan. Data which have been flagged by the screening program are also compared to local weather conditions as determined from other sources. Examples where data flagged during screening may be validated include periods when winds were known to have been exceptionally calm at nearby stations or extreme temperatures outside the historical max/min were witnessed. At this point, flagged data are

permanently validated and left in the database or invalidated and removed from the database. Data removed from the database are replaced with an alphanumeric code to indicate the reason for invalidation.

- Identify those responsible for data validation.

Name: Dominic Shallies
Position: Lead Operator & Data Manager
Affiliation: Hoefler Consulting Group, Inc.

Name: Rebecca Van Wyck
Position: Data Management
Affiliation: Hoefler Consulting Group, Inc.

6.5 Data Capture

- Identify the desired data capture rate for the monitoring data.

Target rate for PSD Quality Meteorological Monitoring Data is 90%.

Is the desired data capture rate being met for each data type?	■ Yes □ No	Comments: None.

6.6 Data Reporting

Are quarterly and annual data reports being submitted for the site?	■ Yes □ No	Comments: None.
Are qualified staff personnel reviewing data reports prior to submittal?	■ Yes □ No	Comments: None.
Is finalized data set submitted with report to ADEC?	■ Yes □ No	Comments: None.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL

7.1 Quality Assurance Program

Has a quality assurance plan been written describing quality assurance procedures?	■ Yes □ No	Comments: None.
Is a copy of the plan available to field and data processing personnel?	■ Yes □ No	Comments: None.
Has the quality assurance plan been approved by the ADEC?	■ Yes □ No	Comments: None.

- Identify those person(s) responsible for updating the plan SOPs.

Name: Steve Mackey
Position: Project Manager
Affiliation: Hoefler Consulting Group, Inc.

7.2 Quality Assurance Methods and Audits

Have adequate audit procedures been identified within the quality assurance plan?	■ Yes □ No	Comments: None.
Does the Plan correctly document PSD accuracy limits for calibrating and auditing?	■ Yes □ No	Comments: None.
Have audits been conducted on the suggested schedule of every six months?	■ Yes □ No	Comments: None.

- Identify the person(s) responsible for conducting audits on the monitoring instrumentation.

Name: Eric Brudie
Position: Field Auditor
Affiliation: Hoefler Consulting Group, Inc.

8.0 COMMENTS AND SUGGESTIONS

- Prepare and compile site specific station checklists and visit forms.
- Maintain all equipment manuals in the field or on the field computer.

APPENDIX B
PERFORMANCE AUDIT DATA SHEETS and ALIGNMENT MAP

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

● *DAS TIME AUDIT*

PSD Limits: DAS time = Alaska Standard Time (AST) +/- 5 minutes.
Conversions: Winter; (AST) = (DST), Summer; (AST) = (DST) - 1 hr.
Comments: None.

DAS TIME vs. NOAA CLOCK			
AST Time	DAS Time	Error Min:Sec	Pass/ Fail?
9:32:00	9:32:10	**0:00:10**	**PASS**

● *TEMPERATURE SENSORS & ΔT AUDIT*

Lower Height: 2.0 **Meters** **Upper Height:** 9.9 **Meters**

2-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G3473-2 / G4106-1 **Range:** -50 to 50 **°C**
10-M Thermistor: **Make:** Met One **Model:** 062MP **S.N.#:** G3473-1 / G4106-2 **Range:** -50 to 50 **°C**
Audit Digital Thermometer: **Make:** Van Waters & Rogers **Model:** 61220/601 **S.N.#:** 51091749 **Range:** -40 to 150 **°C**
Audit Probe: **Make:** Van Waters & Rogers **Model:** 61220/604 **S.N.#:** 240301145 **Range:** -40 to 150 **°C**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1140
End: 1155

THERMISTOR COLLOCATED STANDARD TEST (G4373)

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	36.70	36.86	0.16	Pass	41.48	4.78	Fail	4.62	Fail
Warm	15 to 25	20.62	20.64	0.02	Pass	23.70	3.08	Fail	3.06	Fail
Ice Bath	0	0.12	0.19	0.07	Pass	0.98	0.86	Fail	0.79	Fail
Cold	-15 to -25	-15.64	-15.62	0.02	Pass	-15.78	-0.14	Pass	-0.16	Fail
Very Cold	-35 to -45	-34.30	-34.47	-0.17	Pass	-35.15	-0.85	Fail	-0.68	Fail
		Max Abs. Error	0.17	**PASS**			4.78	**FAIL**	4.62	**FAIL**

Wiring Check	
2m=2m	✓
10m=10m	✓

Time:
Begin: 1158
End: 1210

THERMISTOR COLLOCATED STANDARD TEST - REPLACEMENTS (G4106)

Thermal Input			Station Response (2M)			Station Response (10M)			Station (Delta T)	
Temp Range	Target °C	Input °C	DAS °C	Error °C	Pass/ Fail?	DAS °C	Error °C	Pass/ Fail?	Delta T °C	Pass/ Fail?
Hot	35 to 45	39.73	39.85	0.12	Pass	39.85	0.12	Pass	0.00	Pass
Warm	15 to 25	20.16	20.15	-0.01	Pass	20.15	-0.01	Pass	0.00	Pass
Ice Bath	0	0.21	0.17	-0.04	Pass	0.17	-0.04	Pass	0.00	Pass
Cold	-15 to -25	-17.23	-17.24	-0.01	Pass	-17.24	-0.01	Pass	0.00	Pass
Very Cold	-35 to -45	-32.73	-33.00	-0.27	Pass	-33.03	-0.30	Pass	-0.03	Pass
		Max Abs. Error	0.27	**PASS**		0.30	**PASS**	0.03	**PASS**	

PSD Limits: Max Absolute Error > 0.5 °C (Sensor Accuracy); Max Absolute Error > 0.1 °C (Delta Temperature).
Comments: 10 m G4373 thermistor failed, pair replaced with G4106 thermistors.

● *RELATIVE HUMIDITY SENSOR AUDIT*

Height: 2.0 **Meters**

RH Sensor: **Make:** Vaisala **Model:** HMP45AC **S.N.#:** C2730046 **Range:** 0.8 to 100 **% RH**
Audit Equipment: **Make:** Vaisala **Model:** HMI 41 **S.N.#:** X0650080 **Range:** 0 to 100 **% RH**
Audit Equipment: **Probe#** HMI41 X07450015

RH COLLOCATED STANDARD TEST

Reading Time	Input %RH	Input AT (°C)	Input DP (°C)	DAS %RH	DAS AT (°C)	DAS DP (°C)	Error DP (°C)	Pass/ Fail?
934	73.6	11.4	6.9	75.1	11.7	7.4	0.5	Pass
1016	71.5	12.0	7.0	72.9	12.3	7.6	0.6	Pass
1410	82.8	11.3	8.0	81.7	11.8	8.8	0.8	Pass
					Max Abs. Error		0.8	**PASS**

PSD Limits: Max Absolute Error > 1.5°C Dew Point.
Conversions: Td=DP(°C), Ta=AT(°C), RH=Fraction: Td=b*ע/(a-ע), where ע=a*Ta/(b + Ta) + ln(RH), and a = 17.27, b=237.7°C.
Comments: None.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (In Situ)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5192	**Cup #:**	2325	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4868	**Vane #:**	1492	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319			**Magnetic Declin:**	17.8 **E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1305 End: 1308

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
North Iniskin Island	268.9	270.8	1.9	Pass
East Flank Augustine	336.2	339.5	3.3	Pass
Pk 2815	54.0	56.6	2.6	Pass
South Cottonwood Bay	102.6	103.9	1.3	Pass
Pk 3673	145.9	148.1	2.2	Pass
Compass	200.5	200.5	0.0	Pass
	Max Abs. Error		**3.3**	**PASS**
	Mean Abs. Error		**1.9**	**GOOD**

Time: Begin: 950 End: 1010

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	181.0	1.0	Pass
West	270.0	270.5	0.5	Pass
North	360.0	1.3	1.3	Pass
East	90.0	90.4	0.4	Pass
North	360.0	1.3	1.3	Pass
West	270.0	270.8	0.8	Pass
South	180.0	180.8	0.8	Pass
East	90.0	91.6	1.6	Pass
	Max Abs. Error		**1.6**	**PASS**
	Mean Abs. Error		**1.0**	**PASS**

Time: Begin: 1213 End: 1216

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.2	-0.8	Pass	330.0	329.5	-0.5	Pass
60.0	60.0	0.0	Pass	355.0	356.6	1.6	Pass
90.0	89.7	-0.3	Pass	30.0	28.9	-1.1	Pass
120.0	120.1	0.1	Pass	60.0	60.0	0.0	Pass
150.0	149.8	-0.2	Pass	90.0	89.7	-0.3	Pass
180.0	180.0	0.0	Pass	120.0	120.1	0.1	Pass
210.0	210.0	0.0	Pass	150.0	150.0	0.0	Pass
240.0	240.3	0.3	Pass	180.0	180.0	0.0	Pass
270.0	270.0	0.0	Pass	**Max Abs. Error**		**1.6**	**PASS**
300.0	300.9	0.9	Pass	**Mean Abs. Error**		**0.3**	**PASS**

Time: Begin: 1221 End: 1224

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	0.2	**PASS**
New	0.35	0.0049	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	5.0	**PASS**
New	7.5	0.104	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
No Post-Audit				
New bearings installed				
	Max Abs. Error			
	Mean Abs. Error			

Time: Begin: N/A End: N/A

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: Wind direction bearings and wind speed sensor replaced for routine maintenance.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

• *HORIZONTAL WIND SENSOR AUDIT - CLIMATRONICS (Replacement Parts)*

Height: 11.3 **Meters**

Wind Spd Sensor:	**Make:**	Climatronics	**Model:**	100075	**S.N.#:**	5008	**Cup #:**	2325	**Range:**	0-60 **m/s**
Wind Dir Sensor:	**Make:**	Climatronics	**Model:**	100076	**S.N.#:**	4868	**Vane #:**	1492	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	Climatronics	**Model:**	101984	**S.N.#:**	145	**Torque:**	Honeywell 366-2m	**S.N.#:**	5116
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319		**Magnetic Declin:**	17.8	**E of N**

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.22	0.22	0.00	N/A	Pass
100	2.57	2.57	0.00	N/A	Pass
200	4.92	4.92	0.00	N/A	Pass
400	9.62	9.62	N/A	0.0	Pass
1000	23.72	23.71	N/A	0.0	Pass
2000	47.22	47.21	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1337 End: 1340

Conversion: Heavy Duty Al Cups: m/s = rpm÷42.55+0.22.
Cups rotate clockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
No In Situ Audit				
New bearings installed				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

CROSSARM-VANE ACCUR. & LIN. TEST

Input Dir	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
South	180.0	180.5	0.5	Pass
West	270.0	271.3	1.3	Pass
North	360.0	0.2	0.2	Pass
East	90.0	91.2	1.2	Pass
North	360.0	0.2	0.2	Pass
West	270.0	271.3	1.3	Pass
South	180.0	180.0	0.0	Pass
East	90.0	91.3	1.3	Pass
	Max Abs. Error		**1.3**	**PASS**
	Mean Abs. Error		**0.8**	**PASS**

Time: Begin: 1343 End: 1345

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	28.4	-1.6	Pass	330.0	330.8	0.8	Pass
60.0	59.0	-1.0	Pass	355.0	356.2	1.2	Pass
90.0	89.4	-0.6	Pass	30.0	28.4	-1.6	Pass
120.0	120.0	0.0	Pass	60.0	59.4	-0.6	Pass
150.0	149.6	-0.4	Pass	90.0	89.6	-0.4	Pass
180.0	179.6	-0.4	Pass	120.0	120.0	0.0	Pass
210.0	209.6	-0.4	Pass	150.0	150.1	0.1	Pass
240.0	239.8	-0.2	Pass	180.0	179.8	-0.2	Pass
270.0	269.7	-0.3	Pass	**Max Abs. Error**		**1.6**	**PASS**
300.0	300.6	0.6	Pass	**Mean Abs. Error**		**0.6**	**PASS**

Time: Begin: 1333 End: 1335

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	0.35	0.0049	N/A	**N/A**
New	0.35	0.0049	<0.2	**PASS**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	7.5	0.104	N/A	**N/A**
New	7.5	0.104	4.5	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Cups Aligned North? ✓ Input Description	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
North Iniskin Island	268.9	270.2	1.3	Pass
East Flank Augustine	336.2	336.9	0.7	Pass
Pk 2815	54.0	55.5	1.5	Pass
South Cottonwood Bay	102.6	102.7	0.1	Pass
Compass	200.0	200.0	0.0	Pass
Compass	135.0	134.2	-0.8	Pass
Time: Begin: 1412	**Max Abs. Error**		**1.5**	**PASS**
End: 1425	**Mean Abs. Error**		**0.7**	**GOOD**

Spd PSD Limits: Threshold Torque >0.35gm-cm (0.0049oz-in) @ 0.50m/s.
Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.

Dir PSD Limits: Threshold Torque >7.5 gm-cm (.104 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.

Comments: New wind direction bearings and wind speed sensor.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ (In Situ)*

Height: 10.5 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	78078	**Prop #:**	64950	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	17.8	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1054 End: 1056

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
North Iniskin Island	268.9	268.9	0.0	Pass
East Flank Augustine	336.2	337.3	1.1	Pass
Pk 2815	54.0	58.3	4.3	Pass
South Cottonwood Bay	102.6	105.3	2.7	Pass
Pk 3673	145.9	148.2	2.3	Pass
Compass	200.5	199.5	-1.0	Pass
Time: Begin: 950	**Max Abs. Error**		**4.3**	**PASS**
End: 1010	**Mean Abs. Error**		**1.9**	**GOOD**

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	29.6	-0.4	Pass	150.0	147.6	-2.4	Pass	270.0	267.5	-2.5	Pass
60.0	59.4	-0.6	Pass	180.0	177.5	-2.5	Pass	300.0	297.8	-2.2	Pass
90.0	88.9	-1.1	Pass	210.0	207.2	-2.8	Pass	330.0	328.0	-2.0	Pass
120.0	118.1	-1.9	Pass	240.0	237.4	-2.6	Pass	355.0	353.2	-1.8	Pass
				Time: Begin:	1045	**Max Abs. Error**		**2.8**			**PASS**
				End:	1047	**Mean Abs. Error**		**1.9**			**PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	0.8	**PASS**
New	1.0	0.014	N/A	**N/A**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	11.0	**PASS**
New	11.0	0.153	N/A	**N/A**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
No Post-Audit				
New sensor installed				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: Sensor replaced for routine maintenance.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

• *HORIZONTAL WIND SENSOR AUDIT - RM YOUNG AQ (Replacement Sensor)*

Height: 10.5 **Meters**

Wind Sensor:	**Make:**	RM Young	**Model:**	05305 AQ	**S.N.#:**	78080	**Prop #:**	64950	**Range:**	0-360 **Deg**
Spd Audit Eq:	**Low Spd:**	RM Young	**Model:**	18811	**S.N.#:**	CA02136	**Torque:**	Honeywell 366-3m	**S.N.#:**	5103
Spd Audit Eq:	**High Spd:**	RM Young	**Model:**	18801	**S.N.#:**	CA01674				
Dir Audit Eq:	**Linearity:**	RMY Mdl 18112 Bench Stand	**S.N.#:**	None	**Torque:**	RMY Mdl 18331 Torque Gauge			**S.N.#:**	None
Dir Audit Eq:	**Compass:**	Brunton	**Model:**	11-F5008	**S.N.#:**	5080799319	**Magnetic Declin:**	17.8	**E of N**	

WIND SPD SYNCHRONOUS MOTOR TEST

Input rpm	Input m/s	DAS m/s	Error m/s	Error % Input	Pass/ Fail?
0	0.00	0.00	0.00	N/A	Pass
400	2.05	2.05	0.00	N/A	Pass
1000	5.12	5.12	N/A	0.0	Pass
2000	10.24	10.24	N/A	0.0	Pass
5000	25.60	25.60	N/A	0.0	Pass
10000	51.20	51.20	N/A	0.0	Pass
	Max Abs. Error		**0.00**	**0.0**	**PASS**

Time: Begin: 1203 End: 1206

Conversion: Model 08254 Prop: m/s = 0.00512*rpm.
Prop rotates counterclockwise.

WIND DIR IN-SITU AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
No In Situ Audit				
New sensor installed				
Time: Begin: N/A	**Max Abs. Error**			
End: N/A	**Mean Abs. Error**			

WIND DIR BENCH STAND ACCURACY & LINEARITY TEST

Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
30.0	31.0	1.0	Pass	150.0	148.7	-1.3	Pass	270.0	268.1	-1.9	Pass
60.0	61.0	1.0	Pass	180.0	179.3	-0.7	Pass	300.0	297.8	-2.2	Pass
90.0	90.3	0.3	Pass	210.0	208.7	-1.3	Pass	330.0	328.1	-1.9	Pass
120.0	120.2	0.2	Pass	240.0	238.0	-2.0	Pass	355.0	354.5	-0.5	Pass
				Time: Begin:	1158	**Max Abs. Error**		**2.2**			**PASS**
				End:	1200	**Mean Abs. Error**		**1.2**			**PASS**

WIND SPD TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	1.0	0.014	N/A	**N/A**
New	1.0	0.014	0.4	**PASS**

WIND DIR TORQUE TEST

Bearings Tested	Limit gm-cm	Limit oz-in	Torque gm-cm	Pass/ Fail?
In-Situ	11.0	0.153	N/A	**N/A**
New	11.0	0.153	6.0	**PASS**

WIND DIR POST-AUDIT AZIMUTH ALIGNMENT TEST

Box Aligned South? ✓	Input Deg	DAS Deg	Error Deg	Pass/ Fail?
Input Description				
North Iniskin Island	268.9	271.4	2.5	Pass
East Flank Augustine	336.2	339.1	2.9	Pass
Pk 2815	54.0	58.7	4.7	Pass
South Cottonwood Bay	102.6	105.7	3.1	Pass
Compass	200.0	200.8	0.8	Pass
Compass	135.0	135.6	0.6	Pass
Time: Begin: 1412	**Max Abs. Error**		**4.7**	**PASS**
End: 1425	**Mean Abs. Error**		**2.4**	**GOOD**

Spd PSD Limits: Threshold Torque >1.0gm-cm (0.014oz-in) @ 0.50m/s. Max Abs Error > 0.20m/s @ WS<=5m/s or > 5% of input @ WS>5m/s.
Dir PSD Limits: Threshold Torque >11.0 gm-cm (0.153 oz-in) @ 0.5 m/s. Max Abs Error >5° from True Azimuth (alignment).
Max Abs Error >5° (accuracy). Mean Abs Error >3° (linearity). Azimuth Mean Abs Error calculated for information only.
Comments: New sensor.

METEOROLOGICAL STATION - INSTRUMENT PERFORMANCE AUDIT (11-M)

Owner: Pebble Limited Partnership **Operator:** Dominic Shallies **Alternate:** Steve Mackey **Station Site:** North Head
Auditor: Eric Brudie **Witness(s):** Dominic Shallies **Audit Date:** Sep 11, 2008

• *BAROMETRIC PRESSURE SENSOR AUDIT*

Height: N/A **Meters**

Pressure Sensor: **Make:** Vaisala **Model:** PTB101B **S.N.#:** C0910005 **Range:** 600-1060 **hPa**
Audit Equipment: **Make:** PRETEL **Model:** AltiPlus A2 **S.N.#:** 27806 **Range:** 470-1040 **hPa**

BP COLLOCATED STANDARD TEST							
Date	Reading Time	Raw Input in Hg	Adj Input in Hg	Adj Input mb	DAS mb	Error mb	Pass/ Fail?
10/16/08	1100	29.56	29.49	998.8	998.88	0.1	Pass
				Max Abs. Error		0.1	**PASS**

Audit Inst Cal Data	
Cal. Date: 07/28/08	
Audit Inst	Offset Amount
24.09	-0.09
26.06	-0.07
28.08	-0.08
30.06	-0.06
Intercept	**-0.18**
Slope	**0.0040**

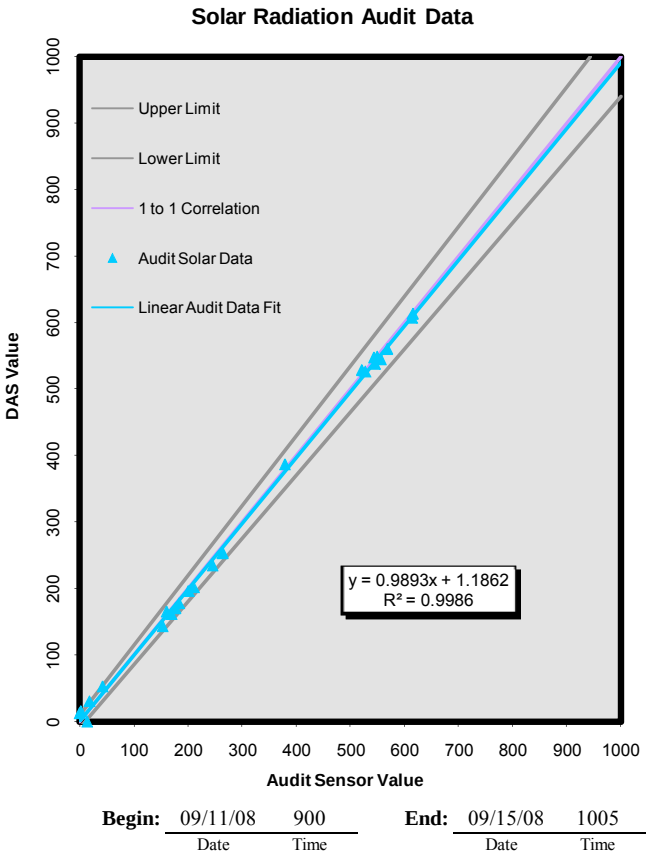
PSD Limits: Max Absolute Error > 3mb (0.3kPa).
Comments: New audit instrument broken during September audit, audited with calibrated standard during October trip.

• *SOLAR RADIATION SENSOR AUDIT*

Height: 4.3 **Meters**

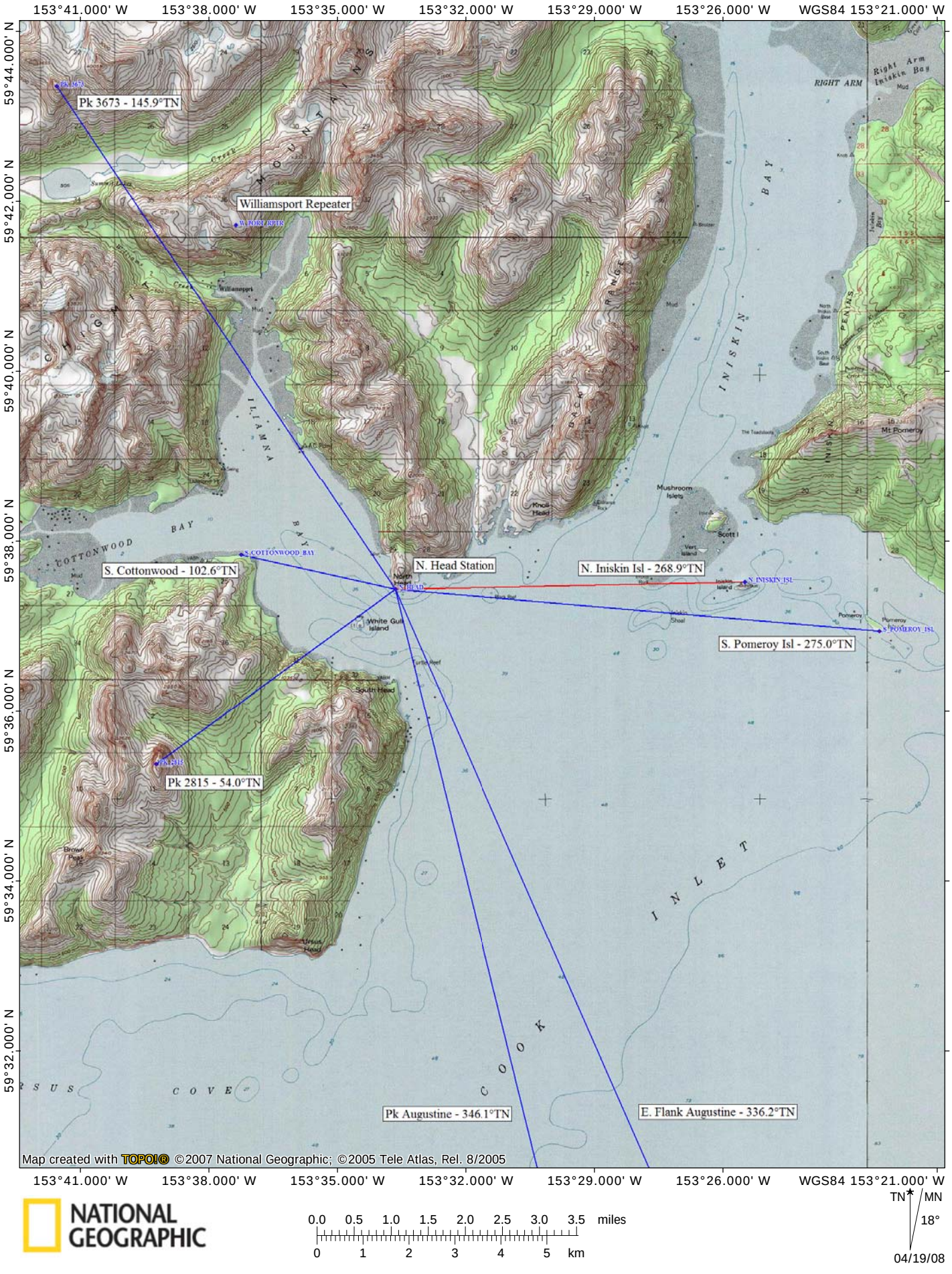
Station Sensor: **Make:** Li-Cor **Model:** Li-200SX **S.N.#:** PY56189 **Range:** 0-3000 **W/m²**
Audit Sensor: **Make:** Eppley **Model:** PSP **S.N.#:** 34377F3 **Range:** 0-2800 **W/m²**

SOLAR RADIATION COLLOCATED STANDARD TEST						
Data Hr AST	Audit W/m²	DAS W/m²	Error W/m²	Allow Err W/m²	Error % Input	Pass/ Fail?
916	153.0	143.1	-9.9	±17.7	-6.5%	Pass
928	169.1	161.6	-7.5	±18.5	-4.4%	Pass
935	176.8	170.4	-6.4	±18.8	-3.6%	Pass
936	183.5	177.5	-6.0	±19.2	-3.3%	Pass
938	14.0	0.0	-14.0	±10.7	n/a	Fail
939	201.0	196.0	-5.0	±20.1	-2.5%	Pass
1015	210.6	201.7	-8.9	±20.5	-4.2%	Pass
1043	245.5	234.3	-11.2	±22.3	-4.6%	Pass
1057	264.0	253.2	-10.8	±23.2	-4.1%	Pass
1147	615.2	613.0	-2.2	±40.8	-0.4%	Pass
1211	545.3	537.6	-7.7	±37.3	-1.4%	Pass
1221	568.2	560.0	-8.2	±38.4	-1.4%	Pass
1301	613.8	606.5	-7.3	±40.7	-1.2%	Pass
1335	549.7	548.1	-1.6	±37.5	-0.3%	Pass
1412	556.3	544.4	-11.9	±37.8	-2.1%	Pass
1429	527.4	526.1	-1.3	±36.4	-0.2%	Pass
1400	543.7	547.1	3.4	±37.2	0.6%	Pass
1500	521.3	528.1	6.8	±36.1	1.3%	Pass
1600	379.0	386.2	7.2	±29.0	1.9%	Pass
1700	160.3	165.0	4.7	±18.0	2.9%	Pass
1800	42.4	52.7	10.3	±12.1	n/a	Pass
1900	17.9	30.5	12.5	±10.9	n/a	Fail
2000	2.1	15.5	13.4	±10.1	n/a	Fail
2100	0.0	12.5	12.5	±10.0	n/a	Fail
Corr. Val	**0.9993**	**Max Abs. Percent Error**			**6.5%**	**FAIL**
R² Value	**0.9986**	**Intercept**	**1.2**	**Slope**	**0.9893**	**PASS**



Begin: 09/11/08 (Date) 900 (Time) **End:** 09/15/08 (Date) 1005 (Time)

PSD Limits: Max Abs Err <5% of Observed + Resolution(10W/m²). Linear regression slope in range 1.0±5% (0.95 to 1.05) when R² > 0.995.
Note: Instantaneous values are associated with minute timestamps and hourly averages coincide with whole hour timestamps.
Comments: Sensor fails at low end.


TOPO! map printed on 04/19/08 from "Port_North_Head.tpo"
153°41.000' W
153°38.000' W
153°35.000' W
153°32.000' W
153°29.000' W
153°26.000' W
WGS84 153°21.000' W
59°44.000' N
59°42.000' N
59°40.000' N
59°38.000' N
59°36.000' N
59°34.000' N
59°32.000' N
Pk 3673 - 145.9°TN
Williamsport Repeater
N. Head Station
N. Iniskin Isl - 268.9°TN
S. Cottonwood - 102.6°TN
S. Pomeroy Isl - 275.0°TN
Pk 2815 - 54.0°TN
Pk Augustine - 346.1°TN
E. Flank Augustine - 336.2°TN
Map created with TOPO!® ©2007 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
NATIONAL GEOGRAPHIC
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles
0 1 2 3 4 5 km
TN MN
18°
04/19/08

APPENDIX C
AUDIT EQUIPMENT CALIBRATION CERTIFICATES

Calibration complies with ISO 9001 ISO/IEC 17025 AND ANSI/NCSL Z540-1

ACCREDITED

Calibration Certificate No. 1750.01

Cert. No.: 4000-1974024

Traceable® Certificate of Calibration for Digital Thermometer

Instrument Identification:

Hoefler Consulting Group, 3401 Minnesota Dr, Suite300, Attn: Justin Mangold, Anchorage, AK 99503 U.S.A. (RMA:944729)

Model: 61220-601 S/N: 51091749 Manufacturer : Control Company

Model: 61220-604 S/N: 240301145

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Reference
Temperature Calibration Bath TC191	A79341		
Thermistor Module	A27129	8/22/09	1000248949
Temperature Probe	3039	10/26/08	A7710039-4
Temperature Probe	149	3/06/09	A82225037-3
Thermistor Module	A17118	10/30/08	A7831032
Temperature Calibration Bath TC218	A73332		

Certificate Information:

Technician: 68 Procedure: CAL-06 Cal Date: 9/08/08 **Cal Due: 9/08/09**

Test Conditions: 24.5°C 45.0 %RH 1017 mBar

Calibration Data:

Unit(s)	Nominal	As Found	In Tol	Nominal	As Left	In Tol	Min	Max	±uc	TUR
°C	0.001	0.087	N	0.001	0.000	Y	-0.049	0.051	0.013	3.8:1
°C	25.001	25.076	N	25.001	25.000	Y	24.951	25.051	0.013	3.8:1
°C	60.001	60.127	N	60.001	59.999	Y	59.951	60.051	0.018	2.8:1
°C	100.001	100.333	N	100.001	100.001	Y	99.951	100.051	0.013	3.8:1

This Instrument was calibrated using Instruments Traceable to National Institute of Standards and Technology.

A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty evaluation includes the instrument under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. The results contained herein relate only to the item calibrated. This certificate shall not be reproduced except in full, without written approval of Control Company.

Nominal=Standard's Reading; As Left=Instrument's Reading; In Tol=In Tolerance; Min/Max=Acceptance Range; ±uc=Measurement Uncertainty; TUR=Test Uncertainty Ratio; Accuracy=±(Max-Min)/2; Date=MM/DD/YY

Wallace Berry

Wallace Berry, Technical Manager

Maintaining Accuracy:

In our opinion once calibrated your Digital Thermometer should maintain its accuracy. There is no exact way to determine how long calibration will be maintained. Digital Thermometers change little, if any at all, but can be affected by aging, temperature, shock, and contamination.

Recalibration:

For factory calibration and re-certification traceable to National Institute of Standards and Technology contact Control Company.

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025:2005 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01.
Control Company is ISO 9001:2000 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA).

Traceable® is a registered trademark of Control Company

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VAISALA

Certificate of Calibration

Report #: 090408-X0740015-RH **RMA #:** 95-70314 **Calibration Date:** Sep-04-2008
Model #: HMI41/HMP45 **Serial #:** X0650080/X0740015
Instrument Type: Humidity Transmitter Calibration Procedure: 11603100
Instrument Range: 0 to 100%, RH Recommended Calibration Due Date: Sep-04-2009
Instrument Range: -20 to +60 °C, T

Customer: HOEFLER CONSULTING GROUP, INC.
City, State: ANCHORAGE, AK

This unit was calibrated by adjusting its reading at 0% against a dry-air line and at 75% against reference humidity and temperature instrument, Vaisala model HMP233. Additional instrument verification checkpoints were made against HMP233 reference at 11%RH and 33%RH. Calibration and instrument verification sequences utilize a dry-air line and a set of controlled aqueous salt solutions Vaisala model HMK13B. Laboratory ambient conditions are humidity and temperature controlled. The calibration uncertainty is presented at 95% confidence level, k=2. The standard uncertainty of the measurement has been determined in accordance with U.S. Guide to the Expression of Uncertainty in Measurement.

Calibration Data (As Found)				
Out of Tolerance: NO				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
22.11	22.30	0.19	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.12	11.30	0.18	2.00	0.92
33.04	32.30	-0.74	2.00	1.01
74.33	72.60	-1.73	2.00	1.02
Calibration Data (As Left)				
Temperature Calibration, °C				
Reference	Unit Under Test	Error	± Tolerance, °C	± Uncertainty, °C
21.97	21.90	-0.07	0.20	0.07
Humidity Calibration, %RH				
Reference	Unit Under Test	Error	± Tolerance, %	± Uncertainty %
0.03	-0.40	-0.43	2.00	0.50
11.21	11.50	0.29	2.00	0.92
32.80	33.00	0.20	2.00	1.01
74.89	74.90	0.01	2.00	1.02

Problem Noted: None
Action Taken: The Unit Was Calibrated

The results of this calibration are related only to the items being calibrated at the time of calibration, and, are traceable to the National Institute of Standards and Technology through NIST Test Report Number TN 276340-08. Vaisala's calibration system has been established to meet the requirements of ANSI/NCSL Z540-1-1994. This certificate can not be reproduced, except in full, without the expressed written consent of Vaisala. The certificate was established to comply with the requirements of ISO/IEC17025. Vaisala is ISO 9001:2000 certified.

Calibration Equipment Used: Workstation 6B			
Model Number	Serial Number	Calibration Date	Due Date
Power Supply	9900343	Nov. 27, 2006	Nov. 27, 2008
Fluke 45	7519018	Dec. 19, 2007	Jun. 19, 2009
HMK13B	P3940001	May. 16, 2008	Nov. 16, 2008
HMP233	V4210039	Jul. 17, 2008	Oct. 17, 2008
HMT333	B0920007	Jun. 17, 2008	Sep. 17, 2008
HMI41/HMP45	S0720005	May. 21, 2008	Nov. 21, 2008

Ambient Conditions	
Temperature:	22.00 °C
Humidity:	49.50 %RH

Approved By

Technical Operator
Roun Roeun

Vaisala Inc., Boston Office
10-D Gill Street, Woburn, MA 01801, USA
Telephone 781 933 4500 • Fax 781 933 8029
www.vaisala.com

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18811** (Comprised of Models 18820A Control Unit & 18831A Motor Assembly)
SERIAL NUMBER: CA 02136

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	27106D Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
30.0	5	30.0	30.0
150.0	25	150.0	150.0
300.0	50	300.0	300.0
450.0	75	450.0	450.0
600.0	100	600.0	600.0
750.0	125	750.0	750.0
990.0	165	990.0	990.0
☑ Clockwise and Counterclockwise rotation verified			

(1) Measured frequency output of RM Young Model 27106D standard anemometer attached to motor shaft 27106D produces 10 pulses per revolution of the anemometer shaft

(2) Indicated on the Control Unit LCD display

* Indicates out of tolerance

☑ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 7/31/08
Inspection Interval One Year

Tested By RP

CERTIFICATE OF CALIBRATION AND TESTING

MODEL: **18801** (Comprised of Models 18820 Control Unit & 18830 Motor Assembly)
SERIAL NUMBER: CA 01674

R. M. Young Company certifies that the above equipment was inspected and calibrated prior to shipment in accordance with established manufacturing and testing procedures. Standards established by R.M. Young Company for calibrating the measuring and test equipment used in controlling product quality are traceable to the National Institute of Standards and Technology.

Nominal Motor Rpm	Output Frequency Hz (1)	Calculated Rpm (2)	Indicated Rpm (3)
600	320	600	600
1200	640	1200	1200
2400	1280	2400	2400
4200	2240	4200	4200
6,000	3200	6000	6000
8,100	4320	8100	8100
9,900	5280	9900	9900
☒ Clockwise and Counterclockwise rotation verified			

(1) Measured at the optical encoder output.
(2) Frequency output produces 32 pulses per revolution of motor shaft.
(3) Indicated on the Control Unit LCD display.

* Indicates out of tolerance

☒ No Calibration Adjustments Required ☐ As Found ☐ As Left

Traceable frequency meter used in calibration Model: DP5740 SN: 4863

Date of inspection 10/23/08
Inspection Interval One Year

Tested By RP

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP. P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5103

Model Number: 366-3M
Part Number: 060-SQF41200-01
Order Code: TW3663M

Product Specifications

Full Scale Range: 0.2-2.0 GM CM
Calibrated At: 0.2-2.0 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW150

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/12/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esztr Gozon

Esztar Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-3M SERIAL NUMBER: 5103 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.01	0.00	0.00	.01
.2	0.00	.25	.37	.40
.4	.20	.47	.43	.60
.6	.40	.65	.60	.80
.8	.60	.84	.80	1.00
1.0	.80	1.02	1.05	1.20
1.2	1.00	1.25	1.28	1.40
1.4	1.20	1.46	1.49	1.60
1.6	1.40	1.68	1.70	1.80
1.8	1.60	1.91	1.94	2.00
2.0	1.80	2.14	2.17	2.20

Max pos error (% FS) = 8.5 % at .200
Max neg error (% FS) = -.2 % at .800

Torque Watch is a: PASS

Job 128274

Honeywell

Honeywell
Sensotec Sensors
2080 Arlingate Lane
Columbus, Ohio 43228 U.S.A.

Phone: 614-850-5000
Fax: 614-850-1111
URL: http://www.sensotec.com
E-mail: service@sensotec.com

Certificate of Calibration

Customer Identification

Customer: CLIMATRONICS CORP.

P.O.#:30880

Product Identification

Product Type: Torque Watch
Serial Number: 5116

Model Number: 366-2M
Part Number: 060-SQF41198-01
Order Code: TQ3662M

Product Specifications

Full Scale Range: 1-7.5 GM CM
Calibrated At: 1-7.5 GM CM

Supply: N/A
Output: Display

Calibration Results

See data on page 2 of this report.

Equipment Information

Test Equipment #: GW151

Accuracy of Standard: +/- 1% FS

Certificate Information

Type of Calibration: Standard
Calibration Date: 10/15/07

Certificate Number: 086-6000-03
Calibration Procedure: 072-LC75-29

This report certifies that the product identified above has been inspected to +/- 10% of full scale reading and found to be accurate.
Instruments used in the calibration of this product have been calibrated to standards traceable to the National Institute of Standards and Technology (NIST), Report #822/254480.

This is a quality record.

Approved and Certified By: Esther Gozon

Esther Gozon, Quality Manager

LOW RANGE TORQUE WATCH DIAL SETTINGS vs. OUTPUT OF LOW RANGE STANDARD

MODEL: 366-2M SERIAL NUMBER: 5116 Units = gm cm Accuracy = 10 % FS

Set Dial To	Low Limit	CW Rdg	CCW Rdg	High Limit
0.0	-.05	0.00	0.00	.05
1.0	.25	.95	.95	1.75
2.0	1.25	1.85	1.88	2.75
3.0	2.25	2.77	2.82	3.75
4.0	3.25	3.73	3.77	4.75
5.0	4.25	4.62	4.76	5.75
6.0	5.25	5.61	5.77	6.75
7.0	6.25	6.50	6.72	7.75
7.5	6.75	6.96	7.14	8.25

Max pos error (% FS) = 0.0 %
Max neg error (% FS) = -7.2 % at 7.500

Torque Watch is a: PASS

THE BRUNTON COMPANY
Certificate Of Calibration

Equipment Owner: HOEFLER Consulting Group
Name: _____

Address: 341 MINNESOTA DR. STE. 300

City, State, Zip: ANCHORAGE AK 99503

Calibration traceable to the National Institute of Standards and Technology in accordance with Mil-STD-45662A has been accomplished on the instrument listed below by comparison with standards maintained by The Brunton Co. The accuracy and stability of all standards maintained by The Brunton Co. are traceable to national standards maintained by the National Institute of Standards and Technology in Washington, D.C. and Boulder, CO. Complete record of all work performed is maintained by The Brunton Co. and is available for inspection upon request.

This Unit has been calibrated to Lietz TM10E serial number 30937 traceable to N.B.S. no. 738 227675 this 18TH Day of JANUARY 2008

DESCRIPTION: POCKET TRANSIT

PURCHASE ORDER: BA 52200

ORDER NUMBER: 1572739

LOT NUMBER: _____

MODEL NUMBER: 5008

SERIAL NUMBER: 508099319

CALIBRATION DATE: 1-18-08

RECALIBRATION DUE DATE: 1-18-09

Signed: Linda Kenyon
QUALITY CONTROL MANAGER

Certificate of Accuracy

Transfer Standard Type: Barometric Pressure/Altimeter

Certificate No: B 072808. 03

Transfer standard model: Pretel AltiPlus A2
Serial number: 27806
submitted by/owner: Hoefler Consulting Group
3401 Minnesota Drive
Suite 300
Anchorage, AK 99503

Was compared to Precision Absolute Reference Barometer:
Model number: 355-AI0900 Serial number: 913930-M1
Certified accuracy of ± 0.007"Hg
NIST traceable to Ruska Deadweight Tester SN 38342/C-85

Date: 07/28/08 Lab temperature 72.9 °F
Lab pressure 660.0 mm Hg

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)
24.00	24.09	0.09	-0.09
25.99	26.06	0.07	-0.07
28.00	28.08	0.08	-0.08
30.00	30.06	0.06	-0.06

Note:
If no sign is given on the correction, the true pressure is higher than the indicated pressure. If the sign is negative, the true pressure is lower than the indicated pressure.

Transfer Standard adjustments made? YES ☐ NO ☒

Post-calibration measurements:

Reference barometer ("Hg)	Transfer Standard ("Hg)	Difference from Reference ("Hg)	Transfer Standard Correction* ("Hg)

Reviewed: R L S Date: 7/28/08

Roger L. Sanders, PE

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STANDARDIZATION OF EPPLEY PRECISION SPECTRAL PYRANOMETER Model PSP

Serial Number: 34377F3

Resistance: 603 Ω at 23 °C
Temperature Compensation Range: -20° to +40 °C

This radiometer has been compared with Standard Precision Spectral Pyranometer, Serial Number 21231F3 in Eppley's Integrating Hemisphere under radiation intensities of approximately 700 watts meter^{-2} (roughly one half a solar conatant).

As a result of a series of comparisons, it has been found to have a sensitivity of:

9.24 x 10^{-6} volts/watts meter^{-2}

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 1400 watts meter^{-2}. This radiometer is linear to within ± 0.5% up to this intensity.

The calibration of this instrument is traceable to standard self-calibrating cavity pyrheliometers in terms of the Systems Internationale des Unites (SI units), which participated in the Tenth International Pyrheliometric Comparisons (IPC X) at Davos, Switzerland in September-October 2005.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Useful conversion facts: 1 cal cm^{-2} min^{-1} = 697.3 watts meter^{-2}
1 BTU/ft^2-hr^{-1} = 3.153 watts meter^{-2}

Shipped to: Hoefler Consulting Group
Anchorage, AK

Date of Test: March 4, 2008

In Charge of Test: R. T. Eppley

S.O. Number: 61537
Date: March 6, 2008

Reviewed by: Thomas J. Kirk

Remarks:

Appendix D

Validated Continuous Data Summaries

CONTENTS

Pebble North Head Station 2008 Hourly Data:

1. Temperature at 2 meters (deg. C)

2. Temperature at 10 meters (deg. C)

3. Temperature Difference 2 meter to 10 meter (deg. C)

4. Relative Humidity (%)

5. Solar (Watts/m^2)

6. Barometric Pressure (mbar)

7. Wind Speed – Climatronic (m/s)

8. Wind Direction – Climatronic (degrees)

9. Wind Sigma – Climatronic (σ_θ)

10. Wind Speed – RM Young (m/s)

11. Wind Direction – RM Young (degrees)

12. Wind Sigma – RM Young (σ_θ)

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.3	3.5	4.0	4.4	4.8	5.0	5.0	3.7	1.9	0.7	1.5	0.9	1.4	0.3	-0.5	-1.0	-1.7	-2.4	-2.8	-3.0	-3.8	-3.5	-4.4	-4.8	5.0	-4.8	0.5
2	-5.0	-5.1	-4.7	-5.5	-5.8	-6.2	-6.5	-6.7	-7.2	-7.5	-7.7	-7.7	-7.7	-7.8	-7.8	-8.4	-8.8	-8.8	-8.8	-9.0	-9.0	-8.5	-8.7	-8.9	-4.7	-9.0	-7.4
3	-8.9	-8.4	-8.6	-8.7	-8.3	-7.5	-7.2	-7.6	-8.1	-7.8	-8.1	-7.9	-8.3	-8.6	-8.8	-8.9	-9.2	-9.5	-10.0	-10.3	-10.4	-10.8	-11.3	-11.4	-7.2	-11.4	-8.9
4	-11.6	-11.9	-12.0	-12.0	-12.2	-12.4	-12.5	-12.6	-12.7	-12.8	-12.7	-12.7	-12.8	-12.9	-12.9	-13.1	-13.2	-13.3	-13.4	-13.6	-13.8	-14.0	-14.2	-14.0	-11.6	-14.2	-12.9
5	-14.2	-14.1	-14.1	-14.4	-14.9	-15.5	-15.9	-16.4	-16.4	-16.2	-16.5	-16.8	-16.6	-16.3	-16.3	-16.3	-16.4	-16.1	-16.1	-16.2	-16.2	-16.4	-16.4	-16.6	-14.1	-16.8	-15.9
6	-16.6	-16.9	-16.9	-16.9	-17.2	-17.7	-17.9	-18.2	-18.3	-18.3	-18.9	-19.2	-18.9	-19.1	-18.9	-19.0	-19.2	-18.9	-19.0	-19.1	-19.3	-19.5	-19.6	-19.6	-16.6	-19.6	-18.5
7	-19.6	-19.4	-19.4	-19.4	-19.4	-19.5	-19.3	-18.9	-18.6	-18.8	-19.0	-19.1	-19.1	-19.1	-19.1	-18.8	-18.6	-18.7	-18.3	-18.4	-17.9	-17.8	-17.8	-17.8	-17.8	-19.6	-18.8
8	-17.7	-17.8	-17.7	-17.7	-17.5	-17.7	-17.6	-17.8	-17.8	-17.9	-17.9	-17.9	-17.8	-17.6	-17.8	-17.6	-17.6	-17.3	-17.4	-17.8	-18.5	-18.8	-18.7	-18.3	-17.3	-18.8	-17.8
9	-18.3	-18.7	-18.8	-19.1	-18.9	-19.0	-19.2	-19.6	-19.5	-20.0	-19.9	-19.5	-19.5	-19.7	-19.5	-19.5	-19.6	-19.8	-19.6	-19.5	-19.4	-19.2	-19.6	-19.6	-18.3	-20.0	-19.4
10	-19.6	-19.5	-19.4	-19.1	-18.9	-18.4	-18.4	-18.7	-18.7	-18.7	-19.0	-18.8	-18.7	-18.5	-18.2	-18.2	-18.0	-18.1	-18.1	-18.8	-19.1	-19.3	-19.9	-20.0	-18.0	-20.0	-18.8
11	-20.2	-20.4	-20.6	-20.7	-20.0	-19.4	-19.2	-19.7	-20.0	-20.3	-20.5	-20.6	-20.7	-20.6	-20.4	-20.4	-20.3	-20.4	-20.4	-20.4	-20.6	-20.6	-20.8	-20.9	-19.2	-20.9	-20.3
12	-21.3	-21.2	-20.9	-20.7	-20.9	-21.3	-20.9	-21.1	-21.9	-22.3	-22.1	-21.7	-22.0	-22.0	-22.3	-22.9	-23.4	-23.5	-23.1	-23.3	-23.6	-23.5	-23.7	-24.2	-20.7	-24.2	-22.2
13	-24.1	-23.9	-23.8	-23.2	-22.6	-22.7	-22.6	-22.5	-22.8	-22.8	-23.1	-23.2	-23.1	-23.5	-23.4	-23.2	-22.7	-22.4	-22.3	-21.5	-21.8	-21.5	-21.4	-21.2	-21.2	-24.1	-22.7
14	-21.0	-19.1	-18.3	-18.8	-17.7	-17.3	-16.5	-15.2	-13.4	-12.2	-11.0	-9.4	-9.0	-8.5	-8.4	-8.0	-7.7	-7.2	-6.1	-5.8	-4.2	-2.8	-1.2	-1.0	-1.0	-21.0	-10.8
15	-1.0	-0.5	-0.4	0.1	0.5	-0.8	-0.7	-1.1	-2.8	-3.2	-3.2	-3.1	-2.9	-3.0	-3.2	-2.9	-2.9	-2.8	-2.9	-2.9	-2.9	-2.7	-2.6	-2.7	0.5	-3.2	-2.1
16	-2.8	-2.8	-2.7	-2.4	-2.0	-0.7	0.7	1.3	0.5	0.4	0.3	0.5	0.8	1.0	1.3	1.6	1.6	1.1	0.5	0.1	-0.1	-1.1	-1.7	-2.1	1.6	-2.8	-0.3
17	-2.5	-2.0	-1.3	0.6	0.0	-0.7	-1.0	1.8	3.0	3.4	2.6	1.4	0.2	0.2	0.9	1.4	2.3	2.7	2.8	2.4	2.6	2.3	2.0	1.6	3.4	-2.5	1.1
18	0.6	0.0	-0.2	-0.2	0.0	-0.2	-0.1	-0.4	-0.1	-0.4	-0.5	-0.5	-0.6	-0.6	-0.5	-0.5	-0.7	-1.0	-1.3	-1.6	-1.4	-1.2	-1.2	-1.2	0.6	-1.6	-0.6
19	-1.4	-1.3	-1.0	-0.6	-0.5	-0.4	0.8	2.7	3.8	1.9	1.2	2.3	2.1	0.0	2.8	3.3	3.9	4.5	4.6	3.4	2.7	2.9	3.2	2.6	4.6	-1.4	1.8
20	2.5	2.7	2.8	3.0	3.4	3.6	3.7	3.9	3.8	4.0	4.1	4.2	4.2	4.5	4.4	4.1	4.2	2.7	2.0	1.0	0.8	1.1	1.2	1.0	4.5	0.8	3.0
21	0.8	0.7	0.9	1.1	1.3	1.2	1.5	1.4	2.3	1.0	1.1	2.7	4.3	4.8	5.1	4.5	4.8	4.8	4.1	4.1	4.2	2.7	2.4	2.3	5.1	0.7	2.7
22	2.6	3.0	3.6	3.4	3.7	3.4	3.2	3.1	3.2	2.6	2.6	0.4	0.4	0.9	0.7	0.0	-0.6	-1.2	-0.8	-1.1	-1.4	-1.1	-1.1	-0.9	3.7	-1.4	1.2
23	-0.9	-1.2	-1.4	-1.6	-2.2	-3.0	-4.4	-5.5			-8.6	-8.5	-9.3	-9.5	-9.9	-10.9	-10.5	-10.9	-11.4	-11.5	-12.2	-12.9	-14.1	-14.4	-0.9	-14.4	-7.9
24	-13.6	-12.8	-12.5	-12.4	-12.1	-11.3	-10.4	-9.3	-7.7	-6.2	-5.2	-5.2	-5.2	-5.6	-5.9	-6.0	-6.3	-5.9	-5.6	-5.9	-6.3	-6.5	-6.5	-6.5	-5.2	-13.6	-8.0
25	-6.6	-6.5	-6.5	-6.1	-5.6	-4.5	-3.0	-2.9	-3.0	-3.2	-3.1	-2.8	-2.4	-2.0	-1.1	-1.2	-1.5	-1.2	0.0	0.2	-0.4	-2.1	-3.6	-4.4	0.2	-6.6	-3.1
26	-5.1	-6.0	-6.5	-6.7	-7.0	-7.8	-8.4	-8.7	-9.9	-10.5	-10.9	-10.7	-10.5	-9.9	-9.1	-9.2	-9.4	-8.9	-8.9	-8.8	-8.4	-8.2	-7.9	-7.7	-5.1	-10.9	-8.6
27	-7.4	-6.8	-7.1	-6.0	-5.3	-5.0	-2.7	-2.3	-2.2	-1.9	-1.6	-2.3	-2.7	-2.8	-3.1	-2.9	-2.4	-1.9	-1.6			-1.4	-1.7	-1.8	-1.4	-7.4	-3.3
28	-1.9												-3.6	-3.8	-3.8	-3.5	-3.5	-3.4	-3.2	-3.2	-3.3	-2.2	-1.3	-1.3	-1.3	-3.8	-2.9
29	-0.9	-0.7	-0.9	-0.9	-1.2	-1.5	-1.8	-1.9	-2.4	-2.7	-2.8	-3.1	-3.2	-2.8	-3.4	-3.5	-3.5	-3.6	-3.9	-4.1	-4.3	-4.4	-5.3	-5.2	-0.7	-5.3	-2.8
30	-5.6	-5.6	-6.2	-6.8	-7.4	-7.7	-7.6	-7.6	-7.7	-8.0	-6.7		-6.3	-6.9	-7.5	-7.9	-8.2	-8.4	-9.2	-9.1	-9.2	-8.9	-9.2	-9.4	-5.6	-9.4	-7.7
31	-9.0	-9.2	-9.1	-8.9	-8.9	-9.0	-8.9	-9.0	-9.0	-8.5	-7.9	-7.3	-7.6	-6.9	-5.7	-5.1	-5.4	-6.1	-6.3	-6.2	-6.3	-6.1	-5.9	-5.9	-5.1	-9.2	-7.4
Max.	**3.3**	**3.5**	**4.0**	**4.4**	**4.8**	**5.0**	**5.0**	**3.9**	**3.8**	**4.0**	**4.1**	**4.2**	**4.3**	**4.8**	**5.1**	**4.5**	**4.8**	**4.8**	**4.6**	**4.1**	**4.2**	**2.9**	**3.2**	**2.6**	**5.1**		
Min.	**-24.1**	**-23.9**	**-23.8**	**-23.2**	**-22.6**	**-22.7**	**-22.6**	**-22.5**	**-22.8**	**-22.8**	**-23.1**	**-23.2**	**-23.1**	**-23.5**	**-23.4**	**-23.2**	**-23.4**	**-23.5**	**-23.1**	**-23.3**	**-23.6**	**-23.5**	**-23.7**	**-24.2**		**-24.2**	
Avg.	**-8.6**	**-8.7**	**-8.7**	**-8.5**	**-8.4**	**-8.5**	**-8.3**	**-8.2**	**-8.3**	**-8.5**	**-8.5**	**-8.5**	**-8.2**	**-8.3**	**-8.1**	**-8.2**	**-8.2**	**-8.3**	**-8.3**	**-8.7**	**-8.8**	**-8.6**	**-8.7**	**-8.8**			**-8.4**

Total Hours in Month 744 **Hours Data Available** 728 **Data Recovery** 97.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-6.5	-7.0	-7.3	-7.8	-8.2	-8.4	-8.5	-8.5	-8.4	-8.4	-8.7	-8.8	-8.8	-8.4	-8.0	-7.7	-7.5	-7.6	-8.2	-8.9	-9.3	-9.4	-9.6	-9.6	-6.5	-9.6	-8.3
2	-9.8	-10.0	-10.1	-10.1	-9.8	-9.6	-9.5	-9.4	-9.0	-8.9	-9.9	-10.5	-11.1	-11.2	-11.5	-12.2	-12.4	-12.0	-11.7	-11.2	-11.4	-11.3	-11.5	-12.0	-8.9	-12.4	-10.7
3	-12.6	-13.5	-14.1	-14.6	-14.7	-14.9	-15.3	-15.6	-16.4	-16.8	-16.4	-16.5	-16.9	-16.7	-16.8	-16.7	-16.3	-15.7	-15.2	-15.3	-15.6	-16.4	-15.9	-15.6	-12.6	-16.9	-15.6
4	-15.4	-14.2	-13.8	-13.8	-14.9	-13.9	-14.0	-15.2	-14.6	-14.2	-14.3	-13.9	-13.3	-12.2	-11.7	-11.4	-11.3	-11.4	-11.4	-11.7	-11.8	-12.3	-13.3	-13.8	-11.3	-15.4	-13.2
5	-14.5	-14.5	-15.0	-14.8	-15.4	-15.9	-15.8	-16.8	-17.5	-17.8	-18.0	-19.0	-18.5	-18.5	-18.3	-18.5	-17.1	-16.7	-17.7	-16.6	-17.5	-17.0	-16.1	-16.2	-14.5	-19.0	-16.8
6	-15.9	-15.7	-15.1	-15.0	-14.6	-13.9	-14.0	-13.1	-12.7	-12.6	-12.5	-12.0	-11.6	-11.1	-10.9	-11.5	-12.8	-13.6	-14.7	-14.9	-16.4	-17.2	-16.7	-16.8	-10.9	-17.2	-14.0
7	-16.7	-16.6	-17.3	-17.3	-16.9	-16.9	-16.3	-16.1	-16.7	-16.4	-16.4	-15.9	-14.7	-14.1	-12.3	-12.1	-11.8	-12.4	-12.0	-13.5	-12.6	-12.8	-13.2	-12.7	-11.8	-17.3	-14.7
8	-12.0	-11.2	-11.8	-12.1	-11.6	-10.2	-7.8	-5.9	-5.8	-5.8	-6.1	-5.9	-5.7	-5.2	-5.5	-5.5	-5.6	-5.9	-5.7	-5.6	-5.6	-4.2	-3.4	-3.4	-3.4	-12.1	-7.0
9	-3.4	-3.4	-3.3	-3.9	-4.4	-4.3	-4.8	-4.8	-4.8	-4.6	-4.7	-4.9	-4.7	-4.5	-4.5	-4.4	-4.7	-4.9	-5.5	-6.1	-6.4	-6.7	-7.0	-7.1	-3.3	-7.1	-4.9
10	-7.2	-7.5	-7.8	-8.5	-8.8	-9.6	-9.8	-10.6	-11.5	-12.1	-12.1	-12.1	-12.0	-11.6	-10.8	-9.9	-9.4	-9.2	-9.7	-10.1	-10.2	-10.2	-10.0	-9.4	-7.2	-12.1	-10.0
11	-9.1	-9.0	-9.0	-8.9	-8.8	-8.9	-9.2	-9.3	-9.4	-9.3	-9.3	-9.3	-9.1	-9.1	-9.5	-9.3	-9.3	-9.6	-9.2	-10.0	-10.5	-10.6	-12.7	-12.4	-8.8	-12.7	-9.6
12	-12.6	-14.1	-14.6	-15.5	-16.4	-16.9	-17.9	-19.2	-19.0	-19.1	-18.6	-17.9	-17.2	-17.0	-16.9	-15.1	-14.1	-13.7	-14.1	-13.6	-13.9	-13.2	-12.8	-10.7	-10.7	-19.2	-15.6
13	-6.6	-5.7	-4.4	-3.0	-1.3	-1.9	-1.9	-0.6	-0.3	0.0	1.2	1.9	1.7	2.4	2.6	2.7	2.6	2.8	3.5	3.6	3.7	3.6	3.7	3.8	3.8	-6.6	0.6
14	4.1	3.8	3.9	3.8	3.7	3.6	3.7	3.9	3.7	3.6	1.1	-4.7	-8.1	-9.4	-10.6	-11.6	-12.6	-13.3	-13.5	-13.6	-14.2	-14.1	-13.9	-13.9	4.1	-14.2	-4.8
15	-14.2	-14.3	-14.9	-15.5	-16.0	-16.4	-17.2	-17.9	-18.0	-18.4	-18.4	-17.8	-17.8	-17.7	-17.4	-16.8	-15.9	-15.9	-15.6	-15.5	-15.0	-13.6	-10.0	-9.2	-9.2	-18.4	-15.8
16	-9.0	-8.5	-7.8	-7.0	-5.7	-4.8	-3.9	-4.0	-4.5	-4.0	-3.3	-2.5	-2.3	-1.7	-1.0	-0.3	0.0	0.6	-0.2	-0.4	-0.4	-0.8	-0.4	-1.0	0.6	-9.0	-3.0
17	-1.0	-0.8	-0.7	-0.1	-0.6	0.1	3.4	3.9	4.3	4.8	3.7	3.7	3.1	3.1	2.9	3.6	3.6	3.0	2.0	2.4	2.3	2.2	2.4	2.5	4.8	-1.0	2.2
18	2.6	2.3	1.0	1.0	1.9	1.8	1.7	1.8	1.7	1.5	1.7	2.2	2.1	2.4	2.4	2.6	2.4	1.6	2.4	2.4	2.4	4.8	5.1	3.4	5.1	1.0	2.3
19	2.2	3.3	6.1	3.3	3.1	5.9	4.6	4.3	4.5	4.1	4.0	3.9	3.9	3.9	4.2	8.4	23.4	25.0	13.8	5.3	4.5	4.3	4.1	3.5	25.0	2.2	6.4
20	2.7	1.9	1.5	1.7	2.1	2.0	1.9	1.8	2.5	2.7	3.7	4.8	5.3	5.1	5.4	5.8	6.0	5.6	5.6	5.7	5.8	5.3	4.3	5.1	6.0	1.5	3.9
21	5.7	5.5	5.4	5.1	5.0	5.1	5.3	4.8	5.1	4.7	4.6	4.3	4.3	4.2	4.2	3.7	3.4	3.4	3.4	3.3	3.8	3.6	3.6	3.5	5.7	3.3	4.4
22	2.8	3.1	3.1	3.2	3.2	3.1	2.7	2.9	3.1	3.3	3.1	2.4	1.5	1.3	1.7	1.3	1.9	2.1	1.5	2.0	2.5	1.6	2.1	0.8	3.3	0.8	2.3
23	0.8	1.2	1.4	1.3	0.3	0.5	0.5	-0.5	-0.6	-1.0	-1.7	-2.0	-2.0	-1.7	-1.5	-1.1	-1.3	-1.1	-1.1	-1.4	-1.6	-1.9	-2.8	-2.4	1.4	-2.8	-0.8
24	-2.5	-2.7	-3.8	-3.7	-3.7	-4.6	-4.7	-5.0	-5.3	-5.2	-5.1	-5.2	-5.1	-5.2	-5.3	-5.1	-5.2	-5.3	-5.7	-6.0	-6.5	-6.7	-6.7	-7.2	-2.5	-7.2	-5.1
25	-7.7	-8.0	-8.5	-9.1	-9.5	-9.8	-10.2	-10.4	-10.8	-10.7	-10.8	-10.3	-9.3	-7.9	-2.3	-0.9	-0.4	0.1	0.3	0.3	0.5	0.7	0.6	0.5	0.7	-10.8	-5.6
26	0.6	0.9	0.7	0.1	0.3	0.2	0.4	0.3	0.3	0.4	0.6	0.9	1.1	1.8	1.8	2.1	1.3	0.9	0.2	-0.2	-0.6	-1.0	-1.2	-1.4	2.1	-1.4	0.4
27	-1.9	-1.9	-1.9	-2.3	-3.2	-3.9	-3.5	-3.6	-3.7	-3.7	-3.8	-3.2	-2.6	-2.3	-1.5	-1.6	-1.6	-0.6	0.6	1.5	2.4	3.3	3.8	3.8	3.8	-3.9	-1.3
28	3.7	4.3	5.0	5.1	5.0	4.7	4.8	4.8	4.6	4.6	4.7	4.2	4.8	4.5	3.7	4.2	4.0	3.5	2.2	2.1	1.6	1.6	1.8	1.7	5.1	1.6	3.8
29	1.5	1.1	0.9	0.8	0.8	0.4	-0.2	-0.3	-1.0	-1.7	-2.4	-2.3	-2.4	-2.4	-2.8	-3.1	-2.8	-2.9	-3.9	-5.0	-5.8	-6.4	-6.6	-6.9	1.5	-6.9	-2.2
Max.	**5.7**	**5.5**	**6.1**	**5.1**	**5.0**	**5.9**	**5.3**	**4.8**	**5.1**	**4.8**	**4.7**	**4.8**	**5.3**	**5.1**	**5.4**	**8.4**	**23.4**	**25.0**	**13.8**	**5.7**	**5.8**	**5.3**	**5.1**	**5.1**	**25.0**		
Min.	**-16.7**	**-16.6**	**-17.3**	**-17.3**	**-16.9**	**-16.9**	**-17.9**	**-19.2**	**-19.0**	**-19.1**	**-18.6**	**-19.0**	**-18.5**	**-18.5**	**-18.3**	**-18.5**	**-17.1**	**-16.7**	**-17.7**	**-16.6**	**-17.5**	**-17.2**	**-16.7**	**-16.8**		**-19.2**	
Avg.	**-5.2**	**-5.2**	**-5.2**	**-5.4**	**-5.5**	**-5.4**	**-5.4**	**-5.5**	**-5.5**	**-5.6**	**-5.7**	**-5.7**	**-5.7**	**-5.5**	**-5.2**	**-4.8**	**-4.3**	**-4.2**	**-4.8**	**-5.2**	**-5.4**	**-5.3**	**-5.2**	**-5.3**			**-5.3**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-6.9	-7.2	-7.4	-7.5	-8.0	-8.3	-8.4	-8.4	-8.5	-8.1	-6.2	-4.9	-4.4	-3.9	-3.5	-2.9	-2.3	-2.3	-0.9	0.3	1.0	1.1	0.9	1.5	1.5	-8.5	-4.4
2	1.8	1.4	1.6	2.0	2.0	2.1	2.0	0.7	0.7	1.0	1.2	0.8	0.8	1.5	2.4	2.7	1.9	0.5	0.2	0.4	1.1	1.8	1.4	0.7	2.7	0.2	1.4
3	-0.1	0.1	0.8	0.6	0.1	-0.1	1.7	2.3	1.9	1.9	1.9	1.1	1.1	1.5	2.2	2.5	2.5	2.8	2.9	3.1	3.2	3.0	3.1	3.0	3.2	-0.1	1.8
4	2.8	2.7	2.6	2.4	2.3	2.6	2.2	2.3	2.4	2.0	1.8	1.6	2.6	3.2	3.6	4.0	4.0	4.0	4.0	3.9	3.7	3.3	3.7	3.4	4.0	1.6	3.0
5	4.1	4.3	4.1	4.0	3.8	3.7	3.7	3.6	3.7	3.6	3.5	3.5	3.5	3.7	4.1	4.3	4.5	3.9	2.7	2.5	2.4	2.5	2.5	2.3	4.5	2.3	3.5
6	2.3	2.3	2.2	2.2	2.5	2.7	2.8	2.7	2.6	2.4	0.9	0.2	1.5	3.8	3.4	2.5	4.2	4.6	5.0	5.3	4.9	3.9	4.1	3.4	5.3	0.2	3.0
7	3.1	2.9	3.1	3.0	2.3	1.6	1.6	1.6	1.3	1.6	1.6	1.6	1.6	1.4	2.2	2.6	2.6	2.4	2.3	2.1	2.0	1.9	1.5	1.0	3.1	1.0	2.0
8	0.8	0.8	0.5	0.4	0.3	0.1	0.0	-0.2	0.9	1.7	2.0	1.8	3.0	3.4	3.8	3.8	3.3	2.9	3.1	3.6	3.8	4.3	4.7	4.2	4.7	-0.2	2.2
9	4.0	3.8	3.4	3.5	3.5	3.8	4.4	4.7	4.7	4.6	4.5	4.8	4.6	4.8	4.6	4.7	4.8	4.6	4.3	3.6	3.0	3.2	3.1	2.3	4.8	2.3	4.0
10	1.7	1.2	1.7	0.8	1.1	1.4	0.7	0.1	0.3	-0.1	-0.6	-0.9	-1.4	-1.2	-1.1	-1.3	-1.4	-1.3	-1.4	-1.5	-1.6	-1.7	-1.3	-1.2	1.7	-1.7	-0.4
11	-1.5	-1.7	-2.1	-2.4	-2.9	-3.4	-3.6	-3.9	-4.0	-3.9	-3.7	-3.7	-3.7	-3.4	-3.2	-3.0	-2.9	-3.0	-3.2	-3.3	-3.4	-3.7	-3.8	-3.7	-1.5	-4.0	-3.2
12	-3.8	-4.5	-5.0	-5.3	-5.4	-5.7	-6.0	-6.0	-6.2	-6.2	-6.2	-6.2	-6.2	-5.8	-5.5	-5.2	-5.1	-5.1	-5.1	-5.5	-5.7	-5.9	-6.1	-6.2	-3.8	-6.2	-5.6
13	-6.3	-6.2	-6.0	-6.1	-6.2	-6.3	-6.2	-6.2	-6.1	-6.1	-6.3	-6.2	-6.0	-6.0	-5.8	-5.6	-5.5	-5.4	-5.5	-6.2	-6.8	-7.1	-7.2	-7.2	-5.4	-7.2	-6.2
14	-7.3	-7.5	-7.5	-7.5	-7.4	-7.0	-6.1	-5.6	-6.2	-6.5	-6.2	-6.1	-5.6	-4.5	-3.4	-1.9	-1.5	-1.1	-1.0	-1.1	-1.0	-0.4	-0.4	0.0	0.0	-7.5	-4.3
15	0.1	-1.1	-1.4	-1.0	-0.6	0.0	0.0	0.3	0.8	1.0	1.2	1.4	1.3	1.7	1.8	2.0	2.1	2.1	1.8	1.4	1.0	1.2	1.4	1.6	2.1	-1.4	0.8
16	1.6	1.6	1.3	1.4	1.7	1.7	1.9	1.9	2.0	1.5	1.6	1.8	1.6	1.5	1.2	1.1	0.9	0.7	0.6	0.4	0.4	-0.2	-0.8	-1.0	2.0	-1.0	1.1
17	-0.8	-1.1	-1.0	-1.7	-1.8	-1.6	-1.7	-1.7	-1.7	-1.4	-1.4	-0.8	-0.3	0.2	0.4	0.7	0.7	0.8	0.3	-2.2	-3.6	-4.4	-4.9	-5.3	0.8	-5.3	-1.4
18	-5.7	-5.9	-6.2	-6.3	-6.2	-6.4	-6.7	-6.7	-7.0	-7.0	-7.3	-7.6	-7.5	-7.4	-7.6	-7.7	-7.6	-7.8	-8.0	-8.2	-8.5	-8.6	-8.8	-9.1	-5.7	-9.1	-7.3
19	-9.5	-9.8	-10.2	-10.7	-11.1	-11.3	-11.3	-11.7	-12.4	-12.7	-12.6	-12.3	-11.8	-11.6	-11.3	-11.1	-11.1	-11.3	-11.2	-11.2	-11.4	-11.6	-11.8	-12.0	-9.5	-12.7	-11.4
20	-12.1	-12.3	-12.4	-12.4	-12.7	-13.1	-13.6	-14.2	-14.8	-14.8	-14.4	-14.2	-13.8	-13.6	-13.4	-13.0	-12.9	-12.7	-12.5	-12.4	-12.6	-12.9	-12.8	-12.6	-12.1	-14.8	-13.2
21	-12.5	-12.0	-12.2	-11.8	-11.7	-11.5	-11.1	-8.3	-3.8	0.7	1.8	2.4	3.0	2.9	1.8	0.2	0.8	-0.3	1.5	0.6	0.7	4.3	4.5	4.3	4.5	-12.5	-2.7
22	4.3	4.0	3.4	3.2	3.2	1.2	-0.8	-0.7	-2.6	-2.7	-2.8	-2.9	-2.6	-3.2	-3.1	-2.9	-3.1	-3.1	-3.3	-4.1	-4.7	-4.5	-3.9	-4.3	4.3	-4.7	-1.5
23	-5.3	-5.4	-5.2	-5.7	-5.9	-6.3	-7.2	-7.9	-8.6	-8.6	-8.9	-9.1	-9.2	-8.8	-8.6	-8.5	-8.6	-9.0	-8.9	-8.8	-8.7	-8.5	-8.2	-8.0	-5.2	-9.2	-7.8
24	-7.7	-7.5	-7.5	-7.4	-7.6	-7.9	-7.8	-7.7	-7.7	-7.6	-7.9	-7.7	-7.3	-6.9	-6.1	-6.1	-6.1	-6.0	-5.8	-6.0	-6.0	-5.7	-6.0	-5.5	-5.5	-7.9	-6.9
25	-4.6	-4.4	-4.2	-3.8	-3.2	-3.0	-3.0	-3.5	-3.2	-3.0	-2.9	-2.9	-3.3	-2.8	-2.3	-2.3	-2.5	-2.5	-2.7	-3.2	-3.6	-3.9	-4.0	-3.9	-2.3	-4.6	-3.3
26	-3.9	-3.9	-4.1	-4.4	-4.5	-4.7	-4.9	-5.1	-5.2	-4.7	-5.0	-5.0	-5.0	-5.3	-5.0	-4.6	-4.1	-3.9	-3.9	-4.4	-4.7	-4.6	-4.9	-5.1	-3.9	-5.3	-4.6
27	-5.3	-5.2	-5.6	-6.1	-6.6	-6.7	-6.6	-6.7	-6.6	-6.4	-6.2	-6.0	-5.9	-5.8	-5.5	-5.3	-5.3	-5.5	-5.6	-5.5	-5.6	-5.8	-5.9	-6.1	-5.2	-6.7	-5.9
28	-6.5	-6.9	-7.2	-7.3	-8.2	-7.8	-7.8	-7.9	-7.7	-7.6	-7.4	-7.2	-6.7	-6.3	-5.7	-5.0	-4.4	-3.9	-3.5	-3.3	-3.3	-3.4	-3.3	-3.0	-3.0	-8.2	-5.9
29	-2.7	-2.2	-2.0	-1.4	-1.5	-1.2	-1.0	-0.9	-0.9	-0.7	-1.0	-0.7	-0.8	-1.1	-1.0	-0.2	-0.2	0.2	0.3	0.5	0.7	0.8	0.9	0.7	0.9	-2.7	-0.6
30	1.1	0.9	0.8	0.7	0.4	0.5	0.4	0.4	0.6	0.9	0.8	1.1	1.2	1.3	1.4	1.7	1.8	1.8	1.7	2.3	2.6	2.7	2.8	2.9	2.9	0.4	1.4
31	3.0	3.2	3.4	3.7	2.9	2.9	3.1	3.0	3.4	3.3	3.5	3.1	3.6	3.6	3.7	3.2	4.2	4.0	3.8	3.8	3.5	3.2	3.5	3.7	4.2	2.9	3.4
Max.	**4.3**	**4.3**	**4.1**	**4.0**	**3.8**	**3.8**	**4.4**	**4.7**	**4.7**	**4.6**	**4.5**	**4.8**	**4.6**	**4.8**	**4.6**	**4.7**	**4.8**	**4.6**	**5.0**	**5.3**	**4.9**	**4.3**	**4.7**	**4.3**	**5.3**		
Min.	**-12.5**	**-12.3**	**-12.4**	**-12.4**	**-12.7**	**-13.1**	**-13.6**	**-14.2**	**-14.8**	**-14.8**	**-14.4**	**-14.2**	**-13.8**	**-13.6**	**-13.4**	**-13.0**	**-12.9**	**-12.7**	**-12.5**	**-12.4**	**-12.6**	**-12.9**	**-12.8**	**-12.6**		**-14.8**	
Avg.	**-2.3**	**-2.4**	**-2.5**	**-2.6**	**-2.8**	**-2.8**	**-2.9**	**-2.9**	**-2.8**	**-2.6**	**-2.6**	**-2.6**	**-2.3**	**-2.0**	**-1.8**	**-1.6**	**-1.5**	**-1.6**	**-1.6**	**-1.7**	**-1.8**	**-1.8**	**-1.8**	**-1.9**			**-2.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.7	3.6	3.9	4.0	4.0	3.8	3.1	3.0	3.5	3.4	3.3	3.5	3.6	3.8	4.0	3.9	4.1	4.3	4.1	4.0	3.3	3.3	3.7	3.2	4.3	3.0	3.7
2	2.6	1.6	1.1	1.0	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.2	1.7	2.6	3.0	2.4	2.4	2.2	1.7	1.6	1.7	1.9	2.2	3.0	1.0	1.6
3	2.4	2.4	2.4	2.2	2.0	1.2	1.3	1.8	2.1	2.6	2.3	2.3	2.1	2.0	2.4	2.2	2.1	2.4	2.8	2.9	2.9	2.8	2.6	2.5	2.9	1.2	2.3
4	2.3	2.3	2.2	2.0	1.6	1.6	1.7	2.0	2.4	2.4	2.4	2.5	2.3	2.8	3.4	3.5	3.5	3.0	3.0	2.6	1.7	0.9	-0.6	-1.9	3.5	-1.9	2.1
5	-2.8	-3.8	-4.2	-4.4	-4.5	-5.0	-5.3	-5.9	-6.1	-5.8	-5.5	-5.2	-4.8	-4.3	-4.0	-3.7	-3.3	-2.6	-2.5	-2.7	-3.2	-3.9	-4.5	-4.8	-2.5	-6.1	-4.3
6	-5.0	-4.8	-4.8	-5.0	-5.3	-5.5	-5.9	-6.3	-6.1	-6.1	-6.1	-6.2	-5.8	-5.0	-4.4	-3.9	-3.4	-3.5	-3.5	-3.4	-3.6	-4.0	-4.4	-4.9	-3.4	-6.3	-4.9
7	-5.3	-5.7	-6.0	-6.3	-6.5	-6.9	-7.3	-7.7	-7.8	-7.8	-7.4	-7.2	-6.4	-5.3	-4.4	-3.6	-2.9	-2.3	-2.4	-2.6	-2.9	-3.6	-4.1	-4.2	-2.3	-7.8	-5.3
8	-4.1	-4.2	-4.2	-4.3	-4.2	-4.4	-4.8	-5.0	-5.3	-5.3	-4.7	-4.0	-3.2				-2.0	-2.0	-2.5	-2.9	-2.9	-3.0	-3.4	-3.9	-2.0	-5.3	-3.8
9	-4.6	-5.3	-5.6	-5.8	-5.9	-6.3	-6.5	-6.9	-7.6	-7.8	-7.6	-6.8	-5.9	-4.9	-4.0	-3.5	-3.3	-3.2	-3.3	-3.4	-3.7	-4.2	-4.6	-4.9	-3.2	-7.8	-5.2
10	-5.2	-5.5	-5.9	-6.1	-6.1	-6.3	-6.7	-7.3	-7.8	-7.8	-7.5	-6.9	-6.4	-5.9	-5.2	-4.5	-4.3	-4.2	-4.1	-4.1	-4.4	-4.8	-5.0	-5.4	-4.1	-7.8	-5.7
11	-5.9	-6.4	-6.7	-7.2	-7.8	-8.2	-8.5	-8.8	-9.5	-9.4	-9.2	-8.8	-8.5	-8.0	-7.6	-6.4	-5.4	-4.8	-4.8	-4.9	-5.2	-5.6	-6.2	-6.9	-4.8	-9.5	-7.1
12	-7.4	-7.8	-8.3	-8.3	-8.5	-8.9	-8.9	-9.0	-9.0	-8.7	-8.7	-7.9	-7.0	-5.8	-4.5	-3.4	-2.8	-2.3	-2.2	-2.1	-2.3	-2.8	-3.0	-3.2	-2.1	-9.0	-5.9
13	-3.2	-3.0	-2.5	-2.4	-2.0	-1.4	-1.0	-0.6	-0.2	-0.6	-1.2	-1.4	-1.0	-0.6	-0.4	1.8	3.2	3.5	3.8	3.6	3.7	3.7	3.9	3.8	3.9	-3.2	0.4
14	3.0	2.3	2.4	2.0	1.6	1.4	1.2	0.8	0.8	0.8	1.1	1.4	1.6	1.9	2.2	2.5	2.9	3.0	3.0	2.9	3.0	2.9	2.6	2.6	3.0	0.8	2.1
15	2.6	2.6	2.4	2.0	1.8	1.9	2.0	1.9	1.4	0.6	0.1	0.1	0.6	1.7	2.5	2.3	2.2	1.5	0.8	-0.1	-0.8	-2.1	-3.9	-4.2	2.6	-4.2	0.8
16	-4.6	-5.4	-6.0	-6.4	-6.0	-6.9	-7.1	-7.8	-7.7	-8.8	-8.5	-8.0	-7.5	-6.7	-6.2	-5.5	-4.9	-3.8	-3.4	-3.5	-3.4	-3.0	-2.6	-2.4	-2.4	-8.8	-5.7
17	-2.0	-1.5	-1.2	-0.6	-0.4	-0.3	0.3	0.4	0.2	0.5	1.0	1.2	1.7	1.7	1.5	1.5	1.8	2.0	1.9	1.9	1.9	2.0	2.4	3.0	3.0	-2.0	0.9
18	3.4	3.6	3.8	3.6	2.4	1.2	0.9	1.0	1.0	0.6	1.2	1.8	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.2	1.9	1.6	3.8	0.6	2.1
19	2.1	2.1	1.9	1.7	1.1	0.7	1.8	0.9	1.3	1.9	2.3	2.3	2.2	2.7	2.7	2.5	2.4	2.5	2.5	2.4	2.3	2.1	2.0	1.9	2.7	0.7	2.0
20	1.9	2.1	2.0	1.8	1.8	1.9	1.8	2.0	2.2	2.4	2.6	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.6	1.8	2.2
21	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.9	3.0	3.0	3.0	2.9	3.1	2.9	2.9	2.8	2.5	2.4	2.4	3.1	2.4	2.6
22	2.5	2.4	2.3	1.8	1.4	1.9	1.5	0.8	0.9	1.6	2.6	3.4	3.9	3.7	4.4	4.8	5.2	5.3	5.2	5.6	5.6	5.3	4.6	4.1	5.6	0.8	3.4
23	3.9	3.7	4.1	6.3	5.4	5.2	4.7	4.4	4.4	5.1	5.3	6.3	7.0	7.6	7.8	8.2	8.6	8.7	9.0	9.1	9.3	9.0	8.8	8.8	9.3	3.7	6.7
24	8.3	7.2	5.2	4.3	3.8	4.0	3.5	2.7	1.8	1.4	1.7	1.9	2.5	2.7	3.1	3.3	3.7	3.6	4.0	4.1	3.8	3.7	3.6	3.8	8.3	1.4	3.6
25	3.5	2.6	1.2	0.8	0.2	-0.4	-0.8	-1.0	-1.2	-1.0	-0.9	-0.8	-0.4	0.1	0.0	-0.3	-0.6	-0.7	-0.5	-0.4	-0.3	-0.8	-1.0	-1.1	3.5	-1.2	-0.2
26	-1.4	-1.7	-1.9	-2.2	-2.5	-2.5	-2.7	-3.1	-3.3	-3.8	-3.8	-3.6	-3.2	-2.8	-2.3	-2.0	-1.2	-0.9	-0.6	-0.3	0.1	0.2	0.1	0.2	0.2	-3.8	-1.9
27	0.2	0.1	0.2	0.1	0.0	-0.3	-0.2	-0.7	-0.8	-0.7	-0.7	-0.9	-0.8	-0.5	0.0	-0.2	0.5	0.5	1.1	0.8	0.7	0.5	0.1	0.0	1.1	-0.9	0.0
28	-0.1	-0.2	-0.4	-0.5	-0.7	-1.0	-1.1	-1.5	-1.8	-2.1	-2.0	-1.5	-1.1	-1.0	-0.6	0.1	0.7	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.8	-2.1	-0.4
29	0.6	0.5	0.6	0.4	0.1	-0.1	-0.5	-0.5	-0.2	-0.3	-0.1	0.2	0.7	1.2	1.7	2.3	2.7	3.1	3.2	3.3	3.1	2.6	2.3	2.0	3.3	-0.5	1.2
30	2.0	1.6	1.6	1.4	1.4	1.2	1.1	0.8	0.9	1.2	1.6	2.3	3.3	4.1	3.3	3.3	4.5	4.8	4.7	5.1	4.6	4.2	3.9	3.8	5.1	0.8	2.8
Max.	**8.3**	**7.2**	**5.2**	**6.3**	**5.4**	**5.2**	**4.7**	**4.4**	**4.4**	**5.1**	**5.3**	**6.3**	**7.0**	**7.6**	**7.8**	**8.2**	**8.6**	**8.7**	**9.0**	**9.1**	**9.3**	**9.0**	**8.8**	**8.8**	**9.3**		
Min.	**-7.4**	**-7.8**	**-8.3**	**-8.3**	**-8.5**	**-8.9**	**-8.9**	**-9.0**	**-9.5**	**-9.4**	**-9.2**	**-8.8**	**-8.5**	**-8.0**	**-7.6**	**-6.4**	**-5.4**	**-4.8**	**-4.8**	**-4.9**	**-5.2**	**-5.6**	**-6.2**	**-6.9**		**-9.5**	
Avg.	**-0.1**	**-0.4**	**-0.6**	**-0.7**	**-0.9**	**-1.2**	**-1.3**	**-1.5**	**-1.6**	**-1.6**	**-1.4**	**-1.1**	**-0.7**	**-0.2**	**0.2**	**0.5**	**0.8**	**1.0**	**1.0**	**0.9**	**0.8**	**0.5**	**0.2**	**0.0**			**-0.3**

Total Hours in Month 744 **Hours Data Available** 717 **Data Recovery** 96.4%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.9	2.3	2.6	2.8	2.6	2.4	2.3	2.2	2.2	2.1	2.3	2.5	2.5	2.5	2.8	3.3	3.6	4.0	4.5	4.7	4.8	4.8	4.7	4.3	4.8	2.1	3.2
2	4.1	2.9	2.2	2.4	2.2	1.4	1.6	1.6	1.6	1.9	2.0	2.6	3.6	4.3	4.1	3.7	4.2	4.6	4.8	4.9	4.7	4.2	3.3	3.1	4.9	1.4	3.2
3	3.1	3.8	3.8	3.8	3.5	3.5	3.1	3.2	3.5	4.7	4.9	4.7	5.8	6.8	6.8	5.2	5.5	6.5	6.8	6.2	4.8	4.2	4.4	4.5	6.8	3.1	4.7
4	4.3	4.6	4.3	4.1	4.0	4.0	4.2	4.7	5.0	5.1	5.1	5.3	5.5	5.9	6.3	6.5	7.0	7.2	7.2	7.4	7.5	6.7	6.4	6.0	7.5	4.0	5.6
5	5.5	5.2	5.0	5.2	5.4	5.5	5.6	5.3	5.2	5.3	5.3	5.6	5.6	5.9	6.0	6.5	6.7	6.9	7.3	7.4	7.3	6.6	6.3	5.6	7.4	5.0	5.9
6	5.3	4.9	4.7	5.3	5.3	5.0	4.7	4.3	4.2	4.4	4.6	4.3	4.2	4.1	4.4	4.9	4.9	4.9	4.8	4.5	4.3	3.9	3.9	3.9	5.3	3.9	4.6
7	4.1	4.5	5.0	5.4	5.6	5.2	5.0	4.8	5.4	5.5	4.8	5.1	5.7	6.0	6.2	6.1	6.4	6.6	5.7	4.8	6.1	5.4	5.4	4.9	6.6	4.1	5.4
8	4.9	5.3	5.5	5.4	5.4	5.6	5.9	5.8	5.7	5.9	5.7	5.6	5.8	5.9	5.8	6.3	6.4	6.5	6.5	6.4	6.4	6.6	6.6	6.3	6.6	4.9	5.9
9	5.9	5.8	5.6	5.4	5.5	5.3	5.4	5.5	5.8	5.9	5.8	5.8	6.3	7.0	7.3	7.6	7.3	7.4	6.9	5.9	5.9	5.6	5.2	4.8	7.6	4.8	6.0
10	4.8	4.8	4.8	4.8	4.6	4.4	4.5	4.6	4.9	5.1	5.6	5.9	6.5	6.9	7.2	7.5	7.8	7.9	7.3	7.1	6.9	6.5	6.4	6.0	7.9	4.4	5.9
11	5.9	6.0	7.7	8.0	5.0	5.0	6.7	8.1	7.9	5.0	4.6	5.2	7.1	8.1	7.8	7.5	7.6	8.2	8.0	8.0	7.4	6.4	6.2	6.1	8.2	4.6	6.8
12	5.7	5.7	5.8	5.7	5.4	5.2	5.2	4.9	4.6	4.5	5.0	5.4	5.8	5.9	4.3	4.2	4.2	3.9	4.0	3.9	3.9	4.6	4.2	3.9	5.9	3.9	4.8
13	3.7	4.3	4.1	4.0	4.1	4.2	4.0	4.3	4.3	4.4	4.4	4.5	4.5	4.6	4.9	4.9	4.7	4.8	4.5	4.2	4.6	3.4	3.7	4.1	4.9	3.4	4.3
14	4.5	5.4	5.9	6.0	6.0	5.9	6.0	5.8	5.5	5.9	5.9	5.8	5.1	5.9	7.2	7.5	8.2	8.2	8.4	7.8	7.7	7.9	7.3	6.6	8.4	4.5	6.5
15	5.5	5.2	5.4	5.7	6.0	6.1	6.0	5.8	5.7	5.2	5.4	5.4	5.4	5.5	5.7	5.9	5.9	5.6	5.4	5.2	5.7	5.4	5.2	5.2	6.1	5.2	5.6
16	5.3	5.4	4.8	4.8	4.6	4.8	4.6	4.5	4.4	4.5	4.6	4.6	4.7	4.7	4.8	5.0	4.9	4.8	4.8	4.8	4.7	4.6	4.4	4.4	5.4	4.4	4.7
17	3.9	3.7	4.6	5.3	5.2	5.0	5.0	5.0	5.0	5.4	5.9	6.6	7.6	7.6	7.1	6.9	7.0	6.9	6.6	6.4	6.2	5.8	5.5	5.6	7.6	3.7	5.8
18	5.7	5.2	5.0	4.9	5.0	5.0	4.7	4.4	4.5	4.7	4.6	4.5	4.4	4.5	4.6	4.7	5.0	5.2	5.1	5.0	5.1	5.1	5.0	4.9	5.7	4.4	4.9
19	4.9	4.7	4.5	4.3	4.0	3.9	4.1	4.0	4.2	4.8	5.9	6.7	7.1	7.8	8.8	9.2	9.5	9.5	9.7	9.5	9.3	8.8	8.1	7.9	9.7	3.9	6.7
20	7.6	7.6	7.4	7.1	7.1	6.8	6.7	6.7	7.1	7.5	8.6	9.3	10.1	10.5	11.5	10.6	10.3	10.9	10.8	10.3	10.0	9.6	8.5	8.0	11.5	6.7	8.8
21	7.7	7.0	6.4	6.0	5.5	5.5	6.1	6.4	6.7	7.3	6.6	6.4	6.6	6.1	6.6	6.6	6.4	6.2	6.4	7.3	7.2	7.3	7.3	8.6	8.6	5.5	6.7
22	8.4	8.3	8.4	8.1	7.6	7.1	6.6	6.6	6.2	6.5	7.1	8.1	8.8	7.6	7.2	6.5	6.5	6.4	5.9	5.8	5.8	5.7	5.4	5.3	8.8	5.3	6.9
23	5.3	5.1	4.8	4.3	3.9	4.3	4.5	4.8	5.3	5.1	5.5	6.2	6.6	6.5	6.6	6.3	6.0	6.1	6.0	6.0	6.2	6.2	6.1	6.1	6.6	3.9	5.6
24	6.2	6.1	6.1	6.1	6.1	5.9	5.8	5.9	5.8	5.9	6.0	5.7	5.6	5.5	5.5	5.3	5.3	5.5	5.4	5.5	5.6	5.8	5.8	5.2	6.2	5.2	5.7
25	4.8	4.2	3.8	3.6	3.9	3.2	3.6	3.5	4.4	5.1	6.3	6.7	7.2	7.2	7.5	7.5	7.7	7.6	7.4	7.5	7.5	7.6	7.6	7.7	7.7	3.2	6.0
26	7.6	7.5	7.1	6.7	6.5	6.3	6.0	5.8	6.0	6.4	6.9	7.6	8.3	8.8	9.0	9.5	9.4	9.2	9.1	8.9	8.9	8.1	8.1	7.9	9.5	5.8	7.7
27	7.6	7.4	7.1	6.4	6.3	6.2	6.1	6.0	6.1	6.0	6.0	7.1	8.3	9.2	9.8	10.7	11.5	12.2	12.5	12.3	12.5	12.2	11.6	11.1	12.5	6.0	8.8
28	11.3	10.7	10.1	10.1	9.4	9.0	8.4	8.0	8.2	8.7	8.7	8.9	10.1	11.2	12.2	13.3	13.9	14.0	13.9	13.8	13.9	13.1	12.8	12.2	14.0	8.0	11.1
29	11.7	11.3	11.2	10.9	10.5	10.4	9.9	9.6	9.6	9.7	10.2	10.0	9.6	8.7	9.4	10.1	10.1	10.5	10.9	10.4	10.3	10.5	10.1	10.2	11.7	8.7	10.2
30	9.7	8.8	8.9	8.2	8.1	7.9	7.7	8.8	8.7	9.1	8.9	8.9	9.0	9.0	8.9	8.8	7.8	7.5	7.4	7.5	7.5	7.2	7.2	7.1	9.7	7.1	8.3
31	7.3	7.3	7.1	7.0	6.9	6.6	6.7	6.5	6.5	6.5	6.5	6.5	6.7	6.6	6.5	6.3	6.3	6.3	6.3	6.1	6.0	6.1	6.1	6.0	7.3	6.0	6.5
Max.	**11.7**	**11.3**	**11.2**	**10.9**	**10.5**	**10.4**	**9.9**	**9.6**	**9.6**	**9.7**	**10.2**	**10.0**	**10.1**	**11.2**	**12.2**	**13.3**	**13.9**	**14.0**	**13.9**	**13.8**	**13.9**	**13.1**	**12.8**	**12.2**	**14.0**		
Min.	**2.9**	**2.3**	**2.2**	**2.4**	**2.2**	**1.4**	**1.6**	**1.6**	**1.6**	**1.9**	**2.0**	**2.5**	**2.5**	**2.5**	**2.8**	**3.3**	**3.6**	**3.9**	**4.0**	**3.9**	**3.9**	**3.4**	**3.3**	**3.1**		**1.4**	
Avg.	**6.0**	**5.8**	**5.8**	**5.7**	**5.5**	**5.4**	**5.4**	**5.4**	**5.5**	**5.6**	**5.8**	**6.0**	**6.5**	**6.7**	**6.9**	**6.9**	**7.0**	**7.2**	**7.1**	**6.9**	**6.9**	**6.6**	**6.4**	**6.2**			**6.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.3	6.5	7.0	7.3	8.0	7.7	7.9	7.9	8.5	8.7	8.9	8.6	8.3	9.0	8.9	9.3	8.6	7.4	8.9	9.0	8.8	8.5	8.3	8.4	9.3	6.3	8.2
2	8.6	8.6	8.6	8.6	8.7	8.5	8.6	8.8	9.0	8.9	9.4	9.9	9.8	9.8	10.1	10.0	10.2	10.0	9.3	9.6	10.0	10.0	10.8	11.0	11.0	8.5	9.4
3	10.8	10.7	10.4	10.5	10.5	10.4	10.1	10.4	10.7	11.1	10.6	9.5	8.5	8.3	8.0	7.8	7.8	7.0	6.7	6.7	6.6	6.8	7.0	6.8	11.1	6.6	8.9
4	6.6	6.4	6.2	6.1	5.9	5.9	6.0	6.1	6.5	6.8	7.1	7.2	7.3	7.4	7.4	7.7	7.9	8.0	8.0	8.0	7.9	7.5	7.2	6.8	8.0	5.9	7.0
5	6.8	6.8	6.6	6.2	5.9	6.2	6.3	6.0	5.9	6.4	6.0	6.2	6.1	6.1	6.5	6.3	6.3	6.4	7.3	7.3	7.5	7.5	8.0	7.9	8.0	5.9	6.6
6	8.0	7.1	7.1	6.7	6.2	6.0	6.1	6.2	6.4	7.0	7.6	8.3	9.1	9.8	10.8	11.9	12.7	13.3	12.7	13.6	13.1	12.5	11.8	10.9	13.6	6.0	9.4
7	10.4	10.1	9.4	8.7	8.1	7.8	7.6	7.3	7.4	7.7	7.5	8.0	9.6	10.5	10.4	11.4	9.4	7.3	7.1	6.8	6.7	6.7	6.6	6.6	11.4	6.6	8.3
8	6.6	6.9	7.0	6.7	6.5	6.5	6.6	7.0	8.0	8.0	8.7	9.6	10.2	11.4	12.1	10.2	10.4	13.3	13.5	12.7	11.7	10.8	10.1	10.0	13.5	6.5	9.4
9	9.8	8.7	7.6	6.5	6.0	5.7	5.4	5.0	5.0	5.4	6.0	6.5	7.2	8.1	8.7	8.9	9.1	9.1	9.2	9.3	9.2	8.7	7.9	7.3	9.8	5.0	7.5
10	7.0	6.8	6.3	6.0	5.8	5.5	5.2	5.2	5.6	5.6	5.8	6.4	7.3	7.8	7.6	7.7	7.7	7.2	7.0	6.9	6.9	6.8	6.9	6.8	7.8	5.2	6.6
11	7.1	7.4	7.2	6.8	6.7	6.5	6.6	6.4	6.2	6.7	6.7	6.8	6.5	6.5	6.5	6.3	6.2	6.2	6.3	6.5	6.7	6.8	6.9	7.2	7.4	6.2	6.7
12	7.3	7.1	6.7	6.4	6.0	5.6	5.4	5.3	5.3	5.5	6.1	7.1	7.9	8.5	9.0	9.5	9.7	9.7	9.5	8.6	7.9	7.1	6.7	6.2	9.7	5.3	7.3
13	6.2	6.0	5.9	5.9	5.6	5.2	5.2	5.4	6.0	6.3	6.8	7.3	7.9	8.6	9.4	10.1	10.4	11.1	11.6	11.2	9.9	10.3	10.2	9.8	11.6	5.2	8.0
14	9.7	9.0	9.1	10.3	10.0	9.6	9.7	9.2	8.8	8.9	8.7	9.0	9.3	9.9	9.7	8.8	9.1	9.0	9.4	9.4	9.3	9.8	9.6	9.3	10.3	8.7	9.4
15	10.1	11.2	11.8	11.1	11.0	9.7	9.1	8.6	8.6	8.7	8.8	9.4	10.0	9.3	9.0	9.2	9.6	10.4	11.3	13.4	12.8	12.6	12.1	11.5	13.4	8.6	10.4
16	10.9	10.7	10.4	10.3	9.9	9.4	9.3	9.3	9.3	9.7	10.4	10.9	10.9	11.4	12.3	11.8	11.4	11.5	11.1	11.2	11.1	11.2	11.2	10.7	12.3	9.3	10.7
17	9.9	9.8	9.7	9.2	8.5	8.4	8.3	8.8	8.8	8.5	8.0	7.6	7.5	7.4	7.2	6.9	6.9	7.5	7.3	7.6	8.2	8.2	8.1	7.0	9.9	6.9	8.1
18	6.6	6.7	6.9	6.7	6.3	6.4	6.5	6.5	8.5	9.9	8.1	7.5	7.4	7.7	8.7	9.2	9.0	9.7	10.0	10.1	9.5	9.4	9.5	9.8	10.1	6.3	8.2
19	9.3	8.9	8.9	8.8	8.1	9.4	10.3	10.5	10.2	8.6	9.2	9.3	9.3	8.9	8.7	8.8	9.1	9.1	9.0	8.8	8.8	8.7	8.5	8.4	10.5	8.1	9.1
20	8.3	8.1	8.0	7.9	7.8	7.4	7.6	8.0	7.8	8.0	8.3	9.0	9.5	8.9	8.6	8.7	8.9	8.6	8.7	9.3	9.1	8.8	8.7	9.2	9.5	7.4	8.5
21	9.4	9.4	9.2	8.9	8.9	8.8	8.8	9.0	9.1	9.0	9.0	9.2	9.3	9.6	9.7	9.6	9.9	10.4	10.5	10.8	11.5	11.5	11.8	11.4	11.8	8.8	9.8
22	10.3	10.1	9.8	9.5	9.6	9.5	9.4	9.4	9.4	9.2	9.3	9.1	9.1	8.8	8.8	8.8	9.2	10.1	10.5	10.3	10.1	10.1	9.9	9.6	10.5	8.8	9.6
23	9.2	9.1	8.9	8.7	8.6	8.5	8.5	8.6	8.6	8.9	9.3	9.4	9.3	9.4	9.4	9.5	9.2	9.4	9.3	9.3	9.4	9.1	9.1	9.2	9.5	8.5	9.1
24	9.2	8.9	8.7	8.6	8.3	8.4	8.5	8.6	8.7	9.0	8.9	8.5	8.2	8.3	8.4	8.8	9.7	10.0	10.1	10.1	9.8	10.3	10.6	10.5	10.6	8.2	9.1
25	10.9	11.0	9.4	8.5	8.4	9.3	10.0	10.2	10.2	10.4	11.4	11.7	11.8	11.7	11.0	10.7	10.3	11.3	11.7	10.5	10.5	12.1	11.1	10.5	12.1	8.4	10.6
26	10.3	10.6	10.7	10.5	10.5	10.3	10.4	10.6	10.8	11.0	11.2	11.3	11.4	12.0	12.5	12.6	13.1	13.4	13.7	13.6	13.3	13.2	13.2	13.3	13.7	10.3	11.8
27	13.1	11.5	9.9	9.4	9.0	8.7	8.6	8.3	8.0	7.5	7.2	7.6	8.0	8.4	8.6	8.9	9.2	9.3	9.0	8.9	9.0	8.8	8.6	8.4	13.1	7.2	8.9
28	8.2	7.1	7.3	6.9	6.7	6.4	7.5	9.7	10.1	10.1	10.8	11.2	11.6	12.3	12.9	12.1	11.5	11.1	10.9	9.4	9.0	9.3	9.2	9.3	12.9	6.4	9.6
29	9.3	9.1	9.3	9.2	9.1	9.0	9.0	8.7	8.5	8.4	8.4	8.4	8.5	8.5	8.8	9.0	9.1	9.3	9.1	9.0	9.1	9.1	9.1	9.0	9.3	8.4	8.9
30	9.1	9.0	8.9	8.3	8.3	7.4	7.0	6.8	7.7	8.1	8.3	8.7	9.0	9.1	9.2	9.4	9.7	10.2	10.4	10.7	10.6	10.4	10.3	10.1	10.7	6.8	9.0
Max.	**13.1**	**11.5**	**11.8**	**11.1**	**11.0**	**10.4**	**10.4**	**10.6**	**10.8**	**11.1**	**11.4**	**11.7**	**11.8**	**12.3**	**12.9**	**12.6**	**13.1**	**13.4**	**13.7**	**13.6**	**13.3**	**13.2**	**13.2**	**13.3**	**13.7**		
Min.	**6.2**	**6.0**	**5.9**	**5.9**	**5.6**	**5.2**	**5.2**	**5.0**	**5.0**	**5.4**	**5.8**	**6.2**	**6.1**	**6.1**	**6.5**	**6.3**	**6.2**	**6.2**	**6.3**	**6.5**	**6.6**	**6.7**	**6.6**	**6.2**		**5.0**	
Avg.	**8.8**	**8.6**	**8.4**	**8.2**	**8.0**	**7.8**	**7.8**	**7.9**	**8.1**	**8.3**	**8.4**	**8.6**	**8.9**	**9.1**	**9.3**	**9.3**	**9.4**	**9.5**	**9.6**	**9.6**	**9.5**	**9.4**	**9.3**	**9.1**			**8.8**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.2	8.8	8.4	8.1	8.0	7.8	8.0	8.7	8.9	8.8	9.3	9.5	9.3	8.9	9.5	10.1	10.5	10.9	11.1	10.8	10.1	9.4	9.4	9.5	11.1	7.8	9.3
2	9.3	9.3	9.1	9.0	9.0	9.0	9.1	9.3	9.5	9.6	9.9	9.7	9.9	10.4	10.7	10.6	10.8	11.2	11.2	11.0	10.8	10.8	10.6	10.4	11.2	9.0	10.0
3	9.6	9.5	11.2	13.7	13.6	13.3	12.4	10.8	8.9	9.1	10.4	9.7	9.5	11.3	11.9	10.2	10.4	10.6	10.7	10.3	10.1	9.7	9.4	9.1	13.7	8.9	10.6
4	9.6	9.6	9.6	9.7	10.1	10.4	10.6	10.7	10.9	10.3	10.3	10.5	10.5	10.7	10.6	10.9	10.9	10.5	10.9	11.2	10.8	10.9	10.7	10.8	11.2	9.6	10.5
5	10.6	10.8	10.6	10.3	10.4	10.5	10.8	10.6	10.5	11.2	11.3	11.6	12.3	12.7	12.4	12.6	12.6	13.4	13.3	13.6	12.8	13.4	13.5	13.1	13.6	10.3	11.9
6	12.2	11.8	11.5	11.2	10.9	11.2	12.1	11.4	11.3	11.5	11.8	12.4	11.9	11.8	11.4	11.9	12.5	12.3	12.2	12.0	11.7	11.6	11.7	11.4	12.5	10.9	11.7
7	11.2	11.0	11.0	10.8	10.5	9.5	8.5	8.5	8.6	8.6	8.5	8.9	9.4	10.0	10.3	10.3	10.3	10.5	10.6	10.5	10.3	10.2	10.1	10.2	11.2	8.5	9.9
8	9.9	9.6	9.7	9.7	9.9	10.9	11.1	10.9	10.9	10.9	11.1	11.4	11.5	11.9	12.5	12.7	12.9	12.6	12.0	12.7	12.5	12.2	10.8	9.9	12.9	9.6	11.3
9	9.6	9.4	9.4	9.5	9.4	9.5	9.5	9.6	10.9	10.6	10.4	10.4	10.5	10.5	10.6	10.5	11.1	11.3	11.2	11.7	11.6	11.7	11.8	12.0	12.0	9.4	10.5
10	12.1	12.1	11.9	11.5	11.1	10.9	10.4	10.3	10.1	9.8	9.8	10.0	10.4	10.3	10.4	10.1	10.0	9.8	9.6	9.5	9.5	9.5	9.6	9.8	12.1	9.5	10.3
11	9.6	9.5	9.4	9.6	9.5	9.3	9.2	9.1	9.2	9.3	9.5	9.8	10.0	10.2	10.4	10.6	10.9	11.1	11.0	10.8	10.7	10.8	10.8	10.4	11.1	9.1	10.0
12	9.8	9.2	8.8	8.6	8.4	8.2	8.2	8.9	10.1	10.1	10.4	10.6	10.7	10.7	10.6	10.7	10.8	10.7	10.7	10.4	10.2	10.1	10.1	10.2	10.8	8.2	9.9
13	9.9	9.8	9.7	9.6	9.5	9.6	9.5	9.4	9.4	9.3	9.5	9.9	9.6	9.5	9.5	9.6	9.6	9.6	9.6	9.6	9.5	9.5	9.4	9.4	9.9	9.3	9.6
14	9.5	9.5	9.6	9.6	9.7	9.7	9.6	9.6	9.7	9.9	9.8	9.7	9.8	9.9	10.0	10.1	10.3	10.4	10.6	10.7	11.0	10.9	10.6	10.4	11.0	9.5	10.0
15	10.4	10.4	10.5	10.6	10.5	10.2	10.1	10.1	10.6	10.9	11.0	10.7	11.2	11.4	12.3	11.9	10.9	11.3	11.9	12.6	12.7	12.6	12.6	12.3	12.7	10.1	11.2
16	11.5	10.6	10.4	10.3	10.2	10.3	10.7	10.3	10.0	9.7	9.6	9.7	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.9	9.9	9.9	9.9	9.9	11.5	9.6	10.1
17	9.9	10.1	9.8	9.9	9.7	8.1	7.9	8.1	8.0	8.5	8.8	9.3	9.3	9.7	10.1	10.7	10.1	10.4	11.0	11.0	10.6	10.4	10.2	10.0	11.0	7.9	9.7
18	9.9	9.7	9.5	9.3	9.0	8.6	8.6	8.5	8.7	9.2	9.5	10.0	10.7	10.9	10.9	11.2	11.5	11.8	12.0	11.9	11.9	11.4	10.9	10.5	12.0	8.5	10.2
19	10.4	10.4	10.2	10.1	9.9	9.8	9.8	9.9	10.2	10.6	11.2	11.9	12.6	13.4	14.1	15.0	15.1	14.1	15.9	15.5	15.7	15.0	13.8	13.0	15.9	9.8	12.4
20	12.6	12.1	12.0	11.9	12.1	11.8	11.9	12.3	12.2	13.0	13.0	12.0	11.2	10.6	10.8	11.2	11.5	11.3	11.2	11.2	11.1	10.4	10.0	10.1	13.0	10.0	11.6
21	10.3	10.3	10.1	9.3	9.2	8.9	9.0	8.8	8.8	8.9	9.3	9.5	10.0	10.8	11.0	11.5	11.4	11.5	12.5	12.9	12.8	12.6	12.1	11.6	12.9	8.8	10.6
22	11.1	10.7	10.1	10.0	9.6	9.7	9.7	9.7	10.1	10.1	9.9	9.6	10.0	9.8	9.6	9.4	9.2	8.9	9.1	9.3	9.2	9.1	8.9	8.8	11.1	8.8	9.6
23	8.8	9.0	8.9	8.8	8.8	8.9	8.8	8.8	9.0	9.4	10.2	10.3	11.0	11.8	12.1	11.6	11.7	10.7	10.6	10.1	9.9	9.5	9.1	8.9	12.1	8.8	9.9
24	9.0	9.4	8.9	8.9	9.2	9.1	8.3	8.4	8.4	8.5	8.7	9.3	10.2	10.8	11.4	11.1	11.1	11.7	12.2	13.6	13.1	12.7	12.3	11.7	13.6	8.3	10.3
25	10.9	11.0	11.3	12.5	12.3	12.9	12.6	13.1	12.9	12.7	13.4	14.1	14.9	16.1	16.9	17.7	17.5	15.4	14.6	14.9	14.6	14.5	14.2	13.7	17.7	10.9	13.9
26	13.2	12.9	12.5	12.1	12.0	12.5	11.6	10.7	10.5	10.8	11.4	11.7	11.6	11.9	11.1	11.1	11.5	12.0	12.2	11.0	10.6	10.7	10.3	10.1	13.2	10.1	11.5
27	10.1	10.0	10.0	10.2	10.1	10.2	9.5	9.2	8.9	9.1	9.4	9.6	9.8	9.9	10.0	10.1	10.2	10.5	10.4	10.7	10.6	10.5	10.5	10.1	10.7	8.9	10.0
28	10.0	10.2	11.0	10.8	10.8	10.7	10.8	11.0	11.3	11.6	12.1	12.7	13.3	14.7	16.4	16.8	16.6	17.3	17.7	17.4	17.8	17.2	16.8	16.6	17.8	10.0	13.8
29	16.2	15.8	15.1	15.1	15.1	14.7	14.1	14.3	14.9	15.0	15.5	16.3	17.1	17.9	18.5	19.0	15.7	20.0	15.4	18.2	19.0	18.9	18.4	17.8	20.0	14.1	16.6
30	16.8	16.2	16.2	15.6	15.4	15.4	15.0	14.7	15.1	15.5	16.1	16.6	16.9	17.6	18.4	19.2	19.8	19.9	19.5	19.1	18.8	18.1	16.9	16.8	19.9	14.7	17.1
31	17.1	17.1	17.1	17.3	16.5	14.8	14.7	14.7	14.4	14.1	14.8	15.3	15.7	16.8	17.0	18.8	19.0	19.5	20.1	21.0	20.8	20.2	18.6	18.6	21.0	14.1	17.3
Max.	**17.1**	**17.1**	**17.1**	**17.3**	**16.5**	**15.4**	**15.0**	**14.7**	**15.1**	**15.5**	**16.1**	**16.6**	**17.1**	**17.9**	**18.5**	**19.2**	**19.8**	**20.0**	**20.1**	**21.0**	**20.8**	**20.2**	**18.6**	**18.6**	**21.0**		
Min.	**8.8**	**8.8**	**8.4**	**8.1**	**8.0**	**7.8**	**7.9**	**8.1**	**8.0**	**8.5**	**8.5**	**8.9**	**9.3**	**8.9**	**9.5**	**9.4**	**9.2**	**8.9**	**9.1**	**9.3**	**9.2**	**9.1**	**8.9**	**8.8**		**7.8**	
Avg.	**11.0**	**10.8**	**10.8**	**10.8**	**10.7**	**10.5**	**10.4**	**10.3**	**10.4**	**10.5**	**10.8**	**11.1**	**11.3**	**11.7**	**12.0**	**12.2**	**12.1**	**12.3**	**12.3**	**12.4**	**12.3**	**12.1**	**11.7**	**11.5**			**11.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	17.0	16.2	15.9	14.4	13.5	13.1	12.4	11.9	11.5	11.5	11.8	11.5	11.2	10.5	10.5	10.4	10.4	10.8	11.6	12.0	11.9	11.8	11.9	11.7	17.0	10.4	12.3
2	11.7	11.6	11.0	10.9	10.8	10.8	10.8	10.8	10.9	11.0	11.2	11.1	11.3	11.3	11.6	11.3	11.4	11.4	11.2	11.2	11.1	10.9	10.9	10.8	11.7	10.8	11.1
3	11.0	11.2	11.2	11.3	11.4	11.2	10.8	10.7	10.6	10.7	10.7	10.9	10.8	10.6	11.6	11.5	11.3	11.4	11.0	10.9	11.0	11.0	11.1	11.1	11.6	10.6	11.0
4	11.0	10.8	10.8	10.7	10.6	10.5	10.8	10.9	10.7	11.1	11.1	10.6	10.7	10.9	10.6	10.7	10.7	10.8	10.6	9.9	9.8	9.9	9.9	10.0	11.1	9.8	10.6
5	10.0	10.0	10.1	10.2	10.4	10.5	10.3	10.3	10.6	11.0	11.6	11.8	11.9	12.0	11.7	11.5	11.7	12.0	12.3	12.5	12.5	12.2	12.0	11.9	12.5	10.0	11.3
6	11.8	11.8	11.7	11.5	11.0	10.6	10.0	9.7	9.9	10.7	12.0	12.8	13.1	13.5	13.7	14.0	14.0	13.6	13.5	15.8	17.4	16.9	16.4	15.9	17.4	9.7	13.0
7	15.4	15.0	14.6	14.3	14.0	13.8	13.6	13.4	13.0	13.3	13.5	14.5	15.4	16.4	17.0	17.7	18.1	18.2	18.2	17.6	17.6	16.7	15.6	15.8	18.2	13.0	15.5
8	15.2	14.3	13.9	13.0	12.5	11.5	11.1	10.9	11.4	12.1	12.0	11.3	11.6	12.0	12.5	13.4	12.8	12.7	12.6	12.7	12.9	12.6	12.3	11.4	15.2	10.9	12.5
9	10.9	10.6	10.0	9.8	9.5	9.4	10.3	11.6	12.5	12.9	13.3	14.2	14.9	15.6	12.9	12.5	12.2	12.8	12.4	11.8	11.4	11.1	10.8	10.6	15.6	9.4	11.8
10	10.6	10.7	10.7	10.9	11.0	11.0	10.9	10.9	10.7	10.7	10.8	11.0	11.4	11.6	12.0	12.4	12.6	12.6	12.3	12.3	12.1	12.0	11.9	11.5	12.6	10.6	11.4
11	11.5	11.7	11.8	11.5	11.1	11.2	11.6	11.6	11.6	11.5	11.7	11.8	12.0	12.0	12.1	12.0	12.1	12.2	12.3	12.5	13.2	13.0	12.2	11.4	13.2	11.1	11.9
12	10.9	10.7	11.4	12.3	12.6	12.7	12.6	12.9	12.6	13.2	13.2	13.2	13.7	13.8	13.9	13.8	13.8	13.5	14.1	13.8	13.2	12.9	12.7	12.4	14.1	10.7	12.9
13	12.4	12.2	12.5	12.6	12.3	12.3	12.4	14.3	14.4	14.2	13.5	13.4	13.7	14.4	14.5	13.9	13.7	13.3	13.1	13.2	13.5	13.9	13.7	13.6	14.5	12.2	13.4
14	13.3	13.2	13.2	12.4	12.7	12.9	12.7	12.2	12.1	12.1	11.9	11.9	12.3	12.7	12.8	12.8	13.1	13.5	13.6	13.7	13.4	13.2	13.3	12.4	13.7	11.9	12.8
15	12.1	12.1	11.8	11.6	11.1	10.9	10.7	10.5	10.7	10.6	10.5	10.6	10.8	10.8	11.0	11.1	11.2	11.2	11.2	11.4	11.4	11.6	11.3	11.1	12.1	10.5	11.1
16	10.8	10.4	10.0	10.0	10.5	10.7	10.7	11.0	11.0	11.1	11.1	10.5	10.8	11.1	11.3	11.4	11.5	11.7	11.8	11.6	11.3	11.0	11.1	11.1	11.8	10.0	11.0
17	11.1	10.9	10.8	10.8	10.7	10.6	10.5	10.9	10.8	10.8	10.5	10.7	10.2	10.2	10.8	11.1	11.5	11.7	11.8	11.7	11.6	11.5	11.4	10.9	11.8	10.2	11.0
18	11.2	11.2	10.7	10.4	10.2	10.2	9.5	9.2	10.0	12.7	13.0	13.2	13.2	13.5	13.8	14.2	14.7	15.1	15.2	15.3	15.4	15.0	15.3	14.1	15.4	9.2	12.8
19	13.7	13.5	13.7	13.3	12.3	11.5	11.5	11.1	11.6	12.4	12.6	12.9	13.3	14.2	14.4	14.6	15.1	15.1	15.0	14.9	14.7	14.9	14.6	14.4	15.1	11.1	13.6
20	14.2	14.0	13.9	13.8	13.6	13.4	13.3	13.2	13.0	13.2	13.5	13.8	13.7	13.8	14.3	14.9	15.6	15.9	15.9	15.9	15.6	14.9	14.5	14.2	15.9	13.0	14.3
21	13.9	13.7	13.4	13.4	13.4	13.5	13.6	13.4	13.3	13.3	13.0	12.8	12.9	13.4	12.0	12.2	12.5	12.4	11.9	11.4	11.0	11.3	11.3	10.9	13.9	10.9	12.7
22	11.0	11.1	10.7	10.7	10.4	10.4	10.7	10.8	10.8	10.9	11.3	12.0	11.8	11.9	12.2	12.8	12.9	11.0	11.2	12.0	12.1	13.8	14.1	14.1	14.1	10.4	11.7
23	13.9	13.9	13.9	13.8	13.7	13.5	13.2	13.0	12.7	13.0	13.2	13.2	12.2	12.0	12.0	11.9	11.9	11.8	11.9	12.2	12.2	12.3	12.6	12.6	13.9	11.8	12.8
24	12.6	12.4	12.2	12.1	12.4	12.5	12.8	12.9	13.0	13.0	13.2	13.3	14.2	14.7	14.6	14.8	15.8	16.3	16.3	15.6	15.3	15.0	14.8	14.7	16.3	12.1	13.9
25	14.3	13.2	13.2	12.1	11.8	11.5	11.5	11.3	11.2	11.0	11.0	11.4	12.0	11.7	11.4	11.5	11.6	11.7	11.7	11.8	11.8	11.7	11.8	11.9	14.3	11.0	11.8
26	11.9	11.9	11.7	11.7	11.5	11.6	11.3	11.6	11.6	11.7	12.0	12.4	12.3	12.4	12.6	12.5	12.2	12.0	11.6	11.5	11.6	11.5	11.4	11.4	12.6	11.3	11.8
27	11.3	11.2	11.2	11.0	10.5	10.4	10.3	10.6	11.0	11.3	11.5	11.7	11.9	12.1	12.5	12.9	13.4	13.8	13.6	13.6	13.0	12.6	12.3	12.2	13.8	10.3	11.9
28	12.2	12.2	12.2	12.2	12.0	11.8	11.7	11.8	12.0	12.0	12.2	12.6	12.6	12.8	12.9	13.1	13.5	14.0	14.3	13.9	13.4	12.8	12.7	12.6	14.3	11.7	12.6
29	12.7	12.5	12.6	12.1	11.3	11.3	11.4	11.4	11.6	12.1	12.8	14.0	15.0	15.7	15.9	15.9	16.0	16.2	15.9	14.9	14.5	13.7	13.2	12.7	16.2	11.3	13.6
30	12.3	11.9	11.6	11.6	11.4	11.3	11.0	10.9	11.0	11.1	11.5	12.2	11.9	11.0	11.1	11.2	11.5	10.9	11.0	11.2	12.4	11.3	11.5	11.6	12.4	10.9	11.4
31	11.4	11.3	10.9	10.6	10.4	9.7	10.2	10.9	11.2	11.4	11.4	11.6	11.9	12.1	12.2	12.2	12.7	12.6	13.2	13.5	13.3	13.3	13.1	13.3	13.5	9.7	11.8
Max.	**17.0**	**16.2**	**15.9**	**14.4**	**14.0**	**13.8**	**13.6**	**14.3**	**14.4**	**14.2**	**13.5**	**14.5**	**15.4**	**16.4**	**17.0**	**17.7**	**18.1**	**18.2**	**18.2**	**17.6**	**17.6**	**16.9**	**16.4**	**15.9**	**18.2**		
Min.	**10.0**	**10.0**	**10.0**	**9.8**	**9.5**	**9.4**	**9.5**	**9.2**	**9.9**	**10.6**	**10.5**	**10.5**	**10.2**	**10.2**	**10.5**	**10.4**	**10.4**	**10.8**	**10.6**	**9.9**	**9.8**	**9.9**	**9.9**	**10.0**		**9.2**	
Avg.	**12.4**	**12.2**	**12.0**	**11.8**	**11.6**	**11.5**	**11.4**	**11.5**	**11.6**	**11.9**	**12.0**	**12.2**	**12.4**	**12.6**	**12.7**	**12.8**	**13.0**	**13.0**	**13.0**	**13.0**	**12.9**	**12.8**	**12.6**	**12.4**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.4	13.4	12.8	12.7	12.7	12.6	12.2	12.3	12.4	12.0	11.9	12.1	12.1	12.3	12.5	12.1	12.3	12.0	11.9	10.8	10.3	11.6	11.5	11.4	13.4	10.3	12.1
2	11.1	11.0	10.9	11.1	10.9	10.9	10.3	10.3	10.3	10.1	9.8	9.7	10.4	11.1	11.7	12.2	12.2	12.1	12.1	11.7	11.3	11.6	11.6	11.6	12.2	9.7	11.1
3	11.7	11.9	12.3	12.5	12.4	12.1	12.0	12.0	11.7	11.3	11.1	10.0	10.0	10.1	10.0	10.0	10.3	11.0	11.1	10.9	10.6	10.3	10.3	9.8	12.5	9.8	11.1
4	9.4	9.8	10.2	10.2	10.0	9.7	9.3	9.7	9.8	10.4	10.1	10.0	10.2	10.3	10.5	10.5	10.6	10.5	10.8	10.9	10.7	10.7	10.3	9.7	10.9	9.3	10.2
5	9.6	9.3	9.2	8.9	9.2	9.0	8.4	8.7	8.5	8.9	9.3	9.3	9.1	9.2	8.8	8.7	8.5	8.4	8.4	8.1	8.0	7.9	7.8	7.5	9.6	7.5	8.7
6	7.8	8.5	9.2	9.7	9.7	10.0	11.0	11.9	11.5	12.2	12.5	12.4	11.7	11.2	11.3	11.5	11.7	11.8	11.8	11.9	11.8	11.9	11.9	11.9	12.5	7.8	11.1
7	12.4	13.0	13.1	13.1	13.1	13.7	13.3	12.7	12.5	12.5	11.3	10.1	10.9	10.2	10.7	11.5	11.9	12.3	11.4	10.4	10.1	10.1	10.0	10.0	13.7	10.0	11.7
8	9.8	9.9	9.6	9.4	9.7	9.6	9.5	9.4	9.4	9.5	10.2	10.4	10.5	10.8	10.6	9.9	9.5	9.5	10.8	11.0	11.2	11.4	11.2	11.3	11.4	9.4	10.2
9	11.2	10.9	11.0	11.3	11.7	12.0	12.2	12.5	12.6	12.9	12.9	12.3	12.0	12.0	10.0	9.9	9.9	9.8	9.9	10.0	10.0	10.0	10.1	10.0	12.9	9.8	11.1
10	9.9	10.1	10.0	9.7	9.6	9.6	9.4	9.1	9.0	8.9	9.4	10.4	11.0	11.3	11.2	12.1	12.8	13.0	13.0	12.5	12.2	12.3	12.2	12.1	13.0	8.9	10.9
11	12.0	11.7	11.5	11.0	10.7	10.7	10.3	10.4	10.4	10.9	11.8	8.7	-2.8	-7.0	13.6	11.1	11.2	10.9	10.9	11.2	11.2	10.5	10.4	10.5	13.6	-7.0	9.7
12	10.7	10.6	10.4	10.0	9.7	9.5	9.5	9.4	9.6	9.9	10.3	10.5	10.9	11.0	11.4	11.6	11.6	11.7	11.8	11.9	11.8	11.7	11.6	11.5	11.9	9.4	10.8
13	11.0	10.7	10.5	10.4	10.2	10.1	10.2	10.3	10.3	10.2	10.2	10.2	10.0	9.7	9.5	9.5	9.9	9.9	10.3	10.7	10.7	10.8	11.0	10.9	11.0	9.5	10.3
14	10.9	11.1	11.2	11.1	11.0	10.5	10.0	10.2	9.9	10.1	10.3	10.2	9.8	9.9	10.0	10.0	9.8	10.3	10.3	10.2	10.2	9.4	9.2	9.5	11.2	9.2	10.2
15	9.5	9.8	9.6	9.8	10.1	10.2	10.0	10.2	10.0	9.9	10.0	10.1	10.0	10.2	10.2	10.1	9.9	10.1	9.8	10.2	10.4	10.2	9.6	9.6	10.4	9.5	10.0
16	9.6	9.5	9.2	9.9	10.1	10.2	9.9	9.8	9.7	9.7	9.8	9.9	10.2	10.9	11.5	12.3	12.6	12.4	11.8	11.6	11.5	11.2	11.1	10.8	12.6	9.2	10.6
17	10.5	10.7	10.5	10.2	9.7	9.6	9.5	9.1	9.1	9.0	9.3	9.6	9.9	9.7	9.8	9.4	8.7	8.1	8.0	7.9	7.7	7.7	8.1	8.5	10.7	7.7	9.2
18	8.6	8.5	8.5	8.6	8.6	8.5	8.7	8.9	9.8	10.3	10.5	10.9	11.0	10.2	9.7	8.3	7.7	7.7	8.2	8.5	8.6	8.6	9.1	9.3	11.0	7.7	9.1
19	9.2	8.6	8.9	8.9	8.9	8.8	8.3	7.8	7.2	7.1	7.2	7.7	7.8	8.2	8.7	9.1	9.2	9.1	8.8	8.7	8.9	8.8	8.8	8.6	9.2	7.1	8.5
20	8.5	8.2	8.2	8.1	8.0	8.2	8.2	8.1	7.9	7.7	7.6	7.0	7.4	7.4	7.8	8.1	8.5	9.0	8.9	8.6	8.2	7.8	7.8	7.3	9.0	7.0	8.0
21	7.0	6.6	6.5	6.5	6.7	6.5	6.7	6.8	6.6	6.7	7.4	8.3	9.1	9.7	10.0	10.2	10.2	10.3	9.7	9.3	8.9	8.5	8.1	7.3	10.3	6.5	8.1
22	6.9	6.7	6.4	6.3	6.1	6.1	6.1	6.0	6.2	6.3	6.6	7.3	8.1	8.7	9.0	9.2	9.3	9.5	9.3	9.0	8.7	7.7	7.1	6.5	9.5	6.0	7.5
23	6.3	6.1	5.8	5.7	5.7	5.7	5.8	5.7	5.8	5.9	6.1	6.1	6.5	6.8	7.0	7.1	7.2	7.7	7.9	8.0	7.7	7.6	7.3	7.1	8.0	5.7	6.6
24	7.1	6.9	6.7	6.6	6.7	6.6	6.7	6.9	7.4	7.9	8.1	7.9	8.0	8.0	8.3	8.3	8.3	8.4	8.3	8.2	8.1	8.2	8.3	8.3	8.4	6.6	7.7
25	8.4	8.5	8.3	8.4	8.4	8.5	8.5	8.4	8.4	8.4	8.3	8.0	8.1	8.3	8.5	8.7	8.9	9.0	9.0	8.7	8.7	8.7	9.1	9.0	9.1	8.0	8.5
26	9.1	9.1	8.9	8.5	8.8	8.9	8.2	7.9	8.0	7.9	8.3	8.6	9.2	9.4	10.0	10.0	9.7	9.5	9.4	9.1	8.3	8.3	9.1	9.0	10.0	7.9	8.9
27	9.2	9.1	9.1	8.8	8.6	8.4	8.2	7.7	7.3	7.2	7.3	7.8	8.4	9.0	9.5	10.1	10.6	10.8	10.9	10.4	10.0	9.7	9.4	8.5	10.9	7.2	9.0
28	8.3	8.1	7.8	7.5	7.5	7.3	7.0	6.9	7.1	7.3	7.4	8.0	8.8	9.3	9.0	9.0	8.9	8.9	8.8	8.8	8.6	8.7	8.7	8.7	9.3	6.9	8.2
29	8.7	8.6	8.8	8.7	8.6	8.6	8.5	8.3	8.1	7.9	8.1	8.1	8.3	8.3	8.7	8.9	9.0	8.8	8.4	8.2	7.9	7.3	6.7	6.3	9.0	6.3	8.2
30	6.2	6.2	6.2	6.5	6.6	6.7	6.6	6.3	5.9	6.1	6.5	7.3	8.0	8.6	9.2	9.3	9.5	9.3	8.9	8.3	7.7	7.4	7.1	7.0	9.5	5.9	7.4
Max.	**13.4**	**13.4**	**13.1**	**13.1**	**13.1**	**13.7**	**13.3**	**12.7**	**12.6**	**12.9**	**12.9**	**12.4**	**12.1**	**12.3**	**13.6**	**12.3**	**12.8**	**13.0**	**13.0**	**12.5**	**12.2**	**12.3**	**12.2**	**12.1**	**13.7**		
Min.	**6.2**	**6.1**	**5.8**	**5.7**	**5.7**	**5.7**	**5.8**	**5.7**	**5.8**	**5.9**	**6.1**	**6.1**	**-2.8**	**-7.0**	**7.0**	**7.1**	**7.2**	**7.7**	**7.9**	**7.9**	**7.7**	**7.3**	**6.7**	**6.3**		**-7.0**	
Avg.	**9.5**	**9.4**	**9.4**	**9.3**	**9.3**	**9.3**	**9.1**	**9.1**	**9.1**	**9.2**	**9.3**	**9.3**	**9.1**	**9.2**	**10.0**	**10.0**	**10.0**	**10.1**	**10.0**	**9.9**	**9.7**	**9.5**	**9.5**	**9.3**			**9.5**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.9	6.5	6.2	5.8	5.5	5.2	4.9	4.6	4.4	4.6	5.1	6.1	8.0	8.3	8.8	7.9	7.6	8.1	8.2	7.9	7.8	7.8	7.7	7.6	8.8	4.4	6.7
2	7.4	6.7	6.5	6.2	5.8	5.5	5.1	4.8	4.7	5.0	6.4	7.0	7.8	8.5	8.9	9.1	9.0	8.8	8.3	7.7	7.2	6.6	5.1	4.2	9.1	4.2	6.8
3	4.2	4.4	4.2	3.9	4.0	3.7	3.4	3.3	3.2	3.3	3.4	3.7	3.5	3.9	3.9	4.0	4.2	4.3	4.1	3.9	3.7	3.6	3.6	3.5	4.4	3.2	3.8
4	3.4	3.3	3.2	3.2	3.0	3.1	3.1	3.2	3.1	3.1	3.2	3.6	4.1	4.7	5.2	5.6	5.8	5.7	5.2	4.8	4.4	3.8	3.4	3.0	5.8	3.0	3.9
5	2.8	2.7	2.5	2.4	2.5	2.5	2.3	2.1	1.9	2.0	2.4	2.7	3.0	3.3	3.3	3.6	3.7	3.8	3.6	3.2	2.9	2.6	2.3	1.9	3.8	1.9	2.7
6	1.5	1.5	1.4	1.4	1.2	1.3	1.3	1.3	1.0	1.2	1.4	1.7	2.2	2.4	2.8	3.0	3.0	3.0	2.6	2.2	2.0	2.2	2.2	2.2	3.0	1.0	1.9
7	2.2	2.2	2.0	1.9	1.6	1.5	1.6	1.3	1.1	0.8	0.8	1.1	1.4	1.7	1.7	1.7	1.9	1.7	1.4	1.2	1.2	1.2	1.3	1.0	2.2	0.8	1.5
8	0.8	0.9	0.7	0.7	0.6	0.5	0.5	0.4	0.1	0.0	0.2	0.3	1.0	1.4	2.0	2.5	2.8	2.8	2.4	1.9	1.6	1.2	1.7	3.3	3.3	0.0	1.3
9	3.4	3.2	3.1	3.0	2.9	2.3	1.6	1.3	1.7	2.2	2.5	3.3	3.4	4.0	4.9	6.4	6.4	6.3	6.4	7.7	8.0	8.3	8.7	8.9	8.9	1.3	4.6
10	8.8	8.3	7.6	7.7	7.2	6.4	6.0	6.4	6.6	6.7	6.9	7.1	7.3	7.7	8.1	7.9	7.8	7.8	7.9	8.4	7.8	7.1	7.4	8.6	8.8	6.0	7.5
11	8.5	8.3	8.0	8.0	8.1	8.1	8.0	8.0	7.9	7.9	7.9	7.7	6.9	6.9	7.0	6.7	4.4	2.4	1.1	0.8	0.7	0.5	0.4	0.4	8.5	0.4	5.6
12	0.6	0.5	0.2	0.2	0.0	-0.1	0.0	-0.1	-0.3	-0.2	-0.2	-0.3	-0.2	0.2	0.2	0.3	0.4	0.4	-0.2	-0.8	-1.2	-1.4	-1.2	-1.4	0.6	-1.4	-0.2
13	-1.9	-2.0	-2.0	-2.2	-2.0	-2.0	-1.9	-2.0	-2.2	-2.3	-2.1	-1.9	-0.8	0.7	2.2	2.2	1.5	1.5	2.0	2.3	2.6	2.7	2.2	2.0	2.7	-2.3	-0.2
14	1.1	1.0	1.6	1.6	1.5	1.4	1.4	0.8	0.6	0.6	0.6	0.8	1.1	1.3	1.5	1.7	1.9	2.2	2.1	2.0	1.9	1.5	1.4	1.5	2.2	0.6	1.4
15	1.7	1.9	1.8	1.7	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.8	3.3	3.6	3.7	3.6	3.5	3.4	3.1	2.8	2.7	2.6	2.5	2.7	3.7	1.7	2.6
16	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.3	2.3	2.3	2.3	2.4	2.7	3.0	2.7	2.7	2.8	2.5	2.0	1.6	1.4	1.1	0.7	0.3	3.0	0.3	2.2
17	0.2	0.1	-0.1	-0.2	-0.4	-0.4	-0.3	-0.7	-0.5	-0.5	-0.7	-0.2	0.7	1.5	2.2	3.3	4.6	4.9	4.9	4.7	4.8	4.8	4.3	4.5	4.9	-0.7	1.7
18	4.6	4.7	4.5	4.7	4.6	4.6	4.9	5.3	5.6	6.0	6.1	6.2	6.5	6.9	7.2	7.4	7.4	7.4	7.3	7.2	7.0	7.1	6.2	5.5	7.4	4.5	6.0
19	5.5	4.0	4.1	3.8	3.9	4.0	4.2	4.1	4.2	4.1	3.9	4.0	4.1	4.0	4.2	4.3	4.0	3.8	3.6	3.1	2.7	2.4	2.1	2.1	5.5	2.1	3.7
20	2.2	2.1	2.0	2.1	2.2	2.1	2.1	2.0	1.7	1.1	1.2	0.9	0.6	0.3	0.1	0.1	-0.2	-0.1	-0.8	-0.9	-0.9	-1.0	-1.2	-1.2	2.2	-1.2	0.7
21	-1.4	-1.3	-1.1	-1.2	-1.0	-1.0	-1.0	-0.8	-0.9	-1.1	-1.1	-1.0	-0.7	-0.6	-0.7	-0.4	-0.5	-0.7	-0.8	-0.9	-1.0	-1.1	-1.6	-1.9	-0.4	-1.9	-1.0
22	-2.0	-2.3	-2.5	-2.8	-3.3	-3.9	-3.9	-4.2	-4.1	-4.3	-4.4	-4.3	-3.4	-3.6	-3.6	-3.4	-3.3	-3.3	-3.4	-3.6	-3.6	-3.6	-3.3	-0.9	-0.9	-4.4	-3.4
23	0.1	0.2	0.0	-0.1	-1.0	-1.5	-1.6	-1.5	-1.9	-2.4	-2.9	-3.1	-3.0	-2.7	-2.3	-2.1	-2.7	-3.4	-4.4	-4.3	-4.1	-3.8	-3.7	-4.0	0.2	-4.4	-2.3
24	-3.8	-3.8	-3.8	-3.9	-4.0	-4.2	-4.4	-5.1	-5.8	-5.9	-5.8	-5.2	-4.7	-4.4	-4.1	-3.7	-3.6	-3.4	-3.3	-3.8	-3.8	-3.6	-3.8	-3.9	-3.3	-5.9	-4.2
25	-3.5	-3.4	-3.2	-3.5	-4.3	-4.3	-4.0	-3.9	-3.7	-3.2	-2.7	-2.2	-1.6	-0.7	-0.8	-0.8	-0.3	0.4	1.0	1.4	1.7	1.6	2.3	2.1	2.3	-4.3	-1.5
26	2.6	2.6	1.7	1.7	1.7	1.2	0.9	-0.1	-0.6	-1.1	-1.2	-0.5	0.1	0.1	0.0	0.4	0.7	0.2	-1.2	-2.2	-3.0	-3.6	-3.9	-4.1	2.6	-4.1	-0.3
27	-4.6	-4.9	-5.1	-5.3	-5.6	-6.0	-6.3	-6.4	-6.8	-6.8	-6.9	-6.6	-6.3	-5.8	-5.3	-5.0	-4.9	-5.0	-5.3	-5.4	-5.5	-5.6	-5.6	-5.5	-4.6	-6.9	-5.7
28	-5.2	-5.0	-5.3	-4.8	-5.0	-5.3	-4.6	-4.2	-4.1	-4.3	-4.0	-3.6	-2.2	-1.3	-0.7	-0.5	-0.5	-0.9	-1.4	-1.9	-2.1	-2.4	-2.1	-2.3	-0.5	-5.3	-3.1
29	-2.7	-3.1	-3.2	-3.0	-3.2	-2.9	-3.1	-3.1	-2.9	-3.2	-2.7	-1.9	-1.1	-0.4	0.3	0.7	1.2	1.7	1.6	0.6	-0.4	-0.8	-1.0	-0.8	1.7	-3.2	-1.4
30	-0.8	-0.6	-0.5	-0.3	0.4	1.2	0.9	0.6	0.8	0.7	0.4	1.0	1.2	1.3	1.6	1.8	1.8	1.8	1.7	1.5	1.3	0.7	-0.3	-0.2	1.8	-0.8	0.8
31	-0.5	-0.7	-0.6	-0.6	-0.7	-1.0	-1.0	-1.4	-1.2	-1.4	-1.7	-1.7	-1.0	-0.4	0.5	0.8	1.4	1.2	1.6	1.1	0.5	-0.1	-0.4	-0.6	1.6	-1.7	-0.3
Max.	**8.8**	**8.3**	**8.0**	**8.0**	**8.1**	**8.1**	**8.0**	**8.0**	**7.9**	**7.9**	**7.9**	**7.7**	**8.0**	**8.5**	**8.9**	**9.1**	**9.0**	**8.8**	**8.3**	**8.4**	**8.0**	**8.3**	**8.7**	**8.9**	**9.1**		
Min.	**-5.2**	**-5.0**	**-5.3**	**-5.3**	**-5.6**	**-6.0**	**-6.3**	**-6.4**	**-6.8**	**-6.8**	**-6.9**	**-6.6**	**-6.3**	**-5.8**	**-5.3**	**-5.0**	**-4.9**	**-5.0**	**-5.3**	**-5.4**	**-5.5**	**-5.6**	**-5.6**	**-5.5**		**-6.9**	
Avg.	**1.5**	**1.3**	**1.2**	**1.1**	**1.0**	**0.9**	**0.8**	**0.7**	**0.6**	**0.5**	**0.7**	**1.0**	**1.4**	**1.8**	**2.1**	**2.3**	**2.3**	**2.2**	**2.0**	**1.8**	**1.6**	**1.4**	**1.2**	**1.2**			**1.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-1.1	-0.9	-1.1	-0.9	-0.9	-1.0	-1.0	-1.1	-1.3	-1.4	-0.8	0.5	0.6	1.1	1.2	1.2	1.5	1.7	1.9	2.1	1.9	1.6	1.2	0.9	2.1	-1.4	0.3
2	1.0	0.9	0.8	1.1	1.1	1.0	0.7	0.3	-0.4	-1.1	-2.3	-3.1	-3.9	-4.0	-4.1	-4.3	-4.6	-5.0	-5.1	-5.4	-6.0	-6.4	-6.7	-7.1	1.1	-7.1	-2.6
3	-7.5	-7.4	-7.7	-7.9	-8.0	-7.9	-8.0	-7.4	-7.4	-7.4	-7.4	-7.2	-6.7	-6.3	-6.0	-5.8	-5.5	-5.7	-5.9	-6.2	-6.5	-6.7	-6.7	-6.7	-5.5	-8.0	-6.9
4	-6.8	-6.9	-6.9	-6.8	-6.9	-7.0	-6.6	-6.4	-6.1	-6.1	-6.1	-6.1	-6.1	-5.8	-5.5	-5.2	-5.3	-5.1	-5.1	-5.0	-4.9	-5.0	-5.0	-5.0	-4.9	-7.0	-5.9
5	-5.1	-5.2	-5.1	-4.8	-4.6	-4.2	-4.1	-4.0	-3.8	-3.4	-2.5	-1.9	-0.7	1.0	2.8	3.1	3.2	3.0	2.7	2.8	2.6	2.3	2.5	2.5	3.2	-5.2	-0.9
6	2.6	2.7	2.9	2.9	2.9	3.1	3.2	3.2	3.3	3.2	3.3	3.5	3.8	4.1	4.4	3.9	3.3	2.9	2.4	1.8	1.6	1.2	0.7	0.2	4.4	0.2	2.8
7	-0.4	-0.9	-1.3	-1.9	-2.7	-3.6	-4.0	-4.6	-5.2	-5.3	-5.6	-5.5	-5.4	-5.4	-5.1	-4.5	-3.4	-3.3	-3.1	-3.2	-3.3	-2.8	-1.6	-1.4	-0.4	-5.6	-3.5
8	-1.5	-1.7	-1.7	-1.7	-1.7	-1.7	-1.9	-2.5	-2.5	-2.2	-1.7	-1.0	0.4	1.3	1.4	1.2	1.0	1.1	1.3	1.5	1.4	1.5	1.6	1.3	1.6	-2.5	-0.3
9	1.0	0.8	0.9	1.5	1.3	1.8	1.7	1.8	1.9	1.8	1.6	1.7	1.8	2.2	2.5	2.6	2.7	2.8	3.0	3.2	3.6	3.3	3.5	3.8	3.8	0.8	2.2
10	4.3	4.5	4.2	4.2	4.6	4.6	5.3	5.6	5.3	3.7	2.9	2.5	2.6	2.7	3.1	3.7	3.4	3.6	3.7	2.4	1.1	2.1	2.5	2.4	5.6	1.1	3.5
11	2.2	2.6	3.0	3.0	3.0	2.9	3.0	2.9	1.0	0.7	1.6	1.4	1.2	1.0	0.8	1.1	1.6	1.7	0.4	0.3	0.5	0.5	0.7	0.5	3.0	0.3	1.6
12	0.3	0.1	0.2	-0.3	-0.9	-0.8	-1.1	-1.1	-1.2	-1.3	-1.2	-0.9	-0.5	-0.7	-0.7	-0.6	-0.6	-0.7	-0.9	-0.6	-0.5	-0.4	-0.4	-0.3	0.3	-1.3	-0.6
13	-0.7	-0.8	-0.9	-1.4	-1.6	-2.0	-1.8	-2.2	-1.0	0.3	1.3	0.5	0.7	1.4	1.6	1.6	1.9	1.4	1.2	1.2	0.7	0.8	0.9	0.5	1.9	-2.2	0.2
14	0.8	0.9	0.8	0.6	0.2	-0.2	-0.1	-0.5	-0.7	-1.5	-1.3	-1.3	-1.1	-0.5	0.0	0.8	0.9	0.6	0.5	0.8	0.8	0.6	0.3	0.1	0.9	-1.5	0.1
15	0.1	0.0	0.1	0.4	0.3	0.4	0.3	0.3	0.1	-0.1	-0.9	-1.7	-1.7	-1.2	-0.5	0.0	0.4	0.5	0.8	2.1	2.6	2.4	1.9	1.9	2.6	-1.7	0.4
16	2.1	2.3	1.6	2.1	2.5	2.6	0.9	0.3	0.5	0.5	0.8	1.3	1.4	1.5	1.3	1.2	0.7	0.2	-0.2	-0.6	-1.0	-0.9	-0.8	-0.8	2.6	-1.0	0.8
17	-1.0	-1.0	-1.3	-1.6	-1.9	-2.2	-2.5	-2.7	-3.0	-3.1	-3.3	-3.1	-3.1	-2.5	-1.8	-1.3	-1.1	-1.0	-0.9	-1.3	-1.6	-2.2	-2.7	-3.2	-0.9	-3.3	-2.1
18	-3.5	-3.6	-3.3	-3.3	-2.9	-2.4	-2.3	-2.3	-2.6	-2.7	-2.8	-2.7	-2.9	-2.9	-2.5	-2.6	-2.2	-2.8	-2.7	-3.4	-4.1	-4.1	-4.0	-4.3	-2.2	-4.3	-3.0
19	-4.4	-4.9	-4.5	-4.9	-5.2	-5.4	-5.8	-5.8	-6.3	-6.6	-6.6	-6.6	-6.8	-6.5	-6.5	-6.2	-5.9	-5.8	-5.6	-5.5	-5.4	-5.3	-5.6	-5.1	-4.4	-6.8	-5.7
20	-5.2	-5.3	-5.7	-6.2	-6.4	-6.7	-6.9	-7.3	-7.8	-8.8	-9.7	-10.4	-10.4	-10.8	-11.1	-11.7	-11.7	-12.0	-12.3	-12.6	-12.8	-13.0	-13.4	-13.2	-5.2	-13.4	-9.7
21	-13.2	-13.5	-13.5	-13.7	-14.3	-14.5	-14.4	-14.3	-14.6	-14.4	-14.3	-14.4	-14.3	-14.0	-13.8	-13.9	-13.8	-13.9	-13.3	-13.1	-12.4	-11.6	-11.1	-10.0	-10.0	-14.6	-13.5
22	-9.5	-8.5	-7.8	-7.7	-7.3	-7.1	-6.7	-7.5	-7.8	-7.5	-7.2	-7.5	-7.1	-7.2	-6.3	-5.9	-5.3	-5.7	-6.4	-5.9	-5.2	-4.5	-4.2	-4.2	-4.2	-9.5	-6.7
23	-4.5	-4.7	-4.8	-4.9	-5.0	-4.8	-4.6	-4.4	-4.1	-3.9	-3.6	-3.5	-3.3	-3.1	-2.8	-1.6	-0.3	0.0	0.6	1.3	1.4	2.1	2.2	2.1	2.2	-5.0	-2.3
24	2.6	3.2	3.1	3.3	3.7	3.8	4.0	4.0	4.0	3.4	3.5	3.7	2.9	2.6	2.5	2.5	1.5	2.5	2.7	2.3	1.0	1.2	0.9	0.9	4.0	0.9	2.7
25	0.1	-1.4	-2.2	-3.1	-3.9	-4.5	-5.0	-5.0	-5.0	-5.1	-4.8	-5.0	-5.8	-6.4	-6.6	-7.1	-7.7	-8.3	-9.0	-9.3	-9.3	-9.2	-9.5	-9.7	0.1	-9.7	-5.9
26	-9.8	-9.7	-10.0	-9.9	-9.8	-9.6	-9.6	-9.5	-9.6	-9.5	-9.5	-9.5	-9.6	-9.3	-9.0	-8.9	-8.7	-8.7	-8.7	-8.8	-9.0	-9.0	-9.0	-8.9	-8.7	-10.0	-9.3
27	-8.7	-8.2	-8.1	-7.9	-7.5	-7.4	-7.6	-7.1	-6.5	-6.0	-5.9	-5.4	-4.8	-4.4	-3.6	-3.6	-3.4	-4.6	-5.0	-4.6	-4.4	-3.5	-2.3	-1.3	-1.3	-8.7	-5.5
28	1.4	1.8	0.3	0.8	2.4	3.2	1.8	0.9	1.4	2.2	2.0	1.6	1.3	0.7	1.1	0.8	0.1	-0.1	-0.4	-0.8	-1.6	-2.3	-3.2	-3.2	3.2	-3.2	0.5
29	-3.5	-3.9	-4.5	-5.1	-5.6	-6.0	-6.4	-7.2	-7.8	-8.3	-8.8	-8.9	-8.8	-8.9	-9.1	-9.2	-9.3	-9.4	-9.6	-10.0	-10.1	-10.3	-10.2	-10.2	-3.5	-10.3	-8.0
30	-10.2	-10.6	-11.0	-11.2	-11.3	-11.7	-11.8	-11.6	-11.2	-11.2	-11.0	-11.3	-10.9	-10.2	-10.5	-10.9	-10.8	-10.3	-10.3	-10.7	-10.3	-10.0	-10.2	-10.1	-10.0	-11.8	-10.8
Max.	**4.3**	**4.5**	**4.2**	**4.2**	**4.6**	**4.6**	**5.3**	**5.6**	**5.3**	**3.7**	**3.5**	**3.7**	**3.8**	**4.1**	**4.4**	**3.9**	**3.4**	**3.6**	**3.7**	**3.2**	**3.6**	**3.3**	**3.5**	**3.8**	**5.6**		
Min.	**-13.2**	**-13.5**	**-13.5**	**-13.7**	**-14.3**	**-14.5**	**-14.4**	**-14.3**	**-14.6**	**-14.4**	**-14.3**	**-14.4**	**-14.3**	**-14.0**	**-13.8**	**-13.9**	**-13.8**	**-13.9**	**-13.3**	**-13.1**	**-12.8**	**-13.0**	**-13.4**	**-13.2**		**-14.6**	
Avg.	**-2.6**	**-2.6**	**-2.8**	**-2.8**	**-2.9**	**-2.9**	**-3.0**	**-3.2**	**-3.3**	**-3.4**	**-3.3**	**-3.3**	**-3.2**	**-3.0**	**-2.8**	**-2.7**	**-2.6**	**-2.7**	**-2.8**	**-2.8**	**-3.0**	**-2.9**	**-2.9**	**-2.9**			**-2.9**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 2 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-9.6	-9.0	-8.5	-8.3	-8.3	-7.7	-7.5	-7.7	-6.8	-6.3	-6.4	-6.8	-6.2	-5.9	-5.2	-4.7	-4.7	-4.8	-4.9	-5.0	-5.0	-5.1	-5.2	-4.9	-4.7	-9.6	-6.4
2	-4.9	-4.9	-4.8	-4.7	-4.5	-4.0	-4.0	-2.5	-2.7	-2.9	-1.7	-0.2	1.4	1.4	2.0	1.7	1.8	2.1	2.1	2.5	2.4	2.6	3.1	3.2	3.2	-4.9	-0.6
3	3.5	3.7	3.8	4.0	4.3	4.4	4.4	3.7	3.6	4.2	4.1	4.0	3.6	3.0	2.8	3.1	3.3	3.5	3.9	4.0	4.2	4.6	4.7	4.8	4.8	2.8	3.9
4	4.6	4.3	4.0	4.3	4.4	4.1	2.7	2.9	3.7	4.3	3.0	4.6	4.7	4.6	4.8	5.1	4.0	3.2	2.4	2.7	3.4	4.2	4.1	3.6	5.1	2.4	3.9
5	2.9	2.7	2.5	2.9	3.9	5.2	4.4	3.9	4.1	3.2	3.2	4.4	6.1	6.6	6.8	7.1	7.2	6.9	6.1	6.7	6.8	6.7	6.4	5.7	7.2	2.5	5.1
6	5.9	5.9	5.5	5.3	5.4	5.4	4.5	4.1	3.7	4.0	3.5	3.8	3.1	3.5	3.1	2.8	2.7	2.4	2.6	2.5	2.2	2.1	2.1	2.2	5.9	2.1	3.7
7	1.8	2.2	2.3	3.2	3.5	3.5	3.7	3.5	3.2	2.9	2.6	2.4	2.2	2.1	1.8	1.6	1.4	1.1	1.2	1.1	1.0	1.2	1.2	1.6	3.7	1.0	2.2
8	3.6	4.1	4.4	4.1	4.4	4.5	4.0	3.8	3.5	3.5	2.2	1.8	2.2	2.3	2.3	2.1	1.6	1.6	1.7	2.2	2.5	2.2	1.7	2.0	4.5	1.6	2.8
9	2.6	2.8	3.0	3.1	3.1	1.1	0.3	0.6	0.3	0.3	0.6	0.4	0.2	0.4	0.3	0.2	-0.3	-0.1	-0.5	-1.0	-1.4	-1.6	-1.1	-0.4	3.1	-1.6	0.5
10	0.2	0.4	0.6	0.4	0.1	0.0	-0.6	-1.1	-1.3	-1.7	-2.5	-2.8	-3.1	-3.5	-4.0	-3.8	-3.6	-3.6	-3.5	-3.5	-3.6	-3.6	-3.5	-3.8	0.6	-4.0	-2.1
11	-3.8	-3.4	-3.2	-3.1	-3.1	-3.3	-3.2	-2.7	-3.0	-3.3	-3.5	-3.3	-3.3	-3.2	-3.7	-3.5	-2.9	-2.9	-3.3	-3.9	-4.2	-3.5	-4.2	-4.7	-2.7	-4.7	-3.4
12	-5.0	-5.1	-5.3	-5.5	-5.5	-5.5	-5.8	-5.6	-5.4	-5.6	-5.6	-5.3	-4.7	-4.1	-4.6	-4.5	-4.2	-4.3	-4.2	-4.3	-3.8	-2.0	-2.5	-3.0	-2.0	-5.8	-4.6
13	-2.1	-2.5	-2.2	-2.1	-3.4	-3.8	-4.3	-4.3	-4.5	-4.9	-4.9	-5.3	-4.9	-3.8	-4.3	-4.0	-3.5	-3.9	-4.1	-4.1	-4.5	-4.9	-4.6	-4.3	-2.1	-5.3	-4.0
14	-4.5	-4.5	-3.9	-4.1	-4.2	-4.1	-4.3	-3.9	-3.7	-3.6	-3.5	-3.7	-2.2	-2.2	-1.8	-2.3	-2.7	-2.1	-1.2	1.0	1.7	2.3	1.6	2.0	2.3	-4.5	-2.3
15	2.0	1.9	2.0	1.9	1.7	1.8	1.7	2.0	1.8	1.6	1.3	0.3	0.5	0.3	0.1	0.1	0.2	0.1	0.1	0.0	-0.4	-0.9	-1.2	-1.6	2.0	-1.6	0.7
16	-2.0	-2.3	-2.2	-1.8	-1.9	-2.1	-2.2	-2.3	-3.0	-3.7	-3.7	-2.7	-2.7	-2.8	-2.8	-2.6	-2.3	-1.7	-1.4	-1.2	-1.1	-0.9	-0.9	1.1	1.1	-3.7	-2.1
17	1.7	1.3	-0.2	-0.2	1.7	2.3	1.7	0.6	0.6	1.6	0.6	2.1	2.7	3.1	2.2	2.3	1.9	0.6	0.4	0.0	1.6	2.4	1.7	1.0	3.1	-0.2	1.4
18	0.7	0.9	1.4	1.6	1.1	1.0	2.3	2.8	3.2	3.1	3.0	3.4	3.6	3.8	3.8	3.8	3.7	3.7	4.0	4.6	4.6	4.8	4.6	4.2	4.8	0.7	3.1
19	3.9	3.5	3.7	3.7	3.2	3.5	3.9	3.3	3.0	3.1	3.1	3.2	3.1	3.0	2.8	2.9	3.1	3.0	3.3	3.3	3.2	3.2	2.9	2.7	3.9	2.7	3.2
20	2.5	2.6	2.7	2.7	3.0	3.1	3.2	3.6	3.8	3.7	3.6	3.5	3.5	3.7	3.8	4.2	4.0	3.7	2.7	2.2	1.8	1.6	1.1	0.5	4.2	0.5	3.0
21	0.3	0.0	-0.3	-1.0	-0.9	-1.1	-0.9	-1.1	-1.7	-1.6	-1.8	-1.9	-2.0	-1.5	-1.4	-1.5	-1.0	-1.4	-1.5	-1.6	-2.0	-2.4	-2.9	-3.2	0.3	-3.2	-1.4
22	-3.2	-3.3	-3.0	-2.7	-2.5	-2.3	-2.4	-2.6	-3.2	-3.0	-2.9	-2.8	-2.8	-2.7	-2.6	-2.3	-2.4	-2.5	-2.5	-2.3	-2.5	-2.7	-2.9	-3.0	-2.3	-3.3	-2.7
23	-3.1	-3.1	-3.0	-2.8	-2.0	-1.9	-1.6	-1.6	-1.6	-1.6	-1.4	-0.2	-0.3	-0.2	-0.6	-1.0	-1.9	-1.7	-1.9	-2.4	-2.8	-3.0	-2.9	-2.8	-0.2	-3.1	-1.9
24	-2.6	-2.4	-2.4	-1.8	-1.5	-1.9	-2.3	-2.2	-2.2	-2.2	-2.0	-1.5	-1.4	-1.6	-1.7	-2.0	-2.5	-3.4	-3.7	-4.1	-3.6	-3.3	-3.2	-3.3	-1.4	-4.1	-2.4
25	-3.0	-1.5	-1.2	-1.5	-2.8	-3.3	-2.7	-2.0	-1.9	-1.8	-1.9	-1.5	-1.8	-2.3	-3.2	-3.6	-3.6	-3.3	-3.3	-2.9	-3.8	-4.3	-4.6	-5.1	-1.2	-5.1	-2.8
26	-5.4	-5.9	-6.6	-7.3	-8.3	-9.1	-10.0	-10.8	-10.6	-10.1	-10.5	-10.5	-10.3	-9.5	-9.3	-9.3	-9.6	-9.6	-9.5	-9.6	-9.6	-10.2	-10.3	-10.5	-5.4	-10.8	-9.3
27	-10.7	-10.8	-10.9	-11.2	-11.6	-11.6	-11.6	-11.9	-12.3	-12.3	-12.7	-12.6	-12.5	-12.3	-12.2	-12.1	-12.1	-12.3	-12.4	-12.1	-12.3	-12.4	-12.4	-12.5	-10.7	-12.7	-12.0
28	-12.4	-12.7	-12.8	-13.2	-13.5	-13.5	-13.8	-13.9	-14.3	-14.2	-14.2	-14.6	-14.5	-14.6	-14.7	-15.0	-15.1	-15.0	-15.0	-14.9	-15.1	-15.4	-15.4	-15.3	-12.4	-15.4	-14.3
29	-15.1	-14.8	-14.7	-14.5	-14.2	-14.0	-14.1	-13.9	-13.7	-13.7	-14.0	-13.9	-13.9	-13.6	-13.4	-13.1	-13.2	-12.7	-12.7	-12.7	-12.5	-12.5	-12.3	-12.8	-12.3	-15.1	-13.6
30	-12.7	-12.6	-12.5	-12.9	-12.9	-13.3	-12.7	-12.7	-13.3	-14.2	-14.2	-14.3	-14.5	-14.8	-14.5	-15.0	-15.5	-15.8	-16.1	-15.5	-15.7	-16.6	-17.5	-17.4	-12.5	-17.5	-14.5
31	-17.7	-18.0	-18.1	-18.7	-19.1	-19.1	-19.0	-19.1	-19.0	-19.2	-19.0	-19.1	-19.3	-18.8	-18.2	-17.9	-18.2	-18.0	-17.9	-17.4	-17.2	-16.8	-16.9	-16.9	-16.8	-19.3	-18.3
Max.	**5.9**	**5.9**	**5.5**	**5.3**	**5.4**	**5.4**	**4.5**	**4.1**	**4.1**	**4.3**	**4.1**	**4.6**	**6.1**	**6.6**	**6.8**	**7.1**	**7.2**	**6.9**	**6.1**	**6.7**	**6.8**	**6.7**	**6.4**	**5.7**	**7.2**		
Min.	**-17.7**	**-18.0**	**-18.1**	**-18.7**	**-19.1**	**-19.1**	**-19.0**	**-19.1**	**-19.0**	**-19.2**	**-19.0**	**-19.1**	**-19.3**	**-18.8**	**-18.2**	**-17.9**	**-18.2**	**-18.0**	**-17.9**	**-17.4**	**-17.2**	**-16.8**	**-17.5**	**-17.4**		**-19.3**	
Avg.	**-2.6**	**-2.6**	**-2.6**	**-2.6**	**-2.6**	**-2.6**	**-2.8**	**-2.8**	**-2.9**	**-2.9**	**-3.1**	**-2.9**	**-2.7**	**-2.6**	**-2.6**	**-2.6**	**-2.7**	**-2.8**	**-2.9**	**-2.8**	**-2.8**	**-2.7**	**-2.9**	**-2.9**			**-2.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.4	3.6	4.0	4.5	5.0	5.1	5.1	3.9	2.2	1.1	1.9	1.2	1.7	0.7	-0.2	-0.8	-1.7	-2.3	-2.8	-3.1	-3.9	-3.5	-4.6	-5.0	5.1	-5.0	0.6
2	-5.1	-5.2	-4.8	-5.7	-5.9	-6.5	-6.8	-6.9	-7.5	-7.8	-8.0	-7.9	-8.0	-7.9	-8.0	-8.6	-8.9	-8.9	-8.9	-9.2	-9.2	-8.6	-8.8	-9.0	-4.8	-9.2	-7.6
3	-9.0	-8.5	-8.7	-8.9	-8.4	-7.5	-7.3	-7.7	-8.3	-7.9	-8.4	-8.2	-8.6	-8.9	-9.2	-9.3	-9.5	-9.8	-10.3	-10.5	-10.7	-11.1	-11.7	-11.8	-7.3	-11.8	-9.2
4	-12.0	-12.2	-12.3	-12.3	-12.5	-12.6	-12.7	-12.9	-13.0	-13.1	-13.1	-13.1	-13.2	-13.2	-13.2	-13.4	-13.5	-13.6	-13.7	-13.8	-14.0	-14.2	-14.4	-14.2	-12.0	-14.4	-13.2
5	-14.4	-14.3	-14.3	-14.7	-15.2	-15.8	-16.2	-16.7	-16.6	-16.4	-16.7	-17.1	-17.0	-16.8	-16.7	-16.7	-16.7	-16.4	-16.4	-16.5	-16.5	-16.6	-16.7	-16.8	-14.3	-17.1	-16.2
6	-16.9	-17.1	-17.1	-17.3	-17.6	-17.9	-18.2	-18.5	-18.6	-18.6	-19.2	-19.5	-19.2	-19.4	-19.2	-19.3	-19.5	-19.2	-19.4	-19.4	-19.6	-19.8	-19.8	-19.9	-16.9	-19.9	-18.8
7	-19.9	-19.7	-19.7	-19.6	-19.6	-19.7	-19.5	-19.1	-18.9	-19.1	-19.3	-19.3	-19.3	-19.3	-19.3	-19.0	-18.9	-18.9	-18.7	-18.7	-18.2	-18.1	-18.0	-18.0	-18.0	-19.9	-19.1
8	-18.0	-18.0	-17.9	-18.0	-17.8	-18.0	-18.0	-18.2	-18.2	-18.3	-18.3	-18.4	-18.3	-18.2	-18.5	-18.2	-18.1	-17.9	-17.9	-18.4	-19.0	-19.3	-19.2	-18.9	-17.8	-19.3	-18.3
9	-18.9	-19.3	-19.4	-19.7	-19.6	-19.7	-19.8	-20.3	-20.5	-20.8	-20.5	-19.9	-19.6	-19.7	-19.4	-19.7	-19.7	-19.8	-19.6	-19.5	-19.5	-19.3	-19.7	-19.5	-18.9	-20.8	-19.7
10	-19.6	-19.6	-19.5	-19.2	-19.0	-18.6	-18.6	-18.9	-18.9	-18.9	-19.2	-18.8	-18.3	-18.3	-18.0	-18.5	-18.3	-18.4	-18.4	-19.1	-19.3	-19.4	-20.0	-20.1	-18.0	-20.1	-19.0
11	-20.3	-20.6	-20.8	-20.9	-20.2	-19.7	-19.5	-19.9	-20.3	-20.6	-20.8	-20.8	-20.5	-20.3	-20.2	-20.7	-20.6	-20.7	-20.8	-20.9	-21.1	-21.1	-21.2	-21.3	-19.5	-21.3	-20.6
12	-21.7	-21.6	-21.2	-21.1	-21.3	-21.7	-21.5	-21.8	-22.3	-22.6	-22.4	-21.9	-21.7	-21.7	-22.5	-23.5	-23.9	-24.0	-23.6	-23.8	-23.9	-23.9	-24.0	-24.3	-21.1	-24.3	-22.6
13	-24.2	-24.1	-23.9	-23.5	-23.2	-23.3	-23.2	-23.2	-23.3	-23.3	-23.4	-23.4	-23.2	-23.5	-23.3	-23.2	-22.8	-22.5	-22.3	-21.7	-21.9	-21.8	-21.8	-21.5	-21.5	-24.2	-23.0
14	-21.4	-19.4	-18.5	-19.0	-17.9	-17.5	-16.5	-15.1	-13.2	-11.9	-10.7	-9.4	-9.0	-8.5	-8.4	-7.9	-7.7	-7.2	-6.0	-5.7	-4.1	-2.8	-1.1	-1.0	-1.0	-21.4	-10.8
15	-1.0	-0.4	-0.4	0.0	0.6	-0.8	-0.6	-1.1	-2.9	-3.3	-3.2	-3.1	-3.0	-3.1	-3.3	-3.0	-3.0	-2.9	-2.9	-3.0	-2.9	-2.7	-2.6	-2.7	0.6	-3.3	-2.1
16	-2.8	-2.8	-2.7	-2.4	-1.9	-0.7	0.7	1.3	0.6	0.5	0.3	0.6	0.9	1.3	1.6	1.7	1.7	1.3	0.8	0.3	0.1	-0.8	-1.5	-1.6	1.7	-2.8	-0.2
17	-2.3	-1.7	-1.0	0.9	0.2	-0.6	-0.9	2.0	3.1	3.5	2.6	1.4	0.2	0.2	0.9	1.4	2.3	2.7	2.8	2.5	2.8	2.5	2.2	1.7	3.5	-2.3	1.2
18	0.6	0.0	-0.2	-0.1	0.1	-0.1	0.0	-0.3	-0.1	-0.3	-0.5	-0.4	-0.5	-0.5	-0.4	-0.5	-0.7	-1.0	-1.3	-1.6	-1.4	-1.2	-1.2	-1.2	0.6	-1.6	-0.5
19	-1.4	-1.3	-0.9	-0.5	-0.4	-0.3	1.1	3.1	3.9	2.1	1.6	2.7	2.3	0.0	3.0	3.4	4.0	4.6	4.7	3.7	2.8	3.0	3.2	2.7	4.7	-1.4	2.0
20	2.5	2.8	2.8	3.1	3.5	3.8	3.9	4.1	4.0	4.2	4.3	4.4	4.3	4.6	4.5	4.2	4.3	2.9	2.1	1.1	0.8	1.1	1.3	1.1	4.6	0.8	3.1
21	0.7	0.8	1.0	1.3	1.4	1.4	1.6	1.5	2.4	1.3	1.4	3.0	4.3	4.9	5.1	4.5	4.9	4.9	4.2	4.2	4.2	2.7	2.4	2.4	5.1	0.7	2.8
22	2.7	3.2	3.6	3.4	3.9	3.6	3.3	3.2	3.3	2.7	2.7	0.4	0.4	1.0	1.0	0.1	-0.6	-1.3	-0.8	-1.1	-1.4	-1.1	-1.1	-0.9	3.9	-1.4	1.3
23	-0.9	-1.2	-1.4	-1.6	-2.3	-3.1	-4.5	-5.5			-8.7	-8.6	-9.5	-9.7	-10.2	-11.1	-10.7	-11.2	-11.7	-11.9	-12.5	-13.2	-14.3	-14.7	-0.9	-14.7	-8.1
24	-14.0	-13.1	-12.8	-12.8	-12.3	-11.5	-10.4	-9.2	-7.6	-6.2	-5.2	-5.3	-5.2	-5.7	-6.0	-6.1	-6.4	-6.0	-5.6	-6.0	-6.4	-6.6	-6.7	-6.7	-5.2	-14.0	-8.1
25	-6.7	-6.6	-6.6	-6.2	-5.7	-4.5	-3.0	-2.9	-3.0	-3.2	-3.1	-2.8	-2.4	-1.9	-1.1	-1.1	-1.3	-1.1	0.2	0.3	-0.3	-2.1	-3.6	-4.5	0.3	-6.7	-3.1
26	-5.2	-6.2	-6.6	-6.8	-7.1	-7.9	-8.6	-8.9	-10.2	-10.8	-11.1	-11.0	-10.7	-10.1	-9.3	-9.4	-9.5	-9.0	-8.9	-8.8	-8.3	-8.1	-7.8	-7.7	-5.2	-11.1	-8.7
27	-7.4	-6.8	-7.1	-6.0	-5.3	-5.0	-2.6	-2.3	-2.2	-1.9	-1.5	-2.3	-2.7	-2.8	-3.1	-2.9	-2.4	-1.9	-1.6			-1.4	-1.7	-1.8	-1.4	-7.4	-3.3
28	-1.9																-2.6	-2.6	-2.6	-2.5	-2.6	-1.7	-1.3	-1.3	-1.3	-2.6	-2.1
29	-0.9	-0.7	-0.9	-1.0	-1.2	-1.5	-1.8	-1.9	-2.5	-2.7	-2.9	-3.0	-3.2	-2.8	-3.5	-3.6	-3.5	-3.7	-3.9	-4.1	-4.3	-4.5	-5.3	-5.3	-0.7	-5.3	-2.9
30	-5.6	-5.8	-6.3	-6.9	-7.6	-7.8	-7.8	-7.8	-7.8	-7.8	-6.6		-6.6	-7.1	-7.6	-8.0	-8.4	-8.7	-9.4	-9.3	-9.4	-9.2	-9.5	-9.6	-5.6	-9.6	-7.9
31	-9.2	-9.5	-9.4	-9.1	-9.2	-9.4	-9.3	-9.3	-9.3	-8.7	-8.1	-7.4	-7.6	-7.0	-5.6	-5.2	-5.4	-6.2	-6.3	-6.3	-6.4	-6.2	-6.0	-5.9	-5.2	-9.5	-7.6
Max.	**3.4**	**3.6**	**4.0**	**4.5**	**5.0**	**5.1**	**5.1**	**4.1**	**4.0**	**4.2**	**4.3**	**4.4**	**4.3**	**4.9**	**5.1**	**4.5**	**4.9**	**4.9**	**4.7**	**4.2**	**4.2**	**3.0**	**3.2**	**2.7**	**5.1**		
Min.	**-24.2**	**-24.1**	**-23.9**	**-23.5**	**-23.2**	**-23.3**	**-23.2**	**-23.2**	**-23.3**	**-23.3**	**-23.4**	**-23.4**	**-23.2**	**-23.5**	**-23.3**	**-23.5**	**-23.9**	**-24.0**	**-23.6**	**-23.8**	**-23.9**	**-23.9**	**-24.0**	**-24.3**		**-24.3**	
Avg.	**-8.7**	**-8.8**	**-8.8**	**-8.7**	**-8.6**	**-8.6**	**-8.4**	**-8.3**	**-8.5**	**-8.6**	**-8.5**	**-8.6**	**-8.4**	**-8.5**	**-8.3**	**-8.5**	**-8.3**	**-8.4**	**-8.4**	**-8.8**	**-8.9**	**-8.7**	**-8.8**	**-8.9**			**-8.4**

Total Hours in Month 744 **Hours Data Available** 724 **Data Recovery** 97.3%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-6.4	-6.9	-7.1	-7.7	-8.1	-8.3	-8.4	-8.4	-8.3	-8.3	-8.7	-8.8	-8.7	-8.4	-8.1	-7.8	-7.6	-7.6	-8.2	-8.8	-9.3	-9.4	-9.5	-9.6	-6.4	-9.6	-8.3
2	-9.7	-9.9	-10.1	-10.1	-9.8	-9.6	-9.4	-9.3	-8.9	-9.0	-10.1	-10.6	-11.2	-11.4	-11.8	-12.5	-12.5	-12.1	-11.8	-11.3	-11.4	-11.4	-11.6	-12.2	-8.9	-12.5	-10.7
3	-12.8	-13.7	-14.3	-14.9	-14.9	-15.1	-15.5	-15.8	-16.6	-17.2	-16.6	-16.7	-17.1	-16.9	-17.1	-17.0	-16.5	-15.8	-15.3	-15.4	-15.7	-16.5	-15.9	-15.6	-12.8	-17.2	-15.8
4	-15.4	-14.1	-13.8	-13.8	-15.0	-14.0	-14.0	-15.2	-14.5	-13.9	-14.1	-13.8	-13.3	-12.2	-11.7	-11.4	-11.3	-11.5	-11.6	-11.8	-11.9	-12.3	-13.4	-13.9	-11.3	-15.4	-13.2
5	-14.6	-14.6	-15.3	-15.0	-15.9	-16.2	-16.0	-17.0	-17.8	-18.0	-18.4	-19.6	-18.8	-18.8	-18.7	-18.9	-17.1	-16.8	-17.8	-16.6	-17.5	-17.0	-15.9	-16.2	-14.6	-19.6	-17.0
6	-15.9	-15.8	-15.2	-14.6	-13.8	-13.8	-13.9	-13.1	-12.7	-12.6	-12.5	-11.9	-11.5	-11.0	-10.8	-11.3	-12.7	-13.6	-14.8	-14.8	-16.5	-17.3	-16.7	-16.8	-10.8	-17.3	-13.9
7	-16.8	-16.8	-17.5	-17.7	-17.0	-17.2	-16.4	-16.0	-16.5	-16.3	-16.2	-15.8	-14.5	-14.0	-12.1	-11.9	-11.6	-12.2	-11.7	-13.4	-12.5	-12.7	-13.1	-12.3	-11.6	-17.7	-14.7
8	-11.3	-10.5	-11.0	-10.6	-10.9	-9.9	-7.5	-5.9	-5.7	-5.7	-6.0	-5.9	-5.7	-5.2	-5.5	-5.5	-5.6	-6.0	-5.7	-5.7	-5.6	-4.1	-3.4	-3.4	-3.4	-11.3	-6.8
9	-3.4	-3.4	-3.3	-3.9	-4.4	-4.3	-4.9	-4.8	-4.8	-4.7	-4.7	-5.0	-4.8	-4.6	-4.6	-4.6	-4.8	-5.0	-5.5	-6.1	-6.4	-6.7	-7.0	-7.1	-3.3	-7.1	-4.9
10	-7.2	-7.4	-7.7	-8.5	-8.8	-9.6	-9.7	-10.5	-11.4	-12.0	-12.2	-12.1	-12.1	-11.9	-11.0	-10.2	-9.6	-9.5	-9.8	-10.1	-10.3	-10.3	-10.0	-9.5	-7.2	-12.2	-10.1
11	-9.2	-9.1	-9.0	-8.9	-8.8	-8.9	-9.2	-9.4	-9.5	-9.4	-9.4	-9.4	-9.2	-9.1	-9.6	-9.4	-9.3	-9.7	-9.3	-10.0	-10.5	-10.7	-12.9	-12.6	-8.8	-12.9	-9.7
12	-12.9	-14.7	-15.1	-16.1	-17.1	-17.4	-18.4	-19.5	-19.2	-19.5	-19.0	-18.3	-17.7	-17.5	-17.6	-15.8	-14.3	-13.8	-14.3	-13.7	-14.0	-13.0	-12.5	-10.0	-10.0	-19.5	-15.9
13	-6.5	-5.7	-4.4	-2.9	-1.3	-1.9	-1.9	-0.7	-0.4	0.0	1.2	1.9	1.7	2.4	2.6	2.7	2.6	2.7	3.5	3.6	3.6	3.6	3.7	3.8	3.8	-6.5	0.6
14	4.1	3.8	3.9	3.7	3.6	3.6	3.7	3.8	3.7	3.6	1.2	-4.8	-8.3	-9.5	-10.6	-11.7	-12.7	-13.5	-13.7	-13.9	-14.5	-14.4	-14.2	-14.2	4.1	-14.5	-4.9
15	-14.6	-14.7	-15.3	-16.0	-16.4	-16.7	-17.5	-18.1	-18.2	-18.6	-18.7	-18.2	-18.1	-17.9	-17.5	-17.1	-16.1	-16.2	-15.9	-15.6	-15.1	-13.4	-10.0	-9.3	-9.3	-18.7	-16.1
16	-9.0	-8.6	-7.8	-7.0	-5.8	-4.9	-4.0	-4.0	-4.5	-4.0	-3.3	-2.5	-2.3	-1.7	-1.0	-0.3	0.0	0.7	-0.1	-0.2	-0.2	-0.7	-0.3	-0.9	0.7	-9.0	-3.0
17	-0.9	-0.7	-0.6	0.0	-0.5	0.3	3.5	3.9	4.3	4.8	3.8	3.8	3.2	3.2	3.1	3.7	3.6	3.0	2.0	2.4	2.6	2.3	2.4	2.5	4.8	-0.9	2.3
18	2.6	2.4	1.1	1.2	2.1	2.1	2.0	2.0	1.9	1.6	1.8	2.2	2.3	2.5	2.6	2.7	2.5	1.7	2.4	2.5	2.6	4.8	5.2	3.7	5.2	1.1	2.4
19	2.4	3.5	6.2	3.7	3.5	6.0	4.7	4.4	4.5	4.1	4.1	4.0	4.0	4.0	4.3	9.9	27.6	27.0	12.7	5.1	4.5	4.3	4.1	3.5	27.6	2.4	6.8
20	2.7	1.9	1.6	1.8	2.2	2.0	2.0	1.9	2.6	2.9	3.7	4.8	5.3	5.1	5.4	5.8	6.0	5.6	5.6	5.7	5.9	5.4	4.3	5.2	6.0	1.6	4.0
21	5.8	5.6	5.4	5.2	5.0	5.2	5.4	4.9	5.1	4.8	4.7	4.3	4.3	4.2	4.1	3.6	3.4	3.4	3.4	3.3	3.8	3.6	3.5	3.5	5.8	3.3	4.4
22	2.8	3.1	3.1	3.2	3.2	3.1	2.7	3.0	3.2	3.3	3.0	2.4	1.5	1.3	1.8	1.4	1.9	2.1	1.6	2.0	2.5	1.7	2.1	0.9	3.3	0.9	2.4
23	0.8	1.2	1.4	1.4	0.6	0.8	0.7	-0.3	-0.2	-0.8	-1.6	-1.8	-1.9	-1.6	-1.4	-1.2	-1.1	-1.0	-1.0	-1.2	-1.5	-1.7	-2.6	-2.1	1.4	-2.6	-0.7
24	-2.3	-2.5	-3.6	-3.7	-3.6	-4.5	-4.6	-4.9	-5.4	-5.2	-5.1	-5.2	-5.2	-5.4	-5.4	-5.3	-5.4	-5.6	-6.0	-6.3	-6.8	-7.0	-6.9	-7.3	-2.3	-7.3	-5.1
25	-7.8	-8.3	-8.7	-9.3	-9.8	-10.1	-10.5	-10.7	-11.0	-11.0	-11.1	-10.5	-9.5	-8.0	-2.3	-0.9	-0.4	0.1	0.2	0.3	0.5	0.8	0.6	0.5	0.8	-11.1	-5.7
26	0.6	0.9	0.7	0.1	0.3	0.2	0.4	0.3	0.4	0.5	0.6	0.9	1.1	1.6	1.6	2.0	1.3	0.9	0.3	-0.2	-0.5	-0.9	-1.1	-1.3	2.0	-1.3	0.5
27	-1.8	-1.9	-1.9	-2.2	-3.1	-3.9	-3.4	-3.6	-3.6	-3.7	-3.9	-3.3	-2.7	-2.1	-1.5	-1.6	-1.7	-0.6	0.8	1.7	2.6	3.4	3.8	3.8	3.8	-3.9	-1.3
28	3.8	4.3	5.0	5.1	5.0	4.7	4.8	4.8	4.6	4.6	4.8	4.4	4.9	4.6	3.9	4.2	4.0	3.6	2.4	2.4	1.9	1.9	2.0	2.0	5.1	1.9	3.9
29	1.8	1.2	1.0	0.9	0.9	0.5	-0.1	-0.3	-0.9	-1.8	-2.5	-2.4	-2.5	-2.5	-2.9	-3.2	-2.9	-3.0	-4.0	-5.1	-5.9	-6.6	-6.8	-7.2	1.8	-7.2	-2.3
Max.	**5.8**	**5.6**	**6.2**	**5.2**	**5.0**	**6.0**	**5.4**	**4.9**	**5.1**	**4.8**	**4.8**	**4.8**	**5.3**	**5.1**	**5.4**	**9.9**	**27.6**	**27.0**	**12.7**	**5.7**	**5.9**	**5.4**	**5.2**	**5.2**	**27.6**		
Min.	**-16.8**	**-16.8**	**-17.5**	**-17.7**	**-17.1**	**-17.4**	**-18.4**	**-19.5**	**-19.2**	**-19.5**	**-19.0**	**-19.6**	**-18.8**	**-18.8**	**-18.7**	**-18.9**	**-17.1**	**-16.8**	**-17.8**	**-16.6**	**-17.5**	**-17.3**	**-16.7**	**-16.8**		**-19.6**	
Avg.	**-5.2**	**-5.2**	**-5.3**	**-5.4**	**-5.5**	**-5.4**	**-5.4**	**-5.5**	**-5.5**	**-5.6**	**-5.7**	**-5.8**	**-5.7**	**-5.5**	**-5.2**	**-4.9**	**-4.2**	**-4.2**	**-4.9**	**-5.2**	**-5.4**	**-5.3**	**-5.3**	**-5.2**			**-5.3**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-7.2	-7.4	-7.6	-7.7	-8.2	-8.5	-8.6	-8.5	-8.6	-8.2	-6.2	-5.0	-4.5	-3.9	-3.6	-3.0	-2.4	-2.4	-0.9	0.3	1.0	1.1	0.9	1.5	1.5	-8.6	-4.5
2	1.8	1.5	1.6	2.0	1.9	2.1	2.0	0.7	0.7	1.1	1.3	0.9	0.9	1.5	2.3	2.7	1.9	0.6	0.2	0.6	1.2	1.9	1.7	0.9	2.7	0.2	1.4
3	0.0	0.2	0.9	0.7	0.1	-0.1	1.7	2.3	1.9	1.9	1.9	1.1	1.1	1.5	2.2	2.5	2.5	2.8	2.8	3.1	3.2	3.0	3.1	3.0	3.2	-0.1	1.8
4	2.8	2.7	2.6	2.4	2.4	2.7	2.3	2.4	2.6	2.2	2.0	1.9	2.8	3.2	3.6	4.0	4.0	4.0	4.0	3.9	3.8	3.3	3.7	3.3	4.0	1.9	3.0
5	4.1	4.3	4.1	4.0	3.8	3.7	3.8	3.7	3.8	3.7	3.5	3.5	3.5	3.6	4.0	4.3	4.5	3.9	2.8	2.6	2.5	2.6	2.6	2.3	4.5	2.3	3.5
6	2.3	2.3	2.2	2.3	2.5	2.7	2.8	2.8	2.6	2.4	0.9	0.3	1.7	3.8	3.4	2.6	4.1	4.6	5.1	5.4	4.9	4.0	4.2	3.4	5.4	0.3	3.1
7	3.2	3.0	3.2	3.1	2.4	1.7	1.7	1.9	1.7	1.7	1.7	1.6	1.6	1.7	2.3	2.6	2.6	2.4	2.2	2.1	2.0	2.0	1.6	1.2	3.2	1.2	2.1
8	0.9	0.8	0.5	0.3	0.3	0.2	0.0	-0.1	0.9	1.7	2.0	1.8	3.0	3.4	3.7	3.8	3.2	2.9	3.1	3.6	3.8	4.4	4.8	4.2	4.8	-0.1	2.2
9	4.0	3.8	3.5	3.5	3.6	3.9	4.5	4.8	4.9	4.7	4.6	4.8	4.6	4.8	4.5	4.7	4.8	4.5	4.3	4.0	3.5	3.6	3.3	2.4	4.9	2.4	4.1
10	1.8	1.4	1.8	0.9	1.2	1.5	0.8	0.1	0.4	-0.1	-0.7	-1.0	-1.4	-1.3	-1.2	-1.4	-1.5	-1.4	-1.5	-1.5	-1.7	-1.8	-1.3	-1.3	1.8	-1.8	-0.4
11	-1.5	-1.8	-2.2	-2.5	-2.9	-3.5	-3.7	-3.9	-4.0	-3.9	-3.7	-3.8	-3.7	-3.5	-3.2	-3.1	-3.0	-3.1	-3.4	-3.5	-3.5	-3.8	-4.0	-3.8	-1.5	-4.0	-3.3
12	-4.0	-4.7	-5.1	-5.4	-5.5	-5.8	-6.2	-6.3	-6.5	-6.4	-6.5	-6.4	-6.3	-5.9	-5.6	-5.4	-5.2	-5.3	-5.4	-5.7	-5.9	-6.1	-6.3	-6.5	-4.0	-6.5	-5.8
13	-6.5	-6.4	-6.2	-6.3	-6.3	-6.4	-6.3	-6.3	-6.2	-6.2	-6.4	-6.3	-6.1	-6.1	-5.9	-5.8	-5.7	-5.5	-5.6	-6.4	-6.9	-7.2	-7.3	-7.4	-5.5	-7.4	-6.3
14	-7.6	-7.8	-7.8	-7.9	-7.6	-7.1	-6.1	-5.6	-6.2	-6.4	-6.2	-6.2	-5.6	-4.5	-3.4	-2.1	-1.8	-1.3	-1.2	-1.2	-1.0	-0.5	-0.4	0.0	0.0	-7.9	-4.4
15	0.0	-1.1	-1.4	-1.0	-0.6	0.0	0.0	0.3	0.7	0.9	1.2	1.3	1.3	1.6	1.7	2.0	2.1	2.0	1.7	1.4	1.0	1.2	1.3	1.5	2.1	-1.4	0.8
16	1.6	1.6	1.4	1.4	1.8	1.8	1.9	1.9	2.0	1.5	1.6	1.7	1.4	1.1	0.9	0.8	0.6	0.6	0.6	0.3	0.4	-0.2	-0.8	-1.0	2.0	-1.0	1.0
17	-0.8	-1.0	-0.8	-1.5	-1.8	-1.6	-1.7	-1.7	-1.7	-1.4	-1.4	-0.9	-0.5	0.1	0.3	0.5	0.6	0.7	0.2	-2.3	-3.6	-4.5	-5.0	-5.4	0.7	-5.4	-1.5
18	-5.8	-6.0	-6.3	-6.4	-6.4	-6.6	-6.9	-7.0	-7.3	-7.3	-7.6	-7.9	-7.8	-7.7	-8.0	-8.0	-7.9	-8.1	-8.3	-8.5	-8.7	-8.8	-9.0	-9.4	-5.8	-9.4	-7.6
19	-9.8	-10.1	-10.5	-11.0	-11.3	-11.6	-11.7	-12.1	-12.7	-13.0	-13.0	-12.7	-12.3	-12.0	-11.8	-11.5	-11.5	-11.6	-11.5	-11.5	-11.6	-11.9	-12.1	-12.2	-9.8	-13.0	-11.7
20	-12.3	-12.6	-12.7	-12.7	-13.0	-13.5	-14.0	-14.7	-15.3	-15.2	-14.8	-14.6	-14.2	-13.9	-13.8	-13.4	-13.3	-13.1	-12.8	-12.6	-12.9	-13.2	-13.2	-13.0	-12.3	-15.3	-13.5
21	-12.8	-12.3	-12.6	-12.1	-12.1	-11.9	-11.5	-8.2	-3.3	0.9	1.8	2.5	3.0	3.0	2.0	0.3	0.8	-0.4	1.8	0.7	1.1	4.5	4.6	4.4	4.6	-12.8	-2.7
22	4.4	4.2	3.7	3.3	3.3	1.7	-0.6	-0.1	-2.2	-2.4	-2.8	-2.8	-2.6	-3.2	-3.1	-2.9	-3.1	-3.2	-3.4	-4.2	-4.9	-4.6	-3.9	-4.4	4.4	-4.9	-1.4
23	-5.5	-5.6	-5.5	-6.0	-6.2	-6.6	-7.6	-8.3	-8.9	-8.9	-9.2	-9.4	-9.4	-9.1	-8.8	-8.8	-8.8	-9.2	-9.0	-8.9	-8.9	-8.7	-8.4	-8.2	-5.5	-9.4	-8.1
24	-7.9	-7.6	-7.7	-7.7	-8.0	-8.2	-8.1	-8.0	-7.9	-7.8	-8.2	-7.9	-7.5	-7.1	-6.3	-6.3	-6.3	-6.2	-6.1	-6.3	-6.2	-6.0	-6.2	-5.6	-5.6	-8.2	-7.1
25	-4.7	-4.4	-4.2	-3.7	-3.2	-3.0	-3.1	-3.5	-3.1	-2.9	-2.8	-2.8	-3.3	-2.8	-2.2	-2.4	-2.6	-2.7	-2.9	-3.4	-3.9	-4.1	-4.2	-4.0	-2.2	-4.7	-3.3
26	-4.1	-4.1	-4.4	-4.6	-4.8	-5.0	-5.2	-5.2	-5.4	-4.8	-5.1	-5.1	-5.3	-5.6	-5.2	-4.9	-4.4	-4.1	-4.1	-4.5	-4.8	-4.7	-4.9	-5.2	-4.1	-5.6	-4.8
27	-5.4	-5.2	-5.6	-6.1	-6.7	-6.8	-6.7	-6.8	-6.6	-6.5	-6.3	-6.1	-6.0	-6.0	-5.7	-5.5	-5.4	-5.7	-5.7	-5.6	-5.7	-5.9	-6.0	-6.2	-5.2	-6.8	-6.0
28	-6.6	-7.1	-7.4	-7.6	-8.5	-8.1	-8.1	-8.1	-8.0	-7.8	-7.8	-7.4	-7.0	-6.5	-5.8	-5.1	-4.5	-4.1	-3.7	-3.4	-3.4	-3.4	-3.3	-2.9	-2.9	-8.5	-6.1
29	-2.7	-2.2	-2.0	-1.5	-1.5	-1.2	-1.1	-1.0	-0.9	-0.7	-1.1	-0.7	-0.9	-1.2	-1.0	-0.2	-0.3	0.2	0.3	0.4	0.7	0.8	0.9	0.8	0.9	-2.7	-0.7
30	1.0	0.9	0.8	0.7	0.4	0.5	0.5	0.5	0.7	0.9	0.8	1.1	1.2	1.3	1.5	1.7	1.8	1.9	1.9	2.3	2.6	2.7	2.8	2.8	2.8	0.4	1.4
31	3.1	3.3	3.5	3.7	2.9	3.0	3.1	3.0	3.5	3.3	3.5	3.2	3.8	3.7	3.7	3.4	4.2	4.0	3.8	3.8	3.7	3.5	3.7	4.0	4.2	2.9	3.5
Max.	**4.4**	**4.3**	**4.1**	**4.0**	**3.8**	**3.9**	**4.5**	**4.8**	**4.9**	**4.7**	**4.6**	**4.8**	**4.6**	**4.8**	**4.5**	**4.7**	**4.8**	**4.6**	**5.1**	**5.4**	**4.9**	**4.5**	**4.8**	**4.4**	**5.4**		
Min.	**-12.8**	**-12.6**	**-12.7**	**-12.7**	**-13.0**	**-13.5**	**-14.0**	**-14.7**	**-15.3**	**-15.2**	**-14.8**	**-14.6**	**-14.2**	**-13.9**	**-13.8**	**-13.4**	**-13.3**	**-13.1**	**-12.8**	**-12.6**	**-12.9**	**-13.2**	**-13.2**	**-13.0**		**-15.3**	
Avg.	**-2.4**	**-2.5**	**-2.6**	**-2.7**	**-2.8**	**-2.9**	**-3.0**	**-2.9**	**-2.9**	**-2.7**	**-2.7**	**-2.6**	**-2.4**	**-2.1**	**-1.9**	**-1.7**	**-1.6**	**-1.7**	**-1.6**	**-1.8**	**-1.9**	**-1.8**	**-1.8**	**-2.0**			**-2.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.8	3.7	3.9	4.0	4.0	3.9	3.2	3.1	3.5	3.4	3.3	3.5	3.6	3.8	4.0	3.9	4.1	4.2	4.0	4.0	3.4	3.4	3.9	3.4	4.2	3.1	3.7
2	2.8	1.7	1.2	1.1	1.3	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.2	1.6	2.2	2.6	2.1	2.3	2.1	1.6	1.6	1.6	1.9	2.2	2.8	1.0	1.6
3	2.4	2.4	2.4	2.2	1.9	1.1	1.2	1.7	2.1	2.5	2.2	2.3	2.1	2.0	2.3	2.2	2.1	2.4	2.7	2.9	2.9	2.8	2.6	2.5	2.9	1.1	2.2
4	2.4	2.4	2.3	2.1	1.7	1.7	1.8	2.1	2.4	2.3	2.5	2.5	2.3	2.8	3.4	3.5	3.4	2.9	3.0	2.6	1.7	0.9	-0.7	-2.0	3.5	-2.0	2.1
5	-3.0	-4.0	-4.4	-4.6	-4.7	-5.2	-5.5	-6.1	-6.4	-6.1	-5.7	-5.4	-5.0	-4.5	-4.3	-4.0	-3.6	-2.9	-2.8	-2.9	-3.4	-4.1	-4.6	-5.0	-2.8	-6.4	-4.5
6	-5.1	-5.0	-5.0	-5.2	-5.6	-5.7	-6.2	-6.5	-6.4	-6.3	-6.3	-6.5	-6.0	-5.3	-4.8	-4.2	-3.7	-3.8	-3.8	-3.7	-3.8	-4.2	-4.6	-5.0	-3.7	-6.5	-5.1
7	-5.4	-5.8	-6.1	-6.4	-6.7	-7.1	-7.5	-7.8	-8.0	-8.0	-7.6	-7.4	-6.5	-5.5	-4.6	-3.8	-3.1	-2.5	-2.5	-2.8	-3.0	-3.7	-4.2	-4.3	-2.5	-8.0	-5.4
8	-4.2	-4.4	-4.4	-4.4	-4.3	-4.6	-4.9	-5.1	-5.4	-5.4	-4.9	-4.4	-3.3				-1.6	-2.3	-2.8	-3.1	-3.0	-3.0	-3.5	-4.1	-1.6	-5.4	-3.9
9	-4.8	-5.5	-5.8	-6.1	-6.1	-6.6	-6.8	-7.1	-7.8	-7.9	-7.8	-7.0	-6.1	-5.1	-4.3	-3.9	-3.8	-3.6	-3.7	-3.8	-3.9	-4.4	-4.8	-5.1	-3.6	-7.9	-5.5
10	-5.4	-5.7	-6.1	-6.3	-6.3	-6.5	-6.9	-7.6	-8.0	-8.0	-7.7	-7.2	-6.6	-6.2	-5.5	-4.8	-4.5	-4.4	-4.3	-4.3	-4.5	-4.9	-5.1	-5.5	-4.3	-8.0	-5.9
11	-6.1	-6.6	-6.9	-7.4	-8.0	-8.4	-8.8	-9.0	-9.8	-9.6	-9.4	-9.2	-8.8	-8.2	-7.8	-6.7	-5.6	-5.0	-5.0	-5.1	-5.3	-5.8	-6.4	-7.1	-5.0	-9.8	-7.3
12	-7.5	-7.9	-8.4	-8.4	-8.6	-9.1	-9.0	-9.1	-9.2	-8.9	-9.0	-8.1	-7.1	-6.0	-4.6	-3.6	-3.1	-2.6	-2.4	-2.3	-2.5	-3.0	-3.1	-3.3	-2.3	-9.2	-6.1
13	-3.3	-3.0	-2.5	-2.4	-2.0	-1.4	-1.0	-0.6	-0.2	-0.6	-1.3	-1.4	-1.1	-0.7	-0.7	1.7	3.3	3.7	4.0	3.9	3.9	4.0	4.1	4.0	4.1	-3.3	0.4
14	3.2	2.4	2.5	2.1	1.7	1.5	1.3	0.9	0.9	0.8	1.0	1.4	1.5	1.7	2.0	2.3	2.7	2.8	2.8	2.8	3.0	2.9	2.7	2.6	3.2	0.8	2.1
15	2.6	2.7	2.4	2.0	1.9	2.1	2.1	1.9	1.3	0.5	0.1	0.1	0.5	1.6	2.3	2.3	2.2	1.4	0.7	-0.3	-1.0	-2.3	-4.2	-4.4	2.7	-4.4	0.8
16	-4.8	-5.5	-6.2	-6.5	-6.1	-7.1	-7.2	-7.9	-7.9	-9.2	-8.9	-8.4	-7.9	-7.1	-6.5	-5.9	-5.3	-4.2	-3.8	-3.8	-3.6	-3.1	-2.8	-2.5	-2.5	-9.2	-5.9
17	-2.1	-1.6	-1.3	-0.6	-0.4	-0.3	0.3	0.5	0.2	0.4	0.9	1.0	1.6	1.5	1.3	1.4	1.6	1.8	1.8	1.7	1.8	2.0	2.5	3.0	3.0	-2.1	0.8
18	3.5	3.7	4.0	3.9	2.5	1.2	0.9	0.9	1.0	0.5	1.1	1.5	1.8	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.9	2.1	1.9	1.7	4.0	0.5	2.0
19	2.1	2.1	1.9	1.7	1.1	0.8	1.9	1.1	1.4	1.9	1.8	1.9	1.8	1.8	1.9	2.0	2.2	2.3	2.4	2.3	2.2	2.0	1.9	1.8	2.4	0.8	1.9
20	1.9	2.1	2.0	1.8	1.8	1.9	1.8	2.0	2.2	2.3	2.3	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	1.8	2.1
21	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.7	2.8	2.8	2.9	3.1	2.9	2.9	2.7	2.5	2.4	2.3	3.1	2.3	2.6
22	2.4	2.3	2.4	1.9	1.4	1.9	1.6	0.8	0.9	1.5	2.2	2.5	2.7	3.3	4.2	4.8	5.0	5.2	5.2	5.6	5.7	5.5	4.7	4.3	5.7	0.8	3.3
23	4.2	3.9	4.4	6.6	5.7	5.4	4.8	4.5	4.5	5.2	5.4	6.3	7.2	7.7	8.0	8.4	8.8	9.0	9.2	9.3	9.4	9.0	8.9	8.9	9.4	3.9	6.9
24	8.4	7.2	5.1	4.3	3.8	4.0	3.5	2.7	1.7	1.3	1.5	1.8	2.4	2.6	2.9	3.0	3.5	3.4	3.7	3.9	3.7	3.7	3.6	3.7	8.4	1.3	3.5
25	3.4	2.5	1.1	0.5	0.0	-0.7	-1.0	-1.2	-1.4	-1.3	-1.2	-1.1	-0.7	-0.2	-0.4	-0.8	-1.1	-1.1	-0.9	-0.7	-0.5	-1.0	-1.1	-1.3	3.4	-1.4	-0.4
26	-1.6	-1.8	-2.0	-2.4	-2.8	-2.7	-3.0	-3.3	-3.6	-4.1	-4.1	-3.9	-3.5	-3.0	-2.5	-2.2	-1.5	-1.1	-0.8	-0.5	-0.1	0.0	-0.1	0.1	0.1	-4.1	-2.1
27	0.1	0.0	0.1	0.0	-0.1	-0.5	-0.3	-0.8	-0.9	-0.9	-0.9	-1.1	-0.9	-0.6	-0.1	-0.3	0.4	0.4	1.0	0.7	0.6	0.4	0.0	-0.2	1.0	-1.1	-0.2
28	-0.3	-0.4	-0.5	-0.7	-0.9	-1.2	-1.3	-1.7	-2.0	-2.2	-2.1	-1.6	-1.3	-1.1	-0.8	-0.1	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	-2.2	-0.5
29	0.5	0.5	0.6	0.4	0.1	-0.2	-0.6	-0.6	-0.4	-0.5	-0.3	0.0	0.4	1.0	1.5	1.9	2.3	2.7	2.9	3.1	2.9	2.5	2.2	2.0	3.1	-0.6	1.0
30	1.9	1.6	1.6	1.4	1.4	1.2	1.1	0.8	0.8	1.0	1.5	2.0	2.6	3.2	2.8	2.8	3.6	4.0	4.3	4.6	4.5	4.2	3.9	3.8	4.6	0.8	2.5
Max.	**8.4**	**7.2**	**5.1**	**6.6**	**5.7**	**5.4**	**4.8**	**4.5**	**4.5**	**5.2**	**5.4**	**6.3**	**7.2**	**7.7**	**8.0**	**8.4**	**8.8**	**9.0**	**9.2**	**9.3**	**9.4**	**9.0**	**8.9**	**8.9**	**9.4**		
Min.	**-7.5**	**-7.9**	**-8.4**	**-8.4**	**-8.6**	**-9.1**	**-9.0**	**-9.1**	**-9.8**	**-9.6**	**-9.4**	**-9.2**	**-8.8**	**-8.2**	**-7.8**	**-6.7**	**-5.6**	**-5.0**	**-5.0**	**-5.1**	**-5.3**	**-5.8**	**-6.4**	**-7.1**		**-9.8**	
Avg.	**-0.2**	**-0.4**	**-0.6**	**-0.8**	**-1.0**	**-1.2**	**-1.4**	**-1.6**	**-1.7**	**-1.7**	**-1.6**	**-1.3**	**-0.9**	**-0.4**	**0.0**	**0.3**	**0.6**	**0.8**	**0.8**	**0.8**	**0.7**	**0.4**	**0.2**	**0.0**			**-0.5**

Total Hours in Month 744 **Hours Data Available** 717 **Data Recovery** 96.4%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	2.9	2.3	2.6	2.8	2.6	2.3	2.3	2.2	2.1	2.0	2.1	2.3	2.4	2.3	2.6	3.2	3.5	3.9	4.4	4.6	4.8	4.8	4.7	4.3	4.8	2.0	3.1
2	4.1	2.8	2.1	2.3	2.2	1.3	1.5	1.4	1.5	1.8	1.9	2.5	3.6	4.2	4.1	3.7	4.1	4.6	4.9	4.9	4.7	4.2	3.2	3.0	4.9	1.3	3.1
3	3.1	3.8	3.9	4.0	3.6	3.5	3.0	3.3	3.5	4.6	5.0	4.8	5.9	6.7	6.8	5.2	5.6	6.5	6.8	6.3	4.8	4.2	4.4	4.5	6.8	3.0	4.7
4	4.3	4.6	4.3	4.1	4.1	4.0	4.3	4.8	5.1	5.1	5.1	5.2	5.5	5.8	6.1	6.3	6.7	7.0	7.0	7.3	7.4	6.7	6.5	6.3	7.4	4.0	5.6
5	5.8	5.5	5.2	5.4	5.6	5.6	5.7	5.5	5.4	5.4	5.4	5.7	5.6	5.8	6.2	6.6	6.7	6.9	7.2	7.3	7.2	6.7	6.3	5.7	7.3	5.2	6.0
6	5.3	5.0	4.9	5.4	5.3	5.0	4.7	4.2	4.2	4.3	4.5	4.2	4.1	4.0	4.3	4.9	4.8	4.9	4.7	4.4	4.2	3.8	3.9	3.8	5.4	3.8	4.5
7	4.1	4.7	5.1	5.4	5.6	5.2	5.0	4.8	5.3	5.5	4.7	5.1	5.6	6.0	6.1	6.0	6.4	6.6	5.6	4.8	6.2	5.6	5.3	4.9	6.6	4.1	5.4
8	4.9	5.3	5.4	5.4	5.4	5.5	5.9	5.8	5.7	5.8	5.6	5.5	5.8	5.9	5.8	6.2	6.4	6.4	6.4	6.3	6.3	6.6	6.6	6.3	6.6	4.9	5.9
9	5.9	5.8	5.5	5.4	5.5	5.3	5.4	5.5	5.8	5.9	5.8	5.8	6.2	6.9	7.3	7.5	7.2	7.4	7.1	5.9	5.9	5.7	5.3	4.9	7.5	4.9	6.0
10	4.8	4.8	4.8	4.9	4.6	4.4	4.5	4.7	5.0	5.2	5.6	5.9	6.4	6.8	7.1	7.4	7.7	7.8	7.3	7.4	7.5	6.6	6.4	6.0	7.8	4.4	6.0
11	6.0	6.1	7.8	8.0	5.0	5.1	6.9	8.1	8.0	5.2	4.9	5.7	7.2	8.0	7.9	7.7	7.7	8.2	8.1	8.1	7.7	6.8	6.4	6.3	8.2	4.9	7.0
12	5.8	5.8	5.8	5.7	5.4	5.2	5.2	4.8	4.5	4.5	5.0	5.4	5.7	5.9	4.4	4.4	4.4	4.2	4.2	4.1	4.2	4.6	4.2	3.9	5.9	3.9	4.9
13	3.8	4.3	4.1	3.9	4.0	4.1	3.9	4.1	4.1	4.2	4.3	4.4	4.3	4.5	4.7	4.7	4.5	4.6	4.3	4.0	4.4	3.3	3.6	3.9	4.7	3.3	4.2
14	4.4	5.4	5.9	5.9	6.0	5.8	6.0	5.8	5.5	5.8	5.9	5.7	5.0	5.7	6.9	7.2	7.8	7.9	8.2	7.7	7.7	7.9	7.3	6.6	8.2	4.4	6.4
15	5.5	5.2	5.4	5.8	6.1	6.2	6.2	5.8	5.7	5.2	5.3	5.4	5.2	5.4	5.6	5.8	5.8	5.6	5.4	5.1	5.6	5.4	5.3	5.3	6.2	5.1	5.6
16	5.3	5.4	4.8	4.8	4.6	4.7	4.5	4.3	4.3	4.3	4.5	4.5	4.6	4.6	4.7	4.7	4.6	4.6	4.6	4.6	4.5	4.5	4.4	4.3	5.4	4.3	4.6
17	3.9	3.8	4.7	5.4	5.2	5.1	5.0	5.1	5.0	5.4	5.9	6.5	6.8	6.2	6.4	6.6	7.0	6.7	6.5	6.5	6.0	5.7	5.4	5.5	7.0	3.8	5.7
18	5.7	5.2	4.9	4.8	5.0	4.9	4.6	4.4	4.5	4.6	4.5	4.4	4.3	4.4	4.5	4.7	5.0	5.0	4.9	4.9	5.0	5.0	4.9	4.9	5.7	4.3	4.8
19	4.9	4.6	4.5	4.3	4.0	3.9	4.1	4.0	4.2	4.7	5.7	5.9	5.7	6.6	7.9	8.4	8.9	9.3	9.5	9.3	9.2	8.7	8.2	8.1	9.5	3.9	6.4
20	7.8	7.8	7.6	7.3	7.3	7.1	7.0	7.1	7.3	7.6	8.7	9.5	10.3	10.8	11.0	10.4	10.3	10.9	10.8	10.3	10.2	10.1	8.9	8.2	11.0	7.0	8.9
21	7.8	7.2	6.8	6.7	6.0	5.8	6.3	6.5	6.7	7.2	6.4	6.2	6.2	5.9	6.2	6.3	6.3	6.2	6.4	7.3	7.1	7.2	7.4	8.6	8.6	5.8	6.7
22	8.4	8.5	8.6	8.2	7.6	7.1	6.6	6.6	6.1	6.4	7.0	8.0	8.2	7.2	7.0	6.2	6.3	6.2	5.6	5.6	5.8	5.6	5.3	5.2	8.6	5.2	6.8
23	5.2	5.0	4.9	4.5	4.2	4.5	4.6	4.9	5.3	5.1	5.5	6.2	6.6	6.5	6.6	6.4	6.1	6.1	6.0	6.0	6.1	6.1	6.0	6.1	6.6	4.2	5.6
24	6.2	6.1	6.0	6.1	6.0	5.8	5.7	5.7	5.7	5.8	5.8	5.5	5.3	5.3	5.3	5.1	5.2	5.4	5.3	5.4	5.5	5.7	5.7	5.3	6.2	5.1	5.6
25	5.0	4.5	4.3	3.7	4.1	3.4	3.7	3.5	4.2	4.8	6.1	6.4	6.7	6.7	7.0	7.0	7.2	7.4	7.4	7.4	7.4	7.5	7.6	7.7	7.7	3.4	5.9
26	7.6	7.5	7.1	6.7	6.5	6.3	6.0	5.7	5.9	6.3	6.8	7.4	8.0	8.6	8.8	9.2	9.1	8.8	8.8	8.6	8.7	8.0	8.0	7.9	9.2	5.7	7.6
27	7.6	7.4	7.1	6.4	6.3	6.3	6.1	6.0	6.1	5.9	5.9	7.0	8.2	9.1	9.7	10.5	11.3	11.9	12.3	12.1	12.3	12.1	11.6	11.2	12.3	5.9	8.8
28	11.3	10.7	10.3	10.3	9.5	9.1	8.5	8.1	8.2	8.6	8.7	8.9	10.1	11.1	12.0	13.1	13.7	13.8	13.7	13.7	13.8	13.2	12.8	12.3	13.8	8.1	11.1
29	12.1	11.7	11.5	11.1	10.7	10.6	10.3	9.8	9.7	9.8	10.4	9.9	9.4	8.6	9.3	9.9	10.1	10.3	11.0	10.5	10.4	10.7	10.2	10.4	12.1	8.6	10.3
30	10.0	9.0	9.1	8.3	8.2	7.9	7.8	8.8	8.5	8.9	8.6	8.5	8.7	8.5	8.6	8.4	7.2	7.1	7.1	7.3	7.3	7.1	7.1	7.0	10.0	7.0	8.1
31	7.2	7.2	7.0	6.9	6.8	6.5	6.5	6.4	6.4	6.4	6.3	6.3	6.4	6.3	6.2	6.0	6.0	6.0	6.0	5.8	5.8	5.9	5.9	5.8	7.2	5.8	6.3
Max.	**12.1**	**11.7**	**11.5**	**11.1**	**10.7**	**10.6**	**10.3**	**9.8**	**9.7**	**9.8**	**10.4**	**9.9**	**10.3**	**11.1**	**12.0**	**13.1**	**13.7**	**13.8**	**13.7**	**13.7**	**13.8**	**13.2**	**12.8**	**12.3**	**13.8**		
Min.	**2.9**	**2.3**	**2.1**	**2.3**	**2.2**	**1.3**	**1.5**	**1.4**	**1.5**	**1.8**	**1.9**	**2.3**	**2.4**	**2.3**	**2.6**	**3.2**	**3.5**	**3.9**	**4.2**	**4.0**	**4.2**	**3.3**	**3.2**	**3.0**		**1.3**	
Avg.	**6.0**	**5.9**	**5.9**	**5.8**	**5.6**	**5.4**	**5.4**	**5.4**	**5.5**	**5.6**	**5.7**	**6.0**	**6.3**	**6.5**	**6.7**	**6.8**	**6.9**	**7.0**	**7.0**	**6.9**	**6.9**	**6.7**	**6.4**	**6.3**			**6.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.2	6.4	7.0	7.4	7.9	7.7	7.9	7.9	8.5	8.6	8.9	8.6	8.3	9.0	8.8	9.3	8.7	7.4	8.9	9.0	8.8	8.5	8.3	8.4	9.3	6.2	8.2
2	8.6	8.6	8.7	8.6	8.7	8.5	8.6	8.7	9.0	8.9	9.3	9.8	9.7	9.6	9.9	9.9	10.1	9.7	9.2	9.5	10.0	10.1	10.9	11.0	11.0	8.5	9.4
3	10.9	10.7	10.5	10.6	10.5	10.4	10.1	10.4	10.6	11.0	10.5	9.5	8.4	8.2	8.0	7.8	7.5	6.8	6.7	6.6	6.5	6.8	7.0	6.8	11.0	6.5	8.9
4	6.6	6.4	6.2	6.0	5.9	5.9	5.9	6.1	6.4	6.8	7.1	7.2	7.2	7.3	7.2	7.6	7.8	8.0	7.9	8.1	8.1	7.5	7.1	6.8	8.1	5.9	7.0
5	6.7	6.8	6.5	6.1	5.8	6.1	6.2	5.8	5.8	6.4	6.0	6.2	6.2	6.2	6.5	6.2	6.3	6.3	7.2	7.2	7.4	7.5	8.0	8.0	8.0	5.8	6.6
6	8.1	7.1	7.2	6.7	6.2	6.0	6.0	6.1	6.4	6.9	7.5	8.2	8.9	9.7	10.7	11.7	12.7	13.2	12.4	13.4	13.1	12.6	11.9	11.0	13.4	6.0	9.3
7	10.4	10.2	9.5	8.7	8.1	7.8	7.6	7.3	7.4	7.6	7.4	7.9	9.5	10.4	10.4	11.6	8.9	7.1	7.0	6.7	6.5	6.6	6.5	6.5	11.6	6.5	8.2
8	6.6	6.8	6.9	6.6	6.4	6.4	6.5	6.9	8.0	8.0	8.6	9.6	10.2	11.3	11.9	10.0	10.3	13.1	13.3	12.6	11.7	10.7	10.1	10.0	13.3	6.4	9.3
9	9.8	8.7	7.6	6.4	5.9	5.6	5.3	4.8	4.8	5.2	5.8	6.3	7.0	7.9	8.4	8.7	8.8	8.8	9.0	9.1	9.1	8.5	7.8	7.3	9.8	4.8	7.4
10	7.0	6.8	6.2	6.0	5.7	5.4	5.1	5.1	5.4	5.4	5.6	6.3	7.0	7.0	7.1	7.2	7.2	6.8	6.6	6.7	6.7	6.8	6.8	6.8	7.2	5.1	6.4
11	7.0	7.3	7.1	6.7	6.6	6.5	6.5	6.4	6.1	6.6	6.6	6.6	6.4	6.4	6.4	6.2	6.1	6.1	6.2	6.4	6.5	6.6	6.9	7.1	7.3	6.1	6.6
12	7.3	7.1	6.7	6.4	6.0	5.6	5.4	5.2	5.1	5.4	6.0	7.0	7.7	8.3	8.8	9.3	9.5	9.6	9.4	8.6	7.8	6.9	6.6	6.2	9.6	5.1	7.2
13	6.1	5.9	5.9	5.8	5.5	5.2	5.2	5.3	5.9	6.3	6.7	7.2	7.8	8.5	9.3	9.9	10.4	10.9	11.4	10.8	9.8	10.8	10.4	9.9	11.4	5.2	8.0
14	9.8	9.1	9.2	10.3	10.0	9.6	9.7	9.2	8.8	8.9	8.6	8.9	9.2	9.7	9.4	8.6	9.1	9.0	9.3	9.4	9.2	9.8	9.8	9.4	10.3	8.6	9.3
15	10.3	11.4	11.9	11.1	11.0	9.7	9.0	8.6	8.6	8.6	8.8	9.3	9.6	8.3	8.3	8.7	9.4	10.3	11.2	13.2	12.7	12.5	12.1	11.5	13.2	8.3	10.3
16	10.9	10.8	10.4	10.3	9.9	9.4	9.3	9.3	9.3	9.7	10.4	10.9	11.0	11.6	12.3	11.4	11.3	11.5	11.1	11.1	11.0	11.2	11.2	10.7	12.3	9.3	10.7
17	10.1	10.1	9.8	9.3	8.7	8.8	8.4	9.2	8.9	8.3	7.9	7.4	7.3	7.2	7.1	6.7	6.8	7.4	7.3	7.5	8.1	8.2	8.0	7.0	10.1	6.7	8.2
18	6.5	6.7	6.7	6.6	6.3	6.3	6.4	6.4	8.5	9.9	8.1	7.4	7.2	7.7	8.7	9.2	9.0	9.7	10.0	10.2	9.5	9.4	9.6	9.8	10.2	6.3	8.2
19	9.5	9.0	8.9	8.8	8.1	9.5	10.4	10.5	10.1	8.4	8.7	8.8	8.7	8.4	8.4	8.7	9.0	9.1	8.7	8.5	8.7	8.6	8.4	8.3	10.5	8.1	8.9
20	8.2	8.1	8.1	7.8	7.8	7.4	7.5	7.8	7.7	7.9	8.1	8.4	8.9	8.5	8.2	8.3	8.4	8.3	8.5	9.1	8.9	8.6	8.6	9.1	9.1	7.4	8.3
21	9.3	9.3	9.2	8.9	8.8	8.7	8.8	9.0	9.0	8.9	8.9	9.0	9.0	9.2	9.2	9.3	9.8	10.3	10.4	10.8	11.5	11.5	11.8	11.5	11.8	8.7	9.7
22	10.3	10.1	9.9	9.5	9.5	9.5	9.3	9.4	9.4	9.1	9.1	9.0	8.9	8.6	8.5	8.6	9.0	9.9	10.1	10.0	9.9	9.9	9.8	9.5	10.3	8.5	9.4
23	9.1	9.0	8.8	8.6	8.6	8.4	8.4	8.5	8.6	8.7	8.9	8.9	8.8	8.9	8.9	8.8	8.9	8.9	8.9	9.1	9.2	9.0	9.0	9.2	9.2	8.4	8.8
24	9.2	8.8	8.7	8.6	8.3	8.3	8.4	8.5	8.7	8.9	8.8	8.4	8.0	8.2	8.3	8.8	9.6	9.9	10.0	10.0	9.8	10.3	10.6	10.5	10.6	8.0	9.1
25	10.9	11.0	9.5	8.5	8.3	9.3	10.0	10.2	10.1	10.4	11.4	11.7	11.8	11.7	11.0	10.7	10.4	11.5	11.8	10.6	10.6	12.1	11.2	10.5	12.1	8.3	10.6
26	10.3	10.6	10.7	10.5	10.6	10.4	10.5	10.7	11.0	11.1	11.3	11.3	11.4	12.0	12.4	12.6	13.0	13.3	13.6	13.5	13.3	13.2	13.2	13.3	13.6	10.3	11.8
27	13.2	11.5	9.8	9.3	9.0	8.6	8.5	8.2	7.9	7.4	7.1	7.5	8.0	8.4	8.5	8.7	8.9	8.9	8.7	8.7	8.9	8.8	8.6	8.4	13.2	7.1	8.8
28	8.3	7.1	7.4	6.9	6.7	6.3	7.5	9.7	10.1	10.1	10.6	11.1	11.4	12.2	12.7	11.9	11.3	11.0	10.8	9.2	8.9	9.2	9.1	9.2	12.7	6.3	9.5
29	9.3	9.1	9.2	9.1	9.1	9.0	8.9	8.6	8.4	8.4	8.3	8.4	8.4	8.4	8.7	8.9	9.0	9.0	8.9	8.9	9.0	9.0	9.0	9.0	9.3	8.3	8.8
30	9.0	8.9	8.8	8.4	8.4	7.5	7.0	6.9	7.5	7.9	8.1	8.2	8.5	8.7	9.0	9.3	9.5	9.8	10.2	10.6	10.6	10.3	10.3	10.1	10.6	6.9	8.9
Max.	**13.2**	**11.5**	**11.9**	**11.1**	**11.0**	**10.4**	**10.5**	**10.7**	**11.0**	**11.1**	**11.4**	**11.7**	**11.8**	**12.2**	**12.7**	**12.6**	**13.0**	**13.3**	**13.6**	**13.5**	**13.3**	**13.2**	**13.2**	**13.3**	**13.6**		
Min.	**6.1**	**5.9**	**5.9**	**5.8**	**5.5**	**5.2**	**5.1**	**4.8**	**4.8**	**5.2**	**5.6**	**6.2**	**6.2**	**6.2**	**6.4**	**6.2**	**6.1**	**6.1**	**6.2**	**6.4**	**6.5**	**6.6**	**6.5**	**6.2**		**4.8**	
Avg.	**8.9**	**8.6**	**8.4**	**8.2**	**7.9**	**7.8**	**7.8**	**7.9**	**8.1**	**8.2**	**8.3**	**8.5**	**8.7**	**8.9**	**9.1**	**9.1**	**9.2**	**9.4**	**9.5**	**9.5**	**9.4**	**9.4**	**9.3**	**9.1**			**8.7**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.1	8.8	8.3	8.1	8.0	8.2	8.2	8.6	8.6	8.6	8.9	9.0	8.5	8.3	9.2	9.9	10.4	10.8	11.0	10.6	9.9	9.2	9.3	9.4	11.0	8.0	9.1
2	9.3	9.2	9.1	9.0	9.0	8.9	9.0	9.2	9.3	9.1	9.4	9.3	9.5	10.0	10.4	10.4	10.6	11.0	11.1	10.9	10.7	10.7	10.6	10.4	11.1	8.9	9.8
3	9.5	9.5	11.4	13.8	13.7	13.4	12.5	10.8	8.7	9.0	10.4	9.7	9.5	11.3	11.9	10.0	10.4	10.5	10.7	10.3	10.1	9.7	9.3	9.0	13.8	8.7	10.6
4	9.5	9.6	9.6	9.7	10.1	10.4	10.6	10.7	10.9	10.3	10.3	10.4	10.5	11.1	10.6	10.9	10.8	10.5	10.8	11.1	10.8	10.9	10.8	10.8	11.1	9.5	10.5
5	10.6	10.8	10.7	10.3	10.5	10.6	10.9	10.8	10.8	11.2	11.5	11.7	12.3	12.7	12.4	12.6	12.6	13.4	13.2	13.7	12.8	13.6	13.8	13.3	13.8	10.3	11.9
6	12.4	12.0	11.9	11.8	11.1	11.5	12.3	11.6	11.4	11.5	11.9	12.4	11.8	11.6	11.2	11.6	12.0	11.9	11.9	12.0	11.7	11.6	11.7	11.4	12.4	11.1	11.8
7	11.2	11.0	11.0	10.9	10.4	9.3	8.4	8.4	8.5	8.5	8.4	8.8	9.2	9.8	10.1	10.0	10.2	10.4	10.4	10.3	10.2	10.1	10.1	10.1	11.2	8.4	9.8
8	9.8	9.6	9.7	9.6	9.9	11.0	11.1	10.9	10.8	10.9	11.0	11.3	11.4	11.8	12.3	12.6	12.9	12.4	12.0	12.6	12.4	12.2	10.8	9.8	12.9	9.6	11.2
9	9.5	9.2	9.3	9.4	9.3	9.4	9.4	9.6	10.9	10.4	10.2	10.2	10.2	10.3	10.5	10.5	11.0	11.2	11.2	11.7	11.6	11.7	11.8	12.0	12.0	9.2	10.4
10	12.1	12.1	11.8	11.5	11.1	10.9	10.4	10.2	10.1	9.7	9.7	9.8	10.2	10.0	10.0	9.8	9.8	9.7	9.6	9.4	9.5	9.4	9.5	9.7	12.1	9.4	10.3
11	9.5	9.4	9.4	9.5	9.5	9.3	9.1	9.1	9.2	9.1	9.2	9.4	9.5	9.7	9.9	10.1	10.5	10.7	10.7	10.6	10.5	10.7	10.8	10.4	10.8	9.1	9.8
12	9.9	9.2	8.8	8.8	8.6	8.6	8.4	8.9	10.1	10.1	10.2	10.5	10.7	10.6	10.5	10.7	10.8	10.7	10.6	10.3	10.2	10.1	10.1	10.2	10.8	8.4	9.9
13	9.8	9.7	9.7	9.6	9.5	9.5	9.4	9.3	9.4	9.2	9.5	9.9	9.5	9.4	9.4	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.4	9.4	9.9	9.2	9.5
14	9.5	9.5	9.6	9.6	9.7	9.7	9.6	9.6	9.7	9.8	9.8	9.6	9.7	9.8	9.9	10.1	10.3	10.4	10.5	10.6	10.9	10.7	10.6	10.4	10.9	9.5	10.0
15	10.4	10.4	10.5	10.7	10.5	10.2	10.1	10.0	10.4	10.6	10.8	10.6	11.1	11.4	12.4	11.9	10.8	11.3	11.9	12.7	12.7	12.6	12.7	12.3	12.7	10.0	11.2
16	11.5	10.6	10.4	10.3	10.2	10.4	10.8	10.3	10.0	9.6	9.6	9.7	9.9	9.8	9.8	9.8	9.8	9.8	9.9	10.0	10.1	10.2	10.1	10.1	11.5	9.6	10.1
17	10.2	10.2	9.9	10.0	9.7	8.3	7.9	8.0	7.9	8.4	8.7	9.3	9.2	9.6	10.1	10.7	9.9	10.2	10.7	10.9	10.5	10.3	10.2	10.0	10.9	7.9	9.6
18	9.9	9.6	9.4	9.3	9.0	8.6	8.6	8.4	8.6	9.1	9.3	9.9	10.5	10.7	10.7	10.9	11.3	11.6	11.8	11.7	11.8	11.3	10.9	10.6	11.8	8.4	10.2
19	10.4	10.4	10.2	10.1	10.0	9.8	9.8	9.9	10.2	10.6	11.2	11.8	12.5	13.4	14.1	14.8	15.0	14.1	15.7	15.7	16.0	15.2	14.0	13.2	16.0	9.8	12.4
20	12.7	12.3	12.1	12.1	12.2	12.0	12.1	12.4	12.3	13.0	13.0	11.9	11.1	10.6	10.6	11.0	11.4	11.1	11.1	11.1	11.0	10.4	10.0	10.1	13.0	10.0	11.6
21	10.4	10.4	10.1	9.3	9.2	8.9	9.0	8.8	8.7	8.9	9.2	9.4	9.9	10.6	10.8	11.2	11.3	11.4	12.3	12.8	12.8	12.7	12.2	11.7	12.8	8.7	10.5
22	11.2	10.7	10.2	10.0	9.6	9.7	9.8	9.7	10.0	10.1	9.7	9.5	9.8	9.8	9.5	9.3	9.1	8.8	9.1	9.2	9.1	9.1	8.9	8.7	11.2	8.7	9.6
23	8.8	9.0	8.9	8.8	8.9	9.0	8.8	8.8	8.9	9.4	10.1	10.2	10.8	11.5	11.9	11.2	11.3	10.5	10.4	10.1	9.9	9.4	9.0	8.9	11.9	8.8	9.8
24	9.0	9.4	9.0	9.0	9.4	9.2	8.3	8.5	8.3	8.5	8.6	9.2	10.1	10.8	11.3	10.9	10.9	11.8	12.5	13.1	12.8	12.8	12.4	11.8	13.1	8.3	10.3
25	11.0	11.1	11.6	12.7	12.5	13.2	13.1	13.4	13.2	13.1	13.7	14.2	15.0	16.1	17.1	17.9	17.6	15.4	14.8	15.0	14.8	14.7	14.3	13.9	17.9	11.0	14.1
26	13.5	13.2	12.8	12.1	12.1	12.5	11.5	10.6	10.5	10.8	11.3	11.5	11.5	11.7	11.0	11.0	11.5	12.0	12.1	10.9	10.5	10.5	10.3	10.1	13.5	10.1	11.5
27	10.1	9.9	10.0	10.2	10.1	10.2	9.4	9.2	8.9	9.1	9.4	9.5	9.7	9.8	9.9	10.1	10.2	10.4	10.1	10.6	10.5	10.5	10.5	10.1	10.6	8.9	9.9
28	10.0	10.4	11.1	10.9	10.9	10.8	10.9	11.0	11.3	11.6	12.1	12.7	13.3	14.7	16.4	16.9	16.8	17.7	18.0	17.8	18.1	17.6	17.3	16.9	18.1	10.0	14.0
29	16.6	16.1	15.3	15.4	15.4	14.9	14.3	14.5	15.0	15.0	15.5	16.3	17.3	18.0	18.7	19.1	15.9	20.3	15.9	18.7	19.3	19.1	18.7	18.0	20.3	14.3	16.8
30	16.9	16.4	16.3	15.6	15.4	15.4	14.9	14.8	15.1	15.4	16.0	16.5	16.8	17.6	18.5	19.3	19.9	19.9	19.5	19.0	18.7	18.0	16.8	16.8	19.9	14.8	17.1
31	17.2	17.3	17.4	17.6	16.7	14.9	14.8	14.6	14.3	14.0	14.6	15.1	15.6	16.5	16.9	18.5	18.8	19.3	20.1	20.9	20.7	20.0	18.5	18.5	20.9	14.0	17.2
Max.	**17.2**	**17.3**	**17.4**	**17.6**	**16.7**	**15.4**	**14.9**	**14.8**	**15.1**	**15.4**	**16.0**	**16.5**	**17.3**	**18.0**	**18.7**	**19.3**	**19.9**	**20.3**	**20.1**	**20.9**	**20.7**	**20.0**	**18.7**	**18.5**	**20.9**		
Min.	**8.8**	**8.8**	**8.3**	**8.1**	**8.0**	**8.2**	**7.9**	**8.0**	**7.9**	**8.4**	**8.4**	**8.8**	**8.5**	**8.3**	**9.2**	**9.3**	**9.1**	**8.8**	**9.1**	**9.2**	**9.1**	**9.1**	**8.9**	**8.7**		**7.9**	
Avg.	**11.0**	**10.9**	**10.8**	**10.8**	**10.7**	**10.6**	**10.4**	**10.3**	**10.4**	**10.5**	**10.8**	**11.0**	**11.2**	**11.6**	**11.9**	**12.0**	**12.0**	**12.2**	**12.2**	**12.4**	**12.3**	**12.1**	**11.8**	**11.5**			**11.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	16.9	16.2	15.8	14.2	13.4	13.0	12.3	11.9	11.4	11.3	11.3	11.0	10.8	10.3	10.3	10.3	10.4	10.8	11.6	11.9	11.8	11.8	11.8	11.7	16.9	10.3	12.2
2	11.6	11.5	11.0	10.8	10.7	10.7	10.7	10.7	10.8	10.9	11.2	11.1	11.2	11.2	11.5	11.2	11.3	11.3	11.1	11.2	11.0	10.8	10.8	10.8	11.6	10.7	11.1
3	10.9	11.1	11.2	11.3	11.4	11.2	10.7	10.6	10.5	10.5	10.5	10.7	10.5	10.5	11.5	11.4	11.2	11.2	10.9	10.8	10.9	11.0	11.1	11.1	11.5	10.5	10.9
4	10.9	10.7	10.7	10.7	10.6	10.4	10.7	10.9	10.7	11.0	11.0	10.5	10.6	10.7	10.4	10.6	10.6	10.6	10.4	9.8	9.7	9.8	9.9	9.9	11.0	9.7	10.5
5	9.9	9.9	10.0	10.1	10.3	10.5	10.2	10.3	10.6	11.0	11.5	11.5	11.5	11.7	11.3	11.4	11.7	11.9	12.2	12.5	12.4	12.1	11.9	11.8	12.5	9.9	11.2
6	11.7	11.8	11.6	11.4	11.0	10.6	10.0	9.7	9.8	10.7	11.8	12.0	12.2	12.9	13.3	13.8	14.0	13.6	13.5	16.2	17.8	17.3	16.7	16.1	17.8	9.7	12.9
7	15.5	15.2	14.8	14.5	14.2	13.9	13.7	13.3	12.8	13.2	13.5	14.5	15.4	16.4	17.0	17.6	18.1	18.4	18.3	17.9	17.9	16.9	15.7	16.0	18.4	12.8	15.6
8	15.3	14.5	14.0	13.2	12.6	11.6	11.2	11.0	11.4	12.1	11.8	11.3	11.6	11.8	12.6	13.3	12.9	12.7	12.4	12.7	12.9	12.5	12.3	11.4	15.3	11.0	12.5
9	10.8	10.6	10.0	9.8	9.7	9.4	10.6	11.7	12.6	12.9	13.3	14.0	14.8	15.4	12.8	12.5	12.1	12.7	12.3	11.6	11.2	10.9	10.6	10.4	15.4	9.4	11.8
10	10.5	10.6	10.6	10.8	11.0	10.8	10.7	10.7	10.6	10.6	10.8	10.9	11.2	11.4	11.7	12.1	12.3	12.3	12.1	12.1	12.0	11.8	11.7	11.4	12.3	10.5	11.3
11	11.4	11.6	11.7	11.4	11.0	11.1	11.5	11.5	11.5	11.4	11.5	11.6	11.7	11.7	11.7	11.7	11.7	11.9	12.1	12.4	13.3	12.9	12.1	11.4	13.3	11.0	11.7
12	10.8	10.7	11.5	12.4	12.6	12.8	12.8	13.0	12.6	13.2	13.1	13.0	13.7	13.7	13.7	13.7	13.7	13.5	13.9	13.7	13.2	12.9	12.7	12.4	13.9	10.7	12.9
13	12.4	12.2	12.5	12.6	12.4	12.3	12.6	14.4	14.5	14.3	13.6	13.4	13.7	14.5	14.5	14.0	13.8	13.4	13.2	13.3	13.7	14.1	13.9	13.8	14.5	12.2	13.5
14	13.6	13.2	13.3	12.5	12.9	13.1	12.8	12.2	12.1	12.0	11.8	11.8	12.4	12.7	12.8	12.7	13.1	13.6	13.6	13.8	13.5	13.3	13.4	12.4	13.8	11.8	12.8
15	12.1	12.0	11.8	11.6	11.0	10.7	10.5	10.2	10.5	10.4	10.3	10.4	10.6	10.6	10.9	11.0	11.0	11.0	11.1	11.3	11.4	11.6	11.3	11.0	12.1	10.2	11.0
16	10.7	10.3	9.9	9.9	10.5	10.7	10.6	10.9	10.9	11.0	11.0	10.4	10.7	11.0	11.1	11.2	11.3	11.5	11.6	11.5	11.2	11.0	11.0	11.0	11.6	9.9	10.9
17	11.0	10.8	10.7	10.8	10.6	10.6	10.5	10.9	10.7	10.8	10.4	10.6	10.1	10.2	10.8	11.1	11.4	11.7	11.8	11.6	11.5	11.5	11.4	10.9	11.8	10.1	10.9
18	11.2	11.2	10.7	10.5	10.4	10.3	9.6	9.2	10.2	12.8	13.1	13.2	13.2	13.5	13.9	14.2	14.7	15.1	15.3	15.4	15.5	15.3	15.4	14.3	15.5	9.2	12.8
19	13.9	13.6	13.8	13.4	12.4	11.7	11.6	11.1	11.7	12.5	12.6	12.9	13.3	14.2	14.4	14.8	15.3	15.3	15.3	15.3	15.1	15.0	14.7	14.6	15.3	11.1	13.7
20	14.3	13.9	13.9	13.7	13.5	13.2	13.1	13.0	12.8	13.0	13.2	13.5	13.4	13.6	14.2	14.9	15.5	15.8	15.8	15.9	15.7	15.0	14.7	14.3	15.9	12.8	14.2
21	14.0	13.8	13.5	13.5	13.5	13.6	13.7	13.4	13.3	13.3	13.0	12.7	12.9	13.3	11.9	12.1	12.4	12.3	11.8	11.2	10.9	11.3	11.2	10.9	14.0	10.9	12.7
22	11.0	11.1	10.6	10.6	10.3	10.3	10.7	10.8	10.8	10.7	11.1	11.4	11.5	11.8	12.0	12.4	12.7	11.1	11.2	11.6	12.1	13.9	14.2	14.2	14.2	10.3	11.6
23	14.0	14.0	13.9	13.9	13.7	13.3	13.0	12.9	12.5	13.1	13.2	13.1	12.1	12.0	11.9	11.8	11.8	11.7	11.7	12.2	12.1	12.4	12.7	12.7	14.0	11.7	12.7
24	12.7	12.6	12.3	12.3	12.5	12.5	12.8	12.9	13.0	12.9	13.0	13.2	14.2	14.5	14.5	14.7	15.6	16.1	16.0	15.5	15.4	15.2	14.9	15.0	16.1	12.3	13.9
25	14.5	13.5	13.3	12.1	11.7	11.4	11.4	11.3	11.1	11.0	11.0	11.4	11.7	11.6	11.4	11.5	11.6	11.6	11.7	11.8	11.8	11.7	11.7	11.8	14.5	11.0	11.8
26	11.8	11.9	11.7	11.8	11.5	11.7	11.4	11.7	11.6	11.7	11.9	12.5	12.3	12.3	12.5	12.3	12.0	11.8	11.5	11.4	11.5	11.4	11.3	11.3	12.5	11.3	11.8
27	11.3	11.2	11.2	11.0	10.6	10.4	10.3	10.7	11.1	11.3	11.5	11.6	11.8	12.0	12.4	12.8	13.3	13.6	13.5	13.5	13.0	12.7	12.3	12.2	13.6	10.3	11.9
28	12.2	12.3	12.2	12.3	12.1	11.8	11.7	11.9	12.1	12.0	12.1	12.5	12.6	12.8	12.8	13.0	13.5	13.9	14.2	13.8	13.3	12.8	12.7	12.7	14.2	11.7	12.6
29	12.8	12.7	12.8	12.2	11.3	11.3	11.5	11.5	11.6	12.1	12.9	14.0	15.0	15.6	15.8	15.9	16.0	16.1	15.7	14.7	14.4	13.6	13.0	12.5	16.1	11.3	13.5
30	12.2	11.8	11.5	11.4	11.2	11.1	10.8	10.8	11.1	11.1	11.4	12.0	11.6	10.9	11.0	11.2	11.5	10.8	10.9	11.1	12.4	11.3	11.5	11.6	12.4	10.8	11.3
31	11.4	11.3	10.8	10.6	10.4	9.7	10.2	10.9	11.3	11.4	11.4	11.6	11.9	12.1	12.2	12.3	12.7	12.6	13.2	13.6	13.3	13.4	13.2	13.4	13.6	9.7	11.9
Max.	**16.9**	**16.2**	**15.8**	**14.5**	**14.2**	**13.9**	**13.7**	**14.4**	**14.5**	**14.3**	**13.6**	**14.5**	**15.4**	**16.4**	**17.0**	**17.6**	**18.1**	**18.4**	**18.3**	**17.9**	**17.9**	**17.3**	**16.7**	**16.1**	**18.4**		
Min.	**9.9**	**9.9**	**9.9**	**9.8**	**9.7**	**9.4**	**9.6**	**9.2**	**9.8**	**10.4**	**10.3**	**10.4**	**10.1**	**10.2**	**10.3**	**10.3**	**10.4**	**10.6**	**10.4**	**9.8**	**9.7**	**9.8**	**9.9**	**9.9**		**9.2**	
Avg.	**12.4**	**12.2**	**12.0**	**11.8**	**11.6**	**11.5**	**11.4**	**11.5**	**11.6**	**11.8**	**11.9**	**12.1**	**12.3**	**12.5**	**12.5**	**12.7**	**12.9**	**12.9**	**12.9**	**12.9**	**13.0**	**12.8**	**12.6**	**12.4**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	13.5	13.5	12.8	12.7	12.8	12.7	12.3	12.4	12.5	12.0	11.9	12.1	12.1	12.3	12.6	12.2	12.4	12.0	11.9	10.8	10.4	11.6	11.5	11.4	13.5	10.4	12.2
2	11.2	11.0	10.9	11.1	10.9	11.0	10.4	10.4	10.4	10.1	9.8	9.8	10.5	11.1	11.7	12.2	12.2	12.1	12.1	11.8	11.4	11.6	11.6	11.7	12.2	9.8	11.1
3	11.7	12.0	12.3	12.6	12.5	12.2	12.1	12.1	11.7	11.3	11.1	9.9	9.9	10.0	9.9	9.9	10.2	11.0	11.1	10.9	10.6	10.3	10.3	9.8	12.6	9.8	11.1
4	9.4	9.8	10.4	10.3	10.2	9.8	9.3	9.7	9.8	10.4	10.0	9.8	10.0	10.1	10.3	10.4	10.4	10.5	10.8	10.9	10.7	10.7	10.5	9.9	10.9	9.3	10.2
5	9.9	9.6	9.5	9.0	9.4	9.1	8.5	9.0	8.7	9.2	9.3	9.2	9.2	9.4	8.9	8.7	8.6	8.5	8.5	8.2	8.1	7.9	7.9	7.5	9.9	7.5	8.8
6	7.9	8.7	9.5	10.2	10.1	10.2	10.6	12.1	12.0	12.8	13.2	13.1	12.3	11.8	11.9	12.1	12.3	12.4	12.4	12.5	12.4	12.5	12.5	12.5	13.2	7.9	11.6
7	13.0	13.7	13.8	13.7	13.8	14.4	13.9	13.3	13.1	13.0	11.8	10.4	11.2	10.5	11.0	11.9	12.5	12.9	11.9	10.8	10.6	10.5	10.5	10.5	14.4	10.4	12.2
8	10.1	10.3	10.1	9.9	10.2	10.1	10.0	10.0	9.9	10.0	10.7	10.9	11.1	11.4	11.2	10.5	10.1	10.2	11.7	11.9	12.1	12.4	12.3	12.3	12.4	9.9	10.8
9	12.3	11.9	12.0	12.4	12.8	13.2	13.4	13.7	13.9	14.2	14.2	13.4	13.1	13.1	11.0	10.8	10.8	10.8	10.9	10.9	10.9	11.0	11.0	10.9	14.2	10.8	12.2
10	10.9	11.3	11.1	10.9	10.8	10.9	10.7	10.5	10.3	10.3	10.7	11.7	12.2	12.6	12.6	13.6	14.5	14.8	14.8	14.3	14.1	14.1	14.0	13.9	14.8	10.3	12.3
11	13.8	13.4	13.2	12.5	12.2	12.2	11.8	12.0	12.1	12.5	13.8	10.8	-5.1	-10.8	14.6	11.0	10.8	10.7	10.8	11.1	11.1	10.3	10.3	10.3	14.6	-10.8	10.2
12	10.6	10.5	10.3	10.0	9.5	9.3	9.4	9.3	9.6	9.8	10.3	10.5	10.9	11.0	11.4	11.6	11.6	11.8	11.8	12.0	11.8	11.7	11.6	11.5	12.0	9.3	10.7
13	11.0	10.6	10.4	10.3	10.1	10.0	10.1	10.2	10.1	10.1	10.1	10.0	9.9	9.5	9.4	9.7	10.1	10.1	10.6	11.0	11.1	11.1	11.4	11.2	11.4	9.4	10.3
14	11.2	11.5	11.5	11.5	11.4	10.9	10.5	10.6	10.3	10.5	10.7	10.5	10.1	10.2	10.3	10.3	10.1	10.6	10.6	10.6	10.5	9.8	9.6	9.8	11.5	9.6	10.6
15	9.8	10.1	9.9	10.1	10.4	10.5	10.3	10.5	10.3	10.2	10.3	10.5	10.4	10.5	10.5	10.4	10.2	10.4	10.1	10.5	10.7	10.6	10.0	10.0	10.7	9.8	10.3
16	9.9	9.9	9.6	10.2	10.5	10.6	10.1	10.0	9.9	10.0	10.0	10.1	10.4	11.1	11.6	12.3	12.6	12.3	11.8	11.6	11.6	11.3	11.2	10.9	12.6	9.6	10.8
17	10.6	10.8	10.6	10.3	9.7	9.6	9.5	9.0	9.0	9.0	9.2	9.6	9.7	9.6	9.7	9.4	8.6	8.1	8.0	7.9	7.7	7.9	8.2	8.5	10.8	7.7	9.2
18	8.6	8.5	8.6	8.7	8.7	8.5	8.8	9.0	9.9	10.4	10.6	11.0	11.1	10.3	9.7	8.4	7.8	7.7	8.2	8.5	8.6	8.7	9.2	9.4	11.1	7.7	9.1
19	9.3	8.6	8.9	8.9	8.9	8.8	8.4	7.8	7.1	7.1	7.2	7.7	7.8	8.2	8.6	9.1	9.2	9.1	8.7	8.7	8.9	8.8	8.8	8.6	9.3	7.1	8.5
20	8.5	8.2	8.2	8.1	8.0	8.2	8.2	8.0	7.9	7.7	7.5	6.8	7.2	7.2	7.6	8.0	8.4	8.8	8.7	8.5	8.2	7.8	7.8	7.2	8.8	6.8	7.9
21	7.0	6.6	6.5	6.5	6.7	6.5	6.7	6.8	6.6	6.7	7.4	8.3	9.1	9.6	9.9	10.0	10.0	10.1	9.5	9.2	8.9	8.5	8.1	7.2	10.1	6.5	8.0
22	6.8	6.6	6.3	6.3	6.1	6.1	6.1	5.9	6.2	6.2	6.6	7.3	8.0	8.6	8.9	9.1	9.2	9.1	9.1	9.0	8.7	7.7	7.1	6.5	9.2	5.9	7.4
23	6.3	6.0	5.7	5.6	5.6	5.7	5.7	5.7	5.7	5.8	6.0	6.0	6.3	6.7	6.8	7.0	7.2	7.6	7.8	8.0	7.7	7.6	7.3	7.1	8.0	5.6	6.5
24	7.1	6.9	6.7	6.6	6.8	6.7	6.7	7.0	7.4	7.9	8.1	7.9	8.0	7.9	8.3	8.3	8.3	8.3	8.3	8.2	8.1	8.2	8.4	8.4	8.4	6.6	7.7
25	8.5	8.5	8.3	8.4	8.4	8.5	8.5	8.4	8.4	8.4	8.3	8.0	8.1	8.3	8.5	8.7	8.9	9.0	9.0	8.8	8.9	8.8	9.2	9.1	9.2	8.0	8.6
26	9.2	9.2	9.0	8.6	9.0	9.1	8.4	8.1	8.1	8.1	8.5	8.7	9.1	9.3	9.5	9.6	9.5	9.4	9.3	9.1	8.3	8.3	9.1	9.1	9.6	8.1	8.9
27	9.3	9.2	9.2	8.8	8.7	8.4	8.2	7.7	7.3	7.3	7.3	7.8	8.4	8.9	9.4	10.0	10.4	10.8	10.9	10.5	10.1	9.8	9.4	8.5	10.9	7.3	9.0
28	8.4	8.2	7.8	7.6	7.5	7.3	7.0	6.9	7.1	7.3	7.4	8.0	8.8	9.2	8.7	8.8	8.7	8.8	8.7	8.8	8.7	8.8	8.8	8.8	9.2	6.9	8.2
29	8.7	8.6	8.8	8.7	8.6	8.6	8.5	8.3	8.1	7.9	8.0	8.1	8.2	8.3	8.6	8.8	8.7	8.6	8.3	8.1	7.9	7.3	6.8	6.4	8.8	6.4	8.2
30	6.2	6.3	6.2	6.5	6.6	6.7	6.6	6.3	5.9	6.1	6.5	7.2	7.9	8.6	9.0	9.2	9.2	9.2	8.8	8.2	7.7	7.4	7.1	7.0	9.2	5.9	7.4
Max.	**13.8**	**13.7**	**13.8**	**13.7**	**13.8**	**14.4**	**13.9**	**13.7**	**13.9**	**14.2**	**14.2**	**13.4**	**13.1**	**13.1**	**14.6**	**13.6**	**14.5**	**14.8**	**14.8**	**14.3**	**14.1**	**14.1**	**14.0**	**13.9**	**14.8**		
Min.	**6.2**	**6.0**	**5.7**	**5.6**	**5.6**	**5.7**	**5.7**	**5.7**	**5.7**	**5.8**	**6.0**	**6.0**	**-5.1**	**-10.8**	**6.8**	**7.0**	**7.2**	**7.6**	**7.8**	**7.9**	**7.7**	**7.3**	**6.8**	**6.4**		**-10.8**	
Avg.	**9.7**	**9.7**	**9.6**	**9.6**	**9.6**	**9.5**	**9.4**	**9.4**	**9.3**	**9.4**	**9.5**	**9.5**	**9.2**	**9.1**	**10.1**	**10.1**	**10.1**	**10.2**	**10.2**	**10.0**	**9.9**	**9.8**	**9.7**	**9.5**			**9.7**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.9	6.6	6.2	5.9	5.5	5.2	5.0	4.7	4.6	4.6	5.2	6.0	7.9	8.2	8.8	7.7	7.5	8.1	8.2	7.9	7.9	7.8	7.8	7.7	8.8	4.6	6.7
2	7.5	6.8	6.7	6.2	5.8	5.5	5.1	4.8	4.7	5.0	6.5	7.1	7.9	8.5	8.9	9.0	8.9	8.7	8.2	7.6	7.1	6.5	4.9	4.0	9.0	4.0	6.7
3	4.0	4.2	4.0	3.8	3.8	3.5	3.3	3.2	3.1	3.2	3.3	3.4	3.2	3.6	3.6	3.8	3.9	3.9	3.9	3.7	3.5	3.4	3.5	3.4	4.2	3.1	3.6
4	3.3	3.2	3.2	3.2	3.0	3.0	3.0	3.1	3.0	3.0	3.1	3.5	4.1	4.6	5.0	5.4	5.6	5.6	5.1	4.7	4.3	3.6	3.1	2.8	5.6	2.8	3.8
5	2.6	2.4	2.2	2.2	2.3	2.3	2.1	1.9	1.7	1.9	2.2	2.5	2.8	3.1	3.1	3.5	3.6	3.6	3.5	3.1	2.9	2.5	2.3	1.8	3.6	1.7	2.6
6	1.5	1.5	1.3	1.3	1.2	1.3	1.3	1.2	0.9	1.1	1.3	1.7	2.1	2.3	2.6	2.7	2.7	2.7	2.4	2.0	1.9	2.0	2.1	2.1	2.7	0.9	1.8
7	2.1	2.1	1.9	1.8	1.5	1.4	1.5	1.1	0.8	0.6	0.6	1.0	1.2	1.5	1.4	1.4	1.6	1.5	1.1	1.0	1.0	1.0	1.1	0.8	2.1	0.6	1.3
8	0.7	0.8	0.6	0.6	0.5	0.4	0.4	0.2	0.0	-0.1	0.1	0.2	0.9	1.3	1.9	2.4	2.6	2.7	2.3	1.9	1.5	1.2	1.8	3.2	3.2	-0.1	1.2
9	3.4	3.1	3.1	3.0	2.8	2.2	1.5	1.3	1.7	2.2	2.5	3.2	3.4	4.0	4.9	6.4	6.4	6.3	6.4	7.7	8.0	8.3	8.7	8.9	8.9	1.3	4.6
10	8.9	8.3	7.6	7.8	7.3	6.4	6.1	6.5	6.7	6.7	6.9	7.1	7.4	7.6	8.0	7.9	7.8	7.9	8.1	8.5	8.1	7.4	7.7	8.6	8.9	6.1	7.6
11	8.5	8.3	8.0	8.1	8.1	8.1	8.1	8.2	8.1	8.1	8.1	7.9	7.2	7.1	7.0	6.7	4.2	2.1	1.0	0.8	0.6	0.3	0.2	0.1	8.5	0.1	5.6
12	0.4	0.3	0.0	0.0	-0.2	-0.3	-0.2	-0.3	-0.5	-0.4	-0.4	-0.5	-0.4	0.0	0.0	0.1	0.2	0.2	-0.4	-0.9	-1.3	-1.5	-1.4	-1.7	0.4	-1.7	-0.4
13	-2.0	-2.2	-2.2	-2.4	-2.1	-2.2	-2.0	-2.2	-2.4	-2.3	-2.2	-2.0	-0.8	0.8	2.2	2.1	1.5	1.5	2.0	2.3	2.6	2.7	2.2	2.0	2.7	-2.4	-0.2
14	1.1	1.1	1.6	1.6	1.4	1.5	1.4	0.8	0.6	0.6	0.6	0.8	1.1	1.2	1.4	1.6	1.8	2.1	2.1	2.0	1.9	1.5	1.3	1.5	2.1	0.6	1.4
15	1.7	1.8	1.7	1.7	1.7	1.9	1.9	2.1	2.2	2.3	2.3	2.8	3.2	3.5	3.6	3.5	3.3	3.3	3.0	2.6	2.5	2.5	2.4	2.5	3.6	1.7	2.5
16	2.6	2.5	2.5	2.5	2.5	2.4	2.3	2.1	2.1	2.1	2.1	2.3	2.6	2.8	2.5	2.4	2.5	2.3	1.8	1.4	1.2	0.9	0.6	0.2	2.8	0.2	2.0
17	0.1	0.0	-0.3	-0.4	-0.6	-0.6	-0.6	-0.8	-0.7	-0.6	-0.9	-0.3	0.6	1.4	2.2	3.3	4.5	4.9	4.8	4.7	4.7	4.8	4.3	4.5	4.9	-0.9	1.6
18	4.6	4.7	4.5	4.6	4.6	4.5	4.9	5.3	5.6	6.0	6.1	6.2	6.4	6.7	7.1	7.3	7.3	7.4	7.3	7.3	7.3	7.3	6.3	5.7	7.4	4.5	6.0
19	5.7	4.1	4.2	3.9	4.0	4.0	4.2	4.1	4.3	4.1	3.8	3.9	4.0	3.8	4.0	4.2	3.8	3.7	3.5	2.9	2.5	2.2	1.9	1.9	5.7	1.9	3.7
20	2.0	1.9	1.9	2.0	2.0	1.9	1.9	1.8	1.5	1.0	1.1	0.8	0.5	0.2	0.0	-0.1	-0.3	-0.2	-0.9	-1.0	-0.9	-1.1	-1.2	-1.3	2.0	-1.3	0.6
21	-1.5	-1.3	-1.2	-1.3	-1.1	-1.0	-1.0	-0.9	-1.1	-1.2	-1.2	-1.2	-0.9	-0.8	-0.9	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	-1.7	-1.9	-0.7	-1.9	-1.1
22	-2.1	-2.5	-2.7	-3.0	-3.5	-4.1	-4.1	-4.5	-4.4	-4.6	-4.7	-4.6	-3.6	-3.9	-4.0	-3.7	-3.6	-3.6	-3.6	-3.7	-3.7	-3.8	-3.3	-0.8	-0.8	-4.7	-3.6
23	0.1	0.3	0.1	-0.1	-1.0	-1.5	-1.6	-1.6	-2.0	-2.6	-3.1	-3.3	-3.2	-2.9	-2.6	-2.4	-2.9	-3.8	-4.7	-4.5	-4.4	-4.0	-4.0	-4.2	0.3	-4.7	-2.5
24	-4.0	-4.1	-4.0	-4.1	-4.2	-4.4	-4.6	-5.3	-6.1	-6.2	-6.1	-5.5	-5.0	-4.6	-4.4	-4.0	-3.9	-3.5	-3.4	-3.8	-3.8	-3.6	-3.8	-3.9	-3.4	-6.2	-4.4
25	-3.5	-3.4	-3.2	-3.5	-4.4	-4.3	-4.0	-3.9	-3.7	-3.3	-2.7	-2.2	-1.6	-0.7	-0.8	-0.8	-0.3	0.4	1.0	1.5	1.8	1.8	2.5	2.3	2.5	-4.4	-1.5
26	2.7	2.8	1.9	1.9	1.8	1.3	1.1	0.0	-0.5	-1.0	-1.2	-0.4	0.2	0.1	0.0	0.4	0.7	0.1	-1.2	-2.2	-3.1	-3.7	-4.0	-4.4	2.8	-4.4	-0.3
27	-4.8	-5.2	-5.3	-5.5	-5.8	-6.2	-6.4	-6.6	-7.0	-7.0	-7.2	-6.9	-6.5	-6.0	-5.5	-5.3	-5.2	-5.3	-5.5	-5.6	-5.7	-5.8	-5.8	-5.6	-4.8	-7.2	-5.9
28	-5.4	-5.2	-5.4	-4.9	-5.0	-5.1	-4.4	-4.0	-3.8	-4.1	-3.8	-3.4	-2.1	-1.3	-1.1	-0.8	-0.5	-0.9	-1.4	-1.9	-2.1	-2.3	-2.1	-2.3	-0.5	-5.4	-3.0
29	-2.6	-3.0	-3.2	-3.0	-3.2	-2.8	-2.9	-2.9	-2.6	-2.8	-2.4	-1.6	-0.9	-0.4	0.3	0.7	1.1	1.6	1.6	0.6	-0.4	-0.9	-1.0	-0.9	1.6	-3.2	-1.3
30	-0.8	-0.6	-0.5	-0.2	0.4	1.2	0.9	0.7	0.8	0.7	0.5	1.0	1.2	1.3	1.5	1.7	1.8	1.9	1.8	1.6	1.4	0.8	-0.2	-0.1	1.9	-0.8	0.8
31	-0.4	-0.5	-0.5	-0.5	-0.6	-0.8	-0.9	-1.3	-1.0	-1.2	-1.7	-1.5	-0.9	-0.4	0.4	0.7	1.1	1.2	1.7	1.3	0.6	0.0	-0.3	-0.5	1.7	-1.7	-0.3
Max.	**8.9**	**8.3**	**8.0**	**8.1**	**8.1**	**8.1**	**8.1**	**8.2**	**8.1**	**8.1**	**8.1**	**7.9**	**7.9**	**8.5**	**8.9**	**9.0**	**8.9**	**8.7**	**8.2**	**8.5**	**8.1**	**8.3**	**8.7**	**8.9**	**9.0**		
Min.	**-5.4**	**-5.2**	**-5.4**	**-5.5**	**-5.8**	**-6.2**	**-6.4**	**-6.6**	**-7.0**	**-7.0**	**-7.2**	**-6.9**	**-6.5**	**-6.0**	**-5.5**	**-5.3**	**-5.2**	**-5.3**	**-5.5**	**-5.6**	**-5.7**	**-5.8**	**-5.8**	**-5.6**		**-7.2**	
Avg.	**1.4**	**1.2**	**1.1**	**1.1**	**0.9**	**0.8**	**0.8**	**0.6**	**0.5**	**0.5**	**0.6**	**0.9**	**1.3**	**1.7**	**2.0**	**2.2**	**2.2**	**2.1**	**1.9**	**1.7**	**1.5**	**1.3**	**1.2**	**1.2**			**1.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-1.0	-0.8	-1.1	-0.8	-0.9	-0.9	-0.9	-1.1	-1.3	-1.4	-0.7	0.5	0.6	1.0	1.1	1.1	1.4	1.6	1.9	2.0	2.0	1.6	1.1	0.9	2.0	-1.4	0.3
2	1.0	0.9	0.8	1.0	1.1	1.0	0.7	0.2	-0.5	-1.2	-2.3	-3.4	-4.1	-4.3	-4.3	-4.6	-4.9	-5.2	-5.5	-5.7	-6.4	-6.8	-7.0	-7.4	1.1	-7.4	-2.8
3	-7.7	-7.7	-7.9	-8.1	-8.2	-8.1	-8.2	-7.7	-7.6	-7.6	-7.7	-7.4	-6.9	-6.6	-6.3	-6.1	-5.7	-5.9	-6.2	-6.5	-6.8	-7.0	-6.9	-6.9	-5.7	-8.2	-7.2
4	-7.0	-7.1	-7.0	-7.0	-7.0	-7.1	-6.8	-6.6	-6.3	-6.3	-6.3	-6.3	-6.3	-6.0	-5.7	-5.4	-5.4	-5.2	-5.2	-5.1	-5.0	-5.1	-5.2	-5.2	-5.0	-7.1	-6.1
5	-5.3	-5.4	-5.3	-5.0	-4.8	-4.3	-4.3	-4.1	-4.0	-3.6	-2.5	-1.8	-0.7	1.2	2.8	3.1	3.2	3.0	2.7	2.8	2.7	2.4	2.5	2.6	3.2	-5.4	-0.9
6	2.6	2.8	2.9	2.9	3.0	3.1	3.2	3.3	3.3	3.2	3.3	3.5	3.8	4.1	4.3	4.0	3.5	2.9	2.4	1.8	1.6	1.1	0.6	0.1	4.3	0.1	2.8
7	-0.4	-0.9	-1.5	-2.0	-2.9	-3.7	-4.2	-4.8	-5.3	-5.4	-5.7	-5.6	-5.5	-5.5	-5.2	-4.6	-3.4	-3.3	-3.1	-3.3	-3.3	-2.8	-1.6	-1.4	-0.4	-5.7	-3.6
8	-1.5	-1.7	-1.7	-1.7	-1.7	-1.8	-1.9	-2.6	-2.5	-2.1	-1.6	-0.9	0.4	1.3	1.4	1.1	1.0	1.1	1.3	1.5	1.4	1.5	1.6	1.3	1.6	-2.6	-0.3
9	1.0	0.8	0.9	1.5	1.3	1.8	1.7	1.8	1.9	1.8	1.6	1.7	1.9	2.2	2.6	2.7	2.7	2.8	3.1	3.2	3.7	3.3	3.6	3.9	3.9	0.8	2.2
10	4.4	4.5	4.3	4.3	4.6	4.6	5.4	5.7	5.4	3.8	3.0	2.6	2.6	2.7	3.2	4.0	3.5	3.8	3.7	2.4	1.0	2.1	2.6	2.5	5.7	1.0	3.6
11	2.2	2.7	3.0	2.9	3.0	2.9	3.0	2.9	1.0	0.7	1.6	1.5	1.2	0.9	0.7	1.1	1.6	1.7	0.4	0.2	0.4	0.4	0.6	0.3	3.0	0.2	1.5
12	0.1	0.0	0.0	-0.5	-1.0	-1.0	-1.2	-1.2	-1.4	-1.4	-1.4	-1.0	-0.6	-0.9	-0.9	-0.8	-0.7	-0.7	-0.9	-0.6	-0.5	-0.4	-0.2	-0.2	0.1	-1.4	-0.7
13	-0.7	-0.7	-0.8	-1.3	-1.6	-1.8	-1.6	-1.6	-0.5	0.5	1.5	0.5	0.8	1.4	1.6	1.6	1.9	1.4	1.3	1.2	0.8	0.8	1.0	0.6	1.9	-1.8	0.3
14	0.8	0.9	0.9	0.7	0.3	-0.1	-0.1	-0.4	-0.5	-1.4	-1.2	-1.3	-1.1	-0.5	0.0	0.8	0.9	0.6	0.5	0.8	0.8	0.6	0.3	0.1	0.9	-1.4	0.1
15	0.1	0.0	0.2	0.3	0.3	0.4	0.3	0.3	0.2	-0.1	-0.7	-1.7	-1.7	-1.1	-0.4	0.1	0.4	0.5	0.9	2.1	2.6	2.4	1.9	1.8	2.6	-1.7	0.4
16	2.1	2.3	1.7	2.2	2.5	2.7	0.9	0.3	0.5	0.5	0.8	1.4	1.5	1.6	1.4	1.3	0.9	0.3	-0.1	-0.6	-1.0	-1.0	-0.8	-0.8	2.7	-1.0	0.9
17	-0.8	-0.8	-1.1	-1.5	-1.9	-2.2	-2.4	-2.7	-2.9	-3.1	-3.3	-3.1	-3.0	-2.5	-1.8	-1.2	-1.0	-0.9	-0.9	-1.2	-1.5	-2.1	-2.8	-3.2	-0.8	-3.3	-2.0
18	-3.5	-3.6	-3.3	-3.3	-2.9	-2.4	-2.4	-2.4	-2.6	-2.8	-2.8	-2.7	-2.9	-2.8	-2.5	-2.7	-2.2	-2.8	-2.7	-3.5	-4.2	-4.2	-4.1	-4.3	-2.2	-4.3	-3.1
19	-4.4	-5.0	-4.5	-4.9	-5.2	-5.5	-6.0	-6.0	-6.5	-6.8	-6.8	-7.0	-7.1	-6.8	-6.9	-6.5	-6.1	-6.0	-5.7	-5.6	-5.6	-5.4	-5.7	-5.2	-4.4	-7.1	-5.9
20	-5.3	-5.4	-5.9	-6.4	-6.6	-6.8	-7.1	-7.5	-8.1	-9.1	-10.0	-10.7	-10.7	-11.1	-11.5	-12.0	-12.0	-12.3	-12.7	-13.0	-13.2	-13.4	-13.8	-13.6	-5.3	-13.8	-9.9
21	-13.5	-13.9	-13.8	-14.0	-14.7	-14.9	-14.8	-14.7	-15.0	-14.8	-14.6	-14.8	-14.6	-14.2	-14.1	-14.2	-14.2	-14.3	-13.5	-13.4	-12.6	-11.7	-11.2	-10.0	-10.0	-15.0	-13.8
22	-9.6	-8.6	-7.8	-7.7	-7.3	-7.1	-6.7	-7.5	-7.9	-7.5	-7.2	-7.5	-7.1	-7.3	-6.3	-5.9	-5.3	-5.7	-6.5	-5.9	-5.3	-4.5	-4.3	-4.2	-4.2	-9.6	-6.7
23	-4.6	-4.8	-4.9	-4.9	-5.1	-4.8	-4.7	-4.4	-4.1	-3.9	-3.6	-3.6	-3.3	-3.1	-2.8	-1.5	-0.3	0.1	0.6	1.3	1.4	2.1	2.2	2.1	2.2	-5.1	-2.3
24	2.6	3.2	3.0	3.3	3.8	3.8	4.0	4.1	4.0	3.4	3.5	3.7	2.9	2.6	2.5	2.5	1.5	2.5	2.7	2.3	1.1	1.3	1.1	1.2	4.1	1.1	2.8
25	0.1	-1.4	-2.3	-3.2	-4.0	-4.6	-5.1	-5.1	-5.1	-5.1	-5.0	-5.1	-6.0	-6.5	-6.8	-7.3	-8.0	-8.5	-9.3	-9.5	-9.6	-9.4	-9.7	-9.9	0.1	-9.9	-6.1
26	-10.1	-10.0	-10.3	-10.2	-10.1	-9.9	-10.0	-9.7	-9.8	-9.7	-9.7	-9.8	-9.9	-9.5	-9.2	-9.1	-8.9	-8.9	-9.0	-9.1	-9.3	-9.2	-9.1	-9.1	-8.9	-10.3	-9.6
27	-8.8	-8.3	-8.3	-8.0	-7.6	-7.3	-7.7	-7.1	-6.6	-6.1	-6.0	-5.4	-4.8	-4.4	-3.6	-3.7	-3.5	-4.8	-5.1	-4.7	-4.4	-3.6	-2.1	-1.1	-1.1	-8.8	-5.5
28	1.8	2.0	0.4	0.9	2.8	3.4	2.0	1.0	2.0	2.7	2.4	1.8	1.5	0.8	1.2	0.9	0.1	-0.1	-0.5	-0.9	-1.7	-2.3	-3.2	-3.3	3.4	-3.3	0.7
29	-3.6	-4.1	-4.7	-5.3	-5.8	-6.2	-6.6	-7.4	-8.0	-8.6	-9.0	-9.2	-9.2	-9.2	-9.4	-9.4	-9.6	-9.7	-9.9	-10.2	-10.3	-10.6	-10.4	-10.4	-3.6	-10.6	-8.2
30	-10.5	-10.9	-11.3	-11.6	-11.7	-12.1	-12.2	-12.0	-11.5	-11.5	-11.3	-11.6	-11.1	-10.5	-10.8	-11.2	-10.8	-10.4	-10.5	-10.8	-10.4	-10.1	-10.3	-10.2	-10.1	-12.2	-11.1
Max.	**4.4**	**4.5**	**4.3**	**4.3**	**4.6**	**4.6**	**5.4**	**5.7**	**5.4**	**3.8**	**3.5**	**3.7**	**3.8**	**4.1**	**4.3**	**4.0**	**3.5**	**3.8**	**3.7**	**3.2**	**3.7**	**3.3**	**3.6**	**3.9**	**5.7**		
Min.	**-13.5**	**-13.9**	**-13.8**	**-14.0**	**-14.7**	**-14.9**	**-14.8**	**-14.7**	**-15.0**	**-14.8**	**-14.6**	**-14.8**	**-14.6**	**-14.2**	**-14.1**	**-14.2**	**-14.2**	**-14.3**	**-13.5**	**-13.4**	**-13.2**	**-13.4**	**-13.8**	**-13.6**		**-15.0**	
Avg.	**-2.6**	**-2.7**	**-2.9**	**-2.9**	**-2.9**	**-3.0**	**-3.1**	**-3.2**	**-3.3**	**-3.4**	**-3.4**	**-3.4**	**-3.3**	**-3.1**	**-2.9**	**-2.7**	**-2.6**	**-2.7**	**-2.9**	**-2.9**	**-3.1**	**-3.0**	**-3.0**	**-3.0**			**-3.0**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature at 10 meters (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-9.6	-9.1	-8.6	-8.3	-8.4	-7.7	-7.5	-7.7	-6.6	-6.3	-6.4	-6.8	-6.1	-5.8	-5.1	-4.7	-4.6	-4.6	-4.9	-4.9	-4.9	-5.0	-5.1	-4.8	-4.6	-9.6	-6.4
2	-4.8	-4.9	-4.8	-4.7	-4.5	-3.9	-4.0	-2.4	-2.6	-2.9	-1.6	-0.1	1.4	1.5	2.0	1.8	1.8	2.1	2.1	2.5	2.4	2.6	3.1	3.2	3.2	-4.9	-0.6
3	3.5	3.7	3.8	4.0	4.3	4.4	4.4	3.7	3.6	4.2	4.1	4.0	3.6	3.0	2.9	3.1	3.3	3.5	3.9	4.0	4.2	4.6	4.7	4.8	4.8	2.9	3.9
4	4.6	4.4	4.2	4.4	4.6	4.3	3.0	3.2	3.9	4.5	3.5	4.7	4.7	4.7	4.9	5.1	4.3	3.5	2.6	2.9	3.5	4.2	4.2	3.9	5.1	2.6	4.1
5	3.3	2.9	2.6	3.1	4.2	5.4	4.7	4.2	4.4	3.5	3.5	4.7	6.2	6.6	6.9	7.2	7.2	6.9	6.2	6.8	6.8	6.7	6.4	5.7	7.2	2.6	5.3
6	5.9	5.9	5.6	5.5	5.7	5.6	4.8	4.2	3.9	4.2	3.8	4.1	3.3	3.6	3.2	2.8	2.7	2.5	2.7	2.6	2.6	2.3	2.4	2.4	5.9	2.3	3.8
7	2.1	2.4	2.5	3.5	3.7	3.6	3.7	3.6	3.3	3.1	2.8	2.5	2.3	2.2	2.0	1.7	1.5	1.2	1.3	1.1	1.0	1.2	1.2	1.6	3.7	1.0	2.3
8	3.7	4.1	4.4	4.1	4.4	4.5	4.0	3.8	3.5	3.5	2.2	1.8	2.3	2.4	2.3	2.1	1.6	1.6	1.8	2.2	2.6	2.3	1.7	2.1	4.5	1.6	2.9
9	2.6	2.9	3.2	3.2	3.2	1.1	0.4	0.6	0.3	0.2	0.6	0.4	0.2	0.4	0.3	0.2	-0.3	-0.1	-0.5	-1.0	-1.5	-1.7	-1.2	-0.4	3.2	-1.7	0.5
10	0.2	0.3	0.6	0.4	0.1	0.0	-0.7	-1.2	-1.3	-1.8	-2.6	-2.9	-3.3	-3.6	-4.1	-3.9	-3.7	-3.7	-3.6	-3.5	-3.7	-3.7	-3.6	-3.9	0.6	-4.1	-2.2
11	-3.9	-3.5	-3.3	-3.1	-3.2	-3.3	-3.2	-2.7	-3.0	-3.3	-3.5	-3.3	-3.2	-3.3	-3.8	-3.5	-2.9	-3.0	-3.4	-4.0	-4.3	-3.5	-4.3	-4.8	-2.7	-4.8	-3.5
12	-5.1	-5.2	-5.4	-5.5	-5.6	-5.6	-5.9	-5.7	-5.4	-5.6	-5.5	-5.3	-4.8	-4.2	-4.7	-4.5	-4.2	-4.3	-4.3	-4.4	-3.7	-2.0	-2.5	-3.0	-2.0	-5.9	-4.7
13	-2.1	-2.4	-2.0	-2.0	-3.2	-3.8	-4.2	-4.2	-4.5	-4.8	-4.8	-5.3	-4.9	-3.9	-4.4	-4.0	-3.5	-3.9	-4.0	-4.0	-4.5	-4.7	-4.4	-4.2	-2.0	-5.3	-3.9
14	-4.2	-4.2	-3.8	-3.9	-4.0	-4.0	-4.2	-3.9	-3.5	-3.4	-3.4	-3.5	-2.2	-2.2	-1.9	-2.3	-2.7	-2.0	-1.0	1.1	1.8	2.3	1.7	2.1	2.3	-4.2	-2.1
15	2.0	1.9	2.0	1.9	1.7	1.8	1.7	2.0	1.8	1.6	1.3	0.3	0.5	0.3	0.0	0.1	0.1	0.1	0.0	-0.1	-0.4	-0.9	-1.3	-1.7	2.0	-1.7	0.7
16	-2.0	-2.4	-2.2	-1.8	-1.9	-2.2	-2.3	-2.4	-3.0	-3.8	-3.8	-2.8	-2.7	-2.8	-2.9	-2.6	-2.3	-1.7	-1.4	-1.2	-1.2	-0.9	-0.9	1.2	1.2	-3.8	-2.1
17	1.8	1.5	-0.1	-0.1	1.8	2.3	1.8	0.6	0.7	1.7	0.8	2.3	2.8	3.2	2.5	2.7	2.4	0.8	0.7	0.1	1.9	2.6	1.8	1.2	3.2	-0.1	1.6
18	0.8	1.0	1.6	1.8	1.2	1.1	2.4	3.0	3.2	3.1	3.1	3.4	3.7	3.8	3.9	3.9	3.7	3.7	4.0	4.6	4.6	4.8	4.6	4.2	4.8	0.8	3.1
19	3.9	3.5	3.7	3.7	3.2	3.5	3.9	3.3	3.0	3.1	3.1	3.2	3.1	2.9	2.8	2.9	3.1	3.0	3.3	3.3	3.2	3.2	2.9	2.7	3.9	2.7	3.2
20	2.6	2.6	2.8	2.8	3.0	3.2	3.3	3.8	3.9	3.8	3.6	3.6	3.6	3.8	4.0	4.2	4.1	3.8	3.0	2.3	1.9	1.6	1.2	0.6	4.2	0.6	3.0
21	0.4	0.1	-0.2	-0.9	-0.8	-1.0	-0.9	-1.0	-1.5	-1.5	-1.7	-1.8	-2.0	-1.7	-1.6	-1.5	-0.9	-1.3	-1.5	-1.6	-1.9	-2.3	-2.7	-3.1	0.4	-3.1	-1.4
22	-3.3	-3.3	-3.0	-2.7	-2.6	-2.3	-2.4	-2.6	-3.3	-3.1	-2.9	-2.8	-2.8	-2.7	-2.6	-2.4	-2.4	-2.5	-2.5	-2.4	-2.5	-2.8	-2.9	-3.1	-2.3	-3.3	-2.8
23	-3.2	-3.1	-3.0	-2.8	-2.0	-1.9	-1.7	-1.7	-1.7	-1.6	-1.4	-0.1	-0.2	-0.1	-0.6	-1.0	-1.9	-1.7	-1.9	-2.4	-2.9	-3.1	-2.9	-2.9	-0.1	-3.2	-1.9
24	-2.6	-2.4	-2.5	-1.8	-1.5	-1.9	-2.4	-2.2	-2.2	-2.3	-2.0	-1.4	-1.4	-1.6	-1.7	-2.0	-2.5	-3.5	-3.8	-4.2	-3.7	-3.4	-3.2	-3.3	-1.4	-4.2	-2.5
25	-2.9	-1.5	-1.2	-1.5	-2.9	-3.3	-2.7	-2.0	-1.9	-1.8	-1.9	-1.4	-1.8	-2.3	-3.2	-3.7	-3.6	-3.3	-3.3	-2.9	-3.9	-4.4	-4.7	-5.3	-1.2	-5.3	-2.8
26	-5.6	-6.1	-6.8	-7.5	-8.6	-9.3	-10.2	-11.1	-10.8	-10.3	-10.7	-10.7	-10.5	-9.8	-9.6	-9.6	-9.9	-9.9	-9.8	-9.7	-9.8	-10.4	-10.5	-10.7	-5.6	-11.1	-9.5
27	-10.9	-10.9	-11.1	-11.5	-11.8	-11.9	-12.0	-12.2	-12.5	-12.5	-12.9	-12.8	-12.7	-12.5	-12.4	-12.4	-12.3	-12.6	-12.6	-12.4	-12.5	-12.6	-12.6	-12.6	-10.9	-12.9	-12.2
28	-12.7	-13.0	-13.1	-13.4	-13.7	-13.7	-14.1	-14.3	-14.5	-14.4	-14.4	-14.9	-14.7	-14.8	-15.0	-15.3	-15.4	-15.3	-15.2	-15.1	-15.3	-15.5	-15.5	-15.5	-12.7	-15.5	-14.5
29	-15.3	-15.0	-14.8	-14.7	-14.7	-14.4	-14.3	-14.2	-14.1	-14.1	-14.4	-14.3	-14.2	-14.0	-13.7	-13.3	-13.4	-12.8	-12.7	-12.8	-12.5	-12.6	-12.4	-12.9	-12.4	-15.3	-13.8
30	-12.8	-12.8	-12.5	-13.0	-13.1	-13.6	-13.0	-12.9	-13.5	-14.6	-14.5	-14.7	-14.8	-15.2	-15.0	-15.6	-16.2	-16.3	-16.7	-15.9	-16.2	-17.2	-18.1	-17.9	-12.5	-18.1	-14.8
31	-18.4	-18.7	-18.7	-19.5	-19.9	-19.8	-19.9	-19.8	-19.7	-20.0	-19.5	-19.8	-19.9	-19.4	-18.7	-18.5	-18.8	-18.5	-18.3	-17.9	-17.6	-17.3	-17.2	-17.3	-17.2	-20.0	-18.9
Max.	**5.9**	**5.9**	**5.6**	**5.5**	**5.7**	**5.6**	**4.8**	**4.2**	**4.4**	**4.5**	**4.1**	**4.7**	**6.2**	**6.6**	**6.9**	**7.2**	**7.2**	**6.9**	**6.2**	**6.8**	**6.8**	**6.7**	**6.4**	**5.7**	**7.2**		
Min.	**-18.4**	**-18.7**	**-18.7**	**-19.5**	**-19.9**	**-19.8**	**-19.9**	**-19.8**	**-19.7**	**-20.0**	**-19.5**	**-19.8**	**-19.9**	**-19.4**	**-18.7**	**-18.5**	**-18.8**	**-18.5**	**-18.3**	**-17.9**	**-17.6**	**-17.3**	**-18.1**	**-17.9**		**-20.0**	
Avg.	**-2.6**	**-2.6**	**-2.6**	**-2.6**	**-2.6**	**-2.7**	**-2.8**	**-2.8**	**-2.9**	**-3.0**	**-3.1**	**-2.9**	**-2.7**	**-2.6**	**-2.7**	**-2.7**	**-2.8**	**-2.8**	**-2.9**	**-2.8**	**-2.8**	**-2.8**	**-2.9**	**-3.0**			**-2.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.10	0.05	0.09	0.14	0.08	0.16	0.19	0.25	0.39	0.33	0.33	0.30	0.33	0.28	0.17	0.02	0.06	0.00	-0.05	-0.12	-0.02	-0.14	-0.17	0.39	-0.17	0.12
2	-0.2	-0.17	-0.09	-0.18	-0.17	-0.22	-0.25	-0.19	-0.30	-0.29	-0.33	-0.25	-0.30	-0.16	-0.14	-0.18	-0.14	-0.12	-0.12	-0.17	-0.17	-0.10	-0.10	-0.15	-0.09	-0.33	-0.19
3	-0.2	-0.07	-0.12	-0.16	-0.07	-0.07	-0.07	-0.12	-0.20	-0.13	-0.28	-0.22	-0.29	-0.31	-0.36	-0.34	-0.32	-0.29	-0.22	-0.22	-0.30	-0.34	-0.35	-0.41	-0.07	-0.41	-0.23
4	-0.4	-0.31	-0.33	-0.29	-0.30	-0.26	-0.25	-0.26	-0.28	-0.33	-0.31	-0.32	-0.32	-0.29	-0.30	-0.27	-0.29	-0.29	-0.24	-0.20	-0.16	-0.18	-0.17	-0.21	-0.16	-0.41	-0.27
5	-0.2	-0.21	-0.24	-0.25	-0.27	-0.28	-0.28	-0.26	-0.22	-0.23	-0.24	-0.33	-0.38	-0.45	-0.40	-0.40	-0.30	-0.25	-0.29	-0.28	-0.27	-0.27	-0.29	-0.24	-0.21	-0.45	-0.29
6	-0.3	-0.24	-0.21	-0.31	-0.35	-0.26	-0.31	-0.29	-0.26	-0.27	-0.33	-0.31	-0.35	-0.33	-0.31	-0.38	-0.30	-0.32	-0.34	-0.30	-0.28	-0.30	-0.25	-0.27	-0.21	-0.38	-0.30
7	-0.3	-0.27	-0.25	-0.21	-0.23	-0.24	-0.21	-0.22	-0.21	-0.23	-0.24	-0.26	-0.22	-0.25	-0.28	-0.23	-0.23	-0.27	-0.36	-0.36	-0.27	-0.28	-0.24	-0.22	-0.21	-0.36	-0.25
8	-0.3	-0.18	-0.19	-0.25	-0.30	-0.38	-0.36	-0.47	-0.44	-0.44	-0.46	-0.51	-0.49	-0.58	-0.66	-0.62	-0.54	-0.59	-0.55	-0.56	-0.46	-0.45	-0.52	-0.57	-0.18	-0.66	-0.45
9	-0.6	-0.57	-0.57	-0.59	-0.72	-0.67	-0.66	-0.77	-0.97	-0.84	-0.64	-0.40	-0.05	0.01	0.03	-0.26	-0.06	0.00	-0.03	-0.01	-0.08	-0.12	-0.03	0.03	0.03	-0.97	-0.36
10	0.0	-0.08	-0.02	-0.10	-0.09	-0.25	-0.15	-0.19	-0.13	-0.21	-0.15	0.01	0.31	0.13	0.19	-0.23	-0.31	-0.36	-0.31	-0.27	-0.26	-0.15	-0.07	-0.08	0.31	-0.36	-0.11
11	-0.1	-0.16	-0.17	-0.18	-0.26	-0.34	-0.32	-0.21	-0.32	-0.31	-0.22	-0.21	0.15	0.30	0.20	-0.23	-0.25	-0.28	-0.45	-0.43	-0.45	-0.50	-0.45	-0.42	0.30	-0.50	-0.23
12	-0.4	-0.32	-0.29	-0.34	-0.37	-0.37	-0.62	-0.65	-0.45	-0.31	-0.22	-0.14	0.21	0.25	-0.19	-0.66	-0.53	-0.53	-0.58	-0.49	-0.33	-0.34	-0.32	-0.13	0.25	-0.66	-0.34
13	-0.1	-0.14	-0.14	-0.31	-0.59	-0.59	-0.63	-0.71	-0.56	-0.45	-0.34	-0.19	-0.08	-0.03	0.10	-0.02	-0.11	-0.11	-0.04	-0.23	-0.14	-0.29	-0.43	-0.37	0.10	-0.71	-0.27
14	-0.4	-0.35	-0.21	-0.18	-0.25	-0.17	0.00	0.15	0.28	0.32	0.23	0.03	0.01	0.00	0.00	0.03	0.04	0.02	0.03	0.03	0.06	0.06	0.06	0.01	0.32	-0.38	-0.01
15	0.0	0.09	0.05	-0.01	0.05	0.04	0.04	0.03	-0.12	-0.08	-0.06	-0.06	-0.04	-0.08	-0.06	-0.07	-0.06	-0.03	-0.01	-0.06	-0.01	-0.01	-0.01	-0.02	0.09	-0.12	-0.02
16	0.0	-0.02	-0.01	0.00	0.09	0.06	0.01	0.02	0.05	0.06	0.06	0.09	0.14	0.27	0.30	0.12	0.11	0.20	0.24	0.20	0.17	0.25	0.26	0.50	0.50	-0.02	0.13
17	0.2	0.25	0.32	0.28	0.18	0.10	0.09	0.23	0.08	0.07	0.07	0.00	-0.01	-0.01	0.00	0.00	0.01	0.01	0.01	0.05	0.11	0.18	0.15	0.09	0.32	-0.01	0.10
18	0.0	0.03	-0.02	0.06	0.05	0.03	0.04	0.04	0.04	0.05	0.06	0.06	0.05	0.03	0.10	0.01	-0.03	-0.03	-0.03	0.00	0.00	0.00	0.02	0.01	0.10	-0.03	0.03
19	0.0	0.00	0.08	0.11	0.10	0.14	0.29	0.34	0.10	0.22	0.38	0.38	0.19	-0.02	0.23	0.06	0.06	0.08	0.09	0.28	0.07	0.06	0.03	0.06	0.38	-0.02	0.14
20	0.0	0.05	0.02	0.06	0.06	0.16	0.16	0.16	0.18	0.17	0.16	0.12	0.09	0.09	0.09	0.10	0.13	0.13	0.09	0.03	0.06	0.07	0.17	0.12	0.18	0.02	0.10
21	0.0	0.02	0.02	0.21	0.09	0.12	0.07	0.12	0.12	0.29	0.29	0.31	0.03	0.05	0.03	0.02	0.05	0.02	0.06	0.09	0.03	0.00	0.03	0.10	0.31	0.00	0.09
22	0.1	0.20	0.07	0.04	0.18	0.26	0.13	0.11	0.15	0.07	0.04	0.05	-0.02	0.16	0.30	0.03	-0.01	-0.04	0.01	-0.01	0.00	0.00	-0.01	-0.01	0.30	-0.04	0.07
23	0.0	-0.01	-0.01	-0.04	-0.07	-0.11	-0.09	-0.03			-0.09	-0.13	-0.20	-0.19	-0.29	-0.27	-0.22	-0.28	-0.34	-0.41	-0.24	-0.29	-0.19	-0.33	-0.01	-0.41	-0.17
24	-0.4	-0.32	-0.31	-0.33	-0.27	-0.14	-0.05	0.04	0.06	0.02	0.02	-0.04	-0.03	-0.07	-0.09	-0.11	-0.10	-0.05	-0.02	-0.08	-0.13	-0.11	-0.11	-0.12	0.06	-0.41	-0.11
25	-0.1	-0.11	-0.10	-0.08	-0.10	-0.04	-0.06	-0.04	-0.02	-0.02	-0.04	-0.01	0.00	0.04	0.01	0.06	0.12	0.10	0.11	0.09	0.03	-0.03	-0.07	-0.09	0.12	-0.11	-0.01
26	-0.1	-0.14	-0.16	-0.10	-0.10	-0.16	-0.24	-0.21	-0.29	-0.24	-0.23	-0.23	-0.18	-0.18	-0.14	-0.14	-0.11	-0.07	0.00	0.02	0.10	0.13	0.04	0.05	0.13	-0.29	-0.11
27	0.0	0.03	-0.04	-0.02	-0.04	0.00	0.09	0.01	0.02	0.03	0.03	-0.01	0.00	-0.01	-0.03	-0.04	-0.01	-0.01	0.00			0.00	0.00	-0.03	0.09	-0.04	0.00
28	0.0																0.93	0.73	0.60	0.66	0.63	0.52	0.01	-0.03	0.93	-0.03	0.45
29	0.0	-0.04	-0.04	-0.04	-0.02	-0.04	-0.04	-0.04	-0.05	-0.08	-0.07	0.03	0.02	0.01	-0.09	-0.07	-0.04	-0.05	-0.04	-0.06	-0.05	-0.03	-0.06	-0.05	0.03	-0.09	-0.04
30	-0.1	-0.12	-0.10	-0.14	-0.13	-0.13	-0.17	-0.17	-0.09	0.14	0.01		-0.30	-0.15	-0.05	-0.13	-0.22	-0.30	-0.25	-0.21	-0.18	-0.29	-0.28	-0.23	0.14	-0.30	-0.15
31	-0.3	-0.27	-0.25	-0.28	-0.32	-0.33	-0.36	-0.30	-0.24	-0.27	-0.21	-0.10	-0.06	-0.05	0.01	-0.02	-0.01	-0.07	-0.06	-0.04	-0.04	-0.09	-0.05	0.03	0.03	-0.36	-0.15
Max.	**0.2**	**0.25**	**0.32**	**0.28**	**0.18**	**0.26**	**0.29**	**0.34**	**0.28**	**0.39**	**0.38**	**0.38**	**0.31**	**0.33**	**0.30**	**0.17**	**0.93**	**0.73**	**0.60**	**0.66**	**0.63**	**0.52**	**0.26**	**0.50**	**0.93**		
Min.	**-0.6**	**-0.57**	**-0.57**	**-0.59**	**-0.72**	**-0.67**	**-0.66**	**-0.77**	**-0.97**	**-0.84**	**-0.64**	**-0.51**	**-0.49**	**-0.58**	**-0.66**	**-0.66**	**-0.54**	**-0.59**	**-0.58**	**-0.56**	**-0.46**	**-0.50**	**-0.52**	**-0.57**		**-0.97**	
Avg.	**-0.1**	**-0.11**	**-0.11**	**-0.12**	**-0.14**	**-0.14**	**-0.13**	**-0.12**	**-0.13**	**-0.10**	**-0.09**	**-0.08**	**-0.06**	**-0.05**	**-0.05**	**-0.14**	**-0.09**	**-0.10**	**-0.10**	**-0.10**	**-0.09**	**-0.09**	**-0.11**	**-0.10**			**-0.09**

Total Hours in Month 744 **Hours Data Available** 724 **Data Recovery** 97.3%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.12	0.18	0.13	0.06	0.03	0.08	0.13	0.09	0.13	0.06	0.05	0.02	-0.01	-0.07	-0.11	-0.15	-0.04	0.00	0.07	0.04	0.02	0.09	0.04	0.18	-0.15	0.04
2	0.1	0.06	-0.06	0.00	0.00	0.02	0.14	0.10	0.06	-0.07	-0.14	-0.04	-0.14	-0.20	-0.26	-0.26	-0.10	-0.09	-0.08	-0.05	-0.08	-0.04	-0.09	-0.16	0.14	-0.26	-0.06
3	-0.1	-0.22	-0.24	-0.28	-0.23	-0.23	-0.23	-0.19	-0.26	-0.35	-0.24	-0.20	-0.17	-0.21	-0.28	-0.30	-0.19	-0.10	-0.10	-0.09	-0.09	-0.09	-0.07	-0.01	-0.01	-0.35	-0.19
4	0.0	0.03	0.01	0.01	-0.04	-0.01	0.04	-0.04	0.13	0.30	0.20	0.08	0.04	0.00	-0.01	-0.02	-0.04	-0.10	-0.15	-0.09	-0.08	-0.05	-0.07	-0.10	0.30	-0.15	0.00
5	-0.1	-0.11	-0.24	-0.22	-0.45	-0.35	-0.24	-0.18	-0.23	-0.22	-0.36	-0.64	-0.33	-0.34	-0.32	-0.42	-0.07	-0.05	-0.16	0.03	-0.06	0.03	0.13	-0.04	0.13	-0.64	-0.21
6	0.0	-0.06	-0.04	0.32	0.78	0.13	0.06	0.05	0.03	0.02	0.00	0.07	0.10	0.07	0.07	0.13	0.10	-0.03	-0.03	0.05	-0.06	-0.12	-0.04	-0.06	0.78	-0.12	0.06
7	-0.1	-0.22	-0.24	-0.40	-0.11	-0.27	-0.11	0.11	0.17	0.12	0.20	0.06	0.18	0.10	0.11	0.10	0.25	0.18	0.31	0.03	0.13	0.04	0.08	0.35	0.35	-0.40	0.04
8	0.7	0.70	0.74	1.51	0.70	0.34	0.29	0.09	0.11	0.04	0.04	-0.01	-0.02	-0.02	-0.03	-0.04	-0.03	-0.04	-0.03	-0.02	-0.03	0.02	0.02	0.03	1.51	-0.04	0.21
9	0.0	0.01	0.01	0.00	-0.02	-0.01	-0.04	-0.03	-0.04	-0.05	-0.04	-0.07	-0.10	-0.10	-0.15	-0.16	-0.11	-0.08	-0.03	0.00	-0.01	0.00	-0.01	-0.01	0.01	-0.16	-0.04
10	0.0	0.13	0.12	0.03	-0.03	-0.03	0.03	0.09	0.04	0.06	-0.02	-0.04	-0.11	-0.23	-0.21	-0.24	-0.23	-0.31	-0.09	-0.05	-0.08	-0.10	-0.09	-0.06	0.13	-0.31	-0.06
11	0.0	-0.06	-0.04	-0.05	-0.06	-0.06	-0.08	-0.08	-0.06	-0.09	-0.08	-0.08	-0.10	-0.09	-0.09	-0.07	-0.08	-0.09	-0.09	-0.03	-0.07	-0.03	-0.18	-0.25	-0.03	-0.25	-0.08
12	-0.3	-0.52	-0.53	-0.65	-0.65	-0.53	-0.48	-0.21	-0.19	-0.36	-0.41	-0.45	-0.50	-0.50	-0.65	-0.64	-0.23	-0.15	-0.19	-0.11	-0.15	0.17	0.24	0.65	0.65	-0.65	-0.31
13	0.1	0.00	0.04	0.08	-0.01	-0.02	-0.04	-0.03	-0.02	-0.01	0.01	0.01	0.02	-0.01	-0.01	-0.05	-0.02	-0.03	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.13	-0.05	0.00
14	0.0	-0.03	-0.02	-0.03	-0.02	-0.02	-0.02	-0.03	-0.03	-0.02	0.14	-0.03	-0.12	-0.07	-0.04	-0.07	-0.09	-0.11	-0.19	-0.28	-0.31	-0.32	-0.29	-0.32	0.14	-0.32	-0.10
15	-0.4	-0.39	-0.42	-0.43	-0.41	-0.36	-0.25	-0.21	-0.23	-0.25	-0.27	-0.35	-0.30	-0.20	-0.17	-0.30	-0.23	-0.35	-0.31	-0.13	-0.03	0.13	-0.01	-0.05	0.13	-0.43	-0.25
16	-0.1	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02	0.01	0.00	0.00	0.01	0.00	0.01	0.07	0.13	0.22	0.18	0.16	0.05	0.06	0.22	-0.05	0.02
17	0.1	0.11	0.08	0.13	0.12	0.14	0.06	0.02	0.01	0.04	0.05	0.11	0.08	0.12	0.11	0.05	0.01	0.00	0.00	0.05	0.27	0.10	0.02	0.07	0.27	0.00	0.08
18	0.0	0.02	0.06	0.15	0.23	0.23	0.23	0.27	0.24	0.13	0.10	0.07	0.18	0.09	0.17	0.02	0.03	0.04	0.02	0.11	0.21	0.02	0.06	0.28	0.28	-0.01	0.12
19	0.2	0.27	0.10	0.35	0.46	0.08	0.06	0.08	0.06	0.07	0.10	0.06	0.06	0.06	0.11	1.52	4.18	1.95	-1.13	-0.16	-0.01	0.01	0.00	0.00	4.18	-1.13	0.35
20	0.0	0.02	0.08	0.11	0.06	0.01	0.02	0.07	0.09	0.18	-0.01	0.01	0.01	0.03	-0.03	-0.03	0.00	0.00	0.01	0.04	0.03	0.03	0.05	0.13	0.18	-0.03	0.04
21	0.1	0.05	0.05	0.07	0.07	0.09	0.06	0.11	0.04	0.06	0.01	0.04	0.01	-0.03	-0.02	-0.03	-0.03	-0.02	-0.03	-0.02	-0.02	-0.02	-0.04	-0.01	0.11	-0.04	0.02
22	0.0	-0.03	-0.03	-0.03	0.00	-0.01	0.03	0.02	0.03	0.01	-0.04	-0.02	-0.01	0.04	0.01	0.12	0.04	0.02	0.10	0.05	0.00	0.13	0.07	0.15	0.15	-0.04	0.03
23	0.1	-0.01	-0.01	0.12	0.26	0.30	0.20	0.16	0.34	0.19	0.12	0.18	0.08	0.13	0.08	-0.04	0.15	0.09	0.12	0.16	0.12	0.16	0.19	0.23	0.34	-0.04	0.14
24	0.2	0.23	0.13	0.09	0.08	0.04	0.04	0.02	-0.09	-0.03	-0.07	-0.09	-0.08	-0.14	-0.16	-0.22	-0.22	-0.28	-0.31	-0.28	-0.28	-0.23	-0.25	-0.16	0.23	-0.31	-0.09
25	-0.2	-0.21	-0.22	-0.22	-0.30	-0.27	-0.25	-0.28	-0.26	-0.25	-0.21	-0.22	-0.20	-0.08	0.07	-0.04	-0.04	-0.05	-0.03	-0.01	0.00	0.01	-0.01	0.00	0.07	-0.30	-0.13
26	0.0	-0.01	0.00	0.07	0.00	0.02	0.01	-0.01	0.10	0.11	0.05	-0.04	-0.05	-0.22	-0.17	-0.12	-0.02	0.03	0.07	0.05	0.10	0.09	0.08	0.12	0.12	-0.22	0.01
27	0.0	0.00	0.08	0.11	0.04	0.03	0.05	0.03	0.09	0.02	-0.04	-0.15	-0.04	0.19	0.07	-0.03	-0.10	-0.02	0.14	0.14	0.18	0.07	0.01	0.03	0.19	-0.15	0.04
28	0.1	0.05	0.03	0.05	0.05	0.02	0.01	0.02	0.00	0.00	0.02	0.15	0.06	0.16	0.19	0.00	0.06	0.11	0.19	0.31	0.37	0.32	0.25	0.26	0.37	0.00	0.12
29	0.2	0.11	0.12	0.07	0.10	0.09	0.07	0.09	0.03	-0.01	-0.09	-0.12	-0.11	-0.07	-0.06	-0.10	-0.08	-0.09	-0.08	-0.09	-0.14	-0.18	-0.25	-0.30	0.23	-0.30	-0.04
Max.	**0.7**	**0.70**	**0.74**	**1.51**	**0.78**	**0.34**	**0.29**	**0.27**	**0.34**	**0.30**	**0.20**	**0.18**	**0.18**	**0.19**	**0.19**	**1.52**	**4.18**	**1.95**	**0.31**	**0.31**	**0.37**	**0.32**	**0.25**	**0.65**	**4.18**		
Min.	**-0.4**	**-0.52**	**-0.53**	**-0.65**	**-0.65**	**-0.53**	**-0.48**	**-0.28**	**-0.26**	**-0.36**	**-0.41**	**-0.64**	**-0.50**	**-0.50**	**-0.65**	**-0.64**	**-0.23**	**-0.35**	**-1.13**	**-0.28**	**-0.31**	**-0.32**	**-0.29**	**-0.32**		**-1.13**	
Avg.	**0.0**	**0.00**	**-0.01**	**0.04**	**0.02**	**-0.02**	**-0.01**	**0.01**	**0.01**	**-0.01**	**-0.03**	**-0.06**	**-0.05**	**-0.05**	**-0.06**	**-0.05**	**0.10**	**0.02**	**-0.07**	**0.00**	**0.00**	**0.01**	**0.00**	**0.03**			**-0.01**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.3	-0.27	-0.19	-0.18	-0.21	-0.24	-0.18	-0.17	-0.10	-0.08	-0.03	-0.07	-0.08	-0.08	-0.10	-0.07	-0.05	-0.04	0.01	0.01	-0.01	-0.02	0.00	0.00	0.01	-0.30	-0.10
2	0.0	0.04	-0.01	-0.01	-0.02	-0.01	0.00	0.03	0.02	0.10	0.11	0.07	0.09	0.04	-0.04	-0.03	0.00	0.09	0.04	0.13	0.04	0.09	0.31	0.20	0.31	-0.04	0.05
3	0.1	0.03	0.12	0.16	0.08	0.07	-0.01	-0.02	-0.02	0.02	0.01	0.00	0.00	0.06	0.03	0.00	-0.02	-0.03	-0.02	0.01	0.00	-0.01	0.00	0.00	0.16	-0.03	0.02
4	0.0	0.04	0.04	0.04	0.07	0.10	0.17	0.14	0.18	0.22	0.25	0.24	0.17	0.01	-0.01	0.00	-0.01	-0.01	-0.01	-0.01	0.06	0.03	-0.02	-0.03	0.25	-0.03	0.07
5	0.0	-0.01	-0.01	-0.01	0.00	0.00	0.03	0.01	0.03	0.02	-0.01	-0.02	-0.02	-0.02	-0.04	-0.02	-0.02	0.00	0.08	0.10	0.11	0.07	0.04	0.05	0.11	-0.04	0.01
6	0.0	-0.01	0.01	0.03	0.03	0.02	0.04	0.02	0.02	0.02	0.02	0.08	0.16	-0.08	0.01	0.14	-0.01	0.00	0.06	0.10	0.04	0.11	0.12	0.03	0.16	-0.08	0.04
7	0.1	0.16	0.08	0.11	0.14	0.09	0.03	0.27	0.43	0.16	0.08	0.00	0.06	0.24	0.09	0.01	-0.02	0.00	-0.02	0.02	0.02	0.04	0.11	0.11	0.43	-0.02	0.10
8	0.1	0.01	-0.01	-0.02	0.03	0.07	0.03	0.05	0.03	-0.01	-0.01	0.01	-0.03	-0.03	-0.04	-0.04	-0.03	-0.02	0.02	0.05	0.05	0.07	0.08	0.03	0.08	-0.04	0.02
9	0.1	0.02	0.06	0.06	0.06	0.13	0.08	0.12	0.12	0.11	0.11	0.04	-0.01	-0.02	-0.03	0.01	0.01	-0.03	0.01	0.40	0.45	0.39	0.18	0.10	0.45	-0.03	0.10
10	0.0	0.18	0.10	0.10	0.07	0.11	0.08	0.05	0.03	0.00	-0.03	-0.03	-0.06	-0.07	-0.08	-0.07	-0.10	-0.08	-0.09	-0.07	-0.09	-0.07	-0.02	-0.06	0.18	-0.10	-0.01
11	-0.1	-0.05	-0.07	-0.05	-0.07	-0.07	-0.08	-0.06	-0.07	-0.07	-0.06	-0.05	-0.04	-0.03	-0.06	-0.09	-0.10	-0.12	-0.14	-0.13	-0.10	-0.11	-0.12	-0.12	-0.03	-0.14	-0.08
12	-0.1	-0.11	-0.11	-0.09	-0.10	-0.12	-0.18	-0.31	-0.30	-0.26	-0.27	-0.21	-0.11	-0.12	-0.13	-0.16	-0.16	-0.18	-0.24	-0.22	-0.22	-0.20	-0.24	-0.23	-0.09	-0.31	-0.18
13	-0.2	-0.22	-0.21	-0.19	-0.15	-0.08	-0.07	-0.06	-0.07	-0.10	-0.09	-0.06	-0.07	-0.07	-0.13	-0.17	-0.14	-0.12	-0.14	-0.16	-0.12	-0.09	-0.11	-0.21	-0.06	-0.24	-0.13
14	-0.3	-0.33	-0.33	-0.33	-0.25	-0.05	0.04	0.03	0.03	0.09	0.03	-0.05	-0.04	-0.01	0.02	-0.19	-0.24	-0.22	-0.17	-0.10	-0.08	-0.04	-0.04	-0.04	0.09	-0.33	-0.11
15	0.0	-0.04	-0.03	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.02	-0.04	-0.06	-0.07	-0.06	-0.06	-0.06	-0.05	-0.03	0.00	-0.02	-0.02	-0.02	-0.02	0.00	-0.07	-0.03
16	0.0	0.00	0.05	0.04	0.04	0.06	0.04	0.01	-0.01	0.03	-0.02	-0.09	-0.19	-0.36	-0.32	-0.37	-0.26	-0.11	-0.06	-0.08	-0.04	0.01	0.01	0.00	0.06	-0.37	-0.07
17	0.1	0.11	0.15	0.14	0.01	0.00	0.02	0.01	0.02	0.01	-0.04	-0.10	-0.14	-0.10	-0.08	-0.26	-0.10	-0.10	-0.09	-0.14	-0.08	-0.09	-0.07	-0.06	0.15	-0.26	-0.04
18	-0.1	-0.12	-0.09	-0.12	-0.17	-0.20	-0.21	-0.28	-0.29	-0.28	-0.29	-0.34	-0.34	-0.32	-0.36	-0.35	-0.36	-0.33	-0.30	-0.29	-0.26	-0.22	-0.22	-0.25	-0.09	-0.36	-0.25
19	-0.3	-0.32	-0.35	-0.32	-0.29	-0.32	-0.37	-0.37	-0.33	-0.31	-0.34	-0.43	-0.41	-0.40	-0.45	-0.44	-0.40	-0.33	-0.32	-0.30	-0.26	-0.23	-0.27	-0.25	-0.23	-0.45	-0.34
20	-0.2	-0.28	-0.32	-0.35	-0.36	-0.32	-0.36	-0.43	-0.51	-0.48	-0.45	-0.32	-0.36	-0.32	-0.41	-0.37	-0.42	-0.42	-0.33	-0.23	-0.32	-0.37	-0.39	-0.39	-0.23	-0.51	-0.36
21	-0.4	-0.32	-0.44	-0.38	-0.40	-0.38	-0.36	0.05	0.44	0.14	0.07	0.07	0.04	0.06	0.18	0.16	0.00	-0.05	0.29	0.18	0.38	0.21	0.14	0.11	0.44	-0.44	-0.01
22	0.2	0.18	0.25	0.14	0.12	0.49	0.22	0.57	0.35	0.30	0.07	0.04	0.01	0.00	-0.07	-0.03	0.00	-0.03	-0.12	-0.10	-0.14	-0.08	0.03	-0.04	0.57	-0.14	0.10
23	-0.2	-0.13	-0.25	-0.32	-0.28	-0.27	-0.44	-0.41	-0.34	-0.27	-0.26	-0.28	-0.23	-0.28	-0.22	-0.24	-0.28	-0.21	-0.15	-0.14	-0.18	-0.20	-0.19	-0.18	-0.13	-0.44	-0.25
24	-0.2	-0.17	-0.25	-0.30	-0.33	-0.31	-0.30	-0.27	-0.23	-0.24	-0.28	-0.25	-0.23	-0.16	-0.15	-0.20	-0.26	-0.25	-0.30	-0.32	-0.20	-0.20	-0.24	-0.11	-0.11	-0.33	-0.24
25	0.0	-0.02	-0.01	0.05	0.05	0.09	-0.03	-0.01	0.09	0.07	0.15	0.06	0.01	0.03	0.03	-0.06	-0.10	-0.15	-0.14	-0.15	-0.24	-0.17	-0.21	-0.07	0.15	-0.24	-0.03
26	-0.2	-0.25	-0.30	-0.28	-0.27	-0.28	-0.26	-0.10	-0.13	-0.06	-0.16	-0.13	-0.26	-0.30	-0.28	-0.27	-0.28	-0.21	-0.17	-0.12	-0.14	-0.11	-0.08	-0.06	-0.06	-0.30	-0.20
27	-0.1	-0.08	-0.06	-0.07	-0.11	-0.10	-0.09	-0.09	-0.06	-0.09	-0.10	-0.10	-0.16	-0.16	-0.15	-0.20	-0.15	-0.13	-0.10	-0.10	-0.08	-0.10	-0.10	-0.10	-0.06	-0.20	-0.11
28	-0.1	-0.17	-0.18	-0.25	-0.29	-0.27	-0.30	-0.27	-0.26	-0.19	-0.33	-0.23	-0.26	-0.17	-0.14	-0.17	-0.14	-0.14	-0.15	-0.11	-0.08	-0.01	0.05	0.04	0.05	-0.33	-0.17
29	0.0	-0.08	-0.04	-0.04	-0.05	-0.05	-0.05	-0.05	-0.05	-0.04	-0.05	-0.05	-0.05	-0.07	-0.04	-0.05	-0.02	-0.03	-0.04	-0.04	-0.04	0.01	0.01	0.04	0.04	-0.08	-0.04
30	0.0	-0.02	-0.01	0.01	0.00	0.05	0.06	0.04	0.06	-0.01	-0.02	-0.02	0.01	0.05	0.08	0.05	0.07	0.08	0.11	0.03	0.00	0.00	0.00	-0.01	0.11	-0.04	0.03
31	0.0	0.05	0.03	0.02	0.08	0.06	0.06	0.08	0.06	0.02	0.01	0.08	0.13	0.18	0.09	0.19	0.02	0.04	0.02	0.04	0.13	0.21	0.18	0.23	0.23	0.01	0.09
Max.	**0.2**	**0.18**	**0.25**	**0.16**	**0.14**	**0.49**	**0.22**	**0.57**	**0.44**	**0.30**	**0.25**	**0.24**	**0.17**	**0.24**	**0.18**	**0.19**	**0.07**	**0.09**	**0.29**	**0.40**	**0.45**	**0.39**	**0.31**	**0.23**	**0.57**		
Min.	**-0.4**	**-0.33**	**-0.44**	**-0.38**	**-0.40**	**-0.38**	**-0.44**	**-0.43**	**-0.51**	**-0.48**	**-0.45**	**-0.43**	**-0.41**	**-0.40**	**-0.45**	**-0.44**	**-0.42**	**-0.42**	**-0.33**	**-0.32**	**-0.32**	**-0.37**	**-0.39**	**-0.39**		**-0.51**	
Avg.	**-0.1**	**-0.07**	**-0.08**	**-0.08**	**-0.08**	**-0.06**	**-0.08**	**-0.05**	**-0.03**	**-0.04**	**-0.06**	**-0.07**	**-0.08**	**-0.08**	**-0.09**	**-0.11**	**-0.12**	**-0.10**	**-0.08**	**-0.06**	**-0.05**	**-0.03**	**-0.03**	**-0.04**			**-0.07**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

April *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.2	0.08	0.02	0.00	0.00	0.04	0.07	0.03	-0.02	-0.01	-0.01	-0.01	-0.02	-0.03	-0.04	-0.05	-0.04	-0.05	-0.03	0.00	0.09	0.17	0.18	0.20	0.20	-0.05	0.03
2	0.2	0.06	0.05	0.08	0.10	0.11	0.10	0.09	0.04	0.03	0.00	-0.03	-0.01	-0.02	-0.36	-0.40	-0.35	-0.06	-0.08	-0.08	-0.06	-0.04	0.00	-0.03	0.17	-0.40	-0.03
3	0.0	-0.03	-0.04	0.00	-0.03	-0.05	-0.04	-0.07	-0.05	-0.04	-0.06	-0.06	-0.06	-0.04	-0.04	-0.04	-0.01	-0.03	-0.02	-0.01	-0.03	-0.02	0.00	0.01	0.01	-0.07	-0.03
4	0.0	0.06	0.09	0.10	0.09	0.09	0.11	0.10	0.00	-0.02	0.02	0.01	0.03	-0.02	-0.05	-0.05	-0.05	-0.05	-0.04	-0.02	-0.04	0.00	-0.10	-0.13	0.11	-0.13	0.01
5	-0.2	-0.22	-0.23	-0.21	-0.22	-0.21	-0.22	-0.26	-0.28	-0.22	-0.20	-0.21	-0.24	-0.24	-0.31	-0.34	-0.37	-0.32	-0.25	-0.23	-0.20	-0.17	-0.16	-0.16	-0.16	-0.37	-0.24
6	-0.2	-0.16	-0.19	-0.18	-0.29	-0.27	-0.28	-0.26	-0.25	-0.22	-0.22	-0.21	-0.19	-0.30	-0.39	-0.29	-0.31	-0.32	-0.36	-0.29	-0.20	-0.17	-0.16	-0.12	-0.12	-0.39	-0.24
7	-0.2	-0.16	-0.14	-0.17	-0.20	-0.18	-0.16	-0.15	-0.16	-0.19	-0.21	-0.19	-0.16	-0.20	-0.20	-0.22	-0.23	-0.20	-0.17	-0.14	-0.12	-0.10	-0.07	-0.09	-0.07	-0.23	-0.16
8	-0.1	-0.11	-0.16	-0.12	-0.09	-0.12	-0.12	-0.12	-0.08	-0.09	-0.18	-0.38	-0.12				0.45	-0.36	-0.24	-0.12	-0.14	-0.02	-0.15	-0.20	0.45	-0.38	-0.12
9	-0.2	-0.19	-0.24	-0.26	-0.23	-0.29	-0.28	-0.19	-0.19	-0.11	-0.16	-0.14	-0.21	-0.21	-0.30	-0.39	-0.44	-0.42	-0.37	-0.32	-0.24	-0.20	-0.22	-0.22	-0.11	-0.44	-0.25
10	-0.2	-0.20	-0.23	-0.23	-0.22	-0.20	-0.22	-0.26	-0.25	-0.24	-0.21	-0.24	-0.21	-0.25	-0.23	-0.30	-0.26	-0.22	-0.21	-0.17	-0.11	-0.09	-0.10	-0.12	-0.09	-0.30	-0.21
11	-0.2	-0.18	-0.16	-0.22	-0.24	-0.22	-0.29	-0.23	-0.24	-0.25	-0.28	-0.35	-0.27	-0.24	-0.23	-0.27	-0.24	-0.25	-0.22	-0.23	-0.15	-0.21	-0.19	-0.16	-0.15	-0.35	-0.23
12	-0.2	-0.14	-0.11	-0.10	-0.15	-0.13	-0.10	-0.13	-0.20	-0.25	-0.26	-0.17	-0.15	-0.17	-0.18	-0.24	-0.30	-0.30	-0.27	-0.17	-0.14	-0.13	-0.12	-0.11	-0.10	-0.30	-0.17
13	-0.1	-0.03	-0.04	-0.03	-0.02	0.00	0.05	0.03	-0.02	-0.04	-0.08	-0.02	-0.11	-0.13	-0.22	-0.12	0.08	0.17	0.22	0.27	0.23	0.24	0.19	0.20	0.27	-0.22	0.03
14	0.1	0.09	0.11	0.07	0.07	0.08	0.07	0.10	0.05	-0.02	-0.06	-0.08	-0.11	-0.12	-0.16	-0.20	-0.21	-0.22	-0.19	-0.10	0.02	0.03	0.03	0.01	0.12	-0.22	-0.03
15	0.0	0.05	0.02	0.03	0.08	0.18	0.06	0.04	-0.04	-0.07	-0.03	-0.01	-0.09	-0.14	-0.11	-0.05	-0.06	-0.07	-0.09	-0.15	-0.17	-0.16	-0.25	-0.26	0.18	-0.26	-0.05
16	-0.2	-0.07	-0.21	-0.15	-0.10	-0.15	-0.13	-0.16	-0.24	-0.40	-0.43	-0.40	-0.33	-0.36	-0.36	-0.38	-0.41	-0.41	-0.37	-0.33	-0.20	-0.14	-0.17	-0.16	-0.07	-0.43	-0.26
17	-0.1	-0.13	-0.10	-0.06	-0.03	-0.03	0.01	0.05	0.04	-0.03	-0.10	-0.17	-0.15	-0.17	-0.17	-0.18	-0.20	-0.18	-0.16	-0.11	-0.06	0.01	0.03	0.03	0.05	-0.20	-0.08
18	0.1	0.10	0.18	0.25	0.15	-0.01	-0.01	-0.01	0.02	-0.03	-0.15	-0.31	-0.50	-0.29	-0.32	-0.29	-0.39	-0.24	-0.23	-0.20	-0.12	-0.01	-0.01	0.06	0.25	-0.50	-0.10
19	0.0	0.04	0.03	0.03	0.03	0.15	0.10	0.12	0.09	0.04	-0.43	-0.35	-0.34	-0.89	-0.78	-0.50	-0.29	-0.20	-0.10	-0.12	-0.10	-0.08	-0.06	-0.05	0.15	-0.89	-0.15
20	0.0	0.02	0.00	-0.02	-0.02	-0.01	0.00	-0.01	-0.05	-0.19	-0.32	-0.21	-0.20	-0.30	-0.18	-0.19	-0.20	-0.17	-0.15	-0.11	-0.08	-0.07	-0.05	-0.05	0.02	-0.32	-0.11
21	-0.1	-0.05	-0.05	-0.05	-0.05	-0.04	-0.04	-0.04	-0.05	-0.06	-0.06	-0.09	-0.20	-0.24	-0.24	-0.20	-0.07	-0.01	-0.03	-0.06	-0.07	-0.05	-0.05	-0.05	-0.01	-0.24	-0.08
22	0.0	-0.02	0.06	0.10	-0.02	0.01	0.07	0.06	0.05	-0.19	-0.47	-0.92	-1.14	-0.44	-0.23	0.04	-0.23	-0.09	0.07	0.02	0.08	0.14	0.18	0.18	0.18	-1.14	-0.11
23	0.3	0.24	0.26	0.24	0.24	0.20	0.12	0.11	0.08	0.10	0.02	0.00	0.22	0.17	0.22	0.17	0.15	0.29	0.26	0.18	0.11	0.09	0.12	0.11	0.29	0.00	0.17
24	0.1	0.04	-0.01	0.00	-0.04	0.00	-0.04	-0.02	-0.11	-0.14	-0.16	-0.13	-0.15	-0.18	-0.21	-0.22	-0.28	-0.22	-0.24	-0.15	-0.09	-0.05	-0.03	-0.04	0.09	-0.28	-0.10
25	0.0	-0.10	-0.15	-0.23	-0.22	-0.25	-0.21	-0.21	-0.23	-0.30	-0.30	-0.26	-0.29	-0.36	-0.43	-0.46	-0.47	-0.45	-0.43	-0.38	-0.26	-0.18	-0.12	-0.14	-0.05	-0.47	-0.27
26	-0.1	-0.11	-0.11	-0.16	-0.26	-0.22	-0.21	-0.22	-0.27	-0.32	-0.27	-0.28	-0.26	-0.24	-0.21	-0.18	-0.23	-0.23	-0.20	-0.19	-0.16	-0.19	-0.14	-0.12	-0.11	-0.32	-0.21
27	-0.1	-0.05	-0.09	-0.13	-0.12	-0.14	-0.11	-0.13	-0.13	-0.16	-0.16	-0.16	-0.12	-0.10	-0.09	-0.11	-0.10	-0.14	-0.13	-0.13	-0.11	-0.14	-0.15	-0.15	-0.05	-0.16	-0.12
28	-0.1	-0.13	-0.13	-0.15	-0.18	-0.18	-0.20	-0.19	-0.21	-0.15	-0.12	-0.14	-0.20	-0.17	-0.18	-0.20	-0.19	-0.21	-0.13	-0.10	-0.06	-0.04	-0.03	-0.05	-0.03	-0.21	-0.15
29	-0.1	-0.05	-0.05	-0.03	-0.04	-0.06	-0.09	-0.10	-0.13	-0.17	-0.21	-0.20	-0.23	-0.21	-0.24	-0.31	-0.34	-0.36	-0.26	-0.22	-0.21	-0.12	-0.08	-0.06	-0.03	-0.36	-0.16
30	0.0	-0.02	-0.01	0.02	0.01	0.01	0.01	0.00	-0.08	-0.14	-0.18	-0.31	-0.69	-0.92	-0.54	-0.49	-0.91	-0.79	-0.42	-0.52	-0.10	-0.02	0.00	-0.06	0.02	-0.92	-0.26
Max.	**0.3**	**0.24**	**0.26**	**0.25**	**0.24**	**0.20**	**0.12**	**0.12**	**0.09**	**0.10**	**0.02**	**0.01**	**0.22**	**0.17**	**0.22**	**0.17**	**0.45**	**0.29**	**0.26**	**0.27**	**0.23**	**0.24**	**0.19**	**0.20**	**0.45**		
Min.	**-0.2**	**-0.22**	**-0.24**	**-0.26**	**-0.29**	**-0.29**	**-0.29**	**-0.26**	**-0.28**	**-0.40**	**-0.47**	**-0.92**	**-1.14**	**-0.92**	**-0.78**	**-0.50**	**-0.91**	**-0.79**	**-0.43**	**-0.52**	**-0.26**	**-0.21**	**-0.25**	**-0.26**		**-1.14**	
Avg.	**0.0**	**-0.05**	**-0.05**	**-0.05**	**-0.07**	**-0.06**	**-0.07**	**-0.07**	**-0.10**	**-0.13**	**-0.18**	**-0.20**	**-0.22**	**-0.24**	**-0.23**	**-0.22**	**-0.22**	**-0.20**	**-0.16**	**-0.14**	**-0.09**	**-0.06**	**-0.06**	**-0.06**			**-0.12**

Total Hours in Month 744 **Hours Data Available** 717 **Data Recovery** 96.4%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.0	-0.07	-0.03	0.00	-0.02	-0.01	0.00	-0.05	-0.06	-0.13	-0.19	-0.19	-0.18	-0.19	-0.16	-0.15	-0.12	-0.12	-0.10	-0.06	-0.02	0.06	-0.01	0.02	0.06	-0.19	-0.07
2	0.0	-0.03	-0.07	-0.05	-0.05	-0.11	-0.10	-0.11	-0.10	-0.08	-0.08	-0.10	-0.03	-0.09	0.03	0.00	-0.05	0.06	0.02	0.00	0.05	0.03	-0.04	-0.03	0.06	-0.11	-0.04
3	0.0	0.05	0.10	0.18	0.05	0.07	-0.01	0.04	0.03	-0.04	0.04	0.08	0.07	-0.06	-0.03	-0.02	0.06	-0.04	-0.03	0.06	-0.04	-0.04	-0.02	0.00	0.18	-0.06	0.02
4	0.0	0.01	0.00	0.02	0.03	0.05	0.06	0.04	0.01	-0.01	-0.05	-0.06	-0.06	-0.10	-0.25	-0.25	-0.37	-0.26	-0.16	-0.13	-0.05	0.05	0.08	0.33	0.33	-0.37	-0.05
5	0.3	0.31	0.18	0.21	0.20	0.18	0.18	0.18	0.15	0.12	0.03	0.10	0.04	-0.04	0.23	0.13	0.03	0.03	-0.05	-0.06	-0.10	0.15	0.05	0.10	0.32	-0.10	0.11
6	0.0	0.08	0.22	0.10	0.00	-0.03	-0.04	-0.05	-0.04	-0.08	-0.05	-0.07	-0.12	-0.11	-0.11	-0.04	-0.09	-0.07	-0.08	-0.08	-0.08	-0.10	-0.04	-0.07	0.22	-0.12	-0.04
7	0.0	0.20	0.07	-0.03	-0.01	0.02	-0.03	-0.01	-0.03	-0.05	-0.06	-0.06	-0.05	-0.07	-0.09	-0.08	-0.07	-0.05	-0.06	0.02	0.11	0.22	-0.02	-0.01	0.22	-0.09	-0.01
8	0.0	-0.02	-0.02	-0.02	-0.01	-0.02	0.00	-0.01	-0.04	-0.05	-0.07	-0.06	-0.05	-0.05	-0.04	-0.07	-0.08	-0.08	-0.08	-0.06	-0.05	-0.03	-0.02	-0.03	0.01	-0.08	-0.04
9	0.0	-0.01	-0.01	-0.02	0.00	-0.01	0.01	-0.01	0.00	-0.02	-0.04	-0.05	-0.06	-0.08	-0.05	-0.05	-0.07	0.03	0.21	0.04	0.01	0.06	0.07	0.08	0.21	-0.08	0.00
10	0.0	0.03	0.04	0.05	0.01	0.00	0.00	0.03	0.03	0.08	-0.01	-0.02	-0.03	-0.07	-0.06	-0.06	-0.11	-0.09	0.03	0.38	0.55	0.11	-0.01	0.00	0.55	-0.11	0.04
11	0.1	0.15	0.07	-0.01	0.00	0.08	0.14	0.01	0.06	0.23	0.28	0.49	0.17	-0.02	0.13	0.16	0.12	0.02	0.11	0.05	0.31	0.45	0.21	0.23	0.49	-0.02	0.15
12	0.2	0.04	0.02	0.01	0.01	0.00	-0.02	-0.05	-0.05	-0.05	-0.05	-0.05	-0.06	0.01	0.16	0.21	0.18	0.26	0.24	0.18	0.22	0.05	0.03	0.06	0.26	-0.06	0.06
13	0.1	0.03	0.00	-0.06	-0.12	-0.13	-0.15	-0.13	-0.14	-0.13	-0.15	-0.15	-0.16	-0.18	-0.19	-0.19	-0.20	-0.20	-0.20	-0.16	-0.13	-0.10	-0.12	-0.12	0.07	-0.20	-0.13
14	-0.1	-0.05	-0.05	-0.04	-0.03	-0.02	-0.02	0.01	-0.04	-0.06	-0.07	-0.07	-0.12	-0.25	-0.28	-0.27	-0.38	-0.31	-0.15	-0.10	-0.02	0.06	0.03	0.01	0.06	-0.38	-0.10
15	0.0	0.02	0.05	0.10	0.15	0.10	0.16	0.03	-0.03	-0.05	-0.07	-0.05	-0.12	-0.10	-0.05	-0.09	-0.08	-0.05	-0.07	-0.08	-0.05	-0.03	0.01	0.02	0.16	-0.12	-0.01
16	0.0	-0.03	-0.04	-0.04	-0.03	-0.07	-0.10	-0.11	-0.10	-0.11	-0.12	-0.13	-0.14	-0.11	-0.08	-0.27	-0.31	-0.28	-0.25	-0.22	-0.18	-0.10	0.00	-0.08	0.01	-0.31	-0.12
17	0.0	0.08	0.10	0.06	0.04	0.04	0.04	0.08	0.01	-0.01	0.00	-0.10	-0.79	-1.35	-0.66	-0.36	-0.09	-0.14	-0.12	0.00	-0.17	-0.08	-0.12	-0.05	0.10	-1.35	-0.15
18	0.0	0.01	-0.09	-0.05	-0.05	-0.07	-0.07	-0.05	-0.03	-0.06	-0.07	-0.07	-0.07	-0.08	-0.08	-0.09	-0.08	-0.24	-0.19	-0.08	-0.07	-0.12	-0.08	-0.08	0.01	-0.24	-0.08
19	-0.1	-0.07	-0.07	-0.04	-0.01	0.02	-0.03	-0.02	-0.04	-0.05	-0.10	-0.74	-1.40	-1.19	-0.92	-0.78	-0.63	-0.22	-0.22	-0.17	-0.15	-0.07	0.13	0.14	0.14	-1.40	-0.28
20	0.2	0.17	0.16	0.24	0.25	0.28	0.32	0.36	0.16	0.11	0.09	0.21	0.18	0.30	-0.43	-0.11	-0.01	0.04	0.02	0.05	0.27	0.55	0.39	0.24	0.55	-0.43	0.17
21	0.1	0.16	0.41	0.68	0.48	0.35	0.20	0.16	-0.01	-0.13	-0.11	-0.20	-0.45	-0.19	-0.39	-0.32	-0.05	-0.05	0.01	-0.04	-0.05	-0.03	0.07	0.00	0.68	-0.45	0.03
22	0.1	0.12	0.13	0.11	0.05	0.00	-0.01	0.00	-0.04	-0.05	-0.06	-0.12	-0.63	-0.36	-0.19	-0.34	-0.21	-0.17	-0.25	-0.23	-0.06	-0.10	-0.09	-0.09	0.13	-0.63	-0.11
23	-0.1	-0.03	0.14	0.14	0.31	0.15	0.03	0.15	0.08	-0.01	0.00	0.00	-0.02	-0.02	-0.02	0.17	0.14	-0.03	0.02	-0.03	-0.07	-0.08	-0.08	-0.04	0.31	-0.08	0.03
24	0.0	-0.06	-0.07	-0.07	-0.09	-0.08	-0.09	-0.11	-0.10	-0.08	-0.12	-0.20	-0.28	-0.18	-0.17	-0.18	-0.10	-0.10	-0.13	-0.08	-0.13	-0.08	-0.10	0.04	0.04	-0.28	-0.11
25	0.1	0.29	0.46	0.17	0.15	0.18	0.13	0.06	-0.20	-0.31	-0.21	-0.28	-0.52	-0.50	-0.53	-0.52	-0.47	-0.23	-0.07	-0.08	-0.10	-0.08	-0.09	-0.03	0.46	-0.53	-0.11
26	0.0	0.01	0.00	-0.01	-0.01	-0.04	-0.04	-0.07	-0.09	-0.09	-0.10	-0.15	-0.21	-0.20	-0.26	-0.30	-0.29	-0.40	-0.36	-0.27	-0.20	-0.07	-0.01	0.00	0.01	-0.40	-0.13
27	0.0	0.00	-0.01	-0.02	0.01	0.00	0.00	-0.03	-0.04	-0.10	-0.10	-0.11	-0.13	-0.16	-0.19	-0.23	-0.22	-0.24	-0.20	-0.12	-0.13	-0.07	0.01	0.10	0.10	-0.24	-0.08
28	0.0	0.06	0.13	0.15	0.11	0.07	0.05	0.06	0.01	-0.02	-0.03	0.04	-0.04	-0.12	-0.14	-0.22	-0.23	-0.25	-0.15	-0.09	-0.06	0.15	0.08	0.17	0.17	-0.25	-0.01
29	0.4	0.32	0.27	0.18	0.24	0.22	0.43	0.28	0.15	0.06	0.16	-0.09	-0.18	-0.09	-0.11	-0.15	-0.05	-0.12	0.06	0.03	0.14	0.23	0.06	0.28	0.43	-0.18	0.11
30	0.2	0.24	0.16	0.14	0.09	0.08	0.10	0.01	-0.14	-0.26	-0.30	-0.35	-0.33	-0.41	-0.24	-0.45	-0.55	-0.34	-0.31	-0.15	-0.16	-0.09	-0.09	-0.07	0.24	-0.55	-0.13
31	-0.1	-0.08	-0.08	-0.11	-0.11	-0.14	-0.14	-0.14	-0.15	-0.14	-0.20	-0.29	-0.31	-0.32	-0.28	-0.31	-0.31	-0.30	-0.28	-0.26	-0.23	-0.20	-0.17	-0.16	-0.07	-0.32	-0.20
Max.	**0.4**	**0.32**	**0.46**	**0.68**	**0.48**	**0.35**	**0.43**	**0.36**	**0.16**	**0.23**	**0.28**	**0.49**	**0.18**	**0.30**	**0.23**	**0.21**	**0.18**	**0.26**	**0.24**	**0.38**	**0.55**	**0.55**	**0.39**	**0.33**	**0.68**		
Min.	**-0.1**	**-0.08**	**-0.09**	**-0.11**	**-0.12**	**-0.14**	**-0.15**	**-0.14**	**-0.20**	**-0.31**	**-0.30**	**-0.74**	**-1.40**	**-1.35**	**-0.92**	**-0.78**	**-0.63**	**-0.40**	**-0.36**	**-0.27**	**-0.23**	**-0.20**	**-0.17**	**-0.16**		**-1.40**	
Avg.	**0.1**	**0.06**	**0.07**	**0.06**	**0.05**	**0.04**	**0.03**	**0.02**	**-0.03**	**-0.05**	**-0.06**	**-0.09**	**-0.20**	**-0.21**	**-0.18**	**-0.17**	**-0.15**	**-0.13**	**-0.09**	**-0.06**	**-0.02**	**0.02**	**0.00**	**0.03**			**-0.04**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.1	-0.18	0.00	0.05	-0.03	-0.04	-0.03	-0.03	0.00	-0.04	-0.05	-0.04	-0.02	-0.04	-0.04	-0.03	0.04	0.07	0.08	-0.01	-0.02	-0.02	-0.04	-0.02	0.08	-0.18	-0.02
2	0.0	0.00	0.01	0.00	0.00	-0.03	-0.02	-0.03	-0.05	-0.07	-0.08	-0.10	-0.18	-0.15	-0.14	-0.10	-0.12	-0.23	-0.12	-0.07	0.04	0.12	0.13	0.06	0.13	-0.23	-0.05
3	0.0	0.03	0.10	0.02	-0.01	-0.01	-0.02	-0.02	-0.04	-0.07	-0.07	-0.07	-0.08	-0.12	-0.10	-0.04	-0.28	-0.21	-0.09	-0.13	-0.09	-0.04	-0.03	-0.04	0.10	-0.28	-0.06
4	0.0	0.00	-0.02	-0.06	-0.05	-0.02	-0.02	-0.05	-0.02	0.02	-0.01	-0.05	-0.09	-0.13	-0.17	-0.10	-0.09	-0.02	-0.10	0.10	0.19	-0.05	-0.09	-0.07	0.19	-0.17	-0.04
5	-0.1	-0.05	-0.07	-0.11	-0.06	-0.04	-0.04	-0.15	-0.07	0.01	0.01	0.04	0.03	0.03	-0.07	-0.04	-0.02	-0.08	-0.04	-0.08	-0.08	-0.05	0.01	0.08	0.08	-0.15	-0.04
6	0.1	0.07	0.07	0.02	-0.02	-0.05	-0.05	-0.07	-0.05	-0.10	-0.14	-0.14	-0.17	-0.15	-0.16	-0.14	-0.06	-0.11	-0.35	-0.20	0.08	0.05	0.17	0.13	0.17	-0.35	-0.05
7	0.1	0.06	0.03	0.02	-0.01	0.01	-0.01	-0.02	-0.03	-0.05	-0.09	-0.11	-0.14	-0.12	-0.01	0.11	-0.46	-0.20	-0.13	-0.15	-0.13	-0.11	-0.09	-0.09	0.11	-0.46	-0.07
8	-0.1	-0.06	-0.12	-0.11	-0.12	-0.08	-0.12	-0.15	-0.03	-0.03	-0.06	-0.03	-0.02	-0.11	-0.15	-0.16	-0.16	-0.21	-0.17	-0.15	-0.04	-0.07	0.01	0.05	0.05	-0.21	-0.09
9	0.0	-0.01	-0.02	-0.08	-0.10	-0.09	-0.12	-0.14	-0.16	-0.17	-0.16	-0.21	-0.18	-0.25	-0.25	-0.23	-0.27	-0.28	-0.24	-0.20	-0.19	-0.14	-0.06	-0.04	0.01	-0.28	-0.15
10	0.0	-0.03	-0.04	-0.04	-0.05	-0.09	-0.12	-0.15	-0.15	-0.15	-0.16	-0.17	-0.35	-0.74	-0.50	-0.52	-0.49	-0.45	-0.35	-0.20	-0.14	-0.07	-0.09	-0.07	-0.02	-0.74	-0.21
11	-0.1	-0.06	-0.10	-0.08	-0.07	-0.04	-0.06	-0.09	-0.12	-0.06	-0.14	-0.25	-0.17	-0.13	-0.10	-0.08	-0.13	-0.11	-0.11	-0.13	-0.16	-0.11	-0.05	-0.01	-0.01	-0.25	-0.10
12	0.0	0.01	-0.01	-0.01	-0.02	-0.03	-0.07	-0.10	-0.13	-0.13	-0.11	-0.13	-0.16	-0.17	-0.19	-0.20	-0.12	-0.10	-0.07	-0.05	-0.08	-0.11	-0.06	-0.05	0.01	-0.20	-0.09
13	-0.1	-0.06	-0.06	-0.06	-0.07	-0.03	-0.04	-0.08	-0.05	-0.07	-0.10	-0.09	-0.08	-0.09	-0.08	-0.19	-0.08	-0.15	-0.20	-0.33	-0.03	0.49	0.21	0.11	0.49	-0.33	-0.05
14	0.1	0.07	0.03	0.08	0.01	-0.01	-0.04	0.01	-0.02	-0.05	-0.06	-0.11	-0.14	-0.21	-0.34	-0.17	-0.04	-0.04	-0.08	-0.05	-0.08	-0.03	0.17	0.02	0.17	-0.34	-0.04
15	0.2	0.26	0.10	0.08	0.02	0.04	-0.02	-0.03	-0.02	-0.04	-0.08	-0.11	-0.32	-0.97	-0.70	-0.42	-0.15	-0.10	-0.07	-0.19	-0.08	-0.02	-0.03	-0.04	0.26	-0.97	-0.11
16	0.0	0.01	0.02	0.04	0.03	0.02	0.03	0.05	0.04	0.04	-0.05	-0.03	0.04	0.13	-0.04	-0.38	-0.06	0.07	-0.06	-0.06	-0.06	0.03	0.09	0.03	0.13	-0.38	0.00
17	0.2	0.32	0.11	0.16	0.19	0.31	0.15	0.37	0.08	-0.17	-0.12	-0.20	-0.18	-0.26	-0.15	-0.19	-0.13	-0.07	-0.05	-0.04	-0.01	-0.02	-0.10	-0.02	0.37	-0.26	0.01
18	0.0	-0.08	-0.12	-0.08	-0.07	-0.08	-0.07	-0.14	-0.04	-0.02	-0.06	-0.11	-0.21	0.08	0.01	0.02	0.00	-0.02	-0.01	0.05	0.04	0.03	0.06	0.04	0.08	-0.21	-0.03
19	0.2	0.09	0.07	0.05	-0.01	0.19	0.09	0.03	-0.05	-0.19	-0.46	-0.52	-0.62	-0.50	-0.31	-0.08	-0.06	-0.03	-0.32	-0.27	-0.08	-0.10	-0.07	-0.09	0.19	-0.62	-0.13
20	-0.1	0.03	0.01	-0.04	-0.03	-0.06	-0.08	-0.19	-0.15	-0.17	-0.23	-0.51	-0.61	-0.39	-0.40	-0.45	-0.44	-0.32	-0.21	-0.14	-0.22	-0.18	-0.11	-0.10	0.03	-0.61	-0.21
21	-0.1	-0.08	-0.02	-0.07	-0.07	-0.06	-0.08	-0.05	-0.11	-0.15	-0.17	-0.20	-0.25	-0.35	-0.48	-0.31	-0.08	-0.13	-0.08	-0.06	0.03	0.06	0.03	0.04	0.06	-0.48	-0.11
22	0.0	0.09	0.10	0.02	-0.04	-0.04	-0.07	-0.07	-0.08	-0.05	-0.11	-0.14	-0.25	-0.23	-0.25	-0.20	-0.19	-0.20	-0.46	-0.27	-0.24	-0.15	-0.09	-0.11	0.10	-0.46	-0.13
23	-0.1	-0.08	-0.09	-0.07	-0.06	-0.07	-0.06	-0.07	-0.05	-0.25	-0.41	-0.48	-0.57	-0.45	-0.54	-0.63	-0.26	-0.46	-0.34	-0.26	-0.20	-0.06	-0.07	-0.04	-0.04	-0.63	-0.24
24	0.0	-0.06	-0.07	-0.07	-0.07	-0.08	-0.07	-0.07	-0.07	-0.08	-0.09	-0.15	-0.13	-0.09	-0.10	-0.09	-0.06	-0.05	-0.06	-0.04	0.03	0.00	0.00	0.00	0.03	-0.15	-0.06
25	0.0	0.01	0.06	-0.07	-0.06	0.05	0.04	-0.03	-0.03	0.01	0.00	-0.02	-0.05	0.03	0.02	0.00	0.07	0.18	0.12	0.09	0.13	0.01	0.01	-0.02	0.18	-0.07	0.02
26	0.0	0.02	0.02	0.06	0.09	0.09	0.10	0.08	0.11	0.08	0.07	-0.01	-0.03	-0.02	-0.04	-0.04	-0.07	-0.08	-0.09	-0.08	-0.05	-0.03	-0.01	0.00	0.11	-0.09	0.01
27	0.0	0.01	-0.02	-0.04	-0.06	-0.09	-0.09	-0.14	-0.13	-0.13	-0.10	-0.07	-0.05	-0.07	-0.13	-0.26	-0.34	-0.39	-0.26	-0.22	-0.10	-0.04	-0.06	-0.06	0.01	-0.39	-0.12
28	0.1	-0.04	0.02	-0.01	-0.01	-0.05	-0.01	0.02	-0.04	-0.05	-0.14	-0.15	-0.16	-0.19	-0.23	-0.20	-0.22	-0.14	-0.08	-0.14	-0.06	-0.07	-0.08	-0.07	0.08	-0.23	-0.08
29	0.0	-0.05	-0.05	-0.06	-0.05	-0.06	-0.06	-0.09	-0.08	-0.08	-0.10	-0.07	-0.10	-0.08	-0.12	-0.09	-0.13	-0.23	-0.26	-0.13	-0.05	-0.07	-0.07	-0.07	-0.05	-0.26	-0.09
30	-0.1	-0.07	-0.06	0.10	0.12	0.09	0.06	0.06	-0.22	-0.25	-0.24	-0.49	-0.50	-0.44	-0.15	-0.13	-0.17	-0.33	-0.12	-0.04	0.02	-0.02	0.03	-0.04	0.12	-0.50	-0.12
Max.	**0.2**	**0.32**	**0.11**	**0.16**	**0.19**	**0.31**	**0.15**	**0.37**	**0.11**	**0.08**	**0.07**	**0.04**	**0.04**	**0.13**	**0.02**	**0.11**	**0.07**	**0.18**	**0.12**	**0.10**	**0.19**	**0.49**	**0.21**	**0.13**	**0.49**		
Min.	**-0.1**	**-0.18**	**-0.12**	**-0.11**	**-0.12**	**-0.09**	**-0.12**	**-0.19**	**-0.22**	**-0.25**	**-0.46**	**-0.52**	**-0.62**	**-0.97**	**-0.70**	**-0.63**	**-0.49**	**-0.46**	**-0.46**	**-0.33**	**-0.24**	**-0.18**	**-0.11**	**-0.11**		**-0.97**	
Avg.	**0.0**	**0.01**	**0.00**	**-0.01**	**-0.02**	**-0.01**	**-0.03**	**-0.04**	**-0.06**	**-0.08**	**-0.12**	**-0.16**	**-0.19**	**-0.21**	**-0.20**	**-0.18**	**-0.15**	**-0.15**	**-0.14**	**-0.11**	**-0.05**	**-0.03**	**-0.01**	**-0.02**			**-0.08**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.1	-0.02	-0.05	-0.02	0.01	0.41	0.21	-0.02	-0.25	-0.19	-0.42	-0.48	-0.82	-0.59	-0.26	-0.23	-0.14	-0.07	-0.08	-0.16	-0.21	-0.22	-0.08	-0.06	0.41	-0.82	-0.16
2	-0.1	-0.06	-0.07	-0.07	-0.05	-0.06	-0.05	-0.08	-0.26	-0.44	-0.55	-0.38	-0.42	-0.45	-0.35	-0.17	-0.14	-0.20	-0.12	-0.09	-0.08	-0.06	-0.07	-0.05	-0.05	-0.55	-0.18
3	-0.1	0.01	0.23	0.14	0.08	0.06	0.09	0.04	-0.15	-0.13	0.02	-0.05	-0.08	0.02	-0.03	-0.11	-0.03	-0.06	-0.02	-0.02	-0.01	-0.06	-0.04	-0.04	0.23	-0.15	-0.01
4	0.0	-0.01	-0.03	0.00	0.06	0.01	0.00	0.02	0.00	-0.04	-0.01	-0.09	-0.02	0.33	0.03	-0.02	-0.04	-0.05	-0.06	-0.03	-0.01	0.00	0.05	0.04	0.33	-0.09	0.00
5	0.1	0.01	0.11	0.00	0.10	0.08	0.07	0.18	0.28	0.04	0.20	0.11	-0.07	0.04	-0.04	0.00	0.01	0.03	-0.06	0.07	0.02	0.16	0.29	0.18	0.29	-0.07	0.08
6	0.2	0.20	0.40	0.54	0.17	0.28	0.24	0.21	0.05	0.05	0.05	0.02	-0.10	-0.23	-0.20	-0.29	-0.55	-0.33	-0.21	-0.08	0.03	-0.01	0.03	0.04	0.54	-0.55	0.02
7	0.0	-0.03	0.01	0.05	-0.04	-0.12	-0.09	-0.03	-0.02	-0.05	-0.04	-0.07	-0.21	-0.17	-0.19	-0.23	-0.12	-0.12	-0.19	-0.14	-0.13	-0.08	-0.08	-0.12	0.05	-0.23	-0.09
8	-0.1	-0.07	-0.02	-0.04	0.01	0.05	0.02	-0.01	-0.04	-0.08	-0.10	-0.11	-0.10	-0.15	-0.20	-0.11	-0.06	-0.26	0.03	-0.14	-0.08	-0.01	-0.01	-0.11	0.05	-0.26	-0.07
9	-0.1	-0.11	-0.07	-0.09	-0.12	-0.10	-0.07	-0.05	-0.01	-0.14	-0.18	-0.17	-0.27	-0.20	-0.08	-0.07	-0.06	-0.06	-0.04	-0.03	-0.03	-0.02	0.00	-0.01	0.00	-0.27	-0.08
10	0.0	0.00	-0.01	-0.01	-0.02	-0.03	-0.03	-0.03	-0.05	-0.08	-0.09	-0.14	-0.24	-0.25	-0.38	-0.27	-0.16	-0.18	-0.03	-0.02	-0.01	-0.03	-0.03	-0.07	0.00	-0.38	-0.09
11	-0.1	-0.10	-0.04	-0.04	-0.06	-0.06	-0.05	-0.03	-0.01	-0.15	-0.25	-0.42	-0.54	-0.53	-0.57	-0.48	-0.46	-0.41	-0.31	-0.23	-0.11	-0.03	-0.03	0.02	0.02	-0.57	-0.21
12	0.1	0.04	0.00	0.23	0.20	0.33	0.22	0.01	0.00	-0.03	-0.11	-0.08	-0.05	-0.06	-0.05	-0.04	-0.03	-0.05	-0.04	-0.06	-0.05	-0.03	0.02	-0.02	0.33	-0.11	0.02
13	0.0	-0.01	0.00	-0.02	-0.03	-0.04	-0.03	-0.03	-0.05	-0.10	0.03	-0.03	-0.11	-0.07	-0.09	-0.10	-0.11	-0.11	-0.08	-0.06	-0.05	-0.04	-0.02	-0.03	0.03	-0.11	-0.05
14	-0.1	-0.04	-0.02	-0.01	0.00	-0.01	0.01	-0.02	-0.03	-0.08	-0.08	-0.12	-0.12	-0.11	-0.08	-0.03	-0.03	-0.07	-0.07	-0.12	-0.09	-0.11	-0.06	-0.03	0.01	-0.12	-0.06
15	0.0	-0.01	0.03	0.03	0.00	-0.04	-0.04	-0.04	-0.18	-0.26	-0.20	-0.18	-0.06	0.00	0.01	0.00	-0.02	-0.02	0.06	0.06	0.05	0.05	0.05	0.03	0.06	-0.26	-0.03
16	0.0	-0.01	-0.01	-0.05	-0.02	0.04	0.15	0.02	-0.01	-0.05	-0.02	0.02	0.06	0.03	0.00	0.00	0.01	0.03	0.04	0.14	0.20	0.24	0.22	0.19	0.24	-0.05	0.05
17	0.2	0.18	0.06	0.07	0.05	0.15	0.04	-0.13	-0.05	-0.11	-0.12	-0.02	-0.06	-0.08	-0.05	-0.04	-0.19	-0.12	-0.27	-0.16	-0.11	-0.04	-0.03	-0.02	0.22	-0.27	-0.03
18	0.0	-0.05	-0.03	-0.02	-0.02	0.00	0.01	-0.07	-0.09	-0.12	-0.15	-0.16	-0.17	-0.20	-0.23	-0.22	-0.18	-0.19	-0.18	-0.12	-0.09	-0.04	0.05	0.06	0.06	-0.23	-0.09
19	0.1	0.07	0.07	0.07	0.06	0.06	0.03	0.04	0.01	0.00	-0.03	-0.06	-0.06	-0.06	-0.01	-0.14	-0.02	-0.01	-0.15	0.19	0.27	0.19	0.25	0.21	0.27	-0.15	0.04
20	0.1	0.13	0.13	0.20	0.18	0.14	0.14	0.10	0.11	0.02	0.00	-0.09	-0.11	-0.08	-0.15	-0.13	-0.18	-0.13	-0.12	-0.10	-0.05	-0.05	-0.01	0.01	0.20	-0.18	0.00
21	0.1	0.03	0.04	0.01	0.04	0.02	0.02	-0.06	-0.08	-0.07	-0.05	-0.09	-0.16	-0.20	-0.22	-0.25	-0.15	-0.12	-0.15	-0.12	-0.02	0.06	0.09	0.07	0.09	-0.25	-0.05
22	0.0	0.02	0.01	0.02	0.00	0.02	0.06	0.00	-0.07	-0.05	-0.18	-0.13	-0.13	-0.05	-0.04	-0.02	-0.11	-0.05	-0.05	-0.06	-0.06	-0.03	-0.06	-0.03	0.06	-0.18	-0.04
23	0.0	0.01	0.00	0.00	0.05	0.03	-0.03	-0.03	-0.03	-0.05	-0.10	-0.09	-0.16	-0.29	-0.21	-0.43	-0.49	-0.16	-0.13	-0.03	-0.01	-0.17	-0.14	-0.07	0.05	-0.49	-0.10
24	0.0	0.07	0.08	0.11	0.13	0.09	-0.01	0.08	-0.08	-0.07	-0.10	-0.06	-0.01	0.01	-0.11	-0.18	-0.20	0.13	0.32	-0.51	-0.26	0.07	0.05	0.12	0.32	-0.51	-0.01
25	0.1	0.17	0.28	0.16	0.21	0.33	0.41	0.32	0.35	0.33	0.33	0.14	0.14	0.06	0.16	0.24	0.07	0.05	0.21	0.16	0.21	0.21	0.09	0.14	0.41	0.05	0.20
26	0.2	0.26	0.26	0.05	0.12	0.02	-0.11	-0.16	-0.07	-0.06	-0.13	-0.20	-0.15	-0.22	-0.07	-0.09	-0.06	0.01	-0.12	-0.14	-0.11	-0.11	-0.08	-0.04	0.26	-0.22	-0.04
27	0.0	-0.03	-0.03	-0.02	-0.02	-0.02	-0.04	-0.02	-0.04	-0.03	-0.06	-0.03	-0.04	-0.06	-0.06	-0.02	-0.01	-0.13	-0.23	-0.14	-0.06	0.07	0.03	0.00	0.07	-0.23	-0.04
28	0.0	0.20	0.09	0.09	0.09	0.08	0.07	0.06	-0.02	-0.02	0.00	-0.04	0.00	0.03	0.04	0.03	0.22	0.32	0.32	0.36	0.36	0.44	0.55	0.36	0.55	-0.04	0.15
29	0.4	0.31	0.22	0.26	0.24	0.22	0.21	0.19	0.12	0.01	0.01	0.08	0.16	0.14	0.17	0.09	0.23	0.29	0.40	0.45	0.29	0.23	0.33	0.20	0.45	0.01	0.22
30	0.2	0.21	0.11	0.02	0.06	0.03	-0.10	0.02	-0.05	-0.13	-0.12	-0.04	-0.05	-0.04	0.04	0.11	0.07	-0.01	-0.03	-0.11	-0.05	-0.08	-0.08	0.02	0.21	-0.13	0.00
31	0.1	0.14	0.24	0.25	0.20	0.16	0.06	-0.13	-0.13	-0.13	-0.18	-0.18	-0.17	-0.27	-0.14	-0.24	-0.15	-0.13	-0.04	-0.15	-0.10	-0.21	-0.06	-0.11	0.25	-0.27	-0.06
Max.	**0.4**	**0.31**	**0.40**	**0.54**	**0.24**	**0.41**	**0.41**	**0.32**	**0.35**	**0.33**	**0.33**	**0.14**	**0.16**	**0.33**	**0.17**	**0.24**	**0.23**	**0.32**	**0.40**	**0.45**	**0.36**	**0.44**	**0.55**	**0.36**	**0.55**		
Min.	**-0.1**	**-0.11**	**-0.07**	**-0.09**	**-0.12**	**-0.12**	**-0.11**	**-0.16**	**-0.26**	**-0.44**	**-0.55**	**-0.48**	**-0.82**	**-0.59**	**-0.57**	**-0.48**	**-0.55**	**-0.41**	**-0.31**	**-0.51**	**-0.26**	**-0.22**	**-0.14**	**-0.12**		**-0.82**	
Avg.	**0.0**	**0.05**	**0.06**	**0.06**	**0.05**	**0.07**	**0.05**	**0.01**	**-0.03**	**-0.07**	**-0.08**	**-0.10**	**-0.13**	**-0.12**	**-0.11**	**-0.11**	**-0.10**	**-0.07**	**-0.05**	**-0.04**	**-0.01**	**0.01**	**0.04**	**0.03**			**-0.02**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	-0.1	-0.09	-0.05	-0.19	-0.17	-0.08	-0.17	-0.03	-0.14	-0.18	-0.48	-0.46	-0.38	-0.19	-0.21	-0.07	-0.05	-0.02	-0.06	-0.09	-0.08	-0.07	-0.06	-0.06	-0.02	-0.48	-0.14
2	-0.1	-0.07	-0.08	-0.08	-0.07	-0.08	-0.08	-0.08	-0.06	-0.08	-0.06	-0.07	-0.07	-0.08	-0.08	-0.06	-0.06	-0.07	-0.07	-0.05	-0.06	-0.09	-0.06	-0.06	-0.05	-0.09	-0.07
3	-0.1	-0.09	-0.01	0.00	0.00	-0.02	-0.08	-0.07	-0.10	-0.12	-0.19	-0.23	-0.23	-0.09	-0.08	-0.12	-0.14	-0.18	-0.16	-0.13	-0.10	-0.09	-0.08	-0.05	0.00	-0.23	-0.10
4	-0.1	-0.08	-0.07	-0.06	-0.07	-0.07	-0.01	-0.03	-0.05	-0.05	-0.07	-0.14	-0.09	-0.17	-0.24	-0.10	-0.08	-0.14	-0.15	-0.13	-0.11	-0.09	-0.07	-0.07	-0.01	-0.24	-0.09
5	-0.1	-0.06	-0.07	-0.08	-0.08	-0.02	-0.08	-0.02	-0.05	-0.05	-0.14	-0.30	-0.33	-0.28	-0.40	-0.09	-0.08	-0.08	-0.08	-0.07	-0.07	-0.04	-0.05	-0.05	-0.02	-0.40	-0.11
6	0.0	-0.03	-0.03	-0.05	-0.04	0.03	-0.01	-0.02	-0.08	0.03	-0.22	-0.87	-0.89	-0.60	-0.36	-0.15	-0.06	0.00	0.03	0.40	0.44	0.37	0.33	0.21	0.44	-0.89	-0.07
7	0.1	0.14	0.14	0.18	0.20	0.13	0.12	-0.12	-0.22	-0.12	-0.07	-0.04	-0.05	-0.06	-0.01	-0.13	0.00	0.22	0.15	0.30	0.35	0.27	0.10	0.21	0.35	-0.22	0.08
8	0.2	0.26	0.15	0.13	0.10	0.06	0.11	0.09	-0.03	0.01	-0.19	-0.03	-0.09	-0.17	0.08	-0.02	0.03	-0.01	-0.20	0.02	0.03	-0.05	0.00	-0.04	0.26	-0.20	0.02
9	0.0	0.06	0.00	0.00	0.14	-0.01	0.25	0.06	0.07	-0.04	-0.06	-0.14	-0.08	-0.21	-0.16	-0.06	-0.12	-0.07	-0.11	-0.16	-0.17	-0.20	-0.18	-0.15	0.25	-0.21	-0.06
10	-0.1	-0.14	-0.14	-0.13	-0.08	-0.16	-0.17	-0.16	-0.13	-0.05	-0.03	-0.06	-0.15	-0.19	-0.29	-0.30	-0.27	-0.28	-0.19	-0.15	-0.07	-0.12	-0.14	-0.14	-0.03	-0.30	-0.15
11	-0.1	-0.10	-0.08	-0.08	-0.09	-0.07	-0.07	-0.06	-0.08	-0.10	-0.18	-0.23	-0.36	-0.40	-0.39	-0.35	-0.35	-0.32	-0.17	-0.09	0.03	-0.09	-0.05	-0.01	0.03	-0.40	-0.16
12	0.0	-0.02	0.10	0.09	0.08	0.08	0.15	0.10	0.01	-0.01	-0.07	-0.16	-0.06	-0.08	-0.20	-0.13	-0.05	-0.01	-0.18	-0.13	-0.06	0.01	0.00	-0.01	0.15	-0.20	-0.02
13	0.0	0.04	0.06	0.05	0.05	0.07	0.14	0.13	0.12	0.05	0.05	0.00	-0.06	0.07	0.00	0.07	0.12	0.10	0.12	0.13	0.16	0.20	0.20	0.19	0.20	-0.06	0.09
14	0.2	0.06	0.10	0.08	0.15	0.14	0.08	0.02	-0.01	-0.08	-0.05	-0.09	0.11	0.07	-0.06	-0.05	-0.07	0.12	-0.03	0.03	0.08	0.10	0.11	0.01	0.24	-0.09	0.04
15	0.0	-0.05	0.03	-0.02	-0.07	-0.14	-0.22	-0.24	-0.21	-0.21	-0.25	-0.25	-0.22	-0.21	-0.11	-0.14	-0.16	-0.17	-0.10	-0.04	-0.08	-0.05	-0.07	-0.04	0.03	-0.25	-0.13
16	-0.1	-0.10	-0.09	-0.07	0.02	-0.03	-0.05	-0.04	-0.04	-0.06	-0.08	-0.08	-0.11	-0.10	-0.15	-0.15	-0.16	-0.17	-0.17	-0.10	-0.12	-0.07	-0.08	-0.06	0.02	-0.17	-0.09
17	-0.1	-0.05	-0.07	-0.07	-0.05	-0.01	-0.02	0.01	-0.05	-0.05	-0.08	-0.05	-0.07	-0.04	-0.04	-0.04	-0.03	-0.04	-0.03	-0.04	-0.03	-0.02	-0.02	-0.03	0.01	-0.08	-0.04
18	0.0	-0.02	0.00	0.06	0.17	0.15	0.11	0.04	0.28	0.12	0.08	0.04	0.04	0.01	0.01	0.00	0.01	0.04	0.07	0.10	0.12	0.22	0.12	0.13	0.28	-0.02	0.08
19	0.2	0.15	0.10	0.14	0.13	0.20	0.11	0.03	0.08	0.12	0.05	0.05	-0.02	0.01	0.08	0.22	0.19	0.18	0.33	0.34	0.34	0.12	0.11	0.14	0.34	-0.02	0.14
20	0.1	-0.08	-0.09	-0.06	-0.13	-0.18	-0.21	-0.19	-0.22	-0.20	-0.24	-0.31	-0.27	-0.20	-0.05	-0.03	-0.14	-0.08	-0.11	-0.01	0.09	0.10	0.13	0.12	0.13	-0.31	-0.09
21	0.1	0.06	0.08	0.12	0.09	0.09	0.03	0.04	0.02	0.01	-0.01	-0.01	-0.03	-0.08	-0.08	-0.08	-0.08	-0.12	-0.15	-0.16	-0.10	-0.05	-0.07	-0.07	0.12	-0.16	-0.02
22	-0.1	-0.05	-0.10	-0.06	-0.09	-0.06	-0.03	-0.01	-0.08	-0.20	-0.16	-0.54	-0.31	-0.13	-0.27	-0.34	-0.16	0.03	-0.02	-0.34	-0.03	0.13	0.19	0.12	0.19	-0.54	-0.11
23	0.1	0.09	0.03	0.10	0.00	-0.15	-0.19	-0.18	-0.22	0.09	-0.06	-0.08	-0.08	-0.03	-0.08	-0.07	-0.08	-0.10	-0.18	0.01	-0.03	0.07	0.14	0.07	0.14	-0.22	-0.03
24	0.1	0.14	0.16	0.19	0.11	0.02	0.08	0.00	0.00	-0.04	-0.14	-0.09	-0.07	-0.16	-0.12	-0.06	-0.18	-0.22	-0.24	-0.08	0.07	0.12	0.16	0.26	0.26	-0.24	0.00
25	0.2	0.22	0.12	-0.03	-0.05	-0.06	-0.05	-0.06	-0.05	-0.09	-0.06	-0.06	-0.23	-0.08	-0.08	-0.06	-0.04	-0.03	-0.04	-0.05	-0.06	-0.05	-0.03	-0.03	0.22	-0.23	-0.03
26	0.0	-0.03	0.03	0.06	0.00	0.04	0.05	0.08	0.08	0.03	-0.08	0.06	-0.01	-0.04	-0.10	-0.19	-0.18	-0.12	-0.07	-0.12	-0.11	-0.09	-0.07	-0.03	0.08	-0.19	-0.04
27	0.0	0.00	0.00	0.05	0.04	-0.01	0.02	0.07	0.03	-0.04	-0.07	-0.10	-0.13	-0.12	-0.09	-0.12	-0.13	-0.12	-0.06	-0.04	0.01	0.02	0.04	0.04	0.07	-0.13	-0.03
28	0.0	0.05	0.08	0.05	0.04	0.05	0.07	0.08	0.03	-0.02	-0.05	-0.10	-0.05	-0.05	-0.08	-0.03	-0.05	-0.10	-0.16	-0.10	-0.05	0.05	0.06	0.12	0.12	-0.16	-0.01
29	0.1	0.14	0.21	0.04	0.02	0.05	0.04	0.03	-0.03	0.01	0.03	-0.01	-0.01	-0.11	-0.09	0.01	0.06	-0.07	-0.18	-0.11	-0.12	-0.08	-0.15	-0.15	0.21	-0.18	-0.02
30	-0.2	-0.07	-0.12	-0.20	-0.23	-0.18	-0.20	-0.12	0.07	0.00	-0.08	-0.18	-0.28	-0.13	-0.16	-0.03	-0.05	-0.16	-0.07	-0.07	0.01	-0.02	-0.02	-0.01	0.07	-0.28	-0.10
31	0.0	-0.01	-0.03	-0.04	-0.04	-0.01	0.06	0.00	0.02	0.03	0.04	0.02	0.04	0.04	0.04	0.05	0.05	0.04	0.03	0.03	0.08	0.10	0.11	0.09	0.11	-0.04	0.03
Max.	**0.2**	**0.26**	**0.21**	**0.19**	**0.20**	**0.20**	**0.25**	**0.13**	**0.28**	**0.12**	**0.08**	**0.06**	**0.11**	**0.07**	**0.08**	**0.22**	**0.19**	**0.22**	**0.33**	**0.40**	**0.44**	**0.37**	**0.33**	**0.26**	**0.44**		
Min.	**-0.2**	**-0.14**	**-0.14**	**-0.20**	**-0.23**	**-0.18**	**-0.22**	**-0.24**	**-0.22**	**-0.21**	**-0.48**	**-0.87**	**-0.89**	**-0.60**	**-0.40**	**-0.35**	**-0.35**	**-0.32**	**-0.24**	**-0.34**	**-0.17**	**-0.20**	**-0.18**	**-0.15**		**-0.89**	
Avg.	**0.0**	**0.01**	**0.01**	**0.00**	**0.00**	**-0.01**	**-0.01**	**-0.02**	**-0.03**	**-0.04**	**-0.09**	**-0.15**	**-0.15**	**-0.12**	**-0.12**	**-0.08**	**-0.07**	**-0.06**	**-0.07**	**-0.03**	**0.01**	**0.02**	**0.02**	**0.02**			**-0.04**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.07	0.08	0.08	0.06	0.07	0.08	0.06	0.05	0.05	0.04	0.01	0.01	0.03	0.04	0.02	0.04	0.00	0.02	0.01	0.02	0.09	0.03	0.03	0.09	0.00	0.04
2	0.0	-0.01	-0.01	0.01	0.04	0.05	0.11	0.15	0.13	0.04	-0.01	0.07	0.07	0.06	0.01	0.02	0.02	0.02	0.07	0.10	0.09	0.01	0.01	0.06	0.15	-0.01	0.05
3	0.0	0.04	0.08	0.08	0.06	0.07	0.09	0.09	0.07	0.04	0.03	-0.11	-0.05	-0.03	-0.10	-0.13	-0.08	0.00	-0.03	-0.01	0.00	0.00	-0.02	-0.03	0.09	-0.13	0.00
4	-0.1	0.06	0.16	0.09	0.15	0.12	0.04	0.07	0.02	0.03	-0.07	-0.15	-0.22	-0.25	-0.25	-0.17	-0.13	-0.07	0.00	-0.02	0.00	0.09	0.18	0.26	0.26	-0.25	-0.01
5	0.3	0.25	0.32	0.13	0.18	0.12	0.10	0.26	0.17	0.30	-0.07	-0.15	0.10	0.23	0.04	0.07	0.08	0.08	0.07	0.03	0.09	0.08	0.07	0.08	0.32	-0.15	0.12
6	0.1	0.21	0.31	0.47	0.39	0.15	-0.35	0.19	0.55	0.63	0.67	0.68	0.61	0.58	0.60	0.60	0.61	0.64	0.65	0.62	0.61	0.58	0.60	0.60	0.68	-0.35	0.47
7	0.6	0.66	0.64	0.67	0.65	0.70	0.63	0.60	0.57	0.55	0.55	0.33	0.35	0.30	0.32	0.47	0.55	0.55	0.48	0.44	0.42	0.44	0.50	0.45	0.70	0.30	0.52
8	0.4	0.41	0.45	0.46	0.49	0.48	0.54	0.56	0.53	0.45	0.51	0.54	0.59	0.62	0.56	0.64	0.65	0.68	0.89	0.91	0.97	1.00	1.09	1.08	1.09	0.36	0.64
9	1.1	1.01	1.04	1.14	1.13	1.16	1.19	1.22	1.23	1.27	1.24	1.15	1.12	1.13	0.95	0.86	0.90	0.92	0.91	0.92	0.95	0.99	0.99	0.99	1.27	0.86	1.06
10	1.0	1.18	1.18	1.22	1.26	1.30	1.33	1.31	1.32	1.35	1.32	1.31	1.24	1.35	1.35	1.49	1.77	1.85	1.82	1.80	1.80	1.82	1.79	1.79	1.85	1.04	1.46
11	1.8	1.72	1.68	1.50	1.48	1.50	1.45	1.60	1.63	1.66	1.98	2.03	-2.31	-3.80	0.99	-0.12	-0.41	-0.25	-0.12	-0.08	-0.12	-0.17	-0.13	-0.14	2.03	-3.80	0.56
12	-0.1	-0.14	-0.10	-0.07	-0.12	-0.14	-0.18	-0.07	-0.03	-0.02	0.00	0.01	-0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.02	0.03	0.01	-0.02	-0.02	0.03	-0.18	-0.04
13	0.0	-0.09	-0.13	-0.14	-0.08	-0.08	-0.12	-0.15	-0.14	-0.14	-0.13	-0.16	-0.11	-0.13	-0.07	0.18	0.21	0.23	0.29	0.31	0.33	0.34	0.36	0.35	0.36	-0.16	0.04
14	0.3	0.38	0.37	0.39	0.40	0.40	0.43	0.38	0.38	0.33	0.36	0.31	0.31	0.32	0.32	0.34	0.36	0.29	0.31	0.34	0.34	0.43	0.38	0.36	0.43	0.29	0.36
15	0.3	0.33	0.30	0.31	0.32	0.31	0.29	0.32	0.27	0.28	0.28	0.45	0.38	0.30	0.30	0.28	0.30	0.30	0.29	0.31	0.34	0.39	0.37	0.37	0.45	0.27	0.32
16	0.4	0.38	0.32	0.28	0.40	0.37	0.23	0.22	0.22	0.28	0.23	0.21	0.18	0.11	0.10	0.03	-0.02	-0.05	-0.02	0.04	0.10	0.08	0.10	0.08	0.40	-0.05	0.18
17	0.1	0.08	0.05	0.04	0.01	0.00	-0.01	-0.01	-0.02	-0.03	-0.05	-0.09	-0.21	-0.08	-0.05	-0.06	-0.10	-0.03	-0.02	0.05	-0.03	0.18	0.10	0.02	0.18	-0.21	-0.01
18	0.0	0.04	0.06	0.10	0.10	0.07	0.09	0.08	0.08	0.11	0.10	0.08	0.04	0.05	0.01	0.08	0.11	-0.01	-0.02	-0.02	-0.05	0.12	0.15	0.05	0.15	-0.05	0.06
19	0.1	0.01	0.04	0.02	0.00	0.02	0.08	0.01	-0.02	-0.03	-0.02	-0.01	-0.04	-0.06	-0.04	-0.03	-0.03	-0.03	-0.04	-0.02	0.01	0.01	0.01	0.02	0.08	-0.06	0.00
20	0.0	0.00	-0.02	-0.02	-0.02	-0.01	0.00	-0.02	-0.04	-0.05	-0.10	-0.17	-0.23	-0.22	-0.17	-0.13	-0.12	-0.13	-0.15	-0.08	-0.03	0.01	0.00	-0.03	0.01	-0.23	-0.07
21	0.0	0.00	-0.03	-0.01	0.01	-0.01	-0.03	-0.04	-0.07	-0.05	0.01	0.00	0.00	-0.05	-0.09	-0.22	-0.24	-0.25	-0.18	-0.09	-0.01	0.00	0.02	-0.04	0.02	-0.25	-0.06
22	-0.1	-0.07	-0.04	-0.05	-0.06	-0.04	-0.04	-0.06	-0.03	-0.08	-0.05	-0.02	-0.02	-0.07	-0.10	-0.14	-0.12	-0.35	-0.22	-0.05	0.01	0.02	-0.01	-0.02	0.02	-0.35	-0.07
23	0.0	-0.07	-0.06	-0.06	-0.06	-0.05	-0.02	-0.04	-0.07	-0.05	-0.08	-0.08	-0.17	-0.17	-0.18	-0.10	-0.10	-0.09	-0.09	-0.01	0.00	0.03	0.01	0.03	0.03	-0.18	-0.06
24	0.0	-0.01	0.04	-0.02	0.04	0.10	0.05	0.08	0.02	-0.03	-0.01	-0.02	-0.01	-0.03	-0.04	-0.05	-0.05	-0.03	0.00	0.00	-0.01	0.02	0.04	0.06	0.10	-0.05	0.01
25	0.1	0.01	0.04	0.04	0.07	0.06	0.05	0.03	0.02	0.02	-0.01	0.01	0.02	-0.02	-0.01	-0.01	0.00	0.02	0.02	0.09	0.11	0.14	0.11	0.13	0.14	-0.02	0.04
26	0.1	0.10	0.09	0.14	0.18	0.15	0.16	0.14	0.10	0.21	0.29	0.07	-0.05	-0.16	-0.45	-0.38	-0.23	-0.14	-0.05	-0.02	0.04	0.02	0.09	0.14	0.29	-0.45	0.02
27	0.1	0.08	0.09	0.04	0.04	0.04	0.04	0.05	0.07	0.06	0.04	0.01	0.00	-0.04	-0.06	-0.11	-0.20	-0.03	-0.02	0.04	0.10	0.09	0.04	0.02	0.12	-0.20	0.02
28	0.0	0.02	0.01	0.04	0.02	0.01	0.01	0.03	0.05	0.05	0.04	-0.01	0.02	-0.08	-0.31	-0.25	-0.13	-0.11	-0.08	0.02	0.05	0.08	0.11	0.11	0.11	-0.31	-0.01
29	0.1	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	-0.01	0.00	-0.03	-0.06	-0.07	-0.09	-0.09	-0.10	-0.12	-0.27	-0.15	-0.10	-0.07	-0.01	-0.01	0.04	0.03	0.05	-0.27	-0.05
30	0.0	0.04	0.02	0.00	-0.02	-0.02	-0.02	0.00	-0.01	0.01	0.01	-0.03	-0.07	-0.09	-0.14	-0.14	-0.22	-0.14	-0.07	-0.03	-0.02	0.01	0.01	0.03	0.04	-0.22	-0.04
Max.	**1.8**	**1.72**	**1.68**	**1.50**	**1.48**	**1.50**	**1.45**	**1.60**	**1.63**	**1.66**	**1.98**	**2.03**	**1.24**	**1.35**	**1.35**	**1.49**	**1.77**	**1.85**	**1.82**	**1.80**	**1.80**	**1.82**	**1.79**	**1.79**	**2.03**		
Min.	**-0.1**	**-0.14**	**-0.13**	**-0.14**	**-0.12**	**-0.14**	**-0.35**	**-0.15**	**-0.14**	**-0.14**	**-0.13**	**-0.17**	**-2.31**	**-3.80**	**-0.45**	**-0.38**	**-0.41**	**-0.35**	**-0.22**	**-0.09**	**-0.12**	**-0.17**	**-0.13**	**-0.14**		**-3.80**	
Avg.	**0.2**	**0.22**	**0.23**	**0.23**	**0.24**	**0.23**	**0.21**	**0.24**	**0.24**	**0.24**	**0.23**	**0.21**	**0.05**	**-0.01**	**0.11**	**0.10**	**0.11**	**0.12**	**0.15**	**0.19**	**0.20**	**0.23**	**0.23**	**0.23**			**0.19**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.0	0.06	0.02	0.03	0.03	0.08	0.16	0.09	0.22	-0.03	0.05	-0.16	-0.12	-0.13	-0.06	-0.17	-0.06	-0.04	-0.01	0.00	0.00	0.02	0.04	0.09	0.22	-0.17	0.01
2	0.1	0.02	0.14	0.02	0.02	0.02	-0.04	0.02	0.00	-0.01	0.08	0.06	0.01	-0.02	-0.06	-0.07	-0.09	-0.11	-0.08	-0.04	-0.06	-0.08	-0.17	-0.22	0.14	-0.22	-0.02
3	-0.2	-0.16	-0.15	-0.12	-0.17	-0.16	-0.15	-0.11	-0.12	-0.13	-0.16	-0.23	-0.26	-0.29	-0.28	-0.25	-0.27	-0.33	-0.28	-0.22	-0.17	-0.14	-0.12	-0.09	-0.09	-0.33	-0.19
4	-0.1	-0.07	-0.03	-0.02	-0.04	-0.06	-0.10	-0.12	-0.13	-0.08	-0.06	-0.08	-0.07	-0.10	-0.12	-0.17	-0.14	-0.12	-0.09	-0.07	-0.12	-0.20	-0.26	-0.24	-0.02	-0.26	-0.11
5	-0.2	-0.23	-0.23	-0.21	-0.25	-0.22	-0.22	-0.19	-0.14	-0.12	-0.18	-0.19	-0.19	-0.20	-0.12	-0.12	-0.13	-0.13	-0.10	-0.06	-0.01	-0.04	-0.03	-0.02	-0.01	-0.25	-0.15
6	0.0	-0.02	-0.01	-0.03	0.01	-0.02	-0.02	-0.07	-0.12	-0.11	-0.05	-0.04	-0.06	-0.14	-0.26	-0.28	-0.28	-0.29	-0.19	-0.20	-0.16	-0.13	-0.11	-0.07	0.01	-0.29	-0.11
7	-0.1	-0.07	-0.11	-0.10	-0.15	-0.12	-0.11	-0.19	-0.23	-0.21	-0.17	-0.15	-0.20	-0.25	-0.30	-0.28	-0.31	-0.26	-0.25	-0.21	-0.22	-0.18	-0.18	-0.19	-0.05	-0.31	-0.19
8	-0.2	-0.08	-0.11	-0.15	-0.09	-0.17	-0.17	-0.17	-0.10	-0.07	-0.12	-0.06	-0.11	-0.11	-0.14	-0.12	-0.14	-0.16	-0.11	-0.06	-0.02	0.01	0.10	-0.02	0.10	-0.18	-0.10
9	0.0	-0.02	-0.03	-0.03	-0.03	-0.06	-0.05	-0.03	-0.01	-0.01	-0.01	-0.01	-0.02	-0.02	0.00	0.01	0.01	0.00	0.00	0.01	0.03	0.02	0.01	-0.01	0.03	-0.06	-0.01
10	0.0	-0.01	0.06	0.10	0.07	0.03	0.01	0.10	0.10	0.06	0.02	0.04	0.10	-0.10	-0.06	0.01	0.01	0.03	0.23	0.09	0.21	0.28	0.35	0.04	0.35	-0.10	0.07
11	0.0	-0.02	0.03	0.04	0.05	0.02	0.07	0.16	0.16	0.20	0.18	0.27	0.28	0.19	-0.01	0.02	-0.19	-0.26	-0.09	-0.05	-0.13	-0.21	-0.23	-0.25	0.28	-0.26	0.01
12	-0.2	-0.20	-0.19	-0.20	-0.23	-0.21	-0.17	-0.16	-0.18	-0.16	-0.20	-0.21	-0.21	-0.19	-0.20	-0.21	-0.24	-0.23	-0.15	-0.16	-0.17	-0.17	-0.19	-0.22	-0.15	-0.24	-0.19
13	-0.1	-0.15	-0.11	-0.21	-0.17	-0.14	-0.13	-0.14	-0.11	0.02	-0.09	-0.09	-0.04	0.06	-0.06	-0.05	-0.03	-0.02	0.01	-0.01	0.01	0.00	-0.02	-0.01	0.06	-0.21	-0.07
14	-0.1	0.03	0.01	0.05	-0.02	0.00	0.02	-0.01	0.01	0.00	0.03	-0.02	-0.05	-0.06	-0.08	-0.08	-0.09	-0.06	-0.06	-0.03	-0.01	-0.03	-0.05	0.02	0.05	-0.09	-0.02
15	0.0	-0.07	-0.05	-0.05	-0.03	-0.04	-0.02	-0.03	-0.03	-0.02	-0.07	-0.05	-0.08	-0.09	-0.14	-0.14	-0.13	-0.12	-0.11	-0.14	-0.14	-0.11	-0.11	-0.11	0.02	-0.14	-0.08
16	-0.1	-0.10	-0.10	-0.11	-0.16	-0.16	-0.16	-0.17	-0.13	-0.16	-0.17	-0.17	-0.14	-0.21	-0.21	-0.25	-0.28	-0.24	-0.17	-0.22	-0.19	-0.15	-0.11	-0.14	-0.06	-0.28	-0.17
17	-0.1	-0.18	-0.24	-0.25	-0.24	-0.26	-0.23	-0.13	-0.13	-0.11	-0.17	-0.07	-0.04	-0.06	-0.03	0.02	-0.03	-0.05	-0.04	-0.03	-0.03	-0.03	-0.03	0.01	0.02	-0.26	-0.10
18	0.0	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.00	-0.02	-0.02	-0.12	-0.20	-0.13	-0.09	-0.06	-0.03	0.06	0.09	0.21	0.17	0.14	0.21	0.21	-0.20	0.00
19	0.2	0.13	0.08	0.08	0.03	0.05	0.06	0.06	0.06	-0.01	-0.04	-0.05	-0.08	-0.13	-0.19	-0.12	-0.15	-0.13	-0.11	-0.16	-0.17	-0.21	-0.20	-0.21	0.21	-0.21	-0.05
20	-0.2	-0.19	-0.18	-0.16	-0.14	-0.19	-0.17	-0.20	-0.12	-0.12	-0.10	-0.11	-0.16	-0.13	-0.14	-0.15	-0.10	-0.10	-0.07	-0.10	-0.07	-0.05	-0.05	-0.05	-0.05	-0.21	-0.13
21	0.0	-0.06	-0.07	-0.04	-0.05	-0.07	-0.05	-0.10	-0.13	-0.11	-0.16	-0.16	-0.17	-0.17	-0.21	-0.23	-0.16	-0.09	-0.06	-0.09	-0.11	-0.13	-0.07	-0.05	-0.04	-0.23	-0.11
22	-0.1	-0.23	-0.26	-0.23	-0.23	-0.18	-0.19	-0.31	-0.27	-0.28	-0.31	-0.27	-0.22	-0.30	-0.40	-0.30	-0.30	-0.29	-0.19	-0.15	-0.15	-0.13	-0.04	0.07	0.07	-0.40	-0.22
23	0.0	0.04	0.02	0.06	0.01	0.00	-0.04	-0.10	-0.10	-0.19	-0.18	-0.18	-0.24	-0.22	-0.34	-0.30	-0.29	-0.33	-0.27	-0.25	-0.25	-0.23	-0.22	-0.24	0.06	-0.34	-0.16
24	-0.3	-0.26	-0.22	-0.18	-0.18	-0.19	-0.20	-0.19	-0.32	-0.33	-0.35	-0.30	-0.27	-0.26	-0.26	-0.32	-0.25	-0.15	-0.09	-0.01	0.03	0.02	-0.02	0.01	0.03	-0.35	-0.19
25	0.0	0.00	-0.02	-0.07	-0.09	-0.06	-0.07	-0.06	-0.03	-0.03	-0.01	-0.02	-0.02	-0.02	-0.03	-0.02	0.00	0.02	0.05	0.15	0.15	0.18	0.19	0.18	0.19	-0.09	0.02
26	0.2	0.22	0.22	0.17	0.07	0.10	0.22	0.09	0.08	0.06	0.05	0.12	0.05	0.02	-0.02	-0.01	-0.01	-0.04	-0.07	-0.09	-0.09	-0.12	-0.16	-0.23	0.22	-0.23	0.03
27	-0.2	-0.24	-0.21	-0.21	-0.20	-0.19	-0.16	-0.22	-0.23	-0.22	-0.25	-0.26	-0.18	-0.25	-0.20	-0.27	-0.27	-0.29	-0.30	-0.22	-0.22	-0.20	-0.17	-0.15	-0.15	-0.30	-0.22
28	-0.1	-0.16	-0.12	-0.10	0.01	0.20	0.25	0.22	0.26	0.24	0.29	0.17	0.11	-0.01	-0.41	-0.31	-0.01	-0.06	-0.05	-0.03	0.01	0.05	0.06	0.06	0.29	-0.41	0.02
29	0.2	0.09	0.03	0.06	0.04	0.07	0.16	0.16	0.22	0.46	0.31	0.28	0.16	0.03	0.03	0.01	-0.07	-0.04	0.00	-0.02	-0.02	-0.03	-0.03	-0.03	0.46	-0.07	0.09
30	0.0	0.01	-0.03	0.03	0.01	0.02	0.03	0.16	0.03	0.01	0.07	0.01	-0.02	-0.03	-0.02	-0.04	-0.04	0.01	0.04	0.02	0.08	0.10	0.08	0.11	0.16	-0.04	0.03
31	0.1	0.18	0.09	0.13	0.08	0.13	0.11	0.12	0.17	0.18	0.05	0.14	0.13	0.03	-0.07	-0.11	-0.29	0.00	0.07	0.11	0.12	0.07	0.07	0.06	0.18	-0.29	0.07
Max.	**0.2**	**0.22**	**0.22**	**0.17**	**0.08**	**0.20**	**0.25**	**0.22**	**0.26**	**0.46**	**0.31**	**0.28**	**0.28**	**0.19**	**0.03**	**0.02**	**0.01**	**0.03**	**0.23**	**0.15**	**0.21**	**0.28**	**0.35**	**0.21**	**0.46**		
Min.	**-0.3**	**-0.26**	**-0.26**	**-0.25**	**-0.25**	**-0.26**	**-0.23**	**-0.31**	**-0.32**	**-0.33**	**-0.35**	**-0.30**	**-0.27**	**-0.30**	**-0.41**	**-0.32**	**-0.31**	**-0.33**	**-0.30**	**-0.25**	**-0.25**	**-0.23**	**-0.26**	**-0.25**		**-0.41**	
Avg.	**0.0**	**-0.06**	**-0.06**	**-0.06**	**-0.07**	**-0.06**	**-0.04**	**-0.05**	**-0.04**	**-0.04**	**-0.06**	**-0.06**	**-0.07**	**-0.11**	**-0.14**	**-0.14**	**-0.14**	**-0.13**	**-0.08**	**-0.07**	**-0.05**	**-0.05**	**-0.05**	**-0.05**			**-0.07**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.1	0.07	0.07	0.05	0.01	0.05	0.08	0.02	0.01	0.02	0.06	0.02	0.00	-0.08	-0.10	-0.12	-0.08	-0.03	-0.03	0.00	0.01	0.00	0.00	-0.01	0.08	-0.12	0.00
2	0.0	-0.02	-0.01	-0.03	-0.03	-0.02	-0.04	-0.06	-0.09	-0.10	-0.06	-0.22	-0.21	-0.27	-0.29	-0.30	-0.30	-0.25	-0.34	-0.30	-0.34	-0.36	-0.30	-0.32	-0.01	-0.36	-0.18
3	-0.3	-0.28	-0.26	-0.20	-0.18	-0.20	-0.20	-0.24	-0.26	-0.28	-0.26	-0.25	-0.23	-0.25	-0.30	-0.25	-0.23	-0.21	-0.23	-0.26	-0.25	-0.29	-0.24	-0.20	-0.18	-0.30	-0.24
4	-0.2	-0.19	-0.15	-0.20	-0.14	-0.11	-0.17	-0.20	-0.19	-0.21	-0.20	-0.19	-0.21	-0.22	-0.21	-0.21	-0.19	-0.17	-0.14	-0.13	-0.13	-0.14	-0.17	-0.18	-0.11	-0.22	-0.18
5	-0.2	-0.21	-0.19	-0.16	-0.19	-0.17	-0.18	-0.12	-0.15	-0.13	0.01	0.11	0.07	0.18	0.01	-0.01	-0.02	0.02	0.01	0.03	0.02	0.12	0.04	0.03	0.18	-0.21	-0.04
6	0.0	0.07	0.04	0.03	0.04	0.06	0.03	0.03	0.01	0.03	0.02	-0.01	-0.02	-0.03	-0.07	0.03	0.16	0.06	0.02	0.00	-0.02	-0.06	-0.10	-0.08	0.16	-0.10	0.01
7	0.0	-0.07	-0.15	-0.14	-0.14	-0.15	-0.19	-0.21	-0.15	-0.10	-0.11	-0.13	-0.11	-0.10	-0.10	-0.08	-0.05	-0.03	-0.04	-0.07	-0.07	0.00	0.01	-0.01	0.01	-0.21	-0.09
8	0.0	0.00	0.01	-0.01	-0.01	-0.02	-0.05	-0.03	0.01	0.08	0.09	0.08	0.04	-0.03	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.01	-0.02	-0.01	-0.02	0.09	-0.05	-0.01
9	0.0	-0.01	0.00	0.01	0.01	0.02	0.01	0.01	0.04	0.02	0.02	0.04	0.06	0.03	0.02	0.08	0.06	0.05	0.05	0.01	0.01	0.02	0.05	0.08	0.08	-0.01	0.03
10	0.1	0.05	0.04	0.07	0.07	0.05	0.12	0.10	0.09	0.07	0.06	0.03	0.02	-0.02	0.07	0.35	0.07	0.14	0.07	-0.03	-0.04	0.06	0.10	0.15	0.35	-0.04	0.07
11	0.0	0.06	0.02	-0.02	0.00	0.00	-0.01	-0.01	-0.03	0.03	0.03	0.07	-0.01	-0.04	-0.07	-0.05	-0.01	-0.05	-0.04	-0.04	-0.07	-0.10	-0.14	-0.11	0.07	-0.14	-0.02
12	-0.1	-0.12	-0.15	-0.21	-0.18	-0.16	-0.14	-0.15	-0.15	-0.17	-0.16	-0.14	-0.14	-0.18	-0.19	-0.15	-0.10	-0.08	-0.03	0.02	-0.01	0.01	0.16	0.04	0.16	-0.21	-0.11
13	0.0	0.07	0.10	0.11	0.06	0.17	0.19	0.58	0.46	0.21	0.12	-0.01	0.04	0.01	0.00	-0.02	0.00	0.03	0.04	0.04	0.09	0.05	0.11	0.08	0.58	-0.02	0.11
14	0.1	0.05	0.03	0.06	0.11	0.04	0.03	0.10	0.13	0.10	0.16	0.03	0.05	-0.01	0.00	0.00	0.00	0.00	0.00	-0.01	0.02	0.00	0.01	0.00	0.16	-0.01	0.04
15	0.0	0.00	0.04	-0.03	-0.04	-0.01	0.00	0.02	0.03	0.06	0.21	0.06	0.09	0.06	0.08	0.04	0.02	0.02	0.06	0.02	-0.01	0.00	-0.02	-0.02	0.21	-0.04	0.03
16	0.0	-0.01	0.02	0.06	0.07	0.06	-0.02	-0.02	-0.03	-0.02	0.02	0.06	0.06	0.07	0.12	0.11	0.15	0.09	0.08	0.03	-0.06	-0.05	0.02	0.05	0.15	-0.06	0.03
17	0.1	0.16	0.14	0.05	0.02	0.05	0.08	0.00	0.05	-0.01	0.01	0.04	0.05	0.05	0.00	0.06	0.02	0.10	0.05	0.12	0.12	0.10	-0.05	-0.04	0.16	-0.05	0.05
18	0.0	0.00	-0.02	0.00	0.00	0.01	-0.06	-0.09	-0.05	-0.06	-0.01	0.04	0.06	0.10	-0.01	-0.04	0.00	-0.02	0.03	-0.07	-0.11	-0.11	-0.03	-0.03	0.10	-0.11	-0.02
19	0.0	-0.06	0.00	-0.08	-0.03	-0.09	-0.18	-0.18	-0.23	-0.24	-0.27	-0.32	-0.28	-0.29	-0.34	-0.31	-0.22	-0.17	-0.11	-0.11	-0.20	-0.11	-0.10	-0.07	0.01	-0.34	-0.17
20	-0.1	-0.07	-0.20	-0.20	-0.21	-0.15	-0.16	-0.22	-0.27	-0.28	-0.28	-0.29	-0.29	-0.29	-0.37	-0.34	-0.32	-0.34	-0.36	-0.40	-0.35	-0.38	-0.39	-0.37	-0.06	-0.40	-0.27
21	-0.4	-0.39	-0.36	-0.34	-0.38	-0.32	-0.40	-0.38	-0.39	-0.39	-0.35	-0.35	-0.28	-0.26	-0.37	-0.39	-0.36	-0.35	-0.23	-0.23	-0.15	-0.07	-0.16	-0.04	-0.04	-0.40	-0.31
22	-0.1	-0.07	0.00	-0.01	-0.02	0.00	0.02	-0.04	-0.09	-0.04	0.01	-0.06	0.01	-0.10	-0.01	-0.06	0.03	0.03	-0.04	-0.02	-0.07	-0.06	-0.04	-0.03	0.03	-0.12	-0.03
23	-0.1	-0.07	-0.03	-0.06	-0.04	-0.01	-0.05	-0.03	-0.03	-0.05	-0.04	-0.03	-0.02	0.00	0.03	0.10	0.06	0.06	0.07	0.00	0.02	0.01	0.01	-0.01	0.10	-0.07	-0.01
24	0.0	0.00	-0.01	0.00	0.02	0.03	0.02	0.03	0.03	0.01	-0.01	0.01	-0.01	-0.01	-0.02	-0.02	-0.02	0.00	-0.01	0.05	0.10	0.03	0.21	0.23	0.23	-0.02	0.03
25	0.0	-0.03	-0.07	-0.11	-0.13	-0.10	-0.11	-0.08	-0.10	-0.07	-0.10	-0.13	-0.14	-0.17	-0.24	-0.27	-0.30	-0.28	-0.31	-0.24	-0.23	-0.21	-0.19	-0.25	0.00	-0.31	-0.16
26	-0.2	-0.27	-0.33	-0.33	-0.34	-0.31	-0.31	-0.26	-0.26	-0.24	-0.24	-0.24	-0.28	-0.25	-0.21	-0.21	-0.23	-0.27	-0.29	-0.28	-0.25	-0.20	-0.12	-0.18	-0.12	-0.34	-0.26
27	-0.1	-0.08	-0.14	-0.09	-0.08	0.04	-0.04	0.01	-0.06	-0.06	-0.06	-0.03	-0.05	-0.04	-0.03	-0.08	-0.04	-0.16	-0.14	-0.07	-0.09	-0.02	0.25	0.20	0.25	-0.16	-0.04
28	0.3	0.26	0.06	0.15	0.36	0.22	0.28	0.12	0.62	0.45	0.38	0.21	0.19	0.09	0.10	0.07	0.04	-0.04	-0.08	-0.07	-0.04	-0.06	-0.08	-0.09	0.62	-0.09	0.14
29	-0.1	-0.17	-0.19	-0.17	-0.19	-0.21	-0.18	-0.15	-0.21	-0.24	-0.26	-0.27	-0.33	-0.30	-0.29	-0.26	-0.26	-0.26	-0.26	-0.25	-0.23	-0.23	-0.24	-0.23	-0.12	-0.33	-0.23
30	-0.3	-0.29	-0.31	-0.34	-0.39	-0.42	-0.42	-0.38	-0.30	-0.29	-0.27	-0.28	-0.19	-0.23	-0.32	-0.24	-0.07	-0.12	-0.19	-0.15	-0.12	-0.03	-0.11	-0.06	-0.03	-0.42	-0.24
Max.	**0.3**	**0.26**	**0.14**	**0.15**	**0.36**	**0.22**	**0.28**	**0.58**	**0.62**	**0.45**	**0.38**	**0.21**	**0.19**	**0.18**	**0.12**	**0.35**	**0.16**	**0.14**	**0.08**	**0.12**	**0.12**	**0.12**	**0.25**	**0.23**	**0.62**		
Min.	**-0.4**	**-0.39**	**-0.36**	**-0.34**	**-0.39**	**-0.42**	**-0.42**	**-0.38**	**-0.39**	**-0.39**	**-0.35**	**-0.35**	**-0.33**	**-0.30**	**-0.37**	**-0.39**	**-0.36**	**-0.35**	**-0.36**	**-0.40**	**-0.35**	**-0.38**	**-0.39**	**-0.37**		**-0.42**	
Avg.	**-0.1**	**-0.05**	**-0.07**	**-0.07**	**-0.07**	**-0.06**	**-0.07**	**-0.06**	**-0.05**	**-0.06**	**-0.05**	**-0.07**	**-0.07**	**-0.09**	**-0.10**	**-0.09**	**-0.07**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.07**	**-0.05**	**-0.05**			**-0.07**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Temperature Difference 2-meter to 10-meter (deg. C)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.0	-0.04	-0.03	-0.03	-0.08	-0.05	-0.09	-0.03	0.15	0.02	0.02	0.03	0.08	0.07	0.11	0.01	0.07	0.16	0.06	0.08	0.11	0.12	0.09	0.03	0.16	-0.09	0.03
2	0.1	0.06	-0.02	-0.03	0.05	0.06	-0.04	0.08	0.02	-0.02	0.04	0.06	0.03	0.06	0.04	0.02	0.00	0.02	0.01	0.02	0.02	0.00	0.00	0.02	0.09	-0.04	0.02
3	0.0	0.02	0.01	0.01	0.02	0.03	0.02	-0.01	0.01	0.01	0.01	0.02	0.00	0.03	0.03	0.03	0.01	0.00	0.02	0.02	0.01	-0.01	0.01	0.05	0.05	-0.01	0.01
4	0.1	0.08	0.27	0.14	0.18	0.25	0.33	0.32	0.20	0.16	0.51	0.16	0.02	0.02	0.05	0.02	0.27	0.27	0.26	0.24	0.16	0.03	0.14	0.33	0.51	0.02	0.19
5	0.4	0.22	0.14	0.20	0.22	0.23	0.32	0.27	0.34	0.38	0.26	0.29	0.02	0.02	0.10	0.05	0.04	0.03	0.12	0.07	0.02	0.05	0.01	0.01	0.41	0.01	0.16
6	0.0	0.02	0.09	0.17	0.23	0.27	0.29	0.19	0.19	0.13	0.30	0.21	0.26	0.14	0.04	-0.02	0.00	0.06	0.10	0.08	0.36	0.19	0.24	0.22	0.36	-0.02	0.16
7	0.3	0.22	0.28	0.29	0.21	0.15	0.06	0.09	0.10	0.16	0.14	0.08	0.10	0.07	0.16	0.16	0.12	0.13	0.12	0.04	0.04	0.04	0.02	0.05	0.32	0.02	0.13
8	0.0	0.00	0.00	-0.01	0.02	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.06	0.06	0.05	0.03	0.01	0.00	0.05	0.05	0.05	0.06	0.01	0.04	0.06	-0.01	0.02
9	0.1	0.10	0.14	0.13	0.13	0.03	0.05	-0.02	-0.03	-0.04	-0.02	0.01	-0.01	-0.01	-0.01	0.02	-0.02	0.00	0.00	-0.01	-0.04	-0.10	-0.06	-0.01	0.14	-0.10	0.01
10	0.0	-0.01	0.00	-0.03	-0.02	-0.02	-0.06	-0.05	-0.04	-0.07	-0.13	-0.14	-0.16	-0.14	-0.08	-0.10	-0.09	-0.10	-0.08	-0.08	-0.09	-0.08	-0.09	-0.11	0.00	-0.16	-0.07
11	-0.1	-0.06	-0.06	-0.06	-0.05	-0.04	-0.02	0.02	-0.03	-0.03	-0.01	0.03	0.00	-0.07	-0.07	-0.07	-0.08	-0.06	-0.07	-0.10	-0.06	0.03	-0.05	-0.10	0.03	-0.10	-0.05
12	0.0	-0.09	-0.13	-0.05	-0.11	-0.12	-0.11	-0.06	-0.01	-0.02	0.07	0.02	-0.08	-0.10	-0.09	-0.05	-0.04	-0.02	-0.04	-0.04	0.03	0.03	0.01	0.01	0.07	-0.13	-0.04
13	0.0	0.04	0.16	0.08	0.25	0.01	0.04	0.06	0.03	0.05	0.09	-0.06	-0.01	-0.08	-0.05	-0.01	0.00	0.00	0.11	0.09	0.03	0.19	0.26	0.08	0.26	-0.08	0.06
14	0.2	0.27	0.14	0.17	0.26	0.15	0.12	0.04	0.20	0.20	0.16	0.19	0.01	0.05	-0.05	-0.03	0.04	0.18	0.19	0.11	0.05	0.03	0.12	0.06	0.27	-0.05	0.12
15	0.0	0.03	-0.01	-0.01	-0.02	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02	-0.02	0.00	-0.01	-0.03	-0.03	-0.03	-0.03	-0.04	-0.05	-0.05	-0.05	-0.05	0.04	-0.05	-0.02
16	-0.1	-0.06	0.00	-0.01	0.01	-0.04	-0.05	-0.02	-0.03	-0.05	-0.04	-0.06	0.02	-0.02	-0.04	-0.01	-0.03	0.01	0.01	0.01	-0.07	-0.03	-0.01	0.09	0.09	-0.07	-0.02
17	0.1	0.17	0.08	0.07	0.06	0.03	0.06	0.04	0.13	0.06	0.18	0.17	0.15	0.10	0.26	0.36	0.49	0.22	0.21	0.12	0.33	0.20	0.11	0.22	0.49	0.03	0.16
18	0.1	0.12	0.22	0.13	0.10	0.11	0.10	0.12	0.02	0.02	0.05	0.02	0.03	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.00	0.22	0.00	0.05
19	0.0	-0.01	-0.01	-0.01	-0.02	0.00	0.00	-0.01	-0.02	-0.01	-0.01	-0.02	-0.01	-0.01	-0.02	-0.02	-0.02	0.00	0.00	-0.01	-0.01	0.00	0.00	0.01	0.01	-0.02	-0.01
20	0.0	0.02	0.02	0.03	0.03	0.06	0.07	0.13	0.09	0.05	0.03	0.07	0.09	0.14	0.18	0.06	0.03	0.09	0.28	0.14	0.13	0.03	0.12	0.08	0.28	0.02	0.08
21	0.1	0.13	0.11	0.06	0.10	0.08	0.06	0.09	0.15	0.07	0.08	0.09	-0.01	-0.29	-0.14	0.01	0.15	0.09	0.07	0.09	0.10	0.18	0.17	0.10	0.18	-0.29	0.07
22	0.0	-0.04	-0.04	-0.02	-0.02	-0.03	-0.04	-0.05	-0.06	-0.06	-0.02	-0.04	-0.04	-0.05	-0.06	-0.06	-0.10	-0.08	-0.08	-0.07	-0.05	-0.07	-0.06	-0.08	-0.02	-0.10	-0.05
23	0.0	-0.04	-0.05	-0.03	-0.01	-0.01	-0.03	-0.02	-0.03	-0.02	-0.03	0.18	0.10	0.17	-0.01	-0.01	-0.03	0.01	0.00	-0.03	-0.06	-0.06	-0.07	-0.05	0.18	-0.07	-0.01
24	0.0	-0.03	-0.07	0.01	0.01	-0.02	-0.08	-0.05	-0.05	-0.09	-0.07	0.02	0.00	-0.01	0.01	0.00	-0.01	-0.05	-0.04	-0.09	-0.05	-0.03	0.01	-0.01	0.02	-0.09	-0.03
25	0.1	-0.01	-0.01	-0.02	-0.04	0.00	0.02	-0.01	0.00	0.00	0.04	0.05	0.02	0.01	-0.05	-0.05	-0.03	-0.05	-0.04	-0.04	-0.14	-0.13	-0.08	-0.12	0.10	-0.14	-0.02
26	-0.2	-0.18	-0.18	-0.20	-0.23	-0.21	-0.24	-0.26	-0.19	-0.15	-0.19	-0.24	-0.26	-0.31	-0.28	-0.30	-0.32	-0.26	-0.27	-0.17	-0.16	-0.17	-0.18	-0.15	-0.15	-0.32	-0.22
27	-0.2	-0.17	-0.21	-0.24	-0.25	-0.27	-0.41	-0.31	-0.29	-0.20	-0.23	-0.22	-0.21	-0.24	-0.24	-0.29	-0.29	-0.25	-0.25	-0.25	-0.23	-0.22	-0.20	-0.16	-0.16	-0.41	-0.24
28	-0.2	-0.24	-0.24	-0.24	-0.24	-0.25	-0.31	-0.34	-0.21	-0.18	-0.22	-0.23	-0.22	-0.26	-0.28	-0.30	-0.30	-0.24	-0.26	-0.22	-0.20	-0.19	-0.18	-0.17	-0.17	-0.34	-0.24
29	-0.2	-0.19	-0.19	-0.28	-0.44	-0.40	-0.28	-0.29	-0.42	-0.37	-0.39	-0.32	-0.27	-0.34	-0.30	-0.20	-0.20	-0.11	-0.05	-0.10	-0.06	-0.13	-0.07	-0.13	-0.05	-0.44	-0.24
30	-0.1	-0.12	0.00	-0.15	-0.21	-0.32	-0.26	-0.21	-0.20	-0.38	-0.36	-0.37	-0.34	-0.42	-0.49	-0.56	-0.63	-0.59	-0.68	-0.45	-0.45	-0.56	-0.59	-0.51	0.00	-0.68	-0.37
31	-0.6	-0.66	-0.58	-0.76	-0.80	-0.77	-0.92	-0.76	-0.74	-0.74	-0.56	-0.66	-0.61	-0.56	-0.52	-0.62	-0.54	-0.49	-0.45	-0.41	-0.37	-0.51	-0.32	-0.41	-0.32	-0.92	-0.60
Max.	**0.4**	**0.27**	**0.28**	**0.29**	**0.26**	**0.27**	**0.33**	**0.32**	**0.34**	**0.38**	**0.51**	**0.29**	**0.26**	**0.17**	**0.26**	**0.36**	**0.49**	**0.27**	**0.28**	**0.24**	**0.36**	**0.20**	**0.26**	**0.33**	**0.51**		
Min.	**-0.6**	**-0.66**	**-0.58**	**-0.76**	**-0.80**	**-0.77**	**-0.92**	**-0.76**	**-0.74**	**-0.74**	**-0.56**	**-0.66**	**-0.61**	**-0.56**	**-0.52**	**-0.62**	**-0.63**	**-0.59**	**-0.68**	**-0.45**	**-0.45**	**-0.56**	**-0.59**	**-0.51**		**-0.92**	
Avg.	**0.0**	**-0.01**	**-0.01**	**-0.02**	**-0.02**	**-0.03**	**-0.04**	**-0.03**	**-0.02**	**-0.04**	**-0.01**	**-0.02**	**-0.04**	**-0.06**	**-0.06**	**-0.06**	**-0.05**	**-0.03**	**-0.02**	**-0.03**	**-0.02**	**-0.04**	**-0.02**	**-0.02**			**-0.03**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	53.8	51.7	45.0	38.5	35.0	34.4	35.4	44.4	58.3	65.7	61.4	66.6	64.3	70.7	73.8	76.5	80.0	82.1	82.9	82.4	85.2	81.6	85.3	88.2	88.2	34.4	64.3
2	88.5	88.7	85.4	89.5	90.0	89.8	89.1	89.1	91.6	90.0	90.3	86.1	81.2	76.0	74.7	82.4	83.2	82.3	82.4	83.4	84.8	82.2	82.1	83.7	91.6	74.7	85.3
3	86.7	82.8	83.3	85.8	85.8	85.5	84.6	86.7	90.0	88.0	88.2	87.6	87.0	85.6	84.4	85.1	83.8	84.0	83.8	81.8	81.8	83.0	83.0	84.2	90.0	81.8	85.1
4	83.5	83.2	81.9	81.5	82.0	83.0	84.0	84.2	83.9	83.0	82.5	83.2	83.5	82.6	81.3	81.4	81.3	81.2	81.8	80.4	79.3	77.6	77.7	77.9	84.2	77.6	81.7
5	77.9	79.2	80.0	80.3	80.4	80.6	81.6	81.4	80.5	79.6	80.3	80.8	80.8	80.0	79.6	83.4	78.9		-75.0	-72.9	-73.1	-74.2	-74.0	-78.0	83.4	-78.0	39.9
6	-75.9	-76.8	-73.2	-70.7	-68.5	-74.7	-81.4	-83.8	-86.8	-86.8	-91.1	-95.5	-96.9	-101.3	-101.2	-100.2	-102.8	-102.4	-102.0	-103.5	-102.8	-103.4	-104.5	-104.8	-68.5	-104.8	-91.3
7	-102.4	-97.2	-94.6	-91.3	-91.1	-94.3	-94.9	-92.4	-89.1	-91.6	-94.4	-96.3	-97.0	-96.7	-94.9	-90.1	-89.3	-84.2	-65.4	-50.0	-45.9	-47.6	-58.0	-68.6	-45.9	-102.4	-84.1
8	-71.0	-72.1	-74.1	-78.7	-65.2	-57.9	-57.1	-55.8	-55.1	-55.4	-57.6	-59.6	-54.5	-54.6	-59.7	-57.1	-58.7	-56.3	-52.9	-59.8	-67.2	-71.8	-72.4	-70.0	-52.9	-78.7	-62.3
9	-67.7	-72.8	-68.8	-69.9	-64.5	-58.9	-57.9	-58.4	-56.4	-58.4	-61.1	-62.0	-72.6	-75.8	-79.2	-76.1	-87.7	-95.0	-96.0	-97.8	-96.8	-94.7	-101.0	-106.4	-56.4	-106.4	-76.5
10	-108.5	-103.5	-106.4	-102.2	-103.3	-97.2	-98.0	-98.9	-102.4	-100.1	-102.0	-104.3	-106.7	-106.9	-106.9	-106.6	-102.5	-102.8	-104.9	-110.5	-110.4	-111.8	-114.0	-113.7	-97.2	-114.0	-105.2
11	-115.0	-116.0	-116.8	-116.1	-110.1	-101.5	-93.6	-100.4	-98.7	-97.6	-103.4	-106.0	-106.0	-107.8	-108.9	-108.7	-106.9	-108.9	-104.4	-103.0	-104.1	-103.5	-103.5	-104.5	-93.6	-116.8	-106.1
12	-108.7	-111.5	-112.7	-111.4	-110.0	-108.2	-100.8	-100.3	-103.9	-104.6	-103.1	-100.1	-101.0	-102.3	-100.8	-102.1	-104.8	-105.4	-103.9	-105.0	-106.5	-106.2	-106.8	-108.9	-100.1	-112.7	-105.4
13	-109.0	-108.7	-108.7	-106.3	-102.5	-103.1	-102.5	-102.4	-104.0	-104.4	-105.9	-106.7	-107.8	-109.9	-111.4	-113.9	-113.8	-114.9	-116.3	-114.9	-116.8	-114.1	-112.4	-110.4	-102.4	-116.8	-109.2
14	-111.2	-107.2	-114.7	-116.1	-116.8	-118.0	-117.7	-115.0	-107.7	-99.9	-92.6	-99.9	-109.0	-111.6	-112.2	-112.2	-107.5	-95.6	-82.8	-67.8	-55.6	-75.3	-74.1	-82.3	-55.6	-118.0	-100.1
15	-49.2	-29.3	-42.6	-49.3	-60.9	-34.7	79.4	62.2											230.2	223.5	223.1	227.1	216.1	196.4	230.2	-60.9	85.1
16	188.5	195.0	224.6	243.0		259.6	194.1	138.0	126.0	108.8	138.9	123.5	79.4	51.3	-1.3	-44.6	-71.0	-77.9	-78.5	-74.1	-80.3	-86.0	-90.5	-87.5	259.6	-90.5	60.0
17	-87.4	-87.2	-89.4	104.5	107.1	-95.3	-91.1	109.9	123.7	125.8	126.1	124.7	113.1	-95.1	-91.1	-96.6	105.9	108.8	107.0	-92.8	-85.4	-76.4	-67.6	-51.1	-51.1	126.1	-98.5
18	-23.8	126.5	177.0	202.1	179.4	162.4		185.6	173.2	167.9	165.2	167.5	152.2	220.0	203.4	131.0	109.7	94.9	90.6	99.9	107.2	113.3	86.9	86.8	220.0	-23.8	138.2
19	89.9	88.5	86.1	91.2	81.7	72.0	32.5	-46.3	-75.1	-81.8	-58.1	-66.3	-85.7	-18.6	-65.1	-86.8	-98.2	104.5	109.2	-97.9	-62.4	-51.2	-53.0	4.3	91.2	109.2	-25.6
20	44.9	47.3	46.1	44.2	52.4	36.5	37.7	22.1	29.5	27.6	26.9	30.5	42.6	22.5	25.4	32.6	28.2	59.9	86.1	78.6	102.1	125.8	121.8	106.8	125.8	22.1	53.3
21	101.5			149.4	134.3	117.7	117.0	76.4	68.5	75.6	79.8	68.9	45.7	37.9	16.9	6.5	8.1	1.2	47.0	55.1	61.8				149.4	1.2	66.8
22				31.2	49.1	38.0	33.7	31.8	37.5	26.8	29.9		16.8	16.2	8.9	8.0	7.1	6.7	8.5	6.5	5.9	7.9	9.8	13.3	49.1	5.9	19.7
23	11.1	11.9	13.6	15.7	11.7	10.2	10.5	11.7			62.1	74.7	56.4	53.9	56.9	53.4	51.7	51.3	44.4	30.7	38.0	28.7	23.6	12.0	74.7	10.2	33.4
24	9.2	12.6	13.4	11.4	8.9	13.8	15.2	12.6	17.6	33.7	58.0	49.0	55.7	21.4	11.6	3.9		2.7	4.5	3.0			15.0	2.8	58.0	2.7	17.9
25	2.9			75.6	58.8		13.4	5.5	4.5	4.9	10.1	4.5	3.8	8.1	9.6	12.2	14.4	11.9	19.3	25.5	26.1	22.7	26.5	27.0	75.6	2.9	18.4
26	23.6	21.9	24.1	37.7	41.6	43.0	37.2	29.0	17.5	12.5	10.9	16.4	18.4	17.5	15.9	18.6	17.4	18.4	16.2	10.4	16.1	20.8	14.0	13.6	43.0	10.4	21.4
27	16.9	24.0	26.7	32.0	35.4	37.6	49.6	47.5	45.9	44.6	28.0	11.9	3.9	5.6	5.9							79.9	46.1		79.9	3.9	31.8
28	49.1																							66.7	66.7	49.1	57.9
29	60.2	56.9	52.8	52.0	50.5	47.6	42.8	42.5	39.8	38.8	38.6	40.2	37.6	39.3	32.9	36.8	47.4	39.8	42.8	39.8	35.3	34.5	27.0	22.9	60.2	22.9	41.6
30		20.6	17.9	19.7	21.4	22.5	38.0	46.1	59.7	53.5	69.6		33.0	68.3	77.7	78.4	80.3	80.3	78.8	75.6	74.8	76.8	76.3	74.0	80.3	17.9	56.5
31	73.9	73.7	74.3	73.9	72.9	71.6	71.6	71.3	71.5	70.6	67.9	64.1	65.4	67.8	65.5	64.3	66.9	71.8	73.9	77.0	77.3	76.6	72.7	72.3	77.3	64.1	71.2
Max.	**188.5**	**195.0**	**224.6**	**243.0**	**179.4**	**259.6**	**194.1**	**185.6**	**173.2**	**167.9**	**165.2**	**167.5**	**152.2**	**220.0**	**203.4**	**131.0**	**109.7**	**94.9**	**230.2**	**223.5**	**223.1**	**227.1**	**216.1**	**196.4**	**259.6**		
Min.	**-115.0**	**-116.0**	**-116.8**	**-116.1**	**-116.8**	**-118.0**	**-117.7**	**-115.0**	**-123.7**	**-125.8**	**-126.1**	**-124.7**	**-113.1**	**-111.6**	**-112.2**	**-113.9**	**-113.8**	-114.9	-116.3	**-114.9**	**-116.8**	**-114.1**	**-114.0**	**-113.7**		**-126.1**	
Avg.	**1.1**	**3.0**	**4.8**	**14.6**	**5.9**	**12.5**	**8.7**	**6.8**	**3.3**	**2.3**	**6.7**	**1.3**	**-1.5**	**1.5**	**-3.7**	**-8.6**	**-11.5**	**-14.4**	**-4.3**	**-3.3**	**-0.3**	**0.8**	**-2.3**	**-1.8**			**1.0**

Total Hours in Month 744 **Hours Data Available** 683 **Data Recovery** 91.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	76.2	77.3	79.9	83.1	84.7	84.5	84.8	84.9	84.2	85.5	88.6	87.1	86.0	84.9	83.1	80.7	78.7	74.4	81.5	82.9	83.5	84.1	83.6	86.1	88.6	74.4	82.9
2	87.7	88.2	86.3	78.6	74.5	73.6	69.0	72.9	69.5	66.8	70.6	70.4	69.9	69.9	69.7	68.7	66.0	63.9	62.8	57.1	57.7	55.6	57.2	60.6	88.2	55.6	69.5
3	60.0	64.4	64.6	65.9	63.3	63.8	64.3	61.8	65.4	67.3	65.2	66.1	66.1	64.5	66.0	67.0	68.0	68.7	70.5	71.5	71.9	73.3	73.7	76.2	76.2	60.0	67.1
4	72.3	73.7	72.5	70.4	66.4	67.7	66.6	65.8	67.2	65.1	73.0	72.7	71.5	67.9	63.3	57.4	57.6	59.0	58.3	57.3	58.5	59.7	63.4	63.7	73.7	57.3	65.5
5	69.8	68.7	65.3	62.0	58.5	55.9	51.4	57.4	58.6	60.8	63.8	71.2	65.7	65.6	65.5	68.8	59.3	57.0	62.4	56.5	62.1	61.7	63.6	60.8	71.2	51.4	62.2
6	60.3	55.9	56.9	63.4	61.9	51.2	52.2	45.0	42.4	47.0	44.1	42.0	39.8	45.0	43.7	48.5	52.0	52.0	50.5	45.0	52.5	57.5	54.8	54.2	63.4	39.8	50.7
7	56.7	58.3	57.3	61.3	56.0	57.6	56.0	53.4	56.5	55.0	56.0	55.9	52.9	49.7	48.2	49.7	48.9	51.8	49.7	51.7	50.9	54.0	57.5	52.6	61.3	48.2	54.1
8	51.6	37.4	50.2	59.6	46.1	46.6	37.4	22.7	24.2	24.9	25.9	25.2	25.2	27.9	28.7	27.2	25.4	25.9	25.6	25.4	26.0	26.3	27.5	31.9	59.6	22.7	32.3
9	34.7	37.7	40.7	40.6	40.8	38.6	35.2	32.2	24.3	19.7	21.5	26.8	30.3	27.6	29.4	30.3	35.2	44.7	44.8	50.8	53.9	49.8	49.9	52.1	53.9	19.7	37.1
10	54.8	58.8	64.0	67.2	66.3	70.3	70.8	70.3	73.5	75.8	75.1	73.5	71.9	73.3	72.4	73.6	72.7	72.3	73.6	75.9	79.3	79.2	77.8	75.3	79.3	54.8	71.6
11	76.8	78.6	75.2	75.0	74.6	82.9	89.5	91.5	92.0	92.8	91.6	92.1	92.1	90.4	89.7	89.2	86.7	92.1	93.3	90.9	89.5	89.1	87.9	84.9	93.3	74.6	87.0
12	82.1	82.3	81.5	80.9	78.4	75.1	71.7	67.1	66.4	73.0	71.9	68.6	68.6	68.1	71.8	70.7	62.2	64.1	65.5	59.3	59.9	59.3	70.3	71.0	82.3	59.3	70.4
13	69.3	67.4	57.1	52.9	45.1	54.8	67.7	67.4	68.9	73.0	68.6	66.8	73.5	73.6	75.5	77.2	78.3	77.8	72.7	72.7	71.8	74.3	74.7	73.9	78.3	45.1	69.0
14	72.4	75.0	75.5	76.5	77.3	77.0	76.9	75.7	76.7	77.3	83.2	88.2	88.6	86.1	82.8	81.6	81.7	84.1	85.8	87.4	85.9	86.7	86.7	85.9	88.6	72.4	81.5
15	85.7	86.0	85.6	83.0	82.7	81.1	78.8	76.1	77.0	78.5	76.3	72.5	68.3	66.8	64.0	65.2	60.6	63.6	64.2	62.7	65.2	77.9	65.8	61.6	86.0	60.6	72.9
16	62.5	64.3	61.6	59.6	61.1	62.3	60.1	62.5	70.8	70.8	70.2	67.4	69.1	68.2	64.9	63.2	64.6	61.4	68.1	71.2	70.9	72.6	74.3	79.3	79.3	59.6	66.7
17	79.0	77.3	77.5	75.1	80.2	75.2	61.6	57.6	54.2	52.3	70.4	76.5	78.0	78.4	80.1	76.0	77.8	81.8	89.2	92.3	91.5	91.5	89.9	87.5	92.3	52.3	77.1
18	85.7	87.6	96.1	97.4	93.5	94.3	96.1	96.7	96.8	97.5	96.0	91.5	90.3	88.3	88.9	92.8	93.0	93.8	88.5	88.9	86.6	66.4	63.0	71.5	97.5	63.0	89.2
19	78.6	71.7	52.3	68.0	69.1	56.7	71.0	76.5	75.6	78.4	78.9	79.1	78.1	77.8	78.0	75.1	73.3	72.7	76.4	78.2	76.0	76.8	76.5	79.7	79.7	52.3	73.9
20	84.3	91.3	95.7	91.8	88.7	89.7	88.0	87.0	78.7	75.1	72.0	63.2	57.3	59.9	57.9	52.9	51.3	54.5	53.4	51.9	50.5	56.4	67.9	58.5	95.7	50.5	69.9
21	51.9	52.0	54.3	58.3	59.8	59.3	56.9	61.2	57.7	61.0	62.6	68.2	70.4	71.1	71.4	75.9	78.3	78.5	79.4	80.8	75.5	76.9	77.2	77.0	80.8	51.9	67.3
22	82.5	79.0	77.5	74.8	73.4	73.8	74.8	72.8	72.4	72.2	75.9	82.8	89.3	92.8	88.7	90.5	83.4	81.0	84.7	78.7	74.0	81.0	76.6	91.5	92.8	72.2	80.2
23	91.7	86.3	83.2	83.6	90.0	88.8	88.0	90.5	88.6	87.5	89.4	91.0	88.8	87.2	85.1	84.1	84.2	80.7	80.0	79.5	78.3	79.2	83.7	78.1	91.7	78.1	85.3
24	77.2	77.8	83.1	82.1	80.6	84.1	82.2	83.1	83.5	84.2	84.2	84.6	84.9	86.7	86.0	82.7	82.0	81.6	81.5	82.0	80.8	80.1	78.5	76.4	86.7	76.4	82.1
25	76.7	78.8	78.8	79.1	77.7	77.2	76.6	78.6	77.9	77.3	84.3	82.1	76.2	73.6	56.6	53.2	53.2	50.6	48.0	48.9	51.2	49.0	48.4	48.4	84.3	48.0	66.8
26	47.8	45.9	45.0	48.1	48.4	48.2	46.6	47.3	50.9	51.3	50.8	50.0	49.6	46.5	47.9	43.1	51.9	58.9	66.1	67.0	61.8	62.8	62.7	62.9	67.0	43.1	52.6
27	67.9	67.3	64.7	67.0	71.2	74.5	70.9	69.1	71.3	71.3	70.3	68.7	66.5	68.1	61.1	74.1	80.8	84.3	80.5	77.8	72.0	66.1	64.0	61.8	84.3	61.1	70.5
28	60.6	56.2	51.1	49.9	49.7	50.2	49.6	50.3	52.5	52.2	52.0	56.0	54.0	56.8	64.3	63.5	64.2	67.5	72.1	71.9	73.5	72.4	70.8	74.6	74.6	49.6	59.8
29	76.7	78.2	78.5	78.9	78.4	80.5	84.3	83.3	83.7	83.7	82.9	82.5	81.1	80.7	87.9	88.9	85.8	86.0	85.5	82.9	81.6	80.8	77.9	77.2	88.9	76.7	82.0
Max.	**91.7**	**91.3**	**96.1**	**97.4**	**93.5**	**94.3**	**96.1**	**96.7**	**96.8**	**97.5**	**96.0**	**92.1**	**92.1**	**92.8**	**89.7**	**92.8**	**93.0**	**93.8**	**93.3**	**92.3**	**91.5**	**91.5**	**89.9**	**91.5**	**97.5**		
Min.	**34.7**	**37.4**	**40.7**	**40.6**	**40.8**	**38.6**	**35.2**	**22.7**	**24.2**	**19.7**	**21.5**	**25.2**	**25.2**	**27.6**	**28.7**	**27.2**	**25.4**	25.9	25.6	**25.4**	**26.0**	**26.3**	**27.5**	**31.9**		**19.7**	
Avg.	**70.1**	**69.8**	**69.4**	**70.1**	**68.9**	**68.8**	**68.2**	**67.6**	**67.6**	**68.2**	**69.5**	**69.7**	**69.1**	**68.9**	**68.0**	**68.0**	**67.5**	**68.4**	**69.5**	**68.9**	**68.7**	**69.0**	**69.2**	**69.5**			**68.9**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	76.6	75.8	76.3	75.7	77.4	78.0	76.8	76.0	76.4	75.5	67.7	60.7	61.3	60.6	61.0	60.5	59.8	71.3	69.4	64.5	61.5	61.4	62.4	62.5	78.0	59.8	68.7
2	63.3	67.4	67.0	69.0	69.6	69.1	72.5	83.4	82.8	77.8	76.9	79.5	80.2	79.5	75.0	71.9	80.5	94.5	98.7	96.4	91.5	84.6	85.6	88.9	98.7	63.3	79.4
3	91.3	88.9	84.4	85.4	89.0	87.7	75.5	77.4	83.3	86.0	86.8	91.1	90.8	88.4	83.6	81.5	85.7	84.9	84.1	85.1	86.7	89.3	90.4	92.0	92.0	75.5	86.2
4	95.2	98.1	98.2	92.7	90.5	89.5	93.2	94.1	93.7	93.0	95.2	94.3	86.0	83.0	80.1	76.4	76.7	77.5	77.2	77.8	78.3	82.0	77.8	80.2	98.2	76.4	86.7
5	74.1	72.8	74.8	77.5	78.2	79.0	78.1	78.5	77.0	77.4	78.9	78.5	78.5	77.6	74.7	74.3	74.7	81.4	89.9	91.2	91.3	92.9	90.1	88.9	92.9	72.8	80.4
6	90.3	90.1	89.6	89.4	86.6	82.3	81.9	83.9	82.6	84.4	96.3	99.3	91.5	75.8	77.7	83.0	69.4	62.7	56.2	53.7	57.8	68.4	66.7	75.3	99.3	53.7	79.0
7	78.4	81.0	79.2	78.7	83.5	89.5	89.8	88.6	88.2	86.9	86.4	88.2	88.3	86.8	82.1	78.2	78.6	78.8	78.9	79.9	80.8	82.3	83.4	78.5	89.8	78.2	83.1
8	79.4	78.5	75.0	72.0	73.3	75.7	77.4	79.4	76.6	73.0	73.1	78.4	65.5	61.6	59.0	59.2	66.5	72.3	72.4	68.4	65.9	58.3	53.3	58.9	79.4	53.3	69.7
9	60.3	61.8	64.9	64.3	64.4	62.4	56.4	53.4	53.6	57.4	59.0	55.9	58.1	57.4	60.6	60.3	60.2	65.0	67.2	69.9	76.6	76.2	78.2	86.0	86.0	53.4	63.7
10	90.8	93.5	88.1	96.1	92.3	87.9	82.4	82.2	77.8	80.5	83.7	87.2	91.8	89.5	89.3	93.1	94.9	92.3	95.4	95.8	95.1	94.1	85.9	84.2	96.1	77.8	89.3
11	84.8	81.7	81.6	81.6	82.8	80.0	78.3	79.3	79.8	79.4	77.4	76.7	76.9	71.6	71.3	68.7	71.4	71.8	74.0	72.0	66.5	69.3	72.1	69.3	84.8	66.5	75.8
12	69.2	70.0	72.3	72.0	72.2	73.8	75.9	78.8	79.4	79.4	78.9	78.3	76.1	75.3	73.7	74.0	74.5	75.7	77.7	80.6	82.7	84.4	85.1	85.9	85.9	69.2	76.9
13	86.4	85.4	86.1	86.0	86.4	85.0	83.0	83.8	85.0	83.9	83.7	82.4	79.8	78.2	78.7	77.8	76.2	74.5	75.1	78.8	79.6	79.1	80.1	81.6	86.4	74.5	81.5
14	82.1	82.7	83.4	84.6	83.7	78.4	71.5	68.8	71.4	72.8	70.7	70.8	68.9	65.1	67.0	64.5	65.6	76.2	72.5	67.7	60.8	49.0	49.9	47.5	84.6	47.5	69.8
15	48.6	63.4	74.0	68.8	67.7	66.2	66.6	66.1	64.5	64.3	64.6	65.4	66.0	65.5	66.0	65.7	65.6	66.4	69.8	73.6	77.0	72.6	71.4	68.3	77.0	48.6	67.0
16	66.5	66.4	68.3	67.3	62.9	61.0	57.1	55.3	53.6	57.6	55.6	52.9	58.3	61.8	72.3	76.2	79.7	80.6	79.7	82.6	78.5	83.7	85.3	82.8	85.3	52.9	68.6
17	81.3	82.5	80.4	84.7	84.3	79.1	79.6	80.6	80.9	80.2	79.0	77.9	74.9	71.8	71.9	72.3	74.0	74.2	77.8	77.8	73.5	73.5	73.0	72.5	84.7	71.8	77.4
18	72.7	73.6	74.5	74.9	77.3	78.0	77.7	78.7	77.4	77.2	73.8	73.1	73.1	73.7	73.3	73.0	72.3	72.5	75.1	76.0	76.0	74.4	71.9	71.4	78.7	71.4	74.6
19	71.4	73.4	74.6	73.7	73.3	73.3	74.5	74.6	73.3	72.8	73.1	75.9	75.8	75.0	73.6	72.7	72.0	72.1	73.9	74.2	74.0	76.4	74.2	76.1	76.4	71.4	73.9
20	79.6	81.6	83.4	85.0	84.7	82.2	82.7	83.0	85.6	83.0	75.9	72.7	73.6	76.5	79.2	77.8	80.4	76.2	76.2	75.6	82.1	85.3	85.7	85.3	85.7	72.7	80.6
21	84.6	84.3	87.7	87.4	90.6	92.1	93.1	92.7	81.3	63.4	53.5	46.7	39.7	37.6	42.8	52.5	51.7	59.0	50.3	50.4	46.2	31.4	31.0	32.9	93.1	31.0	61.8
22	33.4	34.1	37.6	38.7	39.5	49.4	59.7	58.1	62.7	61.0	58.6	59.2	57.1	62.1	61.9	60.8	61.1	60.7	60.4	60.4	61.3	63.3	66.0	65.9	66.0	33.4	55.5
23	66.2	68.5	66.2	66.7	66.6	66.6	71.9	73.1	70.0	68.0	67.6	69.6	66.7	66.6	63.9	65.5	69.8	68.7	66.2	66.5	67.6	67.5	67.1	68.6	73.1	63.9	67.7
24	67.2	67.3	72.3	74.7	83.3	88.7	84.8	77.4	77.2	75.9	77.3	76.6	75.2	75.4	74.5	76.3	74.5	73.4	73.6	75.0	74.8	76.1	84.9	87.0	88.7	67.2	76.8
25	94.8	94.1	91.1	90.2	89.8	90.4	82.6	82.4	79.4	76.9	75.0	72.5	74.8	72.6	71.1	70.6	71.4	72.2	72.2	72.8	74.5	73.1	72.9	71.4	94.8	70.6	78.7
26	72.2	72.9	75.2	75.7	76.7	77.1	77.9	77.0	77.0	73.1	74.2	73.4	74.0	73.9	71.8	69.9	67.8	66.3	64.6	65.6	67.0	66.1	67.2	67.4	77.9	64.6	71.8
27	66.7	66.1	67.9	71.0	74.3	75.2	76.0	77.1	77.4	74.7	73.4	72.0	72.2	74.0	73.8	73.2	72.0	73.1	73.2	73.3	73.8	75.1	74.6	72.2	77.4	66.1	73.0
28	72.1	71.9	72.0	72.3	74.8	73.2	73.0	72.8	71.1	70.9	72.2	71.0	69.7	67.5	66.5	66.3	65.2	64.6	63.8	64.5	64.1	68.7	72.1	73.5	74.8	63.8	69.7
29	70.7	74.6	72.9	73.0	76.5	75.7	75.5	75.9	76.6	76.2	83.6	78.7	85.1	93.5	90.6	75.4	80.5	85.4	92.3	94.4	96.2	97.4	97.8	95.4	97.8	70.7	83.1
30	91.2	92.6	95.2	97.1	97.4	97.3	97.9	97.4	93.5	91.1	93.2	90.2	90.8	91.2	90.2	88.4	88.4	88.5	89.2	84.2	81.4	80.8	80.2	80.4	97.9	80.2	90.3
31	79.0	77.4	77.2	76.0	82.9	84.5	83.6	86.2	83.3	84.5	83.3	85.9	82.2	83.5	82.9	85.9	79.3	81.0	82.2	82.6	84.0	87.4	86.9	85.3	87.4	76.0	82.8
Max.	**95.2**	**98.1**	**98.2**	**97.1**	**97.4**	**97.3**	**97.9**	**97.4**	**93.7**	**93.0**	**96.3**	**99.3**	**91.8**	**93.5**	**90.6**	**93.1**	**94.9**	**94.5**	**98.7**	**96.4**	**96.2**	**97.4**	**97.8**	**95.4**	**99.3**		
Min.	**33.4**	**34.1**	**37.6**	**38.7**	**39.5**	**49.4**	**56.4**	**53.4**	**53.6**	**57.4**	**53.5**	**46.7**	**39.7**	**37.6**	**42.8**	**52.5**	**51.7**	59.0	50.3	**50.4**	**46.2**	**31.4**	**31.0**	**32.9**		**31.0**	
Avg.	**75.5**	**76.5**	**77.1**	**77.5**	**78.5**	**78.3**	**77.6**	**77.9**	**77.2**	**76.1**	**75.8**	**75.3**	**74.3**	**73.3**	**72.9**	**72.4**	**72.9**	**74.6**	**75.1**	**75.2**	**75.1**	**75.0**	**74.9**	**75.4**			**75.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	84.8	83.5	81.0	80.0	79.4	79.5	84.3	84.0	80.5	82.0	82.9	81.7	81.5	78.2	76.7	78.3	76.8	75.4	77.4	77.3	83.3	83.3	78.9	83.6	84.8	75.4	80.6
2	88.0	89.5	89.6	88.2	83.1	82.5	81.9	83.3	82.7	82.9	82.6	83.8	82.8	79.0	75.9	74.4	84.9	86.7	90.4	97.7	99.6	98.8	96.8	94.6	99.6	74.4	86.7
3	95.0	95.0	94.3	95.3	96.8	96.2	93.2	87.1	83.3	79.8	86.5	85.0	87.5	90.7	88.1	89.5	90.9	90.0	89.3	88.6	89.6	90.6	92.3	93.7	96.8	79.8	90.3
4	94.7	94.1	93.2	94.6	96.1	95.8	94.6	90.8	86.0	86.0	86.0	86.1	88.1	84.0	79.1	78.3	78.4	82.7	82.3	86.3	92.5	96.1	94.2	88.4	96.1	78.3	88.7
5	87.2	84.5	83.8	83.6	83.7	82.7	80.7	77.5	75.1	70.5	65.6	62.4	58.5	56.3	56.0	55.5	53.2	45.5	41.4	42.3	47.0	52.7	56.6	60.1	87.2	41.4	65.1
6	60.8	59.6	57.1	58.0	60.2	62.2	62.7	62.8	58.3	57.4	55.8	57.5	54.1	55.8	56.9	52.9	53.2	57.2	58.0	56.5	57.2	56.9	58.2	57.8	62.8	52.9	57.8
7	60.0	59.2	58.6	60.9	63.3	64.5	64.8	66.3	65.6	66.7	64.1	62.8	58.5	54.4	50.9	48.6	45.4	44.3	47.8	48.7	50.8	52.9	54.8	55.4	66.7	44.3	57.1
8	54.4	55.6	56.6	54.8	53.9	58.0	59.5	61.1	61.2	57.9	52.5	50.2	47.3	32.0	56.3	65.5	69.0	68.3	79.9	88.6	85.3	83.7	78.2	78.9	88.6	32.0	62.9
9	76.1	76.1	77.6	77.3	75.9	77.3	77.3	78.7	76.2	72.0	71.9	66.4	65.0	60.5	60.0	58.2	57.4	56.8	56.4	57.5	58.2	59.2	62.2	64.2	78.7	56.4	67.4
10	64.6	62.8	63.5	64.5	63.6	62.2	62.9	66.4	65.6	64.2	62.0	60.6	56.8	55.7	52.5	52.2	51.3	50.7	50.1	49.3	49.4	50.9	51.4	53.9	66.4	49.3	57.8
11	58.7	57.3	56.4	60.4	60.9	64.4	68.2	65.9	68.2	65.0	65.1	64.7	63.4	60.1	59.3	56.8	51.5	52.4	52.3	55.0	54.0	58.8	59.9	59.2	68.2	51.5	59.9
12	59.5	58.9	59.5	59.2	61.1	60.7	59.6	60.9	62.3	61.9	61.3	55.2	51.0	48.3	42.5	45.6	45.2	45.0	46.3	47.3	47.9	50.8	51.1	49.2	62.3	42.5	53.8
13	48.7	51.6	57.2	60.2	63.8	66.6	67.6	72.6	76.1	83.4	92.5	98.1	99.6	99.7	99.9	92.2	83.7	81.1	80.2	81.8	84.9	85.4	81.5	79.5	99.9	48.7	78.7
14	81.9	84.4	81.9	81.6	84.3	86.0	87.0	91.5	89.3	87.3	83.8	79.3	79.0	77.7	75.1	74.0	70.8	71.1	71.6	72.6	71.1	75.5	78.2	76.0	91.5	70.8	79.6
15	74.6	75.0	77.3	81.6	83.8	81.7	78.4	78.1	90.1	94.8	99.7	100.0	98.8	87.5	73.5	68.5	64.0	62.7	62.3	60.5	56.4	55.0	56.5	55.2	100.0	55.0	75.7
16	52.4	46.1	58.3	56.9	49.2	54.3	49.0	54.6	56.6	62.5	62.8	61.3	56.0	54.1	52.3	51.6	51.6	55.4	57.1	61.3	62.0	61.9	63.3	67.2	67.2	46.1	56.6
17	69.4	69.2	69.3	66.7	66.0	67.1	64.2	63.9	66.2	63.3	61.1	64.1	65.4	67.1	69.5	71.5	67.8	66.3	66.6	66.1	66.1	65.5	62.0	57.8	71.5	57.8	65.9
18	54.5	51.7	49.3	48.6	60.7	84.5	86.3	82.3	78.2	83.3	79.0	74.8	73.1	69.0	70.5	68.7	67.7	69.6	70.5	70.1	68.4	65.1	68.5	71.2	86.3	48.6	69.4
19	68.6	65.1	65.8	66.9	68.8	69.7	57.8	66.3	66.8	69.8	72.6	74.2	75.4	73.7	72.0	73.4	71.1	67.4	70.0	78.2	77.9	81.7	83.1	82.3	83.1	57.8	71.6
20	78.6	71.5	71.7	79.6	84.9	85.3	86.4	89.2	88.8	89.4	87.1	90.4	90.1	88.4	88.6	89.1	89.5	89.6	89.9	90.4	90.4	90.2	89.3	89.1	90.4	71.5	86.6
21	88.2	87.7	87.5	87.6	88.6	87.6	87.3	86.7	85.4	85.7	85.3	83.4	83.2	81.5	82.6	84.9	84.5	80.6	81.9	80.2	80.7	83.6	88.3	84.9	88.6	80.2	84.9
22	83.5	82.5	82.9	84.8	88.2	85.8	88.4	92.0	90.0	87.8	85.8	82.4	81.0	84.3	76.6	67.9	56.8	58.9	64.8	60.7	57.6	67.5	72.2	76.5	92.0	56.8	77.4
23	79.0	79.2	72.3	57.1	60.3	61.1	63.7	67.1	67.4	63.3	66.1	60.8	57.9	55.1	54.3	52.8	50.7	50.8	48.2	46.0	44.0	45.6	47.9	49.9	79.2	44.0	58.4
24	53.1	58.2	68.5	71.5	70.5	69.2	70.0	73.0	76.3	80.7	80.7	78.1	74.9	75.5	75.7	76.9	74.5	74.5	72.0	71.2	75.5	76.6	77.7	75.8	80.7	53.1	72.9
25	71.9	70.9	76.5	70.2	71.7	78.1	80.7	77.8	76.8	71.3	67.5	63.1	55.8	46.9	48.0	51.0	52.0	52.4	53.3	55.9	56.4	55.3	54.2	55.0	80.7	46.9	63.0
26	55.7	55.6	56.5	62.2	65.4	65.5	66.7	68.3	72.0	80.2	80.8	80.2	80.5	81.4	81.6	82.2	79.9	81.6	84.3	82.4	81.8	81.1	83.4	81.4	84.3	55.6	74.6
27	79.9	79.8	77.8	79.3	79.5	82.3	80.8	83.2	85.1	82.2	82.9	86.5	85.9	85.2	78.7	85.3	78.0	81.4	77.0	81.1	81.1	82.0	82.6	83.3	86.5	77.0	81.7
28	83.6	83.3	83.2	83.5	82.7	80.0	79.0	77.5	77.4	76.1	73.6	72.9	72.0	69.7	68.8	66.7	65.6	66.5	64.3	64.1	62.3	61.1	61.5	63.7	83.6	61.1	72.5
29	64.0	66.1	65.9	64.1	64.3	66.6	69.9	69.4	68.4	69.8	70.1	70.1	68.9	66.9	65.3	64.7	63.5	62.3	62.5	63.0	65.8	68.1	69.2	69.8	70.1	62.3	66.6
30	68.3	69.6	68.7	69.7	69.0	70.6	70.7	72.4	71.1	69.9	67.0	65.4	61.8	59.8	70.3	73.6	64.9	64.8	62.9	61.0	65.0	69.5	69.3	69.7	73.6	59.8	67.7
Max.	**95.0**	**95.0**	**94.3**	**95.3**	**96.8**	**96.2**	**94.6**	**92.0**	**90.1**	**94.8**	**99.7**	**100.0**	**99.6**	**99.7**	**99.9**	**92.2**	**90.9**	**90.0**	**90.4**	**97.7**	**99.6**	**98.8**	**96.8**	**94.6**	**100.0**		
Min.	**48.7**	**46.1**	**49.3**	**48.6**	**49.2**	**54.3**	**49.0**	**54.6**	**56.6**	**57.4**	**52.5**	**50.2**	**47.3**	**32.0**	**42.5**	**45.6**	**45.2**	44.3	41.4	**42.3**	**44.0**	**45.6**	**47.9**	**49.2**		**32.0**	
Avg.	**71.3**	**70.8**	**71.4**	**71.6**	**72.7**	**74.3**	**74.1**	**75.0**	**74.9**	**74.9**	**74.5**	**73.4**	**71.8**	**69.3**	**68.6**	**68.4**	**66.4**	**66.4**	**67.0**	**68.0**	**68.7**	**70.2**	**70.8**	**70.9**			**71.1**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	76.6	82.0	79.1	75.3	74.6	75.9	76.7	78.2	77.4	76.6	75.9	73.8	72.4	71.6	69.5	66.7	64.1	61.5	58.6	57.8	57.3	58.5	58.6	63.7	82.0	57.3	70.1
2	66.9	80.2	86.1	84.3	83.7	91.4	89.7	90.3	90.8	89.1	90.7	89.7	84.9	79.0	80.1	86.2	84.4	83.4	81.9	79.1	81.1	84.9	89.1	91.9	91.9	66.9	85.0
3	91.0	85.5	85.1	84.5	88.1	86.9	93.7	91.6	90.8	77.1	72.3	74.4	62.2	48.6	48.7	73.2	64.6	53.6	50.0	56.6	72.8	78.3	75.9	73.0	93.7	48.6	74.1
4	73.5	69.9	72.3	73.3	73.7	73.6	70.9	65.1	61.7	62.1	62.4	62.2	61.1	59.6	58.9	58.1	55.8	54.1	54.4	53.0	52.0	58.8	59.9	64.4	73.7	52.0	62.9
5	68.1	71.3	73.0	71.1	69.1	68.1	67.3	69.9	71.4	71.4	71.0	70.2	71.0	69.2	69.1	66.5	65.5	64.1	61.4	61.1	61.6	68.5	69.0	74.4	74.4	61.1	68.5
6	77.0	81.2	84.1	73.6	71.9	74.9	79.6	86.4	87.0	87.0	85.4	88.0	91.6	90.7	88.0	82.1	79.2	77.5	78.8	84.7	88.2	94.4	95.4	95.0	95.4	71.9	84.2
7	88.3	82.1	72.4	62.6	59.0	64.2	65.6	69.1	59.8	58.9	67.8	64.9	62.9	61.4	61.6	63.7	61.8	59.5	71.1	79.6	66.9	75.1	73.8	78.5	88.3	58.9	67.9
8	78.7	73.9	71.6	70.8	70.0	68.8	66.2	66.5	67.3	68.0	71.0	72.5	71.1	71.9	73.3	70.3	69.0	67.9	66.5	66.3	65.6	62.6	62.1	64.9	78.7	62.1	69.0
9	68.2	68.7	70.1	70.7	70.7	71.6	70.2	69.5	67.8	67.1	69.0	69.9	69.0	64.6	61.5	60.3	64.9	64.5	68.0	77.4	79.3	80.2	83.2	86.5	86.5	60.3	70.5
10	86.9	85.2	85.4	85.6	88.3	89.4	87.9	85.5	82.6	81.4	78.4	77.5	75.3	74.1	72.8	71.8	70.5	71.0	75.9	76.5	78.6	79.5	75.3	76.8	89.4	70.5	79.7
11	75.6	75.1	65.0	62.4	82.7	80.4	72.0	61.7	63.4	88.2	91.8	87.7	72.2	62.8	61.5	61.1	60.7	55.9	57.5	57.2	63.2	72.5	73.3	74.4	91.8	55.9	69.9
12	77.4	75.2	73.3	73.9	76.7	76.6	75.5	77.6	79.8	79.5	75.0	72.6	71.8	72.6	89.8	91.1	89.2	88.9	89.2	91.9	91.2	83.6	86.9	89.6	91.9	71.8	81.2
13	92.1	90.3	90.8	90.9	89.6	90.2	89.9	91.0	92.0	92.7	92.6	91.7	92.8	91.3	90.7	89.1	88.8	85.2	86.3	82.9	77.3	91.4	91.1	84.9	92.8	77.3	89.4
14	75.9	67.8	60.2	56.0	54.7	53.6	52.4	54.1	59.0	56.6	58.2	60.0	68.8	63.5	51.3	49.2	46.7	47.3	47.0	53.0	55.5	55.3	60.7	67.9	75.9	46.7	57.3
15	80.3	83.9	81.6	78.7	75.0	71.8	71.8	73.9	78.9	88.5	87.4	86.9	89.3	89.0	88.5	86.4	84.7	85.6	85.5	89.0	85.1	87.6	87.8	88.0	89.3	71.8	83.5
16	86.9	78.8	83.3	83.3	88.6	86.3	90.2	92.5	90.9	89.2	86.6	85.1	83.5	79.0	77.0	77.6	79.0	77.3	77.3	75.7	76.2	78.7	78.4	77.5	92.5	75.7	82.4
17	78.9	79.1	68.5	64.2	65.6	64.8	65.2	66.8	67.0	65.7	63.7	61.0	60.4	65.2	68.2	75.6	70.7	73.7	75.2	77.2	78.4	76.7	79.3	70.2	79.3	60.4	70.1
18	66.5	71.1	82.9	82.8	80.5	81.1	88.6	90.1	88.3	87.0	91.8	93.6	95.3	93.8	92.7	92.0	88.6	85.7	86.8	85.8	84.0	84.3	84.9	85.5	95.3	66.5	86.0
19	81.7	86.1	89.6	87.7	88.1	88.0	88.2	89.0	86.4	79.9	68.3	69.3	73.4	67.0	55.5	53.5	50.6	51.6	50.1	50.8	50.7	52.1	56.7	56.3	89.6	50.1	69.6
20	57.6	56.7	57.7	60.4	59.6	61.4	61.5	62.2	59.3	57.7	52.6	53.0	50.2	52.1	50.2	58.6	55.9	52.4	53.1	54.0	54.5	58.8	66.0	71.2	71.2	50.2	57.4
21	73.9	77.4	76.1	76.3	80.6	77.5	70.4	70.8	67.0	69.2	82.8	82.4	80.5	80.7	76.3	78.4	81.1	84.3	83.3	67.7	70.1	70.3	71.8	64.6	84.3	64.6	75.6
22	67.6	68.3	65.7	68.2	67.8	67.4	66.7	67.9	70.7	70.0	69.0	65.4	65.0	76.0	76.9	81.2	77.0	67.7	75.3	77.5	74.7	77.6	81.6	81.9	81.9	65.0	72.0
23	84.3	89.7	90.7	92.0	91.2	84.8	81.4	79.7	76.1	78.8	75.2	71.0	70.1	74.5	75.9	80.9	85.1	85.0	87.8	86.6	85.6	85.7	87.0	85.5	92.0	70.1	82.7
24	84.8	85.1	83.9	84.3	85.3	86.3	87.6	87.8	88.4	86.8	86.0	90.7	93.3	91.9	93.1	92.8	91.7	90.7	91.3	90.8	89.6	87.0	85.6	87.6	93.3	83.9	88.4
25	87.1	90.8	90.2	90.1	86.8	90.4	88.4	90.5	86.0	81.6	71.6	73.2	67.0	69.1	64.0	68.4	64.3	61.8	69.3	67.1	67.6	68.0	65.6	65.9	90.8	61.8	76.0
26	62.1	62.6	65.5	70.7	72.9	74.8	75.7	77.5	73.5	70.6	67.7	62.1	60.0	56.4	56.0	54.6	55.8	57.7	59.5	60.4	60.6	67.5	65.3	64.5	77.5	54.6	64.8
27	65.8	69.6	69.4	73.2	71.6	69.3	68.9	70.2	69.0	71.2	71.8	64.2	58.2	57.4	55.0	50.8	47.2	43.5	40.6	42.7	39.9	39.7	41.6	45.0	73.2	39.7	58.1
28	43.8	47.6	51.5	51.5	54.0	54.2	56.3	58.5	57.4	56.0	58.2	57.8	50.1	46.4	44.3	42.0	40.9	39.8	41.5	42.6	41.2	43.5	43.7	48.2	58.5	39.8	48.8
29	52.4	54.3	54.5	54.6	56.9	56.7	60.0	61.7	61.4	62.4	59.1	63.4	66.0	75.3	67.5	60.1	63.1	62.8	60.8	67.4	74.4	75.8	79.3	75.3	79.3	52.4	63.5
30	76.5	81.3	78.6	83.1	83.5	83.6	83.5	72.8	75.0	70.1	70.0	69.4	67.7	71.6	74.8	80.3	88.0	89.8	88.3	84.9	85.6	87.3	87.4	88.8	89.8	67.7	80.1
31	86.0	86.0	88.0	90.0	91.2	93.7	94.1	95.1	95.2	95.4	96.4	96.9	95.8	96.2	96.7	97.0	96.9	96.8	96.7	96.9	96.6	95.8	96.1	95.9	97.0	86.0	94.4
Max.	**92.1**	**90.8**	**90.8**	**92.0**	**91.2**	**93.7**	**94.1**	**95.1**	**95.2**	**95.4**	**96.4**	**96.9**	**95.8**	**96.2**	**96.7**	**97.0**	**96.9**	**96.8**	**96.7**	**96.9**	**96.6**	**95.8**	**96.1**	**95.9**	**97.0**		
Min.	**43.8**	**47.6**	**51.5**	**51.5**	**54.0**	**53.6**	**52.4**	**54.1**	**57.4**	**56.0**	**52.6**	**53.0**	**50.1**	**46.4**	**44.3**	**42.0**	**40.9**	39.8	40.6	**42.6**	**39.9**	**39.7**	**41.6**	**45.0**		**39.7**	
Avg.	**75.2**	**76.0**	**75.7**	**75.0**	**75.9**	**76.1**	**76.0**	**76.2**	**75.5**	**75.3**	**74.8**	**74.2**	**72.7**	**71.7**	**70.6**	**71.6**	**70.5**	**69.1**	**70.0**	**70.8**	**71.1**	**73.5**	**74.6**	**75.4**			**73.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	91.1	91.9	86.9	82.8	75.3	75.2	73.2	72.8	66.2	64.4	63.0	66.6	68.9	62.6	64.0	60.4	71.3	85.7	69.0	68.9	69.1	70.1	69.8	67.0	91.9	60.4	72.3
2	63.1	62.5	61.8	62.7	61.8	63.7	62.6	61.7	59.1	59.8	58.0	55.0	58.1	59.5	58.1	57.3	57.1	61.5	66.9	64.1	62.6	64.1	56.5	54.2	66.9	54.2	60.5
3	54.7	55.9	58.2	56.7	56.8	58.5	60.3	57.5	55.9	53.1	58.5	69.1	76.8	77.2	78.9	81.4	83.5	87.0	88.5	89.2	89.7	87.6	84.3	86.7	89.7	53.1	71.1
4	87.1	89.7	90.5	91.8	92.7	92.8	93.2	93.2	90.1	87.7	87.0	87.0	82.8	82.0	81.2	76.5	74.9	70.6	74.0	81.0	79.6	81.5	84.9	87.2	93.2	70.6	85.0
5	84.6	82.6	84.3	89.3	91.1	86.9	86.9	94.2	93.5	82.4	88.7	84.5	85.7	85.6	81.1	84.9	82.6	85.2	76.3	74.3	72.5	74.2	68.4	69.1	94.2	68.4	82.9
6	68.6	78.8	75.3	78.8	82.1	84.5	84.5	84.1	82.2	79.8	76.7	74.6	70.9	67.6	63.4	58.5	55.1	51.3	57.5	51.1	51.7	57.9	60.4	67.5	84.5	51.1	69.3
7	73.2	74.1	80.3	84.6	85.8	84.6	82.8	83.6	82.9	80.7	82.3	80.8	73.7	71.7	74.0	70.8	79.2	89.0	89.4	91.1	91.8	91.1	90.2	90.0	91.8	70.8	82.4
8	90.9	90.8	91.2	93.6	94.3	94.5	93.4	91.4	83.6	77.6	70.6	55.3	46.7	36.6	33.1	65.4	63.4	37.6	37.6	42.4	45.4	49.5	54.9	52.8	94.5	33.1	66.4
9	48.8	55.8	65.8	72.6	75.5	76.8	77.8	80.5	78.9	74.5	71.0	67.7	62.6	58.0	57.2	56.5	56.4	58.9	58.7	58.5	58.4	60.0	63.6	64.7	80.5	48.8	65.0
10	63.8	64.7	70.1	73.3	74.7	77.5	78.4	78.5	77.0	78.8	78.9	75.8	72.2	71.8	74.2	74.4	77.3	79.5	81.7	81.2	82.9	84.2	85.5	84.1	85.5	63.8	76.7
11	77.8	74.4	81.3	86.7	84.8	86.5	87.0	88.5	92.0	88.6	83.7	85.5	89.7	90.3	90.2	92.5	93.9	92.5	91.2	90.1	89.6	88.4	86.6	82.8	93.9	74.4	87.3
12	76.7	75.4	75.3	74.7	78.4	81.4	83.4	85.5	85.8	82.2	76.7	71.1	70.3	67.1	65.3	64.7	65.0	66.2	67.1	70.5	74.0	77.0	76.5	76.2	85.8	64.7	74.4
13	76.4	78.3	79.0	80.1	82.7	84.4	83.9	83.6	81.8	81.8	81.3	80.3	78.6	76.6	73.9	71.5	72.4	69.4	69.0	71.8	80.0	77.2	77.2	80.8	84.4	69.0	78.0
14	81.9	85.7	87.1	84.9	84.6	83.9	82.4	84.2	84.1	82.3	81.5	79.4	78.0	76.7	81.9	89.2	86.4	91.0	86.9	85.4	86.0	82.1	84.1	85.8	91.0	76.7	84.0
15	83.9	78.4	74.3	77.9	76.0	78.9	80.1	80.9	80.3	79.1	79.2	77.1	74.8	85.9	87.9	88.4	85.0	80.8	78.5	64.7	68.6	69.9	73.1	77.9	88.4	64.7	78.4
16	80.7	79.8	81.9	80.6	80.6	81.7	81.4	80.5	80.2	77.3	75.4	74.1	75.6	73.7	69.4	76.3	77.1	77.0	80.1	79.7	81.0	80.9	81.9	84.7	84.7	69.4	78.8
17	88.6	88.1	84.8	88.7	91.4	90.6	93.3	90.7	90.7	94.3	96.6	97.1	97.5	97.4	97.3	97.4	97.7	96.9	97.1	97.9	94.9	93.7	94.1	97.8	97.9	84.8	93.9
18	98.4	98.6	98.7	98.8	98.8	99.6	99.1	99.3	94.0	80.6	92.8	97.6	97.9	96.9	91.8	90.6	92.2	88.9	87.7	88.1	92.5	92.4	92.1	91.4	99.6	80.6	94.1
19	92.7	93.5	93.2	94.9	96.5	86.4	81.2	80.8	83.1	94.8	93.3	92.4	93.7	95.7	96.0	92.7	90.1	90.3	91.4	89.0	87.6	91.1	92.2	92.7	96.5	80.8	91.1
20	92.1	92.4	92.6	93.6	93.3	94.8	94.0	92.6	93.1	93.2	93.9	90.2	84.6	88.4	89.7	87.0	84.5	87.9	86.9	80.0	81.4	84.6	84.3	77.7	94.8	77.7	88.9
21	77.9	78.4	79.5	82.8	85.1	85.6	86.6	83.7	82.9	84.6	86.8	86.8	87.6	85.7	86.7	90.4	89.1	86.5	85.0	81.0	72.7	74.2	71.3	75.7	90.4	71.3	82.8
22	84.2	84.4	87.2	90.3	91.2	92.2	94.3	92.6	91.8	88.8	87.2	90.4	92.1	92.6	90.8	93.5	92.7	87.5	84.8	83.3	84.8	85.2	85.8	87.0	94.3	83.3	88.9
23	90.2	88.9	89.8	89.4	89.3	89.8	90.4	90.0	89.6	89.2	84.1	82.7	84.2	81.8	83.2	83.6	83.5	83.9	82.5	81.2	82.7	84.8	81.5	76.6	90.4	76.6	85.5
24	74.3	78.8	84.2	83.8	85.0	83.7	81.4	79.9	78.9	80.0	83.5	86.0	88.5	86.6	88.3	87.0	79.6	77.7	77.7	77.3	80.8	74.9	73.6	73.1	88.5	73.1	81.0
25	69.3	67.9	84.3	92.8	91.7	83.9	76.4	71.2	71.6	69.8	61.3	60.7	61.0	62.5	64.7	68.0	72.7	64.2	60.2	73.3	73.6	58.3	66.3	70.3	92.8	58.3	70.7
26	70.5	64.5	63.6	64.0	64.1	64.6	65.3	65.0	65.0	64.9	63.8	64.3	64.2	59.6	57.0	56.1	54.0	52.4	51.5	51.7	52.4	53.6	53.1	53.6	70.5	51.5	60.0
27	55.2	69.2	82.2	85.7	90.7	95.4	96.7	98.8	99.5	98.7	99.6	94.6	89.7	87.0	86.3	85.7	84.9	88.7	89.0	86.9	82.9	83.5	82.8	83.4	99.6	55.2	87.4
28	83.1	91.6	87.3	92.4	94.9	95.4	87.7	81.4	81.6	83.5	82.6	82.6	82.4	82.9	87.6	101.5	113.1	124.1	121.6	1.9	2.2	2.5	2.4	2.4	124.1	1.9	73.7
29	34.4	91.6	91.1	91.0	90.4	92.8	91.7	89.7	89.9	90.4	90.2	90.4	90.3	90.5	90.3	90.4	89.8	89.9	90.1	89.9	90.3	90.5	90.0	89.8	92.8	34.4	88.1
30	89.3	90.0	90.0	90.6	90.1	90.2	90.3	90.9	90.4	90.6	90.0	89.9	90.4	89.8	89.7	117.0	129.2	93.6	82.7	79.2	80.5	85.9	82.6	82.2	129.2	79.2	91.0
Max.	**98.4**	**98.6**	**98.7**	**98.8**	**98.8**	**99.6**	**99.1**	**99.3**	**99.5**	**98.7**	**99.6**	**97.6**	**97.9**	**97.4**	**97.3**	**117.0**	**129.2**	**124.1**	**121.6**	**97.9**	**94.9**	**93.7**	**94.1**	**97.8**	**129.2**		
Min.	**34.4**	**55.8**	**58.2**	**56.7**	**56.8**	**58.5**	**60.3**	**57.5**	**55.9**	**53.1**	**58.0**	**55.0**	**46.7**	**36.6**	**33.1**	**56.1**	**54.0**	37.6	37.6	**1.9**	**2.2**	**2.5**	**2.4**	**2.4**		**1.9**	
Avg.	**76.8**	**79.9**	**81.7**	**83.7**	**84.3**	**84.6**	**84.0**	**83.6**	**82.5**	**81.1**	**80.6**	**79.7**	**79.0**	**78.0**	**77.8**	**80.3**	**81.1**	**79.9**	**78.7**	**74.2**	**74.7**	**75.0**	**75.0**	**75.5**			**79.6**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

July 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	89.1	89.4	91.0	91.1	91.5	88.6	86.5	83.2	85.6	91.4	89.1	87.7	89.0	93.8	87.7	77.8	71.8	66.8	63.2	69.1	77.5	88.1	84.1	81.5	93.8	63.2	83.9
2	80.6	80.6	83.4	83.5	81.4	80.6	76.4	73.7	73.0	74.6	71.9	74.4	71.9	64.2	61.7	64.7	63.5	60.1	62.7	67.7	67.1	67.1	67.4	69.2	83.5	60.1	71.7
3	76.9	77.1	63.6	43.2	43.1	45.5	54.8	69.3	86.1	83.3	72.2	80.3	81.9	69.4	65.1	82.1	79.3	78.1	77.0	81.2	83.2	87.4	90.4	94.0	94.0	43.1	73.5
4	93.9	94.9	95.0	95.7	93.3	91.1	88.8	87.8	87.6	93.6	94.3	94.5	94.1	93.3	93.8	90.1	90.8	94.3	94.4	93.4	95.0	95.1	94.5	94.0	95.7	87.6	93.1
5	95.7	94.9	95.7	96.7	96.6	96.3	95.0	95.7	96.7	95.3	93.8	92.5	88.2	85.2	85.3	84.6	84.9	79.7	81.5	79.2	83.4	79.0	78.6	81.9	96.7	78.6	89.0
6	86.6	89.4	90.1	91.3	92.0	90.1	85.0	88.9	88.6	88.0	87.8	82.8	86.4	89.8	92.1	89.0	85.2	84.5	83.8	84.6	88.1	90.8	92.4	93.0	93.0	82.8	88.3
7	93.5	93.0	92.4	90.7	92.2	94.5	96.3	95.3	92.5	91.9	90.2	86.7	84.7	77.9	73.3	75.7	76.5	72.9	71.5	72.2	73.9	76.0	78.1	78.7	96.3	71.5	84.2
8	83.0	87.2	84.6	85.2	80.5	67.1	63.9	68.6	73.9	77.3	78.1	77.4	77.3	77.0	75.5	75.7	75.2	77.4	79.1	74.9	77.0	82.0	87.1	91.2	91.2	63.9	78.2
9	93.6	94.9	94.8	94.7	94.7	94.5	94.3	93.6	83.8	84.2	84.0	84.4	85.0	84.4	83.7	83.6	78.1	77.1	77.3	73.2	75.1	74.6	74.5	72.8	94.9	72.8	84.6
10	71.9	71.8	72.8	75.3	78.3	78.1	81.1	82.4	83.9	87.5	88.0	88.3	74.2	85.7	86.0	88.2	87.3	86.7	89.2	90.3	89.6	90.1	89.2	90.0	90.3	71.8	83.6
11	92.5	94.1	91.6	86.4	88.3	90.0	90.2	90.4	88.7	90.2	88.6	87.3	87.7	86.8	85.7	84.6	79.5	77.0	78.1	79.9	82.5	75.2	70.6	77.4	94.1	70.6	85.1
12	81.0	85.1	88.7	87.1	87.5	88.1	90.5	85.5	77.6	84.4	86.5	83.0	83.1	84.9	85.8	85.9	85.7	86.8	88.0	91.0	92.5	93.3	92.9	92.6	93.3	77.6	87.0
13	95.0	93.8	91.8	92.4	91.3	91.1	93.3	93.7	93.9	96.5	91.5	91.2	95.3	96.4	96.8	97.2	97.0	97.2	97.5	97.4	98.1	98.8	99.1	99.1	99.1	91.1	95.2
14	98.2	97.8	97.7	97.1	97.6	97.4	98.0	97.7	96.8	97.1	98.2	98.3	98.5	97.8	97.7	96.7	96.0	95.5	95.3	94.9	93.7	95.1	96.4	97.5	98.5	93.7	97.0
15	97.6	97.2	96.2	94.6	96.2	98.7	97.9	98.0	95.1	92.7	93.5	95.3	92.0	90.5	84.5	85.9	90.1	86.5	82.7	79.2	80.2	81.3	81.6	83.8	98.7	79.2	90.5
16	90.1	96.4	96.6	97.2	98.1	96.9	92.0	93.0	96.6	98.3	98.4	96.8	96.8	97.4	98.3	98.6	98.6	98.7	98.8	98.1	97.8	97.5	97.6	97.7	98.8	90.1	96.9
17	97.3	96.5	98.4	97.5	96.3	91.0	89.3	86.9	82.4	76.9	78.0	72.4	73.7	71.9	67.7	65.1	78.3	79.4	78.3	76.0	79.6	79.6	79.8	78.6	98.4	65.1	82.1
18	77.6	79.0	79.4	77.5	78.9	79.1	76.5	79.3	77.1	72.7	72.1	69.5	65.7	64.6	66.6	65.3	64.0	62.0	62.8	63.3	63.4	64.2	67.3	70.6	79.4	62.0	70.8
19	71.2	72.0	73.7	74.5	76.7	78.1	78.4	77.7	77.0	74.7	71.5	70.0	68.1	63.9	61.2	58.0	58.3	64.4	56.6	56.9	55.7	57.0	61.9	65.3	78.4	55.7	67.6
20	67.0	70.2	72.0	71.9	70.3	73.7	73.7	71.9	75.3	72.4	73.9	78.0	77.2	79.2	76.1	70.5	67.0	68.3	69.1	67.8	66.8	72.8	76.1	76.3	79.2	66.8	72.4
21	76.3	76.8	79.7	86.7	87.2	84.2	79.7	79.2	82.2	82.6	79.8	79.8	79.1	75.0	75.1	73.2	76.4	75.5	69.1	68.6	69.7	70.0	73.5	80.9	87.2	68.6	77.5
22	82.8	83.5	83.5	81.9	83.6	81.1	79.5	80.6	77.9	80.5	91.4	93.3	90.4	90.6	93.7	93.7	94.1	95.2	92.5	89.2	92.5	92.7	96.6	96.4	96.6	77.9	88.2
23	94.7	93.6	94.3	94.1	89.3	84.7	85.2	85.2	84.7	81.4	77.3	78.6	73.7	68.8	66.7	75.8	75.3	85.8	86.7	87.6	88.8	90.5	93.4	93.3	94.7	66.7	84.6
24	87.1	75.3	75.7	73.7	72.3	74.1	85.4	84.2	85.7	85.1	85.9	84.0	80.1	76.3	74.0	77.7	77.5	80.6	78.5	71.4	73.5	73.3	77.1	83.0	87.1	71.4	78.8
25	88.0	86.7	83.0	73.1	76.7	73.3	73.0	67.6	68.8	68.4	66.4	64.5	61.4	57.0	54.4	52.5	51.2	55.3	60.5	57.5	58.3	60.7	60.9	67.0	88.0	51.2	66.1
26	73.2	75.8	78.3	80.9	81.2	77.3	81.4	86.3	84.3	80.8	77.8	76.0	75.8	74.5	78.9	80.7	80.3	77.5	78.9	91.2	93.4	90.4	91.1	89.7	93.4	73.2	81.5
27	83.5	82.7	81.6	81.4	81.8	79.6	88.4	92.2	95.8	96.3	97.1	93.8	92.8	91.4	90.6	89.8	87.9	88.4	91.7	87.4	89.4	89.6	88.8	91.3	97.1	79.6	88.9
28	89.8	84.9	77.3	81.3	80.3	79.9	79.6	78.8	77.9	79.0	77.9	75.4	74.7	70.3	62.2	59.4	59.5	51.7	48.6	50.6	48.7	51.9	53.3	53.6	89.8	48.6	68.6
29	54.7	55.7	58.9	57.3	55.8	56.6	57.9	55.9	52.7	54.7	53.9	53.5	50.7	49.9	49.3	48.4	62.1	46.8	64.4	53.2	50.4	49.3	50.5	50.4	64.4	46.8	53.9
30	54.5	56.1	55.5	57.1	59.2	59.7	62.4	63.7	62.0	60.6	58.1	57.0	57.1	54.3	52.5	50.8	49.0	48.8	50.9	52.2	54.1	57.2	61.5	62.8	63.7	48.8	56.5
31	62.1	62.4	63.1	62.6	65.3	71.6	71.3	70.9	71.8	72.7	69.5	66.8	66.3	63.1	63.3	55.3	52.2	49.0	46.6	45.1	47.7	51.0	59.2	59.0	72.7	45.1	61.2
Max.	**98.2**	**97.8**	**98.4**	**97.5**	**98.1**	**98.7**	**98.0**	**98.0**	**96.8**	**98.3**	**98.4**	**98.3**	**98.5**	**97.8**	**98.3**	**98.6**	**98.6**	**98.7**	**98.8**	**98.1**	**98.1**	**98.8**	**99.1**	**99.1**	**99.1**		
Min.	**54.5**	**55.7**	**55.5**	**43.2**	**43.1**	**45.5**	**54.8**	**55.9**	**52.7**	**54.7**	**53.9**	**53.5**	**50.7**	**49.9**	**49.3**	**48.4**	**49.0**	46.8	46.6	**45.1**	**47.7**	**49.3**	**50.5**	**50.4**		**43.1**	
Avg.	**83.2**	**83.5**	**83.2**	**82.4**	**82.5**	**81.7**	**82.1**	**82.5**	**82.5**	**82.7**	**81.8**	**81.1**	**79.8**	**78.2**	**76.9**	**76.7**	**76.5**	**75.7**	**76.0**	**75.6**	**77.0**	**78.1**	**79.5**	**81.1**			**80.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	68.0	71.9	70.2	75.9	78.6	79.2	81.0	81.1	87.1	90.8	90.6	91.3	92.0	94.4	94.0	94.2	94.0	91.9	87.1	84.4	86.0	86.8	85.9	87.0	94.4	68.0	85.1
2	86.2	87.5	94.5	96.0	95.0	95.9	96.3	97.5	95.5	95.4	92.6	93.3	91.7	91.3	87.8	89.6	89.0	89.0	91.1	91.0	92.4	94.6	94.8	95.5	97.5	86.2	92.6
3	94.8	94.8	93.8	92.1	91.3	92.5	95.4	97.1	98.1	98.6	98.5	98.3	98.6	98.3	88.0	91.2	93.1	92.8	94.2	94.6	93.8	93.3	92.4	92.5	98.6	88.0	94.5
4	94.4	96.2	95.5	93.4	94.8	93.7	90.5	89.7	92.6	88.6	89.1	93.8	92.1	91.2	92.5	92.4	89.5	88.9	90.1	96.0	97.0	97.6	97.4	97.7	97.7	88.6	93.1
5	97.3	97.8	97.4	96.5	95.2	94.4	96.1	94.4	93.0	89.9	86.1	87.6	88.6	90.2	92.3	92.2	90.9	90.5	88.3	86.0	86.9	89.5	88.6	88.7	97.8	86.0	91.6
6	89.4	88.8	89.5	89.6	91.3	90.4	92.6	93.4	93.0	88.0	80.7	80.0	82.3	73.5	69.2	66.1	66.5	71.2	75.6	57.5	41.0	44.2	48.9	48.5	93.4	41.0	75.5
7	45.4	46.2	48.1	51.2	54.7	55.5	55.2	54.7	59.4	57.1	57.4	53.9	51.3	47.0	44.8	41.3	39.7	39.9	40.7	45.9	46.5	51.3	56.3	50.9	59.4	39.7	49.8
8	52.9	57.9	57.1	62.0	63.0	70.6	70.6	71.4	68.1	64.8	74.6	84.4	79.9	79.4	70.5	64.4	73.0	76.9	81.2	75.9	73.3	78.0	78.2	86.2	86.2	52.9	71.4
9	88.8	88.6	89.8	90.8	90.3	91.8	80.9	67.3	63.9	63.2	59.7	56.4	54.8	54.2	78.0	78.9	81.4	81.2	85.8	90.1	90.6	89.4	89.7	89.5	91.8	54.2	79.0
10	88.0	86.6	87.6	87.0	85.4	89.1	88.3	88.6	90.1	90.4	90.4	89.9	86.3	84.0	83.0	76.9	73.0	73.7	79.1	80.1	81.3	83.8	83.7	85.3	90.4	73.0	84.7
11	85.8	87.3	87.6	91.8	94.7	92.3	88.2	85.0	85.1	88.1	86.0	85.6	84.9	84.3	84.1	84.7	85.1	82.8	82.3	79.1	61.3	71.8	81.2	84.3	94.7	61.3	84.3
12	87.4	87.2	78.9	74.0	71.8	71.4	70.7	68.8	73.1	68.6	71.0	76.9	70.0	71.0	71.3	71.4	73.3	76.1	71.5	73.9	79.5	80.4	83.3	85.7	87.4	68.6	75.3
13	85.5	88.5	85.2	85.1	86.5	86.3	83.7	67.0	66.6	68.2	78.2	79.8	80.1	74.4	71.0	69.1	70.6	75.8	79.2	80.5	77.7	76.5	78.3	77.3	88.5	66.6	78.0
14	79.7	82.0	82.0	87.6	84.4	82.6	84.3	88.8	89.2	91.8	93.4	95.3	92.7	90.8	90.7	90.6	89.6	88.3	87.0	87.0	89.1	89.9	88.2	95.2	95.3	79.7	88.3
15	95.8	97.5	94.4	93.2	91.1	91.4	90.2	90.4	87.5	88.6	89.4	88.5	88.6	90.2	90.8	93.9	95.7	97.7	98.3	97.7	98.4	98.5	98.3	98.8	98.8	87.5	93.5
16	98.9	99.0	98.6	93.6	92.3	91.8	92.5	89.9	90.3	90.6	90.2	96.9	95.5	92.1	90.0	88.4	87.1	84.6	82.7	83.9	88.4	88.8	89.5	90.4	99.0	82.7	91.1
17	89.9	88.4	89.3	90.5	88.9	86.8	87.3	84.1	85.9	85.2	89.4	86.5	89.6	85.9	80.9	80.8	79.3	77.9	77.9	79.9	79.6	77.6	78.8	81.9	90.5	77.6	84.3
18	79.2	79.6	82.8	87.2	86.6	87.3	90.8	91.5	84.9	59.8	56.0	55.5	57.9	55.0	55.0	56.6	51.7	48.2	46.3	46.6	46.4	50.1	47.8	58.7	91.5	46.3	65.1
19	61.9	62.1	56.9	59.1	70.2	75.2	76.2	82.3	74.6	73.0	75.1	75.7	73.1	68.7	67.7	67.3	64.8	64.2	66.2	67.3	67.7	64.5	64.7	67.2	82.3	56.9	68.6
20	68.9	71.6	72.7	72.1	73.5	75.7	75.9	78.4	79.7	79.0	77.0	74.8	74.6	74.3	72.9	70.2	66.9	65.2	65.4	65.2	65.6	68.0	68.9	70.2	79.7	65.2	71.9
21	72.7	75.5	79.4	79.2	79.8	78.8	78.7	81.3	82.0	81.2	84.0	86.5	85.5	82.3	92.1	89.6	87.5	88.0	91.9	95.2	95.2	92.7	94.9	95.6	95.6	72.7	85.4
22	96.5	96.7	97.6	94.4	93.8	92.3	88.4	85.8	89.9	91.0	88.7	86.7	87.4	86.4	85.0	82.4	81.5	95.7	94.5	92.4	91.2	73.6	70.5	72.3	97.6	70.5	88.1
23	74.9	75.8	74.9	75.5	75.4	77.2	78.6	79.1	82.5	80.4	80.2	81.9	89.0	90.0	90.7	91.6	91.5	93.2	93.2	92.5	94.5	94.1	87.8	86.2	94.5	74.9	84.6
24	85.6	83.8	82.3	82.9	80.8	80.3	78.3	78.1	78.3	79.3	80.4	81.5	76.2	73.6	74.7	73.6	67.7	65.6	65.7	69.9	70.3	69.9	69.4	69.7	85.6	65.6	75.7
25	71.2	78.6	79.2	90.8	92.7	93.5	92.3	92.7	93.4	94.6	96.0	92.7	89.8	92.8	94.7	93.5	92.6	91.0	90.8	90.3	90.3	90.6	89.4	88.1	96.0	71.2	90.1
26	86.8	86.2	88.5	87.4	92.1	87.9	91.6	89.5	90.4	92.2	89.5	86.0	87.5	81.9	81.9	83.6	86.2	87.7	90.5	88.5	85.1	85.6	87.2	86.8	92.2	81.9	87.5
27	87.1	86.5	87.6	89.0	91.9	92.8	91.9	87.6	83.1	83.6	82.3	80.4	78.5	76.7	75.7	75.3	72.4	68.9	71.4	70.0	73.0	73.9	77.7	78.9	92.8	68.9	80.7
28	79.0	80.1	81.0	81.6	82.2	84.5	84.2	83.1	82.7	83.6	82.4	80.2	80.5	79.0	79.6	79.3	76.2	73.2	71.1	73.2	74.1	76.0	77.0	79.1	84.5	71.1	79.3
29	79.3	80.7	77.8	77.8	78.4	75.9	73.3	72.2	71.0	68.0	63.5	55.7	47.5	44.0	44.4	46.9	47.8	47.4	50.6	51.2	47.3	49.3	52.0	53.4	80.7	44.0	60.7
30	57.9	62.5	68.3	71.3	73.4	72.9	75.3	74.6	71.2	72.6	70.7	70.2	72.5	84.5	84.8	80.5	75.3	87.8	83.8	81.1	72.8	84.4	79.5	76.8	87.8	57.9	75.2
31	77.6	81.1	84.8	87.6	89.8	90.2	82.7	77.6	76.2	73.7	72.7	70.6	67.9	66.3	66.4	66.6	64.4	65.6	60.3	56.9	57.7	56.1	57.8	56.4	90.2	56.1	71.1
Max.	**98.9**	**99.0**	**98.6**	**96.5**	**95.2**	**95.9**	**96.3**	**97.5**	**98.1**	**98.6**	**98.5**	**98.3**	**98.6**	**98.3**	**94.7**	**94.2**	**95.7**	**97.7**	**98.3**	**97.7**	**98.4**	**98.5**	**98.3**	**98.8**	**99.0**		
Min.	**45.4**	**46.2**	**48.1**	**51.2**	**54.7**	**55.5**	**55.2**	**54.7**	**59.4**	**57.1**	**56.0**	**53.9**	**47.5**	**44.0**	**44.4**	**41.3**	**39.7**	39.9	40.7	**45.9**	**41.0**	**44.2**	**47.8**	**48.5**		**39.7**	
Avg.	**80.9**	**82.2**	**82.4**	**83.4**	**84.2**	**84.5**	**83.9**	**82.7**	**82.5**	**81.3**	**81.2**	**81.2**	**80.2**	**79.0**	**78.9**	**78.2**	**77.3**	**78.1**	**78.5**	**78.2**	**77.2**	**78.1**	**78.7**	**79.8**			**80.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	55.0	54.7	60.8	61.4	61.0	62.3	65.3	64.4	64.5	68.0	68.5	67.6	68.2	66.5	65.3	71.2	70.7	74.4	76.4	90.8	94.0	78.4	78.3	79.3	94.0	54.7	69.5
2	80.3	81.2	83.5	82.5	84.7	83.6	91.7	91.4	90.7	91.9	94.6	94.3	88.2	79.7	73.3	68.5	68.3	69.0	66.4	67.2	67.7	66.6	69.2	69.6	94.6	66.4	79.3
3	70.0	70.0	70.0	71.2	70.3	69.6	68.8	67.3	70.7	74.8	78.6	91.2	90.8	87.4	85.2	87.0	83.7	78.2	82.4	84.9	88.6	89.1	87.6	93.5	93.5	67.3	79.6
4	97.8	93.4	90.3	89.8	89.6	91.1	93.6	90.8	91.9	88.3	92.8	94.6	93.3	92.1	91.3	90.3	90.3	90.3	87.5	88.2	89.6	87.9	88.9	93.2	97.8	87.5	91.1
5	92.1	92.6	93.3	94.9	91.8	92.5	95.2	93.3	94.8	92.5	92.0	95.7	96.8	96.3	97.4	97.9	98.5	98.6	98.7	98.8	98.9	98.9	98.9	99.0	99.0	91.8	95.8
6	99.1	99.1	94.5	89.1	93.2	92.6	83.6	72.5	77.8	71.6	67.5	67.6	72.0	74.2	72.6	70.8	68.3	68.6	70.1	69.1	68.9	69.4	71.8	73.3	99.1	67.5	77.4
7	70.8	68.2	68.2	68.8	69.3	65.6	68.4	72.8	76.0	75.5	84.3	95.0	89.0	93.1	87.9	77.3	74.1	71.2	79.7	91.6	93.3	94.6	94.0	95.1	95.1	65.6	80.2
8	96.3	95.0	97.2	97.9	96.1	96.3	97.7	97.1	97.4	96.4	90.7	89.9	85.8	83.1	87.6	92.3	94.8	93.8	75.0	73.0	71.5	71.1	72.7	72.8	97.9	71.1	88.4
9	72.9	74.4	74.5	73.8	72.2	72.6	72.7	72.9	72.6	70.4	71.4	76.9	79.1	79.5	95.5	96.5	95.8	95.7	95.9	96.0	96.3	97.4	96.8	96.4	97.4	70.4	83.2
10	96.5	93.6	96.1	97.6	97.8	94.9	97.5	98.0	98.0	98.3	95.5	90.5	87.3	86.8	89.3	82.8	74.9	71.6	71.6	74.6	77.2	78.2	81.2	82.5	98.3	71.6	88.0
11	83.3	83.9	83.1	84.0	83.2	82.5	84.1	82.3	82.3	79.4	74.2	70.1	58.7	64.8	75.5	84.2	86.3	85.2	88.1	87.1	86.5	91.6	92.2	93.2	93.2	58.7	81.9
12	91.1	89.6	89.8	91.3	92.8	93.2	92.6	89.9	84.5	83.4	80.8	80.0	78.8	78.6	76.3	75.9	76.8	76.7	77.3	76.6	78.3	79.8	81.2	82.8	93.2	75.9	83.3
13	88.8	94.1	94.4	94.3	95.6	95.8	95.3	94.1	94.2	94.1	94.1	93.2	93.5	92.2	91.4	85.4	79.1	78.6	73.6	69.7	71.5	71.4	71.5	72.6	95.8	69.7	86.6
14	72.8	68.7	66.5	66.3	66.4	69.2	71.4	70.5	75.1	75.8	75.6	77.7	82.9	84.4	82.6	84.3	86.5	81.5	82.1	82.2	83.3	91.0	93.5	91.3	93.5	66.3	78.4
15	91.1	89.9	90.9	91.5	90.9	90.0	90.6	88.9	89.4	90.8	85.0	64.2	91.1	89.6	91.9	92.4	90.1	85.0	88.2	83.6	81.7	82.8	86.5	85.8	92.4	64.2	87.6
16	84.4	83.9	87.0	79.8	77.7	76.9	81.2	81.6	82.5	81.7	79.7	78.6	77.6	74.0	71.4	67.5	64.2	65.7	69.0	68.3	68.8	70.6	71.6	75.7	87.0	64.2	75.8
17	78.5	77.9	78.2	78.7	81.5	80.0	79.9	80.7	79.1	80.3	77.9	75.6	73.0	83.0	81.1	83.6	87.0	86.4	83.9	88.8	94.5	91.5	84.2	77.2	94.5	73.0	81.8
18	72.5	71.9	71.3	70.6	71.8	73.1	72.0	70.9	65.4	65.2	64.8	62.2	63.1	71.9	76.6	92.8	91.0	86.6	84.3	88.9	94.9	94.6	89.7	85.6	94.9	62.2	77.2
19	85.6	84.4	80.2	78.8	78.6	80.4	86.0	91.5	95.3	94.8	92.5	87.0	88.1	83.1	80.7	77.1	76.4	78.8	80.9	78.2	75.4	77.4	75.7	75.0	95.3	75.0	82.6
20	75.7	79.7	80.2	80.1	77.1	74.3	74.0	74.9	75.3	76.6	77.7	80.6	74.7	71.2	70.9	69.1	62.5	56.7	56.8	56.7	59.2	58.9	58.3	61.2	80.6	56.7	70.1
21	60.5	63.1	64.3	65.8	61.4	64.4	62.5	62.8	66.6	64.6	62.9	58.1	51.4	44.4	44.9	49.2	49.7	51.0	58.2	58.6	58.1	60.2	63.2	68.3	68.3	44.4	58.9
22	69.2	68.7	70.1	72.0	73.2	73.4	72.9	73.8	69.9	73.1	68.5	62.3	53.4	50.4	50.6	50.8	50.0	54.2	59.8	59.6	60.9	71.2	76.7	83.9	83.9	50.0	65.3
23	87.5	91.0	91.2	93.1	92.5	92.3	92.0	93.7	94.8	93.9	93.6	94.1	94.4	93.2	93.6	93.9	93.4	91.1	92.8	89.7	93.1	93.7	94.1	95.4	95.4	87.5	92.8
24	95.8	96.3	96.6	96.1	94.7	96.2	94.8	93.5	90.1	81.6	75.1	75.4	76.3	80.0	77.2	75.9	75.6	75.0	74.4	74.6	74.2	73.9	72.9	72.3	96.6	72.3	82.8
25	72.0	72.3	73.6	72.7	71.2	70.0	69.0	69.4	69.2	69.6	70.9	73.1	72.7	72.7	72.1	71.4	71.1	70.5	71.3	73.6	73.8	75.5	71.7	71.7	75.5	69.0	71.7
26	71.7	72.7	71.8	78.9	75.6	72.7	81.0	84.5	83.3	84.3	82.4	80.9	77.0	75.9	73.9	73.9	78.8	80.9	80.7	83.6	88.2	84.8	76.5	76.3	88.2	71.7	78.8
27	74.9	75.8	75.1	76.6	77.8	76.7	74.8	74.6	75.3	72.5	73.8	72.2	68.1	68.8	67.3	65.2	61.1	53.1	45.6	45.5	45.3	45.8	46.1	54.2	77.8	45.3	65.3
28	52.9	53.3	55.1	55.0	53.8	54.2	54.8	53.5	52.0	52.0	53.9	54.5	48.3	59.2	77.3	75.9	73.8	69.1	67.9	65.2	65.5	64.1	59.9	50.3	77.3	48.3	59.2
29	49.4	50.3	48.7	48.0	49.0	49.0	49.0	52.0	52.9	55.0	54.6	54.9	57.0	57.4	49.8	48.5	49.8	56.4	60.5	59.3	60.1	67.3	75.9	79.1	79.1	48.0	55.6
30	80.8	79.4	75.7	70.1	66.6	66.1	68.5	69.1	71.6	71.5	69.9	68.3	63.6	58.7	57.3	56.1	56.7	59.2	59.1	61.8	65.1	65.0	65.7	66.2	80.8	56.1	66.3
Max.	**99.1**	**99.1**	**97.2**	**97.9**	**97.8**	**96.3**	**97.7**	**98.0**	**98.0**	**98.3**	**95.5**	**95.7**	**96.8**	**96.3**	**97.4**	**97.9**	**98.5**	**98.6**	**98.7**	**98.8**	**98.9**	**98.9**	**98.9**	**99.0**	**99.1**		
Min.	**49.4**	**50.3**	**48.7**	**48.0**	**49.0**	**49.0**	**49.0**	**52.0**	**52.0**	**52.0**	**53.9**	**54.5**	**48.3**	**44.4**	**44.9**	**48.5**	**49.7**	51.0	45.6	**45.5**	**45.3**	**45.8**	**46.1**	**50.3**		**44.4**	
Avg.	**79.0**	**79.0**	**79.1**	**79.0**	**78.6**	**78.4**	**79.4**	**79.1**	**79.4**	**78.9**	**78.1**	**77.5**	**76.5**	**76.4**	**76.9**	**76.9**	**76.0**	**75.1**	**75.3**	**76.2**	**77.5**	**78.1**	**78.2**	**79.1**			**77.8**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	66.8	69.7	72.2	74.8	78.4	80.8	82.0	83.6	85.2	87.2	86.1	80.7	72.6	71.7	66.6	81.2	80.7	76.9	74.6	73.5	71.9	70.0	67.9	70.1	87.2	66.6	76.0
2	74.4	84.0	81.3	85.1	86.4	86.0	88.2	88.4	88.1	86.8	73.5	70.7	65.7	61.7	58.6	58.3	61.5	64.1	65.5	68.5	72.3	76.5	81.8	74.3	88.4	58.3	75.1
3	72.5	72.4	76.3	77.7	71.1	72.3	78.2	79.5	81.8	80.3	76.9	77.5	77.8	76.8	76.5	77.9	76.7	74.4	72.6	73.0	73.8	75.7	75.2	74.8	81.8	71.1	75.9
4	73.6	74.3	74.1	73.6	75.3	75.7	75.0	73.6	72.1	71.3	71.7	69.7	66.1	63.5	58.7	58.1	56.0	58.3	61.5	66.5	72.7	80.4	79.8	77.8	80.4	56.0	70.0
5	74.6	72.7	73.5	74.7	71.4	71.4	73.5	77.6	80.1	76.9	77.0	74.7	70.4	65.7	63.2	58.6	59.5	60.1	59.6	64.5	63.4	69.7	69.7	71.4	80.1	58.6	69.7
6	74.8	71.8	73.9	74.5	74.2	75.0	70.9	73.4	76.3	73.0	72.8	69.3	65.2	65.0	66.2	67.0	67.7	68.9	70.5	73.5	72.6	70.4	69.5	67.7	76.3	65.0	71.0
7	66.5	67.6	68.2	65.3	66.1	66.2	64.4	68.6	68.9	69.9	67.0	64.8	64.2	64.6	64.4	63.6	62.7	62.8	67.0	67.1	65.7	65.3	64.1	66.2	69.9	62.7	65.9
8	66.2	61.2	65.1	65.2	63.5	64.2	64.3	64.8	61.6	59.4	57.2	53.2	54.7	50.5	47.2	43.9	43.9	44.7	47.0	50.3	53.9	58.0	59.8	56.0	66.2	43.9	56.5
9	55.4	58.4	59.6	59.7	58.1	65.5	74.4	74.8	71.0	70.1	70.9	70.5	73.0	71.0	71.0	69.2	69.0	71.7	72.7	68.7	71.7	73.8	73.7	74.7	74.8	55.4	68.7
10	76.8	81.2	85.5	86.2	89.5	96.1	89.9	80.8	83.4	83.8	80.8	79.7	77.9	75.1	73.1	76.2	79.9	77.3	76.7	76.3	76.9	80.4	80.8	77.2	96.1	73.1	80.9
11	80.3	85.5	90.6	91.6	91.7	92.3	93.1	95.5	96.6	97.0	97.4	97.4	96.7	89.9	79.6	78.6	85.6	92.7	96.6	95.3	91.3	87.7	82.9	78.7	97.4	78.6	90.2
12	75.0	74.6	72.5	70.8	70.2	67.8	67.3	68.9	70.2	66.4	66.2	64.5	63.0	61.8	61.8	63.1	61.5	61.6	59.8	62.9	64.4	65.3	62.0	66.8	75.0	59.8	66.2
13	64.5	66.1	66.7	71.2	64.8	61.7	58.7	61.7	67.1	63.3	64.6	67.0	65.1	63.2	60.2	65.5	76.5	80.9	74.7	69.9	68.3	67.1	71.1	78.0	80.9	58.7	67.4
14	88.4	89.1	82.7	82.8	86.9	86.7	87.6	94.5	97.1	97.6	98.1	97.7	96.7	97.0	96.4	96.0	95.7	93.7	94.0	95.5	95.4	96.0	97.7	97.6	98.1	82.7	93.4
15	96.4	97.4	96.8	96.9	97.2	96.1	95.9	95.5	93.1	92.0	91.8	88.4	84.4	81.8	81.2	81.0	80.2	80.4	82.7	84.6	84.1	83.9	84.4	82.3	97.4	80.2	88.7
16	83.1	84.1	84.0	83.6	84.4	84.6	84.8	84.3	82.7	83.4	83.9	83.3	79.8	79.3	78.6	79.3	78.8	80.1	79.1	80.1	81.1	80.7	79.6	80.0	84.8	78.6	81.8
17	80.9	81.5	82.1	81.9	83.2	84.2	83.7	83.1	79.8	78.1	80.6	78.2	75.5	75.5	75.7	74.5	71.8	69.0	68.7	71.2	72.8	70.7	73.8	68.9	84.2	68.7	76.9
18	68.0	67.7	69.8	68.6	69.1	66.8	61.8	58.2	55.2	51.8	50.6	50.1	49.9	49.3	46.4	45.9	45.9	45.1	45.5	45.1	44.6	44.9	51.0	53.2	69.8	44.6	54.3
19	52.6	65.5	65.9	66.2	64.4	62.1	59.6	64.1	61.9	61.7	63.1	63.9	63.2	66.9	68.6	66.8	70.7	73.1	75.6	78.6	81.0	82.2	83.9	83.4	83.9	52.6	68.5
20	82.7	83.1	82.6	81.6	80.7	81.0	79.9	79.4	79.9	85.8	82.3	78.3	75.8	74.7	72.0	71.0	74.6	74.1	77.7	78.1	77.0	73.8	74.4	74.4	85.8	71.0	78.1
21	76.0	75.7	76.2	75.9	74.0	73.2	71.8	72.4	72.8	74.0	75.5	74.3	73.2	72.2	72.5	72.8	71.3	69.4	68.5	69.0	69.9	71.1	68.4	66.7	76.2	66.7	72.4
22	66.1	69.5	66.9	65.7	67.3	66.8	66.5	69.9	66.8	66.9	68.6	68.0	59.9	61.7	62.6	59.1	60.3	61.4	59.0	61.1	63.2	64.9	65.4	58.4	69.9	58.4	64.4
23	52.3	48.0	45.1	42.7	57.1	59.1	61.2	60.2	59.4	66.9	65.5	65.0	59.6	52.4	49.5	42.9	46.2	51.1	54.2	52.9	49.9	46.9	51.3	61.3	66.9	42.7	54.2
24	61.7	55.9	54.6	56.4	56.8	57.3	60.1	65.6	67.8	58.4	56.4	54.4	55.8	54.8	56.2	58.7	59.6	56.5	54.1	47.9	46.0	50.3	53.5	53.4	67.8	46.0	56.3
25	54.0	60.1	61.0	72.1	91.1	94.4	93.9	94.5	93.5	92.9	93.6	94.3	92.3	88.5	95.9	98.8	96.3	91.3	84.0	74.4	68.1	68.5	59.3	57.2	98.8	54.0	82.1
26	54.9	53.0	61.6	63.3	63.3	69.0	66.0	75.0	73.9	77.9	78.5	70.3	70.5	77.1	76.1	70.4	66.9	64.0	67.1	66.7	68.6	70.5	70.8	73.4	78.5	53.0	68.7
27	74.2	74.5	75.8	75.9	75.9	74.5	74.6	73.5	76.8	75.4	75.3	75.5	73.0	72.3	68.9	66.7	65.8	68.2	70.1	71.1	72.3	72.2	71.9	72.1	76.8	65.8	72.8
28	72.7	73.1	73.0	70.6	74.0	75.2	65.8	61.3	54.2	55.1	51.6	53.3	47.0	49.3	53.6	54.3	57.8	63.3	65.5	65.2	63.3	58.6	60.9	62.7	75.2	47.0	61.7
29	62.1	70.8	69.6	66.7	68.3	65.4	68.4	68.9	63.8	67.0	58.6	56.9	51.2	53.9	49.4	52.3	55.2	46.4	50.2	71.3	87.2	96.0	97.5	97.6	97.6	46.4	66.5
30	98.1	97.9	98.4	97.5	95.1	89.4	90.9	93.4	89.2	90.6	94.8	83.9	78.0	77.7	76.1	75.2	78.8	78.4	80.4	82.4	82.3	85.9	90.2	84.1	98.4	75.2	87.0
31	90.0	88.7	89.5	90.6	89.5	89.0	89.1	89.7	79.0	83.1	89.3	88.1	82.0	79.6	76.0	74.6	74.3	76.4	74.2	77.5	79.9	83.4	83.6	84.0	90.6	74.2	83.4
Max.	**98.1**	**97.9**	**98.4**	**97.5**	**97.2**	**96.1**	**95.9**	**95.5**	**97.1**	**97.6**	**98.1**	**97.7**	**96.7**	**97.0**	**96.4**	**98.8**	**96.3**	**93.7**	**96.6**	**95.5**	**95.4**	**96.0**	**97.7**	**97.6**	**98.8**		
Min.	**52.3**	**48.0**	**45.1**	**42.7**	**56.8**	**57.3**	**58.7**	**58.2**	**54.2**	**51.8**	**50.6**	**50.1**	**47.0**	**49.3**	**46.4**	**42.9**	**43.9**	44.7	45.5	**45.1**	**44.6**	**44.9**	**51.0**	**53.2**		**42.7**	
Avg.	**72.1**	**73.4**	**74.0**	**74.5**	**75.4**	**75.8**	**75.5**	**76.6**	**75.8**	**75.6**	**74.8**	**73.0**	**70.3**	**69.2**	**67.8**	**67.8**	**68.7**	**68.9**	**69.3**	**70.4**	**71.1**	**72.3**	**72.8**	**72.4**			**72.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	86.3	85.3	87.5	84.8	87.3	86.7	86.3	88.8	89.1	89.7	85.8	81.0	81.0	80.7	81.4	82.4	80.1	79.5	79.9	76.6	74.0	74.2	75.6	75.8	89.7	74.0	82.5
2	76.0	73.4	71.4	70.2	68.8	68.3	68.5	67.0	66.2	62.5	59.1	67.4	68.4	66.0	64.8	68.6	70.8	69.9	72.5	72.1	75.2	74.8	73.6	73.6	76.0	59.1	69.5
3	74.5	75.7	74.9	74.1	71.9	73.6	72.8	75.4	74.5	75.1	75.0	72.6	68.9	69.8	71.8	68.8	67.7	68.4	70.3	70.8	70.3	72.0	72.2	72.5	75.7	67.7	72.2
4	72.7	73.1	72.3	73.7	70.7	73.0	73.8	73.8	75.7	75.7	76.3	73.8	73.6	73.3	73.9	73.8	77.5	76.7	78.2	78.0	78.8	80.6	82.1	82.5	82.5	70.7	75.6
5	82.8	83.6	84.0	82.7	82.2	80.8	81.8	82.7	83.7	81.5	80.2	80.9	78.3	69.5	59.5	58.9	56.3	56.0	60.3	60.5	61.7	64.1	63.5	64.9	84.0	56.0	72.5
6	62.9	60.2	60.0	60.3	58.2	54.3	52.1	51.5	51.4	52.2	50.9	50.3	47.1	45.9	44.6	49.8	57.2	58.8	61.6	66.4	66.8	71.2	72.9	71.0	72.9	44.6	57.4
7	67.8	65.2	69.6	69.8	72.1	73.4	73.3	75.3	75.1	72.3	70.2	72.0	71.5	68.3	66.8	65.7	56.6	59.4	62.8	72.0	76.4	76.0	72.4	72.8	76.4	56.6	69.9
8	73.3	71.6	71.1	73.9	74.0	75.6	78.5	80.8	80.9	79.7	76.1	76.4	68.2	60.1	60.2	62.4	61.0	57.8	55.5	54.2	53.8	53.4	52.0	53.7	80.9	52.0	66.8
9	56.1	63.0	66.3	65.3	69.9	67.8	70.0	72.0	73.8	74.9	77.1	76.7	76.5	74.8	74.4	77.0	77.7	78.1	78.8	76.7	73.3	75.4	73.8	71.5	78.8	56.1	72.5
10	65.1	60.9	61.7	61.9	59.0	58.7	52.9	50.0	55.9	72.8	81.1	81.0	82.5	87.8	96.1	92.9	92.7	90.9	86.8	91.4	97.9	96.3	92.6	92.7	97.9	50.0	77.6
11	88.3	83.5	78.6	83.6	76.4	74.2	72.7	73.7	92.8	96.6	87.0	89.7	91.4	94.6	97.0	93.6	86.8	84.8	97.7	98.1	89.8	83.8	83.0	84.4	98.1	72.7	86.8
12	87.5	89.7	86.8	86.4	89.8	85.5	85.0	81.2	80.0	79.3	79.6	75.0	76.8	77.9	77.0	76.5	76.6	76.7	74.9	72.7	73.5	73.4	73.9	75.4	89.8	72.7	79.6
13	78.5	78.7	80.8	84.5	85.9	85.6	80.7	84.7	77.2	71.5	69.5	93.6	90.2	82.3	81.4	82.3	78.9	83.7	86.6	86.0	91.9	90.3	87.5	90.7	93.6	69.5	83.5
14	85.1	80.5	78.1	84.8	84.7	86.1	86.2	87.2	85.0	90.6	83.5	86.0	88.0	83.1	80.9	78.5	75.8	79.5	79.3	74.2	74.6	75.9	75.4	77.4	90.6	74.2	81.7
15	76.1	76.4	77.0	82.0	83.2	79.5	78.4	75.1	75.4	76.6	81.9	87.2	83.0	79.8	79.2	80.4	90.0	90.8	92.8	80.0	75.0	76.4	81.2	80.5	92.8	75.0	80.7
16	78.3	75.7	82.6	78.3	75.2	73.0	93.1	98.7	98.1	97.7	95.1	86.1	83.4	81.4	78.3	76.5	78.6	81.0	82.4	85.2	84.5	85.8	84.1	87.2	98.7	73.0	84.2
17	86.0	85.5	83.2	86.2	84.8	87.3	88.0	88.8	88.2	88.2	87.8	85.4	80.8	79.6	77.1	74.1	74.6	75.1	74.1	73.9	72.4	77.5	78.2	79.7	88.8	72.4	81.5
18	79.9	81.3	79.1	78.7	75.1	70.5	71.2	72.9	70.9	68.9	69.7	70.7	71.7	72.0	68.5	68.4	65.5	68.6	66.4	71.4	73.7	69.7	67.5	68.1	81.3	65.5	71.7
19	67.0	69.3	64.4	67.1	70.1	79.9	83.5	81.8	84.5	84.4	84.6	86.7	84.0	79.1	78.7	76.2	72.5	68.2	63.5	63.3	64.9	61.4	64.2	60.6	86.7	60.6	73.3
20	59.9	60.2	60.0	61.3	61.0	58.5	59.2	62.7	66.3	73.1	72.2	72.5	75.5	75.3	76.3	76.6	76.7	77.8	78.7	79.1	76.3	77.0	77.0	77.4	79.1	58.5	70.5
21	76.1	74.6	75.5	75.4	75.5	74.3	78.4	78.8	77.7	79.1	80.5	79.7	79.1	77.4	77.5	78.3	78.8	80.2	83.0	83.4	84.0	85.4	86.8	85.3	86.8	74.3	79.4
22	82.5	79.6	79.6	79.1	79.2	78.7	77.6	79.1	81.8	80.9	80.3	80.6	78.8	75.8	68.3	62.0	57.7	62.0	65.0	61.4	63.0	62.1	69.5	77.6	82.5	57.7	73.4
23	80.1	80.5	85.5	90.2	92.1	93.4	95.1	90.4	91.6	94.0	92.4	89.3	88.7	88.4	89.3	82.6	73.9	72.1	71.8	72.3	74.3	73.4	75.3	79.0	95.1	71.8	84.0
24	77.6	74.9	76.0	74.4	71.8	71.3	72.0	74.1	72.7	76.1	76.2	75.1	82.1	85.4	86.3	86.2	92.2	85.1	82.3	85.9	94.2	93.6	95.8	95.7	95.8	71.3	81.5
25	87.8	83.9	82.6	80.5	79.8	79.0	81.2	76.7	76.1	73.4	75.6	77.0	77.6	78.3	75.9	75.4	76.9	78.8	79.5	81.4	80.1	78.1	76.1	79.6	87.8	73.4	78.8
26	80.6	79.5	77.5	76.5	77.2	71.8	71.6	70.2	69.6	68.3	67.8	68.9	68.5	66.4	67.3	65.7	66.6	66.9	67.3	68.7	68.2	67.5	66.1	70.1	80.6	65.7	70.4
27	72.1	72.3	71.3	71.1	67.3	67.9	71.8	70.1	66.7	62.9	61.0	58.7	57.7	58.3	54.7	57.4	60.9	81.5	91.4	94.0	94.7	95.0	93.0	94.4	95.0	54.7	72.8
28	82.0	81.8	87.9	87.4	79.7	77.7	82.9	85.0	87.5	83.5	81.1	84.3	88.0	87.0	84.6	88.6	89.0	87.3	86.4	84.7	85.5	83.5	85.6	85.6	89.0	77.7	84.9
29	84.9	83.6	82.3	81.7	82.4	81.0	80.2	75.9	74.6	75.9	76.2	76.2	76.3	75.6	76.0	76.1	75.7	78.9	79.9	80.4	78.3	77.7	79.5	77.0	84.9	74.6	78.6
30	76.4	79.4	81.6	81.3	80.6	75.2	75.8	72.3	66.6	63.6	62.2	65.6	63.4	59.7	64.1	63.9	59.9	57.6	61.0	61.9	56.4	55.9	58.3	56.9	81.6	55.9	66.6
Max.	**88.3**	**89.7**	**87.9**	**90.2**	**92.1**	**93.4**	**95.1**	**98.7**	**98.1**	**97.7**	**95.1**	**93.6**	**91.4**	**94.6**	**97.0**	**93.6**	**92.7**	**90.9**	**97.7**	**98.1**	**97.9**	**96.3**	**95.8**	**95.7**	**98.7**		
Min.	**56.1**	**60.2**	**60.0**	**60.3**	**58.2**	**54.3**	**52.1**	**50.0**	**51.4**	**52.2**	**50.9**	**50.3**	**47.1**	**45.9**	**44.6**	**49.8**	**56.3**	56.0	55.5	**54.2**	**53.8**	**53.4**	**52.0**	**53.7**		**44.6**	
Avg.	**76.8**	**76.1**	**76.3**	**76.9**	**76.2**	**75.4**	**76.5**	**76.6**	**77.0**	**77.4**	**76.5**	**77.3**	**76.7**	**75.1**	**74.4**	**74.0**	**73.5**	**74.4**	**75.7**	**75.9**	**76.1**	**76.0**	**76.3**	**77.1**			**76.0**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Relative Humidity (%)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	58.5	58.5	56.1	53.8	61.8	59.5	63.8	61.2	51.9	55.3	55.6	60.0	54.5	58.4	59.0	59.0	58.5	66.5	63.9	63.3	64.1	64.7	72.7	68.8	72.7	51.9	60.4
2	68.3	67.5	65.4	64.9	61.5	58.2	59.9	47.7	52.6	54.6	42.7	35.0	37.9	38.0	41.3	43.5	43.4	43.4	45.9	50.9	55.5	59.0	59.2	59.6	68.3	35.0	52.3
3	60.6	61.7	63.1	63.1	62.1	62.4	63.8	70.6	73.1	69.8	68.5	68.7	73.6	80.9	81.8	79.6	77.4	77.2	74.4	74.3	73.7	71.4	70.5	70.6	81.8	60.6	70.5
4	73.4	74.8	76.8	73.9	72.7	73.1	81.6	80.9	79.2	75.9	81.9	74.3	75.4	76.4	76.3	76.3	81.5	86.3	90.8	88.8	86.2	85.5	85.6	89.2	90.8	72.7	79.9
5	91.8	92.5	93.2	90.6	85.3	80.5	83.4	86.2	85.4	88.6	87.5	82.2	73.6	71.6	69.9	68.1	67.2	68.7	73.0	70.6	70.5	70.7	72.8	76.3	93.2	67.2	79.2
6	74.4	74.5	77.4	77.8	77.1	77.2	83.9	91.6	91.6	88.9	89.2	90.1	94.2	91.9	93.5	95.9	96.9	98.0	98.0	98.3	98.6	99.1	99.2	99.2	99.2	74.4	89.9
7	99.3	98.6	96.3	90.3	88.3	88.2	85.0	85.0	84.5	84.9	85.1	84.3	85.7	84.1	84.2	84.7	84.8	86.6	86.6	87.8	91.4	93.4	93.4	90.4	99.3	84.1	88.5
8	76.4	71.9	68.2	66.7	64.7	63.0	63.9	61.0	58.8	58.2	74.5	78.6	74.7	70.9	69.1	69.2	73.2	76.0	73.5	68.8	64.5	68.0	72.5	68.2	78.6	58.2	68.9
9	64.0	62.7	61.2	61.6	63.9	87.5	96.7	91.9	94.0	92.9	87.1	90.9	89.4	85.7	82.6	83.2	86.4	83.0	81.2	82.2	82.3	80.2	75.8	74.4	96.7	61.2	80.9
10	73.0	76.8	76.7	79.1	76.9	76.9	75.9	68.1	62.9	65.4	68.3	70.2	67.2	66.1	62.7	63.4	64.5	63.8	67.2	69.4	74.2	74.8	74.1	73.8	79.1	62.7	70.5
11	72.2	65.8	60.6	58.7	56.9	54.2	53.3	44.6	51.2	55.9	58.5	54.3	59.0	67.9	75.2	77.4	76.6	73.4	71.1	70.8	68.8	56.8	58.0	62.3	77.4	44.6	62.6
12	55.7	57.9	61.1	58.9	63.3	60.0	67.1	63.2	54.3	63.1	57.7	55.9	54.5	57.1	76.5	68.6	73.2	73.3	70.8	67.8	82.2	79.1	77.8	78.5	82.2	54.3	65.7
13	75.9	77.7	73.3	73.7	77.3	79.6	81.1	82.0	84.7	83.4	85.6	88.1	85.6	82.9	87.4	83.6	82.4	81.5	81.1	83.1	85.9	84.1	78.5	82.7	88.1	73.3	81.7
14	84.6	84.9	80.5	80.1	79.1	82.7	83.7	77.2	75.8	76.3	73.1	76.9	65.4	73.3	69.6	69.8	70.2	68.7	60.7	57.7	64.8	63.6	63.1	64.6	84.9	57.7	72.8
15	65.0	67.0	69.0	70.0	72.1	72.0	73.1	72.3	76.2	81.6	84.4	97.2	96.8	97.6	99.3	99.4	98.8	99.1	98.8	96.8	95.4	96.3	97.6	98.3	99.4	65.0	86.4
16	98.7	97.8	93.8	94.3	97.1	93.5	93.8	93.3	93.7	95.9	95.2	92.5	90.6	84.4	82.0	82.0	79.1	77.5	74.9	73.6	72.3	70.0	67.3	42.2	98.7	42.2	84.8
17	43.6	45.3	59.8	62.5	53.2	55.8	63.5	77.0	70.5	67.2	69.0	57.6	57.7	57.6	60.4	59.0	61.2	67.3	67.8	65.8	60.5	58.4	60.5	64.2	77.0	43.6	61.1
18	64.3	62.5	60.9	63.2	59.3	61.1	61.5	63.1	61.3	62.4	63.2	62.4	62.0	63.2	63.8	64.5	64.2	63.0	64.5	63.8	63.4	62.3	62.1	63.0	64.5	59.3	62.7
19	64.8	66.2	64.8	64.7	71.0	66.4	61.6	66.8	70.0	68.0	69.2	68.1	67.5	67.9	67.1	67.0	65.5	65.8	59.3	60.1	61.5	62.0	64.5	68.5	71.0	59.3	65.8
20	70.3	70.1	68.9	67.8	62.4	60.1	58.3	54.7	53.1	52.8	53.0	54.3	54.1	53.7	53.5	52.9	53.5	55.1	64.1	68.6	70.5	73.1	77.5	79.4	79.4	52.8	61.7
21	80.7	81.6	80.4	84.8	83.2	86.9	87.1	89.2	91.9	91.5	90.7	90.5	92.4	89.7	85.7	85.5	79.2	79.5	78.8	78.3	81.9	85.7	89.6	90.8	92.4	78.3	85.7
22	91.7	89.8	87.4	87.5	88.7	89.5	90.6	92.0	94.7	96.0	96.6	97.7	97.9	96.9	96.2	95.0	96.2	95.5	95.0	92.0	92.2	92.5	93.0	95.0	97.9	87.4	93.3
23	95.6	96.3	96.4	97.2	94.4	96.5	96.9	97.9	98.1	98.6	97.3	81.5	77.3	59.6	59.4	60.7	67.9	63.1	63.3	67.3	72.4	74.2	73.0	73.0	98.6	59.4	81.6
24	73.6	74.5	77.3	70.1	66.0	71.3	75.3	72.1	69.9	70.5	70.3	61.1	56.8	51.5	52.9	56.1	60.2	66.7	68.4	70.7	64.7	68.5	67.5	68.3	77.3	51.5	66.8
25	66.7	58.9	53.5	58.2	78.4	88.7	87.7	81.9	78.9	75.4	78.4	74.4	77.8	83.1	91.7	93.9	94.5	95.4	95.4	89.9	82.4	80.0	79.0	79.8	95.4	53.5	80.2
26	78.5	76.5	77.2	76.5	73.4	70.3	73.1	76.3	75.2	67.2	68.2	70.1	69.8	65.2	61.5	62.3	64.9	64.8	65.4	63.4	62.4	66.7	67.5	62.7	78.5	61.5	69.1
27	62.4	64.6	65.3	66.2	63.6	63.4	63.9	62.3	62.7	62.8	65.8	67.9	67.3	67.4	68.5	69.2	68.7	67.3	68.4	68.8	68.2	68.0	67.6	66.6	69.2	62.3	66.1
28	69.6	70.0	71.9	70.5	71.4	71.0	72.2	72.5	69.8	69.2	70.9	70.3	70.4	69.9	70.2	71.5	71.5	71.3	71.8	72.0	72.0	72.3	73.1	72.3	73.1	69.2	71.2
29	73.8	76.9	77.4	77.9	78.4	78.1	77.6	77.4	78.0	78.9	78.8	77.3	76.4	77.2	76.3	71.4	74.1	70.9	67.2	70.6	70.2	68.9	64.2	70.3	78.9	64.2	74.5
30	71.4	68.1	66.5	71.3	72.7	78.9	77.7	72.2	73.3	77.8	78.7	77.9	76.5	76.3	78.2	79.7	80.1	80.5	81.6	76.6	73.2	75.0	78.0	77.6	81.6	66.5	75.8
31	77.8	78.5	76.0	79.6	81.9	83.3	83.4	81.7	78.0	77.4	73.3	72.8	71.7	68.7	67.2	71.3	72.9	73.8	74.5	70.5	67.4	66.2	64.3	65.4	83.4	64.3	74.1
Max.	**99.3**	**98.6**	**96.4**	**97.2**	**97.1**	**96.5**	**96.9**	**97.9**	**98.1**	**98.6**	**97.3**	**97.7**	**97.9**	**97.6**	**99.3**	**99.4**	**98.8**	**99.1**	**98.8**	**98.3**	**98.6**	**99.1**	**99.2**	**99.2**	**99.4**		
Min.	**43.6**	**45.3**	**53.5**	**53.8**	**53.2**	**54.2**	**53.3**	**44.6**	**51.2**	**52.8**	**42.7**	**35.0**	**37.9**	**38.0**	**41.3**	**43.5**	**43.4**	43.4	45.9	**50.9**	**55.5**	**56.8**	**58.0**	**42.2**		**35.0**	
Avg.	**73.4**	**73.2**	**72.8**	**72.8**	**72.8**	**73.9**	**75.5**	**74.6**	**74.0**	**74.4**	**74.8**	**73.6**	**72.7**	**72.1**	**73.0**	**73.0**	**73.8**	**74.3**	**74.1**	**73.6**	**74.0**	**73.9**	**74.2**	**74.1**			**73.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	0	5	18	53	55	32	20	4	0	0	0	0	0	0	55	0	8
2	0	0	0	0	0	0	0	0	0	0	1	9	56	99	89	20	14	4	0	0	0	0	0	0	99	0	12
3	0	0	0	0	0	0	0	0	0	0	0	3	6	13	41	37	11	2	0	0	0	0	0	0	41	0	5
4	0	0	0	0	0	0	0	0	0	0	0	7	38	58	54	45	18	5	0	0	0	0	0	0	58	0	9
5	0	0	0	0	0	0	0	0	0	0	1	15	71	123	119	44	30	7	0	0	0	0	0	0	123	0	17
6	0	0	0	0	0	0	0	0	0	0	1	21	94	52	69	62	34	6	0	0	0	0	0	0	94	0	14
7	0	0	0	0	0	0	0	0	0	0	1	8	22	26	27	19	9	2	0	0	0	0	0	0	27	0	5
8	0	0	0	0	0	0	0	0	0	0	1	12	59	151	68	57	28	5	0	0	0	0	0	0	151	0	16
9	0	0	0	0	0	0	0	0	0	0	1	18	71	124	119	25	18	7	0	0	0	0	0	0	124	0	16
10	0	0	0	0	0	0	0	0	0	0	1	20	88	99	123	25	18	7	0	0	0	0	0	0	123	0	16
11	0	0	0	0	0	0	0	0	0	0	1	13	77	131	129	24	18	8	0	0	0	0	0	0	131	0	17
12	0	0	0	0	0	0	0	0	0	0	1	16	59	103	103	20	15	6	0	0	0	0	0	0	103	0	14
13	0	0	0	0	0	0	0	0	0	0	1	14	38	57	59	27	20	9	0	0	0	0	0	0	59	0	9
14	0	0	0	0	0	0	0	0	0	0	0	5	14	33	30	28	14	3	0	0	0	0	0	0	33	0	5
15	0	0	0	0	0	0	0	0	0	0	0	6	24	36	37	33	20	4	0	0	0	0	0	0	37	0	7
16	0	0	0	0	0	0	0	0	0	0	1	25	66	136	166	43	30	11	1	0	0	0	0	0	166	0	20
17	0	0	0	0	0	0	0	0	0	0	0	7	17	36	43	39	19	6	0	0	0	0	0	0	43	0	7
18	0	0	0	0	0	0	0	0	0	0	1	18	39	57	62	53	29	5	0	0	0	0	0	0	62	0	11
19	0	0	0	0	0	0	0	0	0	0	1	7	17	27	39	76	28	3	0	0	0	0	0	0	76	0	8
20	0	0	0	0	0	0	0	0	0	0	0	2	6	11	10	9	4	2	0	0	0	0	0	0	11	0	2
21	0	0	0	0	0	0	0	0	0	0	1	12	33	43	40	30	27	17	0	0	0	-42	0	0	43	-42	7
22	1	1	0	0	0	0	0	0	0	0	1	8	30	64	103	92	59	16	2	1	1	1	1	1	103	0	16
23	0	0	0	0	0	0	0	0			3	39	115	164	174	53	23	11	1	0	0	0	0	0	174	0	27
24	0	0	0	0	0	0	0	0	0	0	1	11	19	28	35	29	24	9	1	0			-1	0	35	-1	7
25	0	-81	-26	-2	0		1	1	1	1	5	47	53	134	192	65	43	17	2	0	0	0	0	0	192	-81	20
26	0	0	0	0	0	0	0	0	0	0	5	47	125	175	180	57	53	28	2	0	0	0	0	0	180	0	28
27	0	0	0	0	0	0	0	0	0	0	1	12	15	21	29	30	-44	2	1			0	0	0	30	-44	3
28	0																							0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	11	80	187	197	184	65	52	13	1	0	0	0	0	0	197	0	33
30	0	0	0	0	0	0	0	0	0	0	8		129	199	210	117	84	39	5	0	0	0	0	0	210	0	34
31	0	0	0	0	0	0	0	0	0	0	8	64	143	183	206	109	102	49	4	0	0	0	0	0	206	0	36
Max.	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**11**	**80**	**187**	**199**	**210**	**117**	**102**	**49**	**5**	**1**	**1**	**1**	**1**	**1**	**210**		
Min.	**0**	**-81**	**-26**	**-2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	**11**	**10**	**9**	**-44**	**2**	**0**	**0**	**0**	**-42**	**-1**	**0**		**-81**	
Avg.	**0**	**-3**	**-1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**19**	**58**	**88**	**93**	**46**	**27**	**10**	**1**	**0**	**0**	**-1**	**0**	**0**			**14**

Total Hours in Month 744 **Hours Data Available** 714 **Data Recovery** 96.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	0	8	36	128	199	216	129	126	51	5	0	0	0	0	0	216	0	37
2	0	0	0	0	0	0	0	0	0	0	9	75	158	208	224	141	150	58	6	0	0	0	0	0	224	0	43
3	0	0	0	0	0	0	0	0	0	0	11	66	141	196	228	60	139	60	7	0	0	0	0	0	228	0	38
4	0	0	0	0	0	0	0	0	0	0	13	87	170	221	236	188	134	70	7	0	0	0	0	0	236	0	47
5	0	0	0	0	0	0	0	0	0	0	15	93	175	227	243	208	173	78	8	0	0	0	0	0	243	0	51
6	0	0	0	0	0	0	0	0	0	0	18	99	181	231	248	226	179	84	8	0	0	0	0	0	248	0	53
7	0	0	0	0	0	0	0	0	0	0	20	104	187	239	257	239	185	93	8	0	0	0	0	0	257	0	56
8	0	0	0	0	0	0	0	0	0	0	19	82	144	146	146	155	104	58	13	0	0	0	0	0	155	0	36
9	0	0	0	0	0	0	0	0	0	0	23	90	149	203	212	134	118	60	12	1	0	0	0	0	212	0	42
10	0	0	0	0	0	0	0	0	0	1	27	77	196	246	260	243	194	113	10	1	0	0	0	0	260	0	57
11	0	0	0	0	0	0	0	0	0	0	6	27	51	88	107	140	62	45	8	0	0	0	0	0	140	0	22
12	0	0	0	0	0	0	0	0	0	1	35	134	214	266	279	261	209	98	16	1	0	0	0	0	279	0	63
13	0	0	0	0	0	0	0	0	0	0	22	33	38	56	39	20	12	19	7	0	0	0	0	0	56	0	10
14	0	0	0	0	0	0	0	0	0	0	5	13	26	45	65	67	48	23	6	0	0	0	0	0	67	0	12
15	0	0	0	0	0	0	0	0	0	2	61	155	226	283	296	275	218	135	19	1	0	0	0	0	296	0	70
16	0	0	0	0	0	0	0	0	0	0	9	27	40	57	52	57	57	50	25	1	0	0	0	0	57	0	16
17	0	0	0	0	0	0	0	0	0	1	7	17	29	27	31	29	29	14	4	1	1	1	1	1	31	0	8
18	1	1	1	0	0	0	0	0	0	2	12	31	60	70	60	57	42	21	8	1	0	0	0	0	70	0	15
19	0	0	0	0	0	1	1	0	0	0	4	15	26	29	28	79	81	65	14	0	0	0	0	0	81	0	14
20	0	0	0	0	0	0	0	0	0	1	24	83	67	140	190	147	109	53	20	2	0	1	2	0	190	0	35
21	0	0	0	1	1	1	0	0	0	4	25	48	82	85	87	64	56	27	10	1	0	0	0	0	87	0	20
22	0	0	0	0	0	0	0	0	0	2	8	14	32	53	89	118	89	72	37	4	0	0	0	0	118	0	22
23	0	0	0	0	0	0	0	0	0	8	64	176	262	300	334	316	256	174	55	5	0	0	0	0	334	0	81
24	0	0	0	0	0	0	0	0	0	9	88	193	277	331	347	329	271	186	59	5	0	0	0	0	347	0	87
25	0	0	0	0	0	0	0	0	0	1	14	46	125	132	158	134	201	168	39	5	0	0	0	0	201	0	43
26	0	0	0	0	0	0	0	0	0	7	73	146	197	255	209	185	141	87	43	8	0	0	0	0	255	0	56
27	0	0	0	0	0	0	0	0	0	8	55	116	143	118	147	133	119	51	33	5	0	0	0	0	147	0	39
28	0	0	0	0	0	0	0	0	0	7	79	128	185	181	121	152	110	80	45	10	0	0	0	0	185	0	46
29	0	0	0	0	0	0	0	0	0	12	82	162	108	64	110	102	94	70	34	6	0	0	0	0	162	0	35
Max.	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**12**	**88**	**193**	**277**	**331**	**347**	**329**	**271**	**186**	**59**	**10**	**1**	**1**	**2**	**1**	**347**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**13**	**26**	**27**	**28**	**20**	**12**	**14**	**4**	**0**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**29**	**82**	**132**	**162**	**173**	**151**	**128**	**75**	**19**	**2**	**0**	**0**	**0**	**0**			**40**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	0	13	76	98	148	125	124	79	61	33	24	6	0	0	0	0	148	0	33
2	0	0	0	0	0	0	0	0	0	17	48	82	95	93	122	96	80	41	15	5	0	0	0	0	122	0	29
3	0	0	0	0	0	0	0	0	0	5	10	12	16	39	90	68	31	24	13	2	0	0	0	0	90	0	13
4	0	0	0	0	0	0	0	0	0	2	9	17	38	48	70	68	44	37	16	3	0	0	0	0	70	0	15
5	0	0	0	0	0	0	0	0	0	4	12	23	40	92	120	105	58	29	8	4	0	0	0	0	120	0	21
6	0	0	0	0	1	1	1	1	2	11	24	66	108	132	104	75	65	37	22	8	0	0	0	1	132	0	27
7	0	0	0	0	0	0	0	0	1	15	50	94	139	149	209	245	184	127	57	14	1	0	0	0	245	0	54
8	0	0	0	0	0	0	0	0	1	13	25	74	157	154	174	182	132	66	31	9	0	0	0	0	182	0	42
9	0	0	0	0	0	0	0	0	2	24	46	109	104	154	153	186	247	156	84	18	1	0	0	0	247	0	53
10	0	0	0	0	0	0	0	0	1	23	39	52	107	118	90	69	83	56	20	6	0	0	0	0	118	0	28
11	0	0	0	0	0	0	0	0	7	104	297	383	413	506	566	515	460	378	193	33	2	0	0	0	566	0	161
12	0	0	0	0	0	0	0	0	3	48	179	310	400	456	467	446	383	290	168	16	2	0	0	0	467	0	132
13	0	0	0	0	0	0	0	0	7	106	242	372	342	409	505	548	457	327	190	22	2	0	0	0	548	0	147
14	0	0	0	0	0	0	0	0	7	82	206	318	401	442	420	398	245	149	87	33	1	0	0	0	442	0	116
15	0	0	0	0	0	0	0	0	5	37	40	113	137	152	119	155	128	62	27	10	1	0	0	0	155	0	41
16	0	0	0	0	0	0	0	0	6	54	142	203	299	323	354	403	340	282	191	44	5	0	0	0	403	0	110
17	0	0	0	0	0	0	0	0	16	132	201	257	370	378	321	355	220	197	78	20	3	0	0	0	378	0	106
18	0	0	0	0	0	0	0	0	8	59	151	223	338	332	306	382	377	253	129	31	3	0	0	0	382	0	108
19	0	0	0	0	0	0	0	0	14	70	124	216	396	443	417	399	244	131	75	35	4	0	0	0	443	0	107
20	0	0	0	0	0	0	0	0	5	47	128	293	219	261	280	288	254	210	145	54	7	0	0	0	293	0	91
21	0	0	0	0	0	0	0	0	4	38	95	171	208	184	225	328	462	338	223	92	7	0	0	0	462	0	99
22	0	0	0	0	0	0	0	0	14	57	114	165	306	457	575	516	440	281	209	84	6	0	0	0	575	0	134
23	0	0	0	0	0	0	0	0	13	106	262	371	463	491	517	514	475	205	148	57	8	0	0	0	517	0	151
24	0	0	0	0	0	0	0	0	9	96	200	300	380	340	391	185	213	224	215	57	5	0	0	0	391	0	109
25	0	0	0	0	0	0	0	1	43	156	244	263	379	503	548	527	460	365	262	176	27	0	0	0	548	0	165
26	0	0	0	0	0	0	0	1	20	74	271	436	487	559	564	543	476	374	249	119	23	0	0	0	564	0	175
27	0	0	0	0	0	0	0	1	58	195	304	410	491	532	456	433	399	257	162	75	18	0	0	0	532	0	158
28	0	0	0	0	0	0	0	2	50	175	304	418	500	546	561	526	460	353	217	85	16	0	0	0	561	0	176
29	0	0	0	0	0	0	0	0	13	47	71	89	73	73	102	119	75	39	30	16	3	0	0	0	119	0	31
30	0	0	0	0	0	0	0	0	10	25	48	85	104	111	148	130	99	81	59	26	8	0	0	0	148	0	39
31	0	0	0	0	0	0	0	1	14	32	45	87	86	96	79	126	65	43	26	14	4	0	0	0	126	0	30
Max.	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**2**	**58**	**195**	**304**	**436**	**500**	**559**	**575**	**548**	**476**	**378**	**262**	**176**	**27**	**0**	**0**	**1**	**575**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**9**	**12**	**16**	**39**	**70**	**68**	**31**	**24**	**8**	**2**	**0**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**60**	**129**	**197**	**250**	**281**	**296**	**291**	**249**	**176**	**109**	**38**	**5**	**0**	**0**	**0**			**87**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0	0	0	0	0	0	0	0	7	24	36	54	76	94	104	98	101	104	55	25	6	0	0	0	104	0	33
2	0	0	0	0	0	0	0	3	33	82	188	275	362	450	513	480	260	127	43	18	4	0	0	0	513	0	118
3	0	0	0	0	0	0	0	2	25	123	141	117	105	157	144	184	146	78	43	26	4	0	0	0	184	0	54
4	0	0	0	0	0	0	0	1	13	27	62	97	109	126	180	130	97	96	66	37	8	0	0	0	180	0	44
5	0	0	0	0	0	0	0	5	60	140	348	482	576	622	626	601	531	430	302	169	48	2	0	0	626	0	206
6	0	0	0	0	0	0	0	11	108	242	375	491	580	632	640	606	535	429	310	177	52	2	0	0	640	0	216
7	0	0	0	0	0	0	0	14	113	245	378	492	582	633	637	607	532	432	302	165	51	3	0	0	637	0	216
8	0	0	0	0	0	0	0	14	116	252	379	379	585	546	459	413	161	143	120	93	42	2	0	0	585	0	154
9	0	0	0	0	0	0	0	20	125	259	394	500	592	655	656	621	546	444	318	184	56	4	0	0	656	0	224
10	0	0	0	0	0	0	0	22	127	259	392	508	593	644	651	624	556	453	329	196	68	4	0	0	651	0	226
11	0	0	0	0	0	0	0	24	134	266	400	513	601	652	655	626	554	456	329	194	68	4	0	0	655	0	228
12	0	0	0	0	0	0	0	24	131	256	386	505	601	641	648	617	555	457	342	196	76	5	0	0	648	0	227
13	0	0	0	0	0	0	0	11	89	112	156	188	148	142	272	359	333	145	77	38	15	2	0	0	359	0	87
14	0	0	0	0	0	0	0	12	42	111	257	547	682	763	765	758	679	526	398	186	60	6	0	0	765	0	241
15	0	0	0	0	0	0	0	10	24	42	64	113	233	419	512	435	344	238	131	131	113	7	0	0	512	0	117
16	0	0	0	0	0	0	2	39	130	249	382	505	595	648	663	629	563	468	327	192	70	7	0	0	663	0	228
17	0	0	0	0	0	0	1	37	133	292	431	507	653	597	576	645	514	432	320	186	73	9	0	0	653	0	225
18	0	0	0	0	0	0	2	27	103	232	343	480	532	628	635	601	512	401	269	200	83	10	0	0	635	0	211
19	0	0	0	0	0	0	2	39	150	264	344	536	597	647	656	618	544	441	319	173	65	9	0	0	656	0	225
20	0	0	0	0	0	0	3	44	159	318	368	253	393	507	276	337	219	230	62	32	11	2	0	0	507	0	134
21	0	0	0	0	0	0	1	12	43	67	123	206	340	390	368	304	404	404	307	170	58	6	0	0	404	0	134
22	0	0	0	0	0	0	4	59	177	311	440	553	635	682	687	659	592	492	371	240	116	15	0	0	687	0	251
23	0	0	0	0	0	0	4	66	193	325	453	565	648	693	703	672	604	504	381	250	125	16	0	0	703	0	258
24	0	0	0	0	0	0	7	74	204	312	421	476	610	596	603	616	618	379	411	183	50	13	0	0	618	0	232
25	0	0	0	0	0	0	10	31	92	325	480	579	668	711	728	688	618	520	394	260	133	23	2	1	728	0	261
26	1	1	1	2	2	2	5	25	53	79	138	170	200	196	200	232	225	160	125	103	74	18	5	4	232	1	84
27	4	4	4	4	4	4	8	39	88	133	123	167	177	201	258	277	259	284	172	94	33	15	4	3	284	3	98
28	3	3	4	4	4	4	14	87	208	366	468	574	680	646	513	668	520	408	260	154	80	29	1	1	680	1	238
29	1	1	1	1	1	1	13	78	184	186	367	446	674	700	726	686	621	525	402	307	136	24	2	1	726	1	253
30	1	1	1	1	1	1	11	90	218	344	439	553	534	571	549	346	487	355	185	203	71	18	2	1	571	1	208
Max.	**4**	**4**	**4**	**4**	**4**	**4**	**14**	**90**	**218**	**366**	**480**	**579**	**682**	**763**	**765**	**758**	**679**	**526**	**411**	**307**	**136**	**29**	**5**	**4**	**765**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**24**	**36**	**54**	**76**	**94**	**104**	**98**	**97**	**78**	**43**	**18**	**4**	**0**	**0**	**0**		**0**	
Avg.	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**31**	**109**	**208**	**309**	**394**	**479**	**520**	**520**	**505**	**441**	**352**	**249**	**153**	**62**	**9**	**1**	**0**			**181**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3	4	5	4	4	4	10	40	107	187	231	373	474	451	358	341	293	295	194	131	58	19	1	1	474	1	149
2	1	9	1	0	0	0	3	10	25	52	73	145	386	326	236	345	328	116	291	244	51	6	1	0	386	0	110
3	0	0	0	0	0	0	6	32	101	194	193	177	259	179	117	201	302	111	60	40	26	7	1	0	302	0	84
4	0	0	0	0	0	0	6	39	83	120	186	208	232	269	299	286	358	245	173	125	82	25	3	0	358	0	114
5	0	0	0	0	0	0	10	31	61	88	156	184	231	204	252	272	288	264	311	217	99	18	2	0	311	0	112
6	0	1	1	1	0	1	9	30	55	126	138	111	98	147	503	644	257	354	249	60	51	13	2	2	644	0	119
7	3	3	2	0	0	1	4	19	58	98	79	103	113	145	199	224	208	103	60	39	20	8	1	0	224	0	62
8	0	0	0	0	0	0	9	32	62	134	149	135	150	204	195	276	229	229	192	130	75	23	2	1	276	0	93
9	1	1	0	0	0	0	4	16	42	85	74	103	187	238	161	140	114	115	81	67	51	21	3	1	238	0	63
10	1	1	1	1	1	2	12	48	109	163	269	424	405	456	471	463	417	367	313	222	67	16	1	0	471	0	176
11	0	1	0	0	2	4	10	14	28	57	59	60	142	170	138	100	69	51	58	54	27	14	2	1	170	0	44
12	1	0	0	0	0	0	4	10	22	38	60	115	189	164	125	108	82	71	60	42	23	7	1	0	189	0	47
13	0	0	0	0	0	0	2	11	16	56	69	94	91	235	238	196	196	332	130	45	38	8	4	2	332	0	73
14	1	0	0	0	0	1	10	42	95	137	148	139	218	453	371	410	428	299	148	93	78	21	4	1	453	0	129
15	3	0	0	0	0	2	20	56	121	170	217	293	420	389	535	357	192	181	91	67	59	35	6	3	535	0	134
16	3	3	3	3	4	5	9	23	31	97	188	167	248	251	461	717	723	594	471	338	208	77	13	4	723	3	193
17	3	3	4	3	4	8	26	158	302	440	558	664	745	784	796	766	631	581	395	270	159	89	16	2	796	2	309
18	1	1	1	1	2	3	19	29	58	99	88	82	108	128	182	194	457	526	309	156	98	47	9	2	526	1	108
19	2	2	2	3	3	9	31	119	277	430	568	634	745	790	787	763	688	592	475	346	217	82	12	1	790	1	316
20	1	1	1	1	1	5	22	164	303	436	562	670	743	784	800	753	698	545	467	349	218	85	12	1	800	1	318
21	1	1	1	1	1	9	32	170	303	440	559	664	719	754	755	752	692	570	470	351	219	85	14	2	755	1	315
22	1	1	1	1	1	7	25	163	296	432	555	662	742	772	706	649	523	391	291	115	24	17	5	1	772	1	266
23	1	3	4	5	5	5	11	25	44	45	31	32	43	61	46	38	24	27	33	46	87	45	13	10	87	1	28
24	11	11	11	11	12	14	31	62	58	52	104	115	198	151	134	115	215	184	147	376	228	99	20	8	376	8	99
25	6	6	6	6	7	19	54	201	306	449	568	673	752	785	798	762	703	591	447	284	103	38	12	5	798	5	316
26	4	4	4	4	4	12	41	137	258	269	404	683	759	710	814	781	712	643	560	336	205	49	18	5	814	4	309
27	3	3	3	3	3	16	48	158	270	436	560	667	748	785	802	771	703	602	473	321	218	104	25	4	802	3	322
28	2	2	2	2	2	11	44	147	293	451	514	380	580	778	797	779	710	576	384	343	252	82	29	4	797	2	298
29	2	2	2	2	2	15	42	134	179	298	364	433	604	640	664	548	712	587	488	358	220	109	34	6	712	2	268
30	3	3	3	3	4	15	46	110	257	348	520	564	608	653	757	748	468	136	281	141	84	36	13	6	757	3	242
31	6	6	8	8	8	11	17	22	40	49	92	225	267	183	101	135	93	103	77	40	32	12	9	6	267	6	65
Max.	**11**	**11**	**11**	**11**	**12**	**19**	**54**	**201**	**306**	**451**	**568**	**683**	**759**	**790**	**814**	**781**	**723**	**643**	**560**	**376**	**252**	**109**	**34**	**10**	**814**		
Min.	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**10**	**16**	**38**	**31**	**32**	**43**	**61**	**46**	**38**	**24**	**27**	**33**	**39**	**20**	**6**	**1**	**0**		**0**	
Avg.	**2**	**2**	**2**	**2**	**2**	**6**	**20**	**73**	**137**	**209**	**269**	**322**	**394**	**421**	**439**	**440**	**404**	**335**	**264**	**185**	**109**	**42**	**9**	**3**			**170**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6	5	5	5	4	7	18	33	48	157	122	176	117	82	78	91	168	113	94	71	35	20	12	7	176	4	61
2	5	6	5	5	5	13	46	72	135	164	225	320	420	438	287	173	241	217	164	108	61	30	13	5	438	5	132
3	4	4	4	4	4	6	19	72	106	185	195	171	131	323	237	469	666	282	100	68	40	27	13	9	666	4	131
4	8	8	8	8	8	13	24	58	54	92	101	142	221	339	370	342	319	311	403	465	175	53	17	6	465	6	148
5	4	4	4	6	9	13	19	28	38	50	88	107	120	137	127	91	134	85	75	98	40	33	16	6	137	4	56
6	5	5	5	5	5	15	32	64	136	416	515	546	757	816	799	784	723	635	498	286	125	103	23	8	816	5	304
7	4	5	5	5	6	16	36	204	339	474	584	686	764	805	805	782	623	293	145	60	38	19	10	9	805	4	280
8	9	9	9	9	10	19	49	202	346	471	576	617	589	624	605	624	519	614	343	372	199	135	46	10	624	9	292
9	6	5	5	5	6	13	60	199	417	564	633	726	608	759	694	655	725	645	531	405	280	149	22	9	759	5	338
10	5	5	5	5	6	18	43	105	241	324	379	339	538	635	679	620	521	474	332	289	271	138	38	10	679	5	251
11	6	6	8	12	14	14	23	36	39	91	203	218	196	130	124	182	156	144	118	157	122	70	26	5	218	5	87
12	3	3	3	3	4	18	78	302	483	558	602	696	739	720	637	595	280	268	149	118	76	51	19	6	739	3	267
13	4	4	4	4	5	9	25	44	63	182	225	179	203	284	408	633	649	617	401	358	264	140	27	10	649	4	198
14	5	5	6	6	7	10	19	35	78	82	147	229	305	471	679	600	374	315	220	131	113	64	28	12	679	5	164
15	8	9	9	8	10	22	51	210	331	255	264	497	665	796	729	703	659	603	420	311	166	72	31	11	796	8	285
16	9	9	9	9	10	27	55	117	163	187	316	390	274	516	469	641	524	505	496	391	268	150	35	14	641	9	233
17	9	9	9	9	10	20	34	198	333	433	419	373	465	555	559	523	511	514	428	382	278	157	31	17	559	9	261
18	10	9	9	9	9	17	45	133	176	366	401	565	554	783	773	742	723	635	534	395	266	165	34	13	783	9	307
19	7	7	7	7	8	19	38	219	186	303	559	602	651	565	546	554	448	525	482	261	244	120	34	12	651	7	267
20	7	7	7	7	9	17	43	90	107	195	289	630	742	820	821	723	643	639	527	396	152	54	26	10	821	7	290
21	8	8	8	8	8	11	28	43	87	117	191	289	426	495	606	661	494	487	498	356	286	132	41	12	661	8	221
22	7	7	7	7	8	13	32	69	79	138	207	215	211	430	222	249	345	291	352	144	112	25	24	11	430	7	134
23	8	8	8	8	9	19	37	89	146	414	582	701	750	770	781	795	733	645	545	411	285	169	28	12	795	8	331
24	8	8	8	8	8	11	16	36	83	155	159	111	104	75	84	89	80	83	83	56	39	19	12	9	159	8	56
25	7	7	9	9	10	14	25	34	52	100	78	88	119	191	263	209	163	145	67	48	23	16	15	10	263	7	71
26	11	9	11	14	12	14	25	39	63	102	124	158	216	232	262	226	341	306	313	215	134	81	26	7	341	7	122
27	4	5	6	9	11	16	21	42	44	53	110	265	287	325	260	586	606	535	375	220	283	182	43	17	606	4	179
28	12	12	12	12	13	22	44	87	96	186	487	410	402	617	419	218	205	163	103	70	78	47	29	18	617	12	157
29	15	13	15	14	14	19	38	73	82	135	159	208	159	234	311	545	405	344	185	136	196	126	25	16	545	13	144
30	14	14	14	14	14	24	41	188	265	400	592	692	769	811	812	793	733	644	529	405	268	161	27	17	812	14	343
Max.	**15**	**14**	**15**	**14**	**14**	**27**	**78**	**302**	**483**	**564**	**633**	**726**	**769**	**820**	**821**	**795**	**733**	**645**	**545**	**465**	**286**	**182**	**46**	**18**	**821**		
Min.	**3**	**3**	**3**	**3**	**4**	**6**	**16**	**28**	**38**	**50**	**78**	**88**	**104**	**75**	**78**	**89**	**80**	**83**	**67**	**48**	**23**	**16**	**10**	**5**		**3**	
Avg.	**7**	**7**	**7**	**8**	**9**	**16**	**35**	**104**	**161**	**245**	**318**	**378**	**417**	**493**	**481**	**497**	**457**	**403**	**317**	**239**	**164**	**90**	**26**	**11**			**204**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	14	10	9	9	10	18	33	186	331	458	585	666	575	616	797	802	738	636	410	370	241	102	34	15	802	9	319
2	16	14	14	14	14	17	49	218	376	457	505	677	556	815	711	455	539	510	339	196	51	21	14	13	815	13	275
3	9	8	8	6	6	10	21	27	37	56	94	126	126	169	154	206	150	183	131	40	35	26	12	9	206	6	69
4	8	8	8	8	8	12	20	25	33	63	75	130	147	134	353	281	80	42	62	29	27	37	17	10	353	8	67
5	9	9	10	10	10	14	38	57	148	281	299	362	317	328	411	663	768	452	283	388	244	79	27	11	768	9	217
6	8	8	8	8	9	16	38	124	145	131	294	404	545	537	463	637	319	144	131	64	53	44	18	11	637	8	173
7	9	9	9	10	9	9	12	27	60	78	127	180	331	402	585	710	652	436	498	302	170	130	38	16	710	9	200
8	8	8	8	8	8	11	27	117	130	181	224	257	281	411	608	478	277	149	136	82	59	38	14	9	608	8	147
9	7	6	6	5	5	10	41	167	287	390	413	398	528	453	249	120	161	189	142	230	48	20	9	5	528	5	162
10	5	5	5	5	5	6	15	34	46	116	168	204	278	289	352	330	297	174	116	83	49	26	14	9	352	5	110
11	8	9	9	8	9	14	31	111	281	251	483	667	790	735	803	775	576	490	464	395	251	60	22	11	803	8	302
12	8	8	8	8	9	14	39	69	89	101	196	319	401	288	239	184	173	112	108	70	63	22	10	8	401	8	106
13	7	7	7	7	7	7	9	17	43	38	89	136	95	111	119	132	127	98	58	48	31	19	14	8	136	7	51
14	8	8	8	8	8	8	17	40	60	99	210	317	286	427	416	454	446	392	292	198	110	50	19	7	454	7	162
15	7	7	7	6	7	9	25	75	220	279	407	403	291	281	198	173	261	182	118	79	41	17	10	9	407	6	130
16	8	9	9	10	10	10	12	15	24	31	38	42	58	49	83	70	95	66	45	39	26	15	10	8	95	8	33
17	8	8	8	8	8	7	17	42	73	364	216	241	217	312	265	278	327	400	576	178	99	43	17	9	576	7	155
18	7	7	8	8	8	13	57	220	384	539	598	701	791	806	822	774	689	616	480	365	250	115	15	6	822	6	345
19	5	5	5	5	6	10	29	141	290	414	546	648	727	776	782	759	475	457	393	173	175	57	13	5	782	5	287
20	4	4	5	5	5	21	47	60	95	180	250	269	234	174	326	402	668	254	265	303	176	83	15	7	668	4	160
21	7	7	10	9	7	6	16	31	48	135	147	227	360	580	509	505	385	299	390	322	116	38	15	4	580	4	174
22	3	3	4	4	4	7	30	76	130	236	240	143	141	97	103	135	107	133	125	110	51	28	11	5	240	3	80
23	5	5	5	4	4	5	18	50	100	320	533	352	697	731	554	327	635	269	215	133	25	14	5	4	731	4	209
24	4	3	3	3	3	4	9	25	48	72	130	186	207	251	305	339	619	631	399	360	231	40	12	3	631	3	162
25	2	3	3	3	3	4	13	37	89	81	384	569	356	792	772	538	587	473	118	104	47	40	16	4	792	2	210
26	3	3	4	4	4	5	16	49	55	252	618	689	504	480	209	307	232	126	165	128	203	38	10	5	689	3	171
27	4	4	4	4	4	5	10	18	34	42	46	77	91	97	155	149	150	191	184	191	190	77	12	4	191	4	73
28	4	4	4	4	4	5	17	118	261	398	510	612	687	737	758	694	594	397	369	151	169	50	12	4	758	4	273
29	4	4	4	4	4	5	19	99	264	386	508	614	702	756	748	705	543	408	322	217	100	36	10	4	756	4	269
30	4	4	4	4	4	5	8	30	92	210	429	235	370	300	333	694	720	576	475	414	234	96	21	3	720	3	219
31	3	3	3	3	3	3	12	96	223	344	470	574	658	718	562	606	272	303	248	291	190	98	17	4	718	3	238
Max.	**16**	**14**	**14**	**14**	**14**	**21**	**57**	**220**	**384**	**539**	**618**	**701**	**791**	**815**	**822**	**802**	**768**	**636**	**576**	**414**	**251**	**130**	**38**	**16**	**822**		
Min.	**2**	**3**	**3**	**3**	**3**	**3**	**8**	**15**	**24**	**31**	**38**	**42**	**58**	**49**	**83**	**70**	**80**	**42**	**45**	**29**	**25**	**14**	**5**	**3**		**2**	
Avg.	**7**	**6**	**7**	**6**	**6**	**9**	**24**	**77**	**145**	**225**	**317**	**368**	**398**	**440**	**443**	**441**	**408**	**316**	**260**	**195**	**121**	**50**	**16**	**7**			**179**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3	4	4	6	9	10	22	84	276	318	278	255	265	220	208	253	210	133	126	99	53	24	14	12	318	3	120
2	11	12	12	11	10	11	10	31	57	114	139	149	320	290	242	162	205	90	96	84	46	20	9	6	320	6	89
3	6	6	6	6	7	7	10	19	43	82	151	267	279	370	382	388	379	255	170	113	64	20	6	5	388	5	127
4	6	6	6	6	6	6	11	37	107	78	136	140	175	286	286	348	162	183	113	51	25	25	8	5	348	5	92
5	5	5	5	6	6	6	11	22	73	145	280	353	479	552	708	585	597	555	378	162	65	23	8	6	708	5	210
6	6	6	6	6	6	6	17	35	207	355	480	587	668	720	722	735	653	537	332	110	41	17	12	5	735	5	261
7	5	4	4	4	4	4	20	88	217	346	469	575	657	591	505	631	638	550	390	86	134	50	7	3	657	3	249
8	3	3	4	4	4	5	12	87	222	348	471	577	659	710	717	697	633	540	426	300	178	50	9	6	717	3	278
9	5	6	6	6	6	6	13	86	222	348	472	579	659	709	698	692	586	410	247	108	144	42	7	6	709	5	253
10	6	6	6	7	6	7	8	25	67	141	291	278	265	356	553	667	558	356	419	278	149	31	7	7	667	6	187
11	7	7	7	8	10	8	9	19	86	96	258	438	746	728	636	529	457	443	330	161	81	27	6	6	746	6	213
12	6	6	5	6	6	6	12	45	74	117	216	257	273	278	250	313	193	162	150	108	51	21	10	9	313	5	107
13	9	9	10	11	11	11	11	26	84	142	246	169	279	187	153	119	76	54	37	35	21	11	7	8	279	7	72
14	7	7	7	7	7	8	13	20	53	79	111	129	171	221	186	205	218	203	140	117	43	15	7	8	221	7	83
15	7	7	7	7	7	6	7	13	33	47	66	106	147	161	156	125	105	98	77	55	26	9	8	7	161	6	54
16	7	8	7	7	6	5	7	20	52	85	83	70	127	235	388	416	398	439	376	62	27	18	8	9	439	5	119
17	9	9	9	9	9	9	10	14	39	56	79	76	130	127	158	155	224	164	100	76	38	16	8	11	224	8	64
18	10	9	10	12	10	10	12	31	55	83	103	129	143	198	211	208	185	189	136	73	44	16	7	7	211	7	79
19	8	8	8	8	8	9	10	25	54	71	166	259	309	626	508	459	311	231	196	107	43	16	8	8	626	8	144
20	8	8	9	9	9	9	11	26	46	115	273	377	282	376	445	546	489	426	361	210	84	13	6	6	546	6	173
21	6	6	7	7	7	7	8	22	58	72	90	149	215	288	446	311	574	370	192	139	43	20	17	15	574	6	128
22	13	13	13	12	11	11	11	17	74	263	231	410	421	459	717	632	601	393	330	160	65	25	9	9	717	9	204
23	9	9	9	9	9	9	9	21	43	111	226	251	280	214	197	148	150	138	134	77	37	17	13	12	280	9	89
24	11	10	10	11	10	10	11	28	74	110	399	481	565	596	478	485	553	478	338	107	76	18	9	9	596	9	203
25	9	9	9	9	9	10	10	15	37	45	47	97	177	90	66	117	126	72	53	32	19	13	12	11	177	9	46
26	11	11	12	12	12	13	14	35	78	93	175	193	236	260	293	369	315	172	134	106	36	15	10	10	369	10	109
27	10	10	11	10	11	11	11	23	74	153	200	236	238	292	300	546	519	383	285	194	38	14	10	10	546	10	150
28	10	10	10	10	10	10	11	26	80	149	283	336	223	280	299	328	389	441	328	200	57	15	10	10	441	10	147
29	10	10	10	10	10	10	10	33	132	254	379	484	566	616	610	594	496	426	302	167	67	14	10	10	616	10	218
30	10	10	10	10	10	10	10	38	101	250	318	405	377	355	355	265	423	262	237	82	36	11	10	10	423	10	150
31	10	10	10	10	11	10	7	9	18	29	72	96	68	110	88	69	68	78	79	35	15	9	8	8	110	7	39
Max.	**13**	**13**	**13**	**12**	**12**	**13**	**22**	**88**	**276**	**355**	**480**	**587**	**746**	**728**	**722**	**735**	**653**	**555**	**426**	**300**	**178**	**50**	**17**	**15**	**746**		
Min.	**3**	**3**	**4**	**4**	**4**	**4**	**7**	**9**	**18**	**29**	**47**	**70**	**68**	**90**	**66**	**69**	**68**	**54**	**37**	**32**	**15**	**9**	**6**	**3**		**3**	
Avg.	**8**	**8**	**8**	**8**	**8**	**8**	**11**	**33**	**91**	**151**	**232**	**287**	**335**	**371**	**386**	**390**	**371**	**298**	**226**	**119**	**59**	**20**	**9**	**8**			**144**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8	8	9	10	10	11	12	14	20	35	60	108	149	134	92	63	60	50	32	16	12	11	11	10	149	8	39
2	9	9	9	10	9	9	9	10	16	18	22	34	52	125	151	97	73	55	36	31	18	13	12	11	151	9	35
3	11	11	10	10	11	13	12	17	33	45	34	54	84	100	125	141	199	153	151	119	38	11	10	10	199	10	58
4	11	11	11	10	10	10	10	17	47	120	219	354	469	516	460	450	478	346	273	128	32	11	11	11	516	10	167
5	11	11	11	11	12	12	12	19	81	179	337	425	533	599	514	248	225	280	237	125	39	22	21	20	599	11	166
6	20	21	21	15	11	11	10	9	17	32	43	47	60	69	103	95	77	68	47	35	29	30	29	29	103	9	39
7	31	32	30	30	29	28	27	28	35	42	45	45	63	82	107	107	140	116	49	47	32	26	26	25	140	25	51
8	25	24	24	24	24	26	26	27	49	128	88	80	161	148	74	60	46	48	54	40	25	25	24	24	161	24	53
9	23	23	23	21	20	19	19	19	25	40	65	76	105	106	101	130	108	70	42	30	25	21	21	21	130	19	48
10	21	21	21	20	20	20	20	21	39	108	154	216	256	192	281	322	175	187	152	47	21	13	13	13	322	13	98
11	13	13	13	13	13	13	13	16	60	164	174	229	406	538	547	528	386	165	53	30	16	13	12	12	547	12	143
12	12	12	12	11	11	11	11	12	21	37	47	83	111	94	81	59	47	41	28	17	12	11	11	11	111	11	34
13	11	11	11	11	11	11	11	11	13	17	21	32	45	54	52	76	71	51	54	34	12	10	10	10	76	10	27
14	10	11	11	11	11	10	11	11	17	34	69	84	60	89	86	82	101	133	69	33	15	10	10	10	133	10	41
15	10	10	10	10	10	10	10	11	27	26	35	56	63	72	81	55	50	63	46	32	12	10	10	10	81	10	30
16	10	10	10	10	10	10	10	11	21	39	72	107	193	232	335	503	519	388	199	76	14	10	10	10	519	10	117
17	10	10	9	9	9	9	9	10	56	118	224	207	185	141	146	75	60	33	20	12	8	8	8	8	224	8	58
18	9	9	9	9	9	9	9	10	25	93	71	56	99	111	59	39	37	21	17	12	10	10	10	10	111	9	31
19	10	9	9	9	9	9	9	9	15	26	51	111	165	238	287	301	245	144	71	40	12	10	10	10	301	9	75
20	10	10	10	10	9	10	10	10	25	104	129	372	449	297	216	156	213	237	181	72	13	9	9	9	449	9	107
21	9	9	9	9	9	9	9	10	56	162	251	379	455	493	484	476	365	302	183	55	12	9	9	9	493	9	157
22	9	9	8	9	8	9	9	9	42	153	268	368	445	414	354	292	229	140	78	32	10	9	8	8	445	8	122
23	8	9	9	9	10	10	11	11	24	36	77	106	175	104	103	95	115	107	59	20	14	13	13	12	175	8	48
24	12	12	12	13	12	12	12	13	16	37	56	88	92	108	98	93	109	72	46	24	14	14	14	14	109	12	41
25	14	13	13	13	13	13	13	13	20	46	64	58	102	112	122	101	98	71	53	22	12	11	11	11	122	11	43
26	11	11	11	11	11	11	11	11	18	47	93	131	185	359	466	425	350	255	75	32	13	13	13	13	466	11	107
27	13	14	14	13	14	14	13	13	32	131	244	344	407	450	455	366	344	265	135	32	14	13	13	13	455	13	140
28	13	13	12	12	12	12	12	13	31	127	240	341	418	456	460	379	267	131	72	27	14	13	12	12	460	12	129
29	12	12	12	12	12	12	12	11	19	59	109	120	179	209	188	225	192	118	64	22	11	11	11	11	225	11	68
30	11	11	11	11	11	11	11	11	25	114	223	369	426	438	436	404	337	238	99	23	12	11	11	11	438	11	136
Max.	**31**	**32**	**30**	**30**	**29**	**28**	**27**	**28**	**81**	**179**	**337**	**425**	**533**	**599**	**547**	**528**	**519**	**388**	**273**	**128**	**39**	**30**	**29**	**29**	**599**		
Min.	**8**	**8**	**8**	**9**	**8**	**9**	**9**	**9**	**13**	**17**	**21**	**32**	**45**	**54**	**52**	**39**	**37**	**21**	**17**	**12**	**8**	**8**	**8**	**8**		**8**	
Avg.	**13**	**13**	**13**	**13**	**12**	**12**	**12**	**14**	**31**	**77**	**119**	**169**	**220**	**236**	**235**	**215**	**191**	**145**	**89**	**42**	**17**	**13**	**13**	**13**			**80**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	11	11	11	11	10	10	10	10	24	131	179	267	187	216	158	101	60	67	32	18	11	11	11	11	267	10	65
2	11	10	10	10	10	10	10	9	25	112	199	297	383	451	441	396	326	222	70	20	10	10	9	9	451	9	127
3	9	9	9	9	9	9	9	9	12	31	78	163	160	276	195	255	275	262	92	24	9	9	9	9	276	9	80
4	9	9	9	9	9	9	9	9	15	83	201	298	372	409	413	321	292	171	64	18	9	10	10	10	413	9	115
5	10	10	10	10	9	9	9	10	14	69	268	329	368	300	209	219	246	188	67	17	10	10	10	10	368	9	100
6	10	10	10	10	10	10	10	10	14	44	143	264	396	454	519	441	282	222	81	23	15	15	14	14	519	10	126
7	14	14	14	14	14	14	14	14	19	86	199	302	365	448	353	208	271	173	72	25	17	17	16	16	448	14	112
8	16	16	16	17	18	18	18	17	21	86	192	291	358	398	404	363	296	202	54	24	19	19	19	20	404	16	121
9	21	21	21	21	21	21	21	22	23	30	41	43	48	57	48	46	42	36	30	27	26	27	27	27	57	21	31
10	28	28	28	29	29	28	28	28	31	94	124	228	278	298	189	128	136	64	58	30	26	25	26	27	298	25	83
11	27	26	27	27	27	27	26	26	26	27	30	39	35	50	72	57	46	35	24	19	19	19	19	19	72	19	31
12	20	21	20	20	19	19	19	19	21	47	104	144	233	334	237	194	264	175	55	21	17	17	17	18	334	17	86
13	17	17	17	18	17	17	17	17	19	42	64	86	126	135	125	72	89	76	41	25	26	25	24	27	135	17	47
14	27	23	21	21	21	20	20	19	18	29	55	98	133	107	128	95	69	55	27	17	17	17	16	16	133	16	45
15	17	17	17	17	17	17	17	17	17	26	77	143	155	190	249	256	168	99	37	18	17	17	17	17	256	17	68
16	17	17	17	17	17	17	17	17	18	30	67	102	156	230	154	186	190	92	39	18	17	16	16	16	230	16	62
17	16	16	16	16	16	16	16	15	16	47	146	233	241	186	153	155	80	43	26	18	18	18	18	18	241	15	64
18	18	18	18	18	18	18	18	18	19	29	65	112	251	310	318	265	186	102	35	18	18	18	17	16	318	16	80
19	16	16	16	16	16	16	16	16	16	31	67	146	173	222	220	95	90	83	38	15	15	15	15	15	222	15	58
20	15	14	14	14	14	14	14	14	16	27	51	105	216	236	259	203	129	100	30	13	13	13	12	12	259	12	64
21	12	13	13	13	13	13	13	13	13	25	74	140	240	263	254	195	144	78	30	13	13	13	13	12	263	12	68
22	12	12	12	12	12	11	8	8	8	30	125	217	280	295	280	255	167	88	15	6	6	6	6	14	295	6	78
23	21	19	18	17	15	9	10	11	10	22	101	203	268	261	299	270	199	83	16	7	7	8	8	9	299	7	79
24	9	9	9	9	9	8	8	7	7	26	110	193	259	290	280	239	100	51	17	7	7	8	8	8	290	7	70
25	8	9	9	11	10	10	11	12	13	16	36	91	144	102	45	44	42	37	20	7	3	1	0	2	144	0	28
26	3	4	5	5	9	11	11	13	16	26	53	131	275	162	222	250	189	81	24	17	16	15	12	10	275	3	65
27	10	10	10	10	9	9	9	9	9	19	88	182	250	285	285	246	179	68	15	9	9	9	9	9	285	9	73
28	9	10	9	10	9	10	10	9	9	19	90	182	252	285	274	219	161	74	21	15	11	10	11	11	285	9	72
29	9	11	10	10	10	10	10	9	9	17	85	114	121	135	177	120	80	53	24	19	21	24	23	15	177	9	46
30	4	4	4	5	5	6	4	1	-1	0	20	50	86	127	113	135	84	42	20	17	17	17	17	17	135	-1	33
31	17	17	17	17	17	17	17	16	16	23	76	161	223	255	259	227	162	55	18	14	14	15	15	15	259	14	70
Max.	**28**	**28**	**28**	**29**	**29**	**28**	**28**	**28**	**31**	**131**	**268**	**329**	**396**	**454**	**519**	**441**	**326**	**262**	**92**	**30**	**26**	**27**	**27**	**27**	**519**		
Min.	**3**	**4**	**4**	**5**	**5**	**6**	**4**	**1**	**-1**	**0**	**20**	**39**	**35**	**50**	**45**	**44**	**42**	**35**	**15**	**6**	**3**	**1**	**0**	**2**		**-1**	
Avg.	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**14**	**16**	**43**	**103**	**173**	**227**	**251**	**237**	**202**	**163**	**102**	**38**	**17**	**15**	**15**	**14**	**15**			**73**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	15	16	16	16	16	16	16	16	16	21	56	119	170	197	285	247	180	49	16	12	12	12	12	13	285	12	64
2	12	12	12	12	11	10	10	10	10	13	55	152	226	282	275	161	95	52	10	6	6	6	5	5	282	5	60
3	5	5	5	5	4	4	4	5	5	7	38	118	207	198	143	132	106	45	9	5	5	5	5	5	207	4	44
4	5	5	5	5	5	5	5	5	6	8	28	62	94	130	114	83	51	26	8	7	7	7	7	8	130	5	29
5	8	8	8	8	9	9	9	10	10	12	35	52	77	85	67	87	107	31	12	11	11	11	11	12	107	8	29
6	12	11	11	12	12	11	11	11	11	13	37	75	113	145	225	136	76	36	13	12	12	13	13	12	225	11	43
7	12	11	12	12	13	15	14	13	12	12	39	114	199	233	243	111	106	40	13	12	14	15	16	14	243	11	54
8	13	12	12	13	13	13	15	15	14	15	23	42	56	80	78	49	40	18	12	12	12	12	12	12	80	12	25
9	12	13	18	14	24	28	32	26	21	20	27	36	45	48	44	34	27	19	16	16	15	15	14	12	48	12	24
10	12	12	14	14	13	12	12	11	11	15	19	21	22	20	21	27	24	17	13	14	16	15	15	15	27	11	16
11	15	14	13	13	13	13	13	13	16	17	20	34	56	71	71	99	90	33	16	16	17	16	15	14	99	13	30
12	14	13	13	12	12	12	12	12	12	13	39	93	149	124	140	140	80	28	13	12	13	13	12	13	149	12	41
13	13	13	13	13	13	13	13	13	13	14	17	27	32	40	50	60	49	28	23	22	22	22	21	21	60	13	23
14	21	20	20	19	19	19	19	18	18	18	31	75	87	108	90	65	49	30	18	18	18	17	17	17	108	17	35
15	17	17	17	17	17	17	17	17	16	16	26	87	158	149	106	63	34	21	19	19	19	18	17	18	158	16	38
16	18	17	17	17	16	16	16	17	17	18	23	40	166	219	164	56	43	23	13	13	13	13	13	13	219	13	41
17	13	12	12	12	12	12	11	11	11	11	22	73	134	164	139	49	38	19	11	11	11	10	10	10	164	10	34
18	10	10	10	10	10	10	10	10	10	10	21	78	145	175	142	41	33	18	9	6	4	4	5	5	175	4	33
19	5	5	5	5	5	5	5	5	5	5	11	30	104	120	72	63	35	17	6	6	5	6	5	6	120	5	22
20	6	6	5	5	5	5	5	5	4	4	9	38	130	160	122	33	24	10	3	3	3	3	3	3	160	3	25
21	3	3	3	3	3	2	3	3	3	3	12	58	122	150	116	35	25	11	4	3	4	4	4	4	150	2	24
22	5	5	5	5	5	6	6	5	5	5	12	41	92	140	114	33	24	11	6	6	7	7	8	8	140	5	23
23	8	8	7	7	7	7	7	8	8	9	10	15	42	47	39	42	25	14	13	14	16	15	15	14	47	7	17
24	11	10	10	9	8	8	9	9	8	9	11	14	13	18	20	24	16	12	11	11	12	12	12	12	24	8	12
25	11	10	8	7	6	6	5	5	5	5	7	17	29	64	77	75	58	18	4	4	4	4	4	4	77	4	18
26	4	4	4	4	5	4	4	4	4	4	7	18	49	71	89	65	29	10	5	5	5	4	4	5	89	4	17
27	5	5	5	6	5	5	6	6	6	6	8	19	31	41	43	35	15	10	9	9	9	10	10	9	43	5	13
28	9	9	9	10	11	11	11	11	12	11	11	16	28	41	50	40	25	14	11	10	11	10	8	8	50	8	16
29	8	7	6	6	6	5	5	4	4	4	5	22	53	102	70	50	19	7	5	5	5	5	6	5	102	4	17
30	5	6	6	6	6	5	6	6	6	5	8	40	98	137	92	27	19	8	5	5	5	5	5	5	137	5	22
Max.	**21**	**20**	**20**	**19**	**24**	**28**	**32**	**26**	**21**	**21**	**56**	**152**	**226**	**282**	**285**	**247**	**180**	**52**	**23**	**22**	**22**	**22**	**21**	**21**	**285**		
Min.	**3**	**3**	**3**	**3**	**3**	**2**	**3**	**3**	**3**	**3**	**5**	**14**	**13**	**18**	**20**	**24**	**15**	**7**	**3**	**3**	**3**	**3**	**3**	**3**		**2**	
Avg.	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**11**	**22**	**54**	**98**	**119**	**110**	**72**	**51**	**22**	**11**	**10**	**10**	**10**	**10**	**10**			**30**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Solar (Watts/m^2)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5	6	6	6	6	6	7	7	7	7	8	33	71	71	70	45	24	10	9	9	8	8	10	10	71	5	19
2	9	9	9	9	9	9	9	9	8	8	8	12	18	22	32	47	32	11	10	10	11	11	11	11	47	8	14
3	11	11	11	12	12	12	13	29	27	21	17	18	24	33	27	26	22	18	16	14	14	15	14	14	33	11	18
4	16	14	13	13	12	12	12	12	13	14	14	17	22	32	24	25	21	14	12	12	13	16	15	16	32	12	16
5	15	14	13	13	14	14	13	13	13	12	13	17	28	40	40	27	19	14	14	13	13	13	14	14	40	12	17
6	14	14	13	13	13	13	12	14	15	15	15	21	26	32	38	35	24	16	15	15	15	15	15	15	38	12	18
7	15	15	15	14	13	13	13	12	12	12	14	38	92	132	91	41	27	13	11	11	11	12	12	12	132	11	27
8	13	13	13	12	12	12	12	12	11	12	15	18	23	29	31	36	32	25	23	21	20	20	23	22	36	11	19
9	19	18	17	17	16	18	17	18	18	17	18	23	37	57	66	53	29	20	18	16	15	15	15	15	66	15	24
10	15	15	15	15	15	15	14	12	11	11	12	24	35	53	72	57	28	12	11	11	12	12	9	8	72	8	21
11	8	9	9	9	9	9	9	9	9	9	10	25	64	102	92	68	34	13	9	8	8	9	8	7	102	7	23
12	6	6	6	6	6	6	6	6	6	6	7	14	24	28	71	51	26	10	8	8	8	13	15	15	71	6	15
13	14	13	14	14	14	12	11	10	10	9	10	25	67	104	78	31	23	12	9	9	9	8	8	7	104	7	22
14	8	8	9	9	8	8	8	9	9	8	10	25	67	100	81	33	27	15	11	11	11	11	11	11	100	8	21
15	11	11	11	11	12	12	13	13	16	17	19	26	28	29	30	36	28	25	24	23	22	21	20	19	36	11	20
16	19	18	18	19	18	19	19	22	20	18	17	21	33	46	42	39	28	21	21	20	20	20	20	19	46	17	23
17	18	17	14	14	14	14	16	18	18	16	15	24	35	28	42	41	23	14	13	13	13	13	13	13	42	13	19
18	12	12	13	14	13	13	14	14	14	14	14	19	36	46	38	30	19	14	14	15	15	14	14	14	46	12	18
19	14	14	14	14	17	15	14	14	16	14	16	19	26	36	33	39	22	16	14	13	13	14	15	19	39	13	18
20	21	21	19	17	13	13	13	13	13	13	13	25	54	60	42	36	27	14	12	12	12	13	13	14	60	12	21
21	14	13	13	13	13	13	13	13	13	13	17	26	94	114	81	34	26	16	12	12	11	9	8	8	114	8	25
22	10	10	11	11	12	13	14	12	11	11	11	13	24	29	29	28	20	14	13	13	13	12	12	11	29	10	15
23	10	10	11	11	12	14	15	15	15	15	15	18	39	66	75	47	22	15	11	11	11	18	14	13	75	10	21
24	12	12	13	9	10	13	14	11	10	10	10	26	93	136	51	43	27	8	5	5	7	8	8	8	136	5	23
25	8	8	8	9	14	13	13	15	16	15	16	18	31	35	36	31	19	15	15	16	13	12	10	9	36	8	16
26	9	8	7	6	5	4	4	4	4	4	4	22	57	59	61	44	26	8	5	4	4	4	4	4	61	4	15
27	4	4	4	4	3	3	4	3	3	3	4	14	54	98	75	27	23	7	3	4	3	3	3	3	98	3	15
28	4	3	4	3	3	3	3	3	3	3	3	13	53	93	65	27	19	6	2	2	2	2	2	2	93	2	14
29	3	3	3	4	4	4	4	4	4	4	4	12	40	84	33	23	17	7	3	3	3	3	3	3	84	3	11
30	3	3	3	3	3	4	4	4	3	4	4	16	58	100	88	24	17	7	4	3	2	2	3	2	100	2	15
31	2	2	2	3	4	4	4	4	3	3	3	13	58	101	90	25	17	7	3	3	2	2	2	2	101	2	15
Max.	**21**	**21**	**19**	**19**	**18**	**19**	**19**	**29**	**27**	**21**	**19**	**38**	**94**	**136**	**92**	**68**	**34**	**25**	**24**	**23**	**22**	**21**	**23**	**22**	**136**		
Min.	**2**	**2**	**2**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**12**	**18**	**22**	**24**	**23**	**17**	**6**	**2**	**2**	**2**	**2**	**2**	**2**		**2**	
Avg.	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**20**	**46**	**64**	**56**	**37**	**24**	**13**	**11**	**11**	**11**	**11**	**11**	**11**			**19**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	996	994	992	991	990	989	988	987	987	986	985	985	983	982	983	983	982	982	982	982	982	982	982	981	996	981	985.6
2	981	981	981	981	981	981	981	981	980	980	980	980	980	979	978	978	978	978	978	977	976	976	976	976	981	976	979.1
3	976	975	975	975	975	974	974	974	974	974	974	974	974	975	974	975	975	975	975	976	976	977	977	977	977	974	975.0
4	977	978	977	978	978	978	979	979	979	979	979	980	979	979	979	979	979	980	979	979	979	979	979	980	980	977	978.8
5	980	979	979	980	979	979	979	979	979	979	977	978	977	978	976	977	980	981	979	981	980	979	982	982	982	976	979.2
6	984	984	985	984	984	986	987	986	987	986	985	987	987	988	987	987	987	986	986	986	986	986	985	985	988	984	986.0
7	986	986	986	986	987	986	986	985	985	985	985	985	984	984	986	986	986	987	988	988	989	990	991	992	992	984	986.5
8	992	992	992	992	994	993	992	993	993	993	992	992	993	992	991	991	991	991	991	991	989	989	988	987	994	987	991.5
9	989	988	987	987	987	987	986	986	985	986	987	987	987	987	987	988	988	988	988	988	986	989	989	989	989	985	987.4
10	990	990	991	990	990	990	991	990	991	991	991	992	991	992	992	992	992	992	992	992	992	993	993	994	994	990	991.5
11	994	995	995	994	995	995	995	995	995	995	995	995	996	996	997	997	997	998	998	998	998	998	999	999	999	994	996.1
12	999	999	999	999	998	998	997	996	997	996	996	996	996	995	994	994	994	994	994	995	996	996	996	997	999	994	996.4
13	998	1000	1000	1000	1000	1000	1001	1001	1004	1004	1005	1006	1007	1007	1008	1007	1008	1008	1007	1007	1007	1006	1007	1007	1008	998	004.4
14	1009	1009	1009	1009	1009	1009	1009	1009	1008	1008	1007	1006	1007	1007	1006	1006	1005	1005	1004	1002	1002	1001	1000	1000	1009	1000	006.0
15	1000	999	1000	999	998	999	997	999	999	1000	1000	1001	1001	1002	1002	1002	1002	1002	1001	1001	1001	1000	1000	999	1002	997	000.1
16	999	999	999	1000	1001	1002	1003	1004	1005	1007	1010	1011	1013	1013	1015	1015	1016	1017	1017	1018	1018	1018	1019	1018	1019	999	009.9
17	1019	1018	1018	1017	1016	1016	1014	1013	1012	1010	1011	1010	1008	1006	1006	1005	1005	1005	1006	1006	1006	1007	1007	1008	1019	1005	010.4
18	1009	1009	1010	1010	1011	1011	1012	1012	1013	1014	1015	1016	1017	1018	1019	1019	1019	1020	1021	1022	1021	1022	1023	1023	1023	1009	016.0
19	1024	1024	1024	1023	1023	1023	1022	1021	1021	1021	1021	1021	1020	1021	1022	1021	1021	1020	1021	1021	1021	1020	1020	1020	1024	1020	021.5
20	1020	1019	1018	1018	1016	1016	1015	1015	1014	1014	1014	1014	1013	1012	1013	1011	1013	1013	1013	1013	1015	1015	1016	1016	1020	1011	014.8
21	1017	1018	1018	1019	1019	1018	1018	1018	1017	1017	1017	1016	1015	1013	1012	1011	1010	1009	1007	1005	1004	1004	1006	1006	1019	1004	012.9
22	1007	1008	1008	1009	1008	1008	1009	1009	1009	1010	1011	1012	1013	1013	1015	1015	1016	1016	1016	1015	1015	1014	1014	1013	1016	1007	011.8
23	1013	1013	1013	1013	1014	1015	1015	1017	1084	1018	1018	1021	1022	1023	1024	1025	1026	1028	1026	1026	1026	1028	1028	1027	1084	1013	023.4
24	1028	1027	1027	1026	1025	1024	1023	1021	1020	1018	1017	1016	1014	1013	1012	1011	1009	1008	1007	1006	1005	1004	1003	1002	1028	1002	015.2
25	1001	1000	999	1000	999	998	998	999	999	1000	1001	1001	1002	1000	1001	1000	1000	1001	1001	1002	1002	1002	1005	1007	1007	998	000.7
26	1007	1008	1009	1010	1012	1013	1013	1014	1015	1016	1017	1017	1018	1018	1018	1018	1019	1019	1019	1018	1018	1018	1017	1017	1019	1007	015.5
27	1016	1016	1014	1014	1013	1012	1012	1010	1009	1008	1007	1006	1005	1004	1002	1001	1000	998	998		995	994	994	993	1016	993	005.3
28	993		991								1115	992	993	993	993	994	994	995	996	996	997	995	998	999	1115	991	002.1
29	999	1000	1000	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	999	999	998	997	997	997	996	995	995	995	1001	995	999.0
30	996	996	996	996	996	997	997	997	997	997	998	998	999	999	999	999	999	1000	1001	1001	1000	1001	1001	1002	1002	996	998.4
31	1002	1002	1002	1001	1002	1002	1003	1002	1003	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1003	1001	001.7
Max.	**1028**	**1027**	**1027**	**1026**	**1025**	**1024**	**1023**	**1021**	**1084**	**1021**	**1115**	**1021**	**1022**	**1023**	**1024**	**1025**	**1026**	**1028**	**1026**	**1026**	**1026**	**1028**	**1028**	**1027**	**1115**		
Min.	**976**	**975**	**975**	**975**	**975**	**974**	**974**	**974**	**974**	**974**	**974**	**974**	**974**	**975**	**974**	**975**	**975**	**975**	**975**	**976**	**976**	**976**	**976**	**976**		**974**	
Avg.	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1002**	**1000**	**1004**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**999**	**999**	**1000**	**1000**			**000.0**

Total Hours in Month 744 **Hours Data Available** 735 **Data Recovery** 98.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	999	999	998	998	998	998	998	998	998	1001	998	999.9
2	998	999	999	999	999	999	999	1000	1000	1001	1001	1001	1002	1002	1003	1003	1004	1004	1003	1004	1004	1005	1005	1004	1005	998	001.6
3	1006	1006	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1006	1005	1004	1004	1004	1004	1003	1003	1003	1003	1007	1003	005.1
4	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1001	002.0
5	1001	1001	1001	1001	1002	1002	1001	1001	1001	1000	1000	1001	1001	1000	1000	999	999	998	997	998	997	997	996	996	1002	996	999.7
6	996	996	995	995	995	995	995	995	995	995	995	996	996	997	997	997	997	997	997	997	998	998	999	999	999	995	996.4
7	1000	1001	1002	1003	1003	1004	1005	1005	1006	1007	1008	1009	1009	1010	1010	1010	1011	1011	1011	1012	1012	1012	1013	1013	1013	1000	007.8
8	1013	1014	1014	1014	1014	1014	1013	1013	1013	1013	1012	1013	1012	1011	1010	1009	1009	1008	1007	1007	1004	1003	1003	1002	1014	1002	010.2
9	1002	999	999	997	997	995	994	993	992	992	990	990	989	988	987	986	986	985	985	985	985	986	986	986	1002	985	990.6
10	986	986	986	986	986	986	986	986	986	986	987	987	987	986	986	986	986	985	985	985	985	985	985	986	987	985	985.9
11	986	986	986	986	986	986	986	986	986	986	987	987	987	987	987	986	986	986	986	987	987	987	988	989	989	986	986.6
12	989	989	991	992	993	994	995	996	996	996	997	998	998	999	999	998	998	999	999	998	999	998	998	997	999	989	996.1
13	996	993	993	992	990	988	986	984	984	983	982	982	982	981	980	979	979	978	977	978	977	976	976	976	996	976	983.0
14	975	975	975	975	975	974	974	974	974	975	975	976	977	978	979	979	978	980	980	980	981	983	984	983	984	974	977.5
15	984	985	990	990	992	995	997	998	1000	1002	1002	1003	1004	1004	1005	1006	1007	1007	1007	1007	1008	1008	1008	1008	1008	984	000.8
16	1008	1007	1006	1005	1002	1000	999	997	994	993	991	989	988	987	986	986	987	988	989	991	992	994	994	994	1008	986	994.5
17	994	995	995	994	993	992	990	988	985	982	980	979	977	977	975	975	976	977	979	980	982	984	985	986	995	975	984.3
18	986	986	986	986	984	985	984	984	987	989	990	991	992	993	993	992	992	993	992	992	992	992	992	991	993	984	989.3
19	990	989	987	984	983	981	979	978	976	974	973	972	971	969	968	967	962	963	964	966	965	968	969	971	990	962	973.6
20	973	975	979	980	982	983	984	985	985	985	985	985	985	984	983	981	980	979	979	978	978	978	978	977	985	973	981.0
21	977	977	976	975	975	975	975	975	975	976	976	978	978	979	980	981	981	982	983	984	985	985	986	987	987	975	979.1
22	988	989	990	990	991	992	992	993	994	995	996	997	998	1000	1000	1002	1002	1003	1004	1005	1006	1006	1007	1008	1008	988	997.8
23	1008	1009	1009	1009	1010	1010	1010	1010	1011	1011	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1013	1013	1008	011.1
24	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1009	1009	1012	1009	011.0
25	1008	1007	1007	1006	1006	1005	1005	1005	1005	1006	1006	1006	1006	1005	1006	1005	1005	1005	1005	1006	1006	1007	1007	1008	1008	1005	006.0
26	1007	1007	1007	1007	1007	1006	1006	1005	1004	1004	1003	1003	1002	1002	1001	1000	999	999	998	998	998	998	998	997	1007	997	002.2
27	997	997	997	998	998	998	998	999	999	999	999	999	1000	1000	1000	999	999	999	998	998	998	998	998	998	1000	997	998.4
28	998	997	997	997	997	996	996	996	996	996	996	997	997	997	997	997	997	997	997	997	997	997	997	997	998	996	996.8
29	997	997	997	996	996	995	994	994	994	993	993	993	993	992	991	991	990	989	989	988	988	988	987	987	997	987	992.2
Max.	**1013**	**1014**	**1014**	**1014**	**1014**	**1014**	**1013**	**1013**	**1013**	**1013**	**1012**	**1013**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1012**	**1013**	**1013**	**1014**		
Min.	**973**	**975**	**975**	**975**	**975**	**974**	**974**	**974**	**974**	**974**	**973**	**972**	**971**	**969**	**968**	**967**	**962**	**963**	**964**	**966**	**965**	**968**	**969**	**971**		**962**	
Avg.	**996**	**996**	**996**	**996**	**996**	**996**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**995**	**994**	**994**	**994**	**995**	**995**	**995**	**995**	**995**			**995.2**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	987	987	987	987	986	987	987	988	988	989	989	990	990	991	990	990	990	990	988	988	988	988	988	988	991	986	988.4
2	987	989	989	989	989	990	990	992	992	993	994	995	995	996	996	996	996	997	997	998	998	999	1000	1000	1000	987	994.0
3	1001	1002	1003	1003	1002	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1003	1004	1004	1005	1005	1005	1005	1005	1005	1001	003.1
4	1005	1005	1005	1005	1004	1003	1003	1003	1002	1003	1002	1004	1004	1004	1003	1003	1004	1003	1003	1003	1002	1002	1001	999	1005	999	003.2
5	997	995	994	992	991	988	987	986	984	984	984	983	983	983	984	984	985	985	986	987	987	988	989	989	997	983	987.3
6	991	991	992	991	992	992	992	992	992	992	992	991	991	990	990	989	988	987	986	984	983	981	980	979	992	979	988.8
7	978	977	976	975	974	974	974	973	973	973	973	974	974	975	975	975	976	977	978	979	980	982	983	984	984	973	976.4
8	986	987	988	989	990	991	992	992	992	993	993	993	992	990	989	989	987	986	985	984	983	982	982	981	993	981	988.2
9	980	980	979	979	978	978	977	977	978	979	979	980	981	982	982	982	983	983	984	985	986	988	988	990	990	977	981.6
10	991	992	993	994	994	995	996	997	998	998	999	1000	1000	1000	1000	1000	1001	1001	1001	1001	1001	1001	1002	1002	1002	991	998.2
11	1002	1003	1003	1003	1003	1003	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	1006	1006	1007	1007	1007	1008	1008	1008	1002	005.0
12	1008	1009	1009	1009	1010	1011	1011	1011	1011	1012	1012	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1008	011.8
13	1014	1014	1015	1015	1014	1015	1015	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1014	015.6
14	1016	1016	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1017	1016	1016	1015	1014	1013	1013	1013	1012	1011	1010	1010	1017	1010	014.8
15	1009	1008	1008	1006	1005	1004	1004	1003	1003	1003	1003	1002	1002	1002	1001	1000	999	998	997	997	996	996	995	993	1009	993	001.4
16	993	992	992	991	990	990	989	989	988	988	988	988	988	987	987	986	986	985	985	985	985	985	985	985	993	985	987.9
17	985	986	986	987	987	987	988	988	988	989	989	989	989	990	990	990	990	990	990	992	992	992	993	993	993	985	989.2
18	993	993	993	994	993	993	993	993	993	993	993	994	994	994	994	994	993	994	994	994	993	993	994	994	994	993	993.5
19	994	994	994	993	994	994	994	994	994	995	995	996	996	996	997	996	996	996	997	997	998	998	999	999	999	993	995.6
20	999	1000	999	1000	1000	1000	1000	1001	1001	1002	1001	1003	1003	1003	1002	1002	1002	1002	1001	1001	1000	999	999	999	1003	999	000.7
21	998	998	997	997	997	996	997	997	996	996	996	996	997	996	997	997	996	996	995	995	995	996	996	996	998	995	996.4
22	996	996	995	994	994	994	993	993	993	993	993	994	994	994	993	993	993	993	993	993	994	994	994	995	996	993	993.8
23	994	995	994	994	994	993	993	992	992	992	991	992	990	991	991	991	991	990	991	990	990	991	991	991	995	990	991.8
24	990	991	991	992	992	993	993	993	993	993	994	994	995	995	995	995	995	996	995	996	996	998	998	1000	1000	990	994.4
25	1002	1003	1003	1003	1004	1004	1004	1004	1004	1005	1005	1006	1006	1006	1006	1006	1006	1005	1006	1006	1006	1007	1007	1007	1007	1002	005.0
26	1007	1007	1007	1008	1007	1008	1008	1009	1009	1009	1010	1010	1011	1011	1011	1010	1011	1011	1011	1012	1012	1012	1012	1012	1012	1007	009.8
27	1013	1013	1012	1013	1014	1014	1014	1014	1015	1014	1014	1014	1015	1015	1016	1015	1015	1015	1015	1015	1015	1016	1016	1016	1016	1012	014.6
28	1017	1017	1017	1018	1018	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1016	1016	1016	1016	1016	1018	1016	017.2
29	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1015	1015	1014	1014	1014	1014	1013	1012	1012	1010	1010	1010	1011	1011	1016	1010	013.6
30	1011	1010	1010	1010	1010	1009	1009	1010	1009	1009	1010	1010	1010	1011	1011	1010	1011	1010	1011	1012	1012	1012	1012	1014	1014	1009	010.5
31	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1013	1012	1012	1012	1011	1011	1010	1010	1009	1008	1006	1006	1006	1006	1013	1006	010.7
Max.	**1017**	**1017**	**1017**	**1018**	**1018**	**1017**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1018**		
Min.	**978**	**977**	**976**	**975**	**974**	**974**	**974**	**973**	**973**	**973**	**973**	**974**	**974**	**975**	**975**	**975**	**976**	**977**	**978**	**979**	**980**	**981**	**980**	**979**		**973**	
Avg.	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**1000**	**999**	**999**	**999**	**999**	**1000**	**1000**	**1000**			**999.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1006	1005	1005	1004	1004	1004	1004	1003	1003	1003	1002	1003	1002	1002	1002	1002	1001	1001	1001	1002	1002	1003	1003	1004	1006	1001	003.0
2	1004	1005	1006	1007	1008	1009	1009	1010	1011	1011	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1010	1010	1010	1009	1012	1004	009.7
3	1009	1008	1008	1008	1008	1008	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1005	1004	1004	1004	1004	1003	1009	1003	006.4
4	1003	1001	1001	1000	1001	1000	1000	1000	999	999	1000	999	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1002	1002	1003	999	000.4
5	1004	1004	1004	1004	1004	1003	1003	1004	1005	1006	1003	1003	1004	1005	1004	1005	1005	1004	1004	1004	1005	1005	1004	1004	1006	1003	004.2
6	1005	1002	1004	1003	1003	1004	1004	1004	1005	1005	1006	1006	1005	1005	1005	1006	1006	1005	1005	1005	1005	1006	1006	1007	1007	1002	004.8
7	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1008	1008	1008	1008	1009	1007	008.3
8	1008	1007	1007	1006	1006	1006	1005	1005	1005	1004	1004	1003	1003	1003	1002	1002	1001	1001	1001	1000	1000	1000	1000	1000	1008	1000	003.3
9	1000	1000	1000	1000	1000	1001	1001	1001	1001	1002	1002	1002	1002	1001	1001	1000	1000	1000	1001	1000	1000	1000	1001	1001	1002	1000	000.7
10	1001	1002	1003	1003	1003	1004	1004	1006	1006	1007	1008	1008	1009	1009	1010	1009	1010	1010	1010	1011	1011	1011	1011	1012	1012	1001	007.4
11	1012	1012	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1013	1013	1012	1011	1011	1011	1010	1010	1010	1010	1014	1010	012.4
12	1009	1008	1008	1007	1007	1006	1006	1005	1005	1004	1004	1003	1002	1003	1002	1002	1002	1000	1001	1000	1001	1001	1001	1001	1009	1000	003.7
13	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	999	1000	999	1000	999	1001	1002	999	000.4
14	1001	1001	1001	1001	1001	1001	1000	1001	1002	1001	1001	1002	1002	1003	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1003	1000	001.6
15	1001	1001	1000	999	999	997	997	996	996	996	996	996	996	996	996	996	996	997	997	998	999	1000	1001	1003	1003	996	997.8
16	1005	1006	1006	1008	1009	1009	1011	1013	1013	1015	1016	1018	1018	1019	1021	1021	1019	1021	1022	1023	1024	1024	1025	1025	1025	1005	016.2
17	1024	1025	1026	1026	1027	1028	1028	1030	1031	1032	1033	1033	1033	1034	1035	1035	1035	1034	1035	1034	1034	1034	1035	1035	1035	1024	031.5
18	1035	1035	1035	1035	1035	1035	1035	1035	1036	1036	1036	1036	1036	1036	1036	1035	1035	1034	1034	1034	1034	1033	1033	1033	1036	1033	034.8
19	1032	1032	1032	1032	1031	1031	1031	1030	1030	1030	1029	1029	1029	1029	1028	1028	1027	1027	1026	1026	1025	1025	1025	1025	1032	1025	028.8
20	1024	1024	1024	1024	1023	1023	1022	1022	1022	1023	1023	1023	1023	1022	1023	1023	1022	1023	1023	1023	1023	1023	1023	1022	1024	1022	023.0
21	1022	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1023	1024	1023	1023	1023	1023	1022	1023	1023	1023	1024	1022	022.9
22	1023	1023	1022	1021	1021	1022	1022	1022	1022	1021	1021	1021	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1017	1017	1023	1017	020.0
23	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1014	1014	1014	1014	1014	1013	1013	1013	1012	1012	1012	1012	1012	1012	1017	1012	014.0
24	1012	1011	1012	1012	1012	1011	1012	1011	1012	1011	1012	1011	1011	1011	1012	1011	1011	1011	1011	1010	1010	1010	1010	1009	1012	1009	011.0
25	1009	1010	1010	1009	1009	1009	1007	1008	1007	1007	1007	1007	1006	1006	1005	1004	1005	1005	1006	1005	1005	1006	1005	1005	1010	1004	006.7
26	1005	1005	1004	1004	1003	1002	1001	1000	1000	998	998	997	997	996	995	995	994	993	994	993	993	992	992	992	1005	992	997.6
27	991	991	991	991	990	990	990	991	991	991	991	992	993	993	995	996	997	997	999	1000	1000	1002	1002	1003	1003	990	994.4
28	1003	1004	1005	1005	1006	1006	1006	1006	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1007	1008	1008	1008	1008	1008	1008	1003	006.9
29	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1009	1009	1009	1008	1008	1008	1007	1007	1007	1007	1007	1007	1006	1009	1006	007.8
30	1006	1006	1005	1005	1005	1005	1005	1004	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1004	004.6
Max.	**1035**	**1035**	**1035**	**1035**	**1035**	**1035**	**1035**	**1035**	**1036**	**1036**	**1036**	**1036**	**1036**	**1036**	**1036**	**1035**	**1035**	**1034**	**1035**	**1034**	**1034**	**1034**	**1035**	**1035**	**1036**		
Min.	**991**	**991**	**991**	**991**	**990**	**990**	**990**	**991**	**991**	**991**	**991**	**992**	**993**	**993**	**995**	**995**	**994**	**993**	**994**	**993**	**993**	**992**	**992**	**992**		**990**	
Avg.	**1010**	**1009**	**1010**	**1009**	**1009**	**1009**	**1009**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1010**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1010**			**009.5**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1005	1005	1005	1004	1004	1004	1005	1004	1005	1004	1005	1004	1004	1004	1003	1003	1002	1002	1002	1001	1001	1001	1001	1001	1005	1001	003.3
2	1000	1000	999	998	999	998	999	999	999	1000	1000	1000	1001	1001	1001	1002	1002	1002	1002	1002	1003	1005	1005	1005	1005	998	000.8
3	1005	1005	1006	1006	1006	1006	1007	1007	1006	1006	1006	1006	1006	1006	1005	1003	1005	1004	1003	1003	1004	1004	1004	1003	1007	1003	005.1
4	1003	1002	1003	1001	1002	1002	1001	1001	1001	1001	1001	1001	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1003	1001	001.3
5	1000	1001	1001	1001	1001	1001	1001	1001	1002	1002	1003	1003	1004	1004	1005	1006	1006	1007	1007	1008	1009	1009	1010	1011	1011	1000	004.3
6	1012	1012	1013	1013	1014	1015	1015	1016	1016	1016	1017	1017	1017	1018	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1012	015.9
7	1017	1016	1016	1016	1015	1016	1015	1016	1015	1015	1015	1015	1015	1015	1014	1013	1013	1013	1012	1011	1011	1012	1011	1011	1017	1011	014.1
8	1011	1010	1010	1010	1010	1009	1009	1009	1009	1008	1008	1008	1008	1008	1007	1007	1006	1006	1005	1004	1004	1004	1004	1003	1011	1003	007.3
9	1003	1003	1002	1002	1002	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1003	1001	002.1
10	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1002	1001	001.7
11	1000	1000	999	999	998	997	996	995	993	993	992	990	992	988	986	986	986	983	985	984	981	982	982	981	1000	981	990.2
12	981	980	979	979	979	979	979	979	979	979	978	978	977	976	977	978	977	978	979	979	981	981	983	982	983	976	979.1
13	984	985	986	987	987	989	990	990	991	992	992	993	994	995	995	996	996	996	997	997	996	997	996	996	997	984	992.3
14	994	994	992	991	990	988	987	983	983	981	980	980	979	978	978	978	978	977	978	978	979	980	982	983	994	977	983.1
15	984	985	987	988	990	991	993	994	996	998	999	1001	1002	1004	1005	1005	1006	1006	1008	1009	1010	1011	1012	1013	1013	984	999.8
16	1013	1014	1015	1013	1015	1015	1016	1016	1017	1017	1017	1017	1017	1017	1016	1016	1016	1015	1014	1014	1013	1013	1013	1013	1017	1013	015.1
17	1012	1012	1012	1011	1011	1011	1011	1011	1011	1010	1010	1011	1011	1011	1010	1010	1011	1010	1010	1010	1010	1011	1011	1012	1012	1010	010.9
18	1012	1012	1012	1012	1013	1013	1013	1013	1013	1014	1014	1014	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1012	014.4
19	1016	1016	1016	1016	1015	1015	1015	1015	1014	1014	1013	1013	1013	1012	1012	1011	1010	1010	1010	1009	1009	1009	1008	1008	1016	1008	012.4
20	1008	1008	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1006	1006	1006	1006	1006	1007	1007	1008	1005	006.2
21	1007	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1012	1012	1013	1013	1014	1014	1015	1015	1015	1016	1016	1017	1018	1018	1007	012.1
22	1018	1018	1019	1019	1020	1020	1020	1021	1021	1021	1021	1021	1021	1022	1021	1022	1022	1021	1021	1020	1019	1019	1019	1018	1022	1018	020.1
23	1018	1016	1015	1013	1014	1014	1012	1012	1012	1013	1013	1013	1011	1012	1014	1015	1015	1015	1015	1016	1015	1017	1018	1017	1018	1011	014.4
24	1018	1018	1017	1016	1017	1016	1016	1016	1016	1016	1016	1015	1016	1016	1015	1015	1016	1016	1016	1016	1017	1017	1017	1018	1018	1015	016.3
25	1018	1018	1019	1019	1020	1020	1020	1021	1021	1021	1021	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1023	1023	1023	1023	1018	021.1
26	1023	1023	1023	1023	1023	1023	1023	1022	1023	1022	1022	1022	1022	1022	1021	1021	1021	1022	1022	1022	1021	1022	1022	1022	1023	1021	022.1
27	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1022	1021	1021	1021	1021	1020	1020	1020	1020	1020	1020	1019	1022	1019	021.2
28	1020	1020	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1017	1017	1016	1016	1016	1016	1016	1016	1020	1016	018.1
29	1015	1015	1015	1014	1014	1014	1013	1013	1014	1013	1013	1014	1013	1013	1013	1012	1012	1011	1011	1011	1011	1011	1011	1011	1015	1011	012.8
30	1011	1011	1011	1011	1011	1010	1010	1011	1010	1011	1011	1011	1011	1012	1012	1011	1012	1012	1012	1012	1013	1013	1012	1013	1013	1010	011.3
31	1013	1013	1013	1012	1012	1012	1012	1011	1012	1012	1012	1012	1011	1011	1011	1011	1010	1009	1009	1008	1008	1008	1008	1007	1013	1007	010.6
Max.	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1023**	**1022**	**1023**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1022**	**1023**	**1023**	**1023**	**1023**		
Min.	**981**	**980**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**979**	**978**	**978**	**977**	**976**	**977**	**978**	**977**	**977**	**978**	**978**	**979**	**980**	**982**	**981**		**976**	
Avg.	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1007**	**1008**	**1007**	**1007**	**1008**	**1008**	**1008**			**007.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1006	1006	1005	1005	1005	1003	1004	1003	1003	1003	1002	1002	1002	1001	1000	1001	999	999	999	999	999	999	999	998	1006	998	001.7
2	998	998	998	997	997	997	996	996	996	996	996	996	995	995	994	994	993	993	993	992	992	992	991	991	998	991	994.8
3	991	991	991	991	991	992	992	991	992	992	993	993	993	994	995	995	995	996	996	997	997	997	997	997	997	991	993.6
4	997	997	997	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	996	997	997	997	996	996.1
5	997	997	997	997	997	996	996	996	996	995	995	996	996	996	996	995	996	996	996	996	996	997	997	998	998	995	996.2
6	998	998	999	999	1000	1000	1001	1001	1002	1002	1002	1003	1003	1003	1003	1003	1004	1004	1004	1004	1004	1005	1005	1006	1006	998	002.2
7	1006	1007	1006	1007	1007	1007	1007	1007	1008	1008	1009	1009	1009	1010	1010	1011	1012	1013	1013	1013	1014	1014	1014	1014	1014	1006	009.8
8	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1014	1014	1013	013.6
9	1014	1014	1014	1013	1014	1014	1014	1014	1014	1014	1015	1014	1015	1015	1014	1015	1014	1014	1014	1014	1014	1014	1014	1014	1015	1013	014.2
10	1015	1015	1015	1015	1015	1015	1015	1016	1015	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1015	016.1
11	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1019	1018	1018	1018	1018	1018	1018	1018	1019	1018	018.2
12	1018	1018	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1015	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1018	1013	015.3
13	1013	1012	1012	1012	1012	1012	1012	1013	1013	1013	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1012	013.8
14	1016	1016	1017	1017	1017	1017	1018	1018	1018	1019	1019	1019	1019	1020	1020	1020	1020	1020	1020	1020	1021	1021	1020	1020	1021	1016	018.9
15	1020	1020	1020	1019	1019	1020	1020	1020	1020	1021	1021	1020	1020	1020	1020	1019	1019	1018	1018	1017	1017	1017	1016	1016	1021	1016	019.0
16	1015	1015	1015	1015	1014	1015	1015	1014	1014	1014	1014	1015	1015	1015	1015	1014	1014	1014	1014	1014	1013	1013	1014	1014	1015	1013	014.3
17	1013	1014	1014	1013	1013	1013	1013	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1013	014.3
18	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	1015	015.1
19	1015	1015	1015	1016	1016	1016	1016	1016	1017	1017	1016	1016	1017	1017	1017	1017	1016	1016	1016	1015	1015	1015	1015	1015	1017	1015	015.9
20	1015	1015	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1011	1015	1011	012.9
21	1011	1011	1010	1010	1009	1009	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1007	1007	1007	1006	1006	1007	1007	1007	1011	1006	007.7
22	1008	1008	1008	1008	1008	1009	1009	1010	1010	1011	1011	1012	1012	1013	1013	1013	1014	1013	1014	1014	1014	1014	1014	1015	1015	1008	011.5
23	1015	1014	1014	1013	1013	1013	1013	1012	1012	1012	1011	1011	1010	1010	1009	1009	1009	1008	1008	1007	1007	1007	1007	1007	1015	1007	010.5
24	1007	1007	1007	1007	1007	1007	1006	1006	1006	1007	1007	1006	1006	1007	1007	1007	1006	1006	1005	1005	1005	1005	1005	1004	1007	1004	006.2
25	1004	1003	1003	1003	1002	1002	1003	1003	1001	1002	1002	1001	1000	999	999	1000	1000	1000	999	1000	1000	1000	1001	1002	1004	999	001.1
26	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1000	000.3
27	1001	1002	1002	1003	1003	1003	1003	1003	1003	1004	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1004	1004	1001	003.1
28	1004	1004	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1006	1006	1007	1008	1008	1009	1009	1010	1011	1011	1012	1013	1013	1003	006.4
29	1013	1014	1014	1014	1014	1015	1015	1016	1016	1017	1017	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1013	017.0
30	1019	1019	1019	1019	1019	1019	1019	1018	1018	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1015	1015	1015	1015	1015	1019	1015	017.2
Max.	**1020**	**1020**	**1020**	**1019**	**1019**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1021**	**1021**	**1020**	**1020**	**1021**		
Min.	**991**	**991**	**991**	**991**	**991**	**992**	**992**	**991**	**992**	**992**	**993**	**993**	**993**	**994**	**994**	**994**	**993**	**993**	**993**	**992**	**992**	**992**	**991**	**991**		**991**	
Avg.	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1009**	**1010**			**009.2**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1014	1012	013.0
2	1013	1013	1013	1012	1012	1011	1012	1011	1011	1011	1011	1010	1009	1008	1008	1007	1006	1005	1005	1004	1004	1004	1004	1004	1013	1004	008.7
3	1003	1002	1001	1000	999	998	998	997	999	998	998	998	997	998	997	997	997	997	997	997	998	998	999	999	1003	997	998.5
4	999	999	999	999	999	999	999	999	999	999	999	999	999	999	998	998	999	998	998	998	998	998	998	998	999	998	998.7
5	998	998	998	998	998	997	997	997	997	997	997	997	997	997	997	997	997	996	997	996	997	997	997	997	998	996	997.0
6	998	998	998	998	997	997	998	998	998	999	999	1000	1000	1001	1001	1001	1001	1001	1002	1002	1002	1003	1003	1004	1004	997	999.9
7	1004	1005	1005	1006	1006	1007	1008	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1011	1004	009.0
8	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1009	1010	1010	1010	1009	009.2
9	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1012	1013	1013	1012	1012	1012	1013	1013	1014	1014	1014	1010	011.2
10	1014	1014	1014	1014	1014	1014	1015	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1017	1017	1017	1014	015.3
11	1017	1017	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	017.6
12	1018	1018	1018	1018	1018	1017	1017	1017	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1014	1014	1014	1013	1014	1014	1018	1013	015.8
13	1014	1014	1014	1015	1015	1014	1015	1015	1015	1015	1016	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1014	015.9
14	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1016	1016	1016	1016	1016	1017	1016	016.8
15	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1013	1013	1014	1013	1013	1013	1013	1013	1013	1016	1013	014.2
16	1013	1013	1012	1013	1012	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1009	1009	1008	1007	1007	1006	1006	1013	1006	010.6
17	1005	1006	1005	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1006	1006	1006	1005	1004	1005	1004	1003	1004	1007	1003	005.7
18	1003	1003	1003	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	999	999	999	999	1003	999	001.0
19	998	998	998	997	997	996	996	996	996	995	995	995	996	996	995	996	996	996	996	996	996	996	997	998	998	995	996.3
20	998	998	999	999	999	999	1000	1000	1000	1001	1001	1001	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	1002	998	000.3
21	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1002	1002	1003	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1000	001.8
22	1005	1005	1005	1005	1006	1005	1005	1005	1006	1006	1006	1006	1005	1005	1006	1005	1005	1005	1005	1004	1004	1004	1004	1004	1006	1004	005.1
23	1004	1004	1004	1004	1004	1003	1004	1004	1004	1003	1004	1004	1004	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1004	1003	003.5
24	1003	1002	1002	1002	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1002	1002	1003	1001	002.2
25	1001	1002	1001	1001	1001	1001	1001	1002	1001	1002	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1002	1001	001.3
26	1002	1002	1002	1003	1003	1003	1003	1003	1004	1004	1004	1003	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1002	003.4
27	1004	1004	1004	1003	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1004	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1003	004.2
28	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1004	1004	1003	1003	1003	1003	1002	1002	1002	1006	1002	004.8
29	1003	1002	1002	1002	1002	1002	1001	1002	1001	1001	1001	1001	1002	1002	1002	1002	1001	1002	1002	1002	1002	1002	1003	1003	1003	1001	001.9
30	1003	1003	1003	1003	1003	1003	1003	1003	1002	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1003	1002	1003	1004	1004	1002	002.7
31	1004	1004	1003	1004	1004	1004	1003	1003	1003	1004	1004	1003	1003	1003	1003	1003	1003	1003	1002	1002	1002	1002	1002	1003	1004	1002	003.1
Max.	**1018**	**1018**	**1018**	**1018**	**1018**	**1017**	**1017**	**1017**	**1017**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**		
Min.	**998**	**998**	**998**	**997**	**997**	**996**	**996**	**996**	**996**	**995**	**995**	**995**	**996**	**996**	**995**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**997**	**997**		**995**	
Avg.	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**	**1006**			**006.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1003	1003	1004	1004	1004	1005	1005	1006	1006	1006	1007	1007	1008	1008	1008	1008	1009	1009	1009	1009	1010	1010	1010	1011	1011	1003	007.1
2	1012	1012	1012	1012	1012	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1015	1015	1015	1015	1016	1016	1012	013.8
3	1016	1016	1016	1016	1016	1016	1017	1017	1017	1018	1018	1018	1018	1018	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1019	1016	017.6
4	1019	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1018	1017	1017	1017	1017	1017	1019	1017	017.8
5	1017	1016	1016	1016	1016	1016	1016	1016	1015	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1015	1015	1017	1014	015.1
6	1015	1015	1015	1015	1015	1015	1015	1015	1014	1015	1014	1014	1014	1014	1013	1013	1012	1012	1011	1011	1010	1010	1010	1011	1015	1010	013.2
7	1011	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1008	1008	1008	1007	1007	1006	1006	1006	1006	1007	1007	1011	1006	008.4
8	1007	1008	1007	1007	1007	1007	1007	1007	1006	1007	1006	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1008	1005	006.2
9	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1004	1005	1005	1006	1006	1007	1007	1008	1008	1004	004.9
10	1008	1009	1009	1009	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1011	1011	1010	1011	1011	1010	1011	1011	1011	1011	1011	1008	010.2
11	1011	1011	1011	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1008	1008	1007	1007	1006	1005	1004	1004	1003	1003	1002	1011	1002	007.7
12	1002	1001	1001	1000	999	999	999	998	998	997	997	997	996	996	995	995	994	994	994	994	994	994	993	993	1002	993	996.6
13	993	992	992	992	992	992	992	992	992	992	991	992	992	992	993	993	994	994	994	994	995	995	995	996	996	991	992.9
14	996	997	997	998	998	998	999	1000	1000	1001	1001	1002	1002	1003	1004	1004	1004	1005	1005	1005	1006	1007	1007	1008	1008	996	001.9
15	1009	1009	1009	1009	1010	1010	1010	1011	1011	1012	1012	1012	1012	1013	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1013	1009	011.4
16	1012	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1011	1011	1011	1011	1010	1010	1009	1009	1008	1008	1008	1008	1008	1013	1008	010.8
17	1007	1007	1007	1006	1006	1005	1005	1005	1004	1004	1003	1002	1003	1003	1002	1002	1002	1001	1000	1000	1000	1000	999	999	1007	999	003.0
18	999	999	998	998	997	997	997	996	996	996	996	996	995	996	995	995	995	995	995	995	995	996	996	997	999	995	996.2
19	997	997	998	998	998	999	999	999	999	999	999	1000	1000	1000	1000	1000	999	999	999	999	999	999	999	999	1000	997	998.9
20	999	999	999	998	998	998	998	998	998	998	997	997	998	997	997	997	997	997	996	996	996	996	996	996	999	996	997.4
21	996	996	996	996	996	996	996	997	997	997	997	998	998	998	998	998	998	998	998	999	999	999	999	1000	1000	996	997.5
22	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	999	999	999	999	999	998	998	998	997	997	997	996	996	996	1000	996	998.6
23	996	996	995	995	995	995	995	995	995	995	995	996	996	997	996	997	997	996	996	996	995	995	994	994	997	994	995.5
24	993	993	992	992	991	991	990	989	989	988	988	988	988	987	987	987	987	987	987	987	988	988	989	989	993	987	989.0
25	989	990	990	991	991	991	992	992	992	992	993	993	993	993	993	993	993	993	992	992	992	993	993	993	993	989	991.9
26	993	993	993	993	993	993	993	993	994	994	995	995	996	996	996	996	996	996	996	996	997	997	997	997	997	993	994.9
27	997	997	997	997	997	997	997	997	998	998	998	998	998	999	999	999	999	998	998	999	999	999	1000	1000	1000	997	998.2
28	1000	1000	1000	1001	1001	1001	1001	1002	1002	1002	1003	1003	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1006	1007	1007	1000	003.1
29	1007	1007	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1010	1010	1011	1011	1011	1010	1011	1010	1011	1011	1011	1012	1012	1007	009.7
30	1012	1012	1012	1012	1012	1011	1011	1011	1012	1012	1012	1012	1012	1012	1011	1011	1011	1010	1010	1009	1008	1009	1008	1008	1012	1008	010.8
31	1007	1006	1006	1006	1005	1003	1002	1000	1000	999	998	997	997	996	995	996	994	994	992	993	993	991	993	993	1007	991	998.2
Max.	**1019**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1018**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**	**1019**		
Min.	**989**	**990**	**990**	**991**	**991**	**991**	**990**	**989**	**989**	**988**	**988**	**988**	**988**	**987**	**987**	**987**	**987**	**987**	**987**	**987**	**988**	**988**	**989**	**989**		**987**	
Avg.	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1004**	**1003**	**1003**	**1003**	**1003**	**1004**	**1004**			**003.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	993	994	993	993	993	993	993	994	994	995	995	996	996	996	997	997	997	998	998	998	999	1000	1000	1000	1000	993	996.0
2	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1002	1002	1002	1001	1001	1000	998	998	996	996	996	996	996	1002	996	999.8
3	995	996	996	995	996	997	997	997	998	1000	1001	1002	1003	1004	1005	1006	1006	1007	1007	1008	1009	1010	1011	1011	1011	995	002.3
4	1011	1012	1012	1012	1013	1013	1013	1013	1014	1013	1014	1014	1015	1015	1015	1014	1014	1014	1014	1014	1014	1015	1015	1015	1015	1011	013.6
5	1015	1015	1015	1015	1015	1015	1015	1016	1016	1016	1017	1017	1017	1017	1017	1017	1017	1018	1018	1018	1018	1019	1019	1019	1019	1015	016.7
6	1019	1019	1019	1018	1018	1017	1016	1015	1015	1014	1014	1013	1013	1011	1010	1009	1007	1006	1005	1004	1002	1002	1001	1001	1019	1001	011.2
7	1000	1000	999	998	998	997	997	997	997	997	997	997	997	998	999	999	999	1000	1001	1002	1002	1004	1004	1005	1005	997	999.4
8	1006	1007	1007	1008	1008	1008	1008	1008	1008	1008	1008	1008	1008	1007	1006	1005	1003	1003	1001	1001	999	999	998	997	1008	997	005.1
9	998	997	996	996	995	995	994	994	993	994	994	994	994	992	993	994	994	993	993	993	993	992	992	992	998	992	993.9
10	992	991	991	991	991	991	990	990	990	990	990	990	991	991	991	991	991	991	992	992	993	993	994	994	994	990	991.3
11	995	996	997	997	998	998	999	999	999	1000	1000	1001	1001	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	1002	995	000.1
12	1001	1002	1001	1002	1001	1000	1000	1002	1002	1002	1002	1003	1003	1002	1002	1002	1001	1001	1001	1001	1000	1000	1000	1000	1003	1000	001.3
13	1000	1000	999	999	999	999	997	997	997	998	998	998	999	999	998	999	999	998	996	996	996	995	995	995	1000	995	997.8
14	995	994	994	994	994	995	995	995	996	996	996	997	997	997	998	998	999	999	999	1000	1001	1002	1003	1004	1004	994	997.6
15	1005	1005	1006	1006	1006	1006	1006	1006	1007	1006	1007	1008	1007	1008	1007	1008	1007	1008	1007	1007	1007	1007	1007	1006	1008	1005	006.6
16	1005	1005	1004	1004	1003	1003	1002	1002	1001	1000	1000	1000	999	998	998	997	996	996	996	996	997	997	997	997	1005	996	999.8
17	997	997	997	997	997	997	998	998	997	997	998	997	997	997	997	995	994	995	994	990	991	991	990	989	998	989	995.4
18	988	988	985	985	985	985	984	983	983	983	982	984	984	984	985	986	988	988	989	988	987	989	990	991	991	982	986.0
19	991	992	993	993	993	993	993	994	994	994	994	995	995	995	995	995	995	995	996	996	996	997	998	998	998	991	994.6
20	998	999	999	999	999	1000	1000	1000	1001	1001	1002	1002	1003	1004	1004	1004	1004	1004	1005	1005	1005	1006	1006	1006	1006	998	002.3
21	1007	1006	1007	1006	1007	1007	1007	1007	1008	1008	1009	1009	1009	1009	1010	1010	1010	1010	1010	1011	1011	1012	1013	1013	1013	1006	009.0
22	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1015	1013	013.9
23	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1011	1014	1011	013.1
24	1011	1011	1010	1010	1009	1008	1008	1008	1008	1008	1008	1007	1007	1007	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1011	1005	007.1
25	1005	1004	1004	1004	1004	1004	1004	1004	1004	1004	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	004.7
26	1005	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1004	1004	1004	1004	1004	1004	1004	1004	1003	1006	1003	004.7
27	1003	1003	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1006	1006	1003	004.4
28	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1007	1006	1006	1006	1006	1006	1006	1006	1006	1006	1007	1006	006.5
29	1007	1006	1006	1006	1006	1006	1006	1006	1006	1007	1007	1007	1007	1007	1007	1006	1005	1004	1004	1004	1004	1004	1003	1003	1007	1003	005.6
30	1002	1001	1001	1000	999	999	998	998	998	998	998	998	998	998	998	998	998	998	999	999	999	1000	1000	1000	1002	998	998.9
Max.	**1019**	**1019**	**1019**	**1018**	**1018**	**1017**	**1016**	**1016**	**1016**	**1016**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1018**	**1018**	**1018**	**1018**	**1019**	**1019**	**1019**	**1019**		
Min.	**988**	**988**	**985**	**985**	**985**	**985**	**984**	**983**	**983**	**983**	**982**	**984**	**984**	**984**	**985**	**986**	**988**	**988**	**989**	**988**	**987**	**989**	**990**	**989**		**982**	
Avg.	**1003**	**1003**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1002**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1003**	**1002**	**1002**	**1003**	**1003**	**1003**			**002.6**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1000	1001	1001	1001	1001	1001	1002	1002	1002	1003	1003	1003	1002	1002	1002	1002	1001	1001	1000	1000	999	999	999	999	1003	999	001.0
2	998	998	997	997	996	995	995	994	993	993	992	992	991	990	989	988	987	986	986	985	985	984	985	984	998	984	990.8
3	984	984	985	984	984	984	983	984	985	985	986	986	987	987	988	988	989	989	990	991	991	992	992	992	992	983	987.2
4	993	993	993	993	993	993	993	993	993	993	993	993	993	992	992	992	991	991	991	991	991	991	991	991	993	991	992.2
5	991	992	992	992	992	991	992	992	992	992	992	993	993	994	994	994	994	994	994	995	995	995	996	996	996	991	993.1
6	996	996	996	996	997	996	996	997	997	997	997	997	997	997	997	997	997	997	997	996	996	996	996	996	997	996	996.7
7	997	996	996	996	996	996	996	996	996	997	998	999	999	1000	1000	1001	1001	1002	1003	1004	1004	1005	1006	1006	1006	996	999.7
8	1008	1009	1009	1010	1011	1011	1012	1012	1013	1013	1014	1015	1015	1015	1015	1015	1014	1014	1014	1014	1014	1014	1014	1013	1015	1008	012.8
9	1013	1012	1012	1011	1010	1009	1008	1007	1006	1005	1003	1002	1000	998	995	993	993	991	989	987	986	985	984	983	1013	983	999.2
10	982	982	981	981	980	981	982	983	984	985	987	987	988	988	989	989	989	989	989	989	990	990	990	990	990	980	986.1
11	990	989	989	988	988	987	986	986	986	987	985	986	988	988	989	989	989	990	990	991	992	992	993	994	994	985	988.9
12	995	995	995	996	996	996	998	998	999	1001	1001	1001	1002	1003	1004	1004	1005	1005	1005	1006	1006	1008	1007	1009	1009	995	001.4
13	1008	1008	1007	1007	1006	1006	1006	1005	1005	1004	1005	1004	1003	1002	1001	1000	1000	999	999	999	998	998	998	999	1008	998	002.8
14	999	999	999	999	999	998	998	998	998	998	998	998	998	997	997	997	996	996	995	995	995	994	994	994	999	994	997.1
15	994	994	994	994	994	994	995	995	995	995	995	996	996	996	996	996	996	996	996	997	997	997	997	997	997	994	995.4
16	998	998	998	998	998	997	998	998	998	999	999	999	1000	1000	1000	1000	1000	1000	1000	1000	1000	1001	1001	1001	1001	997	999.1
17	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1000	1000	1000	999	999	999	999	999	999	1001	999	000.4
18	999	999	998	998	998	997	997	996	996	996	996	996	995	994	992	993	992	991	991	990	990	989	989	988	999	988	994.1
19	988	988	987	987	987	986	986	986	986	987	987	987	988	988	989	989	989	989	990	991	992	992	993	993	993	986	988.6
20	994	994	995	995	995	995	995	996	997	997	998	998	999	999	999	999	999	1000	1000	1001	1001	1001	1001	1001	1001	994	997.8
21	1001	1002	1002	1002	1001	1002	1002	1002	1002	1002	1002	1001	1001	1001	1000	1000	999	998	998	996	995	994	993	992	1002	992	999.5
22	991	989	990	990	988	988	986	987	987	987	987	988	988	988	987	987	987	987	987	986	986	986	985	985	991	985	987.3
23	984	984	984	983	983	983	983	983	983	983	984	984	984	984	984	984	985	986	986	987	988	988	990	990	990	983	984.8
24	991	991	993	993	993	994	996	997	998	1000	1002	1004	1005	1008	1009	1010	1011	1012	1014	1014	1015	1016	1016	1017	1017	991	004.2
25	1017	1018	1017	1017	1017	1017	1017	1017	1017	1018	1017	1017	1017	1017	1016	1015	1014	1014	1013	1012	1012	1011	1010	1010	1018	1010	015.4
26	1009	1008	1007	1006	1006	1005	1005	1005	1005	1005	1006	1006	1005	1005	1005	1004	1003	1004	1005	1005	1006	1006	1007	1007	1009	1003	005.6
27	1007	1007	1008	1009	1009	1010	1010	1011	1012	1012	1013	1014	1013	1014	1014	1014	1014	1014	1014	1014	1014	1015	1014	1014	1015	1007	012.1
28	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	999	999	998	997	997	997	997	997	996	996	1014	996	003.2
29	997	997	997	997	997	998	998	999	999	1000	1001	1002	1002	1003	1003	1003	1003	1004	1004	1005	1006	1006	1006	1007	1007	997	001.4
30	1007	1007	1007	1008	1008	1008	1009	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1010	1010	1011	1011	1010	1010	1010	1011	1007	009.5
31	1010	1009	1009	1008	1008	1007	1007	1006	1005	1005	1005	1004	1004	1004	1003	1003	1002	1002	1002	1002	1002	1002	1002	1002	1010	1002	004.6
Max.	**1017**	**1018**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1017**	**1018**	**1017**	**1017**	**1017**	**1017**	**1016**	**1015**	**1014**	**1014**	**1014**	**1014**	**1015**	**1016**	**1016**	**1017**	**1018**		
Min.	**982**	**982**	**981**	**981**	**980**	**981**	**982**	**983**	**983**	**983**	**984**	**984**	**984**	**984**	**984**	**984**	**985**	**986**	**986**	**985**	**985**	**984**	**984**	**983**		**980**	
Avg.	**999**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**	**999**	**999**	**999**	**999**	**998**	**998**	**998**	**998**	**998**	**998**	**999**	**999**	**999**			**998.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1002	1002	1002	1002	1002	1002	1002	1001	1001	1001	1001	1001	1001	1001	1000	1000	999	998	998	997	997	997	996	995	1002	995	999.9
2	995	994	993	992	992	991	991	990	990	991	991	990	990	989	990	990	990	990	990	989	989	990	989	991	995	989	990.7
3	990	991	991	991	992	993	993	993	993	994	995	995	996	997	996	998	997	998	998	999	999	999	999	1000	1000	990	995.3
4	1000	1000	1001	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1002	1003	1002	1002	1002	1002	1002	1002	1002	1001	1001	1003	1000	001.6
5	1001	1001	1001	1001	1000	1000	1000	1000	999	999	999	1000	999	999	999	998	997	998	998	998	998	998	998	998	1001	997	999.2
6	998	998	997	998	997	997	996	996	996	996	995	995	995	995	994	993	993	993	992	992	991	991	991	991	998	991	994.6
7	991	992	992	993	993	994	995	996	997	998	999	1000	1002	1002	1003	1003	1004	1004	1005	1005	1006	1007	1007	1008	1008	991	999.8
8	1008	1008	1009	1008	1008	1008	1008	1008	1008	1008	1007	1007	1006	1005	1004	1004	1002	1002	1001	1000	999	998	997	995	1009	995	004.5
9	995	992	992	991	991	989	988	987	987	986	985	985	985	984	983	983	983	983	984	984	984	984	983	983	995	983	986.3
10	982	981	980	979	977	975	974	972	972	972	972	972	973	972	973	975	975	975	975	976	977	977	977	978	982	972	975.5
11	978	978	977	976	976	976	976	975	975	975	975	975	975	974	974	974	974	975	975	975	976	977	977	978	978	974	975.7
12	979	980	981	982	983	983	983	984	985	986	986	988	989	990	991	991	993	993	994	995	996	997	997	998	998	979	988.4
13	998	999	1000	1000	1001	1001	1001	1001	1001	1002	1002	1002	1002	1003	1003	1003	1003	1004	1004	1004	1005	1005	1005	1006	1006	998	002.3
14	1006	1006	1006	1006	1006	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1005	1006	1006	1006	1007	1007	1008	1008	1008	1005	005.8
15	1009	1009	1010	1010	1011	1011	1012	1012	1013	1013	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1009	012.8
16	1013	1013	1012	1012	1012	1012	1013	1014	1014	1015	1015	1015	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1016	1012	014.5
17	1016	1016	1016	1015	1015	1015	1015	1015	1014	1014	1015	1014	1014	1014	1014	1013	1013	1013	1013	1013	1013	1014	1014	1015	1016	1013	014.2
18	1015	1015	1016	1016	1016	1016	1017	1017	1018	1018	1019	1019	1019	1019	1020	1020	1019	1020	1020	1020	1020	1020	1020	1020	1020	1015	018.3
19	1020	1020	1020	1019	1019	1018	1017	1016	1015	1015	1015	1014	1013	1013	1012	1012	1011	1011	1010	1010	1010	1009	1008	1008	1020	1008	013.9
20	1007	1006	1006	1005	1005	1004	1004	1003	1002	1002	1001	1002	1002	1000	999	999	999	998	997	997	998	997	996	995	1007	995	001.0
21	995	995	994	994	994	993	992	993	992	992	991	990	991	990	989	988	987	987	986	986	985	985	984	984	995	984	989.8
22	984	984	984	984	984	985	985	985	986	987	988	988	989	989	989	990	990	991	991	992	992	992	993	993	993	984	988.1
23	993	993	993	993	993	993	992	991	990	990	990	989	988	986	985	984	983	982	981	980	979	977	976	976	993	976	986.6
24	975	974	973	972	971	970	970	971	971	972	972	972	973	973	974	974	975	975	975	976	977	977	978	978	978	970	973.7
25	980	981	982	982	982	982	983	983	983	984	984	984	984	985	985	984	985	986	986	985	988	990	990	990	990	980	984.5
26	991	990	991	991	992	993	994	994	995	997	998	999	999	1000	1000	999	1000	999	998	997	997	996	996	995	1000	990	995.9
27	995	994	993	992	991	990	988	988	987	986	985	984	984	982	981	980	979	978	978	978	978	977	976	976	995	976	984.2
28	976	975	975	975	975	975	975	976	976	977	977	978	978	979	979	979	980	980	980	981	982	983	984	984	984	975	978.3
29	985	986	987	988	988	988	989	989	990	992	993	992	994	994	994	995	996	996	998	999	1000	1000	1001	1003	1003	985	993.2
30	1003	1002	1003	1004	1005	1003	1004	1006	1007	1007	1007	1009	1010	1010	1011	1012	1013	1014	1014	1016	1016	1017	1018	1019	1019	1002	009.6
Max.	**1020**	**1020**	**1020**	**1019**	**1019**	**1018**	**1017**	**1017**	**1018**	**1018**	**1019**	**1019**	**1019**	**1019**	**1020**	**1020**	**1019**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**	**1020**		
Min.	**975**	**974**	**973**	**972**	**971**	**970**	**970**	**971**	**971**	**972**	**972**	**972**	**973**	**972**	**973**	**974**	**974**	**975**	**975**	**975**	**976**	**977**	**976**	**976**		**970**	
Avg.	**996**	**996**	**996**	**996**	**996**	**995**	**995**	**995**	**995**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**996**	**997**			**995.9**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Barometric Pressure (mbar)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1019	1020	1020	1021	1021	1021	1021	1022	1022	1023	1023	1024	1024	1025	1025	1024	1024	1024	1024	1024	1024	1024	1024	1024	1025	1019	022.9
2	1024	1024	1024	1024	1022	1021	1021	1020	1019	1020	1020	1019	1019	1018	1018	1018	1017	1017	1017	1017	1017	1017	1017	1017	1024	1017	019.4
3	1017	1017	1016	1015	1015	1014	1012	1012	1010	1009	1007	1007	1005	1003	1002	1001	1000	1000	997	997	996	995	995	996	1017	995	005.8
4	996	996	995	996	996	996	996	996	996	996	997	997	997	997	996	996	996	996	997	997	997	998	998	998	998	995	996.5
5	998	999	998	998	998	998	997	997	997	997	997	997	996	996	995	995	994	994	994	994	994	995	995	995	999	994	996.1
6	995	996	996	996	996	996	996	996	997	997	997	998	998	999	999	999	999	1000	1000	1000	1001	1001	1002	1002	1002	995	998.2
7	1002	1003	1003	1003	1003	1004	1004	1004	1004	1005	1006	1006	1006	1006	1007	1007	1006	1006	1006	1005	1005	1005	1004	1003	1007	1002	004.6
8	1002	1000	999	997	995	993	992	989	987	986	985	982	980	978	975	974	972	971	970	969	968	967	965	965	1002	965	981.7
9	965	964	964	964	964	964	965	965	966	967	967	968	969	970	971	972	973	975	976	977	979	981	982	984	984	964	970.5
10	985	987	988	990	991	993	994	995	997	999	1000	1003	1004	1006	1007	1007	1008	1009	1010	1012	1012	1013	1014	1015	1015	985	001.7
11	1016	1018	1018	1019	1020	1021	1021	1021	1022	1023	1023	1025	1025	1026	1026	1026	1027	1028	1028	1029	1030	1030	1031	1032	1032	1016	024.2
12	1033	1033	1034	1034	1034	1034	1034	1035	1035	1035	1035	1035	1035	1034	1034	1034	1034	1033	1034	1034	1033	1033	1034	1034	1035	1033	034.0
13	1036	1036	1036	1036	1037	1037	1037	1037	1037	1037	1038	1038	1038	1038	1038	1037	1038	1038	1037	1037	1037	1037	1036	1036	1038	1036	037.0
14	1036	1036	1036	1036	1036	1035	1034	1034	1035	1034	1035	1035	1035	1034	1034	1034	1033	1033	1033	1033	1033	1032	1033	1033	1036	1032	034.4
15	1033	1033	1034	1033	1033	1033	1032	1032	1032	1032	1032	1032	1032	1032	1032	1031	1031	1032	1031	1031	1031	1031	1031	1031	1034	1031	032.0
16	1031	1031	1030	1031	1030	1030	1030	1029	1029	1028	1028	1028	1028	1027	1026	1025	1025	1024	1024	1024	1023	1024	1025	1024	1031	1023	027.2
17	1024	1024	1024	1024	1024	1024	1024	1024	1023	1023	1023	1023	1023	1023	1023	1022	1022	1022	1022	1022	1022	1021	1021	1021	1024	1021	022.8
18	1021	1021	1020	1020	1019	1019	1018	1019	1018	1018	1018	1017	1017	1016	1016	1015	1015	1014	1013	1014	1013	1012	1012	1012	1021	1012	016.5
19	1012	1013	1012	1012	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1009	1009	1009	1009	1009	1009	1009	1009	1009	1013	1009	010.0
20	1009	1009	1010	1010	1010	1011	1011	1011	1011	1011	1012	1012	1013	1013	1013	1013	1013	1013	1014	1014	1014	1014	1014	1014	1014	1009	012.1
21	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1014	1013	1014	1013	1013	1013	1012	1012	1012	1012	1012	1012	1012	1012	1014	1012	013.1
22	1011	1011	1011	1010	1009	1008	1008	1007	1006	1006	1006	1006	1006	1005	1005	1004	1004	1004	1003	1002	1001	1000	1000	998	1011	998	005.5
23	996	994	992	990	988	987	987	987	988	989	989	990	989	991	992	992	993	993	995	995	996	997	998	999	999	987	991.9
24	999	1000	1001	1002	1003	1004	1005	1004	1005	1006	1007	1008	1009	1009	1008	1010	1010	1010	1009	1007	1007	1007	1006	1006	1010	999	005.9
25	1005	1003	1002	1000	999	997	995	993	992	991	990	989	988	987	987	987	986	986	987	986	986	986	985	986	1005	985	991.5
26	986	986	987	987	988	987	987	988	988	987	988	987	987	987	987	987	987	983	986	987	985	984	985	985	988	983	986.5
27	986	986	986	985	985	985	986	986	987	987	988	989	990	991	990	991	991	993	994	994	995	996	997	998	998	985	989.9
28	998	998	999	999	999	999	999	998	999	999	1000	1001	1001	1000	1001	1000	1001	1001	1001	1001	1001	1002	1002	1003	1003	998	000.0
29	1003	1003	1002	1003	1003	1003	1003	1003	1003	1003	1004	1004	1005	1005	1005	1005	1005	1006	1006	1006	1007	1008	1008	1009	1009	1002	004.7
30	1009	1009	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1011	1011	1011	1010	1010	1010	1010	1010	1010	1010	1010	1010	1011	1009	010.1
31	1010	1010	1009	1009	1009	1009	1008	1009	1009	1010	1010	1011	1010	1011	1011	1011	1011	1011	1012	1011	1011	1011	1011	1012	1012	1008	010.3
Max.	**1036**	**1036**	**1036**	**1036**	**1037**	**1037**	**1037**	**1037**	**1037**	**1037**	**1038**	**1038**	**1038**	**1038**	**1038**	**1037**	**1038**	**1038**	**1037**	**1037**	**1037**	**1037**	**1036**	**1036**	**1038**		
Min.	**965**	**964**	**964**	**964**	**964**	**964**	**965**	**965**	**966**	**967**	**967**	**968**	**969**	**970**	**971**	**972**	**972**	**971**	**970**	**969**	**968**	**967**	**965**	**965**		**964**	
Avg.	**1009**	**1009**	**1009**	**1009**	**1009**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1009**	**1009**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**	**1008**			**008.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.4	5.5	4.6	5.3	4.3	6.3	5.2	4.9	3.0	5.1	5.4	3.9	3.6	4.8	10.8	10.7	11.5	10.9	10.7	13.1	14.0	7.5	12.9	14.2	14.2	3.0	7.7
2	15.1	14.0	12.0	14.7	15.5	17.3	16.9	16.4	18.3	18.9	19.3	18.0	18.6	16.6	16.3	16.3	15.7	14.9	13.3	13.2	12.2	9.9	9.1	10.4	19.3	9.1	15.1
3	9.3	5.1	7.3	7.6	5.0	6.3	3.4	5.6	9.2	7.0	10.9	10.3	12.4	13.8	14.5	14.3	14.0	14.1	13.6	14.5	15.8	16.7	16.4	17.5	17.5	3.4	11.0
4	17.4	17.3	17.3	17.1	17.4	17.2	17.2	17.5	17.7	17.8	17.9	18.1	18.4	18.5	18.0	17.8	18.6	18.1	17.7	16.3	16.5	16.7	16.7	16.6	18.6	16.3	17.5
5	18.3	17.6	17.8	19.5	19.7	20.3	20.8	21.3	20.7	22.1	23.9	25.9	25.4	25.6	25.8	27.0	26.7	23.7	24.8	25.1	24.9	25.3	24.3	23.3	27.0	17.6	22.9
6	21.9	19.7	18.7	20.4	21.0	20.7	21.2	21.6	21.7	21.6	23.7	22.2	20.9	20.0	19.0	19.5	18.9	18.6	19.8	19.1	19.0	19.4	18.4	18.5	23.7	18.4	20.2
7	17.9	17.3	16.9	17.0	17.7	18.0	17.9	18.1	18.4	20.2	19.7	20.3	20.3	22.3	21.8	20.7	20.1	20.8	21.4	21.4	20.1	20.7	20.2	19.6	22.3	16.9	19.5
8	20.3	19.6	19.2	20.4	21.1	22.1	22.6	23.7	23.9	23.6	24.4	24.7	24.8	25.6	26.5	25.8	25.3	25.3	24.9	26.6	27.1	27.4	27.2	27.8	27.8	19.2	24.2
9	27.5	26.7	26.3	26.9	27.6	27.3	26.1	26.1	28.2	27.4	26.2	24.8	24.8	24.9	24.1	23.6	21.2	21.0	20.8	21.2	21.2	21.2	20.3	19.4	28.2	19.4	24.4
10	19.8	20.5	19.5	19.0	19.8	20.7	19.9	20.6	19.9	21.6	22.0	20.2	20.1	20.6	20.5	22.1	21.7	21.7	21.7	22.0	22.0	20.5	20.1	19.7	22.1	19.0	20.7
11	19.3	19.4	18.7	19.0	19.3	20.8	19.4	20.0	20.9	21.0	20.3	20.7	21.1	20.1	19.9	20.0	20.1	20.8	21.2	20.9	22.0	21.6	21.5	20.8	22.0	18.7	20.4
12	20.8	20.4	19.8	19.0	18.9	19.5	19.8	20.7	20.0	18.3	19.0	20.8	21.1	21.3	23.5	23.8	23.9	23.8	23.7	24.3	23.5	23.4	22.7	22.8	24.3	18.3	21.5
13	22.2	22.9	23.2	23.1	23.1	20.8	19.5	19.3	19.4	19.6	19.8	20.3	21.0	20.3	19.8	20.2	21.9	18.8	17.5	18.1	20.0	21.5	22.9	22.8	23.2	17.5	20.7
14	21.3	16.2	13.0	10.5	9.2	7.0	4.4	3.4	2.0	2.0	1.9	3.1	3.3	3.3	1.8	2.8	2.6	2.2	2.2	5.4	6.6	6.0	7.7	8.2	21.3	1.8	6.1
15	6.8	8.4	7.0	7.6	6.5	6.4	4.2	4.4	5.6	3.5	4.2	1.6	1.7	3.8	3.6	3.4	3.8	1.9	1.6	3.1	2.3	2.5	1.9	2.8	8.4	1.6	4.1
16	1.5	3.6	2.1	1.5	2.0	4.1	5.9	7.5	9.7	11.8	11.4	8.6	7.0	7.3	6.0	7.1	4.1	5.3	5.6	1.9	1.8	2.3	2.1	2.7	11.8	1.5	5.1
17	1.2	0.8	1.9	3.7	6.8	7.1	10.2	7.6	6.8	7.1	9.9	8.9	7.9	8.6	8.6	5.8	6.4	5.3	3.9	2.4	2.1	2.5	1.7	1.5	10.2	0.8	5.4
18	1.4	1.5	2.0	2.2	0.9	1.4	1.0	1.5	0.8	1.0	1.6	1.4	0.9	0.9	2.1	0.8	0.8	1.9	1.7	2.0	2.2	6.0	4.7	6.0	6.0	0.8	1.9
19	4.4	6.0	6.1	8.1	8.5	8.7	9.3	8.0	7.7	10.8	13.5	12.5	14.1	20.4	13.7	13.5	10.5	10.2	9.6	11.1	6.6	8.1	6.2	8.0	20.4	4.4	9.8
20	6.8	5.6	5.4	6.7	7.3	9.1	9.2	9.0	9.8	10.1	10.5	9.5	9.4	8.9	9.2	8.6	6.9	3.3	2.3	2.2	2.5	3.5	1.7	1.9	10.5	1.7	6.6
21	3.3	3.2	1.4	3.8	3.2	4.0	5.2	4.3	2.9	9.7	8.6	6.9	4.8	6.1	6.5	6.4	7.6	7.6	10.0	9.8	9.1	0.3	0.2	0.2	10.0	0.2	5.2
22	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
23	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
24	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
25	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
26	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
27	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
29	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
30	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
31	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Max.	**27.5**	**26.7**	**26.3**	**26.9**	**27.6**	**27.3**	**26.1**	**26.1**	**28.2**	**27.4**	**26.2**	**25.9**	**25.4**	**25.6**	**26.5**	**27.0**	**26.7**	**25.3**	**24.9**	**26.6**	**27.1**	**27.4**	**27.2**	**27.8**	**28.2**		
Min.	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**		**0.2**	
Avg.	**9.2**	**8.8**	**8.5**	**8.9**	**8.9**	**9.3**	**9.1**	**9.1**	**9.3**	**9.8**	**10.2**	**9.8**	**9.8**	**10.2**	**10.1**	**10.1**	**9.8**	**9.4**	**9.4**	**9.5**	**9.5**	**9.2**	**9.1**	**9.2**			**9.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.8	3.5	4.8	2.0	5.8	5.2	4.2	4.0	3.4	5.8	0.2	1.6
8	2.8	3.6	2.7	1.3	1.7	1.7	2.2	3.1	3.7	3.8	4.2	7.6	6.6	4.9	4.8	6.3	6.4	5.7	6.4	6.1	6.1	5.6	6.1	4.6	7.6	1.3	4.5
9	6.2	6.1	9.1	10.0	9.2	9.3	11.7	13.5	11.3	10.2	7.8	5.0	3.4	3.4	2.3	2.3	2.6	3.6	3.4	3.8	4.6	4.8	5.1	5.8	13.5	2.3	6.4
10	3.7	2.8	2.6	2.8	3.2	3.4	2.4	2.0	2.1	1.7	2.9	2.9	2.4	2.4	2.1	1.3	1.1	2.1	2.9	2.3	2.7	3.1	2.9	2.0	3.7	1.1	2.5
11	2.1	2.0	2.1	2.0	1.1	1.7	2.3	2.3	0.9	2.0	1.4	0.9	1.6	2.9	2.6	2.9	4.1	3.4	5.5	8.2	8.5	10.2	14.1	15.4	15.4	0.9	4.2
12	18.1	22.2	22.4	23.7	22.6	22.4	21.2	18.9	20.0	22.9	20.8	21.0	23.0	23.2	23.8	21.2	16.2	11.9	10.0	6.5	6.6	2.6	2.8	2.1	23.8	2.1	16.9
13	9.1	9.5	13.0	10.8	6.7	7.2	7.7	8.4	8.1	6.6	5.6	6.4	5.3	5.8	5.5	5.5	4.9	4.8	5.7	5.4	5.1	5.0	5.3	5.8	13.0	4.8	6.8
14	7.1	7.1	6.3	6.4	5.8	5.0	5.6	5.7	5.0	3.7	2.1	17.0	22.6	22.4	22.4	22.0	22.6	21.8	21.0	23.1	26.0	25.7	24.6	25.3	26.0	2.1	14.9
15	29.3	28.2	27.6	28.1	25.5	22.4	17.5	17.2	18.4	15.3	14.8	16.0	15.7	15.5	13.1	14.0	11.4	14.2	11.9	5.9	2.8	2.4	5.0	3.6	29.3	2.4	15.6
16	4.2	4.2	4.3	4.8	6.3	8.2	8.0	8.1	6.8	7.2	8.2	9.4	7.0	6.9	6.5	6.9	4.3	4.8	5.7	5.0	2.6	2.2	3.7	6.7	9.4	2.2	5.9
17	7.0	8.5	5.5	2.0	9.3	8.0	5.2	5.9	7.6	7.4	8.1	9.9	11.4	10.7	10.0	7.2	8.2	9.3	10.6	12.4	13.7	11.7	10.8	15.0	15.0	2.0	9.0
18	13.2	16.9	18.5	15.1	16.0	16.7	19.3	20.9	18.6	17.0	11.6	13.0	12.6	11.5	9.7	8.5	10.6	9.9	7.0	8.3	6.5	6.8	3.3	2.7	20.9	2.7	12.3
19	3.7	4.2	5.4	4.0	6.4	7.6	5.3	7.5	9.5	9.4	9.3	10.3	11.0	10.4	10.0	7.7	9.4	10.8	10.1	7.1	7.6	7.2	7.3	8.2	11.0	3.7	7.9
20	9.0	11.1	14.9	15.3	16.4	16.3	14.2	15.5	11.1	6.7	4.8	7.7	6.1	6.9	4.5	6.5	10.3	8.8	9.4	7.7	9.3	7.5	6.6	3.7	16.4	3.7	9.6
21	5.8	6.8	5.6	4.7	5.5	5.3	6.1	5.4	6.9	9.2	10.3	9.5	7.0	5.8	4.9	5.2	4.8	4.2	4.7	4.9	4.9	4.5	4.9	4.5	10.3	4.2	5.9
22	5.8	5.3	5.5	5.5	6.0	5.1	4.5	3.8	4.3	4.3	5.5	6.7	9.3	10.9	11.4	12.0	10.8	8.9	8.9	7.0	5.2	6.4	6.4	5.7	12.0	3.8	6.9
23	2.8	2.2	2.2	1.2	1.5	2.5	2.8	1.9	1.7	1.5	1.7	3.0	4.5	3.4	3.0	2.6	3.7	4.6	1.3	2.3	1.9	2.5	5.8	3.3	5.8	1.2	2.7
24	2.7	2.5	6.8	5.8	5.2	8.5	8.7	9.5	12.9	10.3	11.1	10.8	10.9	13.3	13.5	14.2	14.8	16.0	16.7	16.6	16.5	15.3	15.8	14.7	16.7	2.5	11.4
25	14.9	15.9	16.2	15.9	17.0	15.5	14.0	13.8	13.7	11.3	9.7	8.7	7.7	5.7	5.2	5.2	4.7	4.4	5.0	4.1	5.0	5.1	4.2	3.7	17.0	3.7	9.4
26	4.0	4.4	4.7	2.9	4.4	3.7	5.5	4.7	4.6	3.6	2.8	2.1	2.0	1.6	2.0	2.1	3.4	3.3	4.9	6.3	6.4	4.7	3.0	1.9	6.4	1.6	3.7
27	3.5	2.9	2.8	2.2	4.9	5.4	2.8	3.7	2.1	2.4	4.2	1.8	2.5	2.2	2.1	2.1	4.3	3.8	2.5	2.7	3.4	3.6	4.3	4.8	5.4	1.8	3.2
28	3.2	3.6	4.5	5.6	4.9	4.9	5.9	4.7	5.4	4.8	2.6	3.8	4.8	4.5	4.4	2.8	1.1	1.4	2.8	5.8	6.9	7.3	8.4	8.9	8.9	1.1	4.7
29	8.2	6.3	6.8	5.3	5.0	3.2	6.1	4.8	9.2	9.9	8.6	9.8	7.6	4.9	4.4	6.0	5.7	5.7	7.0	8.9	9.1	11.3	12.0	12.5	12.5	3.2	7.4
Max.	**29.3**	**28.2**	**27.6**	**28.1**	**25.5**	**22.4**	**21.2**	**20.9**	**20.0**	**22.9**	**20.8**	**21.0**	**23.0**	**23.2**	**23.8**	**22.0**	**22.6**	**21.8**	**21.0**	**23.1**	**26.0**	**25.7**	**24.6**	**25.3**	**29.3**		
Min.	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**		**0.2**	
Avg.	**5.8**	**6.1**	**6.6**	**6.1**	**6.4**	**6.4**	**6.2**	**6.3**	**6.4**	**6.0**	**5.5**	**6.4**	**6.4**	**6.2**	**5.9**	**5.8**	**5.9**	**5.8**	**5.8**	**5.8**	**5.8**	**5.5**	**5.8**	**5.7**			**6.0**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	11.4	10.5	8.6	7.0	9.2	9.5	8.2	5.7	4.0	3.0	2.5	2.8	3.3	2.8	2.5	3.1	3.1	3.6	5.5	6.0	5.0	6.2	6.3	6.0	11.4	2.5	5.7
2	6.1	5.6	6.1	7.4	6.0	5.6	4.4	4.6	6.0	6.8	5.4	2.3	1.6	3.7	3.8	4.2	3.2	1.5	1.2	1.5	1.6	1.3	1.6	4.4	7.4	1.2	4.0
3	6.4	3.8	2.9	3.5	9.7	13.3	7.8	6.3	8.9	10.1	10.6	12.2	12.2	11.7	9.6	8.7	7.3	5.7	5.1	6.4	6.9	9.9	11.1	11.3	13.3	2.9	8.4
4	13.4	14.0	14.0	8.9	9.7	10.3	15.5	14.8	16.6	16.5	15.6	14.2	10.0	9.0	9.2	8.3	8.6	7.9	7.4	7.8	9.0	7.6	5.8	5.4	16.6	5.4	10.8
5	7.3	8.3	7.7	8.3	7.7	8.7	10.4	9.9	9.7	9.0	8.2	6.8	7.3	7.6	5.9	6.2	9.0	9.2	13.8	13.1	17.4	15.8	14.4	14.4	17.4	5.9	9.8
6	11.0	9.5	10.4	11.2	10.3	8.5	6.6	5.6	5.9	6.1	7.0	5.4	4.7	5.8	7.1	5.8	3.3	4.1	4.4	4.2	6.1	3.6	4.7	4.1	11.2	3.3	6.5
7	3.0	3.0	2.8	2.8	4.0	3.2	3.5	4.7	6.1	4.4	3.6	4.2	4.5	6.2	6.5	6.2	6.3	6.2	5.9	6.4	7.1	7.4	10.4	13.4	13.4	2.8	5.5
8	10.8	8.2	7.7	8.0	7.9	2.4	1.3	1.1	4.0	5.1	5.2	2.9	4.0	4.3	4.5	6.9	7.3	5.5	7.1	7.2	5.8	5.7	6.5	7.2	10.8	1.1	5.7
9	5.9	6.1	5.5	5.2	5.7	4.6	5.0	4.7	4.7	4.7	4.8	4.6	4.3	4.0	3.1	3.2	1.7	3.9	6.0	5.8	8.4	7.0	4.3	3.3	8.4	1.7	4.8
10	0.8	1.7	2.6	1.9	2.6	6.4	9.6	8.2	4.7	6.0	7.4	4.8	8.0	8.9	9.3	8.2	9.4	8.7	7.9	6.8	8.9	10.1	9.9	10.6	10.6	0.8	6.8
11	11.3	10.9	12.0	11.8	12.1	12.4	13.0	12.7	12.6	12.3	12.6	13.2	12.6	11.9	11.4	11.2	11.1	10.5	10.6	9.9	9.1	10.8	11.3	11.0	13.2	9.1	11.6
12	11.7	12.2	12.6	12.6	12.7	13.1	14.8	14.7	14.4	13.6	13.8	13.5	12.1	11.0	10.2	10.4	10.6	11.5	12.7	12.5	12.1	12.5	13.1	13.7	14.8	10.2	12.6
13	14.2	14.0	13.5	13.0	13.1	12.0	12.6	12.8	12.6	12.9	13.2	12.6	12.9	12.7	14.6	14.6	14.4	14.3	13.7	16.1	16.6	15.6	16.2	17.4	17.4	12.0	14.0
14	18.3	18.5	18.1	17.6	15.6	12.2	8.6	6.3	3.8	2.3	2.2	3.0	2.6	2.8	1.4	0.9	1.9	4.1	4.0	3.4	3.4	3.1	3.6	4.0	18.5	0.9	6.7
15	4.6	4.2	3.3	3.9	4.5	5.0	4.5	5.5	6.6	6.2	5.2	4.9	4.0	3.7	3.7	4.6	3.8	3.9	3.9	4.2	3.6	4.4	4.8	4.7	6.6	3.3	4.5
16	3.9	3.6	3.3	3.9	3.3	3.4	2.2	2.7	4.1	2.5	2.5	2.2	1.6	1.6	2.9	3.2	3.1	2.8	2.3	2.1	1.5	1.6	1.9	3.0	4.1	1.5	2.7
17	2.2	1.5	1.5	3.1	3.8	3.6	3.8	3.5	4.3	5.0	4.6	3.2	4.1	4.1	4.2	3.3	4.6	5.2	8.6	14.4	12.4	13.4	13.6	12.7	14.4	1.5	5.9
18	12.8	13.2	13.2	13.5	14.1	15.0	15.1	16.1	16.9	16.8	17.8	17.3	15.8	15.2	16.6	16.2	17.1	16.7	16.4	17.4	17.7	16.6	16.5	16.9	17.8	12.8	15.9
19	16.2	16.8	17.1	16.8	16.0	17.0	18.0	18.6	18.7	18.5	18.5	18.2	18.4	18.4	19.2	18.8	19.8	20.7	20.0	19.2	19.1	18.9	17.6	15.8	20.7	15.8	18.2
20	16.2	16.3	16.8	16.6	16.2	16.4	17.9	18.7	18.8	18.2	17.0	14.9	13.9	13.8	15.0	14.7	15.4	15.5	14.8	13.8	14.9	16.5	16.5	15.9	18.8	13.8	16.0
21	15.6	15.1	16.4	15.9	16.8	15.4	14.1	8.3	6.9	5.3	6.5	9.7	8.5	5.7	3.8	3.6	3.8	5.1	5.1	4.4	4.8	5.8	5.0	4.6	16.8	3.6	8.6
22	3.5	2.3	2.3	2.8	4.0	3.5	4.1	4.5	5.1	6.0	6.0	7.1	7.5	9.7	10.9	11.6	12.2	12.6	13.2	14.3	13.8	13.5	12.7	12.3	14.3	2.3	8.1
23	13.7	13.1	14.7	15.5	15.2	15.9	17.9	18.8	19.8	19.3	19.3	18.4	18.6	19.6	18.7	17.7	18.4	19.3	18.2	18.0	18.2	18.7	17.3	17.2	19.8	13.1	17.6
24	17.7	16.9	18.0	17.0	16.7	16.4	15.3	15.0	14.2	14.7	15.5	15.7	15.5	14.3	13.2	13.6	15.0	15.5	16.2	17.1	15.6	14.0	14.6	11.7	18.0	11.7	15.4
25	2.2	2.2	2.6	2.3	2.5	3.0	4.1	6.3	4.0	5.5	4.7	3.2	6.0	6.2	8.1	10.9	11.9	13.2	13.0	13.9	14.0	14.6	14.7	13.7	14.7	2.2	7.6
26	15.9	16.4	16.7	16.0	15.6	16.6	15.5	13.6	14.5	13.7	14.6	13.9	15.9	16.2	16.2	16.3	16.6	15.7	15.8	15.9	16.5	16.1	16.4	16.2	16.7	13.6	15.7
27	16.5	17.3	15.4	15.0	17.3	16.3	15.6	15.3	14.1	13.3	14.4	14.6	15.4	14.4	14.4	14.0	13.0	13.5	14.0	13.5	12.7	13.3	13.0	12.7	17.3	12.7	14.5
28	14.0	14.5	15.3	15.6	16.4	15.4	15.6	15.4	15.9	13.9	15.1	13.8	13.6	12.4	10.1	8.2	7.2	5.8	4.0	2.6	1.7	1.5	0.7	1.4	16.4	0.7	10.4
29	3.1	6.3	2.8	3.2	5.1	5.2	4.7	4.4	4.2	5.3	7.6	6.5	7.6	8.6	7.6	7.3	7.4	7.3	9.7	11.3	14.6	16.9	14.9	10.6	16.9	2.8	7.6
30	9.2	10.6	12.8	15.4	11.6	13.9	13.5	11.3	11.4	10.8	11.8	9.7	10.4	11.8	10.7	10.3	10.4	10.6	10.4	9.0	7.7	7.5	7.6	5.6	15.4	5.6	10.6
31	5.7	7.0	5.7	5.1	5.8	4.4	5.7	6.9	6.5	5.5	4.3	7.7	8.6	7.9	7.7	10.6	8.0	7.9	5.5	7.8	10.5	11.8	12.6	11.4	12.6	4.3	7.5
Max.	**18.3**	**18.5**	**18.1**	**17.6**	**17.3**	**17.0**	**18.0**	**18.8**	**19.8**	**19.3**	**19.3**	**18.4**	**18.6**	**19.6**	**19.2**	**18.8**	**19.8**	**20.7**	**20.0**	**19.2**	**19.1**	**18.9**	**17.6**	**17.4**	**20.7**		
Min.	**0.8**	**1.5**	**1.5**	**1.9**	**2.5**	**2.4**	**1.3**	**1.1**	**3.8**	**2.3**	**2.2**	**2.2**	**1.6**	**1.6**	**1.4**	**0.9**	**1.7**	**1.5**	**1.2**	**1.5**	**1.5**	**1.3**	**0.7**	**1.4**		**0.7**	
Avg.	**9.8**	**9.8**	**9.8**	**9.7**	**10.0**	**9.9**	**10.0**	**9.6**	**9.7**	**9.5**	**9.6**	**9.2**	**9.2**	**9.2**	**9.1**	**9.1**	**9.2**	**9.3**	**9.6**	**9.9**	**10.2**	**10.4**	**10.3**	**10.1**			**9.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.8	9.8	8.9	8.3	9.4	8.9	8.8	6.9	6.0	6.1	5.9	6.4	6.7	5.7	4.8	4.6	4.6	4.2	4.0	3.4	2.4	3.7	3.2	2.0	10.8	2.0	6.1
2	2.4	8.1	10.0	11.3	10.9	10.6	10.3	10.5	10.4	10.1	9.0	9.4	8.2	5.3	2.0	1.3	2.6	3.0	3.2	3.7	3.8	4.8	6.9	7.5	11.3	1.3	6.9
3	9.2	11.1	8.0	8.6	8.1	7.3	4.8	6.1	3.6	2.3	4.8	6.1	7.8	6.8	7.2	9.1	8.5	7.3	9.6	11.0	11.1	11.7	12.4	12.9	12.9	2.3	8.2
4	14.5	15.9	14.7	16.6	14.2	12.9	12.7	9.9	7.9	7.5	9.0	8.6	7.7	6.3	5.8	4.5	4.4	4.5	3.2	1.6	1.8	3.8	17.1	20.6	20.6	1.6	9.4
5	21.2	21.9	20.3	19.4	19.1	19.7	22.4	24.5	23.9	19.6	20.1	19.8	19.7	17.0	16.8	17.1	14.9	15.8	15.4	16.0	16.2	15.3	16.0	16.3	24.5	14.9	18.7
6	16.6	17.7	19.4	18.4	21.0	19.4	20.3	19.5	19.3	16.2	15.2	13.2	12.7	16.1	16.5	13.0	12.0	13.7	14.8	14.4	14.0	14.0	13.8	11.8	21.0	11.8	16.0
7	11.2	11.8	11.3	10.7	11.4	11.9	12.4	13.0	13.0	13.2	12.8	12.5	11.6	9.7	10.3	9.6	8.9	8.7	9.1	8.1	9.3	9.2	8.6	8.5	13.2	8.1	10.7
8	7.8	7.7	8.3	7.3	6.6	7.4	6.7	7.1	6.0	5.2	3.5	2.8	1.5			1.2	3.3	2.8	3.1	2.4	1.6	3.3	9.9	12.0	12.0	1.2	5.3
9	11.7	12.9	14.5	14.7	15.6	17.3	16.6	14.2	12.9	10.7	10.1	9.5	11.2	10.6	13.0	15.6	17.0	15.9	15.5	15.6	14.9	15.5	17.4	17.5	17.5	9.5	14.2
10	18.2	15.8	14.7	14.6	14.8	14.0	13.5	14.4	13.0	12.6	12.1	12.3	10.9	11.3	10.5	10.9	10.1	10.1	9.8	9.9	9.6	8.9	10.3	10.6	18.2	8.9	12.2
11	13.0	12.3	12.4	12.0	12.7	12.6	13.7	12.4	12.2	12.7	14.0	16.0	15.0	13.2	13.3	13.2	10.7	11.8	13.5	14.0	12.5	16.0	16.0	14.7	16.0	10.7	13.3
12	15.2	13.4	12.6	12.6	13.5	14.5	11.9	12.8	13.9	15.4	16.3	14.7	14.9	14.5	13.6	13.6	13.8	14.4	14.8	14.4	16.9	18.3	18.0	18.3	18.3	11.9	14.7
13	14.2	11.3	11.4	10.9	10.4	9.8	7.7	7.4	5.9	4.8	2.5	2.5	1.3	0.6	1.2	7.1	10.0	11.9	14.3	14.2	15.5	17.1	18.4	18.0	18.4	0.6	9.5
14	17.2	16.4	15.7	13.7	15.0	14.8	16.4	20.3	17.9	19.3	19.3	19.9	18.6	16.1	16.2	15.2	15.0	15.4	14.7	13.4	12.9	11.6	8.0	7.2	20.3	7.2	15.4
15	6.4	5.2	5.9	6.9	8.2	6.5	3.0	1.7	3.6	1.6	1.4	3.1	3.9	4.7	8.5	13.9	14.7	17.0	15.5	15.9	16.7	17.7	22.8	22.2	22.8	1.4	9.5
16	18.0	15.0	16.8	15.6	14.3	16.4	15.8	13.1	18.5	25.4	25.0	22.5	19.5	21.3	20.1	20.2	23.3	23.0	24.7	23.6	18.6	17.9	19.8	20.1	25.4	13.1	19.5
17	20.8	21.4	20.4	18.4	17.7	17.6	17.3	15.1	13.3	8.5	6.2	6.5	12.8	10.5	12.7	12.1	11.1	11.0	11.4	12.8	12.5	12.2	11.3	9.3	21.4	6.2	13.5
18	10.9	10.0	8.9	7.0	2.4	3.5	2.5	2.5	2.8	3.0	1.8	2.3	3.5	3.5	4.3	3.7	4.2	3.5	4.9	4.6	3.9	2.0	2.3	1.5	10.9	1.5	4.2
19	1.9	3.8	4.2	3.6	3.6	3.3	2.8	1.8	2.9	5.9	6.6	7.8	7.1	5.0	4.6	5.1	4.8	4.6	4.2	4.3	4.8	3.8	4.5	5.6	7.8	1.8	4.4
20	6.2	6.7	5.8	4.7	6.8	6.9	6.9	9.5	9.8	7.5	6.9	8.0	8.8	10.9	10.3	8.9	8.7	10.0	8.8	6.8	7.7	6.8	7.4	7.4	10.9	4.7	7.8
21	7.2	7.9	6.0	6.7	6.5	6.7	6.9	6.6	6.6	7.4	7.9	8.5	9.2	8.5	7.5	5.8	5.5	4.5	4.4	3.9	4.0	5.0	4.1	4.1	9.2	3.9	6.3
22	3.4	3.3	2.3	1.7	3.5	2.6	1.7	2.4	2.5	1.6	1.8	1.3	2.0	2.6	2.5	3.0	2.2	2.6	3.0	3.1	2.7	0.9	2.2	2.4	3.5	0.9	2.4
23	1.4	2.8	2.2	7.3	8.7	4.9	6.3	8.1	6.9	4.6	4.8	4.5	6.4	7.2	7.4	8.0	8.6	10.5	10.3	11.4	9.6	9.4	9.4	10.5	11.4	1.4	7.1
24	12.6	14.1	16.6	16.8	16.9	15.2	17.2	16.3	16.8	17.6	16.9	16.5	15.5	14.7	12.9	11.9	12.0	10.8	10.0	10.6	11.0	11.6	11.0	14.5	17.6	10.0	14.2
25	15.0	15.4	14.5	18.6	17.2	17.4	14.5	16.4	16.9	19.2	18.4	17.6	16.9	18.0	18.6	20.1	19.6	17.5	14.1	13.6	12.2	11.7	10.4	10.3	20.1	10.3	16.0
26	10.8	10.1	9.0	10.4	11.9	11.1	10.3	10.9	11.6	13.0	12.5	13.2	13.6	13.3	13.4	13.7	13.7	13.6	12.9	13.1	12.2	12.9	12.7	12.5	13.7	9.0	12.2
27	12.1	12.5	12.6	13.2	13.2	14.0	14.0	14.1	14.4	14.6	14.4	14.9	14.0	12.5	13.6	13.3	11.7	12.1	12.0	13.2	13.5	13.4	14.6	15.5	15.5	11.7	13.5
28	15.6	15.8	16.0	16.0	15.6	16.1	16.8	17.5	16.7	15.1	14.9	15.2	15.3	15.5	14.8	14.1	13.3	13.1	11.5	12.5	12.0	11.6	11.6	12.6	17.5	11.5	14.6
29	11.9	11.7	10.6	9.8	9.8	10.1	10.5	9.8	10.2	10.4	10.7	9.8	9.4	8.3	7.6	7.8	7.9	7.5	8.2	8.3	8.2	8.8	8.8	8.7	11.9	7.5	9.4
30	8.0	7.4	7.1	5.8	6.0	6.1	5.8	5.2	5.5	4.1	2.5	2.3	1.4	1.5	2.5	2.7	2.1	2.5	1.8	2.2	3.9	4.6	2.2	2.1	8.0	1.4	4.0
Max.	**21.2**	**21.9**	**20.4**	**19.4**	**21.0**	**19.7**	**22.4**	**24.5**	**23.9**	**25.4**	**25.0**	**22.5**	**19.7**	**21.3**	**20.1**	**20.2**	**23.3**	**23.0**	**24.7**	**23.6**	**18.6**	**18.3**	**22.8**	**22.2**	**25.4**		
Min.	**1.4**	**2.8**	**2.2**	**1.7**	**2.4**	**2.6**	**1.7**	**1.7**	**2.5**	**1.6**	**1.4**	**1.3**	**1.3**	**0.6**	**1.2**	**1.2**	**2.1**	**2.5**	**1.8**	**1.6**	**1.6**	**0.9**	**2.2**	**1.5**		**0.6**	
Avg.	**11.5**	**11.6**	**11.4**	**11.4**	**11.5**	**11.3**	**11.0**	**11.0**	**10.8**	**10.5**	**10.2**	**10.3**	**10.2**	**10.0**	**10.1**	**10.0**	**10.0**	**10.1**	**10.1**	**10.1**	**9.9**	**10.1**	**11.0**	**11.2**			**10.6**

Total Hours in Month 744 **Hours Data Available** 718 **Data Recovery** 96.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.7	7.0	8.6	8.3	9.7	10.1	9.3	8.7	8.7	8.3	8.5	9.0	10.6	12.2	12.0	11.4	11.4	10.9	10.2	9.8	8.3	6.5	5.0	4.9	12.2	4.9	9.0
2	4.3	6.9	9.0	9.9	10.2	9.9	8.4	9.6	10.1	10.5	9.2	7.8	6.2	5.2	7.7	8.1	7.8	8.6	9.2	10.1	7.3	3.6	5.0	6.2	10.5	3.6	7.9
3	6.4	4.6	2.0	1.5	1.7	3.2	3.4	1.0	0.9	3.1	8.7	10.4	5.8	4.1	5.2	15.9	13.4	4.2	3.9	11.6	7.0	6.3	6.2	6.5	15.9	0.9	5.7
4	6.2	6.5	6.4	7.5	8.2	8.4	8.9	8.3	7.9	7.4	7.1	7.7	6.8	4.3	2.4	3.4	2.9	3.1	2.4	1.9	1.8	3.9	3.4	5.8	8.9	1.8	5.5
5	7.5	8.6	8.3	9.0	8.8	8.2	7.2	7.9	8.1	8.0	8.3	8.8	7.4	5.7	6.2	4.5	3.6	4.1	3.8	3.2	3.1	2.2	2.2	1.6	9.0	1.6	6.1
6	3.5	3.2	3.5	2.2	2.6	3.5	3.4	2.0	3.7	1.9	3.6	4.4	4.9	6.0	4.6	5.9	7.4	7.5	9.2	8.8	7.2	6.5	7.0	8.4	9.2	1.9	5.0
7	8.5	8.8	8.3	7.0	8.0	11.0	7.9	7.8	6.5	7.4	6.3	5.6	4.7	5.2	5.4	6.3	6.9	6.7	9.2	10.8	13.2	12.2	7.2	7.3	13.2	4.7	7.8
8	7.9	5.9	6.1	6.3	5.9	5.3	5.8	5.7	5.7	5.9	5.7	7.0	7.4	8.4	7.9	6.9	6.2	6.8	7.1	7.7	6.6	6.9	6.1	5.8	8.4	5.3	6.5
9	6.3	5.9	7.1	6.5	6.6	6.0	7.9	7.0	6.6	7.2	5.9	4.7	3.7	3.9	5.3	3.9	5.1	4.0	3.3	2.7	1.6	3.1	1.7	1.9	7.9	1.6	4.9
10	4.3	6.0	4.9	5.5	7.9	6.8	6.6	5.9	5.3	5.5	5.3	6.1	6.1	6.1	6.0	4.8	3.6	2.9	1.5	1.8	1.0	2.5	3.3	3.9	7.9	1.0	4.7
11	4.5	4.2	4.4	5.8	7.3	11.3	9.0	8.0	12.4	19.3	19.1	21.5	17.6	16.4	24.3	23.2	17.6	17.0	14.5	13.9	16.3	15.5	12.5	12.6	24.3	4.2	13.7
12	11.1	7.9	7.8	7.0	7.8	6.7	6.5	6.5	6.0	6.4	5.3	6.2	6.0	10.3	19.3	17.9	18.2	17.4	16.1	18.6	16.3	11.6	12.8	14.7	19.3	5.3	11.0
13	13.2	12.6	12.7	9.4	7.9	7.9	5.7	7.5	8.0	10.1	9.6	10.0	9.6	9.5	9.6	11.6	14.8	15.6	14.5	11.2	9.6	12.0	9.2	8.3	15.6	5.7	10.4
14	5.2	6.3	4.8	6.1	5.4	4.3	6.8	6.6	5.8	5.5	4.3	5.1	4.6	5.0	4.4	4.3	4.4	3.8	3.5	3.7	3.9	1.7	2.9	3.2	6.8	1.7	4.7
15	4.6	4.4	4.3	5.2	5.3	2.9	4.2	3.7	1.7	2.8	2.9	2.9	2.8	3.9	5.4	6.9	9.5	10.1	7.8	5.6	2.5	1.5	1.6	1.2	10.1	1.2	4.3
16	2.3	3.5	5.6	10.1	11.6	11.4	10.6	8.7	7.7	9.1	8.5	8.0	7.3	6.0	4.9	4.0	3.6	3.6	3.3	3.5	3.4	2.5	1.0	3.0	11.6	1.0	6.0
17	2.0	1.7	5.0	8.0	8.9	8.3	8.3	7.2	5.7	6.4	6.8	4.5	2.4	3.7	4.4	4.8	4.0	4.8	4.8	4.0	5.0	4.5	4.7	3.1	8.9	1.7	5.1
18	1.8	2.3	6.0	6.5	5.2	3.5	3.7	6.2	6.7	6.1	6.8	8.0	9.3	9.4	7.6	7.4	6.2	7.5	7.7	6.8	5.7	5.3	4.1	3.2	9.4	1.8	6.0
19	2.9	4.2	3.5	1.6	1.3	1.3	2.2	3.1	2.4	3.9	4.9	2.9	3.1	2.3	3.5	4.4	4.5	6.1	6.7	7.9	8.0	7.4	8.0	7.7	8.0	1.3	4.3
20	8.5	8.7	8.9	9.1	8.1	9.0	9.4	9.5	7.9	7.9	6.4	8.0	6.9	5.3	3.0	3.0	3.5	3.0	3.4	3.6	3.2	2.0	1.2	1.4	9.5	1.2	5.9
21	2.2	1.9	0.9	0.8	1.8	2.2	1.6	2.2	3.7	2.1	4.2	5.0	7.7	6.5	5.7	6.6	5.5	4.4	4.3	3.3	2.0	2.4	1.7	7.1	7.7	0.8	3.6
22	8.2	9.0	8.8	11.3	10.4	10.0	10.2	9.2	10.3	8.8	7.3	5.9	3.8	5.7	6.7	6.6	5.4	7.2	7.3	7.7	8.9	12.8	13.3	13.7	13.7	3.8	8.7
23	13.7	14.0	16.4	18.8	16.8	11.3	10.5	13.7	11.2	9.6	6.7	9.7	17.6	20.3	17.9	18.7	17.4	18.0	17.7	16.9	17.8	16.8	11.9	12.6	20.3	6.7	14.8
24	12.9	11.9	10.3	13.3	12.2	10.8	9.9	10.8	10.3	5.9	5.0	4.9	6.4	6.0	5.9	10.0	8.2	5.8	5.5	4.6	4.0	1.4	2.0	1.6	13.3	1.4	7.5
25	1.8	1.1	1.8	2.4	1.8	2.1	1.9	1.5	1.5	1.0	3.1	3.9	5.1	5.6	5.7	5.1	5.1	4.2	3.7	3.5	2.9	1.5	2.0	4.7	5.7	1.0	3.0
26	6.7	7.0	8.2	10.5	11.6	12.3	11.2	12.3	10.3	10.7	10.2	8.8	9.4	9.2	9.6	10.4	10.3	10.9	10.0	11.2	9.9	11.3	11.0	8.1	12.3	6.7	10.0
27	8.5	9.4	7.5	8.3	8.1	8.5	8.6	11.5	10.1	11.1	13.8	11.1	9.9	9.1	10.3	9.2	8.7	7.6	6.0	6.3	5.9	7.0	7.8	10.1	13.8	5.9	8.9
28	8.7	9.6	10.9	11.0	10.7	9.0	10.1	8.6	9.4	8.8	11.0	12.0	10.6	10.2	9.4	6.8	7.5	6.5	7.4	7.2	7.4	7.8	7.5	7.6	12.0	6.5	9.0
29	9.3	7.4	8.4	10.6	11.8	11.5	11.2	10.2	8.2	6.9	6.4	3.5	3.2	4.0	4.3	3.5	3.8	4.0	4.0	4.4	2.8	1.2	0.9	0.6	11.8	0.6	5.9
30	1.9	1.5	1.0	1.3	1.0	0.9	1.7	3.3	5.0	5.4	6.1	6.4	8.0	7.2	6.6	6.2	7.8	7.6	8.0	7.5	7.4	6.9	8.4	8.4	8.4	0.9	5.2
31	6.5	7.0	8.1	8.5	11.1	11.2	11.4	11.1	10.3	8.7	8.0	8.4	9.2	10.4	10.2	10.5	10.1	10.7	11.3	11.2	9.9	7.4	7.8	7.3	11.4	6.5	9.4
Max.	**13.7**	**14.0**	**16.4**	**18.8**	**16.8**	**12.3**	**11.4**	**13.7**	**12.4**	**19.3**	**19.1**	**21.5**	**17.6**	**20.3**	**24.3**	**23.2**	**18.2**	**18.0**	**17.7**	**18.6**	**17.8**	**16.8**	**13.3**	**14.7**	**24.3**		
Min.	**1.8**	**1.1**	**0.9**	**0.8**	**1.0**	**0.9**	**1.6**	**1.0**	**0.9**	**1.0**	**2.9**	**2.9**	**2.4**	**2.3**	**2.4**	**3.0**	**2.9**	**2.9**	**1.5**	**1.8**	**1.0**	**1.2**	**0.9**	**0.6**		**0.6**	
Avg.	**6.4**	**6.4**	**6.8**	**7.4**	**7.6**	**7.4**	**7.2**	**7.3**	**7.0**	**7.2**	**7.3**	**7.4**	**7.2**	**7.3**	**7.8**	**8.1**	**7.9**	**7.6**	**7.3**	**7.5**	**6.8**	**6.3**	**5.8**	**6.2**			**7.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.1	10.5	11.6	10.0	7.0	7.1	6.9	6.9	7.2	8.5	8.9	13.1	11.0	8.8	6.9	8.4	14.6	15.6	7.7	7.8	5.5	6.3	6.5	8.7	15.6	5.5	8.9
2	8.1	6.5	5.5	5.3	5.0	7.2	7.2	7.3	7.3	5.2	5.4	7.8	5.1	6.9	5.5	6.2	5.7	3.4	3.3	2.7	3.1	3.3	3.4	4.9	8.1	2.7	5.5
3	5.1	3.8	2.3	5.1	7.9	8.3	8.1	7.6	3.5	5.4	4.7	4.4	7.2	5.5	3.8	3.9	6.9	7.8	7.2	5.4	2.8	1.4	1.6	1.0	8.3	1.0	5.0
4	1.0	1.5	1.2	3.5	2.7	1.0	2.1	2.5	1.8	1.5	2.0	5.2	3.7	4.1	3.6	2.5	3.5	3.5	3.8	4.6	3.8	4.4	4.5	3.0	5.2	1.0	3.0
5	2.3	3.4	6.5	6.1	5.2	7.4	8.6	10.9	11.0	10.2	13.1	9.3	11.8	8.9	7.8	10.0	8.1	8.1	4.7	4.0	5.0	4.0	3.5	2.1	13.1	2.1	7.2
6	2.6	3.1	2.7	6.0	9.0	9.0	8.5	7.4	6.8	7.5	8.2	8.5	9.0	9.6	7.5	6.3	5.7	4.8	2.4	6.2	8.2	9.8	10.9	13.3	13.3	2.4	7.2
7	12.9	14.5	14.2	13.8	13.1	13.4	14.2	16.8	16.3	15.6	15.7	13.8	11.7	11.5	11.4	8.6	6.9	7.3	6.1	5.4	4.8	4.5	4.8	3.5	16.8	3.5	10.9
8	2.9	2.0	2.2	1.8	2.3	1.6	1.4	3.2	7.8	10.4	8.8	8.9	7.8	7.4	6.3	3.9	4.8	6.9	5.4	8.0	9.9	9.9	12.1	12.6	12.6	1.4	6.2
9	10.9	12.4	12.0	14.5	14.0	13.2	13.5	12.7	12.7	11.9	11.1	10.0	10.0	9.2	9.2	10.4	11.0	11.7	11.2	10.4	10.3	9.9	10.4	10.6	14.5	9.2	11.4
10	11.3	12.0	12.7	12.9	12.4	12.3	13.0	11.9	7.9	8.7	7.8	5.5	4.2	3.5	4.5	6.7	7.8	7.6	6.8	5.3	5.5	4.7	4.7	4.7	13.0	3.5	8.1
11	3.0	2.7	3.3	2.2	2.2	0.7	0.9	1.5	2.3	4.3	2.7	1.2	2.1	3.6	6.7	5.9	5.0	4.8	4.4	3.0	1.3	2.3	2.7	3.2	6.7	0.7	3.0
12	5.7	8.1	9.7	10.3	10.5	11.0	11.4	11.6	11.5	12.3	11.0	9.7	9.3	8.5	6.7	6.4	6.4	5.8	6.5	8.6	10.0	12.4	12.0	11.7	12.4	5.7	9.5
13	10.8	11.1	11.3	11.4	11.2	11.5	11.8	11.2	11.6	9.1	7.6	7.2	7.0	5.8	5.8	5.3	6.0	5.2	3.6	2.5	3.5	2.7	1.7	1.0	11.8	1.0	7.3
14	2.2	3.1	2.3	6.8	7.5	8.4	6.7	7.6	8.3	7.1	7.7	7.4	6.6	6.1	3.5	3.4	3.3	4.4	4.0	3.0	2.4	1.5	1.2	1.9	8.4	1.2	4.8
15	4.6	5.8	7.3	6.8	9.2	11.0	9.4	9.6	9.7	9.3	7.9	7.2	5.2	3.4	3.5	4.1	3.7	3.8	3.7	7.8	10.2	9.7	9.1	9.2	11.0	3.4	7.1
16	10.3	10.7	12.0	11.6	10.7	10.9	11.5	11.0	10.7	9.1	6.4	7.2	6.9	5.9	3.9	3.4	5.2	5.4	5.0	4.1	4.1	2.3	1.7	1.5	12.0	1.5	7.1
17	2.3	1.8	1.7	1.5	2.1	1.6	1.6	2.1	3.5	4.7	5.5	7.1	6.0	5.5	6.0	5.9	5.6	4.7	3.8	4.6	5.0	4.7	4.2	2.1	7.1	1.5	3.9
18	2.9	1.9	2.2	1.9	2.0	2.7	2.1	2.3	6.3	5.9	3.2	3.6	4.4	4.6	5.1	5.4	5.7	5.3	4.8	3.9	3.4	2.3	1.2	1.8	6.3	1.2	3.5
19	0.7	1.2	1.2	1.4	1.7	3.5	6.6	5.8	4.9	2.9	2.5	5.1	6.5	8.0	6.6	5.6	5.7	4.8	5.3	6.1	5.9	6.2	5.7	3.6	8.0	0.7	4.5
20	2.5	0.9	0.9	1.2	1.4	1.3	1.3	0.8	1.7	3.7	5.5	6.3	6.9	7.9	7.6	6.2	5.8	4.9	4.6	4.9	5.7	4.7	4.1	3.2	7.9	0.8	3.9
21	3.2	3.1	3.3	2.8	2.3	2.5	1.5	2.0	1.3	1.4	2.1	2.7	3.1	4.6	5.3	5.7	5.4	4.7	4.4	4.3	3.3	2.5	1.7	1.4	5.7	1.3	3.1
22	2.9	1.5	0.8	0.8	1.5	2.1	3.3	1.8	2.8	4.6	5.0	4.5	4.6	4.4	4.0	2.5	1.5	3.3	4.5	4.7	4.3	2.2	2.7	5.3	5.3	0.8	3.2
23	4.9	5.1	4.4	5.3	5.4	4.8	4.2	4.6	3.7	4.3	4.3	4.8	4.4	4.4	5.4	5.8	5.4	5.9	5.9	6.0	5.2	4.0	2.5	2.4	6.0	2.4	4.7
24	2.0	4.1	5.9	5.7	7.7	5.7	5.2	6.0	5.6	6.4	7.4	6.5	6.8	7.3	4.8	4.5	4.6	4.7	5.0	7.0	8.2	7.1	8.2	7.3	8.2	2.0	6.0
25	8.9	9.8	15.5	16.4	15.1	16.2	13.4	8.4	8.3	10.1	9.2	13.2	10.2	19.6	19.1	18.1	18.4	17.0	17.7	15.9	11.2	8.2	9.8	5.6	19.6	5.6	13.1
26	4.0	4.7	6.2	7.2	6.5	6.7	6.3	6.3	6.9	6.4	8.8	7.7	6.5	7.8	6.8	7.3	6.2	5.6	5.1	5.0	5.0	5.1	5.1	4.8	8.8	4.0	6.2
27	3.8	6.2	7.6	6.4	5.7	8.4	6.3	8.3	7.1	6.4	3.5	3.2	3.5	2.4	2.1	2.8	4.5	6.2	5.7	5.6	5.2	4.7	4.1	3.1	8.4	2.1	5.1
28	1.6	2.9	2.7	2.5	2.6	3.1	4.7	7.9	7.0	8.5	7.4	6.5	5.8	5.3	3.9	3.6	1.9	2.6	2.9	6.9	5.8	5.1	4.9	4.0	8.5	1.6	4.6
29	3.6	5.6	4.7	5.0	5.1	6.2	5.9	8.1	7.3	6.9	7.4	6.5	6.4	5.6	5.4	6.0	5.8	6.0	6.0	5.4	4.8	5.4	5.5	4.6	8.1	3.6	5.8
30	4.3	4.0	3.1	1.6	1.1	2.1	1.7	1.8	1.0	1.9	3.6	4.3	4.9	5.9	6.0	5.7	5.9	5.8	5.1	3.6	2.9	2.7	2.2	1.7	6.0	1.0	3.5
Max.	**12.9**	**14.5**	**15.5**	**16.4**	**15.1**	**16.2**	**14.2**	**16.8**	**16.3**	**15.6**	**15.7**	**13.8**	**11.8**	**19.6**	**19.1**	**18.1**	**18.4**	**17.0**	**17.7**	**15.9**	**11.2**	**12.4**	**12.1**	**13.3**	**19.6**		
Min.	**0.7**	**0.9**	**0.8**	**0.8**	**1.1**	**0.7**	**0.9**	**0.8**	**1.0**	**1.4**	**2.0**	**1.2**	**2.1**	**2.4**	**2.1**	**2.5**	**1.5**	**2.6**	**2.4**	**2.5**	**1.3**	**1.4**	**1.2**	**1.0**		**0.7**	
Avg.	**5.0**	**5.5**	**5.9**	**6.3**	**6.3**	**6.7**	**6.6**	**6.9**	**6.8**	**7.0**	**6.8**	**7.0**	**6.6**	**6.7**	**6.2**	**6.0**	**6.2**	**6.2**	**5.5**	**5.8**	**5.5**	**5.1**	**5.1**	**4.8**			**6.1**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.1	2.5	3.0	2.9	2.2	1.1	1.5	2.3	2.2	3.3	4.4	4.5	6.7	7.9	7.0	6.6	9.1	7.6	7.5	8.0	9.3	12.0	10.3	11.4	12.0	1.1	5.7
2	8.7	9.0	11.1	12.5	8.4	9.6	8.3	7.5	6.3	6.4	6.0	4.4	6.1	6.8	6.2	5.6	6.1	7.7	7.3	7.2	6.3	6.9	4.9	4.7	12.5	4.4	7.2
3	5.1	4.7	2.9	5.5	6.7	9.8	10.3	12.8	11.4	9.0	7.8	9.4	9.0	5.5	4.4	5.9	6.3	6.0	5.7	4.6	5.3	5.1	5.8	4.7	12.8	2.9	6.8
4	4.8	5.2	3.9	4.2	3.8	3.3	3.5	2.7	1.3	2.2	1.4	1.5	3.9	5.1	6.8	6.3	5.6	5.0	2.5	2.3	1.4	1.9	1.7	1.0	6.8	1.0	3.4
5	0.9	0.9	1.1	1.1	2.1	3.0	1.8	1.3	2.0	1.2	2.1	2.7	3.5	3.2	4.3	4.0	4.4	4.1	4.2	3.2	4.2	3.2	2.2	2.2	4.4	0.9	2.6
6	1.9	2.0	1.9	1.2	4.0	3.3	1.6	1.8	2.6	2.7	1.8	3.3	4.1	6.0	5.8	4.2	3.7	4.7	5.5	5.2	5.6	3.1	3.1	2.1	6.0	1.2	3.4
7	2.9	3.0	3.7	6.5	5.9	9.6	8.4	7.6	5.9	7.3	6.3	3.8	3.5	4.2	4.7	3.9	3.0	3.5	4.6	4.5	3.9	2.3	1.0	1.2	9.6	1.0	4.6
8	2.2	3.2	2.9	1.8	3.6	6.3	6.7	6.7	7.1	5.9	5.9	6.4	7.3	6.0	5.6	5.4	4.2	2.0	2.0	0.9	1.1	1.8	2.5	3.5	7.3	0.9	4.2
9	3.2	4.1	2.6	3.0	1.9	5.2	3.1	1.8	6.9	12.0	12.6	13.5	15.1	15.1	11.9	9.9	8.7	11.7	12.6	10.7	11.9	8.4	8.0	6.0	15.1	1.8	8.3
10	5.5	6.5	7.3	7.9	8.8	9.5	11.6	11.8	12.3	11.9	10.0	7.2	6.1	4.9	4.8	4.5	4.6	5.0	3.7	4.3	3.5	3.3	3.4	4.4	12.3	3.3	6.8
11	6.9	7.3	5.4	3.9	4.8	4.3	3.2	3.1	3.2	4.1	4.4	4.6	4.9	5.5	5.9	5.5	5.4	5.4	5.9	5.6	5.1	3.0	2.0	1.3	7.3	1.3	4.6
12	1.2	1.7	2.3	1.3	1.2	0.6	0.9	1.9	4.7	5.8	6.4	7.6	8.8	9.0	9.4	9.0	10.4	10.9	9.6	11.2	9.9	10.4	10.9	9.8	11.2	0.6	6.5
13	9.5	7.6	8.4	7.9	5.8	4.9	5.8	4.1	5.7	7.9	6.7	5.8	6.2	5.4	4.4	4.2	4.9	4.3	3.6	3.7	3.6	3.8	3.1	3.0	9.5	3.0	5.4
14	3.2	2.6	1.4	1.7	1.8	0.8	0.8	0.9	0.9	1.2	3.0	4.5	3.2	4.4	4.8	4.3	4.8	4.9	4.2	3.2	2.5	2.9	2.9	2.7	4.9	0.8	2.8
15	2.8	1.1	0.7	1.5	1.7	3.9	1.5	1.2	4.4	6.5	7.9	9.8	10.2	11.0	9.3	10.0	14.6	13.9	12.7	10.6	12.3	10.0	9.2	9.3	14.6	0.7	7.3
16	11.2	11.6	12.1	13.6	12.6	9.7	10.9	11.1	11.4	12.2	11.4	11.1	12.5	12.1	13.0	13.3	14.3	14.4	14.4	13.8	14.8	14.5	14.4	13.4	14.8	9.7	12.7
17	12.8	10.0	10.0	6.0	3.3	12.5	13.8	15.5	12.6	12.4	12.9	10.5	10.1	9.5	8.1	8.6	12.2	10.7	12.9	14.2	13.4	12.8	13.2	12.8	15.5	3.3	11.3
18	13.0	13.1	12.7	12.3	11.0	9.5	9.2	10.6	10.0	9.5	10.5	8.7	9.3	9.9	10.8	11.4	9.8	9.9	9.5	10.1	10.0	9.5	8.3	9.6	13.1	8.3	10.3
19	9.4	9.3	10.5	10.3	10.1	11.0	10.9	10.4	10.4	10.4	9.6	9.8	9.9	8.7	7.5	4.9	3.7	2.0	5.2	6.8	7.2	8.9	11.0	9.7	11.0	2.0	8.7
20	9.9	11.4	10.6	10.1	9.4	10.0	9.2	7.3	7.6	6.0	6.5	13.2	12.7	8.9	11.0	10.4	10.3	9.3	8.5	9.6	7.4	8.3	7.6	8.8	13.2	6.0	9.3
21	5.5	4.9	3.3	4.1	5.3	7.8	7.9	8.5	10.5	9.5	8.1	8.0	7.5	7.5	5.6	4.1	6.7	6.8	5.3	5.7	4.9	4.4	5.4	7.4	10.5	3.3	6.4
22	7.6	8.9	10.2	9.7	10.6	10.5	6.6	7.7	2.9	2.7	4.6	3.4	6.1	8.2	7.9	7.2	6.7	5.7	4.2	4.2	4.6	2.9	3.5	1.0	10.6	1.0	6.2
23	1.2	1.2	2.4	2.7	5.3	6.3	7.8	7.5	9.2	7.8	6.9	7.8	5.7	4.9	5.5	4.8	6.0	7.2	5.3	5.7	7.0	8.7	9.1	7.3	9.2	1.2	6.0
24	3.9	2.7	2.1	3.1	3.1	3.1	5.1	2.5	6.1	5.3	6.8	5.4	4.6	4.8	3.2	3.6	4.8	4.0	2.5	1.8	1.6	1.2	2.9	3.7	6.8	1.2	3.7
25	4.5	3.1	4.8	4.7	5.2	6.8	8.4	9.5	9.3	10.2	10.5	11.2	9.7	9.6	8.8	6.8	4.7	5.4	4.7	2.5	2.9	1.3	2.4	2.2	11.2	1.3	6.2
26	2.5	1.4	2.1	4.1	3.1	11.9	14.1	12.8	11.7	10.0	8.7	9.0	10.9	8.5	9.7	9.3	7.0	4.4	3.1	5.6	6.3	5.9	7.6	7.1	14.1	1.4	7.4
27	6.6	6.3	4.7	5.5	4.7	3.2	3.0	1.1	1.7	2.8	7.2	4.9	5.1	4.8	3.7	2.6	1.5	1.2	1.5	1.5	3.6	2.2	2.3	3.8	7.2	1.1	3.6
28	3.9	4.4	5.9	7.6	9.0	9.5	10.0	10.6	10.8	11.5	9.7	11.5	10.5	9.5	9.0	9.2	9.6	10.2	10.9	10.0	9.1	10.6	10.8	10.6	11.5	3.9	9.3
29	10.9	11.7	11.6	10.4	10.1	9.1	11.7	12.0	11.0	12.2	11.2	11.0	10.9	10.2	8.5	7.8	3.6	7.9	4.4	7.1	8.4	9.0	9.5	11.5	12.2	3.6	9.7
30	12.7	12.9	12.6	12.9	12.1	11.8	14.7	11.7	12.9	13.9	11.8	10.9	13.4	12.6	13.1	16.0	16.8	18.0	18.0	16.5	15.1	15.9	17.1	15.6	18.0	10.9	14.1
31	13.0	12.8	11.9	11.0	9.7	12.0	12.4	15.9	18.1	17.7	16.5	16.7	16.3	15.4	14.6	11.6	10.4	11.5	9.0	9.8	9.2	11.0	13.6	13.2	18.1	9.0	13.0
Max.	**13.0**	**13.1**	**12.7**	**13.6**	**12.6**	**12.5**	**14.7**	**15.9**	**18.1**	**17.7**	**16.5**	**16.7**	**16.3**	**15.4**	**14.6**	**16.0**	**16.8**	**18.0**	**18.0**	**16.5**	**15.1**	**15.9**	**17.1**	**15.6**	**18.1**		
Min.	**0.9**	**0.9**	**0.7**	**1.1**	**1.2**	**0.6**	**0.8**	**0.9**	**0.9**	**1.2**	**1.4**	**1.5**	**3.2**	**3.2**	**3.2**	**2.6**	**1.5**	**1.2**	**1.5**	**0.9**	**1.1**	**1.2**	**1.0**	**1.0**		**0.6**	
Avg.	**6.1**	**6.0**	**6.0**	**6.2**	**6.0**	**7.1**	**7.2**	**7.2**	**7.5**	**7.8**	**7.7**	**7.8**	**8.2**	**7.9**	**7.6**	**7.1**	**7.2**	**7.3**	**6.8**	**6.8**	**6.8**	**6.6**	**6.8**	**6.6**			**7.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	14.6	12.3	9.8	11.7	12.1	11.1	10.7	9.1	3.7	3.7	4.5	6.4	6.8	7.2	6.4	5.7	5.3	4.4	4.0	4.8	4.1	5.2	7.4	6.5	14.6	3.7	7.4
2	5.3	5.2	6.6	5.8	4.8	4.1	2.9	3.9	3.9	4.0	3.7	3.9	4.9	4.1	4.7	3.9	3.8	3.8	4.3	3.5	3.2	2.5	1.4	1.3	6.6	1.3	4.0
3	0.6	1.8	1.4	0.7	1.9	2.4	3.7	3.4	3.0	2.9	3.7	4.9	5.3	5.2	3.5	5.3	3.9	4.6	6.1	5.3	4.4	3.5	3.8	3.8	6.1	0.6	3.5
4	5.7	5.1	7.8	4.1	3.7	2.5	2.0	3.3	5.3	3.3	4.7	6.4	4.7	5.3	5.3	4.1	3.6	3.4	5.3	4.5	3.8	3.3	3.1	3.7	7.8	2.0	4.3
5	3.6	3.5	3.8	4.3	5.1	2.1	3.9	3.7	3.6	3.2	1.5	3.4	4.6	5.0	6.2	5.0	4.7	4.9	4.4	3.8	3.4	2.7	2.2	2.1	6.2	1.5	3.8
6	2.0	1.7	0.8	2.3	2.6	2.8	2.4	2.8	2.8	4.2	2.5	2.0	4.6	6.5	4.9	4.3	4.1	3.9	2.9	4.6	10.1	9.4	8.5	8.1	10.1	0.8	4.2
7	6.5	6.7	7.2	7.0	6.9	7.8	8.8	10.6	11.2	8.8	7.0	6.8	7.4	6.4	5.8	4.5	5.6	5.9	7.0	8.1	9.7	8.6	9.3	6.6	11.2	4.5	7.5
8	4.8	1.5	3.7	4.0	5.0	5.0	5.1	4.6	3.4	2.4	2.4	4.0	4.7	4.9	4.6	4.6	4.9	4.8	4.5	3.9	3.7	2.9	1.6	3.0	5.1	1.5	3.9
9	2.3	1.7	2.7	2.3	1.6	3.0	3.6	6.0	8.4	9.2	7.7	6.1	7.2	4.6	4.7	6.0	8.9	7.4	7.8	8.5	7.0	6.6	6.4	6.0	9.2	1.6	5.7
10	6.1	5.6	4.8	2.1	1.7	2.9	4.2	4.1	3.5	3.5	3.7	4.0	4.1	4.3	4.5	5.2	5.5	6.5	5.6	5.7	4.4	4.7	6.0	5.9	6.5	1.7	4.5
11	3.3	2.9	3.6	4.9	4.8	3.4	5.4	5.0	5.4	5.7	6.0	6.6	6.3	6.0	4.9	5.1	5.3	4.6	4.2	3.0	1.6	2.0	3.6	2.9	6.6	1.6	4.4
12	3.9	4.1	3.3	4.8	5.3	5.0	4.7	4.7	3.8	3.2	1.5	2.3	1.8	2.7	2.2	2.3	4.6	5.2	1.3	1.6	3.1	1.9	4.3	3.4	5.3	1.3	3.4
13	2.1	3.5	2.4	3.2	5.1	3.6	3.1	2.8	2.7	2.7	2.8	2.1	3.4	5.6	4.1	3.2	3.8	2.8	2.8	2.6	1.8	1.7	2.9	1.8	5.6	1.7	3.0
14	2.0	2.8	1.9	2.0	1.4	1.7	4.1	2.4	1.4	0.7	1.8	2.8	1.8	1.8	1.1	1.5	1.1	2.3	2.9	1.8	1.7	2.5	1.8	2.2	4.1	0.7	2.0
15	1.7	1.7	2.6	2.9	6.3	7.9	9.1	9.6	9.4	8.6	8.8	8.6	7.7	6.8	4.0	1.3	1.9	1.9	1.9	1.3	1.5	7.4	5.9	4.7	9.6	1.3	5.1
16	6.0	6.2	5.5	5.1	5.0	3.9	3.9	5.1	3.6	5.1	4.7	4.7	6.8	6.9	6.8	7.0	6.2	6.0	7.6	6.1	7.5	4.4	5.3	4.1	7.6	3.6	5.6
17	4.6	4.6	4.9	4.5	3.5	1.6	2.1	2.8	6.1	5.4	5.3	7.0	9.6	6.9	5.5	5.6	6.8	7.7	8.7	7.8	8.6	6.4	6.2	3.8	9.6	1.6	5.7
18	4.2	3.7	2.3	1.8	1.8	1.6	2.5	2.6	1.7	4.3	4.2	4.4	5.1	3.9	4.9	3.6	3.2	3.4	3.8	3.2	2.7	2.1	4.5	3.6	5.1	1.6	3.3
19	2.4	2.5	2.7	2.2	2.8	1.8	2.3	4.3	5.1	7.7	8.1	8.8	8.3	8.5	9.5	8.6	7.1	6.7	7.3	8.2	9.2	10.6	10.5	10.2	10.6	1.8	6.5
20	10.9	12.0	11.6	11.1	12.3	11.9	12.3	11.8	11.8	11.1	11.7	11.5	11.7	9.5	7.7	8.1	8.3	8.0	8.5	7.8	7.8	8.3	9.0	8.3	12.3	7.7	10.1
21	8.5	9.0	9.6	9.4	8.6	8.2	8.2	8.3	6.8	6.4	6.5	7.4	6.2	3.9	2.8	2.5	2.6	2.9	3.7	4.3	3.4	3.8	3.1	4.2	9.6	2.5	5.8
22	2.9	2.9	5.6	5.0	4.6	3.4	2.2	1.3	2.9	2.6	1.5	1.1	3.2	3.0	3.0	3.2	4.3	4.2	3.2	1.6	3.2	6.1	8.4	9.1	9.1	1.1	3.7
23	9.9	10.3	10.6	10.8	11.4	11.9	12.6	12.3	12.2	10.3	11.3	5.7	2.9	2.6	3.8	4.1	2.5	1.3	1.6	2.2	2.2	3.4	4.5	3.9	12.6	1.3	6.8
24	3.6	3.5	4.0	4.9	7.7	9.4	9.1	9.5	10.1	9.5	9.0	9.2	8.4	8.5	10.7	10.2	9.5	9.2	10.0	10.4	9.7	8.1	7.6	7.6	10.7	3.5	8.3
25	5.2	2.3	3.8	3.4	3.8	4.6	3.7	3.4	3.3	4.2	2.3	1.6	2.1	3.3	5.9	6.4	5.0	5.3	5.5	5.0	5.4	3.7	2.5	4.0	6.4	1.6	4.0
26	2.5	2.6	1.4	1.6	2.0	1.6	2.0	1.4	2.0	1.9	1.4	1.1	2.8	3.7	5.0	5.2	5.6	6.1	5.8	4.3	4.2	4.5	3.6	2.1	6.1	1.1	3.1
27	1.6	1.5	1.1	0.8	2.4	3.1	3.2	2.4	5.3	5.5	5.5	5.7	4.6	5.7	6.4	5.6	6.4	5.8	7.0	5.8	7.0	7.7	8.2	7.3	8.2	0.8	4.8
28	6.8	6.3	6.2	6.0	7.3	7.9	7.1	5.8	5.8	6.5	6.2	5.7	6.3	7.3	7.9	8.5	9.2	7.8	8.6	9.3	9.7	9.9	9.8	9.7	9.9	5.7	7.6
29	10.6	9.5	8.7	9.6	9.8	9.1	10.1	9.9	10.1	9.5	8.3	7.0	8.2	9.0	8.6	8.5	8.3	8.9	9.3	10.9	10.2	9.7	11.1	11.9	11.9	7.0	9.5
30	11.9	10.2	10.8	11.8	12.1	11.1	11.3	10.9	8.8	7.7	4.9	2.5	2.7	4.8	5.6	4.4	5.1	5.5	6.3	7.4	6.8	11.6	7.5	8.6	12.1	2.5	7.9
31	11.4	12.9	14.9	12.6	12.8	9.9	7.9	6.4	7.9	9.4	10.2	7.7	7.8	9.1	9.5	7.0	6.4	7.5	9.5	9.3	6.6	8.3	7.1	7.6	14.9	6.4	9.2
Max.	**14.6**	**12.9**	**14.9**	**12.6**	**12.8**	**11.9**	**12.6**	**12.3**	**12.2**	**11.1**	**11.7**	**11.5**	**11.7**	**9.5**	**10.7**	**10.2**	**9.5**	**9.2**	**10.0**	**10.9**	**10.2**	**11.6**	**11.1**	**11.9**	**14.9**		
Min.	**0.6**	**1.5**	**0.8**	**0.7**	**1.4**	**1.6**	**2.0**	**1.3**	**1.4**	**0.7**	**1.4**	**1.1**	**1.8**	**1.8**	**1.1**	**1.3**	**1.1**	**1.3**	**1.3**	**1.3**	**1.5**	**1.7**	**1.4**	**1.3**		**0.6**	
Avg.	**5.4**	**5.2**	**5.4**	**5.3**	**5.7**	**5.4**	**5.6**	**5.6**	**5.7**	**5.6**	**5.3**	**5.2**	**5.6**	**5.6**	**5.5**	**5.2**	**5.3**	**5.2**	**5.5**	**5.4**	**5.4**	**5.6**	**5.7**	**5.4**			**5.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.2	8.9	8.2	8.1	8.9	8.4	8.7	6.5	6.1	5.9	6.2	7.2	6.3	6.4	6.0	4.4	5.0	4.8	7.1	12.6	11.6	8.8	8.2	7.8	12.6	4.4	7.5
2	7.5	6.3	8.6	8.5	10.0	9.8	15.4	15.9	13.7	11.3	14.1	13.0	11.7	9.4	5.8	4.7	5.1	8.1	9.5	11.1	11.0	9.3	8.6	6.6	15.9	4.7	9.8
3	7.5	7.4	5.6	6.0	7.3	6.7	5.7	5.8	5.4	4.8	5.1	6.5	5.3	4.8	5.4	6.2	6.1	5.6	1.8	2.2	2.9	2.9	2.4	1.8	7.5	1.8	5.0
4	3.0	2.4	2.6	1.6	1.1	1.4	2.6	1.9	2.1	2.1	2.5	3.5	3.0	4.5	4.9	4.6	4.8	3.8	2.7	2.6	2.0	2.5	3.1	1.8	4.9	1.1	2.8
5	2.3	1.6	1.6	2.5	1.3	2.4	2.4	1.0	1.4	1.4	1.6	2.7	3.4	3.9	5.2	5.3	4.0	3.6	2.4	2.4	2.5	1.6	1.4	3.0	5.3	1.0	2.5
6	2.2	1.8	2.5	3.7	6.5	7.5	5.9	8.4	9.9	8.7	7.6	7.3	8.9	8.6	7.2	7.8	8.1	7.3	7.2	9.1	11.1	11.1	10.6	9.2	11.1	1.8	7.4
7	9.0	8.6	8.7	6.8	7.0	6.5	6.5	6.2	7.6	7.5	13.3	15.6	13.9	11.4	7.9	3.3	2.2	2.7	5.3	3.5	2.1	1.4	1.2	1.7	15.6	1.2	6.7
8	3.9	1.9	3.1	2.2	1.1	1.7	2.1	1.7	1.5	2.6	6.9	12.8	9.0	9.4	11.5	11.8	15.2	15.8	7.8	7.8	7.9	7.3	5.1	5.3	15.8	1.1	6.5
9	5.7	8.1	6.4	4.5	5.2	6.7	5.2	4.3	5.2	6.0	4.8	5.5	6.6	9.4	16.6	12.9	10.0	9.0	9.5	8.6	7.3	6.9	7.0	6.3	16.6	4.3	7.4
10	3.1	1.1	1.4	1.5	1.6	1.3	2.0	3.5	3.2	2.4	2.1	1.5	1.1	1.5	1.8	3.0	4.8	5.6	4.4	5.6	5.6	5.7	6.0	5.7	6.0	1.1	3.1
11	6.8	6.8	7.3	10.1	10.8	9.7	9.7	6.8	8.2	5.8	6.1	1.0	0.2	0.3	1.8	4.7	8.3	7.9	7.7	7.6	9.8	9.2	9.4	10.9	10.9	0.2	7.0
12	9.7	9.7	16.1	17.3	15.0	15.9	17.4	12.9	7.1	7.5	5.1	4.6	4.5	4.5	4.9	5.7	4.7	5.6	6.5	5.5	4.6	6.7	8.1	9.3	17.4	4.5	8.7
13	13.1	16.5	17.7	17.8	15.5	14.6	19.7	23.0	24.0	23.9	23.6	24.0	23.0	21.7	20.4	11.6	10.2	9.7	6.3	5.8	6.1	6.7	5.9	6.6	24.0	5.8	15.3
14	5.9	6.4	6.5	6.2	4.7	5.0	3.8	3.7	2.6	3.7	2.7	2.9	5.8	3.8	2.5	3.3	3.3	2.9	1.8	2.4	2.9	2.4	1.7	1.7	6.5	1.7	3.7
15	1.6	2.2	4.5	6.3	7.2	7.4	7.9	8.0	7.0	8.1	12.0	8.8	11.3	10.8	11.7	11.4	10.1	7.1	4.1	3.8	2.1	1.9	3.0	2.9	12.0	1.6	6.7
16	3.5	3.1	2.8	3.6	1.9	4.0	8.6	7.4	6.8	6.9	7.7	9.1	8.4	6.8	7.0	8.9	12.7	14.1	15.0	13.2	13.2	11.4	13.2	12.8	15.0	1.9	8.4
17	12.9	11.6	10.7	13.4	13.0	11.3	12.3	8.7	7.3	8.8	7.1	4.8	1.8	8.7	9.9	11.3	13.1	10.3	8.7	15.1	21.6	12.4	9.9	7.3	21.6	1.8	10.5
18	7.8	8.4	9.0	8.1	9.0	11.1	11.1	8.5	8.7	4.7	4.8	5.7	7.9	8.1	7.6	13.4	11.4	7.3	6.7	10.4	17.8	19.0	17.1	16.1	19.0	4.7	10.0
19	15.5	8.4	7.4	6.7	4.9	3.0	1.7	2.7	4.0	5.1	4.4	5.2	5.4	4.7	6.3	7.9	8.9	8.5	7.5	6.5	7.7	8.4	7.2	8.7	15.5	1.7	6.5
20	10.0	11.0	11.7	12.4	12.3	13.1	11.7	12.0	12.4	12.9	14.5	16.2	14.1	14.6	12.7	11.0	9.5	9.8	9.3	6.5	5.7	5.4	8.5	10.6	16.2	5.4	11.2
21	7.6	9.0	11.3	11.6	8.4	10.3	12.7	11.3	12.4	10.2	8.8	9.0	8.8	7.5	7.8	8.1	8.2	9.9	11.4	10.6	7.8	9.5	8.2	8.5	12.7	7.5	9.5
22	9.9	9.6	9.9	9.8	9.1	8.1	8.3	8.5	8.8	9.7	8.3	7.4	6.0	5.8	4.6	4.4	3.3	2.0	2.0	1.1	2.7	2.5	1.9	1.8	9.9	1.1	6.1
23	1.4	2.7	1.7	1.6	1.7	1.4	1.1	2.2	3.1	1.8	1.0	2.4	1.2	0.6	0.8	2.8	2.5	3.0	3.8	2.1	1.2	0.9	1.6	1.5	3.8	0.6	1.8
24	1.2	1.9	1.8	1.7	1.3	1.1	1.3	1.9	1.9	2.9	2.7	2.0	1.8	2.0	2.7	3.6	3.9	2.8	2.1	2.2	3.3	3.3	2.9	2.5	3.9	1.1	2.3
25	2.5	3.7	2.6	2.5	2.9	2.8	2.4	3.3	3.7	2.6	3.9	2.2	3.2	3.5	2.9	2.1	2.6	2.9	1.9	2.6	2.5	2.6	2.1	2.4	3.9	1.9	2.8
26	2.5	2.1	2.5	2.8	2.1	2.3	2.1	2.7	2.3	2.6	2.1	1.1	1.6	1.5	4.4	4.7	4.5	3.1	1.5	0.8	2.2	4.4	4.5	5.7	5.7	0.8	2.7
27	7.0	7.6	7.9	7.9	9.9	9.3	8.1	7.3	6.0	5.4	5.5	5.8	5.4	6.4	6.9	4.7	5.7	6.3	6.9	8.4	8.6	7.9	9.7	11.2	11.2	4.7	7.3
28	10.4	10.8	9.4	7.2	8.1	7.3	8.2	7.4	7.0	6.9	7.5	8.1	6.4	4.4	6.2	6.9	7.4	5.9	6.4	3.1	1.5	1.2	1.1	1.2	10.8	1.1	6.3
29	1.4	2.0	3.1	3.4	2.6	2.8	2.4	2.6	2.8	2.7	2.4	2.7	2.6	4.1	2.6	2.2	2.0	3.7	4.1	3.2	2.0	2.4	2.1	2.4	4.1	1.4	2.7
30	2.4	2.3	3.5	4.9	6.5	7.4	7.4	7.2	9.1	8.7	7.9	9.0	9.0	8.5	9.1	8.5	10.1	10.3	9.1	8.5	8.1	6.7	6.7	6.3	10.3	2.3	7.4
Max.	**15.5**	**16.5**	**17.7**	**17.8**	**15.5**	**15.9**	**19.7**	**23.0**	**24.0**	**23.9**	**23.6**	**24.0**	**23.0**	**21.7**	**20.4**	**13.4**	**15.2**	**15.8**	**15.0**	**15.1**	**21.6**	**19.0**	**17.1**	**16.1**	**24.0**		
Min.	**1.2**	**1.1**	**1.4**	**1.5**	**1.1**	**1.1**	**1.1**	**1.0**	**1.4**	**1.4**	**1.0**	**1.0**	**0.2**	**0.3**	**0.8**	**2.1**	**2.0**	**2.0**	**1.5**	**0.8**	**1.2**	**0.9**	**1.1**	**1.2**		**0.2**	
Avg.	**6.2**	**6.1**	**6.5**	**6.7**	**6.6**	**6.7**	**7.1**	**6.8**	**6.7**	**6.5**	**6.7**	**6.9**	**6.6**	**6.6**	**6.8**	**6.7**	**6.9**	**6.7**	**6.0**	**6.2**	**6.5**	**6.1**	**5.9**	**6.0**			**6.5**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.2	4.8	4.4	3.2	3.0	2.2	1.9	2.8	2.6	2.6	1.9	1.0	4.4	6.1	5.2	9.1	2.9	3.3	3.0	3.6	3.2	2.4	2.1	1.4	9.1	1.0	3.4
2	1.9	2.2	1.5	3.2	3.4	3.5	4.2	3.4	3.6	3.1	4.0	5.0	5.0	5.5	6.7	7.5	8.8	9.8	10.6	11.3	14.1	15.4	18.9	19.1	19.1	1.5	7.2
3	16.9	16.1	13.1	12.0	13.9	12.4	10.9	9.2	8.9	8.9	9.7	11.9	13.3	13.5	12.6	9.7	10.5	11.6	11.7	11.4	10.7	9.8	9.9	9.6	16.9	8.9	11.6
4	8.7	8.1	6.6	6.7	7.0	7.1	8.0	7.8	7.2	6.4	6.6	7.0	6.7	7.1	6.9	7.2	7.8	7.3	7.6	7.5	9.9	13.1	14.1	14.3	14.3	6.4	8.2
5	16.1	15.5	14.3	14.1	15.1	14.1	13.2	11.8	9.9	9.6	10.9	11.3	10.6	6.8	4.2	3.6	4.9	3.8	4.4	4.7	3.7	4.9	4.8	4.1	16.1	3.6	9.0
6	4.0	4.4	4.1	4.8	3.7	4.7	5.0	7.7	8.9	8.6	9.0	8.0	8.4	9.1	9.7	10.6	11.2	10.6	10.5	12.2	12.4	11.4	9.6	8.7	12.4	3.7	8.2
7	7.7	9.8	11.5	12.3	14.5	13.2	12.9	16.3	17.7	17.3	16.7	13.9	15.7	16.1	18.3	17.5	17.8	17.2	18.3	18.9	18.8	16.6	16.5	17.1	18.9	7.7	15.5
8	16.2	11.8	13.9	14.7	12.4	16.7	14.9	15.5	11.2	11.4	14.3	11.8	9.9	10.1	9.6	8.0	8.3	6.5	6.2	5.3	4.0	2.6	2.4	3.2	16.7	2.4	10.0
9	3.6	3.9	4.5	4.6	5.3	7.4	7.3	5.9	4.9	5.0	6.0	5.6	7.0	6.2	8.3	9.5	8.5	7.6	7.0	8.3	8.6	8.1	6.8	7.2	9.5	3.6	6.5
10	5.2	4.5	2.3	2.9	2.4	4.7	10.4	6.4	7.8	6.3	5.6	4.1	4.0	2.2	4.9	2.7	1.3	1.2	1.5	2.1	1.7	1.8	2.0	3.8	10.4	1.2	3.8
11	7.6	8.4	10.3	11.6	13.1	12.7	15.2	17.0	17.2	18.2	17.9	19.4	13.8	7.2	3.5	3.4	10.4	14.8	17.6	18.6	19.2	19.8	20.2	19.8	20.2	3.4	14.0
12	17.8	18.0	19.0	19.6	20.4	20.1	19.4	18.6	18.4	19.3	19.2	19.3	18.5	17.4	17.8	19.1	18.3	16.9	18.1	18.7	17.6	16.5	16.7	17.4	20.4	16.5	18.4
13	12.7	12.7	11.3	14.0	13.0	11.7	11.0	10.2	7.2	2.2	3.9	2.2	1.8	1.8	3.4	3.3	3.4	2.7	2.7	3.1	2.2	3.6	3.8	2.7	14.0	1.8	6.1
14	4.4	1.3	1.2	1.4	2.3	1.6	1.7	0.7	0.9	0.9	0.9	0.6	0.8	0.7	1.5	1.5	1.0	1.5	2.1	1.8	1.7	2.8	3.0	2.0	4.4	0.6	1.6
15	2.6	4.3	4.3	4.8	3.5	2.9	2.4	2.5	3.4	2.6	3.7	3.8	4.5	4.6	6.3	7.3	7.5	7.4	8.6	9.2	8.8	8.4	9.5	9.4	9.5	2.4	5.5
16	7.6	8.1	8.5	9.0	10.7	10.6	10.3	10.4	9.4	10.3	10.6	10.5	9.1	10.2	10.7	11.0	11.6	11.5	11.6	12.8	12.9	12.0	11.7	12.3	12.9	7.6	10.6
17	12.7	13.2	14.2	13.8	13.8	14.5	12.6	12.3	9.5	8.7	9.6	5.6	3.6	3.0	2.1	1.6	2.3	3.0	3.0	3.8	4.9	5.1	3.8	3.6	14.5	1.6	7.5
18	4.9	4.7	4.0	4.5	4.1	4.4	4.0	4.2	4.7	4.8	4.4	5.3	4.4	4.0	8.5	7.8	5.7	4.9	4.6	2.9	2.7	1.9	2.7	2.1	8.5	1.9	4.4
19	1.3	3.9	3.8	4.4	4.5	5.1	4.1	5.5	6.1	5.7	6.6	6.8	7.9	8.7	7.9	5.4	7.7	8.8	9.1	10.2	11.2	11.7	11.8	11.4	11.8	1.3	7.1
20	11.4	11.7	12.0	11.7	11.3	11.6	11.8	12.5	11.9	12.2	10.5	11.7	12.5	11.1	11.4	11.4	10.3	9.8	9.8	11.9	9.6	9.9	10.8	10.0	12.5	9.6	11.2
21	10.8	11.7	13.0	12.1	11.8	12.7	10.5	10.9	12.2	12.1	12.4	12.1	11.3	10.6	11.0	10.9	10.8	10.6	10.6	10.6	10.8	11.7	10.0	9.6	13.0	9.6	11.3
22	11.6	17.2	18.6	16.3	18.3	16.7	15.1	22.1	20.0	17.6	20.5	19.3	15.8	15.3	18.5	16.3	15.4	14.5	12.5	9.7	9.2	7.9	4.4	3.4	22.1	3.4	14.8
23	4.1	3.1	2.9	1.7	4.8	4.3	6.6	7.0	6.7	10.1	10.4	12.6	14.0	13.9	18.5	18.4	20.3	22.2	22.0	21.3	21.2	21.4	20.0	19.9	22.2	1.7	12.8
24	20.4	20.4	17.1	16.2	16.7	16.9	15.8	15.1	19.9	22.6	23.5	20.3	17.0	16.3	15.2	17.6	15.7	10.4	8.1	5.1	3.5	3.3	3.9	2.8	23.5	2.8	14.3
25	2.5	2.1	2.3	3.5	2.5	1.7	2.5	2.6	2.7	1.9	2.7	1.6	1.6	1.1	0.9	2.0	1.4	1.3	2.0	1.7	2.8	3.5	3.1	2.7	3.5	0.9	2.2
26	3.4	2.4	2.8	1.3	1.0	2.4	2.3	4.6	4.4	4.4	4.4	4.2	4.1	6.1	8.1	8.7	10.3	13.0	13.1	12.3	12.6	12.7	13.3	15.2	15.2	1.0	7.0
27	15.7	16.1	14.3	13.9	14.0	14.5	14.4	14.8	15.2	14.7	15.6	15.0	14.0	14.8	14.0	14.1	13.8	14.5	14.4	12.9	12.9	12.0	10.6	10.2	16.1	10.2	14.0
28	8.5	8.7	7.0	5.8	3.6	3.4	3.5	3.1	2.5	3.3	2.6	3.7	3.3	2.4	1.1	1.6	4.3	4.9	5.3	4.9	5.0	3.7	4.2	3.7	8.7	1.1	4.2
29	1.7	3.6	3.8	3.5	3.8	3.6	3.3	3.1	1.9	2.7	1.9	2.0	2.1	1.7	1.5	0.6	1.3	1.6	2.7	2.7	0.6	1.2	1.4	1.8	3.8	0.6	2.3
30	1.4	1.9	2.3	2.1	1.8	3.1	1.3	1.5	3.0	2.4	1.5	2.4	2.3	1.6	1.9	1.9	1.8	1.0	1.6	2.2	1.4	1.6	3.4	3.3	3.4	1.0	2.0
31	3.0	2.5	2.9	2.7	3.2	2.9	2.7	3.0	2.9	3.0	3.1	2.3	2.5	2.7	2.2	1.7	2.0	4.0	4.6	4.2	2.7	2.7	2.9	3.0	4.6	1.7	2.9
Max.	**20.4**	**20.4**	**19.0**	**19.6**	**20.4**	**20.1**	**19.4**	**22.1**	**20.0**	**22.6**	**23.5**	**20.3**	**18.5**	**17.4**	**18.5**	**19.1**	**20.3**	**22.2**	**22.0**	**21.3**	**21.2**	**21.4**	**20.2**	**19.9**	**23.5**		
Min.	**1.3**	**1.3**	**1.2**	**1.3**	**1.0**	**1.6**	**1.3**	**0.7**	**0.9**	**0.9**	**0.9**	**0.6**	**0.8**	**0.7**	**0.9**	**0.6**	**1.0**	**1.0**	**1.5**	**1.7**	**0.6**	**1.2**	**1.4**	**1.4**		**0.6**	
Avg.	**8.1**	**8.3**	**8.1**	**8.1**	**8.4**	**8.5**	**8.4**	**8.7**	**8.5**	**8.3**	**8.7**	**8.4**	**8.1**	**7.7**	**8.1**	**8.1**	**8.3**	**8.3**	**8.6**	**8.6**	**8.4**	**8.4**	**8.3**	**8.2**			**8.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.6	2.9	3.0	3.4	4.1	3.3	3.3	3.8	3.9	3.8	3.9	6.9	7.1	9.8	9.6	9.8	8.6	9.5	10.3	10.5	8.6	10.0	10.4	10.9	10.9	2.9	6.7
2	11.8	10.6	10.2	15.9	16.7	15.5	16.1	14.4	14.9	14.1	10.8	16.7	15.6	16.0	16.3	15.7	15.8	15.4	17.0	17.2	19.0	18.8	19.1	19.5	19.5	10.2	15.5
3	18.5	18.5	17.6	16.2	16.3	16.1	15.3	16.3	17.9	17.1	17.0	16.2	15.2	15.6	16.5	17.0	17.0	16.5	16.9	17.3	16.5	17.3	15.5	15.1	18.5	15.1	16.6
4	15.0	14.7	13.9	14.9	13.4	12.6	13.2	13.2	12.8	13.6	12.9	12.9	12.8	13.1	12.6	12.2	11.9	12.1	11.7	11.7	11.7	12.5	12.6	13.0	15.0	11.7	13.0
5	12.8	13.8	13.8	12.5	12.9	11.5	12.0	10.9	10.9	10.1	7.1	5.1	3.8	2.8	3.5	4.2	4.6	4.2	4.3	4.1	4.3	2.5	3.5	4.4	13.8	2.5	7.5
6	6.2	4.6	5.3	4.9	5.7	3.7	4.7	4.2	5.8	4.5	5.2	6.2	6.5	3.4	2.6	2.3	4.7	7.4	8.4	10.3	11.3	13.0	14.9	16.5	16.5	2.3	6.8
7	17.5	17.6	17.8	17.8	17.7	17.0	18.3	16.7	16.7	15.5	15.5	15.4	13.5	13.5	12.5	12.6	11.0	11.1	10.3	11.1	10.7	9.8	8.6	8.0	18.3	8.0	14.0
8	9.3	7.9	7.7	8.6	6.5	5.8	5.5	3.4	2.9	2.6	1.5	1.2	3.2	2.1	4.1	4.1	4.4	5.6	5.3	6.3	6.0	6.2	7.6	8.5	9.3	1.2	5.3
9	9.3	8.8	8.8	7.5	7.8	9.0	7.7	7.8	8.0	9.3	9.3	8.0	7.9	7.5	8.9	7.9	7.4	7.9	7.7	6.9	6.3	5.3	5.4	4.9	9.3	4.9	7.7
10	6.0	7.8	7.8	6.1	6.5	5.9	4.5	4.2	4.0	3.5	3.9	5.4	5.1	11.1	20.4	15.2	9.8	15.0	18.1	17.2	14.6	11.5	11.5	13.3	20.4	3.5	9.5
11	8.3	9.9	6.4	9.8	7.6	7.0	7.0	4.6	2.8	2.8	2.0	1.6	1.5	2.5	3.5	2.9	3.3	5.2	5.6	7.4	11.0	12.5	13.6	10.2	13.6	1.5	6.2
12	9.2	10.1	11.3	12.6	11.8	12.8	13.4	15.9	15.0	14.8	15.0	14.2	12.8	11.1	10.4	10.6	9.5	9.1	6.8	6.0	5.2	4.5	1.8	4.4	15.9	1.8	10.3
13	3.3	2.7	2.3	2.8	3.1	3.2	2.8	1.6	1.4	1.6	2.3	2.7	2.9	3.5	3.5	3.2	3.1	1.7	1.9	1.4	2.0	1.1	1.6	1.6	3.5	1.1	2.4
14	1.4	2.6	2.3	2.5	1.8	2.7	2.7	2.6	2.9	3.3	2.9	2.7	1.7	1.0	0.9	4.0	5.6	6.2	6.3	6.2	6.4	6.5	5.7	5.8	6.5	0.9	3.6
15	4.4	3.6	2.5	7.3	7.8	5.7	3.9	5.9	6.0	3.2	1.7	3.3	2.5	2.3	1.8	1.8	1.9	2.3	1.7	2.5	4.8	5.9	5.5	4.1	7.8	1.7	3.9
16	4.5	3.8	3.1	3.1	3.2	3.1	4.5	2.0	1.9	1.1	1.7	3.6	3.5	4.4	4.3	3.6	3.1	2.7	2.6	2.5	2.9	2.5	2.2	2.6	4.5	1.1	3.0
17	2.2	1.6	2.6	3.3	3.7	3.0	3.0	3.7	3.2	3.7	3.6	3.8	3.2	3.4	4.5	5.0	5.2	4.2	5.3	3.8	2.4	3.1	5.0	4.7	5.3	1.6	3.6
18	4.5	4.5	5.2	5.5	5.9	6.5	7.9	8.2	6.5	6.7	6.1	5.6	4.3	5.1	6.2	5.6	5.5	5.9	3.7	6.5	6.2	6.2	4.9	6.1	8.2	3.7	5.8
19	5.1	7.1	6.0	8.7	7.3	8.6	9.8	9.7	11.4	11.3	12.0	12.3	12.4	12.9	13.6	13.3	12.1	11.8	11.5	11.7	12.8	11.8	12.2	11.3	13.6	5.1	10.7
20	11.2	12.2	13.6	13.5	13.3	12.9	12.0	12.9	15.0	17.6	18.8	17.5	17.0	16.8	18.0	17.7	17.9	18.0	19.1	18.8	18.4	18.0	18.4	17.0	19.1	11.2	16.1
21	17.1	18.5	17.9	18.0	20.0	18.5	18.3	18.7	19.3	18.2	17.0	17.6	16.2	15.0	15.9	15.5	14.4	14.1	9.6	9.7	7.2	5.9	7.2	4.5	20.0	4.5	14.8
22	6.1	5.0	3.0	4.2	4.3	4.1	4.3	6.0	7.3	5.8	3.6	5.2	3.2	6.8	5.0	6.0	5.2	5.1	6.1	5.7	8.8	7.9	6.1	4.8	8.8	3.0	5.4
23	5.1	4.2	2.5	2.9	2.7	2.4	3.2	2.7	3.3	2.8	2.4	2.9	1.7	2.1	1.6	1.4	1.8	2.2	2.6	4.2	3.9	7.0	8.0	7.1	8.0	1.4	3.4
24	7.7	8.6	7.2	6.6	6.8	8.2	7.7	7.3	6.9	5.5	5.8	5.6	5.6	5.4	7.8	6.1	8.0	4.0	3.6	3.2	2.8	3.0	2.5	2.6	8.6	2.5	5.8
25	11.3	12.3	13.1	14.2	14.9	14.4	14.1	14.1	14.6	13.3	12.8	12.9	14.0	14.6	15.7	17.5	21.8	21.6	23.2	25.7	25.0	19.0	14.9	18.6	25.7	11.3	16.4
26	18.3	19.7	23.1	23.2	22.6	20.9	19.6	19.4	18.0	16.0	15.5	15.1	14.9	14.4	13.0	13.5	13.2	13.0	13.0	12.9	12.7	12.3	10.8	10.9	23.2	10.8	16.1
27	9.1	7.6	8.7	7.0	6.9	4.3	5.7	4.0	6.1	6.9	7.5	5.5	5.2	5.3	4.7	6.7	6.3	8.5	9.2	7.7	6.7	4.8	3.3	3.0	9.2	3.0	6.3
28	3.4	3.9	4.6	2.8	3.6	3.8	3.5	3.2	4.2	2.3	3.3	3.1	4.4	5.2	2.9	3.9	7.4	9.8	11.7	12.9	12.5	14.1	15.7	14.5	15.7	2.3	6.5
29	14.9	16.9	16.8	17.0	18.1	18.0	18.1	21.2	22.9	23.2	23.9	24.3	24.4	25.0	25.2	24.1	25.1	24.9	24.8	25.3	25.2	24.8	22.9	23.6	25.3	14.9	22.1
30	22.4	24.9	25.7	26.2	25.0	26.1	25.5	23.4	21.8	22.4	21.7	22.2	18.6	20.6	21.4	17.8	12.5	13.8	16.1	14.2	14.2	12.7	15.0	11.7	26.2	11.7	19.8
Max.	**22.4**	**24.9**	**25.7**	**26.2**	**25.0**	**26.1**	**25.5**	**23.4**	**22.9**	**23.2**	**23.9**	**24.3**	**24.4**	**25.0**	**25.2**	**24.1**	**25.1**	**24.9**	**24.8**	**25.7**	**25.2**	**24.8**	**22.9**	**23.6**	**26.2**		
Min.	**1.4**	**1.6**	**2.3**	**2.5**	**1.8**	**2.4**	**2.7**	**1.6**	**1.4**	**1.1**	**1.5**	**1.2**	**1.5**	**1.0**	**0.9**	**1.4**	**1.8**	**1.7**	**1.7**	**1.4**	**2.0**	**1.1**	**1.6**	**1.6**		**0.9**	
Avg.	**9.3**	**9.6**	**9.5**	**10.0**	**9.9**	**9.6**	**9.6**	**9.4**	**9.6**	**9.2**	**8.9**	**9.2**	**8.7**	**9.1**	**9.6**	**9.4**	**9.3**	**9.6**	**9.8**	**10.0**	**10.0**	**9.7**	**9.5**	**9.4**			**9.5**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (Climatronics) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.7	11.2	11.2	9.9	10.6	9.0	11.0	8.6	3.6	4.9	4.2	3.8	2.5	1.6	2.3	1.4	1.5	1.6	2.1	1.5	1.4	1.4	2.2	1.6	11.2	1.4	5.0
2	1.3	2.2	5.2	4.8	1.3	5.0	9.6	7.0	9.6	12.3	11.1	7.9	5.6	6.9	7.1	6.4	5.9	5.9	5.3	5.9	6.6	5.4	5.2	4.3	12.3	1.3	6.2
3	5.6	6.6	6.5	7.2	6.2	8.0	7.7	6.9	6.8	7.2	7.1	9.4	8.2	9.8	8.8	9.3	8.4	8.1	8.2	8.0	7.4	7.4	6.5	4.6	9.8	4.6	7.5
4	4.0	3.4	3.7	4.5	3.8	5.8	8.3	7.0	3.1	3.9	6.3	5.7	5.5	4.2	4.4	3.6	5.1	7.1	9.1	4.6	4.8	4.7	4.4	6.3	9.1	3.1	5.1
5	5.7	5.4	2.8	3.4	2.7	4.8	2.6	1.8	1.8	4.7	7.8	6.1	2.7	3.0	3.2	3.1	3.9	4.9	3.8	4.5	5.0	4.8	4.7	5.2	7.8	1.8	4.1
6	3.6	4.6	3.5	2.5	2.1	2.2	2.8	2.1	1.1	1.1	3.6	1.1	1.3	1.9	2.0	2.5	2.6	1.4	1.7	2.5	2.6	2.9	3.0	3.0	4.6	1.1	2.4
7	2.7	2.8	2.8	4.5	7.1	8.0	7.9	8.7	8.5	9.2	8.6	10.1	8.8	7.5	8.4	5.5	3.9	3.2	0.9	1.2	1.9	4.7	5.1	8.1	10.1	0.9	5.8
8	5.5	5.5	5.7	9.2	9.2	9.3	9.9	8.7	8.2	7.4	10.3	7.9	9.8	10.2	8.8	10.1	11.2	7.9	8.4	5.9	5.5	6.0	6.8	5.4	11.2	5.4	8.0
9	4.5	2.7	3.7	3.8	2.4	1.8	2.3	2.7	3.4	3.7	2.9	3.3	4.0	4.9	6.3	5.8	7.1	8.0	8.7	9.9	9.3	10.4	10.6	7.7	10.6	1.8	5.4
10	6.6	6.6	7.0	10.8	10.4	11.1	15.3	15.4	14.0	14.6	16.4	15.0	14.6	13.5	9.1	11.8	11.1	10.7	11.5	10.3	12.2	12.8	12.1	13.0	16.4	6.6	11.9
11	12.2	10.4	12.1	11.7	11.8	9.8	8.0	6.4	9.0	9.3	8.6	8.2	9.6	10.6	8.6	9.2	9.9	9.3	8.9	10.1	10.0	10.3	13.9	14.5	14.5	6.4	10.1
12	9.1	12.0	12.8	9.8	11.2	11.9	12.4	8.8	6.5	6.8	3.5	2.7	6.2	7.7	5.2	2.1	1.6	2.3	3.0	2.0	2.6	6.4	5.7	4.7	12.8	1.6	6.5
13	7.5	4.1	4.4	6.8	2.8	2.7	2.8	2.2	4.2	2.4	2.4	7.5	3.9	2.5	5.2	3.0	3.0	5.2	1.5	2.1	3.2	3.2	2.4	0.7	7.5	0.7	3.6
14	2.1	2.9	3.2	2.1	1.4	1.4	2.2	3.8	2.4	3.0	2.1	2.9	3.0	2.4	3.2	3.2	2.2	1.2	1.6	4.7	5.1	5.6	8.0	8.4	8.4	1.2	3.3
15	7.7	7.8	8.4	7.0	8.1	9.1	6.8	7.1	6.0	4.3	3.7	3.0	3.6	2.3	0.6	0.8	0.9	0.7	0.7	1.4	1.9	1.9	1.9	2.9	9.1	0.6	4.1
16	1.9	2.4	1.5	1.0	0.7	1.6	1.9	1.1	2.3	3.9	3.8	4.1	2.8	1.8	4.7	4.1	5.1	6.2	5.5	7.0	10.6	9.3	9.9	4.7	10.6	0.7	4.1
17	3.6	5.0	10.9	10.7	6.6	5.7	6.9	7.2	8.2	6.5	7.4	7.7	7.2	6.2	7.5	7.7	8.0	8.0	8.0	9.7	5.9	4.7	3.9	2.4	10.9	2.4	6.9
18	2.3	1.9	1.9	6.1	8.9	8.5	7.8	7.3	7.1	7.7	7.5	7.1	7.9	8.3	7.8	8.0	7.9	7.6	9.5	8.5	7.0	9.1	9.4	6.8	9.5	1.9	7.2
19	7.3	6.6	7.9	8.8	8.0	7.5	8.1	7.8	5.7	6.1	5.9	5.0	4.7	5.7	6.2	6.3	6.9	5.9	6.9	7.2	7.9	7.2	7.2	8.6	8.8	4.7	6.9
20	7.3	6.3	7.0	7.6	6.9	5.8	4.5	3.6	3.7	4.2	5.4	2.4	1.9	3.1	3.7	3.4	3.4	2.4	2.3	2.3	2.3	1.6	0.9	3.3	7.6	0.9	4.0
21	3.7	2.4	1.8	2.5	1.6	1.1	2.1	1.3	1.3	1.3	0.9	0.8	1.1	1.0	1.3	2.2	2.9	2.8	1.6	1.9	1.4	1.4	1.5	1.6	3.7	0.8	1.7
22	2.1	1.7	1.9	0.7	1.7	0.8	1.3	2.5	5.1	2.3	1.2	1.3	1.5	1.2	2.1	1.8	3.6	3.2	3.4	4.6	3.9	6.0	5.1	3.7	6.0	0.7	2.6
23	1.4	0.6	2.0	2.1	1.8	1.9	1.9	1.6	1.2	1.5	4.1	17.3	16.4	22.4	22.7	19.4	18.0	17.4	18.4	17.3	18.2	17.7	16.4	14.9	22.7	0.6	10.7
24	15.3	17.6	19.3	18.4	16.3	16.2	19.4	19.0	19.4	21.4	18.4	13.7	13.0	7.6	10.9	10.2	7.2	8.6	7.1	10.7	12.3	6.8	2.9	1.8	21.4	1.8	13.1
25	1.2	4.7	4.0	3.1	3.0	2.1	2.5	3.5	3.0	3.1	2.1	2.6	5.2	3.8	3.2	2.2	1.0	2.2	1.6	4.5	14.1	14.5	17.0	20.9	20.9	1.0	5.2
26	17.5	19.3	22.4	20.7	20.1	21.8	22.5	22.1	20.6	18.4	19.8	23.7	23.9	22.3	27.5	20.4	21.9	22.6	23.0	18.5	17.5	20.4	22.8	18.4	27.5	17.5	21.2
27	17.2	17.1	16.3	16.6	17.6	18.6	20.0	19.9	19.6	17.4	18.3	16.1	16.3	15.8	15.6	16.1	15.5	16.0	15.6	14.4	15.7	15.7	15.2	15.4	20.0	14.4	16.7
28	15.9	16.8	16.4	17.1	17.3	17.3	17.5	18.1	16.5	15.1	15.4	16.3	15.5	15.3	15.2	15.0	15.0	14.1	14.6	13.0	13.3	13.1	13.0	12.7	18.1	12.7	15.4
29	11.0	11.6	12.1	12.8	13.6	13.0	11.7	11.3	12.7	12.5	12.8	10.8	10.5	11.2	10.2	7.6	8.9	5.8	4.5	5.1	4.7	6.4	5.5	6.4	13.6	4.5	9.7
30	7.1	6.4	3.5	7.0	8.2	10.8	9.1	8.0	8.1	13.2	12.7	13.3	12.6	14.2	14.1	14.9	16.2	16.0	16.9	14.9	14.5	16.7	17.1	16.8	17.1	3.5	12.2
31	19.0	19.0	18.2	19.9	20.3	19.6	20.7	19.9	19.1	19.4	17.2	19.1	18.5	18.1	17.6	17.4	17.1	16.6	15.5	15.9	16.1	17.7	15.8	16.9	20.7	15.5	18.1
Max.	**19.0**	**19.3**	**22.4**	**20.7**	**20.3**	**21.8**	**22.5**	**22.1**	**20.6**	**21.4**	**19.8**	**23.7**	**23.9**	**22.4**	**27.5**	**20.4**	**21.9**	**22.6**	**23.0**	**18.5**	**18.2**	**20.4**	**22.8**	**20.9**	**27.5**		
Min.	**1.2**	**0.6**	**1.5**	**0.7**	**0.7**	**0.8**	**1.3**	**1.1**	**1.1**	**1.1**	**0.9**	**0.8**	**1.1**	**1.0**	**0.6**	**0.8**	**0.9**	**0.7**	**0.7**	**1.2**	**1.4**	**1.4**	**0.9**	**0.7**		**0.6**	
Avg.	**7.2**	**7.3**	**7.7**	**8.2**	**7.9**	**8.1**	**8.6**	**8.1**	**7.8**	**8.0**	**8.1**	**8.3**	**8.0**	**8.0**	**8.2**	**7.6**	**7.6**	**7.5**	**7.4**	**7.4**	**7.9**	**8.3**	**8.3**	**7.9**			**7.9**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	62.2	101.5	76.7	80.9	60.6	84.1	77.7	349.9	280.1	243.7	309.1	277.0	314.9	290.0	300.4	307.8	313.2	312.8	313.5	307.2	309.5	310.3	304.1	304.4
2	305.0	308.7	308.5	312.0	307.8	306.7	306.8	309.8	309.9	307.2	308.2	313.7	311.0	315.1	314.5	314.4	317.1	315.0	315.6	315.1	313.9	314.4	312.2	312.5
3	312.1	306.5	304.9	305.3	303.0	305.6	290.7	298.1	308.8	304.2	309.3	310.7	311.1	308.3	309.4	308.9	305.5	303.7	303.3	305.6	311.0	312.3	313.5	313.6
4	314.1	314.9	315.2	314.9	314.1	313.5	314.0	314.5	314.0	313.9	312.5	312.1	312.7	311.6	311.9	310.8	312.8	311.7	309.7	305.0	304.5	300.9	303.1	299.6
5	299.6	303.4	299.7	302.4	303.6	302.1	302.6	301.4	305.4	299.8	294.9	291.2	292.1	290.8	292.9	293.1	294.7	296.1	296.2	293.2	293.2	292.9	292.8	290.0
6	288.1	298.3	306.6	298.4	296.2	292.2	289.4	296.7	292.7	293.0	293.4	294.6	291.4	293.8	294.2	290.3	291.1	291.4	292.4	296.3	295.4	294.5	294.4	294.5
7	296.7	295.7	294.7	303.8	305.9	307.7	310.9	309.4	310.1	312.3	312.3	313.6	311.9	313.8	315.2	312.7	313.6	313.4	311.6	314.3	309.7	310.6	312.3	312.3
8	311.0	306.6	309.0	311.4	309.9	313.7	313.6	314.0	314.4	314.0	313.8	313.1	313.5	313.8	313.4	314.4	315.2	313.3	314.9	314.9	316.4	315.7	314.1	312.1
9	311.2	313.8	315.1	315.9	313.7	315.1	316.1	314.6	312.9	314.4	313.5	314.9	317.0	317.2	318.4	318.0	321.3	323.0	319.9	321.0	318.4	315.2	318.6	319.8
10	319.1	317.8	320.1	317.6	318.8	314.7	317.0	312.6	316.3	314.3	316.1	314.9	314.4	309.8	306.5	310.7	307.6	313.1	307.1	307.3	305.7	313.9	318.7	313.9
11	312.6	309.8	311.3	310.9	306.0	310.5	309.8	315.5	311.3	310.1	307.0	308.7	308.2	306.2	303.5	304.5	311.6	315.6	314.0	314.2	314.2	311.8	311.2	309.8
12	310.6	310.3	309.7	310.2	312.4	313.9	310.9	310.9	314.3	315.2	314.3	312.9	312.8	312.9	310.9	312.8	314.6	315.5	314.5	316.0	317.6	314.3	314.3	316.9
13	316.5	314.1	314.7	310.5	307.3	309.1	310.0	309.8	309.9	305.7	311.8	313.6	313.3	315.2	316.5	318.4	317.3	317.9	322.1	317.7	320.7	316.5	313.2	314.5
14	312.4	309.9	312.4	311.7	311.6	310.7	323.4	323.3	320.0	320.5	327.7	94.4	81.0	96.7	141.1	80.8	271.5	141.4	214.8	98.7	101.8	102.7	87.6	83.7
15	76.7	81.1	88.1	85.3	82.9	97.8	81.8	95.9	127.3	101.1	96.8	93.7	89.0	104.6	93.9	109.3	99.6	98.1	68.9	101.4	286.6	128.7	31.7	324.0
16	331.3	316.0	314.4	312.3	299.7	289.9	323.2	327.3	325.7	323.1	321.0	324.3	332.9	320.8	315.2	319.4	327.9	309.7	319.9	315.1	312.0	332.9	337.7	320.1
17	255.2	194.2	118.2	95.0	111.9	131.6	132.0	94.8	72.3	70.5	80.3	69.1	65.8	52.2	53.9	28.2	22.2	40.5	58.5	343.7	359.9	330.1	195.9	17.3
18	278.2	328.5	123.6	138.8	62.9	58.6	47.5	328.1	106.2	2.0	327.7	324.0	58.2	213.9	246.4	248.2	115.5	327.1	309.2	333.9	83.1	97.8	98.9	117.7
19	97.1	107.6	113.0	120.6	117.9	126.2	122.4	112.1	95.4	117.2	127.2	118.0	119.7	111.6	95.0	95.1	89.3	85.6	86.0	96.4	83.2	72.4	59.1	81.8
20	77.3	81.5	76.1	83.7	76.7	86.7	86.5	85.9	84.6	84.5	87.4	83.2	81.0	82.5	79.9	83.5	87.4	79.6	331.4	322.7	325.4	324.1	325.4	139.4
21	113.2	110.2	116.8	150.7	132.2	143.4	108.0	150.8	65.4	126.7	120.8	108.6	77.9	85.9	86.1	80.9	84.6	73.7	85.8	85.3	57.8	0.0	48.2	14.4
22	14.3	14.4	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	0.0	14.3	15.1	14.5	14.6	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
23	14.8	14.8	14.8	14.8	14.8	14.8	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	359.9	0.0	360.0	360.0	360.0	360.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	359.9	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	359.9	359.9	359.9	360.0	360.0	0.0	14.5	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
31	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.7	14.7	14.7	14.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
2	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
3	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
4	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
5	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
7	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.5	14.5	12.4	8.6	330.3	305.3	318.7	309.0	312.4	313.3	315.1	317.1	319.9
8	322.5	331.7	322.0	328.9	330.5	309.2	334.7	68.8	63.3	68.2	64.0	71.9	60.7	15.1	22.0	58.1	61.5	42.6	62.8	49.9	43.9	11.6	91.5	96.8
9	3.3	3.7	52.5	61.6	66.0	74.5	84.0	85.1	84.8	82.5	82.8	86.5	90.7	80.2	76.8	107.9	317.5	313.2	315.0	304.7	300.3	311.7	316.8	316.8
10	299.2	281.7	285.3	301.2	315.3	303.0	309.7	314.4	297.4	274.4	300.9	296.9	288.3	283.6	295.6	286.5	297.8	286.2	307.6	312.9	308.9	312.9	318.9	321.5
11	295.6	299.8	333.6	325.2	353.2	311.2	304.1	302.6	328.9	314.6	302.7	305.7	299.7	308.8	312.0	319.4	315.2	309.6	319.3	318.1	319.7	313.3	315.4	312.8
12	312.7	312.9	314.1	312.9	314.4	314.7	315.7	323.1	324.1	319.1	314.7	314.3	314.8	315.8	311.9	310.3	312.7	310.4	309.4	302.5	312.3	327.2	331.3	335.8
13	96.8	112.6	111.4	99.7	55.0	50.5	58.7	49.7	43.5	28.8	24.7	11.6	54.9	31.5	26.3	51.6	50.3	44.5	62.4	61.3	34.6	48.0	49.2	44.1
14	61.7	58.2	60.1	56.9	60.7	49.4	51.1	55.2	43.1	38.7	316.7	312.2	316.3	318.0	321.0	320.5	319.2	317.9	314.0	303.3	290.8	296.5	303.3	298.0
15	292.3	291.3	290.4	288.4	289.8	295.7	308.5	315.0	310.6	313.9	314.2	310.6	316.8	318.8	323.6	311.4	313.3	313.9	313.0	304.1	313.0	307.7	77.1	78.6
16	62.5	57.3	48.4	49.1	22.5	26.5	46.6	54.6	82.5	66.0	55.7	41.8	68.3	84.8	86.9	82.0	154.8	200.0	108.8	131.3	119.6	350.8	89.0	101.3
17	110.1	106.1	126.8	296.7	113.4	99.9	71.8	58.9	67.0	80.4	76.9	75.0	52.5	65.2	56.8	1.5	32.8	70.1	81.0	88.9	107.7	93.0	86.9	95.8
18	87.0	89.7	93.8	94.9	94.9	95.4	94.8	93.6	89.5	87.0	87.8	93.4	103.3	94.0	96.6	86.9	89.0	92.3	93.0	94.3	102.2	81.5	69.7	93.0
19	115.6	112.0	78.8	106.4	121.3	83.3	82.7	83.5	71.1	71.2	70.5	63.8	63.0	75.4	64.6	52.7	56.5	55.0	60.9	66.8	58.7	64.2	54.8	76.1
20	80.3	81.8	87.5	92.7	92.9	89.8	89.8	96.4	95.4	95.6	74.0	80.8	78.0	87.6	65.3	56.5	64.1	60.6	67.5	83.9	72.3	72.4	59.8	258.9
21	72.5	76.9	59.3	83.3	83.6	134.6	103.9	195.6	78.4	75.0	76.1	63.4	31.2	54.7	60.3	67.3	79.6	74.5	75.2	77.2	67.8	68.6	67.2	66.6
22	87.1	78.5	71.1	64.2	53.8	63.0	353.6	26.3	23.7	43.8	65.0	73.1	86.5	89.6	93.4	94.6	93.5	91.2	97.2	91.9	81.7	96.5	94.1	114.7
23	114.4	98.7	100.3	88.9	318.6	317.6	320.5	268.9	310.5	261.6	248.5	298.5	308.2	302.7	302.4	291.3	313.1	319.2	287.3	307.5	298.8	298.6	311.8	310.2
24	305.6	293.3	309.3	306.1	305.8	304.7	307.2	309.3	307.5	308.2	305.2	305.5	305.4	309.5	311.2	309.4	311.8	310.3	310.8	311.0	310.4	309.8	307.9	298.2
25	297.4	302.9	302.9	303.5	304.7	298.5	293.0	294.9	295.6	299.0	302.7	304.6	303.7	292.5	82.7	62.2	66.3	52.0	50.5	30.5	26.5	18.9	28.5	27.8
26	40.1	38.1	34.1	351.7	49.9	43.1	59.0	59.6	266.3	268.9	219.1	133.1	194.9	286.9	205.0	185.4	321.6	308.3	269.2	271.6	299.8	303.4	313.1	307.7
27	308.2	313.3	307.7	307.1	305.6	315.8	306.1	314.0	312.6	296.2	312.8	267.3	317.1	326.9	332.7	87.6	123.1	156.5	281.7	202.2	252.4	31.5	56.0	3.7
28	334.7	2.5	21.4	35.1	43.3	75.7	83.2	85.6	89.7	77.6	211.1	175.6	96.7	98.4	107.1	111.2	112.2	245.0	261.9	310.1	308.0	309.3	311.0	312.7
29	313.5	316.7	315.4	320.2	311.2	317.6	305.1	321.7	306.5	302.3	301.8	306.1	309.3	308.6	310.6	313.4	306.8	303.8	309.4	310.5	311.2	310.9	311.2	310.1

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	308.2	312.4	312.9	313.2	314.0	311.8	312.3	309.3	302.2	297.3	278.5	49.2	32.5	243.2	304.8	350.4	259.2	23.9	14.9	8.1	21.2	46.2	47.2	39.6
2	355.9	290.2	33.6	41.7	28.1	26.3	31.5	95.7	100.3	106.5	113.9	332.4	277.9	80.5	75.1	78.8	78.6	271.9	264.1	296.9	288.3	298.4	206.4	137.6
3	127.4	117.2	118.0	120.0	111.7	104.6	80.5	65.7	85.4	86.2	85.5	90.2	90.6	90.1	82.7	79.9	76.9	72.5	82.9	91.7	88.3	87.0	89.2	88.5
4	91.5	91.3	88.0	88.6	94.1	94.0	95.5	94.3	94.3	94.3	97.7	96.5	90.6	81.0	81.2	78.6	81.7	73.7	81.5	85.6	91.4	90.3	70.5	73.1
5	55.3	47.4	50.9	63.5	57.7	67.4	53.3	46.6	45.7	45.6	46.7	58.0	60.6	56.8	60.6	68.3	74.6	80.6	92.4	87.8	92.3	88.9	91.0	92.5
6	85.7	86.5	89.0	88.7	87.8	85.5	88.5	86.9	86.7	86.3	92.7	124.5	106.2	81.1	92.5	119.5	72.3	66.9	74.2	48.3	78.8	259.9	145.3	108.9
7	258.1	271.3	300.3	160.1	113.4	274.4	311.7	308.9	303.7	311.0	317.5	318.1	311.4	298.1	308.0	315.9	316.1	317.5	319.0	314.1	318.2	311.7	306.9	299.5
8	305.1	320.1	319.7	322.4	316.7	349.1	245.1	110.8	87.1	82.4	77.5	62.5	49.3	63.0	61.7	64.4	45.7	44.4	49.2	70.4	45.1	83.4	84.7	68.2
9	74.4	71.7	33.3	101.5	94.9	248.2	84.6	78.2	100.1	298.2	274.2	236.9	122.4	206.7	280.2	277.9	215.2	316.6	324.9	313.8	306.9	308.4	309.3	302.0
10	345.7	272.4	334.5	40.6	294.4	317.5	313.8	311.4	313.0	314.4	312.7	315.7	310.4	307.8	307.9	304.9	308.2	307.4	302.9	307.7	305.6	302.2	300.9	309.7
11	313.2	315.6	316.0	318.6	318.9	321.4	321.0	322.1	321.4	316.8	316.5	318.9	318.3	320.0	315.3	316.1	314.1	310.7	311.7	307.7	306.7	306.7	298.7	297.8
12	304.8	317.3	319.8	320.6	321.0	320.8	319.1	314.8	314.5	314.1	313.1	313.7	317.3	315.6	315.7	315.2	317.0	317.0	313.8	315.6	315.2	316.0	314.6	314.7
13	313.1	314.1	313.8	315.5	318.0	322.3	324.1	324.3	322.1	321.8	321.9	324.3	328.1	329.2	319.9	320.2	324.6	324.7	321.8	319.6	321.6	324.1	320.1	316.5
14	314.1	313.3	312.4	312.6	312.2	313.2	307.4	307.9	314.3	321.9	293.1	300.5	310.0	319.1	310.6	221.1	114.3	121.6	116.6	102.2	101.0	90.1	84.1	87.9
15	69.8	67.6	28.4	40.5	48.4	65.8	58.0	62.8	74.6	62.2	65.0	64.1	43.6	49.8	64.1	66.0	62.8	36.3	32.9	39.7	43.9	59.1	47.2	59.8
16	42.6	41.1	295.0	296.9	233.2	307.0	88.4	81.8	58.1	323.8	85.8	84.8	73.9	176.6	156.5	150.4	128.9	105.8	94.5	76.6	87.2	314.9	316.5	317.0
17	315.7	312.7	317.2	323.6	317.1	320.6	317.4	310.5	304.7	304.0	305.6	304.4	298.0	310.7	311.7	308.9	316.2	322.0	318.2	302.1	324.7	321.4	326.6	330.0
18	325.0	320.9	323.7	321.1	312.3	313.7	313.2	304.2	299.2	300.1	289.3	290.4	295.8	297.0	296.1	300.0	296.2	300.0	309.4	307.8	300.6	303.2	295.3	296.9
19	310.1	307.5	310.3	314.0	316.6	316.0	312.3	307.8	312.9	314.7	314.1	310.9	307.9	305.6	304.5	298.3	293.7	291.5	294.6	296.0	295.9	294.7	295.1	302.7
20	296.6	307.3	308.1	307.7	306.1	308.6	313.2	314.5	313.4	313.1	314.4	317.1	314.3	316.4	316.5	317.3	316.6	316.2	316.0	316.1	315.1	313.9	312.4	311.0
21	314.2	314.3	314.4	312.9	314.0	311.9	305.7	284.0	249.5	337.2	67.2	75.7	70.1	47.6	273.5	297.2	262.8	222.1	306.2	302.4	272.1	38.3	118.7	54.7
22	305.7	3.9	286.5	343.9	334.5	279.1	285.6	310.6	305.1	309.6	305.4	306.4	306.9	307.0	308.6	308.8	312.5	311.4	309.7	310.0	311.2	309.9	307.3	308.7
23	310.9	311.5	308.2	312.4	313.7	314.3	312.6	313.8	316.6	316.8	317.5	318.2	319.7	316.1	321.1	321.4	319.1	321.4	323.5	322.0	319.2	318.0	317.8	317.5
24	316.8	317.8	315.7	314.2	311.7	311.0	313.6	313.7	313.9	313.7	313.7	314.7	314.6	316.6	316.0	316.6	316.9	316.8	316.0	314.5	316.9	313.8	309.1	300.6
25	226.2	299.6	320.5	323.9	318.5	320.0	311.8	315.1	312.5	307.3	290.9	288.0	304.0	307.5	306.6	312.1	314.1	310.9	310.9	313.0	312.9	313.4	313.8	314.2
26	311.9	311.2	310.6	312.9	312.6	312.2	311.6	311.4	310.8	310.3	311.9	311.6	312.6	314.6	316.0	315.5	315.5	315.8	319.4	318.8	316.9	315.0	318.4	321.4
27	320.8	314.6	321.2	324.6	321.8	319.0	321.3	322.7	325.4	324.9	316.6	317.5	317.5	321.3	320.8	320.2	324.1	324.5	324.6	323.1	323.6	320.7	319.5	318.7
28	315.7	314.8	315.1	313.2	313.4	311.6	313.1	313.5	313.4	311.2	310.0	311.8	309.6	314.4	313.5	311.8	311.6	307.7	304.7	302.0	278.4	304.2	236.8	97.1
29	87.5	102.1	74.0	79.8	89.1	87.8	82.3	85.5	84.0	85.6	92.0	79.6	90.1	92.6	86.4	77.8	76.7	83.8	91.6	96.4	98.2	99.5	94.9	84.9
30	75.1	86.5	92.8	96.5	91.4	94.1	94.9	94.8	91.0	90.7	92.3	88.3	91.5	96.7	98.3	93.8	91.4	96.5	100.3	92.4	84.8	88.2	89.8	90.4
31	95.0	94.0	93.6	89.6	95.1	97.2	94.4	95.9	95.3	93.3	91.0	97.6	101.4	102.1	98.2	99.4	93.0	95.5	92.8	90.8	99.0	100.6	100.4	102.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	97.7	92.5	84.0	80.4	79.0	86.4	95.6	90.7	77.6	81.1	88.5	83.5	82.2	81.4	72.0	75.8	62.6	53.7	56.8	46.8	283.2	290.4	289.4	212.9
2	290.6	312.8	308.2	310.1	312.5	311.4	312.3	310.9	310.8	310.1	312.2	312.4	312.6	315.1	298.2	293.7	127.8	98.5	100.0	103.8	95.1	92.1	94.3	87.3
3	87.3	86.1	83.5	112.3	98.2	91.4	83.8	81.0	69.4	52.0	85.3	84.4	87.8	87.8	88.5	91.9	99.7	90.1	92.6	91.0	91.9	89.0	89.0	88.7
4	94.5	96.4	93.4	94.9	92.1	93.7	93.1	89.1	85.3	85.4	90.8	95.5	100.6	91.6	81.2	76.5	74.8	89.0	83.2	75.6	324.0	317.1	300.0	296.2
5	294.4	294.8	305.5	308.4	303.7	297.8	292.6	291.2	294.5	301.2	295.5	295.8	290.6	293.2	289.1	287.4	285.6	292.9	295.3	294.4	287.8	290.4	281.2	283.4
6	280.1	283.4	280.8	285.1	291.7	296.7	296.0	300.1	298.5	301.7	298.5	314.1	317.1	309.6	296.8	311.4	309.4	307.8	297.5	297.1	307.3	298.2	299.6	302.7
7	305.1	310.3	317.5	312.2	311.9	315.5	320.0	318.1	318.6	317.5	315.2	320.6	323.0	327.3	324.8	322.9	326.0	320.2	318.4	319.7	314.3	316.5	318.4	315.2
8	314.4	306.9	309.1	312.1	310.9	312.1	312.5	310.2	316.1	313.7	302.4	299.2	206.3			185.4	134.6	139.0	294.6	311.5	284.5	324.9	299.3	301.8
9	304.5	301.0	298.7	299.8	300.7	306.1	310.2	316.3	321.4	328.6	326.9	333.1	321.3	319.7	307.3	291.4	288.1	288.0	287.4	288.3	289.0	290.1	294.4	295.8
10	296.6	300.9	303.3	304.3	308.0	308.6	312.8	310.5	313.0	311.3	317.8	319.4	322.0	323.1	326.6	319.8	327.4	329.5	329.3	327.8	327.1	324.4	322.3	317.3
11	303.2	302.8	296.1	312.7	317.0	317.9	318.1	318.3	320.6	319.9	319.4	316.3	317.2	323.1	326.6	323.2	328.8	322.2	321.9	318.0	317.5	302.4	302.4	311.2
12	320.4	320.7	323.9	326.9	323.7	323.5	322.9	322.3	320.6	318.5	321.4	324.0	325.9	325.9	329.0	315.9	304.9	295.6	296.2	303.4	303.0	316.2	314.4	319.7
13	324.9	322.5	320.1	320.8	316.5	315.9	319.2	313.5	308.6	307.3	305.8	330.1	305.7	109.4	268.8	313.7	309.6	297.3	290.9	297.7	295.7	300.7	299.0	294.9
14	305.3	303.3	305.4	311.3	307.9	303.0	298.6	284.7	283.5	281.9	285.6	284.3	292.9	295.7	293.9	296.4	295.6	295.5	292.4	293.2	289.5	299.8	311.8	319.1
15	324.9	323.2	312.5	309.6	311.1	303.4	316.3	88.5	143.9	121.8	286.8	317.5	322.2	322.1	307.7	292.1	288.3	288.1	290.1	291.4	283.5	284.0	288.5	291.9
16	304.0	326.5	306.6	305.4	317.9	311.1	316.6	311.9	300.3	294.3	296.5	289.6	286.2	285.6	287.7	288.6	291.6	299.4	299.7	296.8	305.5	301.4	295.9	295.3
17	294.5	293.1	290.9	291.6	292.4	296.2	295.1	297.1	302.9	317.8	321.7	312.6	297.7	319.7	310.4	312.1	324.3	328.6	326.9	329.4	322.1	316.9	321.3	328.0
18	315.9	319.7	315.4	321.3	87.4	90.6	102.0	124.3	48.9	329.4	339.7	113.2	129.9	117.6	115.5	120.5	133.5	126.2	115.2	127.8	150.7	152.1	116.5	128.1
19	143.1	106.6	108.1	109.5	105.3	99.6	92.2	109.0	100.9	113.8	139.2	115.4	123.2	141.1	135.7	129.7	119.9	113.6	105.3	109.5	107.7	109.4	108.5	109.7
20	123.6	135.5	136.2	122.8	116.8	118.7	124.5	129.0	117.6	127.8	129.9	128.5	129.1	132.1	129.4	130.0	133.3	132.2	137.8	126.9	123.4	119.3	109.0	106.5
21	101.0	99.7	94.9	98.8	104.7	113.1	108.4	103.8	100.7	107.1	105.2	107.3	110.0	111.8	114.0	111.3	103.4	99.4	101.8	93.8	92.9	94.7	101.5	91.8
22	93.4	90.0	87.2	81.1	86.3	91.5	66.6	328.5	332.3	54.0	115.7	156.6	123.8	117.3	116.7	120.6	118.0	118.4	104.6	76.9	67.2	2.2	330.3	322.6
23	333.7	323.4	341.2	312.6	316.4	326.6	321.4	319.3	320.0	316.9	318.8	315.6	313.9	315.5	317.6	318.8	317.8	318.3	317.4	318.9	319.7	321.3	320.1	321.4
24	321.0	322.8	320.5	321.4	323.7	324.8	322.1	327.9	326.9	322.1	321.7	324.8	330.1	326.3	322.5	320.9	315.7	320.9	319.1	312.2	306.3	304.3	305.6	304.8
25	296.4	302.1	310.0	300.1	301.6	303.9	298.6	292.6	293.7	291.9	289.9	285.2	285.1	288.9	289.5	288.0	286.9	284.4	289.5	293.2	302.2	294.7	300.5	301.3
26	303.5	302.4	299.5	304.3	308.6	308.2	300.0	304.0	308.2	306.7	310.8	307.4	302.9	306.5	313.9	319.2	316.4	316.9	316.0	315.5	312.9	312.8	314.3	313.9
27	312.3	320.0	315.3	312.5	314.6	315.8	312.0	317.5	314.6	313.2	310.5	308.0	308.0	299.8	302.3	298.6	298.4	303.0	305.1	312.8	314.3	313.7	314.7	312.9
28	314.6	313.7	315.4	314.8	313.4	313.4	314.8	318.8	319.8	321.2	324.9	323.0	321.7	327.0	326.2	326.3	326.1	322.8	331.3	328.3	328.6	327.0	322.5	314.2
29	316.4	312.4	312.5	317.6	319.2	314.9	312.9	312.3	316.3	312.1	316.2	314.1	312.6	318.1	315.3	312.3	309.3	309.0	313.9	316.3	310.2	312.4	316.2	312.7
30	314.7	311.9	311.8	307.7	307.8	306.1	305.9	303.1	308.4	307.9	311.5	309.2	264.2	254.4	124.1	127.7	300.5	300.1	299.8	290.5	319.3	312.8	323.9	346.2

Total Hours in Month 744 **Hours Data Available** 718 **Data Recovery** 96.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	315.6	312.7	313.0	313.8	312.5	312.3	311.8	312.5	310.4	307.6	308.4	313.0	317.7	318.2	319.7	322.0	327.7	326.9	327.1	321.3	319.9	314.9	325.3	305.7
2	314.4	322.7	311.6	311.9	317.0	307.9	304.7	312.2	310.5	311.6	310.3	306.4	301.2	305.0	316.7	314.8	313.7	314.6	309.8	314.2	313.6	306.8	310.6	309.1
3	314.3	319.0	318.3	291.9	359.8	321.1	319.1	359.4	346.9	138.7	132.0	108.5	96.9	69.8	79.3	109.2	104.3	80.7	73.6	93.5	80.3	83.2	55.4	48.4
4	53.4	41.9	52.4	69.7	72.0	78.0	78.2	80.1	92.3	86.3	85.3	86.2	78.9	61.6	326.7	270.8	266.2	275.4	279.6	166.9	325.4	320.1	318.2	311.5
5	313.7	312.3	310.8	315.3	314.8	315.6	313.2	305.0	307.8	305.8	304.7	309.5	313.2	310.4	313.4	313.3	307.8	309.6	314.8	315.4	320.2	301.6	324.2	357.5
6	267.4	280.2	286.9	356.6	92.5	94.8	81.6	128.2	279.9	41.8	94.6	110.3	127.1	124.2	107.0	99.8	98.5	97.8	106.3	119.8	105.8	111.2	122.8	113.9
7	104.6	109.6	102.5	92.7	97.5	102.8	97.8	100.7	88.4	85.0	86.1	81.7	66.1	72.8	73.5	89.1	89.0	91.0	116.3	125.9	101.7	99.2	86.3	93.8
8	91.7	79.3	65.7	56.8	67.7	71.3	57.0	75.6	75.1	77.5	70.4	76.1	79.9	90.3	86.8	85.0	81.4	77.2	76.1	77.0	66.2	67.4	75.3	67.4
9	54.4	46.2	51.8	48.4	57.3	51.9	60.8	66.2	61.8	82.0	71.2	64.3	57.6	55.2	64.5	72.3	70.1	90.7	155.6	262.2	19.9	85.5	339.0	285.2
10	302.4	305.9	306.5	309.8	310.3	310.3	304.2	313.9	315.9	313.0	308.3	312.8	316.5	314.4	318.6	316.8	309.5	310.6	86.7	94.4	71.0	117.8	89.8	89.2
11	103.0	135.6	102.7	93.3	115.9	106.8	95.9	83.8	102.7	125.7	125.3	118.0	100.3	96.3	106.9	106.5	101.1	98.6	93.2	90.4	92.4	91.0	89.8	91.9
12	88.5	71.3	49.5	60.2	78.3	72.4	47.2	68.7	78.3	84.9	64.2	54.5	59.0	90.2	118.4	109.4	105.5	102.4	101.0	101.2	99.6	93.6	96.9	98.0
13	94.6	92.8	92.4	89.3	86.5	92.0	87.2	95.4	95.7	96.4	93.1	95.7	98.4	98.2	98.6	98.3	101.9	103.1	103.1	101.2	100.8	109.1	110.5	105.2
14	97.7	93.2	57.9	38.0	61.6	38.3	50.0	69.2	66.8	68.9	299.8	297.8	291.7	309.5	276.2	323.3	288.4	296.0	302.5	293.8	303.6	281.5	341.3	344.0
15	323.3	325.4	322.1	317.7	309.8	319.1	304.0	318.6	33.9	86.3	113.6	114.0	113.4	104.9	99.1	97.5	101.5	99.9	90.0	88.4	344.8	326.4	81.5	24.5
16	256.7	66.7	84.1	91.6	95.3	90.0	93.2	99.7	97.9	105.0	103.2	97.3	102.2	99.3	101.7	114.5	128.6	126.8	122.9	129.2	137.5	126.7	105.7	311.3
17	315.7	321.2	316.3	316.5	318.0	319.0	319.2	317.0	322.0	317.4	316.6	318.4	274.1	144.4	130.5	127.2	101.8	103.2	102.0	96.9	109.2	103.8	108.9	99.2
18	13.4	21.3	103.1	98.8	98.8	89.8	90.2	99.7	94.2	93.4	94.3	98.1	103.8	107.0	103.2	102.2	101.7	117.4	108.1	104.1	103.2	109.9	108.9	108.0
19	100.4	99.9	93.2	55.8	95.3	19.4	322.2	309.8	325.6	321.9	319.8	126.3	144.5	184.8	283.2	298.9	305.1	316.3	327.5	326.1	321.9	319.6	313.4	304.1
20	301.1	302.2	308.3	308.3	308.7	310.7	312.1	312.2	315.9	319.0	317.5	312.4	312.2	313.0	263.9	149.2	109.0	92.4	79.9	78.5	82.1	79.5	62.9	309.9
21	321.2	331.1	333.4	315.5	326.0	321.7	90.4	60.6	316.8	65.7	94.6	104.2	107.9	103.8	106.8	107.5	99.3	98.3	103.7	95.0	116.8	85.2	308.2	320.9
22	311.8	308.6	310.6	309.9	318.4	323.0	325.4	322.9	321.5	321.4	318.2	315.8	280.3	102.7	99.8	104.3	105.8	105.7	109.0	111.1	103.2	104.0	103.5	104.2
23	103.7	105.1	105.1	110.7	97.4	90.4	88.4	90.7	81.1	81.4	65.3	85.3	100.2	104.1	105.0	107.4	110.3	109.1	114.7	115.9	123.3	116.8	120.2	110.8
24	112.9	107.8	102.0	107.1	109.9	112.8	117.6	132.2	124.6	118.0	130.5	135.8	149.3	129.4	109.6	121.7	103.1	97.9	106.8	104.2	123.1	132.2	324.2	338.6
25	336.5	292.5	329.9	327.7	47.0	336.7	332.4	334.9	280.8	198.0	107.7	103.4	107.7	107.4	110.2	109.7	110.4	106.7	101.1	101.7	96.1	80.8	282.4	309.0
26	318.9	315.5	325.7	322.9	318.1	315.3	320.5	315.7	323.4	319.4	317.7	324.2	311.8	324.0	315.7	306.1	309.8	294.7	306.2	302.9	309.5	306.6	307.7	309.9
27	309.6	307.8	322.7	324.6	325.8	323.8	324.6	316.7	324.1	323.0	317.9	322.4	323.4	324.3	322.8	323.7	326.2	325.8	324.3	321.3	325.0	321.4	324.5	318.7
28	325.2	321.6	314.3	313.4	312.9	321.2	319.7	325.4	325.0	324.4	316.5	316.9	320.9	319.8	320.9	322.2	328.2	324.0	321.6	318.1	321.6	319.4	321.8	318.5
29	312.6	309.9	313.0	317.5	305.1	311.4	310.7	315.5	312.2	311.4	314.6	24.8	99.8	90.3	90.8	93.1	90.7	90.6	87.9	96.9	84.7	4.2	67.4	13.0
30	326.9	51.1	350.6	318.8	344.7	105.9	123.6	107.0	123.4	129.2	117.9	121.2	116.6	116.2	104.0	109.6	116.7	117.0	115.9	108.2	108.0	102.9	104.8	103.9
31	93.8	101.2	105.3	124.9	126.5	120.4	129.0	129.5	117.6	120.2	137.3	140.9	144.9	143.5	143.6	142.2	145.1	142.5	140.6	139.3	137.4	139.5	136.4	138.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	134.6	135.4	107.5	102.6	88.0	89.1	90.5	88.0	82.9	91.1	91.9	100.1	99.1	92.8	87.3	93.4	107.4	114.6	87.1	87.7	75.6	87.1	46.9	63.0
2	70.1	37.9	39.9	57.7	52.6	59.2	56.9	53.0	60.5	71.1	54.6	75.8	46.0	70.4	73.2	88.1	97.7	296.9	281.4	244.6	310.7	298.5	287.3	70.9
3	79.9	93.5	278.5	81.0	85.7	76.1	66.1	70.5	30.4	67.2	91.5	139.0	135.8	117.2	102.9	98.6	118.1	108.6	106.2	124.2	90.4	63.6	87.3	212.3
4	335.6	82.6	99.9	111.7	92.2	343.7	95.1	95.9	40.6	325.5	334.6	147.6	128.9	126.5	123.9	100.5	116.6	104.5	117.1	145.3	110.3	104.8	106.6	86.9
5	84.4	108.8	124.0	114.3	105.7	110.0	110.2	110.5	106.3	99.7	101.7	94.9	98.6	93.1	80.6	99.7	97.6	114.7	79.8	80.7	75.0	88.7	53.3	350.7
6	1.5	319.4	317.5	329.7	319.5	314.7	316.7	316.7	308.4	307.7	306.4	313.2	320.1	320.9	324.8	323.5	323.4	318.1	220.2	317.6	318.3	319.5	317.1	314.1
7	321.6	313.7	315.9	316.2	317.1	320.1	323.7	318.0	319.2	316.9	317.3	320.3	323.1	322.2	319.8	320.9	93.6	88.3	89.4	87.5	81.7	85.2	90.8	78.9
8	70.9	72.3	117.9	324.0	314.7	344.4	99.5	297.2	321.8	325.5	327.8	325.2	323.1	324.4	324.4	65.8	34.9	321.5	325.3	314.0	306.3	309.1	305.2	314.4
9	324.0	324.7	320.8	318.0	316.4	318.0	314.6	321.8	325.3	329.4	325.2	330.1	328.4	333.8	330.0	330.2	330.5	327.2	330.7	330.4	329.8	327.2	322.5	323.1
10	325.6	324.4	327.7	325.9	325.7	322.4	321.4	319.1	320.2	321.2	321.5	317.0	310.8	136.5	115.5	118.2	115.7	113.5	112.5	108.8	108.6	103.9	104.6	103.6
11	100.7	94.2	105.0	89.1	105.4	114.4	45.2	290.5	121.4	94.8	111.4	236.3	103.1	102.0	102.2	101.5	104.9	105.4	106.0	120.8	166.0	320.8	329.0	317.6
12	320.9	318.0	319.7	323.9	326.2	323.2	322.8	323.7	325.2	324.4	324.3	324.2	322.3	323.2	321.8	317.2	320.6	319.8	319.4	319.2	317.7	320.8	324.1	326.7
13	324.2	323.2	322.2	321.8	320.5	319.3	319.8	316.0	318.0	322.1	322.0	324.4	322.0	320.4	320.3	319.8	319.2	319.5	311.1	164.1	76.6	69.8	47.0	343.6
14	13.4	69.9	11.7	322.8	326.0	326.3	326.1	319.1	323.2	322.7	323.1	323.3	324.1	324.8	47.5	104.6	99.1	97.8	94.8	91.3	100.2	78.2	40.0	313.8
15	305.9	332.3	322.3	331.5	325.1	321.3	326.8	326.7	322.1	320.8	320.2	321.2	320.4	131.5	128.2	115.0	98.1	86.3	59.5	331.3	316.5	319.5	324.9	329.7
16	322.4	322.6	320.4	319.0	322.1	321.1	318.9	319.4	316.0	320.1	322.9	321.8	320.5	318.9	320.3	157.5	134.7	119.9	92.4	85.0	77.2	57.4	311.6	309.9
17	332.3	324.9	7.4	86.5	324.8	72.8	103.4	80.8	93.3	102.8	101.1	106.2	106.5	107.3	103.1	106.0	101.8	101.4	100.2	95.1	100.2	102.2	106.0	85.8
18	90.0	21.8	304.2	327.3	91.6	106.8	105.2	298.0	322.5	327.3	63.8	97.1	103.9	89.5	92.8	100.9	96.5	95.7	93.7	97.1	92.0	85.7	66.1	305.5
19	348.3	81.0	98.1	330.4	321.4	322.7	308.8	316.5	344.6	112.0	118.9	115.9	117.9	119.6	112.6	100.3	99.6	99.5	108.5	109.0	104.3	105.5	102.9	99.3
20	98.6	113.8	156.8	105.3	337.0	79.3	117.7	129.6	111.7	114.8	122.0	114.4	109.3	105.3	107.5	108.4	111.8	108.5	104.9	107.6	125.7	106.3	104.1	107.9
21	111.5	111.4	111.2	109.7	102.9	101.7	105.4	95.4	104.7	114.3	121.4	123.7	120.4	119.7	112.8	108.6	96.7	87.5	92.2	93.7	95.8	86.2	77.3	344.6
22	330.7	27.9	15.9	121.8	59.4	83.4	84.2	76.6	58.1	100.4	108.0	106.7	113.8	116.8	108.6	117.2	99.0	309.5	259.8	240.3	229.4	210.6	129.0	135.9
23	125.0	118.8	107.6	100.2	104.7	106.5	97.8	96.7	101.9	111.2	108.8	116.8	113.0	104.2	106.7	111.8	105.1	114.1	116.7	114.8	114.0	104.8	89.0	99.0
24	92.8	94.7	98.2	96.4	102.5	102.3	99.4	98.6	95.7	96.0	101.2	109.5	120.6	126.7	111.2	108.8	99.4	86.7	83.0	85.5	102.0	92.8	89.3	86.7
25	89.9	89.9	110.2	114.8	109.5	109.0	104.9	89.2	89.1	96.3	90.3	96.8	92.7	106.5	108.8	110.1	118.4	111.9	106.9	122.8	117.4	95.0	95.0	75.6
26	72.1	49.5	51.8	59.2	70.2	75.3	71.0	71.7	72.1	87.8	76.2	60.5	51.3	57.6	43.8	52.3	55.3	54.5	47.5	48.4	53.0	55.7	59.4	57.9
27	64.3	122.5	137.7	123.2	111.2	109.0	111.3	117.2	121.3	121.6	91.2	89.1	93.4	88.9	105.0	110.0	117.0	112.7	108.6	110.7	109.2	109.0	102.0	94.6
28	74.7	331.4	329.9	318.8	324.9	317.3	315.5	316.9	326.7	324.5	323.0	328.8	331.0	328.4	324.5	253.5	152.6	246.2	80.1	111.9	94.9	96.5	93.1	89.6
29	93.6	97.5	94.0	92.1	93.8	102.5	95.0	101.3	103.0	103.5	104.8	102.8	104.0	102.8	104.6	103.0	104.9	107.7	109.1	106.0	100.7	104.6	101.7	98.9
30	98.8	93.1	91.7	93.4	345.3	344.9	333.9	341.4	87.7	100.1	106.4	114.1	110.9	106.9	102.5	101.4	103.2	106.6	98.7	92.5	89.5	88.6	78.7	295.9

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	323.8	324.2	323.2	326.4	326.8	349.2	78.8	101.4	111.3	102.3	110.0	119.6	134.3	128.0	96.7	104.6	105.2	98.4	99.7	108.2	118.5	120.1	106.0	103.0
2	96.2	99.0	98.7	101.5	95.8	101.8	104.1	106.1	112.0	132.5	133.5	116.0	114.1	117.3	113.1	106.4	108.4	112.1	103.7	97.7	98.0	100.2	98.8	96.4
3	92.9	107.2	70.4	74.1	89.6	96.1	102.6	120.1	136.8	135.5	97.8	128.1	139.7	100.6	85.0	138.4	138.0	139.0	117.2	103.3	112.8	101.6	104.0	100.3
4	100.6	106.6	86.0	98.5	96.7	85.1	88.3	78.0	76.9	330.4	358.5	60.4	91.3	125.9	131.4	121.8	118.2	110.1	76.7	90.2	15.3	324.9	45.1	41.2
5	305.0	337.8	13.3	130.6	61.2	333.5	5.0	76.8	322.0	95.2	88.5	80.9	78.1	79.7	90.3	88.3	97.9	97.8	94.1	90.2	95.1	80.2	41.9	328.6
6	339.2	325.9	348.8	14.2	326.7	339.9	72.9	102.5	85.8	63.3	63.5	100.1	98.5	110.9	83.7	108.8	199.3	246.2	248.9	251.9	264.6	281.4	323.3	42.6
7	90.7	77.5	96.1	132.1	131.9	131.5	105.4	99.8	95.3	103.5	102.2	94.5	125.6	118.9	109.6	105.7	101.8	104.6	118.3	121.1	112.1	114.9	155.1	286.4
8	311.0	318.5	319.1	319.2	320.2	317.2	327.9	326.9	327.5	332.0	334.5	329.3	322.9	326.8	327.9	320.8	319.7	190.3	118.0	86.1	290.8	315.6	69.8	77.0
9	91.7	111.0	103.4	110.2	136.5	136.9	152.4	309.1	97.1	112.2	114.3	115.9	111.7	107.3	99.9	95.2	88.1	98.2	99.4	93.8	95.4	91.8	92.7	86.1
10	82.2	83.8	92.4	95.1	97.9	101.3	102.0	105.5	105.8	106.5	109.3	112.6	116.8	130.7	140.0	121.7	105.3	105.9	96.0	99.0	98.0	99.6	101.0	102.1
11	107.8	112.4	105.7	115.3	116.1	109.2	100.0	103.1	102.9	108.3	114.4	113.7	113.4	111.9	110.6	110.3	110.4	113.1	115.1	110.9	106.0	93.2	124.8	202.2
12	321.1	322.9	331.6	333.5	340.9	359.8	340.6	112.4	99.9	103.5	112.1	108.5	103.9	105.2	104.7	102.0	102.9	103.3	100.4	105.2	96.3	98.1	96.3	95.5
13	104.5	94.7	97.4	96.0	90.1	92.2	102.3	96.9	105.6	110.0	106.4	115.2	114.2	107.5	110.1	114.4	115.1	114.0	111.9	107.4	104.8	105.3	103.1	107.2
14	115.2	110.4	98.7	115.5	118.4	42.3	339.4	349.5	332.0	107.4	120.7	119.5	114.0	107.3	104.6	100.6	102.1	102.6	103.0	105.0	103.3	107.6	104.9	104.0
15	106.3	81.4	118.1	85.7	111.8	123.6	115.2	104.8	133.8	137.0	125.2	115.6	119.8	114.4	102.7	104.8	106.0	109.6	107.2	101.5	100.7	92.0	95.6	94.6
16	94.3	89.9	95.4	101.5	99.5	95.1	100.0	93.2	96.3	101.7	99.9	98.1	100.1	98.9	98.0	96.8	98.4	98.7	98.5	97.8	96.6	97.1	96.7	97.4
17	99.9	97.6	94.6	99.3	7.7	325.2	319.6	311.6	318.3	317.2	310.8	313.1	321.6	313.3	328.6	330.8	309.4	312.6	301.9	300.6	304.0	304.9	303.6	308.4
18	312.2	314.9	315.1	319.2	317.6	317.3	322.6	322.6	320.6	324.4	323.0	326.4	330.2	330.5	326.8	326.1	324.8	326.2	325.9	325.0	326.0	328.9	321.7	316.7
19	319.1	318.1	317.3	322.1	321.2	315.2	317.4	320.9	320.6	318.7	324.1	324.3	321.8	322.3	316.4	310.0	348.8	99.4	314.7	317.7	312.6	314.7	304.9	316.4
20	322.0	315.2	316.6	309.8	309.8	315.6	318.6	326.7	322.3	331.7	319.5	303.6	308.2	329.8	328.2	328.6	327.1	330.2	325.7	325.1	330.5	326.9	326.3	320.7
21	312.3	309.2	292.1	318.8	319.3	327.9	321.0	308.3	304.8	307.6	305.3	306.6	298.3	298.7	324.4	320.2	323.5	315.7	330.1	327.9	324.0	332.1	321.6	317.7
22	327.3	325.9	322.1	323.4	321.0	319.9	324.6	317.1	321.3	115.2	110.2	115.7	109.4	105.3	103.9	102.9	116.0	105.8	106.0	124.2	106.4	96.6	104.9	112.9
23	42.2	325.1	322.9	317.3	320.7	321.2	315.4	312.4	309.1	313.1	319.6	316.6	329.3	328.4	319.6	162.0	146.4	117.3	124.5	104.3	103.0	123.8	110.7	101.5
24	83.7	46.0	338.7	347.8	310.8	297.6	310.4	311.7	317.4	310.0	307.8	314.0	312.5	319.2	298.8	148.7	137.7	138.7	136.8	243.8	293.9	334.5	323.4	321.9
25	323.2	323.8	326.6	326.7	322.8	313.1	306.6	307.8	310.5	308.4	306.5	316.4	323.6	323.7	319.3	323.9	12.8	95.7	102.9	104.9	112.2	121.9	89.3	338.6
26	322.7	337.0	344.9	93.4	48.0	323.2	322.1	325.5	325.1	329.6	330.6	333.4	327.1	339.3	321.8	322.2	322.9	321.5	229.6	123.2	131.5	133.4	130.6	105.3
27	96.0	93.4	91.6	93.5	87.6	87.9	88.2	66.9	341.8	94.1	102.7	89.2	99.3	110.1	110.1	103.2	97.4	8.1	293.5	193.9	147.9	121.1	291.2	308.7
28	301.2	311.9	325.7	319.1	319.9	319.5	320.5	319.0	323.8	316.7	323.5	323.5	322.8	322.2	323.8	322.3	315.0	315.2	312.9	313.3	313.7	314.1	307.5	316.1
29	317.4	314.0	315.3	317.6	321.5	316.4	309.3	314.3	316.2	314.2	322.4	315.5	315.0	311.7	313.4	311.3	74.7	302.1	70.6	308.3	308.5	319.1	316.7	315.6
30	313.3	308.4	317.8	320.1	323.8	325.0	318.1	321.8	323.4	320.8	325.9	328.1	319.5	321.5	319.1	296.0	293.2	295.5	293.8	297.9	306.8	307.1	305.2	306.2
31	315.9	318.2	316.8	321.9	320.6	312.6	316.1	314.6	310.4	316.3	319.9	317.2	315.9	323.3	319.5	327.8	330.3	327.7	328.3	329.6	329.1	323.9	325.2	322.3

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	319.1	322.2	326.4	322.5	319.3	320.1	320.9	323.9	26.3	88.1	132.4	140.6	131.4	124.7	116.8	103.0	102.8	100.7	92.9	90.3	89.8	93.6	96.8	96.9
2	92.0	92.2	102.6	104.4	83.1	86.5	84.1	82.8	84.2	90.8	88.2	93.7	100.2	96.7	97.6	102.4	100.8	99.0	101.4	96.2	100.1	104.6	92.6	97.8
3	144.6	299.1	288.7	281.1	305.5	7.1	85.1	107.8	127.6	123.9	134.9	113.4	111.2	104.6	93.6	115.2	117.8	114.5	125.7	111.6	91.8	101.2	104.7	111.8
4	108.8	95.3	109.2	101.9	102.1	89.8	66.7	87.0	99.4	88.9	108.2	107.0	101.9	109.1	111.4	99.4	105.5	120.4	119.5	105.0	105.2	90.4	87.7	79.0
5	85.4	90.7	112.1	127.1	142.1	279.1	316.9	318.4	300.7	308.0	337.8	158.8	155.7	148.6	124.3	91.9	94.3	103.3	91.1	87.7	90.0	100.9	89.1	92.8
6	84.2	56.3	213.6	328.8	320.9	328.8	330.3	327.2	327.9	326.3	39.7	148.5	151.7	145.9	117.7	92.2	95.9	95.1	96.7	304.8	289.8	292.7	303.3	318.0
7	326.3	322.1	319.5	312.4	310.2	314.5	321.1	319.5	316.5	327.7	322.9	319.8	323.5	324.8	323.6	322.8	321.8	317.5	311.7	291.2	287.8	301.7	311.5	315.0
8	331.8	60.3	326.1	318.1	325.1	322.7	324.1	324.3	323.8	330.0	86.8	97.0	99.9	104.1	95.7	91.2	97.6	101.9	106.1	99.8	89.1	94.8	15.9	321.7
9	325.4	328.1	330.8	322.0	338.3	319.0	325.4	324.7	315.3	314.6	325.0	331.4	323.5	333.2	88.4	98.8	103.6	98.0	98.1	109.8	110.2	114.5	120.5	124.2
10	126.4	119.4	116.8	125.7	113.4	141.9	144.4	138.3	114.5	100.0	97.9	100.7	108.5	109.9	113.4	117.9	122.7	119.1	122.8	122.4	107.3	115.6	115.0	125.5
11	140.0	120.6	101.2	100.3	100.3	84.2	112.9	104.6	106.0	107.4	111.7	120.1	120.4	118.9	125.2	122.8	114.9	110.2	105.4	87.5	77.7	297.5	316.9	324.2
12	324.7	322.0	311.1	297.2	306.7	305.5	315.1	310.9	304.8	302.6	348.1	115.7	78.5	107.0	112.7	111.6	116.9	136.7	262.0	169.5	138.6	84.0	311.8	320.8
13	308.9	316.1	294.2	288.7	314.7	303.0	332.1	87.4	267.4	352.4	157.8	32.7	321.4	317.4	55.8	285.4	267.9	293.8	290.4	276.4	303.1	316.1	333.6	49.4
14	62.1	76.9	350.9	329.7	325.5	112.0	106.4	94.5	95.0	5.5	325.9	330.7	329.9	350.2	325.7	99.7	17.2	330.9	329.9	346.1	55.0	75.8	66.6	85.6
15	84.5	329.9	333.5	349.9	316.1	314.1	313.8	313.5	313.1	313.0	311.5	311.5	310.8	313.5	320.1	318.1	283.6	296.8	313.7	316.0	130.4	115.2	129.4	102.9
16	114.6	116.3	111.4	112.2	107.4	103.9	96.5	97.3	100.3	105.5	107.1	99.2	110.2	114.7	113.1	111.2	111.1	114.2	111.7	108.5	116.1	98.0	106.5	98.7
17	105.8	97.6	104.9	111.5	101.0	62.9	79.3	92.1	99.6	101.7	90.7	98.2	104.2	97.9	93.2	94.2	102.0	103.4	107.6	119.5	110.0	103.1	105.3	89.3
18	97.5	105.4	98.2	284.9	347.7	311.8	325.7	327.2	312.3	69.9	80.8	68.3	70.8	78.7	98.2	133.2	172.1	89.5	87.2	83.1	72.5	71.7	75.7	93.8
19	88.2	86.3	77.5	87.0	347.5	353.5	317.5	316.8	324.3	316.0	320.5	316.5	322.9	321.3	319.3	319.3	321.8	322.5	319.1	318.5	318.4	320.8	320.6	316.7
20	316.2	315.5	317.1	319.3	316.0	320.7	320.3	320.3	319.7	321.9	317.9	324.1	324.4	324.8	325.1	324.3	327.7	328.7	329.8	327.9	324.9	322.6	319.6	320.9
21	319.5	319.5	316.4	317.6	319.4	322.2	322.8	319.0	319.2	316.5	316.9	313.2	316.0	325.3	93.3	100.4	107.2	112.7	114.7	113.0	94.4	94.7	85.3	96.5
22	88.5	73.1	101.6	94.3	101.8	89.0	91.3	77.6	305.2	305.6	327.8	278.4	118.8	105.8	111.1	123.5	110.9	92.6	97.8	269.3	319.4	320.1	318.5	318.3
23	317.1	318.4	319.4	317.2	315.5	315.6	313.8	313.5	313.0	314.7	314.1	341.8	99.9	99.0	101.5	97.2	94.0	103.5	303.6	325.5	332.9	319.9	324.1	324.1
24	323.6	313.7	314.3	309.2	321.9	324.7	321.9	321.8	316.4	316.7	319.1	317.0	321.7	324.7	304.1	313.0	325.7	329.0	325.9	322.0	323.3	324.1	321.6	316.0
25	321.9	320.9	101.5	116.1	103.4	107.0	100.6	101.7	103.5	105.9	88.6	27.7	225.9	112.4	106.6	106.5	96.5	99.9	104.7	112.9	127.8	126.9	117.5	119.1
26	100.1	112.5	70.7	325.0	317.6	86.4	327.5	329.0	328.6	330.9	330.1	73.4	113.7	114.2	126.6	134.5	128.3	109.1	103.9	110.3	114.0	113.9	110.2	100.4
27	92.8	82.6	42.5	351.9	319.6	309.9	314.7	315.4	311.1	325.7	327.5	327.3	336.4	327.8	315.8	314.9	317.1	327.3	318.7	324.3	319.0	322.4	314.5	311.6
28	320.1	314.8	310.6	319.2	319.8	306.4	304.6	305.4	316.6	318.4	321.8	325.9	321.5	309.7	301.3	300.5	302.5	321.2	325.5	321.2	316.7	308.9	313.5	313.0
29	312.9	313.3	315.5	313.4	307.9	307.7	308.3	312.9	313.8	318.0	318.4	328.2	325.2	327.2	324.8	319.5	315.8	325.4	327.6	313.8	326.9	329.2	324.3	315.4
30	316.7	317.8	316.1	318.6	316.8	321.0	320.2	318.6	316.8	316.6	323.3	315.7	99.5	107.8	122.3	108.8	107.6	110.1	107.4	107.9	89.3	105.5	97.6	101.0
31	105.9	106.1	103.5	101.8	105.3	98.8	94.4	84.0	88.8	86.6	90.0	81.9	80.0	87.7	89.3	70.7	45.7	39.2	54.9	53.6	39.4	56.2	28.3	74.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	65.7	69.5	64.8	73.4	73.0	68.1	68.8	59.4	45.3	41.0	42.5	65.1	53.6	64.4	73.8	70.3	54.0	76.4	91.3	110.8	116.4	93.6	92.1	93.2
2	93.1	86.6	89.1	92.4	100.0	96.8	105.6	103.8	100.2	107.2	106.4	102.4	102.6	97.6	72.7	64.1	58.9	62.9	82.6	75.7	63.7	50.0	60.9	50.2
3	30.0	42.6	37.8	33.3	64.8	53.1	17.3	38.3	65.1	346.4	292.9	316.1	317.8	316.2	318.1	312.2	313.7	319.2	31.9	103.8	114.5	94.7	94.0	336.1
4	316.1	297.2	278.5	84.2	23.5	338.3	324.6	339.0	61.6	349.0	88.6	114.4	117.9	119.4	115.6	116.3	115.8	106.2	101.9	107.0	103.1	324.4	324.7	323.9
5	329.7	2.6	327.1	336.3	106.2	323.4	333.7	86.0	331.7	8.2	81.4	108.8	99.2	96.5	103.6	102.3	103.5	103.4	102.1	107.6	95.8	97.3	62.8	108.9
6	347.7	105.1	99.4	91.3	98.3	104.2	102.4	96.7	102.5	92.2	86.8	82.7	88.1	89.1	75.9	55.9	44.1	47.7	55.1	45.1	83.6	60.5	74.9	70.6
7	49.2	54.1	55.9	50.7	48.7	68.8	64.8	69.6	88.2	87.6	102.4	106.7	113.0	119.4	108.7	77.3	61.1	68.7	101.1	140.5	144.2	135.9	339.9	123.5
8	116.1	82.3	319.5	319.7	96.1	356.0	328.5	345.4	311.6	89.3	108.2	105.6	99.6	95.8	97.9	102.3	102.7	105.0	79.2	76.3	61.4	56.4	50.6	29.5
9	41.4	65.1	61.9	30.5	57.6	56.7	48.5	44.0	47.1	34.3	49.2	85.4	95.3	97.1	106.9	102.5	99.4	98.4	102.5	107.5	103.7	112.3	143.2	144.0
10	138.3	64.9	85.2	322.0	325.3	329.9	326.7	322.5	322.9	312.2	307.1	289.5	254.0	200.8	156.6	272.6	324.4	332.9	336.6	325.7	322.8	319.0	324.5	322.2
11	318.9	322.4	326.4	325.2	322.0	325.6	322.5	324.7	321.4	320.8	324.6	172.4	174.8	135.0	74.2	132.0	113.0	110.1	99.2	90.9	103.1	114.8	114.6	108.2
12	95.4	90.6	102.7	113.2	105.8	99.6	100.7	92.9	82.2	82.3	72.7	65.8	57.5	33.0	48.8	62.9	52.4	70.4	74.1	63.0	64.8	72.9	83.5	81.8
13	90.8	95.9	97.6	98.4	93.7	93.1	99.8	103.5	105.6	102.6	103.6	104.1	104.5	103.9	105.4	95.4	91.8	87.3	51.7	44.3	40.1	42.2	46.8	52.7
14	60.0	67.0	63.1	62.7	23.9	42.1	345.3	53.8	48.9	68.1	3.7	84.8	79.7	79.2	45.4	64.4	75.5	68.8	59.0	121.2	81.2	349.6	8.1	65.1
15	65.0	81.3	87.5	94.1	97.3	93.8	96.8	97.3	94.3	93.3	104.1	92.8	97.0	95.4	103.1	104.8	105.9	104.7	120.0	120.5	74.8	323.9	323.9	328.9
16	330.0	316.6	311.8	316.9	69.4	334.2	318.4	318.4	316.3	310.3	312.8	303.6	316.6	325.7	317.1	299.2	288.0	287.4	289.0	289.7	291.9	300.2	288.7	287.2
17	288.1	293.9	302.3	291.7	294.4	297.0	299.9	314.0	317.3	314.2	316.2	305.5	246.0	104.6	101.0	102.9	105.4	92.0	89.2	97.4	109.6	97.6	93.0	77.1
18	64.5	65.8	60.5	46.6	69.3	78.6	76.5	71.8	69.1	284.8	239.4	127.5	78.6	67.5	61.9	95.7	94.4	70.3	71.2	93.9	111.7	109.6	110.0	107.5
19	109.4	90.4	85.4	89.6	94.9	92.3	319.9	325.7	324.5	319.0	314.5	320.5	313.6	321.2	313.2	302.3	302.4	303.5	320.1	325.2	319.0	313.8	313.4	310.8
20	309.7	308.4	307.5	301.5	304.1	303.4	305.8	299.8	300.8	300.7	293.8	294.2	294.2	294.2	297.6	301.8	297.0	303.3	291.5	305.9	311.9	321.1	313.8	313.0
21	319.8	318.7	316.8	317.0	324.9	322.9	315.8	306.7	301.8	312.0	317.3	312.3	313.4	323.1	317.7	301.9	291.4	288.8	287.0	285.2	288.8	288.1	296.3	312.0
22	308.2	304.8	295.4	297.0	305.8	303.1	313.8	309.9	311.3	310.3	316.2	318.0	324.0	319.2	319.0	316.4	317.9	207.6	175.8	275.8	236.2	319.9	315.1	319.8
23	326.2	312.2	309.3	308.5	307.0	321.1	325.1	320.3	320.8	325.4	74.4	321.3	295.4	169.1	181.1	314.5	306.1	120.5	123.3	300.9	286.5	314.9	322.1	331.6
24	330.2	322.3	332.5	316.8	345.1	320.0	320.0	9.2	45.5	77.8	53.5	11.7	88.2	358.1	68.5	70.7	64.9	60.5	77.1	30.2	70.5	55.1	42.1	14.7
25	13.2	57.7	38.7	72.1	340.4	8.1	359.5	50.1	64.1	75.2	81.1	320.8	277.5	349.2	355.4	293.3	312.2	46.4	258.5	296.9	260.1	225.5	290.8	298.7
26	247.4	219.6	261.1	218.1	244.6	291.7	295.8	314.2	303.1	327.6	322.6	114.6	118.3	78.3	137.7	134.4	121.3	118.7	95.7	173.4	297.7	317.6	313.1	306.0
27	304.6	312.2	309.5	311.2	312.2	312.5	312.1	317.4	313.3	319.7	318.6	310.1	311.4	307.8	308.8	302.4	299.1	324.5	323.4	316.7	312.8	316.9	318.7	309.7
28	300.9	300.6	298.7	309.3	307.3	315.9	321.8	323.4	317.0	316.6	320.7	307.1	320.6	9.1	112.5	110.8	108.1	108.8	108.1	59.6	344.0	19.5	326.7	75.1
29	69.3	47.5	89.4	98.8	88.1	70.1	61.2	57.8	59.0	78.8	87.5	87.1	81.0	97.7	85.4	86.2	212.1	121.9	127.3	108.8	69.8	322.3	321.7	322.0
30	313.5	310.0	317.6	307.6	308.1	312.4	308.5	315.4	319.3	324.8	323.7	312.4	299.5	303.0	302.4	302.7	290.3	301.5	315.7	313.1	302.8	299.8	303.9	307.0

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	309.7	311.8	314.9	312.0	311.8	319.8	330.1	326.7	327.8	333.0	337.5	244.7	104.1	110.3	100.8	108.1	86.6	86.4	84.8	82.3	84.1	86.6	81.5	335.8
2	286.8	329.6	314.9	316.9	322.7	318.1	315.1	319.8	317.8	321.7	325.5	325.1	325.7	324.6	313.8	316.9	309.7	303.0	300.6	299.4	293.2	292.1	293.8	304.3
3	298.6	295.0	304.4	310.2	295.2	301.7	307.7	313.1	312.8	309.3	306.3	299.5	298.9	299.2	304.2	310.2	306.9	300.0	298.1	297.3	301.5	300.5	303.4	302.0
4	302.4	302.3	301.5	302.4	302.6	302.3	309.1	312.1	312.6	311.5	304.0	307.6	314.0	316.2	321.5	308.5	317.7	314.5	311.7	304.6	303.4	302.0	303.8	302.8
5	303.7	301.6	300.0	303.5	301.1	301.6	303.3	309.3	312.2	311.9	308.7	308.1	304.1	303.2	321.0	326.4	317.3	314.6	309.1	318.7	313.6	307.1	311.2	317.6
6	318.0	317.7	313.9	308.4	317.7	311.8	322.1	304.4	308.6	317.1	320.2	321.5	326.8	325.2	316.4	312.9	303.4	301.6	308.3	286.5	287.6	289.1	290.8	299.9
7	312.4	303.7	294.8	296.2	291.6	301.9	306.7	297.8	293.3	290.3	287.1	304.4	292.5	286.7	284.8	286.7	287.4	285.1	287.9	287.0	290.5	291.4	296.5	294.9
8	295.4	313.5	299.2	298.4	304.5	294.8	300.7	298.5	312.2	320.4	320.3	321.3	304.6	315.1	316.3	321.6	320.1	311.3	299.9	306.0	310.8	311.8	354.8	62.6
9	71.8	54.8	60.2	70.4	70.2	87.6	88.5	75.9	61.7	59.7	69.2	45.8	64.0	52.5	63.6	62.2	68.8	61.5	54.3	34.7	18.4	1.6	22.7	47.1
10	49.2	69.3	352.9	114.3	129.9	307.9	308.4	315.8	311.3	323.3	335.1	312.0	316.4	269.5	99.8	96.6	113.1	165.0	58.0	66.2	55.5	331.6	72.7	82.9
11	89.2	95.3	98.4	99.3	97.5	91.8	97.1	103.3	102.2	105.9	107.2	109.4	101.2	86.3	31.6	292.6	297.6	300.6	299.5	304.8	304.4	303.1	302.3	302.3
12	300.8	299.5	300.0	296.0	297.6	296.5	295.2	297.0	300.4	290.6	290.8	289.9	291.4	290.0	287.7	285.5	287.8	289.2	289.1	290.0	295.4	298.4	300.2	309.1
13	316.7	307.3	307.4	297.7	309.5	314.4	317.6	315.9	318.8	303.6	302.9	310.6	318.8	335.7	75.1	73.4	74.1	344.3	46.4	54.6	73.5	89.7	97.6	133.7
14	105.3	101.2	122.6	98.3	120.5	290.5	287.4	286.7	21.2	49.4	8.6	291.6	308.0	307.6	321.9	329.0	325.0	324.4	308.9	317.5	318.1	321.3	324.6	323.8
15	323.9	310.1	324.0	321.6	322.9	321.5	319.7	313.3	322.9	322.9	307.4	318.9	303.5	306.7	295.0	303.2	299.2	296.4	301.3	309.1	310.1	309.0	311.6	310.4
16	304.0	304.6	303.9	304.4	309.9	308.9	314.3	314.8	314.2	310.6	310.5	307.9	307.2	310.6	317.0	315.2	314.7	314.0	318.4	315.7	314.4	311.4	308.1	311.0
17	312.4	312.8	314.9	316.0	317.0	315.8	315.6	319.9	316.3	314.0	314.2	310.9	308.0	311.4	320.5	321.4	45.0	82.0	75.5	81.7	83.0	77.0	74.3	57.2
18	69.3	69.5	50.6	57.9	48.6	48.1	58.4	58.7	50.6	25.3	27.9	30.6	45.3	61.8	89.0	91.2	81.1	81.7	46.5	239.3	326.2	239.8	322.6	343.0
19	299.6	321.8	308.4	318.6	315.7	315.3	316.3	304.0	304.7	306.6	305.3	302.3	305.7	301.5	299.0	301.8	297.4	299.7	306.0	316.1	311.0	312.2	315.6	313.3
20	311.1	312.8	312.4	311.1	309.8	311.2	314.0	314.1	318.6	318.3	316.9	317.0	313.0	324.0	324.7	324.9	331.8	329.5	331.1	324.7	326.1	324.8	325.2	325.6
21	323.3	321.4	321.0	321.3	320.3	319.8	320.2	315.2	314.8	316.6	315.0	317.4	314.6	317.6	318.5	317.3	319.8	324.2	323.5	317.5	314.1	316.4	323.9	324.9
22	316.8	304.5	298.5	300.3	294.8	287.3	297.5	293.1	304.7	304.2	302.6	291.7	295.2	295.1	296.5	292.0	299.3	311.5	313.9	301.5	305.2	308.8	305.2	104.7
23	79.1	183.4	75.2	39.1	313.0	317.3	315.6	312.1	310.1	311.1	305.8	299.8	300.3	295.6	295.9	290.1	288.3	288.9	286.0	290.1	299.4	299.3	303.4	308.0
24	305.7	304.9	302.1	298.3	292.8	291.3	291.1	278.3	284.4	295.6	296.2	300.1	294.0	286.7	282.8	288.0	288.9	297.6	296.3	328.4	333.8	308.3	316.8	321.2
25	318.5	329.9	317.4	308.9	301.6	308.7	318.7	319.2	326.7	323.6	321.5	325.7	326.1	339.8	339.1	323.6	297.6	220.1	257.4	274.5	253.3	220.0	304.9	239.8
26	216.4	258.2	322.6	320.0	107.2	300.7	314.9	319.7	325.1	326.5	327.5	325.9	322.8	313.0	306.8	296.8	298.3	295.6	296.9	296.1	299.2	297.3	299.6	298.1
27	298.7	297.5	296.0	299.1	308.2	315.4	315.8	310.3	315.0	306.5	310.2	312.0	303.3	310.3	303.7	313.4	317.0	315.0	313.4	308.9	310.2	310.4	311.3	310.7
28	310.3	309.1	312.2	310.3	319.7	331.4	333.0	328.9	331.8	332.1	331.9	332.4	329.5	344.7	156.0	255.6	318.1	315.1	309.2	309.2	310.4	322.0	318.9	308.6
29	3.7	321.2	325.4	323.1	325.3	321.0	325.5	323.4	332.7	334.9	331.1	329.5	335.8	327.3	333.1	319.7	157.3	113.9	68.1	45.7	290.4	302.9	324.2	326.6
30	330.9	327.7	325.2	328.4	282.6	177.5	265.3	342.8	80.0	7.6	340.6	107.4	102.5	289.8	45.5	105.0	86.7	279.3	304.7	326.8	65.3	323.1	330.6	328.2
31	325.6	335.7	320.9	324.8	324.4	326.8	325.1	326.6	329.7	326.4	328.0	331.5	330.2	326.1	306.3	292.6	286.1	303.7	313.0	295.4	299.9	318.4	315.5	317.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	325.6	319.8	328.2	325.3	325.0	324.3	323.8	323.1	322.7	325.5	314.1	311.2	317.4	312.0	305.7	314.1	322.1	325.0	315.2	313.2	318.6	319.8	322.1	321.1
2	308.0	312.7	318.2	295.0	293.7	294.5	295.9	304.2	305.7	308.5	318.6	300.6	295.2	303.2	297.7	311.9	312.6	315.8	307.7	310.1	307.9	305.8	301.6	309.0
3	314.4	310.9	311.5	316.3	319.2	316.7	317.3	307.0	300.6	309.2	304.8	304.6	312.4	311.1	300.5	294.3	289.8	291.0	295.3	298.6	301.3	296.9	303.0	301.4
4	308.4	313.3	316.7	314.0	320.5	320.8	315.6	315.7	307.5	311.0	307.7	300.2	298.0	296.0	296.9	297.6	298.2	308.5	304.4	304.0	302.9	304.5	310.0	312.1
5	313.3	312.8	312.6	310.7	313.1	310.9	312.2	312.7	312.1	306.9	298.4	281.0	276.4	317.8	64.9	65.5	78.8	83.3	76.0	51.0	53.5	8.8	59.3	58.1
6	71.6	50.2	55.9	63.9	62.5	62.9	102.1	82.3	90.3	70.1	88.3	85.5	82.0	60.7	85.6	288.3	316.8	319.0	298.4	309.2	306.8	304.6	303.2	300.1
7	292.7	296.4	304.1	312.5	319.2	319.9	312.0	313.5	318.6	322.3	324.4	321.0	326.4	327.5	326.2	324.4	326.9	323.4	320.9	319.9	319.8	323.8	323.4	318.7
8	319.6	325.6	327.4	322.4	320.3	309.0	307.4	318.4	330.6	325.6	323.6	328.7	60.0	21.0	54.8	48.5	52.6	57.4	41.8	43.0	47.2	51.2	47.3	43.2
9	61.0	64.7	61.3	49.1	59.3	77.8	79.8	63.4	62.3	47.2	51.9	57.5	54.2	24.6	42.2	23.9	12.7	36.1	29.2	29.0	31.6	43.5	53.3	14.3
10	66.1	92.8	81.2	98.8	92.3	70.5	68.5	47.7	77.2	287.2	266.7	256.1	72.4	74.9	112.1	117.7	130.9	101.0	101.6	103.9	106.5	106.1	93.7	94.8
11	85.1	97.6	86.9	94.1	77.2	80.2	86.4	79.7	281.3	252.2	296.3	277.6	275.9	317.6	320.0	319.2	320.4	313.1	317.2	315.1	309.7	298.9	303.0	316.8
12	314.2	306.2	308.2	303.8	306.2	302.4	306.0	300.9	295.4	294.7	289.2	288.7	292.3	307.9	309.0	300.5	296.3	302.8	325.3	333.1	325.5	325.1	313.7	321.1
13	318.6	317.5	320.5	326.4	322.6	326.5	337.2	340.3	320.0	306.0	307.3	61.9	26.4	33.2	78.8	89.8	70.6	277.4	316.8	353.4	349.9	304.7	6.7	324.1
14	353.2	92.0	31.0	310.9	333.3	332.4	322.9	325.7	323.5	328.4	327.6	323.5	340.0	89.9	244.8	308.1	317.4	320.6	321.5	310.0	307.3	305.8	315.3	319.1
15	314.6	320.9	331.0	311.0	313.8	316.8	323.5	315.4	315.3	314.1	271.8	321.1	332.6	332.0	324.4	320.7	329.7	332.7	314.4	86.9	75.0	81.3	82.8	64.1
16	67.0	34.7	288.9	210.0	250.0	286.3	294.9	318.0	73.8	78.9	312.3	327.0	314.9	316.4	292.7	303.2	302.2	315.5	317.4	323.3	320.2	324.7	328.3	324.7
17	334.9	317.9	321.4	320.1	323.7	322.3	322.7	322.7	322.6	320.2	321.6	320.3	327.1	320.7	312.7	308.2	295.1	293.1	304.7	311.6	307.5	310.9	307.6	314.9
18	317.2	317.0	316.7	317.6	314.0	311.7	305.2	309.2	314.5	313.6	308.1	316.6	309.8	300.7	306.4	313.2	306.6	312.7	303.8	310.5	315.0	314.6	312.2	309.2
19	307.5	306.9	311.1	311.3	318.1	314.1	312.9	311.7	309.6	310.3	311.4	312.5	311.3	307.3	308.2	308.0	308.6	311.4	313.4	314.3	312.8	314.5	315.5	310.4
20	312.4	311.4	312.4	311.6	311.9	312.9	310.5	307.4	304.2	298.9	296.8	301.5	299.7	297.8	299.4	300.5	299.6	299.6	301.0	301.0	297.4	297.8	297.0	295.2
21	293.8	293.8	294.6	291.8	290.3	296.7	296.4	297.0	294.1	296.2	297.6	293.5	298.8	304.6	312.8	316.2	316.1	313.8	311.3	311.9	309.5	305.1	311.4	307.6
22	315.1	314.6	301.9	305.9	311.1	303.5	301.6	305.1	310.1	303.9	295.1	307.9	298.4	312.3	314.0	307.8	321.2	318.2	314.1	313.3	313.1	317.7	317.9	315.6
23	306.3	305.5	308.9	313.1	324.7	326.0	312.8	297.5	309.8	296.1	292.9	295.8	230.5	304.2	302.2	301.8	326.8	272.9	193.9	90.6	89.5	83.4	79.5	64.6
24	65.3	61.0	55.1	46.3	35.6	44.8	37.8	20.3	34.8	44.7	47.0	40.5	46.9	66.8	87.8	84.7	114.9	92.8	68.1	353.4	335.8	326.5	328.7	327.3
25	324.0	327.0	325.6	321.8	322.9	324.9	323.1	324.6	322.1	325.2	316.7	314.6	321.8	319.8	304.0	301.0	294.9	296.4	300.5	295.3	299.8	310.9	312.5	307.6
26	308.5	301.2	291.5	294.3	296.9	297.7	302.2	300.0	301.6	300.6	303.3	301.5	297.7	296.3	309.1	319.2	315.0	310.8	309.0	311.7	314.1	313.8	313.0	311.9
27	312.3	307.9	307.5	312.3	310.2	297.0	303.6	302.4	309.9	307.8	302.4	315.2	303.5	309.4	299.5	312.1	309.7	311.8	314.1	312.7	309.9	314.7	313.5	309.6
28	229.8	283.0	319.5	300.5	265.7	261.5	265.0	309.8	265.3	283.0	324.6	319.5	312.5	317.2	296.5	304.2	310.1	308.8	305.8	304.2	302.2	300.4	300.5	301.8
29	309.7	315.5	317.2	317.7	316.2	308.0	299.9	290.6	292.5	295.5	297.7	295.7	296.4	297.2	291.1	291.5	292.1	291.1	293.4	296.7	296.0	296.1	304.5	301.7
30	303.6	297.1	298.1	301.8	301.2	300.3	300.4	305.5	303.7	299.0	300.1	294.6	299.2	293.6	296.9	301.0	320.8	305.7	306.9	312.2	314.7	322.2	300.8	307.1

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (Climatronics) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	317.3	312.6	316.3	313.1	315.9	315.7	315.3	323.0	313.0	302.4	303.4	326.0	334.2	313.3	345.5	131.3	40.1	333.2	90.7	67.8	46.9	53.0	336.8	345.5
2	358.1	67.4	97.1	99.8	30.7	86.6	108.9	101.9	110.0	115.6	98.1	87.8	38.0	26.1	31.6	24.1	56.4	56.1	53.4	49.2	24.2	62.9	63.5	58.8
3	70.5	73.5	62.6	65.0	61.4	79.5	71.8	57.9	62.7	50.8	50.4	72.9	69.8	59.5	64.6	59.2	56.6	62.7	54.1	63.2	54.4	42.7	48.8	41.0
4	32.9	35.9	343.0	89.1	92.4	107.7	140.1	118.7	113.9	110.6	133.2	104.2	91.3	86.0	78.6	83.5	108.6	114.5	123.9	132.9	103.7	90.1	99.4	104.1
5	120.1	123.8	251.6	50.7	85.6	97.0	337.3	302.8	13.3	144.7	139.9	118.7	62.9	35.6	24.5	47.9	60.2	54.4	14.0	48.6	55.7	67.4	69.0	85.0
6	61.5	75.2	68.2	287.1	304.5	308.2	329.3	325.0	228.6	254.1	153.1	328.6	306.1	286.8	117.3	107.1	97.0	13.3	326.4	325.7	327.1	326.7	327.0	323.5
7	319.8	316.5	315.6	320.1	321.4	321.2	320.7	318.0	316.0	310.9	317.6	321.4	319.2	322.0	315.2	307.8	305.5	316.0	7.6	117.7	128.7	126.3	116.0	122.8
8	88.0	74.7	65.4	79.4	67.0	74.8	54.3	52.6	79.3	65.2	59.6	83.6	78.6	76.3	81.8	89.9	87.1	63.3	53.3	21.0	91.6	250.5	100.3	114.5
9	68.4	284.5	212.7	281.6	121.7	195.0	319.7	326.5	325.4	324.5	318.9	314.3	313.7	305.0	309.5	304.3	304.6	316.3	318.5	318.1	311.3	315.1	315.6	317.6
10	315.5	318.3	321.0	309.1	306.8	312.5	300.7	296.4	298.3	294.5	293.4	294.4	299.9	307.8	310.7	290.6	288.4	297.1	289.7	300.9	295.1	287.0	289.5	291.4
11	290.4	295.1	293.3	297.4	297.4	307.4	314.0	313.9	311.4	314.2	320.2	328.1	320.3	313.1	325.0	320.5	297.7	300.0	305.8	309.2	302.3	289.1	291.5	298.3
12	323.0	315.3	312.3	313.4	308.2	310.9	313.0	313.4	316.3	312.1	342.6	311.7	313.1	315.2	332.1	86.3	66.4	88.4	97.8	102.3	289.1	326.9	12.1	341.3
13	305.9	310.8	317.7	294.4	51.1	106.0	93.5	81.8	302.8	75.4	356.8	306.3	336.3	104.6	310.1	348.8	52.9	307.3	295.5	89.8	348.8	332.6	327.4	104.9
14	316.3	325.7	322.6	33.4	316.2	311.9	87.3	86.6	42.1	96.2	29.6	0.0	86.7	79.1	94.6	95.5	117.2	275.0	125.2	81.6	74.9	73.4	90.3	92.3
15	90.1	87.7	91.3	89.1	90.8	96.3	89.0	89.3	92.2	86.7	89.7	87.9	82.5	132.3	101.4	121.9	132.6	280.7	359.1	302.6	306.4	301.1	310.1	309.4
16	323.3	327.7	339.4	104.1	132.8	86.2	91.0	105.8	90.1	85.9	83.4	121.3	97.6	108.1	102.4	88.2	108.6	114.3	119.2	131.1	119.1	118.5	111.8	92.1
17	80.3	104.2	126.9	125.8	90.6	82.2	96.5	101.2	98.0	94.8	93.6	99.6	98.4	98.4	102.0	104.5	105.3	104.7	124.9	133.8	97.4	95.4	91.5	16.0
18	19.2	321.1	346.0	100.5	99.9	97.6	96.0	91.7	87.5	88.5	87.2	76.8	81.0	79.4	73.8	74.3	82.9	85.7	75.6	70.3	68.0	76.8	75.7	71.8
19	76.1	76.5	78.1	80.5	77.1	74.9	75.6	71.8	72.8	69.1	66.3	57.1	42.1	38.8	62.6	61.8	67.9	50.8	56.5	52.6	61.4	53.1	57.8	51.8
20	46.9	44.7	46.3	59.8	63.3	94.8	139.3	256.6	88.3	79.1	87.7	180.5	106.9	294.0	279.1	84.6	68.4	321.1	181.7	210.3	335.0	90.1	41.6	311.7
21	306.8	307.9	70.5	326.4	308.3	111.2	88.1	67.0	70.4	118.6	272.2	247.1	331.3	114.3	113.1	56.2	334.0	24.0	90.3	83.2	93.4	324.4	338.5	343.1
22	331.5	332.5	329.5	346.7	321.5	126.0	3.2	100.6	92.6	62.7	309.2	257.9	326.4	134.4	88.8	81.5	115.8	111.2	106.5	102.3	90.8	97.9	99.0	101.8
23	80.4	304.9	72.0	321.1	287.0	262.3	175.3	200.8	155.2	331.6	295.1	308.8	302.6	302.4	301.2	293.8	288.8	292.4	289.0	291.0	289.8	290.6	290.7	287.0
24	287.1	287.2	287.2	292.9	291.7	288.4	289.8	288.7	289.2	293.5	298.1	302.3	303.7	288.3	291.9	295.5	303.8	310.6	302.0	302.8	304.3	305.5	325.2	285.9
25	317.8	96.2	90.3	53.9	56.0	321.6	333.4	53.1	51.1	87.8	292.2	31.6	109.2	105.1	105.9	90.8	80.7	95.9	93.8	331.6	296.7	295.6	290.3	287.1
26	284.6	286.1	284.3	280.7	280.3	280.7	280.0	278.2	290.5	294.0	285.7	284.0	283.2	298.4	313.1	302.6	290.3	290.3	294.5	298.0	302.9	293.7	293.8	310.5
27	309.9	299.7	298.0	290.1	286.6	288.0	296.9	292.1	299.0	299.1	296.1	300.0	294.9	299.0	301.4	301.0	301.2	300.2	301.1	310.4	298.1	299.1	301.6	298.7
28	300.1	296.0	298.1	295.1	295.3	298.0	296.6	297.0	294.3	290.1	298.1	297.4	295.9	297.6	298.2	297.9	299.2	298.0	297.4	297.4	295.0	298.4	297.4	294.6
29	298.5	299.9	302.3	309.3	311.4	311.2	306.4	308.8	309.1	310.8	312.8	311.4	310.4	311.0	309.4	308.7	309.9	304.7	301.4	306.1	295.7	304.3	295.7	305.0
30	305.1	311.8	296.0	306.9	308.5	313.4	313.6	311.2	307.9	313.3	311.8	311.1	309.9	311.9	310.6	312.1	312.8	312.3	311.4	311.0	310.1	312.3	313.4	310.8
31	311.6	310.9	313.2	313.5	314.2	314.3	312.5	316.1	315.7	315.3	313.3	314.5	315.8	315.6	316.5	313.7	316.4	316.3	316.4	315.2	315.4	314.3	314.5	312.7

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	75.2	87.6	78.5	65.6	66.4	44.6	65.3	81.3	75.4	18.0	32.7	64.7	38.2	52.4	10.9	6.6	5.3	5.6	6.7	6.3	5.4	12.5	7.5	6.2	87.6	5.3	38.3
2	6.1	5.0	7.4	4.5	5.6	6.0	7.2	7.0	4.5	5.8	6.5	5.5	5.2	5.2	4.9	6.1	6.3	6.6	7.5	6.3	5.8	5.6	5.9	5.4	7.5	4.5	5.9
3	5.6	8.7	5.5	4.8	8.0	8.0	14.5	12.9	4.9	7.5	4.8	5.3	5.4	6.6	5.0	6.1	7.5	7.6	8.4	8.1	5.7	5.3	4.7	4.8	14.5	4.7	6.9
4	4.5	5.2	5.2	6.4	6.4	7.4	7.1	8.0	7.1	6.4	7.7	7.2	7.9	7.9	7.7	9.3	7.3	8.3	10.4	11.2	10.9	11.8	12.1	11.0	12.1	4.5	8.1
5	10.1	10.6	10.8	13.2	11.1	8.8	9.1	9.6	9.3	10.5	10.7	7.7	8.6	8.4	8.9	8.8	8.7	8.5	8.5	8.6	9.1	8.7	9.0	8.4	13.2	7.7	9.4
6	9.4	12.2	10.7	11.8	11.2	11.9	11.2	9.9	10.6	9.9	8.3	7.7	9.8	8.5	8.8	7.8	8.6	8.1	7.8	7.8	7.2	7.9	8.0	9.2	12.2	7.2	9.3
7	9.7	9.2	10.7	12.0	11.2	9.2	8.6	8.6	8.4	7.1	7.2	7.2	8.3	8.2	8.0	9.8	9.0	8.5	8.6	7.2	10.1	8.7	7.1	6.8	12.0	6.8	8.7
8	7.5	10.2	9.6	7.9	8.6	6.4	6.0	4.7	5.1	4.9	4.3	4.6	4.2	4.0	3.3	4.0	4.7	4.5	4.2	4.3	5.0	4.1	3.9	3.8	10.2	3.3	5.4
9	3.6	4.4	4.7	4.5	3.8	4.4	4.8	4.1	4.0	4.2	4.6	6.1	6.3	6.5	6.5	7.6	8.0	8.6	9.5	9.3	9.8	9.5	9.6	10.3	10.3	3.6	6.4
10	10.6	10.3	9.6	9.6	9.6	8.9	9.4	11.2	9.4	8.2	8.4	10.3	11.1	12.7	13.2	8.0	8.2	7.6	9.4	8.7	8.6	10.6	9.6	9.5	13.2	7.6	9.7
11	10.1	9.6	10.1	12.0	12.2	10.8	12.6	10.1	9.4	8.9	10.4	8.9	8.9	10.0	11.0	11.1	9.6	7.2	6.0	5.1	5.1	4.6	5.3	5.8	12.6	4.6	8.9
12	4.3	4.4	4.3	4.6	4.4	4.0	4.1	4.1	4.3	5.0	5.5	4.3	4.7	5.0	3.7	3.2	4.3	4.8	5.2	5.7	6.7	8.6	9.5	9.2	9.5	3.2	5.2
13	8.3	9.2	8.4	10.0	10.7	10.6	11.1	9.8	9.6	11.7	9.1	7.1	7.8	8.5	8.9	9.4	10.3	11.8	9.9	9.6	9.9	7.5	5.0	5.3	11.8	5.0	9.1
14	5.5	6.7	7.5	6.8	5.9	5.7	8.1	10.0	53.9	34.5	42.3	48.8	42.9	44.8	91.3	77.9	37.7	56.8	54.8	39.4	16.2	22.4	21.8	23.6	91.3	5.5	31.9
15	37.8	25.9	25.8	24.4	26.4	19.7	43.1	63.1	16.1	18.6	12.6	26.4	18.0	6.8	8.9	16.0	17.7	16.4	96.7	48.6	103.5	80.2	49.3	18.7	103.5	6.8	34.2
16	50.5	5.1	16.3	17.4	29.1	56.0	8.7	14.7	10.8	8.7	7.4	10.5	16.5	12.8	12.1	12.1	20.3	14.1	17.0	66.9	15.4	9.3	30.0	9.3	66.9	5.1	19.6
17	97.6	60.1	52.4	17.0	27.5	20.7	6.8	28.1	28.0	40.2	34.9	38.5	36.8	47.6	45.2	62.5	52.6	50.7	52.2	63.2	94.7	78.1	99.7	64.2	99.7	6.8	50.0
18	46.5	23.4	19.6	16.0	88.3	45.4	51.3	12.6	83.3	80.1	20.0	62.5	91.6	87.5	15.2	71.4	67.7	15.7	11.3	6.9	37.3	8.2	11.6	12.6	91.6	6.9	41.1
19	18.3	15.0	8.0	9.0	8.3	14.7	17.5	17.4	21.3	18.7	7.0	15.1	13.8	5.6	13.1	12.7	17.0	19.5	19.6	13.2	23.3	30.6	48.0	24.9	48.0	5.6	17.1
20	27.0	29.5	34.2	22.5	29.9	20.7	22.1	21.9	22.0	22.5	20.8	23.2	24.0	25.8	31.9	22.6	22.1	66.6	41.4	9.3	11.0	11.8	55.3	83.5	83.5	9.3	29.2
21	19.5	12.2	53.3	16.4	31.6	18.5	25.1	43.3	74.2	4.5	5.1	19.4	30.0	23.1	23.4	28.1	22.6	29.8	21.3	22.8	38.0	0.0	45.3	0.1	74.2	0.0	25.3
22	0.1	0.3	0.3	0.4	0.3	0.3	0.2	0.1	0.3	0.2	0.2	0.0	5.0	15.4	0.2	0.2	0.0	0.2	0.2	0.1	0.2	0.1	0.2	0.2	15.4	0.0	1.0
23	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	2.0	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	2.0	0.0	0.2
31	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.1	0.2
Max.	**97.6**	**87.6**	**78.5**	**65.6**	**88.3**	**56.0**	**65.3**	**81.3**	**83.3**	**80.1**	**42.3**	**64.7**	**91.6**	**87.5**	**91.3**	**77.9**	**67.7**	**66.6**	**96.7**	**66.9**	**103.5**	**80.2**	**99.7**	**83.5**	**103.5**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**15.1**	**11.8**	**12.7**	**9.6**	**13.5**	**11.1**	**11.4**	**12.7**	**15.2**	**10.8**	**8.7**	**12.6**	**13.1**	**13.3**	**11.1**	**13.0**	**11.5**	**11.9**	**13.4**	**11.9**	**14.2**	**11.2**	**14.8**	**10.7**			**12.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.1	0.3
2	0.3	0.2	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.0	0.2	0.2	0.1	0.4	0.0	0.3
3	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.3	0.3	0.3	0.1	0.4	0.3	0.4	0.1	0.3
4	0.2	0.2	0.3	0.2	0.1	0.3	0.1	0.4	0.3	0.2	0.3	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.0	0.2	0.1	0.3	0.4	0.0	0.2
5	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.1	0.3	0.1	0.2	0.3	0.1	0.2
6	0.3	0.2	0.0	0.1	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.0	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.3	0.0	0.2
7	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	3.2	1.0	33.0	8.5	7.4	34.4	6.6	6.8	9.6	7.3	9.2	34.4	0.0	5.4
8	9.6	6.6	12.6	35.6	39.5	56.8	71.1	66.5	88.0	63.6	63.9	35.4	41.6	56.0	48.8	45.8	49.7	46.2	45.9	48.4	55.6	66.1	71.1	93.4	93.4	6.6	50.7
9	68.3	80.9	58.6	48.5	49.1	55.8	25.1	21.6	26.4	25.1	23.7	24.1	41.7	29.4	64.1	33.7	24.9	8.9	11.4	13.9	8.0	12.0	10.0	9.3	80.9	8.0	32.3
10	27.6	50.0	34.7	13.3	12.0	16.1	37.1	32.6	19.3	25.6	8.7	12.7	12.0	17.4	19.2	24.4	89.4	32.2	6.5	14.6	12.1	8.1	10.8	17.8	89.4	6.5	23.1
11	16.9	26.9	14.0	15.3	22.5	19.7	7.3	7.2	35.2	12.3	20.4	25.8	11.1	9.8	9.1	11.1	8.6	7.1	4.8	7.0	7.3	5.7	5.2	5.7	35.2	4.8	13.2
12	5.5	3.6	4.5	5.1	6.5	6.5	7.5	9.9	12.2	8.4	8.3	7.7	6.0	6.6	5.1	3.9	6.1	6.3	6.6	10.7	9.3	13.8	32.3	40.2	40.2	3.6	9.7
13	22.6	7.4	11.4	30.6	58.4	52.9	47.0	44.2	51.7	62.1	69.0	74.5	82.5	60.2	59.7	49.5	58.1	50.7	46.4	52.2	59.8	62.9	78.7	72.7	82.5	7.4	52.7
14	59.3	50.8	56.9	57.2	59.9	60.8	67.5	53.3	61.6	66.0	47.5	7.1	6.3	7.7	7.9	8.7	9.8	10.7	11.4	10.3	7.6	8.0	8.9	8.9	67.5	6.3	31.4
15	5.0	5.4	5.4	5.8	7.2	9.7	15.9	14.3	13.5	12.9	13.1	10.6	10.2	9.5	12.9	8.2	7.9	5.5	5.2	10.6	15.6	71.4	37.4	44.0	71.4	5.0	14.9
16	59.8	82.4	74.6	72.2	66.7	53.2	53.6	60.6	85.5	67.2	60.7	75.7	93.8	96.8	99.6	70.1	95.3	85.1	20.4	21.7	40.2	67.3	35.6	11.6	99.6	11.6	64.6
17	20.5	12.3	43.3	76.4	26.3	16.0	42.6	58.7	46.8	70.0	51.5	49.5	38.7	56.0	63.3	71.2	58.7	41.9	21.4	10.5	6.3	6.1	7.5	8.5	76.4	6.1	37.7
18	10.0	7.1	6.2	10.7	9.3	9.2	8.6	8.5	8.3	6.8	8.4	12.6	8.5	7.6	5.9	8.5	7.1	8.9	15.3	10.6	17.0	20.5	49.6	37.7	49.6	5.9	12.6
19	19.8	35.0	46.4	23.4	24.8	52.0	67.9	57.9	36.6	36.7	43.8	37.4	40.0	45.2	53.7	77.7	62.0	50.4	50.2	50.1	46.4	46.3	45.9	31.5	77.7	19.8	45.1
20	24.7	33.5	8.5	9.4	7.3	5.0	6.6	7.4	7.2	20.4	39.2	26.4	27.4	21.6	48.0	48.9	38.5	48.8	53.0	57.1	45.7	45.9	72.1	100.6	100.6	5.0	33.5
21	84.3	62.3	68.3	82.2	81.2	84.2	72.3	92.2	77.4	49.7	38.5	48.5	52.5	49.4	65.5	39.2	26.2	42.1	31.3	36.7	46.0	41.8	37.2	51.0	92.2	26.2	56.7
22	20.4	33.7	37.7	45.2	46.6	62.2	87.2	70.0	65.8	55.5	41.0	33.0	19.0	10.2	8.6	7.5	7.9	8.4	7.5	13.3	21.5	10.0	13.1	22.6	87.2	7.5	31.2
23	12.7	14.9	12.2	65.3	56.4	12.9	58.1	28.3	34.0	61.0	30.1	11.8	5.3	8.7	14.7	19.4	5.3	5.7	72.0	11.5	33.9	10.9	5.3	9.5	72.0	5.3	25.0
24	13.5	19.8	4.7	8.6	11.9	5.9	5.1	5.3	4.7	5.2	4.1	4.8	4.6	3.9	4.2	3.7	4.4	3.9	3.6	3.7	4.2	5.6	5.5	8.6	19.8	3.6	6.2
25	8.1	8.9	8.8	10.1	8.7	11.7	9.6	8.4	7.5	10.3	7.9	7.4	7.8	29.8	71.5	48.6	43.3	52.2	47.7	56.3	51.9	53.1	56.7	63.5	71.5	7.4	28.7
26	59.0	51.0	52.0	70.8	42.0	54.8	50.3	49.6	71.7	63.0	57.4	73.1	68.7	80.8	43.2	27.0	8.1	16.3	17.0	18.0	9.6	8.6	11.7	9.5	80.8	8.1	42.2
27	10.0	8.2	14.7	27.1	8.0	5.5	12.5	8.1	59.8	45.3	10.3	31.2	12.9	12.4	36.9	14.9	10.9	55.1	48.3	70.1	81.6	83.8	54.3	61.4	83.8	5.5	32.6
28	81.7	70.5	69.9	67.9	80.7	76.9	48.0	54.1	37.0	43.2	101.3	65.5	20.4	21.2	28.5	32.8	53.0	70.2	21.3	5.9	6.0	5.3	5.8	5.6	101.3	5.3	44.7
29	5.6	8.3	8.5	21.7	13.3	38.7	13.4	28.9	6.2	8.0	7.4	5.3	4.6	9.0	6.7	4.0	5.8	6.0	5.4	6.5	6.8	6.1	5.4	4.0	38.7	4.0	9.8
Max.	**84.3**	**82.4**	**74.6**	**82.2**	**81.2**	**84.2**	**87.2**	**92.2**	**88.0**	**70.0**	**101.3**	**75.7**	**93.8**	**96.8**	**99.6**	**77.7**	**95.3**	**85.1**	**72.0**	**70.1**	**81.6**	**83.8**	**78.7**	**100.6**	**101.3**		
Min.	**0.2**	**0.1**	**0.0**	**0.0**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.0**	**0.1**	**0.1**	**0.1**		**0.0**	
Avg.	**22.3**	**23.5**	**22.6**	**27.7**	**25.5**	**26.5**	**28.1**	**27.2**	**29.6**	**28.3**	**26.1**	**23.5**	**21.3**	**22.6**	**26.9**	**23.9**	**23.8**	**23.1**	**20.3**	**18.9**	**20.7**	**23.1**	**23.0**	**25.1**			**24.3**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.4	4.2	4.5	5.3	5.2	5.4	5.4	4.9	8.7	13.2	85.8	90.7	85.4	96.9	91.6	95.1	101.0	91.5	63.0	60.1	58.9	60.7	76.0	69.8	101.0	4.2	49.5
2	80.2	69.3	77.9	45.0	49.2	52.4	76.1	51.8	13.4	12.3	32.6	63.0	65.2	51.8	46.6	35.3	49.7	41.3	54.2	41.5	21.3	32.9	65.9	49.1	80.2	12.3	49.1
3	8.9	18.6	33.1	17.1	5.9	4.7	32.2	45.5	18.3	19.1	19.8	14.1	15.3	17.5	21.6	25.9	30.1	38.7	25.0	26.0	20.6	14.0	11.1	10.2	45.5	4.7	20.6
4	7.9	7.3	6.8	14.1	12.9	15.4	8.2	8.5	7.7	7.8	7.6	8.8	18.2	22.7	21.0	24.1	21.6	27.5	23.9	19.4	16.6	16.6	37.7	36.3	37.7	6.8	16.6
5	39.5	44.5	49.2	44.3	50.7	42.2	41.3	45.1	47.4	50.1	47.7	45.4	39.7	46.5	49.4	45.4	26.8	23.7	13.2	10.7	7.7	7.8	8.0	5.9	50.7	5.9	34.7
6	12.2	11.9	11.4	7.8	7.9	8.4	9.0	12.0	12.0	15.1	9.9	14.3	20.4	24.5	24.4	35.2	42.8	35.6	62.4	88.0	59.5	71.5	93.7	78.7	93.7	7.8	32.0
7	94.6	49.2	95.4	80.5	65.9	82.6	9.7	6.7	7.1	8.8	7.4	6.2	10.0	5.9	11.5	10.4	14.9	11.3	14.9	13.2	13.0	12.4	7.3	6.5	95.4	5.9	26.9
8	8.7	14.5	10.8	9.4	8.6	91.0	56.9	89.3	34.9	21.1	27.3	88.1	48.8	54.1	85.1	77.6	73.4	85.6	82.7	70.1	80.9	85.7	87.5	66.8	91.0	8.6	56.6
9	91.7	83.3	91.4	86.9	77.8	85.8	86.9	90.5	97.9	59.2	63.2	94.3	86.9	77.2	73.9	55.4	40.0	34.4	11.2	11.5	6.2	6.5	10.6	20.9	97.9	6.2	60.1
10	91.0	31.5	50.7	79.7	34.4	11.7	5.8	8.3	17.0	12.8	7.1	9.1	5.4	4.8	3.8	6.7	3.9	4.8	8.4	7.1	6.3	8.0	8.4	4.9	91.0	3.8	18.0
11	5.7	7.1	7.3	8.5	8.6	8.6	9.6	9.5	9.0	9.7	9.8	9.7	10.0	9.9	9.2	9.2	11.3	12.9	12.1	10.6	10.6	12.0	11.4	10.7	12.9	5.7	9.7
12	12.2	10.7	9.2	9.0	8.5	8.6	6.8	4.3	3.8	4.9	4.1	4.6	6.9	6.2	6.7	5.9	6.7	5.9	4.9	4.6	4.3	4.1	4.2	4.6	12.2	3.8	6.3
13	4.1	4.6	5.0	5.4	5.5	8.7	9.6	9.9	9.0	8.7	9.9	11.3	13.2	13.5	11.3	10.8	10.1	10.6	10.2	7.8	8.8	8.8	7.5	5.4	13.5	4.1	8.7
14	3.9	3.4	3.3	3.6	5.8	7.7	10.1	9.6	16.5	26.3	18.7	10.1	13.2	8.3	17.2	81.8	19.9	8.0	10.9	9.3	15.9	33.2	30.5	25.4	81.8	3.3	16.4
15	37.3	48.2	79.2	74.5	65.8	55.4	58.4	46.5	32.5	46.1	61.9	55.8	63.2	62.9	77.2	50.7	72.7	72.1	72.1	48.0	62.5	40.7	43.7	37.7	79.2	32.5	56.9
16	77.1	63.4	67.1	31.3	72.9	60.6	85.6	49.7	32.5	82.0	52.7	37.7	92.2	36.4	5.5	8.7	10.1	11.4	14.7	14.1	16.1	27.7	10.7	8.7	92.2	5.5	40.4
17	12.1	14.9	12.5	6.2	6.0	6.5	6.2	8.3	9.1	6.0	8.5	12.7	8.9	8.3	8.3	9.3	9.4	9.8	12.7	15.6	14.4	12.5	12.7	15.3	15.6	6.0	10.3
18	12.4	10.7	11.4	10.7	11.0	9.2	11.2	8.6	8.3	10.7	6.7	8.7	9.7	12.9	9.6	12.2	13.3	14.6	10.3	10.2	13.0	13.6	10.7	12.4	14.6	6.7	10.9
19	12.0	10.6	8.6	8.6	8.5	8.2	9.4	10.4	8.8	8.3	8.9	9.1	10.8	13.1	12.3	10.4	10.4	9.1	10.3	10.2	9.8	10.4	10.5	12.9	13.1	8.2	10.1
20	10.7	11.7	11.5	11.1	11.9	10.4	7.2	5.6	4.5	3.9	4.5	5.4	5.2	5.5	4.3	5.0	4.0	4.2	4.6	4.5	3.7	3.6	4.0	4.4	11.9	3.6	6.3
21	4.6	4.9	4.5	5.0	4.3	4.8	5.8	23.5	37.9	91.5	75.3	33.6	33.5	78.6	72.2	38.7	44.1	23.5	59.3	30.1	45.7	100.5	84.1	88.6	100.5	4.3	41.4
22	87.5	97.7	69.5	43.5	24.7	59.8	24.0	9.9	13.9	11.7	8.0	5.8	7.7	4.7	4.5	4.8	5.0	4.5	4.3	4.7	5.1	5.2	6.7	4.7	97.7	4.3	21.6
23	4.6	4.0	4.1	4.0	4.6	5.7	4.2	4.8	5.0	6.7	6.6	5.4	6.4	7.1	8.9	9.9	9.4	8.7	9.0	9.3	8.8	7.3	8.0	8.1	9.9	4.0	6.7
24	8.1	8.6	6.5	5.2	5.8	5.6	4.0	3.7	4.7	3.6	4.6	4.1	4.5	4.9	4.9	5.0	4.9	4.5	4.2	3.9	4.8	4.6	5.9	10.9	10.9	3.6	5.3
25	73.9	21.7	11.2	8.7	9.7	12.2	5.0	6.5	10.0	8.5	16.2	12.4	8.4	6.0	5.7	5.2	4.7	4.1	4.5	4.5	4.5	4.3	4.2	6.7	73.9	4.1	10.8
26	3.9	3.6	3.5	3.9	3.5	3.8	5.0	6.6	5.8	7.2	5.5	6.5	4.7	3.7	4.2	4.9	4.9	6.4	7.4	8.1	6.3	7.5	9.0	9.2	9.2	3.5	5.6
27	10.2	11.9	12.3	12.0	11.6	12.2	11.8	9.8	11.5	12.3	11.6	9.6	7.7	7.8	8.7	7.8	8.7	9.1	8.4	8.9	10.0	9.1	8.1	9.0	12.3	7.7	10.0
28	7.9	7.5	6.1	5.5	5.4	5.2	5.3	5.0	5.4	6.2	4.3	4.9	4.2	4.7	4.0	3.8	4.6	4.9	6.3	10.2	10.4	15.4	75.7	53.4	75.7	3.8	11.1
29	29.1	17.0	23.8	32.4	14.8	15.7	18.1	17.0	19.9	20.3	13.7	22.5	17.3	9.4	14.8	22.4	21.7	22.4	13.5	11.7	5.3	5.4	7.6	19.1	32.4	5.3	17.3
30	30.8	20.1	10.9	8.0	11.1	8.6	8.7	10.9	14.4	16.5	10.3	17.3	13.2	12.4	10.5	12.7	14.7	12.4	10.4	15.6	22.7	19.0	19.0	18.0	30.8	8.0	14.5
31	16.0	15.4	16.7	18.9	11.7	14.2	12.4	9.7	13.9	18.2	21.9	8.7	9.8	10.0	12.9	9.3	15.2	13.9	18.9	17.6	10.5	7.5	8.1	8.2	21.9	7.5	13.3
Max.	**94.6**	**97.7**	**95.4**	**86.9**	**77.8**	**91.0**	**86.9**	**90.5**	**97.9**	**91.5**	**85.8**	**94.3**	**92.2**	**96.9**	**91.6**	**95.1**	**101.0**	**91.5**	**82.7**	**88.0**	**80.9**	**100.5**	**93.7**	**88.6**	**101.0**		
Min.	**3.9**	**3.4**	**3.3**	**3.6**	**3.5**	**3.8**	**4.0**	**3.7**	**3.8**	**3.6**	**4.1**	**4.1**	**4.2**	**3.7**	**3.8**	**3.8**	**3.9**	**4.1**	**4.2**	**3.9**	**3.7**	**3.6**	**4.0**	**4.4**		**3.3**	
Avg.	**29.1**	**23.6**	**26.3**	**22.8**	**20.3**	**23.6**	**21.0**	**20.4**	**17.4**	**20.3**	**21.7**	**23.5**	**24.1**	**23.5**	**23.9**	**23.9**	**22.9**	**21.5**	**21.5**	**19.6**	**18.8**	**21.6**	**25.4**	**23.3**			**22.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.6	14.7	21.6	23.2	22.8	20.0	11.5	20.0	25.8	25.6	24.0	22.0	24.9	27.2	46.3	35.9	47.9	44.6	44.5	60.3	60.2	51.6	61.5	80.4	80.4	9.6	34.4
2	35.3	10.1	3.4	4.1	3.9	5.1	4.4	4.1	4.7	4.8	4.9	3.8	5.3	5.1	17.9	27.4	11.2	8.1	12.4	8.4	8.0	11.3	10.1	9.1	35.3	3.4	9.3
3	9.0	7.6	12.5	16.6	8.0	9.9	17.8	22.7	41.6	65.9	14.8	19.6	12.8	14.4	13.5	9.9	7.3	12.0	8.9	7.4	8.4	8.2	8.6	9.8	65.9	7.3	15.3
4	7.6	6.0	8.7	7.7	9.6	9.7	9.4	15.3	20.7	20.7	17.6	15.5	9.7	15.0	23.0	28.4	34.6	19.3	38.1	62.0	15.7	27.2	5.3	5.9	62.0	5.3	18.0
5	6.2	6.5	11.3	9.6	8.2	9.7	7.2	5.8	7.2	10.3	9.3	8.5	7.8	11.0	9.3	7.8	9.5	8.8	8.4	8.7	8.1	8.3	9.1	9.1	11.3	5.8	8.6
6	9.9	10.5	8.1	7.8	4.9	8.3	7.3	8.5	8.1	9.8	9.9	13.0	10.7	9.3	11.8	10.3	10.6	9.5	11.1	12.3	9.7	7.3	7.3	9.7	13.0	4.9	9.4
7	9.6	10.9	8.6	10.3	9.9	8.7	8.3	7.6	7.9	6.2	7.0	10.3	14.1	16.5	13.8	14.7	14.0	13.6	12.0	10.3	10.7	9.4	10.0	8.7	16.5	6.2	10.6
8	7.4	9.0	7.9	8.4	8.2	4.7	5.0	5.0	10.2	6.4	11.9	12.6	97.0			31.1	53.4	16.6	65.0	29.7	46.4	13.9	5.8	5.3	97.0	4.7	20.9
9	6.1	8.8	6.1	6.8	7.6	8.0	8.8	9.2	9.9	11.5	12.7	17.1	13.3	11.0	14.0	10.7	5.7	6.2	6.2	6.6	6.7	6.1	5.7	6.0	17.1	5.7	8.8
10	5.4	7.7	7.0	7.1	7.4	7.9	9.5	8.5	7.9	8.7	7.3	7.2	13.7	11.6	11.6	11.2	9.1	9.8	10.7	9.0	9.8	9.9	9.5	10.1	13.7	5.4	9.1
11	8.6	8.7	10.5	6.6	7.8	6.4	5.8	6.6	5.8	6.7	7.4	6.8	7.9	12.6	12.3	10.7	13.9	12.2	12.5	11.7	14.7	9.0	9.1	13.7	14.7	5.8	9.5
12	8.8	9.7	11.7	12.8	11.0	9.6	9.7	10.9	9.5	9.6	11.2	13.1	13.1	11.7	12.6	10.6	13.7	10.4	9.4	12.8	11.9	7.8	8.2	12.0	13.7	7.8	10.9
13	13.0	17.0	8.9	9.7	7.9	8.3	9.3	8.5	9.7	9.4	21.7	11.1	14.5	89.9	45.0	27.0	11.5	9.8	7.5	6.3	5.6	5.6	6.7	6.8	89.9	5.6	15.4
14	9.9	9.9	10.0	10.5	9.4	7.3	9.7	5.9	7.2	7.2	7.7	6.9	6.5	5.5	5.9	5.8	5.9	5.6	6.7	6.4	7.5	9.3	10.0	8.8	10.5	5.5	7.7
15	15.7	16.6	18.1	6.3	4.5	8.6	56.8	31.3	17.8	14.1	74.4	4.8	7.2	12.3	15.5	6.2	5.7	6.0	5.8	6.2	6.0	6.3	6.3	7.5	74.4	4.5	15.0
16	14.7	11.2	10.8	17.6	16.2	14.5	14.8	12.3	10.2	6.8	6.9	8.8	9.1	8.5	9.4	8.8	7.0	6.6	6.7	6.6	8.2	9.4	6.3	7.1	17.6	6.3	9.9
17	7.6	7.4	7.6	8.1	8.4	7.1	8.1	7.2	8.6	14.1	23.3	15.0	8.6	12.6	8.5	10.0	12.6	13.3	14.5	12.8	12.1	10.7	11.3	14.6	23.3	7.1	11.0
18	9.7	9.8	8.6	22.2	23.0	10.3	10.2	14.9	78.5	7.5	61.9	11.9	9.7	7.4	6.9	7.3	7.2	9.6	5.4	14.4	12.3	27.5	14.7	91.7	91.7	5.4	20.1
19	65.6	17.6	13.8	14.5	11.4	11.3	8.6	47.2	13.4	10.3	7.2	3.9	6.1	8.1	7.3	7.8	5.9	9.8	6.9	6.8	4.8	8.1	6.2	7.0	65.6	3.9	12.9
20	10.0	5.1	8.0	11.6	7.2	6.9	9.1	5.8	4.4	8.2	7.2	4.9	4.0	3.0	2.9	3.2	3.4	3.5	5.9	7.4	7.4	4.3	4.5	4.3	11.6	2.9	5.9
21	6.3	6.3	9.7	7.6	4.5	4.5	4.1	5.0	6.2	5.7	3.0	2.7	2.3	2.6	2.7	3.9	3.6	7.6	3.9	8.2	10.0	8.4	5.0	8.1	10.0	2.3	5.5
22	7.6	9.1	10.7	65.4	12.6	10.6	81.0	7.2	7.0	77.0	33.9	47.5	10.6	7.2	8.0	4.8	4.8	16.4	10.6	10.3	15.2	68.5	48.7	8.0	81.0	4.8	24.3
23	41.1	8.2	63.5	35.2	7.1	21.0	12.4	9.1	6.5	7.2	9.4	7.1	4.7	4.7	4.4	4.8	5.8	4.7	5.0	5.0	6.8	8.2	8.8	9.1	63.5	4.4	12.5
24	8.9	11.9	9.2	9.0	10.6	11.1	10.0	12.7	13.0	10.8	10.8	11.2	13.9	14.4	12.7	10.4	12.2	11.1	11.8	14.9	8.7	7.7	8.9	5.0	14.9	5.0	10.9
25	6.0	11.4	9.2	5.4	8.8	6.0	6.9	6.1	6.0	4.9	5.4	6.3	6.0	7.2	6.0	5.1	5.8	6.5	10.8	9.4	12.1	10.2	9.8	8.7	12.1	4.9	7.5
26	7.9	10.5	13.8	8.1	6.3	7.2	9.0	7.5	8.6	9.0	10.6	10.1	10.1	11.1	9.9	6.0	5.6	4.3	4.2	3.7	5.0	3.9	4.6	5.6	13.8	3.7	7.6
27	6.2	9.8	7.5	6.3	6.5	6.3	10.3	7.2	7.9	8.3	9.3	8.4	10.8	11.8	7.9	7.1	10.2	9.4	10.6	6.1	5.6	6.0	5.0	5.1	11.8	5.0	7.9
28	6.5	7.0	5.9	6.6	6.0	5.4	4.6	5.2	6.7	8.3	8.1	7.6	7.4	9.8	11.3	9.6	8.6	13.0	13.0	12.6	11.2	11.8	8.7	10.2	13.0	4.6	8.5
29	9.3	9.2	9.3	9.6	9.4	9.4	8.4	9.3	7.2	5.2	5.5	7.6	8.2	8.7	8.3	8.0	8.3	8.0	7.3	7.3	7.1	5.7	4.7	4.3	9.6	4.3	7.7
30	5.6	5.1	5.8	7.8	5.9	7.4	7.6	10.1	5.3	5.4	11.5	8.6	40.7	75.8	6.8	5.4	70.9	5.6	11.1	17.9	12.1	8.1	15.2	92.3	92.3	5.1	18.7
Max.	**65.6**	**17.6**	**63.5**	**65.4**	**23.0**	**21.0**	**81.0**	**47.2**	**78.5**	**77.0**	**74.4**	**47.5**	**97.0**	**89.9**	**46.3**	**35.9**	**70.9**	**44.6**	**65.0**	**62.0**	**60.2**	**68.5**	**61.5**	**92.3**	**97.0**		
Min.	**5.4**	**5.1**	**3.4**	**4.1**	**3.9**	**4.5**	**4.1**	**4.1**	**4.4**	**4.8**	**3.0**	**2.7**	**2.3**	**2.6**	**2.7**	**3.2**	**3.4**	**3.5**	**3.9**	**3.7**	**4.8**	**3.9**	**4.5**	**4.3**		**2.3**	
Avg.	**12.5**	**9.8**	**11.6**	**12.7**	**9.2**	**9.0**	**12.9**	**11.2**	**12.8**	**13.5**	**15.2**	**11.1**	**13.7**	**15.4**	**12.6**	**11.7**	**14.2**	**10.7**	**12.9**	**13.4**	**12.3**	**13.0**	**11.2**	**16.1**			**12.4**

Total Hours in Month 744 **Hours Data Available** 718 **Data Recovery** 96.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

May 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.3	4.7	4.2	14.0	3.6	3.3	4.8	4.1	6.5	8.9	8.2	7.8	4.6	3.7	4.3	8.2	8.7	9.9	9.6	8.1	8.3	8.3	14.6	9.9	14.6	3.3	7.3
2	13.3	8.9	7.1	7.2	6.2	8.2	10.3	4.7	7.8	4.7	4.6	7.3	9.6	12.8	5.8	5.1	5.6	4.7	5.9	5.1	12.5	16.8	9.0	9.4	16.8	4.6	8.0
3	6.3	12.7	18.4	36.1	68.9	7.7	9.1	69.1	68.3	59.2	14.6	4.4	34.4	45.5	32.1	7.2	6.2	47.7	52.3	20.5	35.7	38.7	45.8	44.2	69.1	4.4	32.7
4	43.4	49.6	51.5	45.3	47.4	48.1	46.8	51.3	47.1	51.0	52.5	37.4	39.2	61.1	87.4	55.3	25.1	43.1	70.3	74.9	88.7	10.0	7.4	7.2	88.7	7.2	47.5
5	4.0	3.5	6.0	4.7	5.5	5.2	7.8	6.5	4.6	7.2	5.8	4.4	5.9	9.1	4.3	7.8	6.4	6.1	5.7	4.6	6.0	18.7	7.1	41.1	41.1	3.5	7.8
6	41.1	20.0	20.5	75.4	13.3	9.2	19.3	71.1	25.4	60.8	9.0	7.4	6.9	16.3	8.7	6.3	6.2	6.3	4.1	7.8	4.9	4.1	4.5	2.8	75.4	2.8	18.8
7	8.6	4.0	7.6	14.2	15.9	8.7	19.2	12.1	19.2	22.5	24.4	29.5	45.7	40.5	37.0	24.0	22.8	18.9	19.2	9.8	8.1	8.8	19.5	13.1	45.7	4.0	18.9
8	19.9	32.7	45.3	47.5	41.7	42.1	46.3	34.9	39.2	38.7	41.1	36.0	29.2	20.5	28.6	25.2	31.1	36.5	38.5	34.8	46.1	38.4	40.1	49.4	49.4	19.9	36.8
9	46.7	55.0	48.6	49.1	47.0	48.0	47.9	49.9	57.9	46.9	43.8	54.0	75.0	76.0	47.8	52.2	37.6	31.4	22.7	83.0	46.7	13.8	75.7	74.1	83.0	13.8	51.3
10	18.5	6.2	7.9	8.2	6.2	4.9	8.1	5.7	5.4	6.0	6.8	5.1	5.2	5.7	5.5	6.7	5.7	9.0	45.0	16.4	53.4	22.7	18.7	9.3	53.4	4.9	12.2
11	8.5	7.2	31.0	41.5	12.3	9.2	27.6	26.0	16.7	4.6	4.2	6.7	12.2	15.0	4.0	4.4	10.3	13.3	18.7	20.4	17.9	19.4	22.8	21.6	41.5	4.0	15.6
12	33.7	47.1	52.7	50.7	40.7	48.1	51.4	43.3	38.9	35.1	47.7	49.1	53.3	22.2	8.9	3.1	4.3	5.5	7.6	5.1	9.5	18.0	12.7	10.4	53.3	3.1	29.1
13	11.3	12.4	10.4	16.3	20.1	16.9	19.7	14.7	12.8	8.8	10.1	9.2	6.1	6.1	7.1	7.6	4.1	3.3	4.0	5.6	9.1	4.3	5.5	19.9	20.1	3.3	10.2
14	19.3	25.8	55.0	53.9	58.7	63.1	58.0	81.4	72.5	85.6	79.7	68.5	68.4	61.5	87.3	96.6	82.8	52.0	82.8	75.1	21.9	63.0	28.0	24.2	96.6	19.3	61.0
15	13.7	6.9	7.3	7.6	9.1	8.5	16.1	13.9	62.9	9.5	14.5	11.2	7.5	8.6	5.4	5.8	5.9	6.4	14.6	19.2	60.5	72.8	16.1	54.0	72.8	5.4	19.1
16	87.7	45.4	23.1	18.8	9.0	9.6	7.3	6.4	6.9	4.7	5.0	7.9	5.4	7.5	5.3	6.8	3.2	4.8	6.9	5.7	6.5	10.7	77.7	10.4	87.7	3.2	15.9
17	20.8	18.0	12.1	4.6	4.1	5.9	4.8	5.3	9.0	7.9	3.9	5.5	69.0	7.6	10.1	5.0	15.7	6.0	5.9	6.1	6.8	3.5	2.7	12.4	69.0	2.7	10.5
18	70.9	71.5	7.5	7.5	11.4	21.0	38.0	10.2	10.2	14.0	11.9	9.9	3.2	3.7	4.4	5.4	6.2	4.6	5.8	3.3	6.0	5.2	6.1	8.3	71.5	3.2	14.4
19	12.6	6.6	16.5	57.2	52.0	77.5	11.2	5.0	7.4	7.6	6.9	79.9	8.0	27.4	19.5	7.7	10.9	8.9	9.1	10.0	11.0	9.3	6.8	7.2	79.9	5.0	19.8
20	5.9	5.7	5.9	6.0	5.3	4.3	4.5	4.3	6.3	7.3	7.4	4.6	4.3	5.5	64.0	15.2	20.4	22.9	14.4	11.5	8.5	40.9	66.5	51.1	66.5	4.3	16.4
21	8.9	12.2	66.2	61.1	9.8	27.0	71.6	66.1	7.6	53.2	9.7	4.8	5.6	4.3	5.3	7.4	6.2	4.9	5.3	8.0	20.5	18.2	82.9	9.1	82.9	4.3	24.0
22	9.5	6.8	7.1	9.0	8.8	10.9	10.7	9.6	7.3	7.0	4.5	4.1	79.0	19.5	9.4	10.1	12.8	4.7	4.1	5.4	5.6	5.0	5.9	5.9	79.0	4.1	10.9
23	5.2	6.0	5.8	7.7	14.4	18.7	22.1	18.3	26.6	30.6	45.4	23.9	11.5	4.4	5.9	3.7	3.2	4.3	4.3	3.3	4.7	3.3	4.9	6.5	45.4	3.2	11.9
24	3.8	5.9	9.4	6.7	6.9	6.5	4.2	6.4	8.9	8.9	7.3	6.7	6.1	5.0	10.1	7.0	4.7	7.8	8.1	7.2	10.6	92.1	8.0	47.6	92.1	3.8	12.3
25	40.1	62.8	41.8	8.1	69.1	17.8	44.9	34.0	96.7	77.3	17.9	10.0	3.6	4.5	5.2	5.0	3.8	5.0	8.4	7.5	12.9	24.5	52.6	6.4	96.7	3.6	27.5
26	8.7	14.3	12.4	9.4	8.9	8.0	8.0	8.5	11.4	10.1	11.0	13.8	12.7	13.8	13.5	9.8	10.4	12.2	10.5	9.2	9.6	8.3	7.7	11.1	14.3	7.7	10.5
27	9.9	10.8	15.7	13.9	11.6	10.5	10.7	8.1	9.5	8.5	7.2	9.6	9.9	9.3	9.4	9.8	10.9	12.1	11.3	9.6	14.2	13.8	11.7	8.3	15.7	7.2	10.7
28	11.6	10.7	9.1	8.2	7.8	8.8	8.1	8.9	9.0	9.0	9.3	8.0	10.5	11.7	9.3	11.7	10.0	11.2	11.6	11.2	10.0	7.8	9.7	9.7	11.7	7.8	9.7
29	6.7	7.3	8.9	8.6	5.4	6.9	5.3	5.8	8.9	8.2	6.6	75.1	17.9	12.8	9.6	10.1	10.0	9.7	12.4	7.6	11.6	64.1	74.6	73.7	75.1	5.3	19.5
30	8.0	66.9	74.9	83.7	74.8	52.5	68.0	11.5	9.5	6.9	7.1	10.3	7.6	5.8	6.6	6.7	5.2	7.1	4.8	8.2	5.9	5.9	5.7	7.1	83.7	4.8	22.9
31	13.5	9.5	8.3	8.6	4.0	3.7	4.5	3.3	4.9	5.0	7.8	6.0	5.5	4.3	4.5	2.8	3.4	3.3	3.6	4.1	3.1	4.3	5.9	6.1	13.5	2.8	5.4
Max.	**87.7**	**71.5**	**74.9**	**83.7**	**74.8**	**77.5**	**71.6**	**81.4**	**96.7**	**85.6**	**79.7**	**79.9**	**79.0**	**76.0**	**87.4**	**96.6**	**82.8**	**52.0**	**82.8**	**83.0**	**88.7**	**92.1**	**82.9**	**74.1**	**96.7**		
Min.	**3.8**	**3.5**	**4.2**	**4.6**	**3.6**	**3.3**	**4.2**	**3.3**	**4.6**	**4.6**	**3.9**	**4.1**	**3.2**	**3.7**	**4.0**	**2.8**	**3.2**	**3.3**	**3.6**	**3.3**	**3.1**	**3.3**	**2.7**	**2.8**		**2.7**	
Avg.	**19.9**	**21.2**	**22.5**	**25.5**	**22.6**	**20.0**	**23.1**	**22.6**	**23.4**	**23.1**	**17.3**	**19.9**	**21.4**	**17.8**	**18.3**	**14.2**	**12.9**	**13.7**	**17.0**	**16.4**	**18.6**	**21.8**	**24.4**	**21.7**			**20.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.8	10.9	7.3	12.6	22.7	22.0	22.1	20.5	27.0	16.7	15.8	9.4	11.7	18.4	30.8	17.9	8.5	4.3	35.1	25.5	45.7	33.1	47.7	40.9	47.7	4.3	21.4
2	39.4	47.1	57.7	52.3	57.0	41.8	39.3	39.1	43.7	46.9	47.3	43.1	54.1	38.6	39.8	42.5	44.4	63.9	61.4	44.8	94.0	54.1	80.6	66.6	94.0	38.6	51.7
3	47.4	78.0	78.4	66.0	38.0	33.4	31.5	34.8	66.9	45.3	48.2	25.0	13.6	13.8	17.9	9.0	4.5	5.5	8.1	7.5	22.5	29.2	16.6	81.0	81.0	4.5	34.3
4	94.2	24.3	25.8	28.5	55.8	60.1	84.6	20.1	85.6	19.1	92.5	7.7	13.0	7.4	13.2	15.5	13.0	7.3	19.6	6.0	22.9	9.6	12.5	19.4	94.2	6.0	31.6
5	17.7	24.9	7.2	7.1	8.0	4.6	6.7	2.9	10.2	11.8	4.9	12.3	8.9	16.7	25.0	13.1	12.4	11.2	38.5	38.5	27.2	38.5	69.4	78.3	78.3	2.9	20.7
6	76.9	21.5	28.6	33.4	4.5	4.3	4.1	5.8	6.8	5.3	7.9	8.2	6.4	6.3	8.8	7.9	9.2	11.4	64.6	53.0	14.3	10.5	9.1	7.9	76.9	4.1	17.4
7	9.0	11.5	8.5	8.4	9.1	8.0	8.4	6.5	6.6	7.2	4.5	6.2	8.1	8.6	5.6	5.7	49.1	9.6	11.5	19.9	25.0	22.3	14.1	27.8	49.1	4.5	12.6
8	25.5	33.2	23.1	38.5	9.3	70.3	14.9	42.1	9.0	7.3	10.9	9.4	8.1	7.3	9.2	56.5	76.9	15.4	15.5	14.1	10.3	10.8	6.5	9.2	76.9	6.5	22.2
9	11.8	11.1	12.4	14.5	11.6	12.6	10.9	11.3	12.2	13.2	11.8	14.4	15.5	17.3	14.8	12.8	13.4	10.1	11.2	11.6	10.8	11.4	8.5	10.3	17.3	8.5	12.3
10	9.7	9.9	9.4	8.5	8.3	7.5	5.4	4.8	8.9	4.8	5.0	4.9	13.2	31.0	4.6	4.3	3.9	3.7	4.0	4.8	5.0	6.0	6.5	6.2	31.0	3.7	7.5
11	13.0	17.5	11.6	16.5	4.4	59.9	65.3	64.5	20.8	12.6	19.2	74.3	45.0	15.0	8.9	6.4	5.9	3.5	3.7	8.4	66.7	10.3	10.2	10.1	74.3	3.5	23.9
12	10.6	12.2	10.1	11.0	11.9	11.2	9.5	10.3	10.0	9.1	9.3	8.4	7.4	8.8	8.4	5.9	7.2	6.5	7.3	7.8	5.7	4.7	7.9	8.4	12.2	4.7	8.7
13	9.2	9.8	9.9	9.3	8.7	7.3	5.9	6.0	4.6	8.4	7.6	7.5	6.5	7.7	7.0	6.9	5.2	5.7	37.2	40.2	11.4	13.1	55.3	86.3	86.3	4.6	15.7
14	67.7	19.4	72.1	16.4	10.1	10.0	10.9	9.6	7.2	9.2	9.0	9.7	8.7	13.6	69.9	7.1	6.3	6.3	8.9	11.4	11.3	20.5	57.4	12.5	72.1	6.3	20.2
15	26.8	29.9	30.7	37.5	12.2	8.5	9.5	10.1	7.4	7.6	8.0	6.6	26.0	8.1	6.9	6.1	12.0	11.6	65.1	15.9	10.5	11.1	12.5	13.1	65.1	6.1	16.4
16	10.6	10.7	11.0	9.8	9.3	7.5	6.2	5.8	5.2	6.3	7.8	5.2	4.9	4.5	4.3	45.3	10.4	18.4	10.3	8.7	8.7	50.1	26.5	17.0	50.1	4.3	12.7
17	11.0	10.9	75.9	23.2	32.8	67.5	28.4	27.3	8.7	3.1	4.5	3.0	3.9	4.7	5.2	5.5	5.6	6.3	6.7	7.5	5.8	4.1	5.5	24.8	75.9	3.0	15.9
18	13.3	85.9	13.1	36.8	61.8	17.6	15.7	59.4	14.6	23.9	56.9	9.2	6.2	8.1	7.6	10.1	6.6	8.9	6.4	7.5	9.1	13.3	77.7	17.9	85.9	6.2	24.5
19	93.4	62.7	54.6	40.0	16.7	41.8	11.8	34.6	43.4	11.7	9.2	6.4	8.2	7.7	9.1	6.4	7.2	6.0	3.5	3.2	3.4	4.3	3.9	7.8	93.4	3.2	20.7
20	10.6	23.6	83.1	100.5	46.2	67.0	14.8	62.3	17.6	4.9	3.8	4.2	2.8	2.4	2.4	3.0	6.2	4.9	4.6	10.5	6.4	4.5	3.4	7.6	100.5	2.4	20.7
21	9.2	6.0	5.1	11.3	11.5	14.6	11.1	17.6	34.0	10.4	6.6	5.9	4.8	6.6	3.3	4.6	7.3	15.0	12.3	13.9	9.6	9.9	26.9	48.3	48.3	3.3	12.7
22	8.8	57.7	90.8	37.1	41.9	30.8	14.5	31.4	83.5	6.4	3.7	3.7	3.5	5.0	4.4	12.7	75.6	19.6	13.8	9.4	10.7	55.2	64.3	8.7	90.8	3.5	28.9
23	9.8	12.2	9.7	8.9	7.3	6.0	9.0	9.8	6.5	3.2	3.9	5.1	4.9	4.8	4.9	3.8	6.0	4.0	3.9	3.7	6.4	7.5	13.8	12.8	13.8	3.2	7.0
24	17.6	9.3	7.7	11.0	5.2	9.5	10.5	9.2	10.7	9.9	7.1	9.2	7.5	5.8	10.6	9.6	18.2	24.0	28.2	23.3	14.1	19.3	20.9	22.2	28.2	5.2	13.4
25	18.8	18.8	10.9	5.1	3.6	5.6	8.7	19.6	20.5	13.0	19.0	14.4	16.0	3.6	2.9	5.4	5.1	3.5	3.7	9.7	15.7	16.9	16.3	35.4	35.4	2.9	12.2
26	59.0	51.1	49.4	62.6	63.9	70.0	79.2	82.7	69.9	78.9	56.3	43.1	47.1	37.5	44.7	45.7	41.4	48.3	51.8	47.1	44.6	43.3	38.8	44.9	82.7	37.5	54.2
27	46.3	44.7	13.2	13.2	10.9	5.2	5.1	3.9	3.9	8.6	11.0	10.6	10.4	11.1	19.9	6.4	5.9	3.1	3.4	3.8	4.2	3.1	7.6	8.7	46.3	3.1	11.0
28	56.7	8.8	9.2	9.2	7.9	10.0	11.3	9.4	12.8	12.8	17.7	16.1	18.6	14.0	28.6	41.6	48.4	97.7	20.0	12.3	8.7	10.5	16.5	18.5	97.7	7.9	21.6
29	15.8	10.6	14.2	11.6	12.6	7.1	10.3	5.5	3.4	2.9	3.2	4.9	4.4	5.7	6.2	5.1	4.4	3.9	4.1	3.8	9.0	4.9	7.0	10.0	15.8	2.9	7.1
30	9.8	13.4	13.4	14.0	60.3	37.7	55.9	28.5	59.9	9.1	5.1	4.2	3.9	3.7	4.4	4.1	4.0	3.4	8.7	10.2	10.8	12.6	12.1	27.0	60.3	3.4	17.3
Max.	**94.2**	**85.9**	**90.8**	**100.5**	**63.9**	**70.3**	**84.6**	**82.7**	**85.6**	**78.9**	**92.5**	**74.3**	**54.1**	**38.6**	**69.9**	**56.5**	**76.9**	**97.7**	**65.1**	**53.0**	**94.0**	**55.2**	**80.6**	**86.3**	**100.5**		
Min.	**7.8**	**6.0**	**5.1**	**5.1**	**3.6**	**4.3**	**4.1**	**2.9**	**3.4**	**2.9**	**3.2**	**3.0**	**2.8**	**2.4**	**2.4**	**3.0**	**3.9**	**3.1**	**3.4**	**3.2**	**3.4**	**3.1**	**3.4**	**6.2**		**2.4**	
Avg.	**28.6**	**26.3**	**28.5**	**25.2**	**22.1**	**25.3**	**20.7**	**23.2**	**24.1**	**14.3**	**17.3**	**13.1**	**13.1**	**11.5**	**14.3**	**14.2**	**17.5**	**14.8**	**19.1**	**16.1**	**18.3**	**18.2**	**25.2**	**26.3**			**19.9**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.0	7.9	6.2	7.0	9.2	41.0	60.0	11.2	10.7	10.9	5.9	9.5	7.6	11.7	9.7	8.9	4.4	8.9	7.5	3.9	3.7	7.2	3.2	4.1	60.0	3.2	11.1
2	12.2	10.5	8.5	5.6	13.4	6.8	6.5	5.4	7.0	9.3	5.8	9.4	4.9	5.3	6.9	9.0	9.2	8.1	20.6	12.3	12.2	10.5	12.3	17.9	20.6	4.9	9.6
3	14.4	35.4	75.4	43.3	26.6	15.7	10.6	14.8	8.6	12.8	20.2	20.3	9.0	48.1	41.2	9.7	5.7	8.9	22.9	15.9	12.7	12.8	8.5	8.3	75.4	5.7	20.9
4	17.9	24.0	9.4	14.4	15.3	12.5	10.5	23.0	22.9	28.1	48.2	63.7	9.7	26.4	9.0	6.9	6.9	17.0	13.6	19.5	58.9	17.0	53.0	77.4	77.4	6.9	25.2
5	78.5	62.7	82.3	97.8	50.3	8.1	62.0	61.9	9.7	57.7	18.7	14.1	8.4	8.5	9.6	9.7	12.6	13.4	15.5	11.3	19.6	11.9	52.6	39.1	97.8	8.1	34.0
6	70.8	7.1	39.9	73.6	5.5	32.9	46.7	62.6	61.2	47.4	72.2	9.8	10.6	25.4	13.3	28.6	71.4	14.0	9.6	13.7	11.5	20.1	9.2	46.8	73.6	5.5	33.5
7	12.4	22.4	22.3	7.8	18.0	18.8	6.0	7.2	9.9	5.3	6.7	12.0	13.1	15.8	8.9	5.9	11.8	12.5	5.4	5.4	4.8	5.3	31.6	22.0	31.6	4.8	12.1
8	7.7	7.7	8.4	8.7	7.8	11.7	10.6	11.5	12.7	17.6	16.2	14.6	10.5	11.9	11.7	6.2	9.8	52.2	21.3	53.2	45.4	8.0	33.7	8.3	53.2	6.2	17.0
9	10.9	4.6	10.3	6.4	12.9	16.1	31.3	71.2	51.8	3.9	3.4	4.1	3.5	3.0	8.8	14.7	19.4	10.8	8.2	12.1	9.5	11.5	12.6	20.7	71.2	3.0	15.1
10	24.5	20.5	17.2	14.5	11.8	12.2	6.2	3.9	3.9	4.8	6.0	3.9	5.0	9.0	8.5	11.9	4.0	4.6	10.0	4.5	7.8	6.4	7.2	10.8	24.5	3.9	9.1
11	3.6	3.1	3.8	11.0	4.9	9.1	8.6	5.5	6.7	4.4	5.5	4.8	4.2	4.8	3.2	4.3	4.9	3.9	6.0	4.0	8.6	15.0	39.3	41.3	41.3	3.1	8.8
12	71.4	18.0	11.7	28.3	75.0	75.1	33.0	19.4	7.6	4.6	3.5	4.4	3.2	3.1	3.2	5.0	4.5	4.6	6.9	5.7	7.6	7.0	8.7	11.9	75.1	3.1	17.6
13	5.5	11.1	8.8	11.4	13.5	17.6	9.1	11.6	9.0	4.8	5.9	5.6	4.4	3.8	3.9	5.5	3.7	4.1	5.2	4.8	3.1	3.6	3.4	5.6	17.6	3.1	6.9
14	3.7	5.2	10.5	6.4	20.3	85.7	31.0	36.4	44.0	68.7	5.0	4.2	5.1	3.4	4.1	6.0	4.0	3.6	4.6	5.7	8.3	4.3	5.1	5.0	85.7	3.4	15.8
15	3.7	27.4	52.4	16.1	17.3	5.7	29.4	25.9	21.1	8.5	8.1	5.2	5.6	7.8	15.0	15.0	3.7	2.7	3.7	9.0	6.5	10.2	10.5	12.4	52.4	2.7	13.5
16	10.6	10.0	10.2	6.4	6.8	11.1	7.5	9.8	8.2	5.7	6.8	8.8	7.5	7.5	8.3	9.0	7.5	7.2	7.9	9.3	9.3	9.1	8.9	8.9	11.1	5.7	8.4
17	8.0	9.9	9.5	10.1	66.4	10.3	11.3	8.3	11.1	10.4	9.7	13.3	14.1	19.0	18.4	15.6	11.1	13.0	8.4	8.4	8.4	8.6	8.9	8.5	66.4	8.0	13.4
18	9.4	10.3	9.9	10.6	12.2	11.5	12.4	9.4	10.0	11.9	10.8	11.9	11.8	11.0	10.0	8.8	9.5	10.1	9.5	8.4	9.2	8.5	10.0	8.4	12.4	8.4	10.2
19	9.1	10.3	9.4	9.3	8.1	9.6	8.7	8.5	7.9	8.3	10.0	9.7	6.8	9.1	8.4	9.7	61.1	43.1	39.5	12.1	10.0	7.2	6.3	8.5	61.1	6.3	13.8
20	6.0	7.5	9.8	7.9	8.3	8.7	10.6	10.6	12.5	21.1	14.8	8.4	8.2	15.6	14.6	14.6	11.2	17.6	17.5	13.0	20.8	14.7	9.8	6.5	21.1	6.0	12.1
21	9.5	13.2	18.6	5.4	8.8	9.9	11.1	6.5	4.5	3.6	3.8	3.8	7.3	12.6	22.1	23.3	11.2	17.0	18.1	14.0	13.1	21.7	11.4	10.4	23.3	3.6	11.7
22	10.9	11.3	8.2	9.3	7.4	5.7	19.4	10.4	82.7	18.6	3.7	6.1	3.8	3.1	4.6	4.9	5.8	2.8	3.9	4.7	8.7	13.1	5.9	17.8	82.7	2.8	11.4
23	53.3	46.8	6.2	6.1	9.3	11.9	6.0	7.3	5.7	5.5	11.5	10.3	13.7	21.4	31.7	15.7	11.3	7.7	6.3	6.8	5.4	5.9	6.9	12.3	53.3	5.4	13.5
24	35.2	53.4	64.7	62.2	71.7	66.2	7.8	60.2	9.2	6.9	5.5	6.9	12.4	4.9	38.2	9.1	12.4	7.6	10.1	40.5	29.0	51.5	8.3	5.6	71.7	4.9	28.3
25	6.2	6.5	4.4	6.4	5.7	9.5	5.3	8.5	5.6	5.4	5.4	7.9	9.6	10.3	8.2	7.5	62.5	8.5	9.9	9.6	13.5	72.2	13.7	51.0	72.2	4.4	14.7
26	36.8	73.5	33.5	11.7	57.2	8.6	6.5	8.8	9.3	12.6	12.8	13.6	9.8	21.2	7.1	8.7	6.5	10.8	93.0	10.1	6.2	7.6	3.8	14.3	93.0	3.8	20.2
27	9.2	12.2	16.2	14.8	16.6	18.0	23.5	96.2	63.1	22.5	11.5	12.3	9.6	13.0	8.8	11.5	11.3	81.8	16.9	76.1	5.8	40.7	39.0	6.7	96.2	5.8	26.6
28	11.9	11.2	9.1	7.9	8.0	9.3	9.0	10.7	10.7	8.7	9.6	7.9	8.9	9.0	10.0	9.5	7.3	6.7	7.0	7.5	8.2	7.1	7.9	8.9	11.9	6.7	8.8
29	7.7	9.2	8.6	7.7	9.6	10.9	9.3	9.2	10.7	11.6	11.2	14.8	10.3	11.0	10.6	45.6	73.0	22.0	38.4	64.2	13.5	7.4	8.5	11.0	73.0	7.4	18.2
30	8.5	9.8	9.3	8.5	12.2	13.8	10.4	10.9	13.0	9.9	14.3	13.4	10.1	9.8	9.9	6.6	6.6	6.0	6.1	6.8	10.8	8.7	7.8	9.0	14.3	6.0	9.7
31	9.2	8.9	10.1	10.0	10.5	8.1	9.2	8.5	6.9	5.8	6.4	6.9	6.6	11.2	8.9	15.5	15.9	11.1	13.8	14.2	14.0	11.3	9.3	13.4	15.9	5.8	10.2
Max.	**78.5**	**73.5**	**82.3**	**97.8**	**75.0**	**85.7**	**62.0**	**96.2**	**82.7**	**68.7**	**72.2**	**63.7**	**14.1**	**48.1**	**41.2**	**45.6**	**73.0**	**81.8**	**93.0**	**76.1**	**58.9**	**72.2**	**53.0**	**77.4**	**97.8**		
Min.	**3.6**	**3.1**	**3.8**	**5.4**	**4.9**	**5.7**	**5.3**	**3.9**	**3.9**	**3.6**	**3.4**	**3.8**	**3.2**	**3.0**	**3.2**	**4.3**	**3.7**	**2.7**	**3.7**	**3.9**	**3.1**	**3.6**	**3.2**	**4.1**		**2.7**	
Avg.	**18.9**	**18.4**	**19.5**	**17.6**	**20.0**	**19.1**	**17.1**	**21.1**	**18.0**	**14.8**	**12.2**	**11.0**	**8.2**	**12.2**	**12.1**	**11.7**	**16.1**	**14.3**	**15.1**	**15.7**	**13.1**	**14.4**	**14.8**	**17.2**			**15.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.7	9.8	11.1	6.5	6.0	6.8	7.4	9.2	71.2	14.8	16.7	4.9	11.0	2.8	5.9	3.9	4.4	6.7	13.1	9.8	13.6	12.6	12.8	13.7	71.2	2.8	11.8
2	13.4	11.0	8.6	15.9	16.5	13.2	15.7	15.9	15.4	10.1	11.0	9.5	7.8	10.3	12.1	7.1	8.8	9.6	5.4	9.0	7.3	5.9	26.2	37.6	37.6	5.4	12.6
3	78.7	37.0	37.9	54.0	18.8	88.0	15.8	12.3	7.6	12.8	8.2	5.0	3.9	3.9	13.0	8.2	8.4	9.0	4.9	9.9	8.4	8.4	5.7	7.3	88.0	3.9	19.5
4	7.9	8.9	6.8	14.0	13.8	22.2	51.1	21.0	7.8	11.9	5.7	3.6	8.3	5.4	3.6	8.9	4.7	9.7	3.6	8.2	11.0	13.6	18.2	15.1	51.1	3.6	11.9
5	13.4	12.1	20.6	10.1	11.4	69.0	6.5	10.0	20.0	19.8	73.7	13.1	8.4	5.5	16.6	8.9	8.8	11.8	10.7	11.8	13.9	12.3	12.0	12.9	73.7	5.5	17.2
6	18.4	37.0	85.4	11.4	7.0	9.1	9.0	7.3	7.7	5.1	67.5	21.3	7.1	9.0	25.4	12.8	13.3	7.1	12.3	64.4	7.0	7.8	10.9	12.2	85.4	5.1	19.8
7	12.8	10.8	12.9	10.5	9.7	12.0	8.5	9.6	9.2	15.8	12.9	13.1	10.0	10.2	10.2	9.0	11.0	8.5	8.2	10.2	7.0	12.4	7.4	14.2	15.8	7.0	10.7
8	22.2	72.4	7.4	7.6	7.0	7.4	4.0	4.9	7.9	12.6	34.4	7.2	4.4	3.9	7.8	7.4	5.6	3.1	3.9	4.1	13.4	15.0	85.2	6.5	85.2	3.1	14.8
9	11.5	30.0	8.5	9.9	49.3	8.6	12.3	9.7	7.4	8.2	9.2	13.9	9.5	40.6	10.1	5.6	2.8	7.6	7.8	4.6	3.2	3.9	5.5	4.6	49.3	2.8	11.8
10	4.5	5.7	6.5	13.7	40.0	18.7	6.3	10.0	20.0	7.0	7.4	6.2	6.0	5.9	6.6	6.7	5.6	4.1	4.9	4.6	5.2	9.6	5.2	7.2	40.0	4.1	9.1
11	7.8	17.7	12.3	11.3	8.8	14.9	8.0	5.1	4.7	4.3	4.4	5.9	4.3	4.1	6.0	6.4	4.1	3.7	5.0	14.4	16.7	24.4	7.1	7.0	24.4	3.7	8.7
12	7.3	6.7	12.9	16.9	17.8	15.0	36.4	14.0	10.7	13.5	81.0	12.4	19.3	16.8	61.9	17.5	29.3	28.2	45.4	49.9	13.6	74.2	19.6	9.2	81.0	6.7	26.2
13	10.5	10.3	21.2	26.3	10.8	20.9	72.1	85.5	85.2	88.8	54.6	62.4	14.4	7.1	77.8	52.3	45.4	47.7	69.0	42.2	60.1	62.8	14.6	64.9	88.8	7.1	46.1
14	37.6	42.7	65.9	32.0	49.6	94.9	15.3	18.0	40.9	90.1	11.7	6.5	14.7	46.7	45.8	47.1	85.5	9.2	6.5	56.5	27.6	8.2	26.4	17.1	94.9	6.5	37.4
15	15.7	33.1	44.6	75.5	7.8	5.5	4.5	3.8	4.9	5.8	4.3	4.5	5.7	3.3	7.6	63.8	15.9	11.9	6.5	19.5	79.3	5.4	8.1	6.0	79.3	3.3	18.5
16	6.4	3.5	4.6	4.5	4.3	8.0	9.7	10.2	7.0	5.5	11.5	11.9	9.6	3.1	3.2	3.2	3.5	4.6	3.9	5.0	6.1	12.5	12.0	10.6	12.5	3.1	6.8
17	8.3	9.7	6.4	7.1	13.6	55.1	47.6	41.7	10.0	8.1	18.2	10.3	6.3	11.1	15.8	16.1	8.4	8.3	3.9	8.0	2.7	7.7	8.0	14.7	55.1	2.7	14.5
18	9.1	10.2	38.0	54.4	44.4	22.9	9.5	12.0	63.7	44.0	55.8	37.4	47.0	62.3	28.3	94.8	82.1	41.8	64.4	50.9	56.7	80.7	30.8	53.6	94.8	9.1	45.6
19	46.5	32.4	37.4	28.6	47.5	33.5	28.1	7.4	8.2	6.5	7.0	3.8	7.1	4.6	4.5	4.2	5.9	6.1	6.3	6.1	5.9	5.5	5.6	8.3	47.5	3.8	14.9
20	6.9	7.5	8.8	9.7	7.9	8.1	7.9	8.5	8.4	8.1	6.6	8.1	7.6	7.4	7.6	7.0	8.0	9.4	8.0	9.3	8.7	8.8	8.5	11.4	11.4	6.6	8.3
21	8.8	9.4	6.4	7.4	8.3	8.7	10.9	9.4	10.7	11.1	7.5	4.9	6.9	29.3	18.6	12.2	13.1	6.9	5.1	5.3	13.7	14.0	20.7	18.2	29.3	4.9	11.2
22	16.5	29.6	16.8	14.4	21.6	13.8	16.3	81.7	12.5	6.5	29.4	26.9	9.2	8.7	6.5	11.1	10.6	8.3	12.0	86.8	6.2	8.0	6.2	7.9	86.8	6.2	19.5
23	6.6	6.3	5.8	4.8	5.0	5.0	4.7	4.7	4.1	5.7	3.4	47.5	9.5	8.4	8.2	9.3	10.9	37.0	20.5	5.9	51.4	7.4	5.5	7.3	51.4	3.4	11.9
24	7.5	22.5	14.0	12.7	7.6	7.0	8.5	8.5	8.2	10.7	12.4	7.1	12.9	9.4	9.2	10.4	9.0	10.6	10.6	7.4	7.0	8.2	7.3	5.9	22.5	5.9	9.8
25	8.6	58.7	10.0	15.7	9.5	6.7	9.0	10.2	5.5	7.7	25.2	80.9	45.9	28.9	13.5	5.1	9.2	6.7	7.0	17.0	5.9	7.6	18.1	15.6	80.9	5.1	17.8
26	19.3	13.7	71.7	10.4	32.8	27.3	24.8	62.2	9.3	13.1	55.5	52.5	9.3	22.0	15.8	5.6	6.4	5.1	7.0	5.2	3.9	4.5	4.2	10.7	71.7	3.9	20.5
27	15.4	14.3	46.1	39.9	8.5	10.8	8.7	9.2	9.9	11.2	11.9	13.5	18.3	11.5	7.9	10.6	10.3	9.6	8.7	8.6	8.7	8.2	8.1	8.4	46.1	7.9	13.3
28	8.0	8.8	9.9	9.3	9.4	5.9	6.6	8.1	11.1	6.2	8.8	13.5	9.8	12.3	6.3	6.0	6.5	10.0	11.6	7.6	11.5	6.8	8.1	5.8	13.5	5.8	8.7
29	6.3	5.3	6.7	9.5	6.2	10.1	10.8	11.0	10.6	8.5	11.7	14.8	10.3	11.8	11.0	10.6	11.1	11.1	9.7	8.8	11.2	12.2	13.8	11.3	14.8	5.3	10.2
30	8.9	10.8	8.7	6.9	5.8	6.9	7.4	6.9	5.6	5.5	8.6	30.8	17.6	6.9	5.5	8.9	6.3	5.3	4.6	17.3	31.9	5.1	7.9	8.2	31.9	4.6	9.9
31	5.2	5.4	4.7	5.6	4.3	9.4	18.6	28.0	24.1	23.0	21.8	36.1	35.8	29.9	27.7	46.4	55.9	59.5	48.1	43.4	67.5	69.5	87.5	72.5	87.5	4.3	34.6
Max.	**78.7**	**72.4**	**85.4**	**75.5**	**49.6**	**94.9**	**72.1**	**85.5**	**85.2**	**90.1**	**81.0**	**80.9**	**47.0**	**62.3**	**77.8**	**94.8**	**85.5**	**59.5**	**69.0**	**86.8**	**79.3**	**80.7**	**87.5**	**72.5**	**94.9**		
Min.	**4.5**	**3.5**	**4.6**	**4.5**	**4.3**	**5.0**	**4.0**	**3.8**	**4.1**	**4.3**	**3.4**	**3.6**	**3.9**	**2.8**	**3.2**	**3.2**	**2.8**	**3.1**	**3.6**	**4.1**	**2.7**	**3.9**	**4.2**	**4.6**		**2.7**	
Avg.	**14.8**	**19.1**	**21.2**	**17.9**	**16.5**	**20.8**	**16.2**	**17.9**	**17.1**	**16.2**	**22.5**	**19.0**	**12.8**	**14.3**	**16.1**	**17.0**	**16.5**	**13.5**	**14.2**	**19.7**	**18.9**	**17.5**	**16.7**	**16.3**			**17.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	58.4	50.4	48.1	47.5	37.8	40.9	40.8	45.4	42.4	47.0	48.8	46.4	46.2	59.6	61.3	49.8	53.5	42.3	26.9	12.4	9.1	14.0	15.8	16.0	61.3	9.1	40.0
2	21.6	23.7	19.2	18.7	16.5	17.6	8.0	6.1	6.3	16.2	11.9	8.3	10.6	11.4	36.1	61.6	46.3	41.4	45.8	47.6	51.4	53.9	46.1	64.8	64.8	6.1	28.8
3	73.6	63.4	68.8	68.7	66.7	79.8	82.6	84.7	82.6	85.5	49.2	7.3	5.8	8.5	6.0	6.4	8.2	6.0	77.6	20.4	19.9	14.1	17.3	37.6	85.5	5.8	43.4
4	10.5	28.9	14.2	71.8	59.1	61.5	7.5	52.6	39.0	60.2	35.8	7.3	7.0	3.1	4.1	5.0	4.8	5.6	6.1	9.4	11.8	14.1	5.6	9.3	71.8	3.1	22.3
5	6.5	63.4	8.8	37.5	42.3	6.6	10.3	53.2	45.2	57.4	87.7	9.5	8.2	6.6	4.6	7.6	5.7	7.1	17.5	16.3	12.5	49.8	78.5	11.0	87.7	4.6	27.2
6	63.6	51.9	22.1	15.8	7.7	8.2	18.6	14.0	12.5	17.9	25.2	26.3	22.1	24.5	43.9	42.6	49.4	48.4	49.6	51.3	48.9	44.9	41.2	52.4	63.6	7.7	33.5
7	61.2	51.1	42.1	53.9	47.8	56.1	51.2	38.9	22.3	24.0	17.0	4.5	6.8	4.4	15.2	33.3	58.4	63.8	17.1	15.5	28.2	10.6	71.5	39.5	71.5	4.4	34.8
8	3.7	76.7	7.4	10.7	65.2	52.0	12.0	68.3	23.3	56.8	16.1	5.3	7.0	9.5	8.2	8.0	5.3	7.6	35.1	38.9	47.1	45.9	83.1	67.7	83.1	3.7	31.7
9	56.1	40.3	48.7	85.3	62.2	44.9	49.8	55.1	47.2	44.7	54.3	31.4	17.7	16.5	4.8	5.1	7.1	8.2	6.8	4.6	4.7	13.9	7.3	7.3	85.3	4.6	30.2
10	73.6	42.2	33.3	43.1	28.1	90.8	7.2	4.5	5.1	13.8	12.6	46.9	39.3	61.4	17.8	96.9	15.7	15.8	25.6	10.7	11.1	11.1	12.3	13.0	96.9	4.5	30.5
11	11.6	12.5	11.9	9.3	7.9	9.7	9.4	13.1	8.5	13.0	19.5	20.7	0.2	82.1	87.9	44.7	3.3	4.8	9.3	8.7	12.6	4.7	4.9	6.0	87.9	0.2	17.3
12	9.5	12.8	5.7	3.9	8.0	6.3	6.2	13.4	26.5	24.7	48.6	62.5	69.2	71.7	63.8	52.9	62.3	44.6	36.7	54.0	59.3	45.2	23.0	24.9	71.7	3.9	34.8
13	14.9	7.7	5.4	5.7	8.7	9.1	5.0	3.3	3.1	3.2	3.2	3.2	2.8	5.0	5.5	12.1	15.8	22.6	48.1	48.0	58.1	48.8	49.7	41.1	58.1	2.8	17.9
14	40.1	74.6	59.7	64.2	72.8	70.7	86.1	68.2	66.1	46.6	88.1	73.8	31.6	57.5	64.6	55.8	50.0	45.3	77.2	79.2	55.2	33.6	68.0	61.6	88.1	31.6	62.1
15	61.4	27.9	15.9	10.4	7.4	8.9	7.9	8.6	10.6	11.1	7.7	12.4	8.0	8.1	6.3	6.3	8.5	7.0	12.2	24.6	73.2	11.1	9.9	10.6	73.2	6.3	15.7
16	7.6	15.4	21.3	12.0	63.7	47.5	6.2	6.8	5.3	4.0	6.7	9.0	10.4	16.0	13.3	10.0	6.6	5.9	5.6	6.8	8.4	9.2	6.5	6.7	63.7	4.0	13.0
17	6.8	9.9	10.8	7.4	6.1	6.6	6.5	11.3	11.6	7.6	6.9	13.4	91.9	7.6	4.8	5.4	5.7	17.1	18.9	10.1	4.1	11.2	14.0	38.6	91.9	4.1	13.9
18	40.9	49.1	54.6	81.0	62.2	36.6	39.9	61.7	67.5	83.1	91.9	91.5	65.2	56.7	45.0	10.9	15.2	39.8	33.4	26.7	4.3	3.5	3.2	5.3	91.9	3.2	44.5
19	3.9	18.6	20.6	19.8	20.0	42.3	21.8	11.5	5.3	7.6	5.7	9.1	7.5	9.6	10.7	4.5	4.7	6.3	8.3	13.0	13.4	10.1	11.8	9.5	42.3	3.9	12.3
20	8.5	8.0	7.7	6.8	8.6	8.8	10.2	9.3	7.9	10.0	6.2	4.7	6.0	5.5	6.7	8.0	12.0	10.8	10.0	10.7	8.9	9.1	7.3	6.3	12.0	4.7	8.3
21	10.1	7.6	8.5	7.9	12.3	10.4	8.8	8.8	7.9	11.1	10.0	8.0	8.7	13.3	10.1	12.9	10.5	8.6	6.4	6.6	9.4	6.8	9.8	6.8	13.3	6.4	9.2
22	8.1	5.9	4.9	6.9	7.5	7.9	8.0	7.1	10.3	6.1	6.9	7.0	9.3	6.7	6.8	11.0	9.6	39.2	15.4	50.4	43.9	27.0	21.1	11.7	50.4	4.9	14.1
23	9.9	7.9	9.5	7.3	9.4	12.0	11.1	5.1	7.5	10.4	67.8	6.1	96.5	42.2	79.0	24.4	21.9	32.5	7.6	89.5	19.7	17.5	7.8	8.2	96.5	5.1	25.5
24	56.1	13.9	6.9	10.0	48.8	44.2	65.0	64.5	76.3	46.4	44.2	59.9	71.0	68.4	39.5	32.7	34.8	50.8	75.4	77.3	41.8	48.9	48.8	51.3	77.3	6.9	49.0
25	64.6	51.0	74.4	75.2	73.9	88.0	72.7	53.4	45.9	73.3	47.2	88.9	73.2	47.4	64.4	82.1	74.7	64.2	99.5	62.8	66.8	46.7	81.0	57.0	99.5	45.9	67.8
26	63.7	66.5	85.0	65.5	55.3	57.8	48.5	20.4	27.1	12.9	13.2	89.4	40.3	68.4	5.3	4.0	8.5	5.2	29.9	82.9	19.0	9.0	11.8	8.1	89.4	4.0	37.4
27	7.7	8.8	8.3	7.4	4.9	4.8	4.7	8.2	8.6	7.8	8.4	5.8	5.9	6.2	7.3	10.6	14.7	17.8	13.4	10.9	9.9	9.6	11.1	8.1	17.8	4.7	8.8
28	6.8	8.0	6.5	9.4	9.3	7.3	8.3	9.8	11.2	9.9	7.6	8.0	11.8	77.7	5.0	4.2	4.1	6.1	5.6	58.6	74.9	79.1	58.0	82.1	82.1	4.1	23.7
29	66.5	62.6	39.8	33.1	30.9	38.3	43.4	50.0	40.2	43.7	43.7	28.4	39.7	15.7	29.0	38.5	32.8	15.9	8.1	13.3	71.7	9.9	9.0	6.2	71.7	6.2	33.8
30	7.7	9.8	11.6	7.6	7.3	8.3	9.8	11.0	12.4	13.6	12.1	10.2	12.6	14.7	12.2	11.8	7.2	8.7	9.0	10.7	6.0	9.9	7.0	5.8	14.7	5.8	9.9
Max.	**73.6**	**76.7**	**85.0**	**85.3**	**73.9**	**90.8**	**86.1**	**84.7**	**82.6**	**85.5**	**91.9**	**91.5**	**96.5**	**82.1**	**87.9**	**96.9**	**74.7**	**64.2**	**99.5**	**89.5**	**74.9**	**79.1**	**83.1**	**82.1**	**99.5**		
Min.	**3.7**	**5.9**	**4.9**	**3.9**	**4.9**	**4.8**	**4.7**	**3.3**	**3.1**	**3.2**	**3.2**	**3.2**	**0.2**	**3.1**	**4.1**	**4.0**	**3.3**	**4.8**	**5.6**	**4.6**	**4.1**	**3.5**	**3.2**	**5.3**		**0.2**	
Avg.	**31.2**	**32.3**	**26.0**	**30.1**	**31.9**	**32.8**	**25.6**	**29.0**	**26.2**	**29.0**	**30.1**	**26.8**	**27.8**	**29.5**	**25.6**	**25.3**	**21.9**	**23.3**	**27.9**	**32.4**	**30.2**	**24.1**	**28.1**	**25.8**			**28.0**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.0	13.2	12.3	15.9	10.8	11.2	13.6	6.3	6.7	7.5	20.9	89.3	9.5	7.7	9.0	5.4	34.5	22.9	22.1	21.9	24.0	42.1	49.3	67.0	89.3	5.4	22.2
2	47.8	10.1	39.4	11.4	8.0	7.0	7.3	6.5	7.7	10.0	8.8	11.7	14.2	16.3	13.1	11.5	12.2	9.8	9.0	10.7	5.8	6.1	5.8	4.7	47.8	4.7	12.3
3	5.7	5.4	9.5	10.8	7.2	11.4	8.7	10.8	11.7	16.0	9.3	5.7	4.2	4.5	6.9	9.3	8.5	7.7	6.8	6.9	6.6	8.6	7.9	9.3	16.0	4.2	8.3
4	7.6	11.5	11.4	13.1	10.7	11.4	9.3	6.4	5.3	5.9	6.5	7.9	6.5	8.2	9.1	11.7	10.5	10.5	14.4	12.1	7.2	5.1	4.0	4.0	14.4	4.0	8.8
5	4.2	4.6	4.9	4.5	4.7	5.0	7.1	7.7	9.6	9.8	7.5	7.0	9.4	17.0	23.6	30.9	16.9	29.1	18.7	8.9	11.1	8.5	11.4	12.7	30.9	4.2	11.5
6	10.5	9.6	10.9	7.8	10.0	8.8	13.5	8.8	10.3	8.1	9.9	10.7	10.7	13.2	12.6	11.7	10.3	12.6	12.5	6.8	6.2	8.8	8.1	11.1	13.5	6.2	10.2
7	13.2	11.7	6.0	7.8	6.0	10.4	10.6	7.3	5.0	5.5	6.1	12.8	10.0	9.3	5.2	5.1	5.0	6.5	5.7	5.4	5.3	6.9	8.0	7.6	13.2	5.0	7.6
8	9.8	12.1	11.9	8.5	13.8	6.5	8.5	8.8	11.2	13.9	10.0	12.7	14.4	16.8	17.3	13.9	10.3	13.1	8.9	10.5	9.8	12.2	65.3	45.8	65.3	6.5	15.3
9	41.7	59.7	49.7	42.9	39.0	20.3	22.8	38.6	52.7	52.0	36.7	54.4	49.8	61.9	49.2	56.5	56.1	56.0	55.2	57.4	56.6	58.4	64.4	66.2	66.2	20.3	49.9
10	82.7	78.3	72.5	74.8	63.9	20.8	8.1	14.3	9.5	15.1	19.9	20.5	14.3	84.3	12.3	38.4	46.2	94.7	89.4	43.1	61.9	67.1	77.0	24.9	94.7	8.1	47.2
11	13.4	8.8	5.6	6.8	6.6	5.8	5.6	3.8	5.3	4.3	3.5	6.1	7.7	33.0	78.5	73.3	15.7	8.0	5.9	4.8	4.4	5.4	7.0	8.3	78.5	3.5	13.6
12	8.7	8.1	9.6	8.5	8.0	9.7	10.2	10.5	10.5	8.7	7.8	7.6	8.0	8.7	9.0	6.7	9.7	9.6	8.6	7.8	9.6	10.2	9.4	7.9	10.5	6.7	8.9
13	14.8	10.7	14.5	9.9	10.1	9.2	8.8	6.0	9.6	57.1	12.4	35.2	26.1	59.8	44.1	53.9	52.5	96.3	81.3	45.1	66.7	28.6	24.6	71.8	96.3	6.0	35.4
14	11.8	92.6	81.0	74.6	21.3	44.9	53.0	61.0	81.2	73.3	62.1	83.2	63.3	49.2	12.7	13.1	53.5	15.6	7.8	40.5	43.9	10.8	11.3	13.2	92.6	7.8	44.8
15	14.2	7.8	9.4	6.9	7.3	8.7	6.9	10.4	7.9	12.6	7.6	7.6	6.7	6.7	7.4	7.9	9.0	9.9	9.5	7.3	6.9	7.4	4.9	4.3	14.2	4.3	8.1
16	8.2	8.4	8.1	7.3	6.5	6.0	5.1	4.6	5.8	5.5	5.5	7.4	8.5	6.9	5.0	4.3	4.5	7.0	6.7	5.4	6.4	8.9	10.2	7.3	10.2	4.3	6.7
17	6.7	6.4	4.5	4.9	5.5	4.0	5.2	6.0	6.8	6.6	4.0	4.5	7.6	9.0	9.5	15.7	77.0	31.0	32.4	27.5	23.0	25.1	39.9	69.0	77.0	4.0	18.0
18	37.9	39.5	68.0	62.2	57.3	54.6	54.5	52.4	45.7	43.3	49.3	38.9	63.4	80.2	30.2	31.7	55.2	67.5	86.0	85.1	68.1	70.0	29.6	63.1	86.0	29.6	55.6
19	75.8	8.5	9.4	7.7	9.6	9.9	11.9	8.3	8.9	8.0	6.2	6.3	7.8	6.5	7.6	11.1	8.0	8.6	8.9	5.2	7.5	6.2	4.0	4.0	75.8	4.0	10.7
20	3.1	3.7	3.6	3.7	6.5	4.7	4.8	5.8	7.1	6.3	9.1	12.8	14.7	11.6	9.9	13.8	17.3	15.7	16.0	12.9	14.7	10.2	11.2	12.3	17.3	3.1	9.6
21	11.5	9.9	9.9	9.2	11.5	11.3	10.6	11.1	10.3	10.4	7.8	7.1	11.5	8.8	7.0	6.1	8.0	8.8	11.3	14.1	13.2	10.8	12.9	15.2	15.2	6.1	10.3
22	12.3	8.8	6.5	8.7	8.4	8.7	11.1	8.8	9.9	9.8	8.8	9.5	9.2	7.4	6.9	10.1	15.2	9.3	9.0	10.6	9.8	9.4	14.6	86.6	86.6	6.5	12.9
23	42.9	97.6	68.6	74.5	14.4	7.8	8.8	4.8	6.9	7.1	8.0	7.7	8.0	8.7	7.4	6.7	6.5	5.7	6.3	8.8	8.8	9.3	9.1	8.2	97.6	4.8	18.4
24	8.4	9.1	9.6	9.7	9.1	9.0	8.5	8.7	6.0	8.6	8.1	7.9	10.6	6.9	7.6	6.5	6.8	11.1	12.1	15.7	15.4	21.4	14.3	9.8	21.4	6.0	10.0
25	17.1	19.8	15.5	10.9	10.3	17.8	15.7	9.5	9.7	12.2	11.9	15.9	12.2	60.5	56.4	16.6	40.3	43.3	33.0	46.7	85.8	102.0	78.9	73.2	102.0	9.5	34.0
26	38.6	82.7	34.7	58.9	85.8	22.9	12.7	9.6	7.6	7.1	8.2	8.4	10.7	12.3	5.5	8.3	8.5	9.5	9.3	9.4	9.5	9.1	7.0	6.3	85.8	5.5	20.1
27	7.5	7.6	9.1	11.7	10.1	10.9	9.7	10.1	8.8	10.0	9.6	9.1	10.5	11.1	13.2	8.4	6.5	5.8	7.0	7.2	6.4	6.7	6.9	6.5	13.2	5.8	8.8
28	6.2	4.8	7.2	7.2	10.7	5.8	6.5	5.7	9.1	4.8	10.2	8.0	9.8	39.8	37.4	52.1	7.0	3.9	4.0	7.0	9.2	9.4	12.4	14.3	52.1	3.9	12.2
29	69.4	8.8	7.9	6.4	8.5	7.6	4.5	6.3	36.8	23.2	27.7	8.9	11.1	23.4	28.9	52.2	63.4	23.8	47.4	74.3	63.5	41.3	17.3	10.8	74.3	4.5	28.1
30	17.1	10.5	9.9	14.0	71.4	43.8	78.2	65.2	74.3	54.7	61.3	48.0	32.3	70.4	75.2	17.5	33.4	39.0	22.1	8.1	78.8	65.8	8.7	7.0	78.8	7.0	41.9
31	6.8	12.1	5.9	9.1	6.1	5.7	7.1	5.2	5.9	5.2	6.5	7.0	9.2	7.8	18.1	14.2	17.8	16.3	13.1	15.8	11.3	13.2	8.8	8.5	18.1	5.2	9.9
Max.	**82.7**	**97.6**	**81.0**	**74.8**	**85.8**	**54.6**	**78.2**	**65.2**	**81.2**	**73.3**	**62.1**	**89.3**	**63.4**	**84.3**	**78.5**	**73.3**	**77.0**	**96.3**	**89.4**	**85.1**	**85.8**	**102.0**	**78.9**	**86.6**	**102.0**		
Min.	**3.1**	**3.7**	**3.6**	**3.7**	**4.7**	**4.0**	**4.5**	**3.8**	**5.0**	**4.3**	**3.5**	**4.5**	**4.2**	**4.5**	**5.0**	**4.3**	**4.5**	**3.9**	**4.0**	**4.8**	**4.4**	**5.1**	**4.0**	**4.0**		**3.1**	
Avg.	**21.4**	**22.0**	**20.2**	**19.7**	**18.0**	**13.6**	**14.5**	**13.9**	**16.3**	**16.9**	**15.2**	**18.7**	**15.9**	**24.8**	**20.5**	**20.1**	**23.4**	**22.9**	**22.0**	**20.7**	**24.4**	**22.7**	**20.8**	**24.5**			**19.7**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.0	6.4	7.6	8.3	6.1	7.0	6.8	7.0	7.2	6.4	10.3	9.2	13.8	7.1	10.1	9.0	10.9	13.2	7.9	11.5	13.7	11.6	10.4	11.2	13.8	6.0	9.1
2	9.6	11.7	10.7	8.0	8.5	10.0	11.6	9.7	10.5	11.8	14.2	10.6	10.9	10.9	12.7	9.5	9.1	11.4	8.0	10.3	9.8	9.4	9.4	10.0	14.2	8.0	10.3
3	9.7	9.8	10.7	10.8	9.5	9.7	11.2	12.7	10.7	10.2	11.2	12.3	14.3	10.1	10.4	10.9	9.1	11.1	11.6	11.3	10.1	8.0	11.3	11.6	14.3	8.0	10.8
4	11.9	10.6	10.3	9.7	8.9	8.9	10.6	8.3	10.4	9.4	10.3	10.4	8.4	7.9	8.0	8.5	9.5	10.3	10.9	10.8	10.2	10.1	8.0	6.6	11.9	6.6	9.6
5	4.7	5.2	5.5	6.9	3.9	5.4	4.1	5.5	4.9	7.4	16.3	39.5	37.3	82.9	48.3	33.5	36.9	49.4	41.6	41.5	39.4	81.4	59.0	51.4	82.9	3.9	29.7
6	47.4	80.3	59.1	47.1	59.1	99.5	51.9	74.8	47.9	70.3	49.0	28.4	30.5	88.7	86.0	15.9	6.6	6.4	8.9	6.0	6.2	7.6	6.5	7.3	99.5	6.0	41.3
7	9.5	8.8	8.3	10.5	10.8	11.0	9.6	9.7	10.8	13.0	11.4	11.0	12.5	12.1	10.0	8.9	10.7	9.4	9.4	6.8	6.6	7.8	9.5	10.1	13.0	6.6	9.9
8	12.0	8.8	11.0	7.1	8.2	9.9	5.4	14.5	11.9	11.2	43.8	58.2	66.4	82.7	57.6	65.7	58.2	44.5	45.4	43.5	47.5	48.5	49.4	46.2	82.7	5.4	35.7
9	48.2	47.7	45.0	75.2	73.5	56.7	65.5	71.4	65.1	60.6	64.0	75.5	75.3	77.8	63.6	79.9	84.3	58.0	56.0	58.4	65.7	64.1	73.9	83.6	84.3	45.0	66.2
10	54.7	55.7	61.1	91.9	85.0	87.1	97.7	75.0	87.2	75.8	55.1	79.3	92.5	41.9	4.5	6.2	8.1	8.0	6.9	8.1	8.4	12.2	13.4	11.6	97.7	4.5	47.0
11	19.3	14.7	19.2	13.8	21.8	22.2	17.8	27.7	92.4	22.5	19.9	31.1	22.4	10.9	7.8	6.7	12.1	7.5	11.4	13.1	7.3	6.9	6.6	10.1	92.4	6.6	18.6
12	8.4	12.6	8.0	4.1	4.5	4.9	4.5	4.5	6.5	5.0	6.4	6.7	9.8	10.6	9.1	10.8	16.2	12.3	15.9	13.5	12.7	12.8	30.3	12.7	30.3	4.1	10.1
13	8.2	10.1	10.8	7.0	5.4	9.2	35.9	29.8	44.0	29.9	86.9	63.6	67.5	71.0	48.2	36.9	84.7	29.6	19.2	51.6	53.0	39.1	79.0	56.0	86.9	5.4	40.7
14	72.5	49.5	59.6	21.2	47.4	11.4	14.1	13.7	8.4	7.9	5.8	9.4	20.7	61.3	87.9	9.0	9.5	13.0	16.5	9.5	15.9	9.2	9.1	16.3	87.9	5.8	24.9
15	17.5	11.8	24.1	10.3	6.3	15.7	16.5	12.3	8.4	18.7	73.8	12.3	12.4	16.6	15.4	37.8	44.0	39.9	75.3	93.1	50.7	24.7	25.0	59.5	93.1	6.3	30.1
16	54.4	76.2	69.2	75.2	83.9	67.8	18.4	15.2	67.3	38.8	35.8	11.0	12.1	7.8	12.2	14.1	15.1	10.5	12.4	9.7	10.7	8.9	10.8	14.4	83.9	7.8	31.3
17	10.4	19.6	5.0	6.2	5.5	6.2	6.9	9.1	8.6	9.9	9.1	8.8	7.3	8.5	6.4	6.6	11.6	12.9	7.2	21.8	30.0	36.1	4.5	8.2	36.1	4.5	11.1
18	6.1	8.2	6.8	8.5	8.0	9.6	6.9	3.8	7.0	7.6	8.5	25.8	15.4	8.6	4.0	5.3	7.4	5.4	7.3	5.8	4.3	4.5	6.8	6.5	25.8	3.8	7.8
19	7.7	9.0	5.5	4.7	6.7	4.6	5.2	4.4	4.9	5.4	5.2	4.2	4.5	4.9	3.7	4.0	5.4	5.5	6.0	5.4	4.4	6.1	5.7	6.3	9.0	3.7	5.4
20	5.5	6.5	4.9	5.9	5.7	7.8	9.0	8.4	7.5	7.7	8.6	9.9	10.0	8.7	7.6	8.2	8.1	7.3	8.4	7.7	8.3	7.6	7.4	7.4	10.0	4.9	7.7
21	7.6	7.6	9.5	7.4	6.4	9.9	8.7	9.6	8.5	8.3	10.7	8.3	11.5	11.1	8.7	4.7	4.7	3.9	4.8	4.7	5.1	5.5	4.0	6.7	11.5	3.9	7.4
22	5.1	6.0	7.6	7.2	6.0	6.6	6.3	6.3	3.6	6.1	11.2	7.0	14.6	4.6	6.8	6.3	10.7	9.8	7.0	8.4	5.8	7.6	10.5	10.3	14.6	3.6	7.6
23	5.1	8.2	15.8	12.3	12.8	8.7	8.3	12.1	7.4	13.5	15.0	34.3	27.8	31.7	59.9	42.0	92.2	64.3	95.5	28.3	34.1	22.8	30.4	46.9	95.5	5.1	30.4
24	49.8	45.2	49.0	52.6	48.9	44.9	51.4	45.8	41.5	52.1	53.6	63.6	54.5	49.4	24.0	26.3	25.4	32.6	48.5	64.5	22.5	8.0	11.2	13.2	64.5	8.0	40.8
25	8.7	9.8	9.2	7.6	8.3	9.5	9.1	9.1	7.8	9.2	13.5	11.9	9.7	10.1	12.7	11.6	6.9	9.3	9.8	7.3	11.3	10.9	12.3	9.6	13.5	6.9	9.8
26	10.5	10.0	7.5	8.9	9.1	8.6	10.2	10.7	10.8	10.2	10.0	10.0	7.9	8.8	12.6	6.6	7.8	6.3	5.9	5.3	4.3	5.1	5.1	4.3	12.6	4.3	8.2
27	5.5	6.2	6.8	5.8	7.2	27.5	12.8	22.9	6.7	8.3	6.6	9.2	7.9	6.1	12.3	7.1	9.9	7.3	6.0	7.8	6.5	12.4	18.3	19.8	27.5	5.5	10.3
28	18.5	33.3	11.7	23.4	47.5	87.3	50.5	21.5	25.0	68.1	21.0	13.4	9.8	7.3	16.2	11.0	5.2	5.7	7.7	6.7	8.6	8.1	7.1	9.4	87.3	5.2	21.8
29	9.4	7.5	7.2	8.9	8.6	10.2	11.8	8.4	8.2	7.2	7.7	7.8	7.1	7.5	7.5	8.7	7.8	7.2	7.6	8.3	7.6	7.8	10.3	8.9	11.8	7.1	8.3
30	9.4	7.6	7.0	7.6	7.7	7.4	7.2	7.9	9.8	8.1	9.0	8.3	9.2	8.2	7.6	10.5	14.2	11.5	8.8	9.8	8.8	10.5	8.0	7.9	14.2	7.0	8.8
Max.	**72.5**	**80.3**	**69.2**	**91.9**	**85.0**	**99.5**	**97.7**	**75.0**	**92.4**	**75.8**	**86.9**	**79.3**	**92.5**	**88.7**	**87.9**	**79.9**	**92.2**	**64.3**	**95.5**	**93.1**	**65.7**	**81.4**	**79.0**	**83.6**	**99.5**		
Min.	**4.7**	**5.2**	**4.9**	**4.1**	**3.9**	**4.6**	**4.1**	**3.8**	**3.6**	**5.0**	**5.2**	**4.2**	**4.5**	**4.6**	**3.7**	**4.0**	**4.7**	**3.9**	**4.8**	**4.7**	**4.3**	**4.5**	**4.0**	**4.3**		**3.6**	
Avg.	**18.4**	**20.1**	**19.1**	**19.1**	**21.0**	**22.8**	**19.5**	**19.1**	**21.7**	**20.7**	**23.5**	**23.0**	**23.5**	**25.9**	**22.7**	**17.4**	**21.4**	**17.5**	**19.6**	**19.7**	**17.7**	**17.2**	**18.4**	**19.5**			**20.4**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (Climatronics)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.2	10.3	7.1	11.7	8.3	6.8	5.6	10.9	22.9	16.0	12.6	11.0	31.9	24.4	64.5	51.6	86.0	27.9	13.0	15.3	48.0	58.6	11.9	64.7	86.0	5.6	26.2
2	77.4	50.9	19.4	24.7	75.4	50.0	14.8	11.4	15.2	12.6	9.3	31.5	66.4	46.3	58.6	60.9	64.4	58.3	64.4	57.5	55.6	60.1	49.8	74.7	77.4	9.3	46.2
3	60.3	40.3	54.8	44.2	52.9	28.5	43.3	55.6	57.7	59.1	62.8	39.5	42.5	43.4	51.2	44.0	42.9	47.7	47.4	48.4	54.6	53.3	49.9	64.0	64.0	28.5	49.5
4	62.7	74.7	94.0	48.9	43.6	26.9	15.3	13.9	34.4	19.8	16.9	21.3	20.8	30.5	37.8	33.0	14.4	13.3	16.9	45.9	31.7	19.3	16.1	10.2	94.0	10.2	31.8
5	18.8	31.4	86.5	91.2	68.0	20.6	86.3	36.1	90.2	50.7	8.0	39.0	64.9	69.3	78.8	59.1	52.0	44.3	96.7	61.0	47.0	48.9	39.7	25.4	96.7	8.0	54.7
6	46.5	33.0	80.4	76.3	62.2	64.3	15.9	39.4	75.8	83.7	21.5	84.8	32.9	93.0	22.5	15.7	13.3	83.2	11.0	7.4	6.2	3.8	4.0	4.3	93.0	3.8	40.9
7	5.5	6.2	10.9	7.9	8.2	9.5	11.2	10.0	8.1	9.9	9.8	8.1	9.6	8.7	7.7	17.2	14.1	26.9	89.1	52.1	66.0	23.2	7.5	7.8	89.1	5.5	18.1
8	28.7	42.5	43.2	28.9	60.7	54.9	47.9	62.7	74.9	56.2	55.5	74.4	64.6	61.1	59.0	59.6	57.7	79.0	86.9	89.4	92.1	94.7	72.8	84.4	94.7	28.7	63.8
9	69.5	83.9	74.9	56.7	33.3	70.6	9.5	14.1	9.4	9.1	9.2	7.8	8.8	7.3	8.0	6.0	7.5	9.2	12.1	6.9	8.0	4.3	5.3	13.0	83.9	4.3	22.7
10	14.6	11.8	13.7	5.4	8.7	9.8	6.9	5.9	8.4	6.1	5.2	6.1	8.0	12.4	17.0	8.7	8.0	6.9	6.8	10.2	10.3	8.5	8.4	7.1	17.0	5.2	9.0
11	8.4	10.6	7.0	6.3	6.6	9.8	9.6	15.6	8.2	8.1	8.3	15.0	10.1	9.4	12.0	13.6	13.5	11.8	9.4	8.0	8.0	11.5	7.5	10.5	15.6	6.3	10.0
12	15.0	11.1	8.7	13.3	9.1	8.7	11.2	10.7	9.2	23.6	62.1	73.3	8.8	9.5	39.1	20.3	79.5	17.0	11.9	38.3	47.7	13.6	55.6	88.3	88.3	8.7	28.6
13	19.3	86.0	40.1	12.5	81.1	15.2	17.1	17.5	28.8	39.1	66.5	8.9	45.2	45.6	11.8	86.7	57.0	11.2	78.9	35.6	47.8	8.7	17.3	90.4	90.4	8.7	40.3
14	17.4	8.6	9.8	59.4	20.6	42.0	57.2	14.8	63.3	30.6	81.7	76.8	22.3	60.3	12.2	17.2	66.5	67.9	89.4	30.4	23.5	33.5	17.1	13.6	89.4	8.6	39.0
15	14.6	15.3	12.9	16.6	13.6	9.6	15.3	12.6	12.6	19.3	17.0	21.9	17.8	28.8	58.0	39.3	63.4	59.4	91.8	20.9	15.1	7.4	10.2	7.3	91.8	7.3	25.0
16	11.0	8.7	18.3	57.0	53.0	15.0	14.5	27.9	13.2	10.8	13.4	7.3	18.4	39.8	11.7	8.4	15.6	11.3	10.9	9.3	7.8	8.4	12.3	27.4	57.0	7.3	18.0
17	45.1	79.1	10.6	13.8	22.4	25.2	17.9	13.5	14.5	22.6	12.1	12.1	12.6	13.9	9.1	6.1	8.5	18.0	20.9	17.6	9.2	14.0	24.5	58.0	79.1	6.1	20.9
18	67.5	45.8	76.3	27.9	9.0	10.5	13.7	19.2	22.2	20.4	22.9	30.4	23.0	22.1	25.0	26.6	24.3	26.0	27.0	37.5	49.1	33.3	30.0	52.3	76.3	9.0	30.9
19	34.6	38.2	26.5	21.3	28.8	33.3	32.0	38.0	43.7	38.3	49.5	52.1	50.8	43.5	36.9	38.7	37.6	60.9	51.2	47.4	49.1	59.1	60.3	56.0	60.9	21.3	42.8
20	62.9	74.6	64.3	55.6	70.6	94.8	100.8	72.3	84.5	62.6	48.3	91.1	86.1	45.5	35.5	74.5	65.4	57.4	58.9	95.9	38.3	27.9	83.8	9.8	100.8	9.8	65.1
21	9.1	15.2	40.0	7.8	54.4	51.8	11.2	64.2	72.9	57.1	89.4	99.1	81.8	18.7	17.6	55.5	45.0	71.5	17.9	14.6	28.2	44.3	39.7	47.2	99.1	7.8	43.9
22	9.2	29.2	13.1	74.1	62.7	46.1	87.1	15.9	12.5	84.2	42.8	52.7	15.2	72.2	26.4	27.0	10.4	7.7	7.3	10.1	11.8	8.7	8.8	7.0	87.1	7.0	30.9
23	45.3	71.3	81.9	25.0	49.4	62.0	34.1	18.1	29.7	33.1	26.2	8.4	11.5	9.9	7.7	8.9	7.2	9.0	7.2	8.0	7.1	6.8	7.1	6.7	81.9	6.7	24.2
24	7.7	6.7	6.8	7.0	6.0	6.2	5.5	5.5	5.9	5.9	6.7	9.0	10.1	17.1	12.3	16.5	14.5	10.2	8.9	7.1	8.8	47.3	67.8	33.8	67.8	5.5	13.9
25	66.2	12.0	20.3	60.8	58.8	83.8	86.8	67.1	86.5	53.3	70.6	90.2	11.3	18.8	17.0	21.2	79.9	19.0	22.6	36.5	4.9	6.4	6.8	6.6	90.2	4.9	42.0
26	6.7	5.7	6.5	6.6	6.7	7.4	8.4	9.7	12.0	12.9	11.1	7.7	8.4	12.8	7.8	11.1	8.5	9.3	10.3	11.1	11.0	10.0	11.1	11.9	12.9	5.7	9.4
27	11.8	13.8	13.4	10.2	8.7	8.5	7.3	7.6	6.9	10.0	7.4	8.9	9.3	7.5	8.7	8.6	9.0	7.2	9.1	9.4	9.6	8.6	9.4	9.2	13.8	6.9	9.2
28	9.7	8.1	9.4	9.0	7.4	7.6	7.0	6.2	7.6	9.0	10.6	8.1	7.7	8.6	9.3	9.1	8.8	8.1	8.3	8.2	9.4	9.1	8.7	8.3	10.6	6.2	8.5
29	9.9	9.9	9.7	9.6	5.1	6.0	10.0	7.8	5.3	5.7	4.1	5.3	5.5	4.5	4.7	5.8	5.0	9.3	8.5	11.3	13.1	10.4	17.8	8.7	17.8	4.1	8.1
30	6.6	7.0	10.0	5.7	5.2	4.8	5.0	5.5	6.8	5.6	4.7	4.9	4.7	3.8	4.1	3.9	4.2	4.7	4.1	5.7	5.7	5.1	4.0	5.4	10.0	3.8	5.3
31	4.0	4.3	4.6	4.1	4.0	4.5	3.9	5.0	4.9	4.4	6.5	4.5	4.8	4.8	5.4	5.0	5.0	5.6	5.7	5.2	6.5	5.3	6.2	5.3	6.5	3.9	5.0
Max.	**77.4**	**86.0**	**94.0**	**91.2**	**81.1**	**94.8**	**100.8**	**72.3**	**90.2**	**84.2**	**89.4**	**99.1**	**86.1**	**93.0**	**78.8**	**86.7**	**86.0**	**83.2**	**96.7**	**95.9**	**92.1**	**94.7**	**83.8**	**90.4**	**100.8**		
Min.	**4.0**	**4.3**	**4.6**	**4.1**	**4.0**	**4.5**	**3.9**	**5.0**	**4.9**	**4.4**	**4.1**	**4.5**	**4.7**	**3.8**	**4.1**	**3.9**	**4.2**	**4.7**	**4.1**	**5.2**	**4.9**	**3.8**	**4.0**	**4.3**		**3.8**	
Avg.	**28.2**	**30.5**	**31.4**	**29.0**	**32.4**	**28.9**	**26.2**	**23.1**	**30.6**	**28.4**	**28.1**	**32.6**	**26.3**	**28.8**	**25.1**	**27.7**	**31.9**	**29.0**	**32.4**	**27.8**	**26.8**	**24.3**	**24.9**	**29.7**			**28.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.8	4.9	3.9	4.7	3.7	5.7	4.6	4.4	2.7	4.9	5.1	3.6	3.2	4.6	10.8	10.7	11.5	10.9	10.7	13.0	13.9	7.4	12.8	14.0	14.0	2.7	7.4
2	14.8	13.9	11.9	14.5	15.2	16.9	16.5	16.0	17.8	18.3	18.7	17.4	18.1	16.1	15.9	15.8	15.1	14.4	12.9	12.9	12.0	9.9	9.1	10.5	18.7	9.1	14.8
3	9.4	5.2	7.4	7.8	5.1	6.4	3.4	5.7	9.3	7.0	11.0	10.3	12.3	13.7	14.3	14.2	13.8	13.9	13.4	14.3	15.6	16.4	16.1	17.1	17.1	3.4	11.0
4	17.0	16.8	16.8	16.5	16.9	16.7	16.6	16.9	17.1	17.2	17.3	17.6	17.8	17.9	17.5	17.2	18.0	17.5	17.0	15.8	16.0	16.1	16.0	16.1	18.0	15.8	16.9
5	17.6	17.0	17.1	18.6	18.9	19.5	19.9	20.3	19.8	21.0	22.7	24.6	24.0	24.3	24.5	25.6	25.3	22.5	23.6	23.8	23.5	23.9	23.0	22.1	25.6	17.0	21.8
6	20.8	18.8	17.8	19.4	20.0	19.6	20.0	20.5	20.6	20.5	22.6	21.2	19.9	19.1	18.1	18.6	18.0	17.7	18.8	18.2	18.1	18.4	17.5	17.6	22.6	17.5	19.2
7	17.1	16.6	16.1	16.2	16.8	17.2	17.1	17.4	17.7	19.3	18.9	19.3	19.3	21.0	20.5	19.4	18.9	19.5	20.2	20.1	19.0	19.8	19.3	18.8	21.0	16.1	18.6
8	19.5	18.8	18.4	19.6	20.2	21.0	21.6	22.7	22.8	22.6	23.3	23.6	23.7	24.5	25.3	24.7	24.2	24.3	23.8	25.5	25.8	26.1	26.1	26.7	26.7	18.4	23.1
9	26.4	25.5	25.1	25.6	26.5	26.2	24.9	25.2	27.2	26.3	25.3	23.7	23.6	23.7	22.7	22.3	19.6	19.1	19.1	19.4	19.7	19.9	18.8	18.0	27.2	18.0	23.1
10	18.3	19.1	18.0	17.7	18.5	19.6	18.6	19.4	18.7	20.6	20.8	19.0	18.9	19.5	19.5	21.2	20.9	20.9	20.8	21.2	21.2	19.3	18.7	18.6	21.2	17.7	19.5
11	18.3	18.6	17.8	18.0	18.5	19.8	18.4	18.7	19.9	20.2	19.5	19.9	20.3	19.3	19.1	19.2	19.2	19.9	20.5	20.2	21.3	20.9	20.8	20.1	21.3	17.8	19.5
12	20.2	19.8	19.2	18.4	18.4	19.0	19.2	20.0	19.3	17.7	18.4	20.2	20.4	20.5	22.7	23.0	23.0	22.9	22.9	23.3	22.3	22.2	21.4	21.3	23.3	17.7	20.6
13	20.8	21.4	21.8	21.8	21.8	20.7	20.5	20.8	21.0	20.7	20.1	19.9	20.1	19.0	18.5	18.7	20.3	17.3	15.9	16.9	18.4	20.4	22.1	22.0	22.1	15.9	20.0
14	20.7	15.8	12.7	10.5	9.4	7.2	4.2	3.3	1.9	1.8	1.7	2.8	2.9	3.0	1.5	2.5	2.4	2.0	2.0	5.3	6.4	5.7	6.9	7.4	20.7	1.5	5.8
15	5.9	7.5	6.4	6.9	5.8	6.1	3.8	4.2	5.6	3.5	4.4	1.5	1.7	3.9	3.7	3.4	3.8	1.8	1.5	3.0	2.3	2.4	1.7	2.8	7.5	1.5	3.9
16	1.3	3.9	2.1	1.5	2.0	4.0	5.7	6.9	8.9	11.1	10.9	8.0	6.4	6.9	5.9	6.8	3.8	5.3	5.6	1.7	1.6	2.0	1.9	2.5	11.1	1.3	4.9
17	1.0	0.5	1.7	3.6	6.6	6.9	9.9	7.1	6.1	6.1	8.8	7.7	6.9	7.4	7.5	5.0	5.6	4.7	3.5	2.1	1.8	2.3	1.4	1.3	9.9	0.5	4.8
18	1.2	1.4	2.0	2.1	0.7	1.3	0.9	1.4	0.7	0.9	1.7	1.4	0.9	0.8	2.3	0.6	0.6	1.8	1.7	1.9	2.2	6.1	4.7	6.0	6.1	0.6	1.9
19	4.3	6.0	6.1	8.0	8.3	8.5	9.0	7.8	7.3	10.5	13.0	12.0	13.6	19.1	12.9	12.8	9.7	9.3	8.9	10.5	6.0	7.2	5.2	7.2	19.1	4.3	9.3
20	6.0	5.0	4.7	6.1	6.3	8.3	8.3	8.1	8.8	9.1	9.5	8.5	8.2	7.7	7.9	7.6	6.4	3.1	2.1	2.1	2.4	3.3	1.6	1.7	9.5	1.6	5.9
21	3.2	3.1	1.2	3.6	3.0	3.8	4.9	4.1	2.6	9.5	8.4	6.6	4.3	5.6	6.0	5.6	6.8	6.7	9.0	8.8	14.0	18.2	17.4	13.4	18.2	1.2	7.1
22	9.3	7.0	4.8	4.2	5.7	7.6	6.6	4.1	4.0	4.0	1.7	3.6	4.2	9.8	17.3	17.5	15.0	12.2	8.8	10.0	8.9	5.7	7.2	5.7	17.5	1.7	7.7
23	6.3	9.8	10.6	15.2	16.9	16.5	19.5	17.7	17.5	19.7	18.9	17.0	20.5	17.0	15.4	15.6	16.7	13.9	16.9	20.6	16.0	16.5	15.3	18.0	20.6	6.3	16.2
24	16.2	13.5	11.8	10.6	7.7	4.3	2.5	1.5	1.0	2.6	2.1	4.0	2.8	5.5	6.4	6.5	4.9	1.8	1.7	1.2	0.8	3.1	2.1	1.6	16.2	0.8	4.8
25	1.9	1.2	1.0	1.5	3.8	7.0	6.3	8.3	7.4	10.2	11.2	12.2	12.3	16.0	14.8	16.5	18.9	18.9	18.1	18.3	18.6	18.4	14.5	14.7	18.9	1.0	11.3
26	14.1	16.7	16.5	12.5	10.7	10.4	11.7	9.9	11.3	11.0	10.7	10.3	10.0	8.9	7.6	5.9	4.6	3.1	3.0	3.2	2.3	1.5	0.9	1.5	16.7	0.9	8.3
27	3.9	2.7	5.7	7.4	7.9	7.8	4.3	2.7	2.2	3.3	5.9	3.8	4.9	7.3	7.4	5.2	6.8	6.1	8.2	7.6	5.5	6.9	4.9	4.0	8.2	2.2	5.5
28	3.6	2.9	2.1	1.8	2.2	1.8	2.0	1.4	4.2	3.2	1.2	0.5	2.1	2.1	2.7	2.8	2.8	2.6	3.0	1.5	1.3	6.8	7.5	6.5	7.5	0.5	2.9
29	8.8	7.9	7.9	6.7	6.8	8.4	8.1	9.0	9.6	9.2	9.9	10.3	10.9	9.2	10.8	8.3	2.5	0.9	1.5	2.1	1.3	1.0	1.9	1.0	10.9	0.9	6.4
30	2.6	4.6	3.3	4.2	4.3	4.6	6.0	6.3	3.9	1.8	4.2	8.3	9.9	9.6	10.3	11.3	13.5	15.7	16.0	15.1	14.1	15.3	14.1	15.7	16.0	1.8	8.9
31	15.6	15.7	13.7	16.8	16.9	17.9	18.1	15.3	13.8	15.4	15.1	14.4	15.8	16.3	12.6	11.9	10.3	12.9	10.4	8.6	7.4	7.8	5.8	3.7	18.1	3.7	13.0
Max.	**26.4**	**25.5**	**25.1**	**25.6**	**26.5**	**26.2**	**24.9**	**25.2**	**27.2**	**26.3**	**25.3**	**24.6**	**24.0**	**24.5**	**25.3**	**25.6**	**25.3**	**24.3**	**23.8**	**25.5**	**25.8**	**26.1**	**26.1**	**26.7**	**27.2**		
Min.	**1.0**	**0.5**	**1.0**	**1.5**	**0.7**	**1.3**	**0.9**	**1.4**	**0.7**	**0.9**	**1.2**	**0.5**	**0.9**	**0.8**	**1.5**	**0.6**	**0.6**	**0.9**	**1.5**	**1.2**	**0.8**	**1.0**	**0.9**	**1.0**		**0.5**	
Avg.	**11.3**	**11.0**	**10.5**	**11.0**	**11.1**	**11.6**	**11.4**	**11.2**	**11.3**	**11.9**	**12.4**	**12.0**	**12.3**	**12.9**	**13.0**	**12.8**	**12.3**	**11.7**	**11.7**	**11.9**	**11.6**	**12.0**	**11.5**	**11.5**			**11.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	1.7	1.6	1.2	2.1	2.8	2.7	2.6	2.4	1.1	1.2	2.2	1.6	0.9	2.2	2.1	1.7	0.8	1.2	2.2	2.3	2.7	3.0	2.5	2.5	3.0	0.8	2.0
2	2.5	3.0	4.2	3.3	3.5	2.6	1.5	1.4	3.9	6.3	8.0	8.8	10.7	11.3	13.5	14.4	12.6	10.8	12.2	13.2	16.4	14.6	14.8	17.2	17.2	1.4	8.8
3	16.2	19.9	18.9	18.4	16.9	16.8	16.5	16.4	17.2	18.4	15.3	14.9	13.5	13.5	13.7	12.0	11.3	6.8	4.6	5.2	4.8	6.6	5.8	5.3	19.9	4.6	12.9
4	5.8	3.7	3.9	3.7	6.5	4.2	3.4	4.6	3.4	2.6	2.5	3.7	3.7	2.5	3.3	4.6	5.1	6.4	6.7	6.4	5.8	4.8	5.2	7.9	7.9	2.5	4.6
5	10.4	10.9	12.4	11.5	14.9	14.2	13.2	13.5	12.8	13.7	15.0	16.3	14.4	14.5	13.4	14.1	7.6	6.6	8.0	3.3	6.6	4.6	2.4	5.1	16.3	2.4	10.8
6	5.4	5.5	4.7	4.4	4.1	4.2	4.7	5.2	4.6	5.7	6.1	6.2	5.9	7.1	7.0	9.4	8.6	9.6	9.2	6.7	10.2	12.0	12.0	12.6	12.6	4.1	7.1
7	11.5	11.9	13.2	12.6	10.3	11.9	9.6	8.7	9.3	6.8	7.1	6.9	4.3	5.4	2.4	2.3	3.5	4.7	1.9	5.9	5.3	4.1	4.0	3.3	13.2	1.9	6.9
8	2.7	3.3	2.5	1.1	1.6	1.6	2.0	2.7	3.2	3.4	3.7	6.7	5.8	4.3	4.3	5.6	5.7	4.9	5.7	5.2	5.3	4.7	5.4	4.0	6.7	1.1	4.0
9	5.4	5.3	8.0	8.8	8.1	8.4	10.6	12.3	10.4	9.4	7.2	4.6	3.2	3.1	2.1	2.1	2.4	3.5	3.3	3.8	4.7	4.6	5.0	5.6	12.3	2.1	5.9
10	3.5	2.6	2.4	2.7	3.1	3.4	2.3	1.8	2.0	1.6	2.9	2.9	2.3	2.3	2.0	1.0	0.8	2.0	2.9	2.2	2.6	3.0	2.8	1.8	3.5	0.8	2.4
11	2.0	1.8	1.9	1.7	0.9	1.5	2.4	2.4	0.8	2.2	1.4	0.8	1.6	3.0	2.7	2.9	4.3	3.7	5.7	8.2	8.3	10.2	13.8	15.1	15.1	0.8	4.1
12	17.5	21.3	21.4	22.7	21.6	21.3	20.1	17.2	18.0	21.3	19.6	19.9	21.9	22.0	22.7	20.4	15.7	11.8	10.0	6.5	6.6	2.4	2.6	1.9	22.7	1.9	16.1
13	8.8	9.3	12.7	10.1	5.5	5.9	6.5	7.2	7.0	5.6	4.8	5.6	4.6	5.1	4.7	4.7	4.1	4.2	4.9	4.6	4.2	4.0	4.1	4.6	12.7	4.0	6.0
14	5.8	5.9	5.2	5.2	4.7	4.1	4.6	4.8	4.1	3.1	5.2	16.6	21.0	20.5	20.2	19.9	20.7	20.0	19.6	22.0	24.7	24.4	23.4	24.1	24.7	3.1	13.7
15	27.9	26.7	26.2	26.7	24.3	21.3	16.5	15.9	17.3	14.3	14.0	15.4	14.8	14.5	12.0	13.7	11.1	13.8	11.8	5.9	2.6	2.2	4.6	3.1	27.9	2.2	14.9
16	3.4	3.2	3.4	3.7	4.9	7.0	6.5	7.0	5.9	6.2	7.1	8.2	6.0	5.9	5.6	6.0	3.7	4.4	5.5	4.9	2.5	2.0	3.4	6.6	8.2	2.0	5.1
17	6.8	8.4	5.3	1.7	9.0	7.7	4.6	5.2	6.7	6.5	7.2	8.9	10.0	9.4	8.8	6.1	6.7	7.8	9.5	12.0	13.3	11.5	10.6	14.5	14.5	1.7	8.3
18	12.7	16.2	17.7	14.4	15.3	16.0	18.3	19.8	17.7	16.3	11.3	12.6	12.2	11.3	9.6	8.3	10.4	9.7	6.6	8.2	6.2	6.2	2.8	2.5	19.8	2.5	11.8
19	3.5	3.9	4.8	3.8	6.2	6.9	4.6	6.8	8.6	8.5	8.4	9.1	9.7	9.2	9.0	6.7	8.3	9.5	8.8	6.2	6.5	6.3	6.4	7.3	9.7	3.5	7.0
20	8.1	10.2	14.4	14.8	15.7	15.8	13.8	15.0	10.9	6.3	4.2	6.9	5.5	6.3	3.8	5.7	9.2	7.7	8.3	6.9	8.5	6.6	5.8	3.2	15.8	3.2	8.9
21	5.1	6.1	4.8	4.2	4.8	4.7	5.5	4.7	6.0	8.2	9.2	8.4	6.2	5.1	4.3	4.6	4.3	3.8	4.2	4.3	4.2	3.9	4.2	4.1	9.2	3.8	5.2
22	5.4	4.7	4.9	4.9	5.4	4.5	4.0	3.3	3.8	3.7	4.8	5.9	8.4	10.6	11.0	11.8	10.5	8.7	8.8	6.8	4.6	6.3	6.1	5.6	11.8	3.3	6.4
23	2.7	2.1	2.1	1.0	1.4	2.3	2.6	1.8	1.5	1.3	1.5	3.0	4.6	3.5	3.0	2.5	3.7	4.4	1.1	2.3	1.8	2.4	5.9	3.3	5.9	1.0	2.6
24	2.6	2.4	7.0	5.8	5.2	8.5	8.8	9.6	12.8	10.4	11.1	10.8	10.9	13.2	13.3	14.1	14.6	15.7	16.3	16.2	16.2	15.0	15.6	14.4	16.3	2.4	11.3
25	14.5	15.5	15.8	15.4	16.6	15.1	13.6	13.5	13.5	11.1	9.7	8.8	7.8	5.6	4.7	4.6	4.1	3.6	4.4	3.6	4.3	4.2	3.6	3.2	16.6	3.2	9.0
26	3.5	3.8	4.1	2.5	3.9	3.2	5.0	4.2	4.4	3.3	2.5	1.8	1.8	1.3	1.7	1.9	3.2	3.2	4.7	6.3	6.5	4.7	2.9	1.8	6.5	1.3	3.4
27	3.5	2.8	2.6	2.1	5.0	5.4	2.8	3.7	1.9	2.3	4.2	1.6	2.4	2.0	2.0	2.0	4.2	3.7	2.3	2.4	3.0	3.1	3.9	4.3	5.4	1.6	3.1
28	2.7	3.1	3.9	5.0	4.3	4.2	5.3	4.1	4.9	4.3	2.2	3.5	4.5	4.3	4.1	2.6	0.9	1.2	2.6	5.8	6.9	7.3	8.4	8.9	8.9	0.9	4.4
29	8.1	6.0	6.6	4.9	4.8	3.0	6.0	4.6	9.1	9.8	8.6	9.8	7.7	4.9	4.5	6.1	5.8	5.8	7.1	8.9	9.2	11.4	12.0	12.4	12.4	3.0	7.4
Max.	**27.9**	**26.7**	**26.2**	**26.7**	**24.3**	**21.3**	**20.1**	**19.8**	**18.0**	**21.3**	**19.6**	**19.9**	**21.9**	**22.0**	**22.7**	**20.4**	**20.7**	**20.0**	**19.6**	**22.0**	**24.7**	**24.4**	**23.4**	**24.1**	**27.9**		
Min.	**1.7**	**1.6**	**1.2**	**1.0**	**0.9**	**1.5**	**1.5**	**1.4**	**0.8**	**1.2**	**1.4**	**0.8**	**0.9**	**1.3**	**1.7**	**1.0**	**0.8**	**1.2**	**1.1**	**2.2**	**1.8**	**2.0**	**2.4**	**1.8**		**0.8**	
Avg.	**7.2**	**7.6**	**8.1**	**7.6**	**8.0**	**7.9**	**7.5**	**7.6**	**7.7**	**7.4**	**7.1**	**7.9**	**7.8**	**7.7**	**7.3**	**7.3**	**7.0**	**6.9**	**6.9**	**6.8**	**7.0**	**6.8**	**6.9**	**7.1**			**7.4**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	11.4	10.5	8.7	7.1	9.3	9.5	8.3	5.9	4.1	2.9	2.1	2.4	2.6	2.2	1.9	2.6	2.6	3.1	4.7	5.0	4.2	5.3	5.4	5.3	11.4	1.9	5.3
2	5.2	5.0	5.3	6.5	5.2	4.9	3.6	4.3	5.9	6.8	5.3	2.0	1.4	3.3	3.2	3.7	2.9	1.4	1.2	1.6	1.5	1.2	1.4	4.2	6.8	1.2	3.6
3	6.3	3.7	2.7	3.4	9.5	12.8	7.0	5.3	8.2	9.3	9.5	11.6	11.6	10.8	8.5	7.8	6.4	5.0	4.7	6.0	6.3	9.4	10.7	10.9	12.8	2.7	7.8
4	12.9	13.5	13.6	8.4	9.3	9.8	15.0	14.2	15.9	15.8	15.0	13.7	9.3	8.0	8.2	7.3	7.8	7.0	6.7	7.1	8.5	7.2	5.0	4.6	15.9	4.6	10.2
5	6.3	7.0	6.5	7.1	6.6	7.4	8.9	8.4	8.1	7.7	7.1	5.7	6.3	6.4	5.0	5.3	7.9	8.2	13.0	12.5	16.6	15.1	13.9	14.0	16.6	5.0	8.8
6	10.5	9.1	10.0	11.0	10.0	8.4	6.5	5.5	5.8	5.8	6.9	5.4	4.5	5.2	6.7	5.5	2.8	3.7	4.0	3.7	5.5	3.2	4.3	3.7	11.0	2.8	6.2
7	2.5	2.7	2.5	2.5	3.8	3.0	3.5	4.7	6.2	4.3	3.4	4.2	4.5	6.3	6.5	6.1	6.0	5.9	5.5	6.2	6.7	7.2	10.4	13.2	13.2	2.5	5.3
8	10.6	7.7	7.2	7.4	7.7	2.2	1.1	0.9	3.7	4.6	4.8	2.4	3.4	3.8	3.8	6.0	6.3	4.7	6.2	6.3	4.9	4.9	5.8	6.3	10.6	0.9	5.1
9	5.2	5.2	4.8	4.5	5.0	4.1	4.4	4.1	4.2	4.2	4.3	4.2	3.8	3.5	2.7	2.9	1.4	3.6	5.5	5.7	8.4	7.0	4.2	3.2	8.4	1.4	4.4
10	0.6	1.4	2.4	1.7	2.2	6.1	9.4	8.2	4.6	5.9	7.4	4.7	8.2	9.1	9.5	8.4	9.6	8.9	8.1	7.0	9.1	10.3	10.0	10.7	10.7	0.6	6.8
11	11.2	10.6	11.6	11.2	11.4	11.6	12.1	11.7	11.7	11.6	11.8	12.1	11.7	10.9	10.8	10.6	10.6	10.1	10.2	9.7	9.0	10.7	11.2	10.9	12.1	9.0	11.0
12	11.5	11.6	11.7	11.7	11.8	12.2	14.0	14.4	14.1	13.3	13.6	13.3	11.6	10.7	9.9	10.1	10.4	11.2	12.6	12.3	12.0	12.4	13.0	13.5	14.4	9.9	12.2
13	14.0	13.8	13.4	12.8	12.7	11.2	11.5	11.7	11.6	11.9	12.1	11.4	11.5	11.2	13.4	13.4	12.9	12.9	12.6	15.0	15.2	14.2	15.1	16.7	16.7	11.2	13.0
14	17.7	17.9	17.5	17.2	15.2	11.9	8.6	6.3	3.6	2.1	2.1	3.0	2.5	2.6	1.2	0.6	1.7	4.1	4.0	3.4	3.3	2.8	3.3	3.6	17.9	0.6	6.5
15	3.9	3.5	2.6	3.1	3.7	4.2	3.7	4.8	5.7	5.3	4.3	4.1	3.3	2.9	2.9	3.8	3.0	3.1	3.1	3.7	3.1	4.0	4.3	4.2	5.7	2.6	3.8
16	3.5	3.1	2.9	3.7	2.8	3.0	1.8	2.4	3.8	2.2	2.2	1.9	1.3	1.4	2.8	3.1	3.0	2.7	2.1	2.0	1.4	1.5	1.8	2.9	3.8	1.3	2.5
17	2.1	1.3	1.3	2.8	3.8	3.4	3.7	3.5	4.3	5.1	4.7	3.2	4.1	4.0	4.2	3.2	4.5	4.8	8.2	13.9	11.3	12.3	12.2	11.3	13.9	1.3	5.6
18	11.7	12.2	12.0	12.5	13.5	14.4	14.4	15.6	16.4	16.3	17.2	16.7	15.3	14.6	16.0	15.6	16.3	15.9	15.7	16.7	16.9	15.8	15.8	16.2	17.2	11.7	15.2
19	15.4	16.2	16.5	16.1	15.3	16.2	17.2	17.8	17.8	17.6	17.5	17.4	17.5	17.5	18.3	18.0	18.9	19.7	19.1	18.3	18.2	18.0	16.8	15.2	19.7	15.2	17.4
20	15.6	15.7	16.1	16.0	15.7	15.9	17.2	18.0	18.2	17.7	16.5	14.4	13.7	13.4	14.7	14.4	15.0	15.2	14.5	13.6	14.7	16.2	16.1	15.6	18.2	13.4	15.6
21	15.3	14.8	16.0	15.5	16.4	15.0	13.8	8.1	6.3	4.6	5.7	8.8	7.7	5.1	3.5	3.4	3.6	4.8	4.7	4.1	4.5	5.1	4.5	4.1	16.4	3.4	8.1
22	3.1	1.9	2.0	2.5	3.6	3.1	4.0	4.4	5.0	6.1	6.1	7.3	7.6	9.8	11.0	11.7	12.1	12.6	13.1	14.1	13.7	13.4	12.6	12.2	14.1	1.9	8.0
23	13.6	13.0	14.5	15.3	14.9	15.5	17.5	18.2	18.9	18.3	18.2	17.5	17.5	18.6	17.3	16.3	17.0	17.6	16.5	16.4	16.8	17.6	16.3	16.3	18.9	13.0	16.7
24	16.7	15.9	17.3	16.5	16.3	16.0	15.1	14.8	14.0	14.5	15.2	15.4	15.2	14.0	13.1	13.4	14.6	15.1	15.8	16.6	15.2	13.8	14.3	11.5	17.3	11.5	15.0
25	2.0	2.2	2.6	2.2	2.5	2.9	4.3	6.4	3.9	5.5	4.7	3.2	6.1	6.4	8.2	10.9	11.9	13.1	12.9	13.7	13.8	14.4	14.5	13.4	14.5	2.0	7.6
26	15.6	16.1	16.3	15.6	15.3	16.2	15.2	13.4	14.3	13.5	14.4	13.7	15.6	15.9	15.7	15.9	16.1	15.1	14.9	15.0	15.8	15.5	15.5	15.0	16.3	13.4	15.2
27	15.3	16.3	14.2	13.6	16.0	15.2	14.5	14.1	12.9	12.2	13.6	13.9	14.8	13.6	13.6	13.2	11.9	12.3	12.7	12.4	11.7	12.4	12.3	12.1	16.3	11.7	13.5
28	13.6	14.0	14.8	15.3	16.0	15.1	15.2	15.1	15.5	13.6	14.8	13.6	13.4	12.3	10.2	8.3	7.3	5.9	4.1	2.6	1.5	1.3	0.4	1.1	16.0	0.4	10.2
29	2.8	6.1	2.4	3.0	4.9	5.0	4.4	4.1	3.9	4.9	7.3	5.7	7.3	8.6	7.4	6.5	6.8	6.7	9.7	11.4	14.5	16.3	14.4	9.7	16.3	2.4	7.2
30	8.0	9.7	12.5	15.1	11.6	14.1	13.9	11.6	11.3	10.8	12.5	9.6	10.8	11.3	10.3	9.8	9.8	10.2	10.1	8.5	6.8	6.9	7.0	5.2	15.1	5.2	10.3
31	5.5	6.7	5.4	4.8	5.7	4.2	5.6	6.8	6.3	5.2	4.0	7.6	8.4	7.7	7.5	10.4	7.7	7.6	5.2	7.3	10.1	11.5	12.3	11.1	12.3	4.0	7.3
Max.	**17.7**	**17.9**	**17.5**	**17.2**	**16.4**	**16.2**	**17.5**	**18.2**	**18.9**	**18.3**	**18.2**	**17.5**	**17.5**	**18.6**	**18.3**	**18.0**	**18.9**	**19.7**	**19.1**	**18.3**	**18.2**	**18.0**	**16.8**	**16.7**	**19.7**		
Min.	**0.6**	**1.3**	**1.3**	**1.7**	**2.2**	**2.2**	**1.1**	**0.9**	**3.6**	**2.1**	**2.1**	**1.9**	**1.3**	**1.4**	**1.2**	**0.6**	**1.4**	**1.4**	**1.2**	**1.6**	**1.4**	**1.2**	**0.4**	**1.1**		**0.4**	
Avg.	**9.3**	**9.3**	**9.3**	**9.2**	**9.6**	**9.5**	**9.5**	**9.2**	**9.2**	**9.0**	**9.2**	**8.7**	**8.8**	**8.8**	**8.7**	**8.6**	**8.7**	**8.8**	**9.1**	**9.4**	**9.7**	**9.9**	**9.8**	**9.6**			**9.2**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.5	9.3	7.9	7.4	8.3	8.3	8.5	6.4	5.4	5.5	5.4	5.8	6.0	5.2	4.1	4.1	4.0	3.6	3.6	3.0	2.2	3.5	3.0	1.8	10.5	1.8	5.5
2	2.2	8.0	10.1	11.3	10.9	10.6	10.3	10.5	10.4	10.1	9.0	9.4	8.2	5.3	1.9	1.1	2.5	2.9	3.1	3.7	3.7	4.7	6.8	7.4	11.3	1.1	6.8
3	9.0	10.9	7.7	8.5	8.1	7.2	4.4	5.6	3.2	1.9	4.6	5.7	7.5	6.6	6.9	8.9	8.4	7.1	9.4	10.7	10.8	11.4	12.0	12.4	12.4	1.9	7.9
4	14.0	15.4	14.2	15.9	13.6	12.5	12.2	9.4	7.2	6.8	8.4	8.3	7.5	6.0	5.2	4.0	3.9	4.2	2.9	1.3	1.6	3.7	17.0	20.1	20.1	1.3	9.0
5	20.4	21.0	19.4	18.5	18.3	18.8	21.4	23.2	22.8	18.8	19.3	19.0	18.9	16.4	16.3	16.5	14.4	15.4	15.1	15.6	15.7	14.8	15.4	15.7	23.2	14.4	18.0
6	15.9	16.9	18.5	17.7	20.1	18.6	19.5	18.7	18.6	15.7	14.8	12.6	12.2	15.6	15.9	12.6	11.7	13.4	14.4	14.0	13.6	13.8	13.5	11.6	20.1	11.6	15.4
7	11.0	11.6	10.9	10.6	11.2	11.5	11.8	12.5	12.4	12.7	12.5	11.7	10.8	8.9	9.4	8.8	8.0	8.1	8.7	7.7	9.0	8.9	8.3	8.3	12.7	7.7	10.2
8	7.7	7.8	8.3	7.3	6.6	7.4	6.8	7.2	5.9	5.2	3.5	2.6	0.0			0.4	2.1	2.7	3.1	2.3	1.5	3.1	9.9	12.0	12.0	0.0	5.1
9	11.7	12.7	14.3	14.4	15.3	16.9	16.2	13.7	12.3	9.8	9.3	8.6	10.7	10.1	12.7	15.2	16.5	15.5	15.1	15.1	14.5	15.1	16.8	16.9	16.9	8.6	13.7
10	17.5	15.4	14.5	14.3	14.5	13.8	13.2	14.2	12.9	12.4	11.8	11.9	10.4	10.8	9.7	10.4	9.2	9.0	8.8	9.0	8.7	8.3	9.7	10.2	17.5	8.3	11.7
11	12.8	12.2	12.2	12.0	12.5	12.3	13.5	12.2	12.0	12.3	13.6	15.6	14.5	12.4	12.1	12.4	9.7	11.0	12.6	13.3	11.7	15.5	15.5	14.1	15.6	9.7	12.8
12	14.4	12.7	11.7	11.6	12.5	13.6	11.2	11.9	13.2	14.6	15.3	13.5	13.6	13.2	12.2	13.0	13.5	14.0	14.4	14.0	16.3	17.6	17.3	17.1	17.6	11.2	13.8
13	13.0	10.5	10.9	10.6	10.3	9.7	7.4	7.4	6.0	4.8	2.5	2.4	1.3	0.4	0.9	6.8	9.8	11.8	14.1	14.0	15.2	16.7	17.9	17.5	17.9	0.4	9.3
14	16.7	16.0	15.3	13.2	14.6	14.6	15.9	19.5	17.2	18.6	18.5	19.1	18.0	15.8	15.9	14.9	14.7	15.1	14.4	13.2	12.7	11.5	7.9	6.9	19.5	6.9	15.0
15	5.9	5.1	5.8	7.0	8.2	6.5	2.7	1.5	3.5	1.5	1.4	3.2	3.8	4.4	8.4	13.7	14.4	16.5	15.2	15.5	16.1	17.0	21.8	21.2	21.8	1.4	9.2
16	17.3	13.5	16.3	14.8	13.3	15.5	14.7	12.6	17.8	24.2	23.8	21.5	18.7	20.2	19.2	19.3	22.1	21.9	23.5	22.4	18.0	17.3	19.0	19.3	24.2	12.6	18.6
17	19.9	20.5	19.6	17.8	17.1	17.1	16.8	14.7	13.0	8.1	5.9	6.4	12.6	10.0	12.5	11.9	10.3	10.0	10.4	11.5	11.6	11.6	10.6	8.5	20.5	5.9	12.8
18	10.6	9.6	8.8	6.6	2.3	3.5	2.4	2.4	2.7	2.8	1.6	2.2	3.4	3.4	4.3	3.7	4.2	3.4	4.9	4.6	3.8	1.8	2.2	1.3	10.6	1.3	4.0
19	1.7	3.7	4.1	3.5	3.6	3.2	2.7	1.6	2.7	5.8	6.5	7.8	7.0	4.9	4.6	5.0	4.8	4.6	4.1	4.3	4.8	3.8	4.5	5.6	7.8	1.6	4.4
20	6.2	6.6	5.7	4.7	6.7	6.8	6.8	9.3	9.6	7.4	6.8	7.9	8.7	10.7	10.1	8.8	8.6	9.8	8.6	6.8	7.6	6.8	7.4	7.4	10.7	4.7	7.7
21	7.2	7.8	5.9	6.7	6.5	6.6	6.9	6.6	6.6	7.4	7.8	8.4	9.0	8.4	7.4	5.8	5.5	4.5	4.4	3.8	3.9	5.0	4.0	4.1	9.0	3.8	6.3
22	3.4	3.2	2.1	1.5	3.4	2.5	1.6	2.2	2.3	1.4	1.6	1.0	1.8	2.5	2.4	2.9	2.1	2.5	2.9	3.0	2.7	0.7	2.0	2.2	3.4	0.7	2.2
23	1.2	2.6	2.1	6.9	8.6	4.6	6.0	7.8	6.7	4.5	4.7	4.5	6.5	7.3	7.5	8.0	8.6	10.5	10.3	11.3	9.4	9.0	9.0	9.9	11.3	1.2	7.0
24	11.8	13.1	15.6	15.7	15.4	13.8	16.0	14.6	15.1	16.2	15.6	15.0	13.7	13.4	12.1	11.3	11.6	10.3	9.5	10.4	10.9	11.6	10.9	14.4	16.2	9.5	13.2
25	14.8	15.1	14.2	18.0	16.7	17.0	14.3	16.0	16.4	18.5	17.7	17.0	16.3	17.4	18.0	19.2	18.7	16.9	13.7	13.3	12.0	11.5	10.3	10.3	19.2	10.3	15.6
26	10.8	10.0	9.0	10.4	11.9	11.1	10.3	10.9	11.5	12.9	12.3	13.1	13.4	13.0	13.1	13.4	13.5	13.5	12.8	13.1	12.2	12.9	12.7	12.5	13.5	9.0	12.1
27	12.1	12.0	12.4	13.1	13.0	13.8	13.7	13.8	14.1	14.2	14.2	14.6	13.7	12.3	13.5	13.2	11.5	12.0	11.9	13.1	13.4	13.3	14.4	15.3	15.3	11.5	13.3
28	15.3	15.4	15.6	15.7	15.4	15.8	16.5	16.9	15.9	14.2	13.6	14.2	14.4	14.0	13.6	12.8	12.2	12.2	10.2	11.2	10.7	10.5	10.9	12.2	16.9	10.2	13.7
29	11.5	11.5	10.4	9.5	9.5	9.9	10.4	9.7	10.1	10.5	10.6	9.8	9.5	8.2	7.6	7.9	8.0	7.6	8.2	8.3	8.3	8.8	8.8	8.8	11.5	7.6	9.3
30	8.0	7.5	7.2	5.8	6.1	6.2	5.8	5.3	5.6	4.2	2.5	2.3	1.2	1.3	2.4	2.6	2.0	2.5	1.7	2.0	4.0	4.7	2.1	1.9	8.0	1.2	3.9
Max.	**20.4**	**21.0**	**19.6**	**18.5**	**20.1**	**18.8**	**21.4**	**23.2**	**22.8**	**24.2**	**23.8**	**21.5**	**18.9**	**20.2**	**19.2**	**19.3**	**22.1**	**21.9**	**23.5**	**22.4**	**18.0**	**17.6**	**21.8**	**21.2**	**24.2**		
Min.	**1.2**	**2.6**	**2.1**	**1.5**	**2.3**	**2.5**	**1.6**	**1.5**	**2.3**	**1.4**	**1.4**	**1.0**	**0.0**	**0.4**	**0.9**	**0.4**	**2.0**	**2.5**	**1.7**	**1.3**	**1.5**	**0.7**	**2.0**	**1.3**		**0.0**	
Avg.	**11.2**	**11.3**	**11.0**	**11.0**	**11.1**	**11.0**	**10.7**	**10.6**	**10.4**	**10.1**	**9.8**	**9.8**	**9.8**	**9.6**	**9.7**	**9.6**	**9.6**	**9.7**	**9.7**	**9.7**	**9.6**	**9.8**	**10.7**	**10.9**			**10.3**

Total Hours in Month 744 **Hours Data Available** 718 **Data Recovery** 96.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.8	7.1	8.7	8.3	9.7	10.2	9.3	8.8	8.7	8.4	8.6	9.1	10.6	12.2	11.9	10.8	10.4	10.0	9.4	9.5	8.1	6.5	4.7	5.0	12.2	4.7	8.8
2	4.1	6.6	9.2	10.0	10.2	10.0	8.5	9.7	10.3	10.6	9.3	7.9	6.3	5.2	7.8	8.2	8.0	8.7	9.3	10.2	7.2	3.5	5.0	6.2	10.6	3.5	8.0
3	6.5	4.5	1.9	1.3	1.6	3.1	3.3	0.8	0.7	2.9	8.5	10.2	5.6	3.5	4.6	15.2	13.0	3.8	3.4	11.0	6.3	5.7	5.3	5.7	15.2	0.7	5.3
4	5.4	5.7	5.6	6.6	7.3	7.5	8.1	7.4	7.1	6.6	6.4	6.9	6.0	3.7	2.0	3.2	2.7	2.8	2.2	1.6	1.6	3.8	3.4	5.8	8.1	1.6	5.0
5	7.6	8.7	8.3	9.1	8.9	8.3	7.2	8.0	8.2	8.0	8.4	8.9	7.5	5.8	6.3	4.6	3.7	4.2	3.9	3.3	3.0	2.1	2.1	1.5	9.1	1.5	6.1
6	3.3	3.1	3.4	2.1	2.5	3.5	3.2	1.9	3.6	1.7	3.6	4.3	4.9	6.0	4.6	5.9	7.3	7.5	9.1	8.7	7.2	6.5	7.0	8.3	9.1	1.7	4.9
7	8.4	8.8	8.2	6.6	7.6	10.7	7.5	7.6	5.9	6.7	5.7	5.0	4.0	4.5	4.6	5.7	6.3	6.2	9.0	10.6	12.8	11.8	6.6	7.0	12.8	4.0	7.4
8	7.3	5.1	5.1	5.2	5.0	4.5	4.9	4.9	5.0	5.1	4.9	6.1	6.6	7.7	7.2	6.2	5.5	6.0	6.1	6.8	5.6	6.0	5.4	5.0	7.7	4.5	5.7
9	5.5	4.9	6.1	5.5	5.8	5.2	7.1	6.2	5.8	6.5	5.3	4.2	3.2	3.3	4.8	3.4	4.6	3.7	3.1	2.4	1.5	3.0	1.5	1.7	7.1	1.5	4.4
10	4.3	6.1	4.9	5.6	8.0	6.9	6.6	5.9	5.4	5.7	5.4	6.3	6.2	6.2	6.0	4.8	3.7	2.9	1.3	1.7	0.8	2.4	3.2	3.8	8.0	0.8	4.8
11	4.5	4.1	4.0	5.4	7.2	11.0	8.4	7.1	11.8	18.5	18.3	20.3	16.6	15.3	22.8	21.8	16.7	16.0	13.3	12.6	14.9	14.2	11.3	11.6	22.8	4.0	12.8
12	10.1	6.8	6.7	6.1	7.0	5.9	5.6	5.7	5.3	5.8	4.7	5.4	5.1	9.6	18.4	17.1	17.4	16.8	15.5	17.8	15.6	10.8	12.2	14.1	18.4	4.7	10.2
13	12.7	11.9	12.2	8.7	7.1	7.5	5.3	7.3	7.8	9.9	9.2	9.7	9.5	9.4	9.4	11.3	14.4	15.1	14.1	11.1	9.4	11.7	9.1	8.0	15.1	5.3	10.1
14	4.9	5.9	4.1	5.3	4.9	3.8	6.1	5.9	5.2	4.9	3.8	4.5	4.1	4.5	3.9	3.8	3.9	3.5	3.1	3.4	3.8	1.5	2.7	3.0	6.1	1.5	4.2
15	4.4	4.2	4.2	5.1	5.4	2.8	4.2	3.5	1.5	2.7	2.8	2.8	2.8	3.9	5.4	6.9	9.4	10.0	7.4	5.1	2.4	1.3	1.5	1.0	10.0	1.0	4.2
16	2.1	3.0	4.9	9.4	11.3	11.0	10.3	8.6	7.6	9.0	8.5	7.9	7.3	6.0	4.9	4.0	3.5	3.6	3.2	3.5	3.4	2.4	0.8	3.0	11.3	0.8	5.8
17	2.0	1.5	5.0	8.1	9.0	8.2	8.3	7.3	5.4	6.4	6.9	4.6	2.3	3.6	4.4	4.8	4.0	4.8	4.7	4.0	5.0	4.5	4.7	3.0	9.0	1.5	5.1
18	1.6	2.2	6.0	6.5	5.1	3.2	3.4	6.1	6.6	5.9	6.6	7.9	9.2	9.2	7.5	7.3	6.2	7.5	7.7	6.8	5.7	5.2	4.0	3.2	9.2	1.6	5.9
19	2.8	4.2	3.3	1.4	1.2	1.1	2.0	3.2	2.2	3.8	4.9	2.7	3.0	2.1	3.5	4.5	4.6	6.1	6.2	7.4	7.6	7.3	8.1	7.7	8.1	1.1	4.2
20	8.6	8.8	9.0	9.2	8.2	9.1	9.5	9.6	7.9	7.8	6.4	8.1	7.0	5.4	2.9	2.8	3.3	2.8	3.2	3.5	3.2	1.9	1.1	1.2	9.6	1.1	5.8
21	2.1	1.7	0.6	0.6	1.6	2.1	1.5	2.1	3.7	1.9	4.1	5.0	7.6	6.5	5.7	6.6	5.5	4.4	4.2	3.2	1.8	2.3	1.5	6.8	7.6	0.6	3.5
22	8.2	9.1	8.8	11.2	10.1	9.5	9.5	8.8	10.0	8.6	7.4	6.1	3.8	5.7	6.6	6.5	5.4	7.1	7.3	7.6	8.8	12.5	12.9	13.3	13.3	3.8	8.5
23	13.3	13.6	15.8	17.9	15.8	10.3	9.3	12.3	9.7	8.5	5.7	8.8	16.7	19.2	17.1	17.8	16.6	17.1	16.9	16.1	17.0	16.1	11.7	12.3	19.2	5.7	14.0
24	12.6	11.6	10.1	12.9	11.9	10.6	9.8	10.5	10.1	5.9	5.0	4.9	6.4	6.0	5.9	9.8	8.1	5.7	5.5	4.6	3.9	1.2	1.9	1.4	12.9	1.2	7.3
25	1.6	0.9	1.7	2.3	1.7	1.9	1.6	1.3	1.2	0.7	3.0	3.9	5.0	5.6	5.7	5.0	5.1	4.2	3.6	3.5	2.8	1.2	1.8	4.8	5.7	0.7	2.9
26	6.6	6.8	7.5	9.9	11.3	12.1	10.8	12.1	9.7	10.3	9.8	8.2	9.2	8.6	9.3	10.4	10.2	10.8	10.0	11.2	9.9	11.3	11.0	8.0	12.1	6.6	9.8
27	8.4	9.3	7.1	7.8	7.5	8.0	8.0	11.3	9.5	10.6	13.5	10.5	9.3	8.6	9.8	8.7	8.0	7.1	5.7	6.1	5.6	6.6	7.3	9.8	13.5	5.6	8.5
28	8.1	9.2	10.7	10.9	10.6	8.6	9.8	8.1	8.8	8.3	10.8	11.8	10.2	9.8	9.1	6.5	6.9	6.2	7.1	7.0	7.1	7.7	7.3	7.4	11.8	6.2	8.7
29	9.3	7.4	8.3	10.3	11.8	11.5	11.2	10.1	8.1	6.8	6.5	3.3	3.1	4.0	4.2	3.4	3.7	3.9	3.9	4.4	2.8	0.9	0.7	0.4	11.8	0.4	5.8
30	1.7	1.3	0.8	1.1	0.8	0.7	1.6	3.2	4.9	5.3	6.1	6.3	7.9	7.1	6.5	6.1	7.7	7.5	7.9	7.4	7.3	6.8	8.4	8.3	8.4	0.7	5.1
31	6.3	6.9	8.1	8.4	10.9	11.0	11.1	10.9	10.2	8.6	8.0	8.3	9.0	10.2	10.1	10.3	9.9	10.5	11.1	11.0	9.7	7.4	7.7	7.3	11.1	6.3	9.3
Max.	**13.3**	**13.6**	**15.8**	**17.9**	**15.8**	**12.1**	**11.2**	**12.3**	**11.8**	**18.5**	**18.3**	**20.3**	**16.7**	**19.2**	**22.8**	**21.8**	**17.4**	**17.1**	**16.9**	**17.8**	**17.0**	**16.1**	**12.9**	**14.1**	**22.8**		
Min.	**1.6**	**0.9**	**0.6**	**0.6**	**0.8**	**0.7**	**1.5**	**0.8**	**0.7**	**0.7**	**2.8**	**2.7**	**2.3**	**2.1**	**2.0**	**2.8**	**2.7**	**2.8**	**1.3**	**1.6**	**0.8**	**0.9**	**0.7**	**0.4**		**0.4**	
Avg.	**6.1**	**6.2**	**6.5**	**7.1**	**7.3**	**7.1**	**6.9**	**7.0**	**6.7**	**6.9**	**7.0**	**7.1**	**7.0**	**7.0**	**7.5**	**7.9**	**7.6**	**7.3**	**7.1**	**7.2**	**6.5**	**6.0**	**5.5**	**6.0**			**6.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.0	10.3	11.4	9.7	6.4	6.4	6.3	6.3	6.5	8.0	8.4	12.6	10.6	8.2	6.4	7.9	14.0	15.0	7.1	7.2	4.8	5.7	5.6	7.6	15.0	4.8	8.3
2	7.3	5.6	4.7	4.4	4.2	6.3	6.3	6.4	6.5	4.6	4.8	7.0	4.4	6.2	4.9	5.7	5.2	3.1	3.1	2.4	2.7	3.0	3.0	4.4	7.3	2.4	4.8
3	4.6	3.3	2.0	4.6	7.2	7.4	7.2	6.8	3.1	4.9	4.4	4.2	7.1	5.4	3.7	3.8	6.8	7.7	7.1	5.4	2.6	1.2	1.5	0.7	7.7	0.7	4.7
4	0.8	1.4	1.1	3.4	2.6	0.7	2.0	2.4	1.6	1.3	1.8	5.2	3.7	4.0	3.5	2.4	3.5	3.5	3.8	4.6	3.8	4.3	4.5	2.7	5.2	0.7	2.9
5	2.1	3.3	6.5	6.1	5.2	7.4	8.5	10.7	10.7	9.9	12.9	8.9	11.5	8.4	6.9	9.7	7.8	8.0	4.2	3.6	4.5	3.7	3.2	1.9	12.9	1.9	6.9
6	2.3	3.0	2.6	5.8	9.0	9.0	8.6	7.5	6.9	7.6	8.2	8.6	8.9	9.4	7.2	6.1	5.5	4.7	2.1	5.6	8.0	9.5	10.7	13.1	13.1	2.1	7.1
7	12.3	14.0	13.9	13.4	12.7	12.9	13.3	16.3	15.7	15.3	15.4	13.4	11.1	11.0	11.3	8.5	6.6	7.1	5.9	5.0	4.2	4.0	4.6	3.2	16.3	3.2	10.5
8	2.6	1.7	2.1	1.7	2.2	1.5	1.2	2.9	7.6	9.8	8.2	8.5	7.6	7.1	6.0	3.7	4.6	6.6	5.0	7.8	9.9	9.9	12.0	12.4	12.4	1.2	5.9
9	10.1	11.5	11.4	13.7	13.5	12.5	13.1	11.9	11.7	10.7	10.3	9.2	9.2	8.3	8.4	9.4	9.9	10.7	9.9	9.3	9.3	9.1	10.0	9.9	13.7	8.3	10.5
10	10.4	11.2	11.4	11.8	11.4	11.8	12.6	11.7	7.8	8.6	7.8	5.6	4.3	3.4	4.5	6.7	7.8	7.5	6.7	5.3	5.5	4.7	4.7	4.7	12.6	3.4	7.8
11	2.9	2.5	3.3	2.0	2.1	0.4	0.6	1.3	2.2	4.2	2.6	0.9	1.9	3.5	6.6	5.9	5.0	4.8	4.4	2.9	1.1	2.2	2.4	3.1	6.6	0.4	2.9
12	5.6	7.8	9.3	9.7	9.7	10.4	10.8	10.9	10.7	11.5	10.3	9.2	9.0	8.2	6.6	6.5	6.3	5.8	6.5	8.5	10.0	12.2	11.2	10.7	12.2	5.6	9.1
13	10.1	10.5	10.7	10.8	10.8	11.3	11.6	11.1	11.6	8.8	7.4	7.0	6.9	5.7	5.8	5.3	6.2	5.3	3.6	2.3	3.5	2.7	1.6	0.8	11.6	0.8	7.1
14	2.0	3.0	2.2	6.4	7.0	7.8	6.3	7.4	8.0	6.8	7.3	7.1	6.4	5.8	3.1	3.4	3.3	4.4	4.0	2.9	2.3	1.3	1.0	1.8	8.0	1.0	4.6
15	4.4	5.3	6.9	6.3	8.7	10.6	8.7	8.9	9.3	9.2	7.8	7.2	5.0	3.4	3.5	4.1	3.6	3.7	3.2	7.0	9.9	9.4	8.6	8.4	10.6	3.2	6.8
16	9.8	10.1	11.4	11.2	10.3	10.5	11.3	10.8	10.7	9.0	6.2	7.2	6.9	6.1	4.0	3.3	5.0	5.2	4.9	4.0	4.0	2.1	1.4	1.4	11.4	1.4	6.9
17	2.1	1.5	1.4	1.3	1.9	1.4	1.4	1.9	3.4	4.7	5.5	7.1	6.0	5.5	6.0	5.9	5.6	4.7	3.7	4.5	5.0	4.8	4.2	2.0	7.1	1.3	3.8
18	2.8	1.8	2.1	1.6	1.9	2.6	2.0	2.2	5.9	5.4	2.9	3.5	4.3	4.5	5.1	5.4	5.7	5.3	4.8	3.9	3.3	2.2	1.0	1.6	5.9	1.0	3.4
19	0.4	1.0	1.0	1.2	1.6	3.3	6.6	5.6	4.4	2.8	2.4	5.1	6.5	7.9	6.5	5.6	5.7	4.8	5.3	6.1	5.9	6.2	5.7	3.6	7.9	0.4	4.4
20	2.4	0.7	0.6	1.0	1.2	1.1	1.1	0.5	1.6	3.6	5.5	6.3	6.8	7.9	7.5	6.2	5.8	4.8	4.6	4.9	5.7	4.7	4.1	3.2	7.9	0.5	3.8
21	3.1	3.1	3.2	2.8	2.2	2.4	1.3	1.9	1.1	1.3	2.0	2.6	3.0	4.5	5.3	5.7	5.4	4.6	4.3	4.2	3.2	2.4	1.6	1.3	5.7	1.1	3.0
22	2.6	1.3	0.6	0.6	1.2	2.0	3.1	1.6	2.6	4.6	5.0	4.5	4.6	4.4	4.0	2.5	1.4	3.2	4.4	4.6	4.0	2.0	2.6	5.3	5.3	0.6	3.0
23	4.9	5.0	4.4	5.3	5.4	4.8	4.2	4.5	3.7	4.3	4.2	4.8	4.4	4.3	5.4	5.8	5.4	5.9	5.9	6.0	5.2	4.0	2.3	2.3	6.0	2.3	4.7
24	1.8	4.0	5.9	5.6	7.6	5.7	5.1	5.9	5.5	6.2	7.4	6.5	6.8	7.2	4.8	4.5	4.3	4.3	4.4	6.3	7.9	6.5	7.5	6.5	7.9	1.8	5.8
25	8.0	9.0	14.9	15.8	14.6	15.6	13.0	7.7	7.5	9.7	8.5	12.5	9.5	18.7	18.2	17.3	17.5	16.3	16.9	15.3	10.9	7.8	9.2	4.9	18.7	4.9	12.5
26	3.5	4.1	5.3	6.4	5.6	5.9	5.5	5.6	6.2	5.6	7.8	6.8	5.5	6.8	5.7	6.3	5.4	4.8	4.3	4.4	4.4	4.4	4.5	4.2	7.8	3.5	5.4
27	3.4	5.9	7.4	6.3	5.7	8.3	6.2	8.2	7.1	6.4	3.4	3.1	3.4	2.2	2.0	2.7	4.5	6.2	5.7	5.6	5.2	4.7	4.1	3.1	8.3	2.0	5.0
28	1.4	2.6	2.5	2.4	2.4	3.0	4.6	7.8	6.5	8.0	7.0	6.0	5.2	5.0	3.6	3.3	1.6	2.3	2.7	6.9	5.8	5.0	4.7	3.7	8.0	1.4	4.3
29	3.4	5.5	4.6	4.9	5.0	6.2	5.8	8.1	7.3	6.9	7.4	6.6	6.4	5.6	5.4	6.0	5.8	6.0	6.0	5.4	4.8	5.4	5.5	4.6	8.1	3.4	5.8
30	4.2	3.8	3.0	1.5	1.0	1.9	1.5	1.5	0.7	1.7	3.6	4.2	4.9	5.9	6.0	5.7	5.9	5.8	5.0	3.5	2.8	2.5	2.1	1.5	6.0	0.7	3.3
Max.	**12.3**	**14.0**	**14.9**	**15.8**	**14.6**	**15.6**	**13.3**	**16.3**	**15.7**	**15.3**	**15.4**	**13.4**	**11.5**	**18.7**	**18.2**	**17.3**	**17.5**	**16.3**	**16.9**	**15.3**	**10.9**	**12.2**	**12.0**	**13.1**	**18.7**		
Min.	**0.4**	**0.7**	**0.6**	**0.6**	**1.0**	**0.4**	**0.6**	**0.5**	**0.7**	**1.3**	**1.8**	**0.9**	**1.9**	**2.2**	**2.0**	**2.4**	**1.4**	**2.3**	**2.1**	**2.3**	**1.1**	**1.2**	**1.0**	**0.7**		**0.4**	
Avg.	**4.6**	**5.1**	**5.6**	**5.9**	**6.0**	**6.4**	**6.3**	**6.6**	**6.5**	**6.7**	**6.5**	**6.7**	**6.4**	**6.5**	**5.9**	**5.8**	**6.0**	**6.1**	**5.3**	**5.5**	**5.3**	**4.9**	**4.8**	**4.5**			**5.8**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.0	2.4	3.0	2.7	2.0	0.8	1.3	2.2	2.0	3.2	4.3	4.5	6.6	7.8	6.9	6.6	9.0	7.5	7.4	7.9	9.2	11.8	10.1	11.2	11.8	0.8	5.6
2	8.5	8.8	10.8	12.2	8.1	9.5	8.2	7.4	6.3	6.4	5.9	4.4	6.0	6.8	6.2	5.6	6.1	7.6	7.1	7.1	6.2	6.9	4.8	4.6	12.2	4.4	7.1
3	5.0	4.6	2.4	4.9	6.1	9.3	10.0	12.4	11.1	8.8	7.5	9.1	8.8	4.9	3.9	5.8	6.3	5.9	5.6	4.6	5.3	5.0	5.8	4.7	12.4	2.4	6.6
4	4.7	5.1	3.8	4.1	3.7	3.2	3.5	2.6	1.2	2.1	1.2	1.3	3.9	5.0	6.7	6.3	5.6	5.0	2.4	2.2	1.2	1.7	1.5	0.9	6.7	0.9	3.3
5	0.8	0.6	0.9	0.9	1.9	2.7	1.5	1.1	1.8	0.9	2.0	2.6	3.4	3.1	4.2	3.9	4.4	4.0	4.1	3.1	4.0	3.2	2.0	1.9	4.4	0.6	2.5
6	1.7	1.9	1.7	1.0	3.8	3.0	1.4	1.6	2.5	2.6	1.7	3.3	4.1	5.9	5.6	4.0	3.5	4.5	5.3	5.0	5.5	3.0	3.0	2.0	5.9	1.0	3.2
7	2.8	2.6	3.6	6.4	5.8	9.4	8.3	7.5	5.8	7.3	6.2	3.7	3.4	4.1	4.7	3.9	2.8	3.4	4.6	4.5	3.9	2.3	0.8	1.0	9.4	0.8	4.5
8	2.1	3.1	2.8	1.7	3.5	6.2	6.2	6.3	6.7	5.3	5.3	6.0	7.0	5.6	5.3	5.4	4.1	1.8	1.9	0.6	0.8	1.7	2.4	3.4	7.0	0.6	4.0
9	3.1	4.1	2.5	2.9	1.7	5.2	3.0	1.5	6.7	11.7	12.2	13.1	14.6	14.6	11.6	9.5	7.9	11.3	12.2	10.3	11.5	8.1	7.8	5.4	14.6	1.5	8.0
10	4.9	5.9	6.9	7.5	8.6	9.2	11.4	11.6	12.1	11.6	9.8	7.1	6.1	4.9	4.7	4.5	4.6	5.0	3.6	4.3	3.4	3.3	3.3	4.4	12.1	3.3	6.6
11	6.9	7.3	5.4	3.8	4.8	4.3	3.2	3.1	3.2	4.1	4.4	4.6	4.9	5.4	5.9	5.5	5.4	5.4	5.9	5.6	5.1	2.8	1.9	1.1	7.3	1.1	4.6
12	1.0	1.5	2.1	1.0	0.9	0.3	0.6	1.8	4.7	5.8	6.4	7.6	8.8	8.9	9.3	9.0	10.3	10.7	9.5	11.0	9.8	10.3	10.6	9.5	11.0	0.3	6.3
13	9.3	7.5	8.3	7.8	5.6	4.6	5.7	4.1	5.6	7.8	6.7	5.8	6.2	5.5	4.4	4.2	4.9	4.3	3.6	3.6	3.5	3.8	3.1	3.0	9.3	3.0	5.4
14	3.2	2.6	1.3	1.5	1.6	0.5	0.5	0.6	0.7	1.0	2.9	4.5	3.1	4.4	4.8	4.2	4.8	4.9	4.2	3.2	2.4	2.8	2.9	2.6	4.9	0.5	2.7
15	2.7	0.8	0.4	1.3	1.6	3.8	1.3	1.0	4.3	6.4	7.9	9.6	10.0	10.8	8.9	9.6	14.1	13.5	12.4	10.4	12.0	9.7	9.0	9.1	14.1	0.4	7.1
16	10.9	11.1	11.7	13.2	12.3	9.4	10.7	10.8	11.1	12.0	11.1	10.8	12.2	11.8	12.6	12.8	13.9	14.0	13.9	13.3	14.1	14.0	13.8	12.9	14.1	9.4	12.3
17	12.4	9.8	9.8	5.9	3.0	11.6	13.0	15.1	12.0	12.0	12.7	10.3	9.5	9.2	7.5	7.7	12.0	10.5	12.7	14.1	13.2	12.6	13.0	12.7	15.1	3.0	10.9
18	12.7	12.7	12.4	11.7	10.6	9.2	8.7	10.2	9.6	9.0	10.0	8.0	8.4	8.9	10.1	10.6	9.3	9.2	8.8	9.5	9.3	8.7	7.9	9.4	12.7	7.9	9.8
19	9.2	9.2	10.2	9.9	9.8	10.9	10.7	10.1	10.1	10.2	9.1	9.4	9.7	8.5	7.5	5.0	3.6	1.8	5.0	6.7	7.3	9.0	10.9	9.6	10.9	1.8	8.5
20	9.6	11.3	10.3	10.2	9.5	9.9	9.0	6.9	7.3	5.5	6.4	13.0	12.7	8.2	10.1	9.5	9.6	8.6	8.0	9.1	6.8	7.8	7.2	8.6	13.0	5.5	9.0
21	5.5	4.9	3.2	4.2	5.1	7.2	7.7	8.6	10.6	9.6	8.2	8.1	7.6	7.6	5.3	4.0	6.5	6.7	4.9	5.3	4.7	4.0	5.2	7.3	10.6	3.2	6.3
22	7.2	8.3	9.8	9.2	10.3	10.3	6.4	7.7	2.7	2.6	4.6	3.4	6.1	8.1	7.9	7.2	6.7	5.8	4.2	4.2	4.5	2.8	3.5	0.9	10.3	0.9	6.0
23	1.1	1.0	2.3	2.7	5.1	6.1	7.8	7.6	9.3	7.9	6.8	7.7	5.3	4.7	5.4	4.7	6.0	7.1	5.3	5.7	7.0	8.6	9.1	7.1	9.3	1.0	5.9
24	3.6	2.4	1.8	2.8	2.8	2.9	5.2	2.3	6.1	5.4	7.0	5.5	4.5	4.8	3.1	3.6	4.7	4.0	2.4	1.6	1.4	1.0	2.8	3.7	7.0	1.0	3.6
25	4.4	3.0	4.6	4.4	5.1	6.8	8.4	9.6	9.4	10.3	10.5	11.1	9.3	9.1	8.7	6.6	4.4	5.3	4.7	2.4	2.8	1.1	2.3	2.0	11.1	1.1	6.1
26	2.4	1.2	1.9	4.0	2.9	11.4	13.6	11.9	10.9	9.1	7.9	8.0	10.1	7.8	9.4	9.0	6.9	4.4	3.0	5.6	6.3	5.9	7.5	7.1	13.6	1.2	7.0
27	6.5	6.1	4.4	5.3	4.5	3.0	2.9	0.8	1.5	2.6	7.1	4.7	5.1	4.7	3.7	2.5	1.4	1.1	1.4	1.2	3.5	2.1	2.1	3.8	7.1	0.8	3.4
28	3.9	4.4	5.6	7.5	8.8	9.3	9.6	10.2	10.1	11.3	9.3	11.0	10.1	9.1	8.6	8.8	9.6	10.2	10.9	10.0	9.0	10.6	10.8	10.4	11.3	3.9	9.1
29	10.7	11.6	11.5	10.3	9.7	8.9	11.6	11.9	10.7	11.9	10.6	10.6	10.8	10.1	8.5	7.7	3.4	7.6	4.2	7.0	8.3	8.9	9.4	11.3	11.9	3.4	9.5
30	12.6	12.7	12.2	12.4	11.5	11.0	14.2	11.1	12.1	13.2	11.1	10.1	12.9	12.1	12.6	15.7	16.4	17.5	17.5	16.1	14.7	15.6	16.7	15.3	17.5	10.1	13.6
31	12.7	12.3	11.5	10.5	9.4	11.8	12.1	15.5	17.7	17.2	15.9	16.2	15.8	14.5	13.9	10.7	9.5	10.6	8.2	8.9	8.3	10.3	12.7	12.5	17.7	8.2	12.4
Max.	**12.7**	**12.7**	**12.4**	**13.2**	**12.3**	**11.8**	**14.2**	**15.5**	**17.7**	**17.2**	**15.9**	**16.2**	**15.8**	**14.6**	**13.9**	**15.7**	**16.4**	**17.5**	**17.5**	**16.1**	**14.7**	**15.6**	**16.7**	**15.3**	**17.7**		
Min.	**0.8**	**0.6**	**0.4**	**0.9**	**0.9**	**0.3**	**0.5**	**0.6**	**0.7**	**0.9**	**1.2**	**1.3**	**3.1**	**3.1**	**3.1**	**2.5**	**1.4**	**1.1**	**1.4**	**0.6**	**0.8**	**1.0**	**0.8**	**0.9**		**0.3**	
Avg.	**6.0**	**5.8**	**5.8**	**5.9**	**5.8**	**6.8**	**7.0**	**6.9**	**7.3**	**7.6**	**7.5**	**7.6**	**8.0**	**7.6**	**7.4**	**6.9**	**7.0**	**7.1**	**6.6**	**6.6**	**6.6**	**6.4**	**6.6**	**6.4**			**6.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	14.1	11.6	9.1	11.3	11.8	10.9	10.4	8.6	3.3	3.5	4.5	6.3	6.7	7.1	6.4	5.7	5.4	4.4	3.9	4.8	4.0	5.1	7.2	6.4	14.1	3.3	7.2
2	5.2	5.1	6.6	5.7	4.5	4.0	2.7	3.6	3.6	3.9	3.5	3.9	4.8	4.0	4.6	3.8	3.7	3.7	4.3	3.5	3.2	2.4	1.2	1.1	6.6	1.1	3.9
3	0.3	1.7	1.3	0.5	1.8	2.2	3.4	3.4	3.0	2.8	3.6	4.9	5.3	5.2	3.4	5.3	3.8	4.6	6.1	5.2	4.3	3.5	3.8	3.8	6.1	0.3	3.5
4	5.7	5.1	7.8	4.0	3.6	2.2	1.6	3.1	5.3	3.2	4.7	6.3	4.6	5.2	5.3	4.1	3.6	3.3	5.3	4.5	3.7	3.1	2.9	3.5	7.8	1.6	4.2
5	3.5	3.4	3.7	4.2	5.0	1.9	4.0	3.6	3.6	3.1	1.3	3.2	4.6	4.9	6.1	5.0	4.7	4.9	4.3	3.6	3.3	2.6	2.1	2.0	6.1	1.3	3.7
6	1.8	1.5	0.6	2.1	2.6	2.6	2.1	2.6	2.6	4.0	2.3	1.8	4.5	6.4	4.8	4.2	4.1	3.9	2.8	4.4	10.0	9.4	8.5	7.9	10.0	0.6	4.1
7	6.1	6.4	7.0	7.0	7.0	7.7	8.5	10.3	11.1	8.2	6.7	6.6	7.1	6.1	5.6	4.3	5.4	5.9	7.1	8.0	9.6	8.6	9.3	6.5	11.1	4.3	7.3
8	4.5	1.2	3.5	4.0	4.8	4.8	5.1	4.5	3.2	2.1	2.2	4.0	4.7	4.9	4.6	4.6	4.9	4.8	4.5	3.9	3.7	2.8	1.4	3.0	5.1	1.2	3.8
9	2.2	1.5	2.5	2.2	1.4	3.0	3.3	5.7	8.4	9.2	7.3	5.6	6.9	4.4	4.6	6.0	8.8	7.3	7.7	8.5	7.0	6.6	6.4	6.0	9.2	1.4	5.5
10	6.1	5.5	4.8	1.9	1.6	2.8	4.1	4.0	3.5	3.4	3.7	3.9	4.0	4.3	4.5	5.2	5.5	6.5	5.6	5.7	4.4	4.7	5.9	5.9	6.5	1.6	4.5
11	3.2	2.8	3.5	4.9	4.8	3.2	5.4	5.0	5.3	5.7	6.0	6.5	6.3	6.0	4.9	5.1	5.3	4.6	4.2	2.9	1.5	1.9	3.6	2.8	6.5	1.5	4.4
12	3.8	4.1	3.3	4.7	5.3	5.0	4.5	4.6	3.8	3.1	1.3	2.2	1.7	2.6	2.0	2.2	4.5	5.1	1.0	1.4	3.0	1.7	4.2	3.3	5.3	1.0	3.3
13	2.1	3.4	2.3	3.2	5.0	3.5	3.0	2.4	2.3	2.4	2.7	2.0	3.3	5.7	3.8	3.0	3.6	2.6	2.6	2.3	1.6	1.5	2.7	1.7	5.7	1.5	2.9
14	1.9	2.6	1.8	1.8	1.2	1.5	4.0	2.3	1.2	0.5	1.6	2.6	1.6	1.6	0.9	1.4	0.9	2.1	2.7	1.6	1.6	2.4	1.7	2.1	4.0	0.5	1.8
15	1.5	1.5	2.4	2.7	6.4	7.9	9.1	9.7	9.5	8.7	8.8	8.6	7.9	6.9	3.9	1.1	1.8	1.8	1.9	1.1	1.4	7.3	5.9	4.7	9.7	1.1	5.1
16	6.0	6.2	5.5	5.1	5.0	3.8	3.9	5.1	3.6	5.1	4.7	4.6	6.8	6.9	6.8	6.9	6.2	6.0	7.6	6.1	7.5	4.3	5.2	4.0	7.6	3.6	5.5
17	4.6	4.5	4.9	4.4	3.4	1.3	1.8	2.6	6.1	5.4	5.0	6.9	9.4	6.7	5.3	5.4	6.7	7.6	8.7	7.8	8.5	6.4	6.1	3.6	9.4	1.3	5.5
18	4.2	3.6	2.2	1.7	1.7	1.4	2.3	2.4	1.5	3.9	3.8	4.0	4.7	3.4	4.6	3.3	2.9	3.0	3.5	2.9	2.3	1.8	4.1	3.3	4.7	1.4	3.0
19	2.2	2.3	2.4	2.0	2.6	1.5	2.2	4.3	4.9	7.7	8.0	8.9	8.1	8.5	9.5	8.7	7.0	6.6	7.3	8.3	9.2	10.4	10.3	10.2	10.4	1.5	6.4
20	10.8	11.9	11.3	10.7	12.1	11.4	12.0	11.4	11.4	10.6	11.6	11.0	11.2	9.1	7.4	7.9	7.7	7.3	7.7	7.3	7.4	8.0	8.8	8.1	12.1	7.3	9.8
21	8.4	8.8	9.6	9.4	8.5	8.0	7.9	8.1	6.5	6.3	6.5	7.6	6.3	3.7	2.7	2.4	2.5	2.8	3.7	4.3	3.3	3.7	2.9	4.0	9.6	2.4	5.7
22	2.7	2.6	5.4	4.9	4.4	3.4	2.0	1.1	2.8	2.6	1.3	0.9	3.1	3.0	2.9	3.2	4.3	4.1	3.1	1.4	3.2	6.0	8.4	9.0	9.0	0.9	3.6
23	9.8	10.3	10.5	10.8	11.4	11.8	12.6	12.3	12.2	10.3	11.4	5.4	2.8	2.6	3.8	4.1	2.4	1.1	1.5	2.1	2.1	3.4	4.4	3.7	12.6	1.1	6.8
24	3.4	3.3	3.9	4.8	7.5	8.9	8.8	9.2	10.1	9.3	8.7	9.2	8.1	8.1	10.7	10.2	9.0	8.5	9.5	10.1	9.4	7.7	7.4	7.7	10.7	3.3	8.1
25	5.1	2.2	3.7	3.4	3.8	4.6	3.7	3.4	3.2	4.2	2.1	1.3	1.9	3.2	5.9	6.4	4.9	5.3	5.5	4.9	5.3	3.6	2.4	3.9	6.4	1.3	3.9
26	2.4	2.5	1.3	1.5	1.9	1.4	1.8	1.2	1.8	1.7	1.2	1.0	2.7	3.7	4.9	5.2	5.6	6.1	5.8	4.3	4.2	4.5	3.6	1.9	6.1	1.0	3.0
27	1.5	1.3	0.9	0.6	2.3	3.1	3.2	2.3	5.3	5.2	5.1	5.4	4.2	5.4	6.5	5.6	6.4	5.4	6.9	5.6	6.9	7.5	8.2	7.4	8.2	0.6	4.7
28	6.7	6.3	6.3	6.0	7.1	8.0	7.2	5.9	5.8	6.5	6.0	5.5	6.2	7.3	8.0	8.6	9.3	7.6	8.2	9.1	9.5	9.9	9.8	9.8	9.9	5.5	7.5
29	10.6	9.5	8.7	9.5	9.9	9.1	10.0	9.8	10.0	9.4	8.0	6.5	7.7	8.3	8.1	8.2	8.2	8.2	8.5	10.8	9.4	8.9	10.5	11.6	11.6	6.5	9.1
30	11.7	9.9	10.7	11.6	12.0	10.8	11.0	10.7	8.8	7.7	4.7	2.3	2.6	4.8	5.6	4.4	5.1	5.6	6.3	7.3	6.4	11.3	7.4	8.4	12.0	2.3	7.8
31	11.1	12.5	14.5	12.4	12.5	9.7	7.4	5.7	7.3	8.5	9.4	6.8	7.0	8.2	8.7	6.2	5.6	6.5	8.3	8.3	5.8	7.3	6.2	6.7	14.5	5.6	8.4
Max.	**14.1**	**12.5**	**14.5**	**12.4**	**12.5**	**11.8**	**12.6**	**12.3**	**12.2**	**10.6**	**11.6**	**11.0**	**11.2**	**9.1**	**10.7**	**10.2**	**9.3**	**8.5**	**9.5**	**10.8**	**10.0**	**11.3**	**10.5**	**11.6**	**14.5**		
Min.	**0.3**	**1.2**	**0.6**	**0.5**	**1.2**	**1.3**	**1.6**	**1.1**	**1.2**	**0.5**	**1.2**	**0.9**	**1.6**	**1.6**	**0.9**	**1.1**	**0.9**	**1.1**	**1.0**	**1.1**	**1.4**	**1.5**	**1.2**	**1.1**		**0.3**	
Avg.	**5.3**	**5.0**	**5.2**	**5.1**	**5.6**	**5.2**	**5.5**	**5.4**	**5.5**	**5.4**	**5.1**	**5.0**	**5.4**	**5.4**	**5.4**	**5.1**	**5.2**	**5.1**	**5.4**	**5.2**	**5.3**	**5.4**	**5.6**	**5.3**			**5.3**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.2	7.9	7.3	7.3	7.9	7.5	7.9	5.7	5.3	5.1	5.4	6.4	5.6	5.7	5.3	3.8	4.3	4.3	6.5	12.2	11.4	8.4	7.8	7.4	12.2	3.8	6.8
2	7.1	5.7	8.0	7.8	9.6	9.3	14.9	15.4	13.3	10.9	13.7	12.7	11.4	9.2	5.3	4.1	4.5	7.2	8.5	9.8	9.8	8.2	7.6	5.7	15.4	4.1	9.2
3	6.4	6.5	4.8	5.2	6.4	5.9	4.9	4.9	4.7	4.2	4.8	6.5	5.4	4.8	5.5	6.3	6.2	5.6	1.5	2.1	2.7	2.8	2.3	1.7	6.5	1.5	4.7
4	3.0	2.2	2.4	1.4	0.8	1.2	2.5	1.7	1.9	1.7	2.4	3.4	3.0	4.5	4.9	4.6	4.7	3.8	2.7	2.5	1.9	2.4	3.0	1.6	4.9	0.8	2.7
5	2.1	1.4	1.5	2.2	1.1	2.3	2.2	0.8	1.2	1.3	1.4	2.7	3.4	3.8	5.2	5.3	4.0	3.6	2.3	2.3	2.5	1.4	1.1	2.9	5.3	0.8	2.4
6	2.0	1.6	2.3	3.5	6.5	7.4	5.6	8.1	9.6	8.1	6.8	6.4	8.0	7.8	6.3	6.8	6.9	6.4	6.2	7.9	9.8	9.7	9.4	8.2	9.8	1.6	6.7
7	7.9	7.5	7.7	6.0	6.2	5.8	5.5	5.4	6.9	6.8	12.6	15.1	13.5	11.2	7.8	2.9	1.9	2.4	5.2	3.4	2.0	1.3	1.0	1.5	15.1	1.0	6.2
8	3.9	1.7	3.0	2.1	0.9	1.6	2.0	1.6	1.4	2.4	6.8	12.4	8.9	9.2	11.2	11.5	14.7	15.2	6.8	6.7	6.6	6.4	4.4	4.6	15.2	0.9	6.1
9	5.0	7.3	5.6	3.9	4.7	6.0	4.6	3.7	4.6	5.1	4.0	5.0	6.2	8.9	15.9	12.6	9.8	8.9	9.4	8.5	7.3	6.9	6.9	6.2	15.9	3.7	7.0
10	3.0	0.9	1.2	1.3	1.4	1.0	1.8	3.5	3.2	2.3	2.0	1.2	0.9	1.3	1.6	2.8	4.6	5.1	4.0	5.3	5.3	5.6	5.7	5.5	5.7	0.9	2.9
11	6.7	6.4	6.8	9.5	10.4	9.0	9.3	6.4	8.0	5.5	4.8	0.4	0.0	0.4	0.0	3.0	8.2	7.9	7.6	7.4	9.6	9.1	9.2	10.7	10.7	0.0	6.5
12	9.4	9.1	15.5	16.6	14.6	15.4	16.7	12.2	6.2	6.6	4.3	3.7	3.6	3.6	3.8	4.6	3.8	4.7	5.6	4.5	3.7	5.8	7.1	7.9	16.7	3.6	7.9
13	12.2	15.8	17.1	17.1	14.8	14.0	18.8	21.7	22.6	22.6	22.2	22.6	21.7	20.5	19.4	11.1	9.5	8.7	5.4	4.9	5.3	5.9	5.0	5.7	22.6	4.9	14.4
14	5.2	5.5	5.8	5.4	4.0	4.3	3.3	3.3	2.2	3.2	2.0	2.3	5.1	3.2	2.1	2.9	2.9	2.5	1.4	2.1	2.5	2.1	1.5	1.4	5.8	1.4	3.2
15	1.2	1.9	4.3	6.2	7.2	7.2	7.8	7.9	6.9	7.9	11.7	8.4	11.0	10.5	11.5	11.2	9.9	7.0	4.1	3.6	1.8	1.7	2.8	2.7	11.7	1.2	6.5
16	3.2	3.0	2.7	3.5	1.7	3.9	8.5	7.3	6.8	7.0	7.7	9.2	8.2	6.3	6.8	8.9	12.6	13.9	14.8	13.1	13.0	11.3	13.0	12.6	14.8	1.7	8.3
17	12.7	11.6	10.6	13.3	12.9	11.3	12.3	8.5	7.1	8.8	7.1	4.8	1.6	8.6	9.8	11.1	12.8	9.7	8.0	14.4	20.5	12.0	9.3	6.4	20.5	1.6	10.2
18	6.9	7.3	7.8	6.9	7.8	9.8	9.8	7.2	7.6	4.0	4.1	4.9	7.0	7.2	6.9	12.8	10.8	6.3	5.9	9.9	17.2	18.2	16.4	15.5	18.2	4.0	9.1
19	15.0	7.7	6.8	6.2	4.6	2.8	1.5	2.6	3.8	5.1	4.5	5.0	5.4	4.5	6.3	8.0	9.0	8.6	7.2	6.0	7.4	8.3	7.0	8.6	15.0	1.5	6.3
20	9.9	10.9	11.6	12.4	12.2	12.9	11.5	11.9	12.4	12.8	14.3	15.9	14.0	14.5	12.7	11.0	9.5	9.9	9.4	6.6	5.7	5.1	8.4	10.5	15.9	5.1	11.1
21	7.3	8.8	10.9	11.3	7.8	9.6	12.3	11.3	12.4	10.0	8.5	9.0	8.7	7.0	7.5	8.1	8.2	9.9	11.4	10.6	7.8	9.4	8.2	8.5	12.4	7.0	9.4
22	10.0	9.7	10.0	9.8	9.2	8.2	8.3	8.6	8.7	9.8	8.4	7.3	5.7	5.8	4.5	4.3	3.2	1.8	1.9	0.9	2.5	2.3	1.7	1.7	10.0	0.9	6.0
23	1.2	2.7	1.7	1.6	1.6	1.3	0.9	2.2	3.0	1.6	0.8	2.3	1.0	0.4	0.5	2.8	2.3	2.9	3.7	1.9	1.0	0.7	1.4	1.3	3.7	0.4	1.7
24	1.0	1.8	1.5	1.6	1.1	1.0	1.1	1.7	1.6	2.6	2.3	1.7	1.5	1.7	2.3	3.2	3.5	2.5	1.8	1.9	3.0	2.9	2.6	2.2	3.5	1.0	2.0
25	2.2	3.3	2.2	2.2	2.5	2.4	2.1	2.8	3.3	2.3	3.5	1.8	2.7	3.1	2.4	1.8	2.3	2.6	1.6	2.3	2.2	2.3	1.7	2.1	3.5	1.6	2.4
26	2.2	1.8	2.2	2.6	1.9	2.0	1.9	2.5	2.1	2.3	1.9	0.9	1.4	1.3	4.3	4.6	4.5	3.1	1.3	0.5	2.1	4.3	4.4	5.7	5.7	0.5	2.6
27	7.1	7.6	7.9	8.0	10.0	9.4	8.2	7.2	6.0	5.2	5.4	5.9	5.5	6.6	7.0	4.7	5.7	5.9	6.5	8.2	8.5	7.7	9.3	11.1	11.1	4.7	7.3
28	10.4	10.8	9.5	7.2	8.2	7.3	7.8	6.9	6.8	6.7	7.3	8.3	6.1	4.2	6.2	6.9	7.4	5.9	6.4	3.0	1.2	0.9	0.8	0.8	10.8	0.8	6.1
29	1.1	1.6	2.7	3.1	2.4	2.5	2.1	2.2	2.5	2.4	2.2	2.5	2.4	4.0	2.3	2.0	1.8	3.6	4.0	3.1	1.9	2.2	1.9	2.2	4.0	1.1	2.4
30	2.3	2.2	3.4	4.9	6.6	7.4	7.4	7.0	8.6	8.0	7.3	8.8	9.0	8.5	9.1	8.6	10.1	10.3	8.9	8.4	8.2	6.8	6.9	6.4	10.3	2.2	7.3
Max.	**15.0**	**15.8**	**17.1**	**17.1**	**14.8**	**15.4**	**18.8**	**21.7**	**22.6**	**22.6**	**22.2**	**22.6**	**21.7**	**20.5**	**19.4**	**12.8**	**14.7**	**15.2**	**14.8**	**14.4**	**20.5**	**18.2**	**16.4**	**15.5**	**22.6**		
Min.	**1.0**	**0.9**	**1.2**	**1.3**	**0.8**	**1.0**	**0.9**	**0.8**	**1.2**	**1.3**	**0.8**	**0.4**	**0.0**	**0.4**	**0.0**	**1.8**	**1.8**	**1.8**	**1.3**	**0.5**	**1.0**	**0.7**	**0.8**	**0.8**		**0.0**	
Avg.	**5.8**	**5.7**	**6.2**	**6.3**	**6.2**	**6.3**	**6.8**	**6.4**	**6.4**	**6.1**	**6.4**	**6.6**	**6.3**	**6.3**	**6.5**	**6.4**	**6.7**	**6.3**	**5.7**	**5.8**	**6.1**	**5.7**	**5.6**	**5.7**			**6.2**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	5.2	4.7	4.3	3.1	2.9	2.0	1.7	2.5	2.4	2.3	1.7	0.8	4.4	6.1	5.2	9.0	2.6	3.1	2.7	3.2	2.8	2.1	1.8	1.1	9.0	0.8	3.2
2	1.7	2.0	1.2	3.1	3.2	3.5	4.2	3.4	3.6	3.0	3.8	4.6	4.6	5.2	6.6	7.3	8.7	9.8	10.7	11.3	13.9	15.2	18.3	18.7	18.7	1.2	7.0
3	16.6	15.8	13.0	11.8	13.7	12.3	10.9	9.0	8.7	8.8	9.7	11.9	13.3	13.4	12.5	9.7	10.5	11.6	11.7	11.4	10.7	9.8	10.0	9.6	16.6	8.7	11.5
4	8.8	8.1	6.7	6.6	7.0	7.1	8.0	7.9	7.4	6.5	6.8	7.1	6.8	7.1	6.7	7.2	7.5	7.2	7.4	7.5	9.9	13.1	14.1	14.2	14.2	6.5	8.2
5	15.9	15.3	14.2	14.0	15.0	14.0	13.1	11.7	9.8	9.4	10.8	11.3	10.6	6.8	3.9	3.3	4.8	3.6	4.3	4.6	3.6	4.9	4.8	3.9	15.9	3.3	8.9
6	3.8	4.3	4.1	4.8	3.6	4.7	4.8	7.7	8.9	8.4	8.4	7.5	7.5	8.2	9.2	10.3	11.2	10.5	10.3	12.0	12.3	11.3	9.6	8.7	12.3	3.6	8.0
7	7.5	9.7	11.5	12.2	14.3	12.9	12.6	15.9	17.2	16.8	16.3	13.5	15.3	15.7	17.7	17.0	17.3	16.7	17.7	18.3	18.2	16.1	16.0	16.6	18.3	7.5	15.1
8	15.8	11.2	13.5	14.4	12.0	16.2	14.6	15.1	10.8	10.6	13.1	10.6	9.7	9.4	9.0	7.5	8.0	6.4	6.2	5.4	4.0	2.6	2.2	2.7	16.2	2.2	9.6
9	3.1	3.2	3.8	3.8	4.6	6.7	6.6	5.0	4.0	4.1	5.1	4.6	5.8	5.0	6.7	7.5	6.8	6.0	5.6	6.3	6.6	6.0	5.0	5.6	7.5	3.1	5.3
10	4.0	3.7	2.0	2.6	2.1	4.5	10.5	6.3	7.8	5.9	5.1	4.0	3.9	2.0	4.8	2.6	1.0	1.0	1.2	1.8	1.6	1.6	1.7	3.5	10.5	1.0	3.5
11	7.3	8.2	10.2	11.4	12.8	12.4	14.7	16.5	16.6	17.4	17.2	18.5	13.3	6.6	3.0	3.1	10.2	14.6	17.3	18.0	18.6	19.1	19.5	19.1	19.5	3.0	13.6
12	17.2	17.4	18.3	18.8	19.6	19.2	18.6	17.9	17.7	18.4	18.5	18.5	17.8	16.8	17.2	18.3	17.5	16.3	17.5	18.0	17.1	16.0	16.3	16.9	19.6	16.0	17.7
13	11.9	12.4	10.9	13.7	12.7	11.3	10.5	10.1	7.0	2.1	3.9	2.1	1.6	1.6	2.9	2.7	2.9	2.3	2.3	2.7	1.8	3.2	3.5	2.5	13.7	1.6	5.8
14	4.3	1.1	1.0	1.2	2.1	1.5	1.5	0.5	0.7	0.7	0.7	0.3	0.5	0.5	1.3	1.3	0.8	1.3	2.1	1.7	1.5	2.8	2.9	1.9	4.3	0.3	1.4
15	2.4	4.3	4.0	4.7	3.3	2.8	2.3	2.5	3.2	2.4	3.8	3.7	4.6	4.7	6.4	7.4	7.5	7.5	8.7	9.3	8.9	8.5	9.5	9.5	9.5	2.3	5.5
16	7.6	8.2	8.5	9.1	10.7	10.7	10.4	10.4	9.4	10.3	10.6	10.5	9.1	10.3	10.7	11.1	11.6	11.4	11.3	12.7	12.8	11.9	11.5	12.3	12.8	7.6	10.5
17	12.6	13.1	14.0	13.6	13.5	14.3	12.4	11.9	9.4	8.7	9.7	5.8	3.6	3.0	2.0	1.5	2.1	2.7	2.6	3.4	4.4	4.5	3.3	2.9	14.3	1.5	7.3
18	4.3	3.9	3.1	3.7	3.3	3.6	3.3	3.6	4.0	4.1	3.8	4.7	3.9	3.4	7.9	7.1	5.1	4.5	4.1	2.5	2.3	1.7	2.6	2.0	7.9	1.7	3.9
19	1.1	3.8	3.8	4.4	4.4	5.1	4.1	5.5	6.1	5.8	6.7	6.9	8.0	8.8	8.0	5.4	7.8	8.8	9.1	10.2	11.2	11.7	11.8	11.5	11.8	1.1	7.1
20	11.4	11.7	12.0	11.6	11.3	11.7	11.8	12.5	11.5	11.9	10.2	11.1	11.8	10.1	10.3	10.5	9.2	8.7	8.7	11.0	8.8	9.0	9.8	9.0	12.5	8.7	10.7
21	9.8	10.9	12.2	11.2	11.0	11.8	9.7	10.5	11.7	11.5	12.1	11.8	10.9	10.3	10.7	10.8	10.3	9.7	9.6	9.9	10.3	11.2	9.1	8.7	12.2	8.7	10.6
22	11.1	16.7	18.0	15.9	17.7	16.1	14.8	21.2	19.3	17.1	19.8	18.6	15.4	15.0	17.9	15.8	14.9	14.1	12.1	9.7	9.2	8.0	4.4	3.1	21.2	3.1	14.4
23	3.8	2.7	2.5	1.5	4.8	4.3	6.6	7.1	6.8	10.2	10.4	12.5	13.8	13.6	17.9	17.8	19.5	21.2	20.9	20.4	20.3	20.5	19.2	19.1	21.2	1.5	12.4
24	19.6	19.7	16.6	15.8	16.2	16.4	15.4	14.6	19.1	21.7	22.5	19.5	16.5	15.9	14.8	17.1	15.3	10.4	8.1	4.7	3.2	3.1	3.8	2.6	22.5	2.6	13.8
25	2.4	1.9	2.1	3.4	2.6	1.8	2.6	2.6	2.6	1.8	2.6	1.4	1.4	0.9	0.6	1.9	1.3	1.2	1.9	1.5	2.6	3.3	2.7	2.4	3.4	0.6	2.1
26	3.0	2.1	2.6	1.1	0.8	2.3	2.2	4.5	4.1	4.1	4.1	4.0	3.8	6.0	8.1	8.8	10.4	12.9	13.0	12.1	12.4	12.5	13.1	14.9	14.9	0.8	6.8
27	15.4	15.7	14.0	13.6	13.7	13.8	13.7	14.4	14.6	14.2	15.1	14.5	13.7	14.4	13.6	13.8	13.5	14.2	14.1	12.8	12.8	11.9	10.6	10.2	15.7	10.2	13.7
28	8.6	8.8	7.2	5.9	3.5	3.1	3.1	2.8	2.2	2.9	2.4	3.3	3.1	2.1	0.9	1.4	4.3	5.0	5.4	5.0	5.0	3.5	4.1	3.7	8.8	0.9	4.0
29	1.6	3.4	3.6	3.4	3.5	3.5	3.1	2.9	1.7	2.4	1.7	1.8	1.9	1.5	1.3	0.4	1.1	1.5	2.5	2.5	0.4	1.1	1.3	1.8	3.6	0.4	2.1
30	1.4	1.9	2.4	2.1	1.6	3.0	1.1	1.2	2.8	2.2	1.3	2.2	2.2	1.3	1.7	1.7	1.7	0.7	1.4	1.9	1.2	1.5	3.1	3.0	3.1	0.7	1.9
31	2.7	2.3	2.8	2.5	3.0	2.6	2.5	2.7	2.6	2.7	2.8	2.1	2.3	2.4	2.1	1.6	1.9	3.9	4.6	4.1	2.6	2.6	2.9	2.9	4.6	1.6	2.7
Max.	**19.6**	**19.7**	**18.3**	**18.8**	**19.6**	**19.2**	**18.6**	**21.2**	**19.3**	**21.7**	**22.5**	**19.5**	**17.8**	**16.8**	**17.9**	**18.3**	**19.5**	**21.2**	**20.9**	**20.4**	**20.3**	**20.5**	**19.5**	**19.1**	**22.5**		
Min.	**1.1**	**1.1**	**1.0**	**1.1**	**0.8**	**1.5**	**1.1**	**0.5**	**0.7**	**0.7**	**0.7**	**0.3**	**0.5**	**0.5**	**0.6**	**0.4**	**0.8**	**0.7**	**1.2**	**1.5**	**0.4**	**1.1**	**1.3**	**1.1**		**0.3**	
Avg.	**7.8**	**8.0**	**7.9**	**7.9**	**8.1**	**8.2**	**8.1**	**8.4**	**8.2**	**8.0**	**8.4**	**8.1**	**7.8**	**7.4**	**7.8**	**7.8**	**8.0**	**8.0**	**8.2**	**8.2**	**8.1**	**8.1**	**8.0**	**7.9**			**8.0**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	3.4	2.8	2.7	3.2	3.8	3.1	3.1	3.7	3.8	3.5	3.8	6.9	6.9	9.9	9.6	9.7	8.3	8.7	10.1	10.2	8.2	9.5	9.8	10.3	10.3	2.7	6.5
2	11.7	10.3	9.8	15.5	16.2	15.1	15.6	14.1	14.6	13.7	10.2	16.2	15.2	15.6	15.8	15.1	15.3	14.6	16.6	16.5	18.3	18.1	18.4	18.7	18.7	9.8	15.1
3	17.5	17.7	16.8	15.2	15.2	15.2	14.3	15.6	17.2	16.4	16.4	15.6	14.4	15.1	16.1	16.5	16.4	15.9	16.3	16.7	16.0	16.8	15.0	14.6	17.7	14.3	16.0
4	14.4	14.1	13.2	14.3	12.5	11.7	12.5	12.7	12.5	13.3	12.6	12.6	12.6	12.9	12.4	12.0	11.7	11.9	11.5	11.6	11.5	12.3	12.4	12.9	14.4	11.5	12.6
5	12.7	13.7	13.7	12.4	12.8	11.4	12.0	10.9	10.9	10.1	7.1	4.9	3.7	2.4	3.1	3.8	4.3	3.9	3.8	3.6	3.9	2.2	3.1	4.0	13.7	2.2	7.3
6	5.6	4.1	4.8	4.4	5.1	3.2	4.3	3.7	5.2	4.0	4.7	5.7	5.8	3.0	2.3	2.2	4.7	7.3	8.5	10.3	11.4	13.0	14.7	16.2	16.2	2.2	6.4
7	17.0	17.1	17.3	17.0	16.3	15.6	17.5	15.9	15.4	14.1	13.9	14.2	12.0	11.7	11.0	11.5	9.6	10.2	9.8	10.7	10.3	9.1	8.0	7.7	17.5	7.7	13.0
8	8.8	7.3	7.0	8.2	6.4	5.8	5.6	3.3	2.7	2.5	1.3	1.0	2.8	1.7	3.4	3.2	3.7	5.0	4.6	5.5	5.2	5.4	6.4	7.3	8.8	1.0	4.8
9	8.2	7.7	7.7	6.6	6.8	7.8	6.6	6.8	7.0	8.1	7.9	6.9	6.8	6.5	7.7	6.8	6.4	6.8	6.8	6.0	5.3	4.6	4.7	4.2	8.2	4.2	6.7
10	5.3	7.0	7.0	5.2	5.7	5.1	3.7	3.6	3.4	3.1	3.6	4.7	4.5	10.1	19.4	14.7	9.7	14.5	17.4	16.6	14.2	11.2	11.0	12.7	19.4	3.1	8.9
11	7.6	9.6	6.0	9.4	6.7	6.3	6.6	4.2	2.6	2.7	1.9	1.4	1.3	2.4	3.5	2.8	3.1	5.3	5.7	7.9	11.7	13.1	14.0	10.2	14.0	1.3	6.1
12	9.4	10.2	11.5	12.9	12.0	12.9	13.4	15.7	14.8	14.7	14.8	14.0	12.7	11.0	10.4	10.6	9.4	9.1	6.4	5.4	4.9	4.2	1.5	4.2	15.7	1.5	10.3
13	3.3	2.6	2.2	2.6	3.0	3.0	2.5	1.4	1.3	1.4	2.0	2.4	3.0	3.2	3.0	2.9	2.7	1.6	1.7	1.1	1.8	1.0	1.5	1.4	3.3	1.0	2.2
14	1.2	2.4	2.0	2.4	1.6	2.5	2.6	2.5	2.7	3.0	2.6	2.6	1.4	0.8	0.7	4.0	5.5	5.9	6.1	6.3	6.3	6.6	5.7	5.6	6.6	0.7	3.5
15	4.3	3.4	2.2	7.4	7.9	5.5	3.7	5.8	6.0	3.1	1.6	3.1	2.3	2.0	1.7	1.6	1.6	2.1	1.5	2.0	4.2	5.3	5.0	3.4	7.9	1.5	3.6
16	3.8	3.1	2.5	2.7	2.9	3.0	4.6	2.2	2.1	0.9	1.3	3.3	3.4	4.3	4.2	3.5	3.0	2.6	2.4	2.3	2.8	2.3	2.0	2.4	4.6	0.9	2.8
17	2.0	1.5	2.5	3.2	3.5	2.9	2.8	3.5	3.0	3.5	3.4	3.6	2.9	3.3	4.6	5.0	5.2	4.1	5.3	3.8	2.3	3.1	5.1	4.7	5.3	1.5	3.5
18	4.5	4.5	5.2	5.4	5.9	6.5	8.0	8.2	6.5	6.8	6.1	5.5	4.2	5.1	6.3	5.7	5.6	6.0	3.7	6.6	6.4	6.4	5.0	6.2	8.2	3.7	5.9
19	5.1	7.2	6.1	8.8	7.3	8.7	9.9	9.8	11.5	11.3	12.0	12.3	12.4	12.8	13.5	13.3	12.1	11.7	11.4	11.7	12.8	11.7	12.1	11.3	13.5	5.1	10.7
20	11.2	12.1	13.5	13.4	13.2	12.7	11.9	12.8	14.8	17.1	18.1	17.0	16.5	16.3	17.4	17.2	17.4	17.4	18.4	18.2	17.9	17.5	17.8	16.4	18.4	11.2	15.7
21	16.6	17.9	17.2	17.3	19.2	17.8	17.6	17.9	18.5	17.5	16.4	17.0	15.6	14.5	15.5	15.2	14.1	13.9	9.7	9.8	7.3	6.0	7.4	4.6	19.2	4.6	14.4
22	6.2	5.1	3.0	4.2	4.4	4.2	4.3	6.2	7.5	5.9	3.6	5.3	3.2	7.0	5.1	6.1	5.1	5.0	6.1	5.8	8.8	7.9	6.0	4.7	8.8	3.0	5.4
23	5.2	4.3	2.4	2.9	2.6	2.2	3.5	2.8	3.5	2.9	2.4	3.0	1.5	2.0	1.5	1.3	1.6	2.0	2.2	3.8	3.6	6.3	7.0	5.9	7.0	1.3	3.2
24	6.4	7.3	5.9	5.5	5.9	7.2	6.4	6.2	5.9	4.7	4.8	4.5	4.6	4.7	7.1	5.5	7.7	3.7	3.1	2.7	2.6	2.8	2.3	2.4	7.7	2.3	5.0
25	10.4	10.9	11.8	13.4	13.7	12.9	12.8	12.7	13.5	11.8	11.9	12.3	12.9	13.6	15.2	16.8	20.9	20.7	22.2	24.5	23.8	18.0	14.1	18.0	24.5	10.4	15.4
26	17.5	18.9	22.0	22.2	21.6	20.1	18.8	18.6	17.3	15.5	15.1	14.8	14.6	14.1	12.5	13.0	12.9	12.9	12.9	12.8	12.7	12.2	10.8	10.9	22.2	10.8	15.6
27	9.2	7.7	8.7	7.1	7.0	4.2	5.7	4.0	6.2	7.0	7.6	5.5	5.3	5.4	4.8	6.9	6.4	8.6	9.3	7.8	6.8	4.9	3.3	3.0	9.3	3.0	6.4
28	3.2	3.7	4.5	2.7	3.4	3.5	3.2	3.1	4.0	2.1	3.1	3.0	4.5	5.3	2.9	4.0	7.6	10.0	11.7	12.9	12.4	13.9	15.4	14.2	15.4	2.1	6.4
29	14.6	16.4	16.2	16.1	17.3	17.4	17.5	20.3	21.9	22.3	22.9	23.2	23.4	24.0	24.1	23.0	23.9	23.8	23.7	24.1	24.1	23.7	21.9	22.6	24.1	14.6	21.2
30	21.4	23.7	24.6	25.0	23.9	25.0	24.4	22.5	20.9	21.5	20.8	21.2	17.9	19.7	20.6	17.2	11.4	13.4	15.6	13.7	13.6	11.7	14.6	11.5	25.0	11.4	19.0
Max.	**21.4**	**23.7**	**24.6**	**25.0**	**23.9**	**25.0**	**24.4**	**22.5**	**21.9**	**22.3**	**22.9**	**23.2**	**23.4**	**24.0**	**24.1**	**23.0**	**23.9**	**23.8**	**23.7**	**24.5**	**24.1**	**23.7**	**21.9**	**22.6**	**25.0**		
Min.	**1.2**	**1.5**	**2.0**	**2.4**	**1.6**	**2.2**	**2.5**	**1.4**	**1.3**	**0.9**	**1.3**	**1.0**	**1.3**	**0.8**	**0.7**	**1.3**	**1.6**	**1.6**	**1.5**	**1.1**	**1.8**	**1.0**	**1.5**	**1.4**		**0.7**	
Avg.	**8.9**	**9.1**	**9.0**	**9.5**	**9.5**	**9.1**	**9.2**	**9.0**	**9.2**	**8.8**	**8.5**	**8.8**	**8.3**	**8.7**	**9.2**	**9.0**	**8.9**	**9.3**	**9.5**	**9.7**	**9.7**	**9.4**	**9.2**	**9.1**			**9.1**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Speed (RMYoung) (m/s)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	10.3	10.9	10.9	9.6	10.3	8.9	10.9	8.0	3.5	5.0	4.3	3.6	2.3	1.5	2.2	1.3	1.3	1.4	2.0	1.4	1.3	1.2	1.9	1.3	10.9	1.2	4.8
2	1.1	2.0	5.1	4.7	1.1	4.7	9.4	6.9	9.3	12.0	10.7	7.3	4.5	5.7	5.7	5.0	4.6	4.8	4.3	4.9	5.5	4.5	4.3	3.5	12.0	1.1	5.5
3	4.7	5.7	5.4	6.1	5.3	7.0	6.5	5.5	5.6	5.7	5.7	8.0	6.8	8.2	7.3	7.8	7.3	6.7	6.9	6.6	5.9	6.2	5.7	4.0	8.2	4.0	6.3
4	3.5	2.9	3.4	4.2	3.5	5.6	8.1	6.9	2.9	3.7	6.2	5.5	5.1	3.7	3.9	3.1	5.0	7.0	9.0	4.4	4.6	4.4	4.2	6.3	9.0	2.9	4.9
5	5.6	5.2	2.7	3.1	2.3	4.5	2.2	1.6	1.6	4.4	7.6	5.8	2.2	2.4	2.7	2.6	3.3	4.3	3.4	4.0	4.4	4.3	4.2	4.7	7.6	1.6	3.7
6	3.1	4.3	3.0	2.0	1.9	1.9	2.6	1.9	0.9	0.9	3.4	0.9	1.1	1.8	1.9	2.4	2.5	1.2	1.5	2.3	2.4	2.7	2.8	2.9	4.3	0.9	2.2
7	2.6	2.8	2.6	4.4	6.9	7.8	7.5	8.5	8.4	9.1	8.4	9.7	8.4	7.1	8.3	5.4	3.8	3.1	0.7	1.0	1.6	4.6	5.1	8.0	9.7	0.7	5.7
8	4.9	4.8	5.0	8.3	8.0	8.2	8.8	7.6	7.2	6.5	9.0	6.9	8.5	9.0	7.7	9.0	9.9	6.8	7.4	5.2	4.8	5.2	6.0	4.6	9.9	4.6	7.0
9	3.9	2.3	3.3	3.5	2.2	1.8	2.6	2.6	3.5	3.9	3.1	3.8	4.5	5.4	6.6	6.1	7.4	8.2	8.5	9.8	9.4	10.4	10.6	7.4	10.6	1.8	5.4
10	6.4	6.4	6.7	10.9	10.4	10.9	15.0	15.1	13.8	14.4	16.0	14.7	14.4	13.1	8.7	11.7	11.0	10.7	11.4	10.3	12.1	12.5	11.9	12.9	16.0	6.4	11.7
11	12.0	10.3	12.0	11.6	11.7	9.7	7.9	6.3	9.0	9.2	8.3	7.6	9.0	10.3	8.0	8.6	9.8	9.3	8.9	10.1	9.9	10.1	13.6	14.2	14.2	6.3	9.9
12	8.5	11.6	12.5	9.5	11.1	11.7	11.9	8.6	6.4	6.7	3.3	2.4	6.2	7.6	4.9	2.0	1.4	2.2	2.9	1.8	2.4	5.9	5.1	4.6	12.5	1.4	6.3
13	7.4	3.9	4.1	6.8	2.4	2.6	2.8	2.1	4.2	2.3	2.2	7.5	3.8	2.4	5.3	3.0	2.8	5.2	1.3	2.0	2.9	2.9	2.2	0.5	7.5	0.5	3.4
14	1.9	2.6	2.9	2.0	1.2	1.2	2.1	3.7	2.2	2.9	1.9	2.7	2.9	2.2	3.2	3.1	2.0	0.9	1.3	4.1	4.6	5.0	7.6	8.1	8.1	0.9	3.0
15	7.3	7.4	8.1	6.5	7.8	8.8	6.4	6.8	5.8	3.9	3.5	3.2	4.1	2.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	3.5
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	7.0	10.3	9.0	9.5	4.4	10.3	0.0	1.7
17	3.3	4.8	10.7	10.5	6.1	5.1	6.6	7.0	8.0	6.2	7.2	7.5	7.1	6.0	7.4	7.6	8.0	7.9	7.8	9.5	5.8	4.6	3.7	2.1	10.7	2.1	6.7
18	2.0	1.7	1.5	5.9	8.7	8.4	7.5	6.8	6.4	7.0	6.6	6.2	6.9	7.3	7.0	7.0	7.1	6.8	8.3	7.3	5.8	7.9	8.2	5.7	8.7	1.5	6.4
19	6.4	5.7	6.9	7.9	7.2	6.5	7.0	6.6	4.8	5.3	5.0	4.3	4.2	5.1	5.6	5.6	6.2	5.2	6.1	6.3	7.0	6.3	6.2	7.7	7.9	4.2	6.0
20	6.3	5.4	6.0	6.7	6.1	5.0	3.8	3.1	3.3	3.7	4.9	2.0	1.6	2.9	3.5	3.1	3.0	2.1	2.0	2.0	2.1	1.4	0.7	3.3	6.7	0.7	3.5
21	3.7	2.3	1.7	2.2	1.4	0.9	2.0	1.1	1.1	1.0	0.7	0.6	0.9	0.9	1.1	2.0	2.5	2.6	1.5	1.8	1.3	1.1	1.2	1.4	3.7	0.6	1.5
22	1.8	1.5	1.7	0.5	1.5	0.6	1.1	2.4	5.1	2.1	1.0	1.1	1.5	1.1	2.2	1.8	3.8	3.4	3.6	4.8	4.1	6.2	5.2	3.7	6.2	0.5	2.6
23	1.3	0.4	2.0	2.1	1.7	1.9	1.9	1.5	1.3	1.8	4.7	17.7	16.1	21.6	21.9	18.8	17.5	16.9	17.8	16.9	17.6	17.2	16.0	14.6	21.9	0.4	10.5
24	15.0	17.0	18.6	17.8	15.9	15.8	18.7	18.3	18.7	20.5	17.8	13.5	12.8	7.5	10.8	10.0	7.2	8.6	7.2	10.7	12.2	6.7	2.8	1.6	20.5	1.6	12.7
25	0.9	4.6	3.7	2.6	2.5	1.9	2.3	3.1	2.6	2.8	1.8	2.4	5.2	3.7	3.2	2.1	0.9	2.5	1.7	4.8	14.3	14.4	16.6	20.0	20.0	0.9	5.0
26	17.0	18.6	21.4	19.7	19.2	20.8	21.3	20.9	19.7	17.6	18.9	22.5	22.7	21.3	26.1	19.5	20.9	21.6	21.9	17.8	16.8	19.6	21.7	17.5	26.1	16.8	20.2
27	16.4	16.5	15.7	16.0	16.9	17.9	19.3	19.1	18.9	16.8	17.7	15.7	15.8	15.4	15.3	15.7	15.1	15.7	15.2	14.0	15.3	15.3	14.8	15.0	19.3	14.0	16.2
28	15.4	16.2	15.9	16.6	16.8	16.8	16.9	17.5	16.0	14.7	14.9	15.8	15.1	14.9	14.8	14.6	14.6	13.9	14.3	12.8	13.0	12.8	12.7	12.5	17.5	12.5	15.0
29	10.8	11.3	11.8	12.6	13.4	12.8	11.5	11.2	12.6	12.4	12.6	10.8	10.5	11.2	10.2	7.7	9.0	5.8	4.5	5.2	4.7	6.5	5.6	6.5	13.4	4.5	9.6
30	7.2	6.4	3.4	7.1	8.2	10.8	9.1	8.0	8.0	12.9	12.5	13.1	12.5	13.9	13.8	14.6	15.8	15.5	16.5	14.5	14.3	16.2	16.6	16.3	16.6	3.4	12.0
31	18.3	18.3	17.6	19.2	19.6	18.9	20.0	19.1	18.4	18.7	16.6	18.5	17.9	17.5	16.9	16.9	16.5	16.0	15.0	15.4	15.6	17.1	15.4	16.4	20.0	15.0	17.5
Max.	**18.3**	**18.6**	**21.4**	**19.7**	**19.6**	**20.8**	**21.3**	**20.9**	**19.7**	**20.5**	**18.9**	**22.5**	**22.7**	**21.6**	**26.1**	**19.5**	**20.9**	**21.6**	**21.9**	**17.8**	**17.6**	**19.6**	**21.7**	**20.0**	**26.1**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**6.7**	**6.9**	**7.3**	**7.8**	**7.5**	**7.7**	**8.2**	**7.7**	**7.4**	**7.6**	**7.6**	**7.8**	**7.6**	**7.5**	**7.7**	**7.0**	**7.1**	**7.0**	**6.9**	**7.1**	**7.5**	**7.8**	**7.8**	**7.5**			**7.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	65.4	104.3	79.8	83.6	63.5	86.6	80.2	356.0	282.6	246.9	311.5	279.8	318.5	292.3	302.6	309.9	315.3	314.9	315.6	309.2	311.6	312.5	306.2	306.4
2	306.9	310.7	310.6	313.9	309.9	308.7	308.8	311.8	311.9	309.1	310.0	315.5	313.0	317.1	316.5	316.2	319.0	316.9	317.6	317.1	315.9	316.4	314.3	314.6
3	314.2	309.0	307.2	307.6	305.3	307.9	293.1	300.4	311.0	306.4	311.5	312.8	313.3	310.2	311.4	310.8	307.5	305.7	305.3	307.6	313.0	314.2	315.2	315.2
4	315.8	316.6	316.8	316.7	315.9	315.2	315.8	316.2	315.7	315.7	314.2	313.8	314.4	313.3	313.6	312.5	314.5	313.5	311.3	306.8	306.3	302.6	304.9	301.4
5	301.2	305.2	301.4	304.0	305.3	303.7	304.1	302.9	306.9	301.4	296.4	292.9	293.7	292.4	294.6	294.6	296.3	297.5	297.7	294.7	294.6	294.4	294.1	291.3
6	289.4	299.8	308.2	300.0	297.9	293.8	290.9	298.4	294.1	294.4	295.1	296.2	292.8	295.1	295.6	291.6	292.5	292.6	293.5	297.5	296.4	295.6	295.5	295.6
7	297.7	296.6	295.8	305.1	307.0	309.0	312.1	310.6	311.2	313.4	313.4	314.8	313.2	315.1	316.4	313.9	315.1	314.7	312.6	315.4	311.0	311.9	313.6	313.5
8	312.1	307.8	310.2	312.6	311.0	314.7	314.7	314.9	315.5	315.1	314.6	314.0	314.2	314.4	314.0	315.0	316.1	314.0	315.5	315.2	316.8	315.9	314.4	312.2
9	311.3	313.9	315.4	315.8	313.8	315.5	316.6	314.7	312.7	314.0	313.2	315.2	318.3	318.5	320.1	319.7	323.5	325.1	322.0	323.2	320.4	317.0	320.3	321.8
10	321.1	319.7	322.1	319.6	320.9	316.4	318.8	314.4	318.1	315.8	317.7	316.5	316.2	311.7	308.4	312.2	309.1	314.5	308.6	308.7	307.0	315.5	320.4	315.4
11	314.1	311.1	312.6	312.4	307.4	311.8	311.1	316.9	312.6	311.6	308.2	310.1	309.7	307.6	304.8	305.7	312.8	316.8	315.1	315.1	315.0	312.7	312.0	310.6
12	311.2	310.7	310.2	310.8	312.9	314.0	311.1	311.1	314.1	315.2	314.3	312.7	312.8	313.0	310.6	311.9	314.0	315.1	313.9	315.7	318.0	314.9	314.9	317.8
13	317.5	314.9	315.6	311.1	308.3	310.6	311.7	311.4	311.4	307.3	313.3	314.9	314.7	316.9	318.2	320.3	319.1	320.0	324.3	319.4	322.6	318.0	314.3	315.5
14	313.3	311.0	313.8	313.3	313.3	312.4	326.2	326.2	324.1	324.1	331.2	96.2	84.6	99.2	142.2	82.9	273.9	142.7	217.6	100.1	103.5	104.9	90.5	86.4
15	80.2	83.8	90.7	87.8	85.6	99.7	85.0	97.9	128.6	102.6	98.3	95.7	90.8	105.8	95.4	110.7	101.4	99.4	80.3	102.8	15.6	128.1	34.8	326.6
16	335.3	318.3	316.5	315.3	302.5	292.6	325.6	330.0	327.9	325.4	322.8	326.6	335.3	323.1	317.5	321.6	330.7	311.9	322.0	317.4	314.7	335.8	340.7	323.3
17	305.4	195.5	119.1	96.6	113.6	133.1	133.3	96.8	75.1	73.2	82.8	72.2	68.2	55.3	56.7	32.2	25.7	43.9	61.3	346.7	2.6	333.7	199.7	20.9
18	280.7	331.2	124.3	140.1	71.5	61.3	52.7	331.9	99.3	4.2	330.9	330.0	58.0	237.8	249.7	242.9	117.6	330.5	311.9	338.0	84.8	99.6	100.6	119.0
19	99.0	109.2	114.2	121.9	119.3	127.7	124.0	113.6	97.9	118.7	128.6	119.8	121.2	113.0	97.3	97.2	91.8	88.2	88.7	98.7	85.9	75.2	61.4	85.0
20	80.5	83.8	78.8	86.3	79.7	89.8	89.5	88.7	87.6	87.6	90.5	86.3	84.2	85.7	83.0	86.8	90.4	81.6	334.7	326.2	328.9	327.2	329.2	135.7
21	113.9	110.9	116.3	152.4	134.4	145.2	110.0	153.0	67.6	128.2	122.3	110.5	80.8	89.0	89.0	83.5	87.6	76.1	88.7	87.8	89.4	94.7	93.1	94.9
22	86.9	100.2	80.5	72.6	140.1	153.3	116.5	141.8	143.0	79.9	41.8	318.0	326.5	316.0	306.6	305.7	305.8	319.6	324.8	322.3	322.2	326.0	321.8	338.5
23	323.4	305.1	302.6	304.0	298.2	295.2	290.1	292.6	0.0	0.0	289.4	284.5	287.6	286.3	283.2	277.4	289.0	305.3	300.7	305.6	322.5	319.2	324.2	318.8
24	314.7	312.5	313.1	312.0	312.0	309.3	329.0	316.6	330.3	88.5	89.2	92.9	88.0	102.6	104.2	101.9	110.3	120.8	264.8	32.9	112.9	100.8	100.5	133.7
25	95.5	90.5	206.8	218.1	306.7	318.0	332.1	332.5	339.0	322.2	320.0	319.8	315.3	300.8	295.7	290.5	290.6	290.9	304.1	302.5	301.3	290.5	294.4	297.6
26	308.6	308.6	308.0	306.0	317.4	313.5	313.9	306.5	303.9	303.8	308.5	308.2	305.9	312.5	315.5	313.3	309.7	324.3	328.5	328.7	334.4	328.1	116.3	92.0
27	88.5	87.6	109.7	117.2	130.0	112.9	91.5	53.5	70.8	67.1	75.5	64.2	78.5	86.1	84.0	70.1	73.9	69.5	77.3	0.0	0.0	74.0	73.6	66.5
28	75.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.6	0.0	87.9	0.0	108.0	113.9	111.9	125.8	133.5	137.1	139.4	179.3	256.3	0.0	325.0	336.5
29	325.1	331.6	328.4	335.1	332.2	322.2	330.8	325.3	321.2	321.4	321.1	321.3	319.1	322.3	320.7	320.2	40.1	83.9	277.7	170.3	204.9	152.0	85.4	98.3
30	232.6	298.7	296.7	314.8	322.2	320.3	316.8	312.4	317.8	70.6	341.6	0.0	308.8	312.0	316.0	316.3	314.6	313.5	318.4	319.3	320.8	312.4	311.8	315.6
31	311.6	315.8	312.7	312.0	311.6	314.9	312.1	313.2	313.4	308.1	312.9	311.7	319.2	314.2	311.1	314.0	317.5	316.7	324.8	324.9	324.3	314.2	321.3	307.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	268.0	301.7	354.3	330.2	323.6	325.1	327.3	325.7	328.3	320.4	326.3	330.1	343.4	315.1	301.2	269.9	207.9	121.8	335.4	336.2	333.9	330.2	335.9	329.7
2	328.2	325.5	321.1	325.2	324.3	316.8	334.1	322.5	295.5	309.9	306.5	306.3	309.7	310.7	311.2	316.6	318.8	321.1	320.8	329.6	320.8	322.6	319.3	313.9
3	322.8	317.4	316.1	313.2	315.4	313.4	315.4	313.2	313.6	312.2	312.6	313.1	315.3	310.0	312.5	310.3	311.8	306.1	299.1	299.2	296.0	309.0	310.4	312.1
4	318.0	312.2	314.5	312.0	319.1	314.5	300.5	327.9	328.8	331.5	325.7	325.3	331.9	322.2	313.7	309.2	304.7	312.3	309.2	307.4	312.0	315.0	314.7	317.1
5	314.6	310.4	312.6	313.6	313.7	312.4	312.5	313.2	316.3	313.7	311.7	310.7	313.8	314.2	314.4	314.3	309.9	307.1	307.1	288.4	306.5	312.5	307.7	307.9
6	315.3	317.9	317.7	327.4	328.9	325.2	321.7	319.0	320.6	315.7	313.3	314.9	320.9	312.3	316.0	314.9	319.7	317.4	320.4	326.7	320.1	315.0	316.2	316.8
7	316.2	315.2	317.2	314.6	318.3	312.9	312.9	310.5	310.4	310.3	305.3	307.5	312.7	314.8	313.2	316.5	310.9	322.7	312.4	314.8	315.9	317.7	320.2	323.1
8	326.4	335.7	326.0	330.2	333.6	313.4	340.0	73.2	64.4	70.7	67.5	75.4	64.8	21.1	28.8	62.4	65.3	46.5	66.6	53.6	47.8	17.6	94.4	94.9
9	9.6	11.6	57.0	64.9	69.6	77.7	87.6	88.5	88.3	86.1	86.3	90.2	94.3	84.2	80.5	111.5	322.3	317.2	318.2	307.6	302.9	314.2	319.4	319.2
10	301.8	285.1	288.0	303.7	317.7	305.2	313.2	317.3	299.9	276.6	303.1	299.5	294.1	289.8	303.9	294.1	305.3	290.1	310.2	315.6	311.3	315.4	321.5	324.1
11	298.1	302.3	336.8	327.7	358.3	314.0	306.4	304.9	333.2	316.5	305.1	308.7	302.3	311.5	314.6	322.1	317.5	312.0	321.5	320.4	322.2	315.6	317.4	314.7
12	314.4	314.3	315.5	314.3	316.0	316.4	317.4	325.0	326.4	321.0	316.4	316.1	316.5	317.5	313.6	312.0	314.5	312.3	311.0	304.4	314.2	330.5	334.7	338.3
13	99.0	114.5	113.5	102.6	61.9	55.2	62.7	55.7	49.7	40.3	36.3	21.3	59.0	37.1	32.3	57.5	56.8	51.3	68.2	67.4	41.5	55.8	53.9	52.3
14	67.9	64.9	65.5	64.2	67.1	56.0	58.4	61.2	49.5	44.2	325.9	317.8	321.1	322.8	325.8	324.8	322.8	321.1	317.1	306.1	293.5	299.1	305.6	300.5
15	294.7	293.7	292.9	291.0	291.9	297.8	310.6	317.2	312.8	316.0	316.4	312.8	319.4	321.8	327.0	314.5	316.3	316.5	315.7	307.1	317.0	310.6	81.7	82.4
16	66.4	61.5	53.5	54.2	27.4	30.9	51.1	58.8	84.6	71.3	60.0	47.4	70.1	80.4	78.8	86.2	148.2	207.4	114.3	137.3	126.6	0.2	96.4	112.6
17	117.3	110.5	131.4	308.3	118.0	104.2	77.2	63.6	73.5	89.2	81.4	79.2	57.1	69.2	61.0	9.3	38.2	75.0	86.3	93.4	111.6	97.1	91.5	100.0
18	91.8	94.1	99.7	100.0	99.1	99.7	99.1	97.8	94.0	91.4	92.1	97.2	106.6	97.6	100.0	90.7	92.8	96.1	97.3	97.9	106.3	86.1	74.0	96.6
19	119.6	116.9	83.1	110.7	126.0	87.1	86.8	87.5	75.2	75.0	74.7	68.2	66.9	80.1	68.4	55.9	60.9	59.1	65.7	71.6	63.4	68.6	59.0	81.0
20	85.1	86.6	91.8	96.6	97.0	93.7	93.9	100.3	99.5	99.9	77.9	85.3	82.9	92.7	69.4	61.3	68.2	65.2	71.6	87.7	76.0	76.6	62.6	291.2
21	75.4	80.1	62.7	87.7	86.7	136.4	107.1	197.8	81.6	79.1	80.0	67.5	36.0	59.4	64.4	71.6	83.8	78.2	80.1	81.7	71.6	73.5	71.7	70.5
22	91.6	82.9	75.4	68.7	57.5	66.9	358.2	33.0	29.4	47.8	68.7	77.0	91.2	93.6	97.4	98.7	98.0	95.9	101.0	96.4	86.6	100.6	98.5	118.2
23	117.1	101.2	103.0	81.9	329.9	324.4	327.2	275.0	317.0	267.0	254.4	305.0	314.8	309.8	310.1	298.9	320.0	326.2	294.4	313.3	305.4	304.1	316.4	315.1
24	310.6	298.7	313.9	310.9	310.6	309.1	311.7	313.8	311.7	313.1	311.4	313.0	314.0	317.1	318.5	316.5	317.2	315.8	315.1	314.7	314.1	313.5	311.6	301.7
25	300.8	306.1	306.1	306.6	307.8	301.2	295.8	297.8	298.4	301.9	305.7	307.7	307.5	297.3	86.8	67.3	71.6	57.4	55.4	37.6	31.8	25.8	34.4	33.4
26	45.6	44.0	40.4	1.2	54.9	48.0	63.9	63.5	276.0	277.8	226.7	136.0	200.9	300.1	212.2	191.8	330.8	316.4	276.7	278.7	306.8	310.5	320.4	314.8
27	314.9	320.2	314.0	312.9	311.7	319.5	310.2	318.5	317.0	302.3	318.0	273.3	324.9	335.2	341.1	92.2	126.9	160.2	290.1	209.1	261.1	37.1	60.0	9.9
28	344.7	10.2	26.8	40.7	47.5	80.2	87.5	90.1	93.7	81.7	235.2	181.1	101.1	102.6	111.2	115.7	116.2	252.3	268.0	316.6	314.2	315.4	317.1	318.7
29	319.6	323.1	321.6	326.4	317.6	324.0	310.7	327.9	312.2	307.7	307.3	311.6	314.6	314.3	316.1	318.8	312.1	309.1	314.2	313.6	314.3	313.7	314.0	312.7

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	310.9	315.0	315.5	316.1	316.6	314.4	315.0	312.1	305.1	300.4	283.0	53.9	37.2	239.9	309.9	2.9	264.2	25.3	20.3	13.9	26.8	51.0	51.9	43.5
2	3.8	298.3	38.5	46.4	32.9	30.6	36.1	99.8	104.1	110.2	117.2	340.1	286.4	84.3	79.5	83.1	82.9	278.6	272.6	306.5	296.4	304.6	209.7	140.7
3	130.6	120.4	121.5	123.4	115.0	107.9	84.8	70.8	89.6	90.7	89.8	94.6	94.9	94.2	87.0	84.1	81.1	76.7	87.1	95.9	92.4	91.3	93.4	92.6
4	95.1	95.0	91.6	92.6	97.9	97.8	99.3	98.1	98.1	98.0	101.3	100.6	94.7	85.7	85.9	82.7	85.7	78.0	85.4	90.0	95.4	94.3	74.8	77.0
5	59.2	51.8	55.5	67.2	61.5	71.0	57.3	50.6	49.5	49.2	50.7	61.7	64.4	60.7	64.7	72.8	78.8	84.4	96.5	91.8	95.9	92.6	94.7	96.0
6	89.8	90.3	92.7	92.2	91.6	89.3	92.0	90.9	90.5	90.6	96.0	127.7	109.8	85.0	96.4	123.0	76.3	70.2	78.2	50.9	82.6	264.8	147.2	111.2
7	263.7	276.3	317.2	161.4	116.2	280.8	317.4	314.1	308.8	316.4	323.1	323.7	317.0	303.3	313.2	321.4	321.9	323.0	324.6	319.7	323.7	316.9	311.9	304.5
8	310.1	325.3	324.9	327.7	321.7	357.7	248.5	114.6	90.5	86.8	81.6	70.3	53.3	67.2	65.7	67.4	50.9	46.3	53.0	74.7	49.4	83.7	87.9	71.7
9	76.1	74.8	41.1	102.7	98.2	255.2	87.8	81.6	98.4	303.6	280.0	242.1	124.1	209.7	286.0	283.2	220.7	322.6	330.9	319.1	312.0	313.6	314.7	307.9
10	1.1	276.6	340.5	46.1	299.8	323.0	318.7	316.4	318.5	319.5	317.5	320.8	315.0	312.4	312.5	309.6	312.8	312.0	307.5	312.4	310.4	306.8	305.6	314.2
11	317.9	320.4	320.8	323.6	323.9	325.3	324.4	325.6	325.0	321.6	322.9	325.5	324.8	326.7	322.2	323.0	319.9	317.1	316.6	311.1	310.2	309.9	302.0	301.3
12	308.1	320.7	323.1	323.8	324.3	324.0	322.0	317.2	316.8	316.6	316.4	317.3	321.6	319.8	321.3	320.7	320.6	320.8	317.0	318.0	317.4	318.1	316.7	316.8
13	315.2	316.2	316.0	317.7	320.3	325.0	326.9	327.2	325.1	324.8	325.4	328.2	331.5	332.9	323.7	324.0	328.0	328.2	325.1	322.0	324.1	326.9	322.6	318.6
14	316.0	315.0	314.3	314.3	314.1	315.4	309.9	310.4	316.8	327.1	300.9	308.0	318.2	327.4	318.8	232.3	117.1	125.0	119.9	105.6	104.5	95.0	88.4	92.5
15	74.5	72.5	33.4	45.4	53.3	68.9	62.2	66.6	78.9	66.4	69.5	68.1	48.0	54.5	67.5	69.8	67.2	41.5	38.0	43.8	48.4	62.4	51.1	63.8
16	47.9	46.0	300.8	302.2	239.4	312.6	91.1	85.6	62.0	331.0	90.8	88.6	75.0	181.1	160.7	154.0	131.6	108.3	97.2	79.9	90.5	320.1	321.8	322.1
17	320.9	318.4	322.8	329.3	322.0	326.1	322.7	315.2	309.2	308.8	310.5	309.9	303.3	316.2	317.2	314.5	321.4	327.4	323.3	306.5	327.6	324.1	329.6	332.7
18	327.5	323.4	326.2	323.7	314.5	315.8	315.5	306.5	301.5	302.3	291.6	292.6	298.0	299.3	298.4	302.3	298.4	302.0	311.3	309.7	302.4	305.0	297.2	298.6
19	312.0	309.3	311.9	315.5	318.1	317.5	313.7	309.3	314.4	316.0	315.6	312.3	309.4	307.3	306.3	300.1	295.4	293.0	296.0	297.3	297.3	296.0	296.6	304.3
20	298.1	308.6	309.5	309.1	307.5	310.0	314.4	315.6	314.5	314.2	315.5	318.3	315.6	317.9	317.9	318.7	317.9	317.4	317.3	317.5	316.3	314.9	313.6	312.3
21	315.4	315.7	315.6	314.2	315.0	313.1	307.2	285.9	253.3	347.1	70.6	79.3	73.9	51.5	279.0	302.7	267.5	226.7	311.8	306.9	277.0	42.6	120.2	58.7
22	312.6	2.3	291.8	349.3	339.6	283.0	289.9	314.8	309.4	313.7	309.3	310.1	310.8	311.0	312.8	312.9	316.4	315.1	313.3	313.2	313.0	311.6	309.4	310.6
23	312.6	313.2	309.9	313.9	315.2	315.7	313.9	315.0	317.8	318.1	318.9	319.5	321.2	317.6	323.0	323.4	321.2	323.0	325.4	323.9	320.9	319.4	319.3	319.1
24	318.4	319.5	317.1	315.7	313.3	312.7	315.2	315.2	315.4	315.2	315.2	316.3	316.3	318.2	317.9	318.4	318.5	318.6	317.6	315.9	318.1	315.4	310.8	302.5
25	227.7	302.5	324.0	328.4	321.1	323.1	314.4	317.5	316.3	312.1	295.6	292.8	308.2	311.7	310.9	316.1	317.9	314.6	314.4	316.0	314.7	315.0	315.3	315.8
26	313.5	312.8	312.2	314.3	314.0	313.7	313.1	313.0	312.5	312.2	314.0	314.0	314.5	316.2	317.9	317.6	317.5	318.3	321.8	320.9	318.6	316.7	320.1	323.1
27	322.8	316.5	323.2	326.4	323.5	320.8	322.9	324.4	327.4	326.8	318.5	319.5	319.2	323.2	322.8	322.0	326.1	326.6	326.7	324.8	325.4	322.2	320.9	320.4
28	317.1	316.1	316.2	314.3	314.4	312.8	314.2	314.5	314.4	312.5	311.4	313.2	311.3	316.0	315.9	315.0	314.6	312.3	309.1	305.4	281.0	306.9	240.2	100.5
29	91.1	105.0	77.1	82.7	92.8	91.2	85.9	89.2	88.3	89.9	95.5	83.2	93.3	95.9	90.0	81.3	80.4	87.5	95.0	99.5	101.1	102.4	98.2	88.9
30	78.6	90.5	96.4	99.9	95.1	97.7	98.5	98.5	94.9	94.6	95.8	92.1	95.1	100.4	101.6	97.7	95.2	100.1	103.5	96.4	89.2	92.6	93.6	94.4
31	98.7	97.9	97.5	93.8	98.5	100.8	98.0	99.3	98.8	97.0	95.0	100.8	104.4	105.2	101.6	102.5	96.9	99.1	96.2	95.1	102.8	104.1	103.9	106.2

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	101.4	96.8	88.2	85.1	83.0	90.4	99.3	94.9	81.6	85.1	92.6	87.8	86.4	85.2	75.8	79.6	66.9	58.0	60.4	49.6	288.3	295.0	293.8	219.0
2	295.5	317.0	312.4	314.2	316.7	315.5	316.5	315.0	315.0	314.4	316.7	316.9	317.2	320.2	304.6	300.6	131.2	101.8	103.2	106.2	97.9	95.6	97.6	91.0
3	91.0	89.6	87.6	115.0	100.8	94.7	87.8	84.6	73.8	60.7	89.3	88.3	91.5	91.7	92.3	95.3	102.8	93.8	96.0	94.4	95.6	92.4	92.5	92.3
4	97.8	99.5	97.0	98.4	95.8	97.5	96.6	92.8	89.7	89.6	94.8	99.2	103.7	95.4	85.0	80.4	78.6	92.9	86.6	78.0	329.7	322.6	303.7	298.7
5	297.4	297.0	307.5	310.6	305.8	300.3	294.8	294.1	297.4	303.7	298.6	298.8	293.9	296.6	292.7	290.9	289.3	297.9	299.8	297.9	290.7	293.2	284.3	286.3
6	283.3	286.5	283.9	288.0	294.4	299.3	298.7																	
7																								
8																69.7	125.6	139.3	296.4	312.5	285.4	325.6	299.4	301.9
9	304.5	300.8	298.3	299.3	300.2	305.6	309.6	315.7	320.9	328.2	326.6	333.1	321.0	320.2	307.6	291.8	288.1	287.9	287.4	288.1	288.5	289.5	293.6	294.9
10	295.8	300.1	302.5	303.5	307.2	307.8	311.8	309.5	312.0	310.2	316.8	318.6	321.2	322.7	326.7	319.9	327.6	329.8	329.4	327.9	327.0	323.8	321.6	315.6
11	296.4	272.6	263.9	258.5	235.0	197.5	160.7	185.2	188.7	221.8	238.8	175.9	157.5	270.2	301.6	300.2	303.3	276.4	269.3	257.6	229.8	214.2	222.4	257.4
12	219.9	237.2	223.5	244.8	198.4	176.5	187.2	266.4	268.0	263.5	260.0	273.3	298.1	306.2	297.0	276.3	280.5	288.9	266.4	257.4	257.6	304.5	296.1	281.1
13	282.8	292.7	293.2	286.8	276.2	280.0	295.6	291.3	288.9	295.5	307.1	332.2	307.3	120.2	271.1	316.6	312.7	300.3	293.8	300.8	298.8	303.9	302.3	298.0
14	308.4	306.2	308.6	314.5	311.0	306.1	301.9	287.6	286.7	285.7	289.5	287.9	296.5	299.4	297.3	299.5	298.2	298.0	294.8	295.8	292.4	302.7	314.7	322.3
15	328.2	326.2	315.2	312.1	313.5	305.6	319.0	89.3	144.4	122.0	291.3	320.4	325.5	325.3	310.4	294.5	290.5	290.2	292.1	293.1	284.9	284.7	287.9	291.4
16	303.4	326.4	306.0	304.9	317.2	310.5	316.1	311.1	299.6	293.3	295.6	288.7	285.6	285.1	287.2	288.0	291.0	299.4	299.4	296.3	304.9	301.0	295.5	295.0
17	294.6	293.4	291.4	292.5	293.2	297.3	296.3	298.5	304.3	319.5	323.3	314.2	298.9	321.1	311.4	313.2	325.6	329.8	327.8	330.6	323.5	318.3	323.0	329.8
18	317.4	321.3	316.8	322.8	87.2	90.4	101.4	123.5	47.9	332.2	345.2	112.8	129.4	116.8	114.4	119.5	132.7	125.4	114.5	127.3	150.7	152.5	116.2	120.6
19	143.7	106.7	108.4	109.0	104.9	99.5	92.3	111.0	101.4	113.8	139.2	115.0	122.8	140.8	135.0	128.8	118.8	112.6	104.6	108.9	107.2	109.2	108.1	109.3
20	123.2	135.2	136.0	122.4	116.3	118.2	124.1	128.8	117.4	127.8	129.6	128.1	128.7	131.7	129.0	129.6	133.0	131.9	137.5	126.7	123.1	119.0	108.6	106.2
21	101.1	99.9	95.5	99.0	104.6	112.9	108.1	103.8	101.0	106.9	105.0	107.1	109.7	111.5	113.7	110.8	103.1	99.4	101.5	94.0	93.1	94.8	101.5	92.1
22	93.9	90.7	87.6	79.3	87.1	91.5	63.1	332.4	336.9	61.6	114.8	157.3	124.1	117.0	116.4	119.9	116.9	117.7	104.2	77.1	67.0	3.5	333.5	324.9
23	336.8	325.7	343.8	314.5	318.2	328.6	323.1	320.8	321.8	319.2	320.7	317.9	315.9	317.1	318.8	319.8	318.5	319.0	318.3	319.9	321.0	322.6	321.6	323.2
24	322.6	324.4	321.6	322.6	324.8	326.2	323.3	329.1	328.3	323.2	323.2	326.3	331.4	327.6	323.3	321.7	316.3	321.5	319.8	312.8	307.0	305.2	306.6	305.8
25	297.3	302.9	310.7	300.8	302.2	304.5	299.2	293.1	294.2	292.3	290.3	285.8	285.7	289.3	289.6	287.8	286.5	284.2	289.3	293.0	302.0	294.7	300.6	301.3
26	303.6	302.5	299.4	304.3	308.5	308.2	299.8	303.9	308.1	306.5	310.5	307.0	302.5	306.3	313.9	319.4	316.5	317.0	316.2	315.7	313.2	313.1	314.5	314.2
27	312.7	320.6	315.6	312.9	314.8	316.1	312.4	317.7	314.8	313.5	310.7	308.4	308.3	300.0	302.7	298.8	298.6	303.3	305.4	313.1	314.6	314.0	314.8	313.1
28	314.7	313.9	315.6	314.8	313.5	313.4	314.8	318.5	319.6	321.3	325.5	323.5	322.1	327.6	326.7	326.7	326.7	322.8	331.7	328.6	329.4	327.9	323.2	314.6
29	316.7	312.8	312.9	318.2	319.4	315.3	313.0	312.5	316.4	312.3	316.4	314.5	313.1	318.6	315.8	312.5	309.4	309.0	313.9	316.4	310.2	312.7	316.4	313.0
30	315.0	312.1	312.0	307.8	308.1	306.3	306.0	303.2	308.8	308.6	313.0	310.8	265.4	256.0	123.2	127.0	300.5	300.2	300.6	291.0	320.0	313.1	324.6	351.6

Total Hours in Month 744 **Hours Data Available** 664 **Data Recovery** 89.2%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	316.0	313.0	313.2	314.1	312.8	312.6	312.0	312.7	310.6	307.8	308.5	313.2	317.8	318.1	319.7	322.1	328.3	327.5	327.7	321.6	320.2	315.1	325.8	306.1
2	314.9	323.2	311.6	311.9	317.0	307.7	304.7	312.2	310.4	311.5	310.3	306.4	301.4	305.5	317.1	315.0	313.8	314.6	309.8	314.2	313.6	307.1	310.9	309.2
3	314.7	319.6	319.5	292.2	6.6	322.4	320.2	345.0	345.0	137.8	131.6	108.0	96.8	70.0	79.9	108.7	103.9	81.2	73.6	94.2	81.0	83.2	55.9	49.1
4	53.3	42.1	53.1	70.4	73.5	78.6	79.0	80.4	92.6	86.6	85.7	86.4	79.4	62.5	331.3	270.6	267.2	276.4	281.3	166.9	328.2	321.3	319.4	312.1
5	314.1	312.7	311.2	315.7	315.3	316.0	313.6	305.4	308.3	306.1	305.0	309.9	313.6	310.9	313.8	314.0	308.4	310.3	315.3	316.0	321.6	301.7	325.6	358.9
6	268.4	280.9	287.8	358.6	92.4	94.9	82.2	126.6	280.8	43.8	94.6	109.3	126.3	123.3	106.2	99.3	98.2	97.6	105.4	119.0	105.0	110.2	122.5	113.2
7	104.3	109.1	102.3	93.6	97.8	102.5	98.1	100.8	89.3	85.8	87.0	82.3	67.3	73.4	74.5	89.5	89.9	92.1	116.0	125.4	101.6	99.0	86.9	94.3
8	92.1	79.6	66.7	56.8	68.3	72.2	57.1	75.9	75.3	78.5	71.2	76.6	80.4	90.5	87.5	86.1	81.6	77.9	76.2	77.6	67.1	67.8	75.8	68.2
9	54.6	46.9	52.4	48.9	57.2	52.6	61.3	66.0	62.4	82.2	71.1	64.7	58.2	56.4	64.5	72.7	70.9	91.0	155.7	263.9	21.0	84.7	338.3	283.0
10	302.7	306.2	306.7	310.0	310.5	310.4	304.1	314.1	316.2	313.3	308.6	313.1	316.9	314.6	319.1	317.1	309.7	311.2	86.6	93.7	72.0	117.2	89.1	88.8
11	102.6	135.2	102.8	93.1	115.4	106.4	96.1	84.4	102.8	125.1	124.7	117.4	100.0	96.3	106.2	105.7	100.9	98.5	93.6	90.8	92.7	91.3	90.3	91.9
12	88.5	72.3	49.7	60.7	79.0	73.4	47.2	69.2	78.5	85.0	64.8	54.9	59.1	90.2	117.6	108.5	104.8	101.9	100.6	100.7	99.3	93.9	96.7	97.8
13	94.8	93.3	92.6	89.7	87.0	92.2	87.6	95.6	95.4	96.3	93.4	95.7	98.1	98.0	98.4	98.1	101.3	102.3	102.4	100.7	100.5	108.0	109.5	104.9
14	97.9	93.3	57.7	39.0	62.3	38.2	51.2	70.1	67.0	70.6	301.9	298.1	292.9	310.3	276.2	332.2	288.6	296.0	305.0	294.6	303.8	282.9	342.6	344.9
15	324.0	326.8	323.2	318.4	310.2	319.9	304.3	319.4	34.4	86.4	112.9	113.4	112.8	103.9	98.5	97.3	101.1	99.7	90.5	89.2	346.5	332.0	81.1	26.8
16	257.7	66.9	85.0	91.8	95.3	90.2	93.3	99.2	97.7	104.2	102.4	97.2	101.5	98.8	101.1	113.2	127.3	125.5	121.7	128.1	136.7	126.2	92.5	311.4
17	316.2	322.4	316.5	316.6	318.1	319.2	319.4	317.0	322.5	318.0	317.4	319.7	275.3	144.2	129.5	125.8	100.7	102.2	101.1	96.5	108.3	103.1	107.9	99.0
18	14.5	22.2	102.6	98.5	98.6	90.3	90.9	99.5	94.1	93.6	94.4	97.8	103.0	106.0	102.4	101.6	101.0	116.3	107.0	103.2	102.6	108.9	107.9	107.3
19	100.3	99.4	92.9	61.9	91.3	23.3	323.1	309.8	326.9	323.0	320.8	124.2	144.4	184.7	283.5	299.1	305.0	316.2	328.0	326.4	322.0	319.5	313.1	304.0
20	300.9	301.9	308.2	308.1	308.6	310.5	311.8	311.6	315.8	319.4	318.2	312.9	312.8	313.6	263.2	148.7	107.7	91.9	80.2	78.5	81.7	78.7	71.1	307.2
21	321.3	331.8	333.2	317.8	327.3	322.3	88.9	58.6	317.2	66.0	94.2	103.3	107.0	102.8	105.6	106.3	98.4	97.5	102.5	94.4	115.6	84.3	311.0	320.7
22	311.5	308.5	310.6	309.8	318.2	323.1	325.5	322.9	321.4	321.6	318.7	316.5	281.8	102.3	99.2	103.3	105.2	104.8	108.0	110.1	102.7	103.3	102.8	103.4
23	103.0	104.3	104.3	109.7	97.0	90.7	88.9	91.0	81.6	81.5	65.9	85.6	99.8	103.2	104.1	106.4	109.1	107.9	113.6	114.7	122.3	115.7	119.1	109.8
24	111.7	106.8	101.6	106.2	108.9	111.7	116.4	131.2	123.6	117.0	129.5	134.9	148.4	128.4	108.6	120.5	102.2	97.5	105.9	103.3	121.9	131.0	324.9	339.5
25	339.2	300.9	330.9	329.0	43.4	337.5	332.4	335.7	279.4	199.8	107.4	102.9	106.7	106.2	108.8	108.4	109.1	105.5	100.5	100.9	95.8	81.3	282.8	308.6
26	318.6	315.2	325.8	322.9	317.8	315.0	320.4	315.3	323.3	319.1	317.6	324.2	311.7	324.2	315.6	305.8	309.5	294.0	305.7	302.3	309.0	305.8	307.1	309.6
27	309.1	307.3	322.3	324.4	325.4	323.5	324.3	316.1	323.7	322.7	317.5	322.3	323.7	324.4	322.8	323.6	326.2	325.9	324.5	321.1	324.6	321.1	324.2	318.4
28	325.1	321.5	314.0	313.0	312.3	320.9	319.0	325.1	324.5	324.1	316.2	316.5	320.7	319.6	320.9	322.3	328.4	324.1	321.7	317.7	321.3	319.1	321.6	318.2
29	312.1	309.4	312.5	316.9	304.5	310.8	310.0	314.7	311.3	310.6	314.1	24.5	99.0	89.7	90.2	92.1	90.1	90.0	87.4	96.5	85.5	6.0	71.9	352.8
30	328.0	48.5	350.3	324.7	348.3	107.2	120.6	105.6	122.4	128.5	116.8	120.1	115.4	114.9	103.0	108.3	115.4	115.9	114.8	107.3	107.0	102.2	104.0	103.2
31	93.6	100.7	104.7	123.8	125.5	119.3	128.0	128.5	116.4	119.1	136.2	139.8	143.7	142.3	142.4	141.0	143.8	141.3	139.4	138.1	136.2	138.2	135.2	137.6

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

June *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	133.4	134.4	106.6	102.2	88.1	89.4	91.0	88.6	83.5	91.6	91.9	99.5	98.9	93.0	87.5	93.5	106.5	113.5	87.0	87.9	75.6	88.0	46.6	63.1
2	70.1	38.5	42.2	59.3	52.8	59.6	57.1	53.2	60.3	71.3	55.0	75.8	46.5	70.9	73.5	88.2	98.0	295.6	280.2	244.1	313.4	297.8	286.4	71.0
3	80.1	93.4	279.1	82.3	85.6	75.7	66.3	70.9	30.9	68.6	91.1	138.4	134.6	116.0	101.9	97.9	116.7	107.3	105.1	122.9	89.6	63.5	87.0	220.7
4	20.0	81.7	99.8	110.6	91.7	349.5	91.3	95.4	38.8	327.0	338.3	146.5	127.8	125.3	122.6	98.8	115.2	103.3	115.7	144.1	109.8	103.7	105.5	86.7
5	84.4	108.4	122.8	113.2	104.7	108.9	109.2	109.4	105.4	99.2	101.2	95.1	98.3	93.1	81.1	99.3	97.6	113.8	79.7	80.9	74.9	88.9	53.7	352.1
6	2.1	319.1	317.6	329.2	318.8	313.8	315.9	315.9	307.6	306.8	305.6	312.6	319.7	320.4	324.6	323.5	323.3	318.0	218.5	316.8	317.8	319.0	316.4	313.2
7	321.0	313.0	315.2	315.4	316.3	319.2	323.0	316.9	318.2	316.1	316.4	319.6	322.8	321.8	319.2	320.6	93.2	88.5	89.6	87.9	82.0	85.5	91.0	79.8
8	71.0	72.7	117.2	323.6	314.0	346.6	99.7	299.0	320.8	325.2	327.4	324.7	322.6	324.2	324.2	65.4	35.9	321.2	325.1	313.4	305.6	308.4	304.3	313.6
9	323.3	324.1	320.1	317.2	315.4	317.0	313.8	321.1	324.4	328.6	324.6	329.6	328.1	333.5	329.6	329.8	330.2	327.0	330.7	330.2	329.9	326.9	321.9	322.7
10	325.3	323.8	327.4	325.4	325.3	321.6	320.5	318.1	319.5	320.5	321.1	316.5	310.3	135.5	114.1	116.9	114.5	112.2	111.2	107.7	107.5	103.1	103.8	102.9
11	100.6	94.0	104.3	89.5	104.5	111.1	45.2	292.6	120.3	94.8	110.9	234.8	101.9	101.9	101.6	101.0	104.0	104.5	105.1	119.6	164.0	321.0	328.9	317.2
12	320.3	317.3	319.1	323.4	325.9	322.5	322.3	323.1	324.8	324.0	323.9	323.9	322.0	322.9	321.6	316.9	320.2	319.4	319.0	318.7	317.0	320.0	323.7	326.5
13	323.7	322.7	321.7	321.3	319.7	318.4	318.9	315.1	317.2	321.7	321.8	324.1	321.5	320.1	320.1	319.6	319.0	319.5	310.7	163.0	76.7	68.5	48.2	347.6
14	14.8	69.3	16.2	322.2	325.6	326.0	325.8	318.5	322.6	322.4	322.7	322.7	323.8	324.0	47.5	103.2	98.2	97.2	94.2	90.8	99.3	77.7	38.0	313.3
15	305.3	332.3	321.7	331.4	324.4	320.7	326.4	326.5	321.3	320.2	319.6	320.8	319.8	130.4	127.1	113.7	97.4	86.0	60.0	330.8	316.0	319.0	324.6	329.2
16	321.9	322.0	319.8	318.3	321.3	320.5	318.2	318.6	315.2	319.4	322.5	321.4	320.1	318.5	320.2	156.8	133.7	118.3	91.8	84.9	77.3	58.2	312.5	309.9
17	332.9	325.5	13.6	87.2	326.2	72.1	101.9	81.0	93.0	102.0	100.4	105.1	105.4	106.2	102.2	104.9	100.9	100.5	99.6	94.8	99.7	101.7	105.2	86.9
18	90.1	21.1	303.3	327.9	89.8	105.7	104.4	304.5	322.2	327.0	65.4	96.5	102.9	89.2	92.5	100.3	95.8	94.9	93.5	96.7	92.3	87.2	76.5	303.9
19	15.5	81.3	97.2	331.7	321.7	323.5	307.9	315.4	344.6	111.1	118.3	114.6	116.8	118.6	111.6	99.6	99.2	98.9	107.5	108.0	103.5	104.6	102.2	99.0
20	98.4	113.8	151.5	88.2	337.1	79.6	116.9	128.4	111.0	113.8	121.0	113.3	108.1	104.2	106.2	107.2	110.7	107.4	104.0	106.8	124.8	105.3	103.3	107.1
21	110.8	110.4	110.2	108.6	102.3	101.1	104.9	94.3	103.2	113.2	120.3	122.7	119.5	118.6	111.5	107.4	96.3	87.7	92.2	92.9	95.4	85.6	76.8	345.2
22	331.2	28.2	34.2	120.0	61.3	83.8	84.2	77.1	56.0	99.8	106.8	105.7	112.5	115.7	107.7	116.3	97.2	309.4	260.0	241.1	230.3	210.3	128.1	134.9
23	124.0	117.7	106.7	99.6	103.9	105.6	97.5	96.5	101.4	110.2	107.8	115.7	111.9	103.1	105.5	110.5	104.1	112.9	115.5	113.6	113.1	104.1	89.1	99.2
24	93.3	94.7	97.9	96.4	101.9	101.8	99.2	98.5	95.9	96.1	100.7	108.7	119.6	125.8	110.5	108.1	99.3	87.0	83.9	86.2	102.0	93.2	90.0	87.4
25	90.6	90.4	109.4	113.8	108.4	108.1	104.2	89.7	89.5	96.4	90.7	96.8	92.9	105.5	107.7	109.0	117.6	110.8	105.9	121.9	116.9	95.1	95.1	76.2
26	72.9	49.1	52.3	60.0	69.7	77.3	70.8	73.7	72.2	87.5	75.8	61.0	51.3	57.3	44.2	52.9	55.3	54.8	48.7	49.2	53.3	55.4	58.8	57.6
27	64.7	121.7	136.6	122.0	110.1	107.9	110.2	116.1	120.2	120.4	90.8	88.9	93.2	88.7	104.6	109.0	115.6	111.3	107.4	109.4	107.9	107.7	101.0	93.9
28	74.5	331.8	330.4	318.5	325.0	316.7	314.7	316.2	326.3	323.9	322.4	328.6	330.8	328.3	324.2	253.2	150.3	235.4	80.0	110.9	94.7	96.4	93.5	90.0
29	93.8	97.4	94.3	92.4	94.1	101.9	94.8	100.7	102.1	102.6	103.8	102.0	103.1	102.0	103.6	101.9	103.9	106.5	107.9	104.9	100.2	103.7	101.1	98.5
30	98.4	93.1	91.5	93.0	349.7	346.4	335.7	342.5	80.9	100.0	105.3	112.8	109.5	105.5	101.4	100.4	102.2	105.5	98.0	92.8	89.8	89.4	78.6	295.3

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	324.2	324.2	323.3	326.6	326.8	350.2	80.4	100.5	110.5	101.1	108.9	118.8	133.3	126.8	96.0	103.4	104.1	98.1	99.2	107.2	117.5	119.0	105.0	102.2
2	96.1	98.7	98.4	100.7	95.7	101.3	103.2	105.2	111.1	131.6	132.6	114.8	112.6	115.8	111.5	105.2	107.0	110.7	103.0	97.0	97.5	99.4	98.4	96.0
3	92.6	106.5	70.8	74.3	89.8	95.8	102.1	119.3	135.6	134.4	97.7	127.1	138.5	100.5	84.9	137.4	136.9	137.9	116.0	102.3	111.6	100.7	102.8	99.5
4	99.7	105.7	85.2	97.4	96.0	84.2	87.6	77.5	76.4	330.0	358.3	61.2	90.7	125.1	130.0	120.5	116.8	108.9	76.4	89.9	15.3	325.3	45.5	34.8
5	312.6	341.1	18.0	104.5	61.9	334.6	4.9	77.4	322.1	92.0	89.2	81.3	78.2	79.6	89.7	87.7	97.1	97.1	93.0	89.4	94.1	79.1	40.9	329.0
6	338.7	326.2	349.9	11.1	327.4	340.9	73.8	100.2	83.8	62.5	61.4	99.0	97.4	110.1	83.4	108.0	199.9	246.2	249.0	252.0	264.4	280.9	322.8	42.7
7	90.7	76.8	95.3	130.8	130.7	130.4	104.5	99.4	95.1	102.7	101.5	94.4	124.5	117.9	108.4	104.5	101.2	103.6	116.9	119.8	110.8	114.0	153.4	285.7
8	310.3	317.6	318.6	319.1	319.4	316.6	327.5	326.7	327.2	331.7	334.2	329.1	322.5	326.2	327.7	320.4	319.2	190.0	117.3	92.3	295.3	314.9	69.7	76.8
9	92.1	109.9	103.0	109.3	135.7	135.9	151.3	311.7	96.9	111.1	113.2	114.8	110.6	106.2	99.4	95.3	88.7	97.9	98.9	93.9	95.2	91.8	93.0	86.6
10	83.2	84.3	92.6	95.3	97.6	100.8	101.3	104.5	104.8	105.5	108.2	111.4	115.6	129.7	139.0	120.5	104.3	105.0	95.8	98.5	97.6	99.0	100.4	101.6
11	106.7	111.3	104.6	114.3	114.9	108.4	99.5	102.2	102.2	107.1	113.2	112.3	112.0	110.4	109.2	108.9	109.1	112.0	113.9	109.7	105.1	93.4	120.1	201.9
12	323.7	323.7	331.2	334.3	343.5	354.0	344.2	111.9	99.2	102.5	110.9	107.4	103.0	104.2	103.7	101.4	102.1	102.4	99.9	104.2	96.0	97.8	96.1	95.5
13	103.5	94.5	97.0	96.0	90.6	92.2	101.9	96.8	104.9	109.0	105.5	114.1	113.1	106.3	108.8	113.2	113.9	112.8	110.7	106.3	103.7	104.2	102.1	106.1
14	114.0	109.2	98.4	114.4	117.3	56.2	339.6	349.8	333.0	107.3	119.5	118.4	112.7	106.0	103.4	99.6	101.2	101.6	102.1	104.1	102.5	106.6	104.2	103.4
15	105.3	89.5	100.8	85.2	111.0	122.5	114.1	106.0	132.9	136.0	124.2	114.5	118.8	113.5	102.4	104.2	104.9	108.5	106.1	100.7	100.2	92.0	95.5	94.7
16	94.3	90.1	95.2	100.7	98.9	95.1	99.6	93.2	96.0	101.0	99.5	97.8	99.5	98.5	97.8	96.9	98.0	98.4	98.1	97.5	96.5	97.0	96.5	97.2
17	99.5	97.4	94.5	98.9	19.5	324.6	319.0	310.7	317.4	316.3	309.8	312.2	321.0	312.5	328.0	330.5	308.5	311.7	301.0	299.6	302.9	303.8	302.5	307.5
18	311.3	314.0	314.0	318.4	316.8	316.4	321.9	321.9	319.8	323.9	322.5	325.9	329.9	330.5	326.4	325.7	324.5	326.0	325.5	324.7	325.5	328.9	320.9	315.6
19	318.3	317.2	316.5	321.5	320.6	314.2	316.5	320.1	319.5	317.7	323.5	323.6	320.9	321.6	315.8	309.5	348.2	99.4	314.5	317.2	312.0	314.0	304.2	315.7
20	321.2	314.3	315.9	309.0	308.8	314.7	317.8	326.3	321.4	331.6	318.7	302.8	307.3	329.3	327.6	328.0	326.7	329.9	325.1	324.5	330.2	326.3	325.6	319.8
21	311.2	308.2	291.4	318.1	318.6	327.3	320.1	307.2	303.9	306.7	304.4	305.8	297.3	297.8	324.1	319.6	322.9	315.0	329.7	327.6	323.4	331.4	320.7	316.7
22	326.9	325.4	321.3	322.7	320.2	318.9	323.8	316.1	318.9	114.5	109.1	114.7	108.3	104.4	103.1	102.1	114.8	104.9	105.1	123.0	105.6	96.5	104.2	112.5
23	45.6	324.9	322.9	316.5	320.2	320.5	314.4	311.4	308.2	312.1	318.7	315.9	329.1	327.8	319.1	161.2	145.1	116.0	123.3	103.6	102.3	122.8	109.7	101.2
24	84.3	47.1	338.7	348.7	310.8	296.1	309.4	311.7	316.2	308.8	306.6	312.9	311.2	318.3	297.8	147.7	136.6	137.8	136.1	244.1	294.0	332.0	323.7	321.8
25	323.3	323.9	326.9	327.1	322.5	312.2	305.6	306.8	309.6	307.4	305.5	315.5	322.7	323.3	318.8	323.5	13.0	95.3	102.7	104.2	111.5	120.6	88.6	337.6
26	320.3	340.2	345.7	92.9	48.0	322.2	321.0	324.9	324.7	328.8	330.1	333.0	326.8	339.3	321.1	321.5	322.2	320.9	228.3	121.9	130.4	132.4	129.6	104.9
27	96.0	93.7	91.9	93.5	88.0	88.0	88.2	54.4	341.1	93.7	102.1	89.3	99.0	109.2	109.4	102.8	97.2	5.8	292.7	178.0	146.7	121.3	290.6	307.4
28	299.9	311.0	325.4	318.2	319.0	318.7	319.7	318.1	322.9	315.6	322.9	322.9	322.0	321.6	323.5	321.8	314.3	314.6	312.0	312.5	313.0	313.1	306.6	315.2
29	316.5	313.0	314.4	316.8	320.8	315.4	308.3	313.2	315.2	313.2	321.6	314.7	314.1	311.1	312.9	310.8	74.9	301.4	71.1	307.8	308.2	318.6	316.0	314.9
30	312.5	307.6	317.1	319.0	322.7	324.1	317.1	320.9	322.4	319.7	325.1	327.3	318.5	320.7	318.1	295.3	292.4	294.7	292.9	296.9	305.8	306.1	304.2	305.4
31	314.9	317.2	315.6	321.1	319.9	311.5	314.9	313.2	309.1	314.8	318.7	315.9	314.7	322.4	318.5	327.3	329.7	327.0	327.7	329.1	328.7	323.5	324.5	321.5

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	317.9	321.2	325.4	321.5	318.0	318.9	319.7	322.8	26.8	88.1	131.4	139.5	130.2	123.6	115.6	102.1	101.9	100.2	93.2	90.1	89.9	93.2	96.3	96.4
2	91.9	92.2	101.8	103.7	83.1	86.6	84.3	82.9	84.5	91.0	88.3	93.4	99.6	96.3	97.1	101.7	100.3	98.6	100.7	96.1	99.5	103.7	94.3	95.6
3	122.3	300.0	286.5	289.3	305.3	7.1	85.7	106.7	126.4	122.7	133.8	112.2	109.9	103.5	93.1	114.0	116.5	113.4	124.6	110.6	91.6	100.2	103.8	111.1
4	107.9	95.3	108.3	101.5	101.7	89.6	67.2	87.3	98.9	89.0	107.1	106.0	101.3	108.0	110.1	98.6	104.4	119.3	118.4	104.0	104.4	90.8	88.1	78.5
5	85.3	90.7	111.3	125.7	141.0	277.1	316.0	317.9	300.0	307.7	338.3	157.9	154.9	147.7	123.1	91.5	93.7	102.3	90.8	87.5	89.6	100.1	89.5	92.6
6	84.4	56.9	214.3	328.5	320.5	329.0	330.5	327.9	328.1	326.4	39.9	147.5	150.8	144.7	116.4	91.2	95.2	94.5	96.4	303.6	289.0	291.9	302.5	317.3
7	325.9	321.8	319.0	311.8	309.4	313.9	320.4	318.8	315.5	327.2	322.3	319.5	323.2	324.6	323.5	322.9	321.9	317.3	311.3	290.5	287.0	301.0	311.0	314.4
8	331.8	63.7	326.2	317.5	325.0	323.0	324.5	324.3	323.9	329.8	86.7	96.5	99.0	102.6	95.1	90.3	96.9	101.0	105.1	99.3	89.2	95.0	14.0	321.9
9	325.6	329.7	331.1	321.7	331.9	318.6	324.8	324.3	314.3	313.6	324.6	330.9	323.3	333.3	88.2	98.0	102.7	97.7	97.9	108.7	109.1	113.5	119.5	123.2
10	125.4	118.4	115.8	124.9	113.5	141.2	143.5	137.3	113.7	99.3	97.3	100.0	107.3	108.7	112.2	116.6	121.3	117.9	121.6	121.2	106.3	114.6	114.0	124.5
11	139.0	119.9	100.6	99.7	99.8	84.2	111.9	103.8	105.1	106.3	110.5	119.0	119.1	117.6	123.9	121.6	113.7	108.9	104.3	87.0	77.0	296.3	316.1	324.2
12	324.9	321.9	310.4	295.9	305.8	304.4	313.5	310.1	303.9	301.5	351.9	114.8	78.9	106.4	113.6	110.9	116.2	135.4	263.3	164.9	137.5	84.1	311.6	320.3
13	308.1	316.0	293.5	287.9	313.7	301.9	331.5	90.2	266.7	354.9	157.1	32.2	320.9	316.7	58.0	284.1	267.7	293.5	289.9	276.2	303.7	317.3	334.1	49.4
14	61.2	76.2	350.1	329.0	328.3	101.9	105.5	93.1	95.2	328.9	327.1	331.6	330.1	350.5	326.7	100.3	11.7	331.9	331.1	347.6	56.4	75.0	66.6	85.2
15	83.6	330.7	333.5	350.6	315.0	312.7	312.6	312.2	312.0	311.7	310.2	310.3	309.7	312.3	319.6	313.1	283.0	295.9	313.1	316.0	125.0	114.1	128.2	102.2
16	113.5	115.1	110.2	111.0	106.4	103.2	96.0	97.0	99.8	104.7	106.1	98.7	109.2	113.5	111.8	109.9	109.8	113.0	110.5	107.6	115.1	97.8	105.8	98.6
17	105.1	97.3	104.0	110.5	100.6	62.6	81.4	91.8	99.1	101.2	90.7	98.1	103.6	97.7	93.2	94.2	101.5	102.8	106.7	118.5	109.0	102.5	104.5	89.8
18	97.2	104.8	99.0	285.7	347.8	312.9	326.2	327.8	313.4	69.9	80.9	68.6	71.0	77.6	98.6	133.1	170.4	89.5	88.6	83.0	73.9	73.8	76.3	94.7
19	88.7	86.5	78.2	87.2	348.3	351.7	316.3	316.2	324.2	315.2	319.8	315.7	322.4	320.8	318.7	318.6	321.4	322.1	318.5	317.8	317.6	320.1	319.8	315.9
20	315.3	314.6	316.3	318.6	315.1	319.8	319.6	319.5	319.0	321.4	317.1	323.5	323.8	324.2	324.6	323.8	327.4	328.7	330.0	327.7	324.6	322.0	318.9	320.2
21	318.9	318.9	315.7	316.9	318.9	321.9	322.3	318.4	318.5	315.8	316.1	312.3	315.2	324.8	92.5	99.1	105.9	111.5	113.6	111.9	94.0	94.3	85.6	95.9
22	88.7	73.6	100.9	93.9	101.1	88.5	91.4	69.7	304.1	304.5	327.6	277.4	117.8	104.8	109.8	122.2	109.6	92.4	97.4	265.0	319.0	319.4	317.7	317.5
23	316.2	317.6	318.6	316.3	314.6	314.5	312.7	312.6	312.0	313.9	313.2	341.6	99.1	98.5	100.7	96.6	93.1	100.6	303.3	325.2	330.0	319.4	324.1	324.3
24	323.5	313.5	313.5	308.0	321.2	324.2	321.2	321.2	315.6	315.9	318.5	316.4	321.3	324.6	303.4	312.4	325.5	329.1	325.6	321.5	322.7	323.6	320.9	315.3
25	321.5	320.5	100.6	115.2	102.7	106.2	100.1	100.9	102.9	105.2	88.9	28.9	226.0	111.7	105.7	105.5	96.4	99.4	103.9	112.0	126.7	125.8	116.7	118.0
26	100.3	111.7	68.4	325.4	317.8	86.7	327.1	327.6	329.2	331.5	330.6	73.3	112.6	113.0	125.5	133.4	127.2	108.0	103.4	109.2	112.9	112.7	109.1	100.0
27	93.2	82.1	44.5	345.6	319.6	308.9	313.7	314.6	310.1	325.1	327.3	327.3	336.5	327.8	315.2	314.6	317.0	327.6	318.4	324.2	318.3	322.0	313.7	310.8
28	319.6	314.3	309.8	318.5	319.3	305.7	303.8	304.7	315.9	317.8	321.3	325.5	320.8	309.1	300.5	299.9	301.8	321.2	325.6	320.8	316.0	308.0	312.7	312.2
29	312.1	312.5	314.5	312.6	307.0	306.7	307.4	312.0	312.7	317.0	317.7	327.8	324.9	326.9	324.5	319.0	315.2	325.2	327.2	312.9	326.3	328.6	323.9	314.5
30	315.7	317.0	315.1	317.7	315.5	320.1	319.2	317.6	315.8	315.7	322.7	314.4	99.0	106.7	121.1	107.9	106.4	108.8	106.4	107.5	89.0	104.8	97.3	100.6
31	105.1	105.4	102.9	101.4	104.3	98.8	94.5	84.4	88.8	86.8	90.4	82.5	80.7	87.5	89.2	71.0	47.1	40.1	54.9	53.4	39.9	56.8	30.0	75.1

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	66.1	69.5	64.6	73.5	73.0	68.3	68.8	59.1	46.1	40.7	42.5	64.8	54.3	64.2	73.5	70.7	55.4	76.9	91.7	110.0	115.3	93.7	92.3	93.3
2	92.9	87.4	89.5	92.3	99.7	96.9	104.7	102.9	99.6	106.4	105.6	101.7	102.0	97.2	72.8	65.0	58.2	63.0	82.8	75.3	64.0	50.7	61.3	50.4
3	31.5	43.4	39.1	35.0	65.0	55.0	20.3	40.3	66.6	350.0	291.6	314.9	316.8	315.2	317.1	311.0	312.6	318.2	31.2	102.7	113.3	93.6	92.8	336.0
4	315.3	296.7	277.5	81.3	41.7	343.4	324.9	338.7	61.7	350.2	88.5	113.1	116.5	117.9	114.1	114.8	114.3	104.9	100.3	106.1	102.4	324.3	325.0	324.1
5	330.5	3.3	328.2	335.6	100.3	323.8	333.8	83.5	336.8	9.3	84.1	108.3	98.5	95.3	102.5	101.5	102.6	102.5	102.0	107.3	95.4	97.0	65.1	108.0
6	349.3	104.9	99.1	91.7	98.0	103.6	102.1	96.6	102.2	92.6	87.2	83.2	88.5	89.3	75.8	56.4	44.6	47.8	55.9	45.5	83.7	61.1	74.9	70.7
7	50.0	54.8	56.1	50.9	48.9	68.6	65.2	70.0	88.4	87.9	101.9	105.7	111.9	118.3	108.3	77.6	61.7	68.6	100.8	139.8	143.2	134.6	340.5	119.7
8	114.9	88.2	319.4	319.9	95.7	356.6	328.7	346.7	311.6	89.1	107.8	104.8	99.0	95.7	97.7	101.7	102.0	104.1	79.5	76.8	61.7	56.7	53.1	30.5
9	41.5	65.1	62.4	32.6	57.6	57.1	48.9	44.8	48.0	35.5	48.9	85.7	95.4	97.2	105.9	101.8	99.0	98.2	101.9	106.5	102.9	111.3	142.1	143.0
10	136.7	62.0	84.2	324.5	326.1	333.7	327.7	322.6	323.0	311.1	307.0	297.6	254.8	201.0	157.1	268.9	324.0	332.7	336.4	325.5	322.5	318.4	324.1	321.9
11	318.3	322.0	325.9	324.9	321.4	325.2	322.0	323.9	320.9	320.4	324.1	340.0	26.5	354.4	326.8	125.7	116.3	113.3	103.0	95.4	106.7	118.0	117.8	111.5
12	99.5	95.4	106.1	116.4	109.2	103.4	104.4	97.2	87.1	87.1	77.5	71.9	63.7	38.2	53.7	67.8	58.9	76.1	79.1	68.7	70.6	78.1	88.6	87.2
13	95.4	100.2	101.6	102.4	98.0	97.7	103.7	107.2	109.2	106.2	107.3	107.8	108.2	107.7	109.1	99.8	96.5	92.5	56.8	49.5	45.6	46.7	51.7	57.6
14	64.4	71.3	68.0	67.7	29.9	48.0	349.8	59.5	53.4	73.1	12.1	90.4	85.2	83.8	51.1	70.2	80.0	74.4	65.4	125.8	86.2	355.6	13.5	69.6
15	71.1	86.3	92.1	98.6	101.4	98.2	101.1	101.6	98.8	97.7	108.1	97.3	101.4	99.8	107.0	108.6	109.8	108.4	124.2	125.4	81.9	329.0	328.9	334.5
16	335.7	321.4	316.2	321.7	74.3	338.6	322.4	322.5	320.4	314.4	316.9	307.7	320.7	330.1	321.5	303.5	292.6	291.9	293.5	294.0	296.2	304.5	292.9	291.3
17	292.2	298.2	306.5	295.9	298.6	301.2	304.2	318.2	321.5	318.2	320.1	309.5	250.5	108.3	104.7	106.5	109.1	97.0	94.1	101.6	113.3	101.7	97.7	81.6
18	68.6	70.0	64.6	52.2	74.8	83.3	80.8	76.5	74.1	289.4	240.6	134.5	82.6	72.2	66.3	100.1	99.0	75.0	76.1	97.8	115.3	113.1	113.5	111.2
19	113.0	95.1	89.8	94.3	99.6	96.9	325.3	330.4	329.2	323.1	318.2	324.9	317.8	325.5	317.6	306.3	306.5	307.6	324.0	329.2	323.0	317.8	317.4	314.9
20	313.7	312.5	311.5	305.6	308.2	307.5	309.9	303.9	304.6	304.6	297.7	297.9	298.0	298.0	301.5	305.8	301.0	307.4	295.6	309.9	315.8	325.3	317.7	316.7
21	324.0	322.6	320.6	320.8	329.1	326.6	319.5	310.5	305.6	315.7	320.9	316.0	317.1	327.1	321.7	305.7	295.7	292.9	291.1	289.4	292.8	292.1	300.4	315.9
22	312.1	308.6	299.0	300.5	309.5	306.8	317.6	313.6	314.9	313.8	319.5	321.6	327.8	322.7	322.9	320.2	321.9	212.2	180.8	277.4	243.0	324.2	319.8	324.4
23	331.3	316.3	313.5	312.4	310.9	326.0	330.9	325.2	325.4	330.8	80.4	326.1	317.0	163.2	177.3	318.6	310.2	124.3	127.1	306.1	291.3	320.9	327.4	337.8
24	336.9	327.2	338.6	321.4	350.9	325.8	326.0	17.3	50.6	82.6	57.8	17.0	92.3	3.7	73.3	75.1	69.8	66.4	81.6	39.1	74.6	59.5	46.8	20.4
25	19.4	63.2	44.0	77.0	346.0	12.7	4.2	55.1	68.1	79.9	85.9	326.8	281.5	353.8	359.3	297.3	316.6	51.3	260.5	301.5	265.8	230.1	292.4	304.0
26	251.3	223.6	263.7	220.8	248.3	295.2	300.1	318.2	307.2	332.5	327.6	113.8	122.1	83.2	141.7	138.3	124.8	122.0	99.8	188.2	301.0	321.8	317.0	309.8
27	308.4	316.0	313.2	315.0	315.9	316.2	315.8	321.2	317.4	323.2	322.2	313.6	315.0	311.4	312.5	305.9	302.8	328.4	327.6	320.4	316.5	320.7	322.6	313.3
28	304.6	304.2	302.3	312.9	311.0	319.5	325.6	327.3	320.5	320.0	324.1	310.2	324.4	13.3	115.6	113.9	111.3	112.3	111.6	66.6	346.6	25.7	330.4	80.9
29	77.5	52.6	95.1	103.8	93.0	74.7	66.7	63.1	64.2	83.4	92.8	91.7	86.0	102.0	90.2	91.4	217.2	125.9	131.3	112.8	74.2	326.4	326.2	326.2
30	317.3	313.8	321.5	311.3	311.8	316.0	311.9	319.1	323.0	328.4	327.3	315.9	303.1	306.6	305.9	306.4	294.0	305.1	319.3	316.6	306.2	303.1	307.2	310.4

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	313.4	315.3	318.8	315.7	315.4	324.1	334.6	331.2	332.4	337.8	341.0	257.2	108.1	113.9	104.9	111.6	92.0	90.8	89.5	87.4	88.9	91.8	86.7	339.5
2	291.1	334.5	323.6	320.8	326.9	322.2	318.8	324.1	321.7	325.7	329.3	329.1	329.5	328.3	317.6	320.7	313.5	306.7	304.2	302.9	296.7	295.5	297.1	307.6
3	302.0	298.3	307.8	313.4	298.6	305.1	311.1	316.6	316.4	312.4	309.8	303.0	302.3	302.7	307.8	313.8	310.4	303.6	301.6	300.7	304.9	303.9	306.8	305.4
4	305.8	305.7	304.9	305.7	306.1	305.7	312.5	315.7	316.1	315.0	307.2	310.8	317.4	319.7	325.3	312.1	321.6	318.2	315.2	308.0	306.9	305.4	307.1	306.2
5	307.2	305.0	303.4	306.9	304.5	305.0	306.6	312.6	315.6	315.4	312.0	311.3	307.4	306.5	324.6	329.9	321.0	318.7	312.8	322.3	317.1	310.4	314.6	321.2
6	321.8	321.5	317.4	311.5	321.5	315.1	325.7	307.7	311.9	320.6	323.8	325.3	330.5	328.6	320.0	316.4	306.7	305.0	311.7	289.9	291.0	292.5	294.1	303.2
7	315.7	307.0	298.0	299.5	294.8	305.2	310.0	301.1	296.7	293.6	290.5	307.7	295.9	290.3	288.4	290.2	290.9	288.7	291.2	290.5	293.8	294.7	299.8	298.1
8	298.7	316.9	302.4	301.8	307.9	298.0	304.0	301.8	315.4	323.7	323.5	324.5	307.8	318.5	319.8	325.1	323.8	314.7	302.9	308.8	313.8	315.0	359.6	68.0
9	76.5	58.8	65.0	75.1	74.5	92.4	93.7	80.8	66.0	63.9	73.6	50.8	68.8	57.5	68.7	67.6	74.3	66.9	60.6	38.5	23.0	5.6	28.0	53.0
10	55.1	75.2	359.3	119.9	132.7	311.2	311.7	319.3	314.6	326.7	339.2	315.3	319.9	269.9	103.8	101.2	118.7	163.6	53.6	71.1	59.1	335.9	77.2	87.5
11	93.7	99.7	102.0	102.8	101.3	95.8	100.9	106.6	105.7	109.2	110.6	112.8	104.9	91.2	36.0	295.8	300.9	304.0	303.0	307.2	306.9	305.9	305.2	305.1
12	303.6	302.3	302.7	298.7	300.2	299.2	297.9	299.8	303.3	293.6	294.1	293.3	294.8	293.6	291.3	288.9	291.4	292.6	292.3	293.4	298.6	301.6	303.5	312.2
13	320.0	310.5	310.6	300.9	312.6	317.6	320.7	319.1	322.4	306.6	306.1	314.1	322.7	339.0	80.5	78.9	78.4	347.7	54.7	59.1	79.5	94.4	102.6	138.7
14	108.9	107.6	127.2	100.2	124.5	294.0	291.6	289.8	2.3	55.7	15.1	327.3	321.1	313.0	326.7	333.6	327.6	329.5	312.5	321.1	323.6	325.7	328.9	328.9
15	329.1	313.6	328.4	325.6	327.1	325.7	323.9	317.1	327.2	327.1	310.7	322.8	306.8	310.1	298.3	306.8	302.5	299.7	304.7	312.3	313.5	312.3	314.9	313.8
16	307.3	307.9	307.2	307.7	313.2	312.2	317.6	318.0	317.5	313.9	313.8	311.2	310.3	313.9	320.2	318.4	317.9	317.3	321.4	318.8	317.5	314.6	311.4	314.1
17	315.6	315.9	318.0	319.0	320.0	318.8	318.7	323.0	319.4	317.1	317.4	314.2	311.3	314.9	324.6	325.7	51.6	87.1	81.0	86.8	87.6	81.4	79.2	64.1
18	73.8	74.4	56.9	63.0	53.5	53.4	64.1	63.4	54.5	30.3	33.3	35.2	50.0	66.7	93.1	95.4	85.7	87.0	53.7	239.9	329.2	242.9	327.2	347.6
19	305.6	325.9	311.7	322.2	319.3	318.9	319.7	307.4	308.0	310.0	308.6	305.5	309.0	304.8	302.2	305.1	300.7	302.9	309.3	319.3	314.2	315.3	318.5	316.4
20	314.3	315.9	315.5	314.5	313.0	314.5	317.1	317.0	321.7	321.1	320.1	320.3	316.2	327.6	328.3	328.4	335.6	333.1	334.5	328.2	329.7	328.3	328.7	329.0
21	326.8	324.9	324.3	324.8	323.8	323.1	323.6	318.7	318.2	319.9	318.3	320.6	317.8	321.0	321.7	320.4	323.2	327.7	327.0	321.0	317.4	319.8	327.4	328.2
22	320.1	307.5	301.8	303.4	298.0	290.6	300.7	296.2	307.8	307.2	305.7	295.1	298.7	298.5	300.0	295.5	302.7	314.7	317.2	304.8	308.3	312.0	308.5	108.7
23	83.7	191.3	79.6	47.9	316.5	320.8	318.9	315.5	313.5	314.4	309.1	303.1	303.7	299.1	299.3	293.8	291.9	292.3	289.3	293.3	302.5	302.3	306.5	311.1
24	308.8	308.0	305.2	301.4	296.0	294.5	294.4	282.0	287.9	298.8	299.4	303.3	297.5	290.5	286.6	291.6	292.3	300.8	299.6	332.1	337.3	311.7	320.5	325.0
25	322.1	333.9	321.1	312.0	304.3	311.8	322.0	322.5	331.0	328.0	325.4	329.9	330.5	344.3	341.2	327.9	301.6	223.8	261.3	279.3	257.1	220.0	308.6	243.4
26	220.6	261.4	327.0	324.4	109.7	303.8	318.6	323.4	329.4	330.8	331.9	330.1	326.6	316.8	310.9	300.3	301.9	299.0	300.1	299.4	302.4	300.5	302.8	301.4
27	302.0	300.7	299.3	302.4	311.4	318.8	319.0	313.4	318.1	309.9	313.2	315.4	306.7	313.6	307.1	316.8	320.2	318.0	316.4	312.1	313.3	313.6	314.5	313.8
28	313.4	312.3	315.4	313.4	323.4	336.4	337.8	333.2	336.5	337.0	336.3	336.8	333.7	349.5	158.1	259.0	321.8	318.6	312.8	312.5	314.0	325.8	322.9	311.9
29	9.8	325.2	329.6	327.2	329.6	325.0	329.8	327.2	336.8	338.5	335.3	334.3	340.6	331.3	335.2	317.3	159.3	117.8	72.7	50.2	282.4	301.9	328.0	330.8
30	335.9	332.6	329.3	333.2	288.2	182.3	268.3	348.7	81.6	11.7	341.3	111.5	106.4	293.7	51.3	109.0	91.0	284.4	307.9	331.1	72.7	324.4	335.6	332.9
31	329.6	340.3	325.0	329.4	328.5	331.4	329.6	331.1	334.5	331.1	332.4	336.4	334.9	331.2	310.2	295.7	289.5	306.9	316.5	298.2	303.2	322.2	318.9	320.9

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	329.9	323.8	333.0	329.5	329.3	328.5	328.0	327.5	326.6	329.7	317.6	314.4	321.0	315.5	309.0	317.7	325.7	328.5	318.4	316.4	322.0	322.9	325.4	324.5
2	311.2	316.0	321.4	298.3	296.9	297.9	299.2	307.3	309.0	311.7	321.9	303.7	298.5	306.6	301.2	315.0	315.8	318.8	310.8	313.1	310.9	308.8	304.7	311.8
3	317.3	313.8	314.7	319.3	322.5	319.7	320.5	310.1	303.7	312.3	307.9	307.9	315.6	314.4	303.8	297.7	293.3	294.3	298.6	301.7	304.4	300.0	306.3	304.5
4	311.5	316.4	319.8	317.0	323.7	324.1	318.7	318.8	310.8	314.2	310.9	303.4	301.2	299.1	300.0	300.7	301.3	311.6	307.6	307.2	306.1	307.7	313.1	315.1
5	316.2	315.8	315.6	313.7	316.2	314.0	315.2	315.8	315.2	309.9	301.7	284.8	280.2	322.6	70.1	69.5	83.4	87.6	80.5	55.8	58.0	17.4	64.8	62.7
6	75.7	56.2	61.6	68.1	67.4	82.1	106.3	87.5	95.1	74.9	92.2	90.1	87.0	66.8	91.5	291.8	320.2	322.3	301.5	312.5	310.0	307.7	306.3	303.1
7	295.9	299.6	307.2	315.5	322.4	323.1	315.1	316.7	321.9	325.4	327.8	324.2	329.7	331.1	330.1	327.7	330.6	327.0	323.9	323.0	323.0	327.3	326.7	321.9
8	323.0	329.1	330.9	325.7	323.7	312.3	310.7	322.3	335.2	330.1	328.5	332.2	65.5	26.7	59.8	54.3	56.8	61.9	47.5	47.8	51.7	56.0	51.8	47.6
9	65.4	69.3	66.0	54.5	64.7	82.4	84.0	68.9	66.9	52.3	56.5	62.5	59.0	29.4	46.8	30.1	19.4	40.4	34.2	34.2	36.9	49.0	56.6	21.1
10	71.0	96.8	84.9	105.1	95.3	74.4	78.6	54.2	85.0	291.0	271.9	257.8	79.3	79.1	115.3	120.8	134.3	104.6	105.1	107.3	109.8	109.6	97.9	98.8
11	89.9	101.4	91.3	98.4	81.8	84.6	90.8	84.4	281.9	256.7	300.5	282.2	280.2	321.7	324.0	323.2	324.4	316.8	320.9	318.4	312.8	301.6	306.1	320.1
12	317.7	309.6	311.7	307.0	309.4	305.7	309.2	304.2	298.9	297.9	292.6	292.1	295.8	311.1	312.4	304.0	300.0	306.3	329.0	337.0	329.4	328.9	318.2	325.0
13	322.6	321.7	324.5	331.1	326.9	331.0	341.4	344.3	323.5	310.7	311.0	67.4	31.0	38.3	83.5	94.9	75.3	281.4	321.7	349.7	354.9	310.6	14.1	331.3
14	0.0	96.6	37.5	315.0	339.4	337.4	327.4	330.4	328.4	333.3	333.1	328.0	344.6	94.9	264.1	311.6	321.2	324.5	325.5	313.7	310.9	309.3	319.0	323.0
15	318.3	325.0	335.2	314.5	317.4	320.5	327.6	319.0	318.9	317.9	276.1	325.4	338.0	336.7	328.5	325.6	334.6	337.6	317.4	92.5	78.8	85.6	87.3	70.3
16	72.1	38.8	292.2	214.0	252.8	290.0	298.7	321.7	77.2	80.8	312.7	331.1	318.8	320.3	296.1	306.5	305.3	319.3	321.4	327.7	323.9	329.0	333.3	329.9
17	340.1	322.0	325.6	324.3	328.2	326.8	327.1	326.9	327.0	324.5	325.9	324.6	332.1	325.3	316.4	312.0	298.3	296.3	308.2	315.2	311.2	314.4	310.8	318.6
18	321.1	320.7	320.3	321.4	317.8	315.3	308.6	312.9	318.0	317.0	311.6	320.1	313.5	304.3	310.0	316.7	310.0	316.1	306.9	313.9	318.5	318.1	315.5	312.6
19	310.7	310.2	314.3	314.7	321.5	317.3	316.1	314.8	312.8	313.5	314.6	315.8	314.5	310.7	311.5	311.1	312.0	314.7	316.7	317.6	316.0	317.7	318.8	313.7
20	315.6	314.6	315.5	314.7	315.0	316.1	313.8	310.5	307.3	302.2	300.1	304.8	303.2	301.3	302.8	303.7	302.8	302.7	304.1	304.2	300.7	301.0	300.2	298.4
21	297.0	297.1	297.8	295.1	293.6	299.9	299.5	300.2	297.3	299.3	300.8	296.8	302.1	308.1	315.9	319.0	319.0	316.7	314.5	314.9	312.8	308.1	314.5	310.6
22	318.3	318.0	304.8	309.0	314.3	306.5	304.6	308.2	313.2	307.0	298.3	311.1	301.8	315.9	317.5	311.0	324.7	321.6	317.4	316.6	316.3	320.8	321.4	319.1
23	309.6	308.8	312.2	316.5	328.8	330.5	316.3	300.6	313.0	299.3	296.3	297.7	235.5	308.1	307.1	305.9	329.8	275.7	196.8	95.2	94.6	88.4	84.0	69.9
24	70.4	65.4	59.0	50.4	41.2	49.0	42.5	24.8	39.9	50.0	51.5	45.5	50.8	71.7	92.2	88.9	118.7	97.8	73.1	358.1	340.4	331.2	333.9	332.0
25	327.5	330.8	329.2	325.0	326.2	328.4	326.8	328.1	325.6	328.8	320.2	318.2	325.2	323.2	307.3	304.4	298.4	299.8	303.7	298.7	303.0	314.1	315.7	310.7
26	311.6	304.5	295.0	297.6	300.1	300.9	305.4	303.2	304.8	303.8	306.4	304.9	301.0	299.7	312.3	322.4	318.0	313.9	312.1	314.8	317.0	316.8	316.1	315.0
27	315.4	311.1	310.8	315.6	313.5	300.3	306.8	305.1	313.1	310.9	305.6	318.8	306.7	312.7	302.7	315.3	313.0	314.9	317.3	316.0	313.0	318.3	317.1	313.9
28	234.5	286.6	323.4	304.4	270.0	263.8	269.1	313.9	269.4	285.7	328.5	323.5	316.0	320.7	300.3	307.6	313.3	311.8	308.9	307.4	305.4	303.7	303.6	304.9
29	312.9	318.4	320.2	320.8	319.3	311.3	303.4	294.1	296.0	298.9	300.9	299.0	299.6	300.6	294.6	294.8	295.5	294.5	296.8	300.0	299.2	299.3	307.6	304.8
30	306.7	300.2	301.4	305.0	304.4	303.6	303.5	308.6	306.8	302.2	303.3	298.0	302.6	297.2	300.3	304.3	324.1	308.9	310.1	315.3	317.7	325.3	304.0	310.4

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Resultant Wind Direction (RMYoung) (Degrees)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	320.5	315.7	319.5	316.3	318.9	318.8	318.3	326.4	316.7	305.7	306.6	330.4	338.7	317.5	349.8	135.1	30.4	337.7	94.2	71.8	53.8	53.3	341.8	350.3
2	4.6	71.4	101.1	103.6	35.1	90.5	112.4	105.5	113.8	119.1	102.1	92.2	43.6	30.4	36.7	29.1	61.2	61.3	58.8	52.7	28.8	68.0	69.2	65.5
3	75.8	78.3	67.9	69.4	66.2	83.8	76.4	63.2	68.6	55.9	55.5	77.3	74.2	64.5	69.7	63.6	61.1	66.7	58.4	68.6	59.3	47.8	53.4	46.3
4	38.5	42.1	348.3	93.3	95.7	111.7	144.1	122.3	118.1	114.4	137.4	108.3	95.7	91.1	83.2	87.9	112.3	118.0	127.8	136.8	107.9	94.7	103.5	107.6
5	123.9	128.0	253.4	55.9	89.4	101.0	340.3	307.0	21.3	149.2	143.7	123.2	68.7	42.2	28.9	52.6	64.9	59.8	25.4	53.3	60.2	71.5	73.5	90.1
6	66.4	79.8	75.4	289.5	308.7	311.7	333.8	329.5	233.6	263.7	157.4	343.5	309.8	295.4	119.5	109.5	100.3	18.8	332.3	330.5	332.0	331.5	331.5	327.9
7	324.0	320.6	319.6	323.9	325.1	324.7	324.3	321.5	319.5	314.4	321.1	324.8	322.7	325.6	318.9	311.4	308.8	319.8	20.1	122.3	133.4	130.1	119.1	126.4
8	92.9	79.4	69.9	83.5	70.9	78.8	58.8	57.2	83.7	69.8	64.2	88.7	83.3	80.7	86.0	94.0	91.2	68.3	58.5	26.2	96.3	249.4	104.7	116.4
9	74.1	289.4	216.6	285.2	125.5	198.8	323.5	330.5	329.4	328.5	322.6	317.9	317.2	308.2	312.8	307.8	308.0	319.7	322.2	321.5	314.6	318.4	318.8	321.1
10	319.0	321.9	324.5	312.4	310.3	315.8	304.3	300.0	301.8	298.2	297.0	298.0	303.3	311.1	314.0	294.2	292.1	300.7	293.3	304.5	298.7	290.7	293.1	295.0
11	293.9	298.7	296.8	300.9	300.9	310.9	317.5	317.1	314.7	317.6	323.7	331.8	324.0	316.7	328.6	324.0	301.3	303.5	309.3	312.6	305.9	292.6	295.1	301.7
12	326.9	318.7	315.7	316.7	311.5	314.2	316.3	316.8	319.8	315.4	347.1	315.7	316.6	318.6	335.7	90.2	75.7	92.1	101.5	105.9	292.7	330.7	15.5	345.0
13	309.3	312.2	321.5	297.8	55.8	109.6	97.3	85.2	305.3	79.5	2.4	309.8	340.7	107.4	313.8	352.2	57.5	310.8	302.7	93.4	353.8	337.8	332.4	117.2
14	320.7	330.2	326.7	38.2	323.9	319.3	90.7	90.7	45.9	99.6	28.7	5.3	90.2	82.6	98.2	99.4	120.9	279.6	129.2	86.3	79.6	78.2	94.6	96.7
15	94.6	92.4	95.8	94.0	95.2	100.4	93.6	93.9	96.6	91.3	94.1	92.6	86.8	136.8	119.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	118.1	135.1	122.7	121.8	115.3	96.9
17	84.9	109.1	130.5	129.5	94.8	86.8	100.7	105.0	102.0	99.0	97.6	103.6	102.6	102.8	105.6	107.9	108.5	108.5	128.7	137.7	100.9	99.2	95.7	20.7
18	24.5	324.1	349.6	104.6	103.6	101.4	99.9	96.3	92.2	93.3	91.8	81.3	85.4	83.8	78.3	78.8	87.5	90.1	80.2	75.0	73.6	81.1	80.1	75.7
19	81.2	80.7	82.7	85.0	82.0	79.8	80.1	77.3	77.3	73.2	71.4	63.0	46.7	43.8	66.7	66.3	71.8	56.1	62.1	56.6	65.9	57.4	62.6	56.8
20	51.5	50.9	50.3	64.6	67.2	98.3	136.2	259.8	92.9	84.1	91.4	180.8	108.3	297.4	282.4	90.1	73.9	325.8	185.6	212.8	339.6	93.6	45.3	315.3
21	310.1	311.8	75.4	330.9	315.8	119.6	91.3	76.0	72.3	122.3	277.0	240.5	341.4	118.1	116.8	60.3	338.7	28.7	93.0	86.7	98.0	325.7	343.4	344.8
22	336.0	336.4	333.9	344.8	325.3	126.0	8.4	104.2	96.8	67.3	313.9	261.5	330.7	135.1	92.6	85.5	119.5	114.7	110.1	105.9	95.1	101.8	102.9	105.4
23	83.9	317.5	73.1	325.5	290.4	267.2	179.6	203.8	159.1	334.1	298.9	312.2	306.0	305.7	304.5	297.4	292.5	295.9	292.6	294.6	293.4	294.3	294.4	290.8
24	290.8	291.0	291.0	296.6	295.3	292.0	293.5	292.4	293.0	297.0	301.4	305.7	307.1	292.0	295.5	299.1	307.2	313.9	305.4	306.2	307.6	310.6	329.0	291.3
25	320.7	100.1	94.7	58.2	60.4	325.7	337.1	58.8	57.4	92.1	295.9	36.0	113.0	109.2	109.5	95.1	89.6	99.8	97.2	335.6	300.2	299.3	294.0	290.8
26	288.3	289.7	288.1	284.6	284.0	284.5	283.7	282.0	293.9	297.3	289.2	287.7	286.9	301.7	316.0	305.8	293.8	293.8	297.8	301.3	306.2	297.1	297.2	313.6
27	313.1	303.0	301.4	293.7	290.3	291.5	300.4	295.6	302.4	302.5	299.6	303.4	298.6	302.8	304.9	304.4	304.7	303.6	304.5	313.5	301.5	302.6	305.0	301.9
28	303.3	299.3	301.5	298.5	298.7	301.3	299.9	300.4	297.7	293.5	301.2	300.6	299.4	301.1	301.6	301.2	302.5	301.3	300.6	300.7	298.4	301.7	300.7	297.9
29	301.7	303.2	305.6	312.4	314.5	314.3	309.7	312.1	312.3	314.0	315.8	314.5	313.6	314.3	312.6	312.0	313.1	307.8	304.5	309.3	299.0	307.5	299.0	308.1
30	308.2	315.0	299.1	310.2	311.7	316.5	316.8	314.5	311.2	316.3	314.9	314.2	313.2	315.1	313.8	315.1	315.6	315.2	314.2	314.0	313.1	315.1	316.1	313.6
31	314.3	313.6	315.9	316.1	316.9	317.0	315.2	318.6	318.2	317.8	316.2	317.1	318.5	318.5	319.3	316.5	319.0	319.0	319.1	317.9	318.0	316.8	317.2	315.4

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

January 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	74.7	86.6	76.6	64.7	65.6	43.7	64.3	81.1	75.8	17.6	32.8	65.3	37.8	52.8	10.8	6.6	5.4	5.7	6.8	6.3	5.4	12.6	7.5	6.3	86.6	5.4	38.0
2	6.2	5.1	7.5	4.4	5.7	6.0	7.4	7.0	4.5	5.8	6.5	5.4	5.1	5.2	5.0	6.1	6.4	6.7	7.7	6.5	5.7	5.7	6.0	5.3	7.7	4.4	6.0
3	5.5	8.8	5.6	4.9	8.2	8.1	14.2	12.7	5.0	7.7	4.8	5.4	5.6	6.6	5.0	6.1	7.5	7.7	8.5	8.2	5.7	5.3	4.7	4.6	14.2	4.6	6.9
4	4.5	5.3	5.2	6.4	6.5	7.4	7.2	7.8	7.2	6.5	7.7	7.2	7.7	7.9	7.7	9.3	7.3	8.3	10.3	11.2	10.9	11.9	12.2	11.0	12.2	4.5	8.1
5	10.2	10.6	10.8	13.2	11.2	8.9	9.1	9.5	9.2	10.5	10.7	7.6	8.6	8.4	8.8	8.7	8.7	8.4	8.5	8.7	9.2	8.6	8.9	8.3	13.2	7.6	9.4
6	9.2	12.4	10.6	11.7	11.2	11.8	11.2	9.9	10.6	10.0	8.4	7.7	9.8	8.4	8.8	7.9	8.5	8.1	7.8	8.0	7.4	8.0	8.1	9.2	12.4	7.4	9.4
7	9.8	9.3	10.8	12.2	11.4	9.4	8.8	8.7	8.6	7.3	7.5	7.8	8.6	8.3	8.3	10.1	9.2	8.7	8.7	7.7	10.2	8.7	7.2	6.9	12.2	6.9	8.9
8	7.4	10.2	9.8	7.9	8.7	6.7	6.3	4.9	5.4	5.1	4.6	4.8	4.6	4.8	3.9	4.5	5.1	4.7	4.7	4.9	5.8	5.1	4.5	4.3	10.2	3.9	5.8
9	4.1	5.2	5.5	5.7	4.8	5.2	6.0	5.3	5.0	5.6	5.7	7.2	7.0	7.5	7.6	8.3	9.0	9.8	10.4	10.0	10.5	10.1	10.5	11.4	11.4	4.1	7.4
10	10.8	11.1	10.2	10.3	10.2	9.6	10.0	11.4	10.2	8.6	9.0	10.7	11.6	13.0	13.6	8.2	8.3	7.9	9.5	8.9	8.6	11.2	10.6	10.0	13.6	7.9	10.1
11	10.5	9.8	10.5	12.5	12.3	11.1	13.4	10.6	9.7	8.9	10.6	8.9	9.0	10.1	11.1	11.1	10.0	7.8	6.4	5.7	5.7	4.9	5.4	5.9	13.4	4.9	9.2
12	4.7	4.6	4.4	4.7	4.8	4.6	4.5	4.6	5.5	6.1	6.4	5.2	5.6	5.9	4.5	4.6	5.8	6.4	6.7	7.2	7.8	9.3	10.2	10.2	10.2	4.4	6.0
13	9.0	10.0	9.2	10.3	10.8	10.8	11.2	9.9	9.7	11.9	9.2	7.2	7.9	8.8	9.6	10.2	10.9	12.6	10.8	10.2	10.6	8.4	5.2	5.6	12.6	5.2	9.6
14	5.7	7.0	7.7	6.9	6.0	5.8	8.4	10.4	49.4	32.4	39.5	48.7	42.2	43.7	87.0	77.2	37.3	54.1	56.4	38.7	16.1	21.8	21.7	23.8	87.0	5.7	31.2
15	36.6	26.1	25.9	24.0	25.7	19.6	42.3	63.1	16.4	18.4	12.4	26.5	17.4	6.7	8.8	15.9	17.3	16.3	92.3	46.2	103.5	80.0	48.4	19.5	103.5	6.7	33.7
16	49.2	5.4	16.6	17.4	29.0	54.9	8.9	15.5	11.3	9.6	7.9	10.9	17.5	13.1	12.3	12.5	20.5	14.4	17.6	66.6	15.8	9.5	28.6	9.7	66.6	5.4	19.8
17	88.3	54.3	51.2	17.0	27.2	20.9	6.8	27.8	27.5	39.4	33.7	37.7	37.0	47.0	44.3	62.4	52.5	50.9	51.9	62.5	94.0	78.0	100.9	63.7	100.9	6.8	49.0
18	44.8	24.4	19.7	16.4	81.4	45.0	48.2	12.9	79.0	63.9	20.4	60.5	90.1	81.2	14.8	67.2	59.6	15.5	11.5	7.1	36.8	8.1	11.5	12.8	90.1	7.1	38.9
19	18.1	14.8	8.1	9.1	8.4	14.6	17.7	17.1	20.7	18.6	7.0	14.7	13.6	5.7	12.8	12.2	16.9	19.5	19.3	13.0	23.1	29.8	47.9	24.5	47.9	5.7	17.0
20	26.6	29.2	33.3	22.6	29.4	20.5	22.4	21.9	21.7	22.4	20.5	22.9	24.2	25.7	31.2	22.6	21.9	64.9	38.2	9.7	10.9	12.2	52.6	83.6	83.6	9.7	28.8
21	19.5	12.2	43.5	17.1	30.7	18.9	24.7	40.1	70.8	4.6	5.2	19.4	29.1	23.0	22.9	27.9	23.3	29.7	21.1	22.8	20.6	8.5	7.9	7.1	70.8	4.6	22.9
22	13.1	16.9	18.3	40.7	31.3	17.8	42.1	62.7	34.1	22.9	74.6	12.6	11.0	11.8	6.4	6.3	6.2	9.8	19.1	10.9	9.6	9.4	10.9	20.0	74.6	6.2	21.6
23	21.1	11.9	11.4	10.6	5.5	7.6	6.5	6.6	0.0	0.0	9.0	9.6	7.1	10.6	11.7	9.8	8.0	10.9	9.0	7.7	13.4	9.5	9.9	5.7	21.1	0.0	8.9
24	4.6	5.6	5.9	5.2	5.8	11.1	60.7	53.3	42.9	79.2	64.5	30.4	42.7	15.4	11.7	10.7	28.4	64.9	43.1	71.4	53.0	20.2	17.2	18.1	79.2	4.6	31.9
25	21.1	16.5	61.8	27.9	12.3	9.7	18.6	17.9	23.6	10.9	12.5	8.9	9.3	8.6	10.0	7.6	6.7	8.1	11.0	10.0	9.8	8.5	10.5	13.3	61.8	6.7	14.8
26	11.0	9.7	7.1	10.9	11.7	11.0	5.8	8.5	6.9	5.8	7.0	6.0	6.6	4.4	4.4	6.1	11.1	8.8	7.0	7.8	9.1	13.1	69.6	41.9	69.6	4.4	12.1
27	10.1	12.5	15.2	10.8	17.3	9.3	51.2	66.9	89.4	72.3	44.0	67.4	44.7	25.5	32.5	51.1	39.5	51.9	34.4	0.0	0.0	38.3	50.8	45.7	89.4	0.0	36.7
28	41.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	23.1	0.0	6.9	7.3	6.2	19.0	8.0	17.0	15.8	43.0	20.0	0.0	19.6	19.8	43.0	0.0	10.7
29	16.1	15.4	13.2	18.5	16.9	13.1	18.3	12.8	7.9	10.5	8.9	9.1	10.4	10.7	7.0	7.2	88.3	76.7	71.2	54.6	32.7	85.0	17.1	45.9	88.3	7.0	27.8
30	32.1	15.6	13.9	5.6	6.2	7.8	6.0	5.1	13.3	57.5	60.9	0.0	6.8	6.6	6.1	5.5	4.8	5.0	5.6	7.5	7.8	6.7	7.5	8.4	60.9	0.0	12.6
31	8.6	7.0	7.2	6.8	8.2	5.8	4.8	5.9	5.9	6.3	6.3	11.0	11.2	9.6	9.4	7.1	9.0	9.4	10.4	10.0	10.2	7.0	10.3	11.1	11.2	4.8	8.3
Max.	**88.3**	**86.6**	**76.6**	**64.7**	**81.4**	**54.9**	**64.3**	**81.1**	**89.4**	**79.2**	**74.6**	**67.4**	**90.1**	**81.2**	**87.0**	**77.2**	**88.3**	**76.7**	**92.3**	**71.4**	**103.5**	**85.0**	**100.9**	**83.6**	**103.5**		
Min.	**4.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.6**	**0.0**	**4.6**	**4.4**	**3.9**	**4.5**	**4.8**	**4.7**	**4.7**	**0.0**	**0.0**	**0.0**	**4.5**	**4.3**		**0.0**	
Avg.	**20.5**	**15.3**	**17.3**	**14.1**	**16.9**	**14.1**	**18.3**	**20.4**	**22.4**	**18.9**	**18.7**	**17.6**	**18.0**	**16.3**	**14.3**	**17.1**	**18.1**	**20.3**	**20.7**	**19.1**	**19.0**	**17.9**	**20.8**	**18.5**			**18.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

February 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	63.4	75.1	54.1	7.1	7.4	10.6	5.9	7.3	18.2	24.3	12.1	10.2	33.7	14.2	16.9	21.1	62.7	90.4	10.7	6.2	7.0	9.4	7.7	10.0	90.4	5.9	24.4
2	8.6	6.7	8.9	7.9	6.8	10.8	26.1	32.3	22.4	7.2	10.6	7.8	5.4	6.3	7.8	5.7	7.5	10.8	14.6	14.8	10.0	12.5	12.6	7.9	32.3	5.4	11.3
3	12.7	8.8	8.7	7.7	8.9	7.1	7.2	7.8	7.0	5.5	6.2	5.7	6.3	5.6	3.8	3.8	3.4	6.2	6.5	9.9	10.4	6.8	5.7	6.1	12.7	3.4	7.0
4	5.5	6.2	6.9	6.4	6.2	13.8	15.3	10.4	7.0	8.7	5.1	6.2	11.9	13.7	10.3	6.0	4.6	4.3	4.3	4.3	7.0	8.2	7.9	4.5	15.3	4.3	7.7
5	5.4	5.2	4.6	5.9	6.5	8.3	8.4	8.6	7.7	6.3	5.7	4.4	3.9	4.9	4.7	3.4	6.9	6.3	6.7	66.3	8.2	14.6	35.1	10.1	66.3	3.4	10.3
6	7.7	9.2	8.0	7.8	6.7	6.2	6.6	7.7	8.0	9.5	12.2	9.9	7.4	4.5	8.4	5.0	8.6	6.9	9.0	11.3	7.3	5.6	4.1	4.4	12.2	4.1	7.6
7	4.4	3.4	3.9	4.3	4.7	5.0	4.6	5.4	4.2	8.3	7.3	8.6	11.0	8.7	23.9	13.2	8.7	7.8	34.3	6.7	6.9	9.8	8.0	9.3	34.3	3.4	8.9
8	9.5	6.9	12.1	26.5	36.4	55.1	70.0	65.8	86.8	62.3	62.9	35.0	41.5	54.3	46.5	44.4	49.2	44.7	45.1	47.5	55.0	63.4	70.5	91.8	91.8	6.9	49.3
9	67.0	79.6	57.5	47.4	48.5	55.0	25.0	21.6	26.1	25.7	23.7	23.8	40.8	29.1	62.1	32.6	25.6	8.9	11.5	14.0	8.0	12.2	10.4	9.4	79.6	8.0	31.9
10	27.5	50.7	35.1	13.4	12.1	16.1	35.4	32.1	18.3	25.6	8.6	12.7	12.1	17.9	20.8	24.3	84.4	28.5	6.5	15.0	12.4	8.4	11.0	18.2	84.4	6.5	22.8
11	16.5	27.0	14.7	15.4	23.6	20.0	7.3	7.2	35.6	9.3	19.9	22.8	10.9	10.0	9.3	11.4	8.7	7.0	4.9	7.2	7.5	5.7	5.2	5.8	35.6	4.9	13.0
12	5.6	3.6	4.7	5.2	6.8	6.8	7.7	11.0	12.4	9.1	8.8	7.9	6.2	6.7	5.1	3.9	6.1	6.2	6.4	10.5	9.7	13.4	31.8	37.6	37.6	3.6	9.7
13	21.5	7.5	11.3	30.2	58.1	53.6	45.8	43.5	50.4	62.2	68.7	73.9	81.2	59.5	59.1	48.5	57.5	50.6	46.3	51.1	58.9	61.7	77.8	72.0	81.2	7.5	52.1
14	59.1	50.3	55.4	56.2	57.9	59.1	66.5	52.0	60.5	64.9	46.9	7.5	6.8	8.4	8.9	9.5	10.5	10.9	11.8	10.3	7.6	7.9	8.9	8.7	66.5	6.8	31.1
15	4.9	5.3	5.3	5.8	7.1	9.7	16.1	14.9	14.2	13.3	13.5	10.8	11.0	10.1	13.8	8.3	8.1	5.6	5.0	10.3	15.8	68.2	36.1	43.2	68.2	4.9	14.8
16	57.8	80.3	73.2	71.0	66.3	52.1	52.7	60.1	85.0	66.2	59.8	73.9	92.8	95.4	98.7	68.7	96.2	87.1	20.3	22.2	40.4	65.2	34.3	11.2	98.7	11.2	63.8
17	19.5	12.6	43.6	74.2	26.3	15.8	41.7	57.1	46.6	69.9	50.7	48.3	38.5	55.1	62.1	69.3	58.0	40.4	21.8	10.5	6.4	6.0	7.7	8.2	74.2	6.0	37.1
18	10.1	7.1	9.2	10.4	9.2	8.9	8.6	8.3	8.1	6.8	8.2	12.2	8.4	7.5	5.8	8.5	7.2	9.0	15.3	10.6	16.9	20.9	48.2	37.4	48.2	5.8	12.6
19	20.0	35.5	45.9	23.2	25.2	51.7	66.7	57.0	36.0	37.2	43.8	37.3	39.2	44.8	52.9	76.3	60.3	49.7	48.6	49.0	46.7	46.0	44.8	31.5	76.3	20.0	44.6
20	24.5	33.3	8.5	9.1	7.2	5.0	6.6	7.4	6.9	20.8	38.9	26.3	27.9	21.4	46.1	47.2	38.1	48.1	52.6	56.3	44.6	45.5	70.4	101.9	101.9	5.0	33.1
21	83.3	61.4	66.9	81.4	79.6	84.9	72.1	93.3	76.1	49.0	38.5	47.4	51.1	48.5	64.2	38.3	26.6	41.5	31.4	37.3	45.4	40.7	37.1	50.0	93.3	26.6	56.1
22	20.6	33.7	37.5	44.9	46.1	61.4	86.2	68.2	63.9	54.6	40.2	31.9	19.1	10.2	8.5	7.3	7.6	8.4	7.4	12.9	22.2	9.9	12.9	22.7	86.2	7.3	30.8
23	12.8	15.1	12.1	60.5	53.4	13.2	57.5	25.4	35.1	56.3	30.6	12.1	5.2	8.7	14.9	19.7	5.6	6.1	67.6	12.0	27.5	10.8	5.3	9.6	67.6	5.2	24.0
24	13.7	18.7	4.5	8.7	12.1	6.0	5.2	5.2	4.7	5.2	4.1	4.6	4.7	3.9	4.2	3.7	4.2	4.0	3.5	3.7	4.0	5.5	5.6	8.9	18.7	3.5	6.2
25	8.2	8.8	8.8	10.2	8.8	11.8	9.6	8.6	7.6	10.4	7.9	7.5	7.7	29.6	71.5	48.2	42.1	51.2	46.3	53.7	50.8	50.9	54.1	61.5	71.5	7.5	28.2
26	55.8	49.0	49.5	69.1	40.3	53.5	49.7	48.0	71.8	63.7	57.8	73.0	70.0	80.1	44.4	27.5	8.4	16.4	17.1	18.0	9.6	8.8	12.0	9.9	80.1	8.4	41.8
27	10.3	8.5	15.2	26.5	8.0	5.9	12.2	8.3	53.7	44.6	10.4	30.6	13.3	12.7	36.2	14.3	11.0	56.0	48.3	71.4	82.7	81.1	53.3	59.8	82.7	5.9	32.3
28	81.8	67.7	67.9	65.9	78.7	74.9	47.4	52.8	37.0	43.0	102.4	66.7	20.6	21.2	28.7	33.4	50.3	69.5	21.2	6.1	6.4	5.5	6.0	5.8	102.4	5.5	44.2
29	5.9	8.9	8.8	21.4	13.6	38.2	13.7	28.9	6.3	8.2	7.5	5.3	4.7	9.1	6.7	4.2	5.9	5.9	5.2	6.5	6.8	6.1	5.4	4.0	38.2	4.0	9.9
Max.	**83.3**	**80.3**	**73.2**	**81.4**	**79.6**	**84.9**	**86.2**	**93.3**	**86.8**	**69.9**	**102.4**	**73.9**	**92.8**	**95.4**	**98.7**	**76.3**	**96.2**	**90.4**	**67.6**	**71.4**	**82.7**	**81.1**	**77.8**	**101.9**	**102.4**		
Min.	**4.4**	**3.4**	**3.9**	**4.3**	**4.7**	**5.0**	**4.6**	**5.2**	**4.2**	**5.2**	**4.1**	**4.4**	**3.9**	**3.9**	**3.8**	**3.4**	**3.4**	**4.0**	**3.5**	**3.7**	**4.0**	**5.5**	**4.1**	**4.0**		**3.4**	
Avg.	**25.6**	**27.1**	**25.6**	**28.4**	**26.6**	**28.3**	**30.3**	**29.5**	**31.6**	**30.3**	**28.0**	**25.0**	**23.9**	**24.2**	**29.2**	**24.4**	**26.7**	**27.2**	**21.7**	**22.6**	**22.2**	**24.5**	**25.2**	**26.3**			**26.4**

Total Hours in Month 744 **Hours Data Available** 696 **Data Recovery** 93.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

March 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	4.4	4.2	4.4	5.3	5.2	5.5	5.4	4.9	8.7	13.1	85.9	89.1	84.7	96.3	91.4	94.9	100.9	91.2	61.3	58.1	56.9	58.9	75.0	68.4	100.9	4.2	48.9
2	80.0	69.5	76.2	44.9	48.9	50.8	74.7	51.1	13.3	12.4	32.5	62.8	65.5	50.7	45.5	34.9	47.9	41.9	51.8	34.0	21.0	27.5	67.2	49.9	80.0	12.4	48.1
3	9.1	18.8	33.4	17.4	6.1	4.7	32.1	44.9	18.2	19.4	20.2	14.1	15.4	17.4	22.6	25.8	29.5	38.3	25.1	25.0	20.9	13.9	11.1	10.2	44.9	4.7	20.6
4	7.9	7.2	6.8	14.4	12.5	15.2	8.0	8.3	7.5	7.6	7.5	8.6	18.2	23.3	22.0	24.6	21.5	26.7	24.6	19.8	16.4	16.5	37.4	36.2	37.4	6.8	16.6
5	39.6	43.2	49.1	43.6	49.7	41.8	41.9	44.5	46.8	49.3	46.9	45.7	39.0	46.1	49.1	44.5	26.9	24.4	13.0	10.8	7.5	7.8	8.0	5.7	49.7	5.7	34.4
6	12.2	12.1	11.4	7.7	7.9	8.7	8.7	11.8	12.3	15.3	9.8	14.3	19.9	24.8	24.4	35.4	42.8	36.1	61.8	85.7	58.7	72.4	93.6	77.8	93.6	7.7	31.9
7	95.3	49.8	93.5	80.6	66.0	83.2	9.8	6.8	7.1	9.1	7.6	6.5	10.2	5.8	11.7	10.7	15.3	11.7	15.4	13.8	14.2	12.8	7.4	6.4	95.3	5.8	27.1
8	8.8	14.9	11.3	9.6	9.2	90.3	50.2	79.8	30.9	21.6	26.2	85.2	47.7	53.5	84.2	76.0	72.4	84.0	80.8	69.5	79.5	84.9	86.5	65.2	90.3	8.8	55.1
9	89.9	81.9	90.5	86.3	76.8	86.5	85.7	88.8	96.1	59.9	63.7	95.2	87.1	77.8	73.7	55.4	40.9	35.0	12.2	11.9	6.4	6.6	10.8	19.9	96.1	6.4	60.0
10	84.3	28.2	50.4	78.3	34.6	13.7	6.1	9.1	17.7	12.9	7.5	9.4	5.4	4.8	3.9	6.8	4.0	4.9	8.5	7.3	6.5	8.1	8.4	4.9	84.3	3.9	17.7
11	6.1	7.3	7.6	9.2	9.5	9.3	10.4	10.1	9.5	10.4	10.6	10.3	10.5	10.3	9.3	9.7	11.9	13.5	12.4	10.7	10.7	11.8	11.5	10.6	13.5	6.1	10.1
12	12.2	11.5	9.6	9.4	9.2	9.0	7.2	4.3	3.9	5.0	4.2	4.8	7.4	6.5	6.9	6.2	6.9	6.4	4.9	4.8	4.4	4.2	4.4	4.7	12.2	3.9	6.6
13	4.2	4.6	5.0	5.5	5.7	9.5	10.3	10.2	9.5	9.2	10.4	11.9	13.9	14.1	11.7	11.4	11.5	11.2	10.2	8.4	9.3	9.7	8.1	5.4	14.1	4.2	9.2
14	3.9	3.3	3.3	3.6	5.8	7.7	9.9	9.5	16.7	25.8	18.6	10.0	13.4	8.8	17.1	81.1	19.8	8.1	10.9	9.3	15.6	32.0	29.6	25.2	81.1	3.3	16.2
15	36.5	47.8	77.8	72.9	64.5	54.1	57.6	46.5	32.3	45.5	60.1	54.7	61.3	60.8	74.7	50.0	70.2	70.6	70.9	47.7	61.1	40.1	43.1	37.2	77.8	32.3	55.8
16	75.8	62.3	68.3	31.3	72.3	61.2	82.1	49.2	32.0	81.2	50.8	35.5	89.3	35.0	6.0	9.2	10.3	11.3	14.6	14.5	16.1	27.8	11.4	9.2	89.3	6.0	39.9
17	12.6	15.2	12.9	6.6	6.3	6.9	6.4	8.4	9.3	6.1	8.5	12.7	9.1	8.4	8.3	9.5	9.9	10.3	13.1	16.2	14.9	12.8	13.9	16.0	16.2	6.1	10.6
18	13.4	11.0	12.0	11.2	11.0	9.4	11.3	8.5	8.3	10.6	6.7	8.6	9.6	12.9	9.7	12.2	13.4	14.6	10.5	10.3	13.2	13.9	10.8	12.5	14.6	6.7	11.1
19	11.9	10.6	8.6	8.6	8.8	8.4	9.5	10.4	9.0	8.5	9.1	9.3	10.8	13.2	12.4	10.4	10.4	9.0	10.3	10.1	9.8	10.5	10.7	13.3	13.3	8.4	10.1
20	10.8	12.0	11.5	11.1	11.8	10.5	7.2	5.6	4.5	3.9	4.5	5.7	5.2	5.8	4.5	5.2	4.2	4.4	4.7	4.7	3.8	3.6	4.0	4.3	12.0	3.6	6.4
21	4.7	4.9	4.5	5.1	4.3	4.7	5.7	23.5	38.1	91.4	74.1	33.4	33.6	77.8	72.8	37.9	44.4	23.8	59.8	30.8	45.8	100.2	83.2	87.1	100.2	4.3	41.3
22	87.6	95.9	69.6	42.1	25.3	59.7	24.0	9.9	14.1	11.7	7.9	5.8	7.7	4.5	4.4	4.7	5.1	4.6	4.3	4.6	5.1	5.2	6.7	4.5	95.9	4.3	21.5
23	4.5	3.9	4.0	4.0	4.5	5.8	4.2	4.8	5.2	7.0	6.9	5.7	7.0	7.3	9.8	10.8	9.7	9.5	10.1	10.2	9.5	7.9	8.4	8.5	10.8	3.9	7.0
24	8.5	9.0	6.5	5.2	5.6	5.6	4.0	3.7	4.7	3.6	4.6	4.1	4.6	5.0	5.0	5.2	5.3	4.6	4.3	3.9	5.0	4.7	5.9	11.0	11.0	3.6	5.4
25	72.9	21.9	11.8	8.9	9.6	12.5	4.9	6.8	10.3	8.9	16.1	12.1	8.3	5.9	5.4	5.2	4.9	4.0	4.5	4.5	4.6	4.3	4.2	6.8	72.9	4.0	10.8
26	3.9	3.5	3.3	3.9	3.6	3.7	4.9	6.6	5.7	7.2	5.5	6.4	4.7	3.8	4.4	5.2	5.1	6.6	8.1	8.7	6.8	7.7	9.6	9.8	9.8	3.3	5.8
27	11.1	12.1	12.8	13.0	11.8	13.3	12.8	10.8	12.0	13.6	12.5	10.2	8.0	8.4	9.4	8.8	9.5	9.9	9.2	9.9	10.8	10.0	8.4	9.5	13.6	8.0	10.7
28	7.8	7.5	6.1	5.3	5.1	5.0	5.2	4.8	5.3	5.9	4.0	4.7	4.0	4.7	4.0	3.6	4.2	4.8	6.2	10.2	10.1	15.6	73.2	51.4	73.2	3.6	10.8
29	26.6	16.8	23.8	31.6	14.8	15.6	18.5	17.3	19.7	20.4	13.4	23.0	17.1	9.3	14.7	23.1	22.4	22.8	13.2	11.4	5.2	5.3	7.4	19.4	31.6	5.2	17.2
30	30.6	20.2	10.5	7.9	11.1	8.6	8.5	10.3	14.1	16.6	10.3	17.5	13.3	12.3	10.5	12.4	14.3	12.3	10.2	15.2	22.9	19.1	19.5	17.9	30.6	7.9	14.4
31	15.8	15.2	16.8	19.0	11.3	13.8	12.1	9.5	13.7	17.9	22.6	8.4	9.7	9.6	13.0	8.8	14.8	13.6	19.4	17.6	10.3	7.3	7.9	8.2	22.6	7.3	13.2
Max.	**95.3**	**95.9**	**93.5**	**86.3**	**76.8**	**90.3**	**85.7**	**88.8**	**96.1**	**91.4**	**85.9**	**95.2**	**89.3**	**96.3**	**91.4**	**94.9**	**100.9**	**91.2**	**80.8**	**85.7**	**79.5**	**100.2**	**93.6**	**87.1**	**100.9**		
Min.	**3.9**	**3.3**	**3.3**	**3.6**	**3.6**	**3.7**	**4.0**	**3.7**	**3.9**	**3.6**	**4.0**	**4.1**	**4.0**	**3.8**	**3.9**	**3.6**	**4.0**	**4.0**	**4.3**	**3.9**	**3.8**	**3.6**	**4.0**	**4.3**		**3.3**	
Avg.	**28.8**	**23.4**	**26.2**	**22.7**	**20.3**	**23.7**	**20.6**	**20.0**	**17.3**	**20.4**	**21.6**	**23.4**	**23.9**	**23.4**	**24.0**	**23.9**	**22.9**	**21.6**	**21.5**	**19.3**	**18.8**	**21.4**	**25.4**	**23.1**			**22.4**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

April 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.4	14.3	22.4	23.6	23.4	20.4	11.4	19.8	25.7	25.8	23.9	21.8	25.1	28.0	45.8	35.8	48.0	44.1	43.5	58.3	60.0	52.2	61.0	80.9	80.9	9.4	34.3
2	34.8	10.4	3.4	4.0	4.0	5.2	4.5	4.1	4.7	4.8	5.2	3.9	5.5	5.3	17.6	28.0	11.4	7.9	12.0	8.3	7.8	11.3	9.9	9.1	34.8	3.4	9.3
3	8.8	7.6	12.9	16.5	7.8	9.7	17.9	22.2	41.3	63.5	14.7	20.3	13.3	14.4	13.7	9.9	7.0	12.1	8.7	7.3	8.3	8.2	8.6	9.8	63.5	7.0	15.2
4	7.6	5.7	8.5	7.5	9.3	9.5	9.3	15.6	20.3	20.8	17.3	15.5	9.7	14.9	23.2	29.0	33.8	19.5	37.0	59.1	14.3	24.2	5.2	5.8	59.1	5.2	17.6
5	6.2	6.7	11.3	9.6	8.2	9.9	7.3	5.7	7.1	10.3	9.1	8.4	7.8	10.7	9.1	7.7	9.3	8.7	8.4	8.7	7.9	8.2	8.8	8.7	11.3	5.7	8.5
6	9.5	10.1	7.7	7.5	4.8	8.2	7.3	19.4	0.4	0.4	0.4	4.5	3.2	1.9	0.3	0.4	0.3	0.4	0.4	0.0	0.4	0.4	0.2	0.1	19.4	0.0	3.7
7	0.1	0.2	1.9	0.3	0.3	0.3	2.6	1.6	2.0	0.5	0.5	5.6	7.5	11.1	9.2	9.1	9.1	6.3	6.0	3.3	3.2	1.9	3.7	0.2	11.1	0.1	3.6
8	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	2.8	0.5	0.5	13.0	0.2			23.3	18.2	16.9	64.8	29.7	45.5	14.6	6.0	5.4	64.8	0.2	11.1
9	6.0	9.0	6.2	6.9	7.5	7.9	8.8	9.1	10.2	12.2	13.0	18.1	13.8	11.6	14.1	10.6	5.6	6.0	6.0	6.4	6.5	5.9	5.8	6.0	18.1	5.6	8.9
10	5.5	7.8	7.0	7.1	7.3	7.8	9.6	8.5	8.0	8.8	7.5	7.5	14.4	12.3	11.7	11.7	9.6	10.7	10.9	9.7	9.9	10.7	10.0	10.3	14.4	5.5	9.4
11	9.5	25.3	35.3	50.9	57.9	66.5	59.3	79.8	80.7	78.5	70.8	73.1	73.0	67.9	34.3	33.3	39.5	44.7	48.5	49.5	61.6	73.5	67.1	46.5	80.7	9.5	55.3
12	58.7	53.1	66.0	75.6	70.7	73.0	83.8	50.5	36.3	35.2	42.0	50.0	44.8	26.3	36.0	35.3	25.2	13.7	33.2	59.1	67.2	28.0	38.2	49.4	83.8	13.7	48.0
13	46.8	43.0	23.0	27.5	37.0	33.7	25.6	31.3	26.0	21.6	22.6	11.3	14.8	79.3	41.6	27.4	11.8	9.8	7.6	6.4	5.7	5.6	6.7	6.8	79.3	5.6	23.9
14	9.9	10.0	10.1	10.7	9.4	7.5	9.8	6.0	7.5	7.3	7.8	6.9	6.6	5.6	6.0	5.9	6.1	5.7	6.9	6.6	7.6	9.3	10.1	9.2	10.7	5.6	7.9
15	16.4	16.9	18.6	6.4	4.7	8.9	57.0	25.7	18.3	14.1	74.6	5.1	7.0	12.3	15.7	6.3	5.7	6.1	5.9	6.3	5.9	6.0	6.3	7.6	74.6	4.7	14.9
16	14.8	11.5	10.7	17.9	16.2	14.9	15.3	12.4	10.1	6.8	7.0	8.5	8.8	8.1	9.2	8.7	7.0	6.9	6.8	6.8	8.3	9.4	6.5	7.2	17.9	6.5	10.0
17	7.7	7.5	7.7	8.2	8.5	7.3	8.3	7.4	8.9	14.0	23.3	15.3	8.6	13.1	8.6	10.2	13.6	13.9	15.4	13.5	12.8	11.1	11.8	15.1	23.3	7.3	11.3
18	10.3	10.1	8.8	22.9	22.2	10.3	10.0	15.2	77.2	7.9	58.5	11.9	9.9	7.5	7.0	7.4	7.3	9.7	5.4	14.6	12.7	28.1	14.8	87.8	87.8	5.4	19.9
19	64.0	17.3	13.7	14.2	11.3	11.4	8.7	41.7	13.2	10.1	7.3	3.9	6.1	8.3	7.5	7.9	6.0	9.8	6.8	6.7	4.7	7.9	6.0	6.9	64.0	3.9	12.5
20	10.0	5.1	8.0	11.6	7.3	6.9	9.2	5.7	4.5	8.3	7.3	5.0	4.1	3.1	3.0	3.3	3.5	3.5	5.9	7.5	7.5	4.4	4.4	4.3	11.6	3.0	6.0
21	6.1	6.2	9.6	7.4	4.3	4.5	4.0	4.9	6.0	5.5	2.9	2.7	2.3	2.6	2.8	3.9	3.4	7.5	3.7	8.0	9.9	8.3	4.8	8.0	9.9	2.3	5.4
22	7.4	9.3	11.7	51.5	13.0	10.4	77.1	7.6	7.0	69.2	28.6	47.8	10.7	7.3	8.2	4.8	4.6	16.2	10.3	10.5	14.8	65.8	42.6	8.3	77.1	4.6	22.7
23	39.6	8.4	62.4	35.5	7.3	21.5	13.2	9.5	6.8	7.5	9.5	7.2	4.8	4.7	4.6	4.9	5.8	4.6	5.2	5.1	7.3	8.7	9.1	9.8	62.4	4.6	12.6
24	9.7	12.6	9.2	9.4	10.5	11.7	10.6	13.5	13.7	12.0	11.7	12.0	15.0	14.5	13.4	10.4	12.5	11.5	12.4	14.7	8.6	7.6	9.0	4.8	15.0	4.8	11.3
25	6.1	11.4	9.2	5.4	8.8	5.9	7.0	6.1	6.1	5.0	5.4	6.1	5.8	7.0	6.1	5.0	5.7	6.2	10.7	9.4	12.3	10.3	9.7	8.9	12.3	5.0	7.5
26	8.1	10.7	14.1	8.3	6.3	7.2	9.2	7.7	8.7	9.1	10.8	10.4	10.3	11.3	9.9	6.3	5.7	4.5	4.2	3.7	5.0	3.9	4.7	5.5	14.1	3.7	7.7
27	6.2	10.1	7.6	6.2	6.4	6.1	10.4	7.4	7.9	8.3	9.2	8.3	10.8	11.8	8.1	7.4	10.4	9.5	10.7	6.2	5.4	6.0	5.0	5.0	11.8	5.0	7.9
28	6.3	7.0	6.0	6.7	5.9	5.3	4.6	5.3	7.0	8.5	8.8	8.2	7.5	10.3	12.2	9.9	9.3	13.0	14.3	12.8	11.7	12.3	9.1	10.4	14.3	4.6	8.8
29	9.6	9.2	9.3	9.8	9.6	9.5	8.5	9.4	7.2	5.1	5.4	7.5	8.1	8.8	8.6	8.2	8.4	8.1	7.4	7.5	7.1	5.6	4.6	4.3	9.8	4.3	7.8
30	5.6	5.1	5.7	7.9	6.0	7.5	7.8	10.3	5.3	5.5	11.8	8.9	40.9	76.9	6.8	5.6	70.5	5.8	11.0	17.6	12.4	8.2	15.9	91.6	91.6	5.1	18.8
Max.	**64.0**	**53.1**	**66.0**	**75.6**	**70.7**	**73.0**	**83.8**	**79.8**	**80.7**	**78.5**	**74.6**	**73.1**	**73.0**	**79.3**	**45.8**	**35.8**	**70.5**	**44.7**	**64.8**	**59.1**	**67.2**	**73.5**	**67.1**	**91.6**	**91.6**		
Min.	**0.1**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**2.7**	**0.2**	**1.9**	**0.3**	**0.4**	**0.3**	**0.4**	**0.4**	**0.0**	**0.4**	**0.4**	**0.2**	**0.1**		**0.0**	
Avg.	**14.7**	**12.1**	**14.3**	**15.9**	**13.2**	**13.7**	**17.3**	**15.5**	**16.0**	**16.2**	**17.2**	**14.3**	**13.3**	**17.1**	**13.6**	**12.6**	**13.8**	**11.4**	**14.3**	**15.5**	**15.1**	**15.3**	**13.5**	**17.8**			**14.7**

Total Hours in Month 744 **Hours Data Available** 718 **Data Recovery** 96.5%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

May *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.5	4.8	4.2	14.4	3.6	3.2	4.8	4.1	6.6	9.0	8.3	7.9	4.7	3.8	4.4	8.8	9.1	10.0	10.2	8.6	8.6	8.4	15.7	9.9	15.7	3.2	7.5
2	13.3	9.5	7.0	7.3	6.4	8.2	10.4	4.7	7.8	4.6	4.6	7.4	9.7	12.9	6.0	5.1	5.6	4.5	6.1	5.1	12.6	16.9	8.9	9.7	16.9	4.5	8.1
3	6.6	13.2	19.2	36.6	60.9	8.5	9.7	54.9	47.8	58.4	14.6	4.3	32.6	44.9	31.5	6.8	5.9	47.8	52.3	20.3	35.9	37.9	44.7	43.4	60.9	4.3	30.8
4	43.0	49.1	50.8	44.7	47.4	48.1	46.7	50.8	46.8	50.2	51.2	36.8	38.6	59.7	87.9	54.3	24.6	42.1	70.0	73.3	88.5	10.2	7.7	7.3	88.5	7.3	47.1
5	4.2	3.6	6.0	4.9	5.5	5.3	8.0	6.7	4.6	7.5	5.9	4.3	5.8	9.2	4.5	8.0	6.4	6.1	5.9	4.9	6.3	19.2	7.6	39.7	39.7	3.6	7.9
6	40.8	19.8	20.3	74.9	13.0	9.0	19.4	70.9	25.1	59.3	8.9	7.3	7.1	16.5	8.4	6.1	6.1	5.9	3.9	7.8	4.7	4.2	4.6	2.9	74.9	2.9	18.6
7	8.3	4.0	7.3	14.4	15.5	8.6	18.9	11.7	19.0	22.3	23.2	29.4	44.1	40.5	36.6	24.3	23.2	18.8	18.9	9.9	7.8	8.4	20.0	13.1	44.1	4.0	18.7
8	19.3	33.3	44.5	47.3	41.9	42.0	45.6	34.9	38.2	38.3	41.0	36.2	29.4	20.3	28.3	25.0	30.9	35.7	38.2	34.6	45.9	38.1	40.7	49.2	49.2	19.3	36.6
9	45.6	54.7	47.2	48.7	46.1	47.0	47.4	49.1	57.5	47.5	43.4	53.4	73.8	75.2	47.1	52.0	37.4	30.1	23.0	83.5	46.2	13.6	74.8	70.3	83.5	13.6	50.6
10	18.4	6.4	8.0	8.3	6.2	4.9	8.5	5.8	5.5	6.0	6.8	5.2	5.4	5.8	5.9	7.2	5.7	9.2	43.2	15.9	46.3	22.7	18.3	9.3	46.3	4.9	11.9
11	8.4	7.2	30.6	39.6	12.1	8.8	27.3	26.1	16.1	4.6	4.2	6.8	11.8	15.0	3.9	4.3	9.6	13.1	18.4	20.4	17.6	19.7	22.7	21.4	39.6	3.9	15.4
12	33.2	46.2	52.0	49.7	40.1	47.8	51.3	42.2	38.7	35.0	48.6	49.0	52.7	21.8	9.1	3.2	4.1	5.2	7.0	5.0	9.0	18.1	12.5	9.8	52.7	3.2	28.8
13	11.0	12.1	10.1	16.3	20.4	17.0	20.0	14.3	12.5	8.6	9.9	8.9	6.0	6.0	6.8	7.3	3.8	3.0	3.8	5.3	8.8	4.2	5.4	19.2	20.4	3.0	10.0
14	19.4	25.8	53.8	53.7	57.6	63.0	57.5	80.1	71.3	85.3	79.5	68.6	69.5	61.9	88.1	96.5	83.2	52.1	82.6	75.5	22.2	60.9	28.2	24.5	96.5	19.4	60.9
15	14.0	7.4	8.0	7.9	9.4	8.5	16.8	14.4	61.7	9.5	14.6	11.3	7.5	8.3	5.3	5.7	5.6	6.1	14.1	19.6	60.3	70.6	16.0	51.8	70.6	5.3	18.9
16	88.0	44.8	23.2	18.7	8.6	9.4	7.1	6.2	6.7	4.5	4.8	7.8	5.1	7.3	5.0	6.7	3.2	4.9	6.9	5.8	6.4	10.4	71.4	10.8	88.0	3.2	15.6
17	22.1	18.6	12.6	4.8	4.4	6.1	5.2	5.4	9.3	7.5	4.1	5.7	69.9	7.9	10.3	5.2	15.2	5.7	5.6	6.0	6.6	3.3	2.7	12.2	69.9	2.7	10.7
18	70.3	70.6	7.1	7.3	11.0	20.7	36.3	9.8	10.0	14.0	11.7	9.3	3.0	3.5	4.1	5.2	5.9	4.7	5.7	3.0	5.8	5.1	6.0	8.0	70.6	3.0	14.1
19	12.0	6.4	16.1	48.2	41.6	75.6	11.7	5.0	7.8	8.2	7.4	79.6	8.0	27.5	19.6	7.8	11.0	9.2	9.5	10.7	11.0	9.5	7.0	7.2	79.6	5.0	19.1
20	6.1	5.7	5.9	6.0	5.3	4.4	4.5	4.4	6.5	8.1	7.8	4.6	4.3	5.6	64.9	15.4	20.3	22.2	14.6	11.7	8.6	37.6	58.1	48.1	64.9	4.3	15.9
21	9.6	10.9	63.2	28.8	10.4	27.5	68.3	61.1	7.9	51.6	9.3	4.6	5.5	4.1	5.2	7.2	5.9	4.8	4.9	7.8	19.7	17.9	82.9	9.7	82.9	4.1	22.0
22	9.8	6.9	7.1	9.0	9.0	11.5	11.3	10.0	8.0	7.2	4.7	4.3	79.4	19.3	9.2	9.7	12.5	4.5	4.1	5.4	5.3	4.7	5.6	5.7	79.4	4.1	11.0
23	4.9	5.6	5.6	7.7	14.3	18.6	21.8	18.2	26.3	30.2	44.8	23.6	11.0	4.2	5.6	3.6	3.3	4.2	4.4	3.4	4.8	3.4	4.9	6.4	44.8	3.3	11.7
24	3.7	5.7	9.2	6.4	6.7	6.4	4.2	6.4	9.0	9.0	7.4	6.7	6.2	5.1	9.9	7.0	4.5	7.7	7.8	6.8	10.7	83.7	8.7	47.7	83.7	3.7	11.9
25	33.9	59.9	37.4	8.5	66.0	15.2	43.3	34.1	96.7	75.2	18.6	9.7	3.6	4.4	5.1	4.9	3.8	4.8	8.1	7.3	12.5	23.6	51.3	6.5	96.7	3.6	26.4
26	8.9	14.6	12.9	9.6	9.3	8.3	8.5	8.8	12.1	10.3	11.4	14.4	13.0	13.9	13.9	9.9	10.4	12.2	10.7	9.4	9.7	8.3	7.6	11.5	14.6	7.6	10.8
27	10.0	11.0	16.3	14.2	12.0	11.3	11.3	8.3	10.0	9.0	7.5	9.9	10.6	9.9	9.9	10.3	11.2	12.4	11.8	10.3	14.5	14.2	12.7	8.4	16.3	7.5	11.1
28	12.2	10.8	9.2	8.2	7.8	9.3	8.1	9.5	9.4	9.3	9.5	8.1	10.9	11.9	9.8	12.0	10.9	11.3	12.2	11.8	10.2	8.1	9.8	9.9	12.2	7.8	10.0
29	6.9	7.5	9.0	8.8	5.4	6.9	5.3	6.0	9.0	8.4	6.6	75.0	17.6	12.5	9.6	9.9	9.7	9.8	12.2	7.2	11.5	63.5	59.5	49.5	75.0	5.3	17.8
30	8.9	65.2	69.2	70.8	70.3	43.2	60.2	11.3	9.6	7.0	7.2	10.4	7.6	5.9	6.4	6.5	5.3	7.1	4.9	8.1	5.8	5.8	5.4	6.9	70.8	4.9	21.2
31	13.0	9.2	7.9	8.6	4.0	3.7	4.5	3.4	5.0	5.0	7.8	6.1	5.6	4.4	4.5	2.8	3.5	3.3	3.6	4.0	3.0	4.3	5.9	6.1	13.0	2.8	5.4
Max.	**88.0**	**70.6**	**69.2**	**74.9**	**70.3**	**75.6**	**68.3**	**80.1**	**96.7**	**85.3**	**79.5**	**79.6**	**79.4**	**75.2**	**88.1**	**96.5**	**83.2**	**52.1**	**82.6**	**83.5**	**88.5**	**83.7**	**82.9**	**70.3**	**96.7**		
Min.	**3.7**	**3.6**	**4.2**	**4.8**	**3.6**	**3.2**	**4.2**	**3.4**	**4.6**	**4.5**	**4.1**	**4.3**	**3.0**	**3.5**	**3.9**	**2.8**	**3.2**	**3.0**	**3.6**	**3.0**	**3.0**	**3.3**	**2.7**	**2.9**		**2.7**	
Avg.	**19.7**	**21.0**	**22.0**	**23.7**	**21.7**	**19.6**	**22.7**	**21.9**	**22.7**	**22.9**	**17.3**	**19.9**	**21.3**	**17.7**	**18.3**	**14.1**	**12.8**	**13.5**	**16.9**	**16.4**	**18.3**	**21.2**	**23.5**	**20.5**			**19.6**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

June 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	7.8	10.9	7.2	12.0	22.4	21.8	22.5	20.4	26.5	16.3	15.3	9.0	11.5	18.0	31.0	18.2	8.1	4.4	34.8	25.0	45.4	33.7	47.7	40.5	47.7	4.4	21.3
2	39.4	46.6	57.7	52.0	56.8	42.0	39.3	39.0	43.7	46.1	47.3	42.5	53.3	38.4	39.9	42.1	43.1	64.6	61.3	43.9	94.0	54.4	80.8	65.6	94.0	38.4	51.4
3	46.9	76.4	78.4	65.3	37.1	33.5	31.6	34.9	66.5	44.7	47.8	24.8	13.7	13.7	17.6	8.8	4.6	5.3	7.8	7.6	22.2	28.2	16.5	64.4	78.4	4.6	33.3
4	88.4	23.4	23.9	28.5	54.1	43.3	83.9	20.0	83.8	16.4	89.9	7.9	13.1	7.5	13.3	15.5	13.0	7.0	19.5	6.0	22.9	9.3	12.3	19.3	89.9	6.0	30.1
5	18.0	24.5	7.3	7.0	7.6	4.5	6.6	2.9	9.7	11.6	4.6	12.3	8.5	16.6	25.0	12.7	11.9	11.1	36.8	37.8	27.8	37.8	67.6	77.7	77.7	2.9	20.3
6	76.2	22.2	26.9	34.3	4.7	4.3	4.3	5.9	6.9	5.3	8.0	8.3	6.7	6.7	9.5	8.1	9.5	12.1	63.4	52.1	14.5	10.9	9.0	8.0	76.2	4.3	17.4
7	9.3	11.7	8.7	8.5	9.2	8.2	9.3	6.9	6.8	7.3	4.6	6.4	8.7	9.0	5.7	5.9	48.9	9.5	11.5	19.6	25.4	22.6	14.2	27.7	48.9	4.6	12.7
8	24.3	32.2	22.8	39.1	9.6	66.1	14.3	36.2	9.3	7.9	11.6	10.1	8.5	7.8	9.3	56.3	76.5	15.7	16.2	14.5	10.5	11.1	6.4	9.4	76.5	6.4	21.9
9	12.0	11.2	13.2	15.2	11.8	13.3	11.1	11.9	12.5	13.8	12.7	15.1	16.0	18.0	14.8	13.8	13.7	10.9	12.3	12.4	11.5	12.0	8.9	10.6	18.0	8.9	12.9
10	10.6	10.3	9.8	9.1	9.0	7.8	5.4	4.9	9.3	5.1	5.3	5.2	13.2	31.5	4.7	4.4	3.9	3.7	4.0	4.7	4.9	5.9	6.3	5.7	31.5	3.7	7.7
11	12.6	17.2	10.9	16.0	4.2	41.9	58.2	60.3	20.9	12.0	18.7	71.8	39.1	14.7	8.2	6.3	5.6	3.4	3.5	8.4	65.8	10.6	10.8	10.4	71.8	3.4	22.2
12	11.1	12.5	10.4	11.3	12.2	11.9	10.4	10.7	10.5	9.9	9.8	8.7	7.7	9.2	9.0	6.2	7.7	7.0	7.8	8.2	5.9	4.8	8.5	8.9	12.5	4.8	9.2
13	9.5	10.6	10.3	10.0	8.9	7.4	6.0	6.1	4.8	8.8	8.1	7.9	6.8	8.2	7.4	7.3	5.5	6.2	37.7	39.9	11.7	12.5	54.4	78.3	78.3	4.8	15.6
14	67.2	18.1	68.6	16.3	10.5	11.0	11.5	10.2	7.6	9.6	9.4	10.2	9.1	13.5	69.3	7.0	6.1	6.1	8.7	11.1	10.9	16.8	54.5	12.4	69.3	6.1	19.8
15	26.9	31.8	30.7	38.0	12.7	9.1	10.0	10.5	7.9	8.0	8.2	6.8	25.6	7.6	7.1	6.2	11.6	11.4	64.5	15.9	10.8	11.4	13.1	13.3	64.5	6.2	16.6
16	11.2	11.1	11.4	10.4	9.7	7.9	6.5	6.1	5.3	6.6	8.1	5.5	5.1	4.7	4.6	45.1	10.3	18.2	10.0	8.9	8.9	46.6	24.6	16.4	46.6	4.6	12.6
17	11.2	10.6	70.9	21.2	30.2	66.1	23.4	25.9	8.6	3.0	4.3	2.8	3.7	4.5	5.0	5.3	5.4	6.0	6.5	7.4	5.5	3.8	5.2	21.5	70.9	2.8	14.9
18	13.1	86.6	13.3	35.3	58.2	17.4	15.3	50.7	15.4	25.4	55.8	8.9	6.1	7.8	7.3	9.6	6.3	8.7	6.4	7.3	8.9	12.9	73.0	19.1	86.6	6.1	23.7
19	82.5	62.4	50.8	30.7	17.4	43.8	12.3	34.8	44.0	11.6	8.9	6.5	8.4	7.8	9.0	6.3	7.0	5.8	3.5	3.2	3.1	4.1	3.6	7.5	82.5	3.1	19.8
20	10.2	23.5	78.5	98.0	45.4	65.9	14.2	49.2	17.1	4.9	3.8	4.2	2.9	2.3	2.3	3.0	6.2	4.8	4.4	10.2	6.5	4.3	3.3	7.4	98.0	2.3	19.7
21	9.0	5.9	5.1	11.2	11.1	14.0	10.3	13.7	28.6	10.1	6.6	5.9	4.7	6.7	3.3	4.5	7.1	14.7	11.9	13.5	9.4	9.8	25.8	48.4	48.4	3.3	12.2
22	9.4	56.9	76.3	32.5	39.0	23.6	15.1	31.0	80.6	6.2	3.6	3.5	3.5	5.1	4.4	12.6	73.9	19.7	13.5	9.2	10.7	55.2	63.9	8.8	80.6	3.5	27.4
23	9.9	12.1	9.4	8.4	7.0	5.8	8.8	9.7	6.3	3.3	3.9	5.1	4.9	4.7	4.8	3.8	5.8	4.0	4.0	3.8	6.4	7.2	13.8	12.3	13.8	3.3	6.9
24	17.8	9.3	7.6	10.9	4.9	9.3	10.1	8.8	10.3	9.8	6.8	9.1	7.5	5.9	10.4	9.4	17.8	24.4	27.9	24.0	13.8	19.4	21.0	22.4	27.9	4.9	13.3
25	18.9	18.7	10.6	5.2	3.6	5.5	8.3	20.0	20.5	12.7	18.7	13.6	16.3	3.4	2.9	5.4	5.3	3.5	3.5	9.8	15.1	16.7	15.9	34.8	34.8	2.9	12.0
26	57.2	50.2	48.9	62.4	63.5	69.5	78.3	82.6	69.7	78.2	55.4	43.2	46.7	37.5	43.4	45.6	41.3	47.8	52.2	46.9	44.4	42.8	39.4	44.2	82.6	37.5	53.8
27	45.9	43.1	13.3	13.2	10.8	5.0	5.1	4.0	3.9	8.6	11.1	10.6	10.3	11.0	19.2	6.1	5.9	3.1	3.4	3.8	4.1	3.0	7.3	8.4	45.9	3.0	10.8
28	55.6	9.2	9.8	10.2	8.5	10.6	11.7	9.8	13.7	13.1	18.2	16.3	19.3	14.6	28.3	41.3	46.7	95.7	20.3	11.9	8.5	10.4	16.6	18.6	95.7	8.5	21.6
29	15.4	10.2	13.8	11.5	12.4	6.8	10.0	5.1	3.1	2.6	3.0	4.6	4.2	5.5	6.0	4.8	4.2	3.9	4.1	3.6	8.4	4.8	6.7	9.7	15.4	2.6	6.8
30	9.4	13.3	13.5	13.8	58.1	37.8	55.0	28.1	52.8	8.9	4.8	4.3	4.0	3.6	4.2	3.9	3.7	3.3	8.3	10.1	10.9	12.4	12.2	26.9	58.1	3.3	16.8
Max.	**88.4**	**86.6**	**78.5**	**98.0**	**63.5**	**69.5**	**83.9**	**82.6**	**83.8**	**78.2**	**89.9**	**71.8**	**53.3**	**38.4**	**69.3**	**56.3**	**76.5**	**95.7**	**64.5**	**52.1**	**94.0**	**55.2**	**80.8**	**78.3**	**98.0**		
Min.	**7.8**	**5.9**	**5.1**	**5.2**	**3.6**	**4.3**	**4.3**	**2.9**	**3.1**	**2.6**	**3.0**	**2.8**	**2.9**	**2.3**	**2.3**	**3.0**	**3.7**	**3.1**	**3.4**	**3.2**	**3.1**	**3.0**	**3.3**	**5.7**		**2.3**	
Avg.	**27.9**	**26.1**	**27.3**	**24.6**	**21.7**	**23.8**	**20.3**	**22.0**	**23.6**	**14.3**	**17.2**	**13.0**	**13.0**	**11.5**	**14.2**	**14.2**	**17.2**	**14.7**	**19.0**	**16.0**	**18.3**	**17.8**	**24.8**	**25.3**			**19.5**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

July *2008*

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.8	8.4	6.9	7.4	9.7	35.5	56.7	10.9	10.5	10.9	5.9	9.5	7.6	11.9	9.4	8.5	4.0	8.7	7.3	3.8	3.8	7.4	3.0	3.8	56.7	3.0	10.8
2	11.9	10.1	8.1	5.3	12.9	6.5	6.3	5.2	7.0	9.3	5.8	9.5	4.9	5.4	6.9	8.6	9.0	8.0	20.2	12.0	12.0	10.0	12.0	17.8	20.2	4.9	9.4
3	14.7	35.0	73.8	42.7	26.5	15.3	10.2	14.4	8.7	12.7	19.8	20.2	8.9	47.6	39.8	9.8	5.8	8.9	22.8	15.5	12.4	12.4	8.3	8.0	73.8	5.8	20.6
4	17.6	23.8	9.5	14.0	15.0	12.6	10.3	22.1	22.2	23.5	46.0	58.7	9.6	26.4	9.1	6.9	7.0	16.8	14.1	19.2	59.1	17.8	50.7	68.0	68.0	6.9	24.2
5	72.2	60.1	77.7	67.4	48.8	8.6	60.1	60.4	10.3	40.7	18.0	14.2	8.4	8.6	9.5	9.6	12.3	13.2	15.1	10.9	19.2	12.2	52.2	34.4	77.7	8.4	31.0
6	49.3	7.4	39.9	67.7	6.3	32.9	46.8	57.9	60.0	47.8	70.1	9.5	10.3	25.2	13.5	28.5	70.6	13.8	9.3	13.4	11.2	19.8	9.6	46.8	70.6	6.3	32.0
7	12.0	22.4	22.1	7.8	18.1	19.0	5.8	6.9	9.8	5.0	6.3	11.7	13.1	15.7	8.9	5.6	11.6	12.3	5.5	5.4	4.7	5.3	31.4	22.2	31.4	4.7	12.0
8	7.8	8.0	9.1	9.1	8.0	12.3	11.2	11.9	13.4	17.9	17.0	15.1	10.9	12.8	12.2	6.6	10.1	52.6	20.9	40.9	32.7	8.3	33.6	8.8	52.6	6.6	16.3
9	10.7	4.6	9.7	6.2	12.5	16.2	32.3	70.8	51.2	3.8	3.5	4.3	3.6	2.9	8.3	13.9	19.6	10.5	8.1	11.5	9.1	11.3	12.6	20.7	70.8	2.9	14.9
10	24.3	20.8	16.8	14.3	11.3	12.0	5.7	3.7	3.7	4.6	5.8	4.0	5.1	9.0	8.6	11.9	3.8	4.4	9.8	4.4	7.3	6.1	7.0	10.1	24.3	3.7	8.9
11	3.5	3.1	3.6	10.8	4.9	8.7	8.4	5.2	6.3	4.3	5.4	4.8	4.2	4.9	3.2	4.3	4.8	3.9	5.9	3.9	8.2	14.4	25.1	41.6	41.6	3.1	8.1
12	70.4	16.9	11.8	26.0	70.4	55.3	30.5	19.4	7.6	4.4	3.7	4.3	2.9	2.8	2.9	4.6	4.2	4.4	6.5	5.4	7.2	6.8	8.4	11.3	70.4	2.8	16.2
13	5.3	10.7	8.6	11.0	13.3	17.9	8.6	11.3	8.8	4.8	5.6	5.7	4.5	3.8	3.9	5.7	3.7	4.2	5.1	4.7	3.0	3.4	3.2	5.3	17.9	3.0	6.8
14	3.7	5.0	9.7	6.2	20.1	74.4	18.2	34.6	44.0	64.7	4.9	4.2	5.1	3.3	3.9	5.8	3.7	3.4	4.4	5.4	8.0	4.1	4.7	4.7	74.4	3.3	14.4
15	3.6	17.7	13.6	16.2	17.1	5.7	22.1	22.4	21.0	8.5	8.2	5.3	5.7	7.7	14.3	14.5	3.6	2.7	3.6	8.6	6.1	10.0	10.1	12.1	22.4	2.7	10.8
16	10.3	9.8	9.6	5.9	6.4	10.9	7.1	9.8	7.9	5.4	6.4	8.5	7.2	7.3	7.9	8.5	7.1	6.8	7.5	9.0	9.0	8.9	8.7	8.7	10.9	5.4	8.1
17	7.6	9.5	9.3	10.0	55.8	10.8	11.7	8.5	11.8	10.6	9.8	13.6	14.8	19.4	18.6	16.2	11.2	13.2	8.4	8.5	8.6	8.6	9.0	8.6	55.8	7.6	13.1
18	9.7	10.8	10.3	11.0	12.3	11.8	12.9	9.8	10.4	12.1	11.1	11.8	12.1	12.5	10.3	9.1	10.1	10.5	9.6	9.1	9.8	9.4	10.6	8.7	12.9	8.7	10.6
19	9.3	10.7	9.8	9.7	8.6	9.9	9.0	8.9	8.3	8.7	10.6	10.2	7.1	9.5	8.6	9.9	61.1	42.3	39.6	12.5	10.5	7.3	6.2	8.7	61.1	6.2	14.0
20	6.3	7.4	9.9	7.9	8.3	8.8	10.9	11.4	12.3	21.9	15.4	8.4	8.2	16.7	15.6	15.5	11.5	19.0	18.3	13.2	21.2	15.6	10.4	6.9	21.9	6.3	12.5
21	9.8	13.2	18.3	5.8	9.4	10.4	11.7	6.5	4.5	3.5	3.7	3.7	7.3	12.5	22.8	23.2	11.5	17.2	18.5	13.9	13.4	22.9	12.1	10.7	23.2	3.5	11.9
22	11.5	11.7	8.6	9.9	7.7	5.9	20.4	11.0	82.5	18.8	3.7	6.1	3.8	2.9	4.3	4.7	5.8	2.6	3.6	4.8	8.3	12.4	5.9	17.3	82.5	2.6	11.4
23	49.9	39.1	6.6	6.7	9.8	12.3	6.1	7.3	5.7	5.5	12.0	10.5	14.5	21.9	32.2	15.9	11.5	7.8	6.4	6.4	5.1	5.9	6.8	11.8	49.9	5.1	13.2
24	35.1	52.6	62.7	61.8	71.7	66.3	8.2	59.9	9.5	7.1	5.5	7.0	12.8	5.1	38.4	9.3	12.4	7.6	9.9	40.8	28.6	48.2	9.0	6.3	71.7	5.1	28.2
25	6.8	7.2	5.0	7.0	6.2	9.7	5.4	8.6	5.6	5.4	5.3	8.0	9.9	10.4	8.4	7.8	62.5	8.3	9.9	9.6	13.3	68.3	13.7	49.9	68.3	5.0	14.7
26	34.8	68.7	33.7	11.5	57.4	9.0	6.8	9.3	9.9	13.4	13.4	14.6	10.8	21.6	7.5	9.1	6.9	11.4	93.0	10.2	6.2	7.6	3.9	13.8	93.0	3.9	20.2
27	9.1	11.9	16.0	14.6	16.1	17.9	23.3	86.3	60.0	21.9	11.2	12.3	9.4	12.8	8.7	11.4	10.9	80.8	16.5	70.3	5.8	38.6	35.6	6.8	86.3	5.8	25.3
28	12.1	11.6	9.8	8.2	8.2	9.6	9.3	10.9	11.3	8.9	10.1	8.2	9.3	9.4	10.5	10.0	7.5	6.9	6.9	7.5	8.3	7.1	7.9	9.0	12.1	6.9	9.1
29	7.8	9.3	8.7	7.8	10.0	11.1	9.4	9.5	11.1	12.1	11.7	14.9	10.5	11.1	10.7	45.5	71.3	22.6	37.7	64.9	13.4	7.4	8.8	11.2	71.3	7.4	18.3
30	8.5	9.8	9.6	8.7	12.4	14.4	10.6	11.1	13.4	10.0	14.5	13.6	10.5	9.9	10.1	6.6	6.6	6.1	6.2	6.9	10.9	8.7	7.7	9.0	14.5	6.1	9.8
31	9.5	9.1	10.3	10.6	10.9	8.2	9.4	8.5	6.7	5.9	6.6	6.7	6.7	11.6	9.1	15.7	16.9	10.9	14.3	14.9	14.8	11.4	10.6	13.8	16.9	5.9	10.5
Max.	**72.2**	**68.7**	**77.7**	**67.7**	**71.7**	**74.4**	**60.1**	**86.3**	**82.5**	**64.7**	**70.1**	**58.7**	**14.8**	**47.6**	**39.8**	**45.5**	**71.3**	**80.8**	**93.0**	**70.3**	**59.1**	**68.3**	**52.2**	**68.0**	**93.0**		
Min.	**3.5**	**3.1**	**3.6**	**5.3**	**4.9**	**5.7**	**5.4**	**3.7**	**3.7**	**3.5**	**3.5**	**3.7**	**2.9**	**2.8**	**2.9**	**4.3**	**3.6**	**2.6**	**3.6**	**3.8**	**3.0**	**3.4**	**3.0**	**3.8**		**2.6**	
Avg.	**17.8**	**17.6**	**18.0**	**16.4**	**19.6**	**18.1**	**16.3**	**20.5**	**17.9**	**14.0**	**12.2**	**10.9**	**8.4**	**12.3**	**12.2**	**11.7**	**16.1**	**14.3**	**15.0**	**15.1**	**12.6**	**14.1**	**14.2**	**16.7**			**15.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

August 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.8	10.0	11.1	7.0	6.2	7.1	7.6	9.7	71.8	15.0	16.6	4.9	11.0	2.8	5.9	3.6	4.2	6.3	12.9	9.9	13.6	12.6	12.3	13.4	71.8	2.8	11.8
2	13.2	10.7	8.3	15.3	16.8	13.3	15.8	16.1	15.5	10.2	11.1	9.5	7.6	10.3	12.1	6.8	8.5	9.2	5.2	8.8	7.0	5.6	21.1	24.4	24.4	5.2	11.8
3	48.6	34.0	38.6	46.6	19.0	87.7	16.2	11.7	7.6	12.8	8.2	5.0	3.9	3.6	12.6	8.1	8.5	8.9	5.0	9.6	8.3	8.0	5.5	7.4	87.7	3.6	17.7
4	7.7	8.7	6.7	13.6	13.7	22.2	50.1	20.5	7.4	11.9	5.6	3.4	8.0	5.3	3.6	8.5	4.5	9.8	3.6	7.8	10.6	13.4	18.1	15.5	50.1	3.4	11.7
5	13.6	12.0	20.3	10.2	11.6	69.0	6.9	10.6	19.9	19.9	73.3	13.4	8.6	5.5	16.5	9.1	8.7	11.4	10.7	11.8	13.9	12.1	12.1	12.8	73.3	5.5	17.2
6	18.9	36.5	66.7	11.9	7.5	9.8	9.3	8.0	8.1	5.4	67.0	21.1	7.4	9.2	25.1	12.6	13.0	6.9	11.8	66.3	6.8	7.6	10.8	12.4	67.0	5.4	19.2
7	13.7	11.3	13.5	10.9	9.9	12.6	8.7	10.1	9.3	16.2	13.0	13.7	10.4	10.4	10.7	9.6	11.5	8.8	8.3	10.3	6.9	12.4	7.4	14.6	16.2	6.9	11.0
8	23.2	68.5	7.8	8.0	7.6	8.2	4.4	5.4	8.5	12.8	33.3	7.0	4.2	3.6	7.4	7.2	5.5	3.0	3.7	3.8	13.5	14.8	85.2	7.4	85.2	3.0	14.8
9	11.6	22.2	8.7	10.3	40.9	9.2	12.9	10.4	7.6	8.3	9.7	14.2	10.0	40.8	10.2	5.5	2.5	7.2	7.5	4.4	3.3	4.0	5.6	4.6	40.9	2.5	11.3
10	4.5	5.8	6.5	13.6	38.9	18.5	6.5	10.0	19.6	6.8	7.2	5.9	5.8	5.7	6.7	6.8	5.7	4.2	4.9	4.6	5.1	9.6	5.3	7.2	38.9	4.2	9.0
11	7.8	17.4	12.2	11.0	8.6	15.2	8.0	4.9	4.6	4.1	4.4	6.0	4.4	4.2	6.1	6.4	4.1	3.7	4.8	14.3	15.5	19.2	7.6	7.4	19.2	3.7	8.4
12	8.2	7.6	13.4	16.8	18.0	15.1	35.7	14.2	10.7	13.3	78.1	12.5	18.6	16.5	59.8	17.6	28.8	28.2	43.6	46.7	13.7	73.1	19.7	9.6	78.1	7.6	25.8
13	11.0	11.2	21.3	26.0	11.2	21.3	71.2	84.4	84.8	88.8	54.8	61.9	15.0	7.3	77.4	52.5	45.8	48.2	67.9	42.2	59.0	59.1	15.3	62.4	88.8	7.3	45.8
14	37.0	42.5	64.4	28.3	45.2	90.8	15.1	17.7	30.9	71.8	12.4	7.0	14.5	45.4	45.2	44.6	78.6	9.4	6.9	54.5	25.1	8.5	26.1	17.1	90.8	6.9	35.0
15	15.4	9.2	44.9	72.3	8.3	5.7	4.6	3.9	5.0	5.9	4.4	4.5	5.7	3.4	8.0	47.2	15.6	11.8	7.0	18.9	77.6	5.4	8.1	5.6	77.6	3.4	16.6
16	6.2	3.5	4.5	4.5	4.1	7.6	9.5	9.7	7.0	5.1	11.2	11.5	9.3	3.2	3.3	3.2	3.5	4.6	3.8	4.9	6.2	12.1	11.5	10.1	12.1	3.2	6.7
17	8.0	9.5	6.1	6.9	13.3	50.7	37.7	41.7	9.8	8.0	18.0	10.2	6.0	11.0	15.9	16.2	8.1	8.0	3.7	8.1	2.8	7.2	7.8	14.5	50.7	2.8	13.7
18	8.8	9.9	32.4	52.5	43.5	22.0	10.0	12.4	62.8	43.3	55.4	37.2	46.8	61.5	25.1	94.2	78.3	41.6	63.2	50.4	55.4	79.4	30.7	51.7	94.2	8.8	44.5
19	44.9	32.8	36.5	28.7	47.9	29.1	26.2	7.9	8.7	6.7	7.6	3.8	7.2	4.6	4.7	4.3	6.4	6.5	6.6	6.3	6.2	5.7	5.8	8.5	47.9	3.8	14.7
20	7.1	7.7	9.2	9.8	8.1	8.5	8.3	8.9	8.8	8.5	6.8	8.4	8.4	8.0	7.9	7.4	8.3	9.8	8.5	9.9	9.4	9.2	8.9	11.5	11.5	6.8	8.6
21	9.5	9.6	6.6	7.8	8.7	9.4	11.4	9.7	11.0	11.5	7.8	5.0	7.0	30.2	18.5	11.9	13.0	6.8	5.2	5.3	13.6	13.8	20.8	18.2	30.2	5.0	11.3
22	16.3	27.3	16.4	14.3	21.3	14.0	16.1	75.4	12.6	6.6	28.0	26.1	9.1	8.6	6.5	11.1	10.3	8.2	12.0	86.5	6.8	8.2	6.3	8.3	86.5	6.3	19.0
23	6.8	6.5	6.1	4.9	5.2	5.1	4.7	4.9	4.2	5.8	3.5	48.0	9.2	8.1	7.9	9.0	10.8	27.0	20.8	6.1	45.2	7.8	6.0	7.7	48.0	3.5	11.3
24	8.3	22.9	14.3	12.9	7.8	7.2	8.8	9.1	8.5	11.2	12.8	7.4	13.6	9.8	9.2	10.7	9.2	11.1	11.1	8.0	7.3	8.9	7.9	6.0	22.9	6.0	10.2
25	8.9	58.6	9.8	15.5	9.0	6.4	8.7	10.0	5.1	7.3	24.0	80.6	46.0	28.2	13.2	4.9	9.1	6.4	6.7	16.7	6.0	7.6	18.0	15.4	80.6	4.9	17.6
26	18.4	13.2	69.9	10.9	30.7	26.3	18.4	55.4	10.0	13.6	49.7	51.6	8.8	21.8	15.7	5.7	6.5	5.0	6.4	4.9	4.0	4.5	4.2	10.4	69.9	4.0	19.4
27	15.0	13.9	43.7	27.8	9.3	11.5	9.2	9.5	10.0	11.5	12.5	14.1	18.7	12.0	8.2	11.0	10.4	9.9	9.0	9.4	9.1	8.9	8.2	8.6	43.7	8.2	13.0
28	8.2	9.2	9.9	9.5	9.8	6.0	6.7	8.1	11.3	6.5	9.4	13.7	10.1	12.7	6.4	6.1	6.6	10.3	12.1	8.3	12.1	6.9	8.3	5.9	13.7	5.9	8.9
29	6.4	5.5	6.8	9.7	6.5	10.3	11.0	11.2	10.7	8.7	12.2	16.0	10.9	12.1	11.2	11.0	11.2	11.7	10.6	8.9	11.8	13.2	14.1	11.5	16.0	5.5	10.6
30	9.1	11.1	8.8	7.1	5.9	7.3	7.7	7.2	5.8	5.8	9.1	31.6	15.5	6.7	5.5	8.7	6.0	5.2	4.5	16.8	30.4	4.8	7.7	7.8	31.6	4.5	9.8
31	4.9	5.2	4.2	5.2	4.1	9.0	18.5	27.1	24.1	23.0	21.9	35.8	35.2	29.3	27.3	46.2	56.2	59.0	48.0	42.3	67.4	69.1	87.9	71.5	87.9	4.1	34.3
Max.	**48.6**	**68.5**	**69.9**	**72.3**	**47.9**	**90.8**	**71.2**	**84.4**	**84.8**	**88.8**	**78.1**	**80.6**	**46.8**	**61.5**	**77.4**	**94.2**	**78.6**	**59.0**	**67.9**	**86.5**	**77.6**	**79.4**	**87.9**	**71.5**	**94.2**		
Min.	**4.5**	**3.5**	**4.2**	**4.5**	**4.1**	**5.1**	**4.4**	**3.9**	**4.2**	**4.1**	**3.5**	**3.4**	**3.9**	**2.8**	**3.3**	**3.2**	**2.5**	**3.0**	**3.6**	**3.8**	**2.8**	**4.0**	**4.2**	**4.6**		**2.5**	
Avg.	**13.9**	**17.9**	**20.3**	**17.1**	**16.1**	**20.5**	**15.7**	**17.6**	**16.8**	**15.7**	**22.2**	**19.1**	**12.8**	**14.3**	**15.9**	**16.4**	**16.1**	**13.2**	**14.1**	**19.6**	**18.5**	**17.2**	**16.6**	**15.8**			**16.8**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

September 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	57.4	50.1	47.0	47.2	37.3	40.6	40.2	45.0	42.4	47.0	48.7	46.6	45.8	58.9	60.7	49.5	52.9	41.9	26.6	11.8	9.2	13.7	15.8	15.6	60.7	9.2	39.7
2	21.4	23.6	19.0	18.7	16.2	16.7	7.7	5.9	6.0	15.9	11.6	7.9	10.2	10.9	35.0	59.9	45.4	41.5	45.4	47.2	51.0	52.9	46.2	64.9	64.9	5.9	28.4
3	73.5	62.9	68.5	68.7	65.8	79.7	82.0	84.0	81.7	85.0	49.2	7.6	6.1	8.8	6.2	6.5	8.4	6.3	78.0	20.0	19.8	13.9	16.8	37.1	85.0	6.1	43.2
4	10.8	29.1	13.5	70.7	54.7	47.2	7.7	52.2	37.0	61.5	33.2	7.3	6.9	3.2	4.1	5.0	4.9	5.4	5.9	8.9	11.2	13.7	6.3	9.2	70.7	3.2	21.2
5	6.5	63.4	8.5	27.4	33.3	7.1	10.0	46.1	40.8	57.0	86.4	9.3	7.9	6.3	4.4	7.3	5.4	6.8	16.9	15.8	12.0	40.0	72.4	10.6	86.4	4.4	25.1
6	63.7	50.0	18.2	15.4	7.5	8.0	18.4	13.5	11.8	17.9	25.1	26.0	21.7	24.1	43.3	42.2	49.5	48.2	49.7	50.7	48.8	44.3	40.3	51.2	63.7	7.5	32.9
7	60.7	50.7	41.7	53.1	47.6	55.1	50.8	38.8	22.2	24.4	16.4	4.3	6.8	4.5	14.6	33.2	54.9	60.3	16.9	15.4	28.3	9.4	60.7	34.5	60.7	4.3	33.6
8	3.8	70.5	7.9	10.9	61.7	50.0	12.4	67.6	23.6	56.6	15.7	5.2	6.9	9.2	7.8	7.7	5.0	7.3	34.6	39.0	46.6	45.7	82.5	67.8	82.5	3.8	31.1
9	56.0	40.0	49.1	84.4	62.1	45.0	49.8	53.8	47.7	44.2	53.6	31.5	18.0	16.1	4.6	4.7	6.7	7.8	6.4	4.5	4.6	13.6	7.3	7.4	84.4	4.5	29.9
10	69.6	28.4	31.2	41.5	19.9	85.9	7.5	5.2	5.8	14.6	13.0	36.9	38.3	61.4	15.2	97.2	16.1	16.5	26.3	11.4	11.6	11.4	12.9	13.3	97.2	5.2	28.8
11	11.7	12.8	12.4	10.6	8.3	11.0	9.7	13.3	8.9	13.8	12.2	14.3	11.6	0.1	6.7	17.0	3.5	4.9	9.0	8.6	12.2	4.8	4.9	6.0	17.0	0.1	9.5
12	9.3	12.8	5.4	4.0	7.7	6.0	5.8	12.9	26.0	24.7	48.2	62.2	67.3	71.8	62.9	53.4	61.4	44.6	35.4	54.7	59.6	44.6	22.8	24.8	71.8	4.0	34.5
13	14.8	7.7	5.4	5.6	8.4	9.1	4.9	3.4	3.2	3.2	3.2	3.2	2.8	4.9	5.5	11.8	16.3	22.6	47.8	48.3	57.1	48.0	49.2	41.2	57.1	2.8	17.8
14	39.7	74.7	58.8	63.6	72.6	70.0	85.9	68.1	64.7	46.1	87.9	72.9	31.3	56.3	61.5	54.6	48.8	42.9	74.2	77.7	54.0	33.4	68.0	60.1	87.9	31.3	61.2
15	58.2	27.5	16.5	10.1	7.1	8.7	7.8	8.4	10.1	10.9	7.5	12.4	7.7	8.2	6.0	6.2	8.3	6.9	12.5	25.1	71.9	11.6	10.7	11.5	71.9	6.0	15.5
16	8.3	16.4	22.0	12.3	61.1	47.7	6.7	7.1	5.4	4.1	6.8	9.3	11.0	16.7	13.4	10.0	6.5	5.8	5.5	6.7	8.4	9.2	6.4	6.7	61.1	4.1	13.1
17	6.7	10.0	10.9	7.3	6.3	6.7	6.6	11.5	12.1	7.8	7.1	13.7	91.6	7.7	4.6	5.2	5.6	17.1	19.2	9.9	4.2	10.9	13.8	38.2	91.6	4.2	13.9
18	40.3	48.6	54.3	80.9	61.5	36.2	39.6	60.9	67.0	84.5	92.3	90.6	64.7	56.1	44.9	10.7	15.4	38.5	33.0	26.3	4.3	3.7	3.3	5.3	92.3	3.3	44.3
19	3.9	18.6	21.0	20.0	19.9	42.3	21.7	12.6	6.0	8.4	5.9	9.8	7.6	9.9	11.1	4.6	4.8	6.4	8.7	14.4	13.6	10.3	12.0	9.6	42.3	3.9	12.6
20	8.5	7.9	7.7	7.0	8.7	8.9	10.4	9.4	7.9	10.0	6.2	4.7	6.0	5.4	6.7	8.1	12.1	10.8	10.0	10.8	9.2	9.5	7.5	6.3	12.1	4.7	8.3
21	10.4	7.9	8.7	8.3	13.1	11.0	8.9	8.8	7.9	11.3	10.1	7.9	8.8	14.1	10.2	13.0	10.4	8.4	6.1	6.5	9.2	6.6	10.0	6.8	14.1	6.1	9.4
22	8.1	6.0	4.9	6.9	7.6	8.0	8.0	7.2	10.3	6.1	6.9	7.2	10.1	7.0	7.3	11.5	10.0	38.9	15.4	48.6	41.8	27.6	22.0	12.5	48.6	4.9	14.2
23	10.5	8.4	10.1	7.6	9.8	12.5	11.5	5.5	8.2	10.7	63.9	6.6	94.9	38.2	71.0	24.8	22.7	32.8	7.9	89.9	19.3	18.3	8.4	8.4	94.9	5.5	25.1
24	52.1	14.8	7.5	10.7	48.8	40.7	63.0	62.2	74.6	45.7	43.6	58.2	68.0	67.5	39.0	33.4	34.9	48.4	72.7	74.1	41.4	48.7	48.2	51.3	74.6	7.5	47.9
25	64.0	50.1	74.1	73.7	74.7	88.1	72.3	52.8	46.1	71.2	46.0	89.2	72.9	48.2	64.6	82.2	74.4	63.4	99.3	62.8	67.2	47.0	81.0	57.8	99.3	46.0	67.6
26	63.6	65.2	84.9	64.9	54.4	58.2	48.6	20.7	27.7	13.6	13.9	84.0	38.9	67.2	5.4	4.1	8.7	5.3	28.0	63.9	19.3	9.5	12.3	8.5	84.9	4.1	36.3
27	7.8	8.9	8.4	7.6	4.9	4.9	4.6	8.4	8.6	8.0	8.7	5.9	6.0	6.3	7.4	10.8	15.2	18.2	14.2	11.3	10.1	9.9	11.5	8.2	18.2	4.6	9.0
28	7.0	8.2	6.6	9.6	9.4	7.4	8.6	10.2	11.7	10.2	7.9	7.9	12.3	77.3	5.0	4.2	4.1	6.2	5.6	55.5	73.0	77.1	56.3	80.3	80.3	4.1	23.4
29	57.5	61.9	39.3	33.3	30.2	37.2	41.8	48.8	39.3	43.3	42.8	28.5	39.9	15.0	29.3	37.5	32.4	16.1	8.3	12.9	71.6	10.6	9.4	6.6	71.6	6.6	33.1
30	8.2	9.7	12.2	8.0	7.5	8.5	9.9	11.3	13.2	14.3	12.7	10.6	12.6	14.6	12.2	11.8	7.0	8.7	9.4	10.9	6.1	10.0	7.2	5.9	14.6	5.9	10.1
Max.	**73.5**	**74.7**	**84.9**	**84.4**	**74.7**	**88.1**	**85.9**	**84.0**	**81.7**	**85.0**	**92.3**	**90.6**	**94.9**	**77.3**	**71.0**	**97.2**	**74.4**	**63.4**	**99.3**	**89.9**	**73.0**	**77.1**	**82.5**	**80.3**	**99.3**		
Min.	**3.8**	**6.0**	**4.9**	**4.0**	**4.9**	**4.9**	**4.6**	**3.4**	**3.2**	**3.2**	**3.2**	**3.2**	**2.8**	**0.1**	**4.1**	**4.1**	**3.5**	**4.9**	**5.5**	**4.5**	**4.2**	**3.7**	**3.3**	**5.3**		**0.1**	
Avg.	**30.5**	**31.6**	**25.8**	**29.7**	**30.9**	**31.9**	**25.4**	**28.5**	**25.9**	**29.1**	**29.6**	**26.1**	**27.8**	**26.5**	**22.4**	**24.3**	**21.7**	**23.0**	**27.6**	**31.5**	**29.9**	**23.7**	**27.5**	**25.6**			**27.4**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

October 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	9.2	13.8	12.9	16.4	11.3	12.0	14.7	6.5	7.1	8.1	16.2	86.5	9.3	7.6	8.8	5.4	33.5	23.0	21.8	22.8	24.5	38.2	48.9	66.6	86.5	5.4	21.9
2	46.7	11.0	30.9	12.2	8.5	7.3	7.8	6.9	8.2	10.5	9.3	12.0	15.2	16.5	13.3	12.0	12.5	9.8	9.0	10.7	5.8	6.0	5.7	4.8	46.7	4.8	12.2
3	5.7	5.4	9.5	10.9	7.3	11.4	8.7	11.2	11.8	15.7	9.5	5.8	4.3	4.6	7.0	9.4	8.6	7.7	6.9	7.0	6.6	8.6	8.0	9.4	15.7	4.3	8.4
4	7.7	11.6	11.5	13.5	11.0	11.6	9.4	6.6	5.4	6.0	6.6	8.0	6.6	8.4	9.4	11.9	10.7	10.6	14.5	12.2	7.4	5.1	4.2	4.0	14.5	4.0	8.9
5	4.2	4.6	5.0	4.5	4.8	5.1	7.2	7.7	9.9	10.1	7.6	7.0	9.5	17.4	24.5	31.8	17.4	29.4	18.9	9.3	11.5	8.8	12.0	13.4	31.8	4.2	11.7
6	10.9	10.1	11.2	8.1	10.5	9.2	13.9	9.1	10.5	8.5	10.4	11.5	12.3	14.3	13.1	11.7	10.3	12.5	12.8	6.6	6.1	8.7	8.1	11.2	14.3	6.1	10.5
7	13.4	11.8	6.0	7.8	5.8	10.5	11.0	7.3	5.0	5.3	5.9	12.7	9.8	9.1	5.0	4.8	4.8	6.3	5.4	5.2	5.1	6.8	8.1	7.5	13.4	4.8	7.5
8	9.8	12.7	12.1	8.6	13.8	6.6	8.6	8.8	11.3	14.8	10.5	13.1	14.4	17.4	18.0	14.3	10.7	13.3	9.0	10.6	10.3	12.7	65.5	45.5	65.5	6.6	15.5
9	41.1	59.5	48.9	42.9	38.8	20.2	22.6	38.7	51.5	51.1	36.5	54.8	49.9	61.9	48.6	55.8	55.0	55.9	55.0	57.0	56.7	60.5	65.7	66.5	66.5	20.2	49.8
10	81.5	77.5	70.5	69.8	61.5	20.9	8.2	14.9	9.6	15.6	21.4	21.2	14.6	82.0	12.1	36.2	41.7	93.8	86.1	43.2	61.6	67.2	76.7	24.3	93.8	8.2	46.3
11	13.4	8.6	5.4	6.7	6.4	5.8	5.5	3.8	5.2	4.2	3.5	6.2	7.4	32.4	78.2	73.7	16.1	8.1	6.1	4.8	4.4	5.4	7.2	8.6	78.2	3.5	13.6
12	9.0	8.2	9.8	8.7	8.1	9.8	10.4	10.6	10.5	8.6	7.7	7.4	7.9	8.4	8.8	6.6	9.5	9.5	8.4	7.7	9.5	10.2	9.4	8.0	10.6	6.6	8.9
13	15.7	10.7	14.6	9.9	9.9	9.6	9.2	6.1	10.0	57.4	12.5	32.2	26.5	59.7	43.0	53.6	51.1	96.9	79.1	45.1	65.8	28.1	24.1	70.9	96.9	6.1	35.1
14	11.5	89.3	80.0	71.5	21.4	43.2	53.7	50.2	68.4	69.4	56.5	60.8	47.7	42.7	13.1	13.6	40.8	15.7	8.0	40.0	41.3	11.8	12.2	13.7	89.3	8.0	40.7
15	15.2	8.0	10.1	7.4	7.9	9.3	7.2	11.0	8.5	13.2	7.9	7.9	6.8	6.9	7.4	8.0	9.0	10.0	9.6	7.4	6.9	7.4	5.1	4.4	15.2	4.4	8.4
16	8.4	8.6	8.3	7.5	6.6	6.1	5.1	4.7	5.9	5.6	5.5	7.5	8.6	6.9	5.0	4.4	4.6	7.0	6.8	5.3	6.5	9.0	10.2	7.3	10.2	4.4	6.7
17	6.8	6.4	4.5	5.0	5.6	4.0	5.1	6.2	7.0	6.7	4.0	4.6	7.9	9.6	10.1	16.6	77.2	30.9	31.4	27.3	23.4	25.3	40.1	67.7	77.2	4.0	18.1
18	37.8	39.3	67.6	60.7	56.6	54.5	53.3	52.2	45.1	44.0	49.2	39.1	62.9	79.2	29.8	30.8	55.2	66.6	85.4	84.3	68.6	68.8	30.5	63.0	85.4	29.8	55.2
19	71.7	9.4	9.6	8.1	10.0	10.3	12.4	8.7	9.3	8.2	6.4	6.5	7.9	6.7	7.9	11.3	8.1	8.7	9.1	5.2	7.4	6.2	3.9	4.1	71.7	3.9	10.7
20	3.2	3.7	3.6	3.9	6.5	4.7	4.8	5.8	7.2	6.5	9.4	13.0	15.3	11.8	10.8	14.2	17.8	17.1	16.7	13.8	15.2	11.2	12.1	13.4	17.8	3.2	10.1
21	12.5	10.4	10.4	10.1	12.0	11.7	11.0	11.1	10.7	10.7	7.8	7.1	11.5	8.8	7.4	6.0	8.4	9.6	12.5	14.4	13.5	11.3	13.3	16.4	16.4	6.0	10.8
22	13.0	8.8	6.5	8.6	8.3	8.5	11.1	8.6	9.9	9.8	8.8	9.1	9.0	7.3	6.8	9.8	15.1	9.4	9.0	10.6	10.0	9.5	14.9	86.5	86.5	6.5	12.9
23	42.6	96.8	67.1	73.9	14.9	8.1	9.3	4.9	7.0	7.1	8.0	7.6	8.0	8.6	7.2	6.4	6.2	5.3	6.0	8.6	8.8	9.2	9.2	8.2	96.8	4.9	18.3
24	8.4	9.0	9.6	9.6	8.9	8.8	8.3	8.3	5.8	8.4	7.9	7.8	10.4	6.6	7.3	6.3	6.5	11.0	12.1	16.2	16.6	21.6	14.9	10.3	21.6	5.8	10.0
25	17.8	20.7	16.2	11.4	10.5	18.1	16.3	9.8	10.5	12.9	12.5	16.7	12.6	56.6	50.2	17.1	40.5	42.7	32.7	46.5	85.6	102.2	78.7	72.6	102.2	9.8	33.8
26	38.2	82.5	35.3	51.3	78.4	23.1	13.3	10.2	8.2	7.8	9.3	9.3	11.2	12.6	5.9	8.2	8.5	9.4	9.2	9.2	9.7	9.1	7.0	6.3	82.5	5.9	19.7
27	7.5	7.6	9.1	11.7	10.1	11.1	9.8	10.0	8.8	10.0	9.7	9.1	10.5	10.9	13.2	8.3	6.5	5.8	6.9	7.1	6.5	6.7	6.9	6.6	13.2	5.8	8.8
28	6.2	4.9	7.3	7.3	11.2	6.2	7.0	6.2	9.7	5.4	10.5	8.5	10.4	40.2	37.1	51.3	7.5	3.9	4.2	7.2	9.5	9.8	13.1	14.8	51.3	3.9	12.5
29	58.5	9.5	8.4	6.8	9.2	8.0	4.7	6.8	36.4	21.3	24.9	9.5	11.4	21.9	23.8	36.8	54.9	23.7	47.1	73.9	43.7	38.1	18.0	11.6	73.9	4.7	25.4
30	17.9	11.3	10.6	14.5	70.3	43.7	78.3	63.1	71.6	53.7	53.0	48.0	32.3	68.4	74.2	17.0	33.0	38.3	22.8	8.7	78.0	62.7	9.8	7.9	78.3	7.9	41.2
31	7.4	12.6	6.4	9.8	6.4	6.1	7.6	5.6	6.3	5.6	7.3	7.4	10.0	8.7	18.4	13.8	17.6	16.8	13.5	16.1	11.7	13.8	9.5	9.0	18.4	5.6	10.3
Max.	**81.5**	**96.8**	**80.0**	**73.9**	**78.4**	**54.5**	**78.3**	**63.1**	**71.6**	**69.4**	**56.5**	**86.5**	**62.9**	**82.0**	**78.2**	**73.7**	**77.2**	**96.9**	**86.1**	**84.3**	**85.6**	**102.2**	**78.7**	**86.5**	**102.2**		
Min.	**3.2**	**3.7**	**3.6**	**3.9**	**4.8**	**4.0**	**4.7**	**3.8**	**5.0**	**4.2**	**3.5**	**4.6**	**4.3**	**4.6**	**5.0**	**4.4**	**4.6**	**3.9**	**4.2**	**4.8**	**4.4**	**5.1**	**3.9**	**4.0**		**3.2**	
Avg.	**21.1**	**22.1**	**20.0**	**19.3**	**17.8**	**13.7**	**14.7**	**13.6**	**15.9**	**16.8**	**14.7**	**18.0**	**15.6**	**24.3**	**20.2**	**19.6**	**22.6**	**22.9**	**21.8**	**20.8**	**23.8**	**22.6**	**21.1**	**24.6**			**19.5**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

November 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	6.7	6.9	8.2	8.9	6.7	7.4	7.2	7.6	8.1	6.9	10.6	9.3	14.4	7.0	10.2	9.2	12.0	14.1	7.9	11.5	14.5	12.3	10.9	11.9	14.5	6.7	9.6
2	9.7	11.9	10.7	7.9	8.3	9.9	11.5	9.7	10.6	11.9	14.4	10.5	10.7	10.8	12.6	9.9	9.0	11.9	8.0	10.4	9.7	9.4	9.3	9.8	14.4	7.9	10.4
3	9.9	9.7	10.9	11.2	10.0	10.0	11.5	12.6	10.7	10.3	11.1	12.3	14.4	10.5	10.4	10.7	8.8	10.9	11.5	11.2	10.1	7.9	11.3	11.6	14.4	7.9	10.8
4	12.1	10.5	10.5	9.8	9.4	9.3	10.7	8.3	10.5	9.4	10.3	10.4	8.5	7.9	8.0	8.5	9.5	10.4	10.8	10.7	10.2	10.1	7.9	6.5	12.1	6.5	9.6
5	4.8	5.2	5.4	6.8	4.0	5.5	4.2	5.5	4.9	7.3	16.3	38.9	36.9	83.3	47.0	34.0	36.2	47.6	41.0	41.2	38.8	80.9	57.5	50.9	83.3	4.0	29.3
6	47.3	79.2	58.4	46.9	60.0	98.5	51.5	74.0	48.2	70.2	49.0	28.0	31.2	87.8	85.9	15.8	6.7	6.9	8.8	6.2	6.3	7.8	6.4	7.3	98.5	6.2	41.2
7	9.3	8.8	8.5	10.9	11.2	11.4	9.8	10.0	11.5	13.7	12.3	11.6	13.4	12.9	10.5	9.9	11.3	10.1	9.8	7.2	7.0	8.3	9.7	10.5	13.7	7.0	10.4
8	12.6	9.5	11.7	7.5	8.6	10.1	5.5	15.3	11.9	12.0	41.8	57.3	66.2	83.0	57.6	64.7	58.4	44.3	45.7	43.2	46.6	48.2	49.3	46.0	83.0	5.5	35.7
9	48.2	47.6	44.1	74.6	73.2	56.5	64.4	70.8	65.2	60.2	63.5	75.4	74.4	77.7	63.4	80.4	84.1	58.1	55.5	58.3	65.7	63.2	73.1	83.6	84.1	44.1	65.9
10	55.4	55.4	61.0	91.0	85.0	86.1	96.6	74.3	85.8	75.7	55.1	79.2	91.7	41.4	4.6	6.3	8.2	7.8	6.7	7.9	8.2	11.8	13.3	11.3	96.6	4.6	46.7
11	19.5	14.7	19.4	13.4	22.6	22.5	18.3	27.6	89.6	22.1	20.4	31.5	22.3	11.6	8.4	7.1	12.6	7.7	11.9	13.8	7.5	7.1	6.7	10.3	89.6	6.7	18.7
12	8.6	12.6	8.2	4.0	4.5	4.9	4.5	4.3	6.3	4.8	6.1	6.4	9.5	10.7	9.2	10.7	16.1	12.3	16.6	14.9	13.5	13.4	30.2	13.3	30.2	4.0	10.2
13	8.6	10.4	11.0	7.5	5.6	9.8	33.5	27.1	40.7	30.1	87.3	64.0	65.9	70.3	47.4	35.3	83.3	29.6	19.1	38.8	51.6	35.9	77.9	46.6	87.3	5.6	39.1
14	71.5	48.2	58.7	21.5	38.3	12.0	15.1	14.8	9.2	8.8	6.5	9.8	21.0	59.7	83.1	9.3	10.0	13.4	16.8	9.6	16.1	9.3	9.5	17.0	83.1	6.5	24.5
15	17.9	12.6	25.9	9.1	6.4	15.9	17.2	12.8	8.5	19.4	74.2	13.3	13.2	17.1	15.2	37.4	43.1	40.2	75.1	92.4	49.7	24.8	24.9	59.4	92.4	6.4	30.2
16	53.4	75.7	68.7	74.8	83.9	67.4	18.3	15.6	66.9	17.4	25.6	11.8	12.3	8.0	12.3	14.4	15.3	11.2	13.2	10.6	11.6	9.7	11.5	15.3	83.9	8.0	30.2
17	11.4	20.8	5.3	6.6	6.0	6.7	7.4	9.8	9.5	10.8	9.9	9.3	7.7	8.9	6.7	7.0	11.5	12.7	7.8	22.8	30.5	37.0	4.7	8.8	37.0	4.7	11.6
18	6.7	8.7	7.0	9.0	8.3	10.0	7.1	4.1	7.3	7.8	8.7	26.0	15.7	8.7	4.1	5.4	7.5	5.5	7.5	5.9	4.5	4.7	7.0	6.6	26.0	4.1	8.1
19	7.6	9.3	5.6	4.7	6.9	4.6	5.1	4.4	4.9	5.3	5.2	4.3	4.5	4.9	3.7	4.0	5.5	5.7	6.1	5.4	4.4	6.2	5.7	6.3	9.3	3.7	5.4
20	5.5	6.5	5.0	5.9	5.7	8.0	9.0	8.4	7.5	7.8	8.6	9.8	9.9	8.5	7.5	8.2	8.0	7.2	8.4	7.6	8.2	7.5	7.4	7.2	9.9	5.0	7.6
21	7.5	7.5	9.4	7.3	6.2	9.7	8.6	9.5	8.3	8.2	10.7	8.1	11.4	11.0	8.5	4.6	4.7	4.0	5.0	4.6	5.2	5.6	4.0	6.7	11.4	4.0	7.3
22	5.3	6.3	7.8	7.2	6.2	6.6	6.3	6.2	3.6	6.1	10.9	7.1	14.4	4.7	6.9	6.4	11.4	9.9	7.4	8.8	6.0	7.8	10.8	10.6	14.4	3.6	7.7
23	5.3	8.4	16.1	13.3	13.8	9.4	8.8	12.3	7.6	13.3	14.9	28.4	26.1	31.7	58.3	41.7	92.5	62.6	94.3	28.0	33.3	22.7	30.1	46.4	94.3	5.3	30.0
24	48.8	45.9	49.5	52.6	48.9	45.0	51.3	46.1	41.3	51.7	52.9	64.1	54.0	48.4	23.8	26.7	25.5	32.2	48.4	64.5	23.1	8.7	12.0	14.1	64.5	8.7	40.8
25	9.4	11.0	10.4	7.9	9.1	10.0	10.1	9.9	8.1	9.7	13.9	12.2	9.8	10.7	12.5	11.6	6.7	9.1	9.6	7.1	11.0	10.8	12.4	9.6	13.9	6.7	10.1
26	10.4	9.8	7.2	8.7	8.8	8.5	10.2	10.5	10.7	10.2	9.9	9.9	7.7	8.7	12.7	6.8	7.9	6.3	5.9	5.2	4.3	5.2	5.2	4.4	12.7	4.3	8.1
27	5.7	6.3	6.9	5.9	7.3	27.7	12.9	20.7	7.0	8.3	6.5	9.7	7.9	6.3	12.1	7.3	10.0	7.5	6.1	7.9	6.6	13.2	18.9	19.9	27.7	5.7	10.4
28	18.1	33.1	12.5	23.6	47.6	87.5	50.6	22.0	23.4	63.1	21.9	14.2	10.3	7.6	16.1	11.0	5.3	5.7	7.6	6.6	8.4	8.1	7.1	9.3	87.5	5.3	21.7
29	9.4	7.6	7.2	9.2	8.8	10.1	11.7	8.2	7.9	7.1	7.6	7.6	6.9	7.3	7.2	8.5	7.5	7.0	7.4	8.0	7.3	7.6	10.2	8.8	11.7	6.9	8.2
30	9.3	7.4	6.7	7.4	7.6	7.2	7.0	7.8	9.8	7.8	8.7	7.9	9.0	7.9	7.2	10.4	14.7	11.6	8.7	9.8	8.8	11.1	8.0	8.0	14.7	6.7	8.7
Max.	**71.5**	**79.2**	**68.7**	**91.0**	**85.0**	**98.5**	**96.6**	**74.3**	**89.6**	**75.7**	**87.3**	**79.2**	**91.7**	**87.8**	**85.9**	**80.4**	**92.5**	**62.6**	**94.3**	**92.4**	**65.7**	**80.9**	**77.9**	**83.6**	**98.5**		
Min.	**4.8**	**5.2**	**5.0**	**4.0**	**4.0**	**4.6**	**4.2**	**4.1**	**3.6**	**4.8**	**5.2**	**4.3**	**4.5**	**4.7**	**3.7**	**4.0**	**4.7**	**4.0**	**5.0**	**4.6**	**4.3**	**4.7**	**4.0**	**4.4**		**3.6**	
Avg.	**18.5**	**20.3**	**19.3**	**19.2**	**21.0**	**22.9**	**19.5**	**19.0**	**21.5**	**19.9**	**23.2**	**22.9**	**23.4**	**25.8**	**22.4**	**17.4**	**21.4**	**17.4**	**19.6**	**19.3**	**17.6**	**17.2**	**18.4**	**19.3**			**20.3**

Total Hours in Month 744 **Hours Data Available** 720 **Data Recovery** 96.8%

HCG, Inc.

Northern Dynasty Mines Pebble North Head Meterological Station - Wind Sigma (RMYoung)

December 2008

Day	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	Max.	Min.	Avg.
1	8.4	10.3	7.3	11.8	8.5	6.9	5.8	11.6	22.7	16.0	12.5	12.0	32.5	24.8	64.7	50.8	82.6	28.2	12.7	15.0	43.5	53.5	12.5	55.4	82.6	5.8	25.4
2	70.4	49.9	19.0	24.7	73.5	49.4	14.9	11.1	15.0	12.6	8.8	31.0	67.7	46.0	59.0	60.9	64.6	56.9	64.0	57.8	56.5	59.7	50.8	73.9	73.9	8.8	45.8
3	58.3	39.4	54.5	44.3	51.8	28.9	42.9	55.4	57.6	58.7	62.5	39.0	42.2	42.8	51.5	44.1	42.7	48.7	46.8	47.7	54.1	53.7	50.0	62.6	62.6	28.9	49.2
4	61.1	74.5	94.0	48.1	41.5	26.7	15.5	14.1	34.3	19.8	17.3	21.3	20.8	30.8	36.4	32.7	14.3	13.4	16.9	45.8	31.1	19.6	16.0	9.8	94.0	9.8	31.5
5	19.0	31.2	86.3	90.6	66.6	19.9	86.0	36.2	86.3	50.6	8.2	38.4	63.7	69.3	79.6	58.7	51.0	44.1	96.0	60.3	46.3	48.7	38.9	25.6	96.0	8.2	54.2
6	46.0	32.9	79.8	75.9	61.9	63.7	16.2	38.5	75.5	82.9	20.4	80.3	29.7	93.5	22.4	15.4	13.0	79.5	11.2	8.2	6.5	4.3	4.4	4.8	93.5	4.3	40.3
7	5.8	6.6	11.3	8.0	8.7	9.9	11.7	10.2	8.4	10.1	10.2	8.3	9.7	9.0	7.8	17.0	14.3	27.6	85.1	42.5	64.1	21.4	7.6	8.0	85.1	5.8	17.6
8	28.6	41.7	42.9	29.1	59.5	54.4	48.0	61.8	74.6	55.1	55.0	73.5	64.7	60.6	58.2	59.5	57.0	78.1	86.8	89.0	91.7	94.7	71.7	83.4	94.7	28.6	63.3
9	67.7	84.7	74.7	56.9	33.2	70.9	10.2	14.5	10.1	9.8	9.6	8.1	9.2	7.2	8.1	6.1	7.4	9.3	12.7	6.9	8.1	4.4	5.4	14.0	84.7	4.4	22.9
10	15.2	12.4	14.2	5.5	8.6	9.9	6.8	5.7	8.2	6.0	4.9	5.8	7.8	12.6	17.2	8.6	7.8	6.8	6.5	10.2	10.2	8.3	8.2	6.9	17.2	4.9	8.9
11	8.3	10.5	7.0	6.2	6.7	9.8	9.7	15.7	8.2	8.2	8.7	16.2	10.4	9.4	12.8	13.8	13.4	11.8	9.5	8.1	8.0	11.4	7.3	10.4	16.2	6.2	10.1
12	15.8	10.9	8.8	13.8	9.2	8.8	11.4	10.8	9.5	23.5	62.6	73.9	9.1	9.8	39.5	19.5	74.3	16.8	11.7	37.4	48.0	14.6	55.8	88.8	88.8	8.8	28.5
13	19.5	85.9	41.4	12.6	79.1	15.0	17.2	16.6	12.2	38.8	66.3	9.3	45.5	44.5	12.3	86.9	56.4	11.6	72.0	34.9	47.7	9.5	17.9	77.4	86.9	9.3	38.8
14	17.8	9.0	10.3	58.1	16.7	23.4	56.7	14.7	62.6	30.2	76.5	76.6	21.4	59.4	11.9	16.4	65.3	62.6	86.2	30.6	23.7	32.7	17.1	13.4	86.2	9.0	37.2
15	14.4	15.5	12.8	16.5	13.2	9.3	15.2	12.5	12.3	19.5	17.2	21.5	18.2	29.2	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.2	0.0	9.8
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	9.5	7.9	8.6	12.6	27.4	27.4	0.0	3.0
17	44.5	75.4	10.8	13.9	22.6	24.9	17.1	13.3	14.0	22.8	12.0	11.5	12.2	13.6	8.9	6.1	8.3	18.0	21.3	17.9	8.9	13.7	24.0	56.3	75.4	6.1	20.5
18	66.6	44.8	75.8	27.6	8.8	10.1	13.7	19.3	22.4	20.5	23.6	30.7	22.9	22.5	25.0	26.4	24.5	25.6	26.5	36.7	48.2	32.5	29.9	51.6	75.8	8.8	30.7
19	34.4	38.2	25.8	21.6	29.0	33.3	31.6	37.9	43.1	38.1	48.6	51.7	51.2	43.4	36.4	38.9	37.6	61.3	51.1	47.0	49.4	58.2	59.8	55.6	61.3	21.6	42.6
20	62.4	73.9	64.2	55.6	69.8	94.5	100.0	72.2	83.6	61.9	47.6	88.4	83.6	45.6	35.9	73.7	64.1	57.2	59.7	96.2	39.5	26.5	83.1	10.1	100.0	10.1	64.6
21	9.2	16.9	35.1	8.6	51.2	41.1	10.8	57.5	71.7	56.8	88.4	89.7	79.0	17.8	17.4	54.8	44.7	71.4	14.7	13.9	27.2	32.6	37.5	44.7	89.7	8.6	41.4
22	9.8	26.2	13.5	65.5	63.6	40.0	86.7	14.9	11.9	81.5	42.7	50.8	15.9	61.4	26.4	26.1	10.2	7.7	7.3	9.8	11.6	8.3	8.4	6.6	86.7	6.6	29.5
23	40.0	66.9	80.8	26.1	49.9	60.4	33.2	15.4	30.3	30.4	26.3	8.5	11.6	9.7	7.5	8.6	7.0	8.8	6.9	7.7	6.8	6.6	6.9	6.5	80.8	6.5	23.5
24	7.5	6.5	6.5	6.7	5.8	5.9	5.1	5.3	5.6	5.5	6.5	9.1	10.2	16.7	12.1	16.5	14.4	10.3	9.0	7.2	8.7	43.6	67.9	32.2	67.9	5.1	13.5
25	64.5	11.6	20.4	60.6	58.4	84.0	86.7	66.3	85.9	53.0	70.6	90.4	10.9	19.0	17.1	20.6	77.2	18.4	22.2	37.3	4.7	6.1	6.6	6.3	90.4	4.7	41.6
26	6.5	5.6	6.3	6.4	6.4	7.0	8.1	9.3	11.7	12.7	10.7	7.5	8.1	12.7	7.8	10.9	8.3	9.0	10.0	10.9	10.8	9.7	11.0	12.0	12.7	5.6	9.1
27	11.8	13.6	13.3	10.0	8.5	8.3	7.0	7.3	6.6	9.8	7.2	8.6	9.0	7.2	8.5	8.3	8.9	7.1	8.8	9.4	9.3	8.6	9.3	9.1	13.6	6.6	9.0
28	9.6	7.9	9.3	8.8	7.1	7.6	6.8	5.9	7.3	8.9	10.4	8.0	7.5	8.4	9.2	8.9	8.7	7.9	8.1	8.1	9.3	8.9	8.5	8.2	10.4	5.9	8.3
29	9.9	9.8	9.8	9.4	5.1	6.1	10.0	7.8	5.3	5.7	4.1	5.2	5.5	4.5	4.7	5.9	5.0	9.5	8.5	11.2	13.0	10.3	17.3	8.6	17.3	4.1	8.0
30	6.6	7.0	9.9	5.8	5.2	4.8	5.0	5.5	7.0	5.6	4.7	4.9	4.8	3.8	4.1	3.9	4.2	4.9	4.2	5.6	5.7	5.1	4.0	5.3	9.9	3.8	5.3
31	4.1	4.3	4.7	4.1	4.0	4.5	3.9	5.0	4.9	4.4	6.4	4.5	4.8	4.9	5.7	4.9	5.1	5.7	5.9	5.2	6.5	5.2	6.1	5.3	6.5	3.9	5.0
Max.	**70.4**	**85.9**	**94.0**	**90.6**	**79.1**	**94.5**	**100.0**	**72.2**	**86.3**	**82.9**	**88.4**	**90.4**	**83.6**	**93.5**	**79.6**	**86.9**	**82.6**	**79.5**	**96.0**	**96.2**	**91.7**	**94.7**	**83.1**	**88.8**	**100.0**		
Min.	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		**0.0**	
Avg.	**27.2**	**29.8**	**30.7**	**26.9**	**30.1**	**27.1**	**25.6**	**21.7**	**29.3**	**27.7**	**27.4**	**31.8**	**25.5**	**27.1**	**23.1**	**26.0**	**28.8**	**26.4**	**28.7**	**26.7**	**26.0**	**23.3**	**24.4**	**28.4**			**27.1**

Total Hours in Month 744 **Hours Data Available** 744 **Data Recovery** 100.0%

HCG, Inc.

Appendix E

Validated Manual Particulate Data

Not Applicable.